

2018



Substance Abuse in Minnesota: A State Epidemiological Profile

Section 3.

Alcohol: Use, Consequences, and Intervening Variables

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**for the Minnesota Department of Human Services, Alcohol and
Drug Abuse Division**

Substance Abuse in Minnesota

Section 3. Alcohol: Use, Consequences, and Intervening Variables

The 2018 Minnesota State EpiProfile is divided into eight parts:

- 1. Introduction (which includes a profile overview, population snapshot, and acknowledgements)**
- 2. Executive Summary**
- 3. Alcohol: Use, Consequences, and Intervening Variables**
- 4. Tobacco and Nicotine: Use, Consequences, and Intervening Variables**
- 5. Drugs: Use, Consequences, and Intervening Variables**
- 6. Mental Health and Shared Factors**
- 7. Socioeconomic Factors**
- 8. Appendix (which includes technical notes and data sources)**

Alcohol in Minnesota: Use

Recent Alcohol Use

About the Indicator

Alcohol is the most frequently used drug nationally and statewide, and is associated with a number of adverse health consequences¹. Reported use of alcohol in the past 30 days is a common measure of recent alcohol use. Adults are defined as persons aged 18 and older. Youth include 8th, 9th, and 11th graders.

Data Source(s)

General Consumption

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

Adults

National Survey on Drug Use and Health (NSDUH), Behavioral Risk Factor Surveillance System (BRFSS) and the Minnesota Survey of Adult Substance Use (MNSASU)

Youth

Minnesota Student Survey (MSS) and Monitoring the Future (MTF)

Section Summary

Adults

- Minnesota's overall per capita consumption went up, from 2.44 gallons in 2011, to 2.80 gallons in 2014, moving from the 5th decile among US states in consumption, to the 2nd decile. It then declined slightly to 2.73 in 2015, to the 3rd decile.

Youth

- Past 30-day alcohol use declined among 9th grade students from 2001 to 2016 (from 30% to 11%).
- Alcohol use varied by age: 7.9% of 8th graders reported recent alcohol use, while 24.6% of 11th graders reported use in 2016.
- Unlike adults, female students reported similar (or higher) rates of alcohol use as male students.

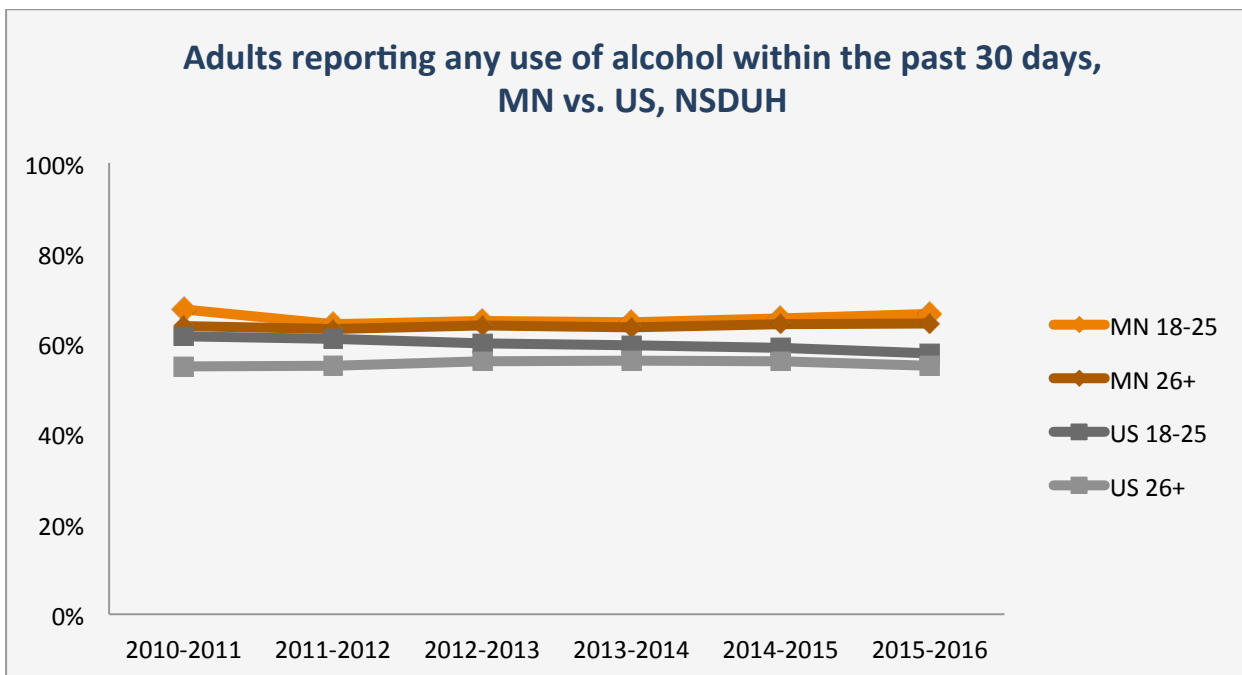
Data Source: NIAAA

Overall, Minnesotans drink almost 20% more than the national average. Although they consume about the same amount of beer and wine as the US average, they consume much more alcohol in the form of hard alcohol, or spirits.

Per Capita Ethanol Consumption in Gallons among Persons Age 14 and Older

Beer	2007	2008	2009	2010	2011	2012	2013	2014	2015
MN	1.16	1.21	1.19	1.10	1.09	1.18	1.13	1.13	1.16
US	1.21	1.20	1.17	1.14	1.12	1.13	1.12	1.10	1.09
Rate ratio	0.96	1.01	1.02	0.97	0.97	1.04	1.01	1.03	1.06
Wine	2007	2008	2009	2010	2011	2012	2013	2014	2015
MN	0.32	0.37	0.37	0.33	0.34	0.42	0.43	0.44	0.43
US	0.38	0.38	0.38	0.39	0.40	0.42	0.42	0.43	0.42
Rate ratio	0.84	0.97	0.97	0.85	0.85	1.00	1.02	1.02	1.02
Spirits	2007	2008	2009	2010	2011	2012	2013	2014	2015
MN	0.97	1.03	1.04	0.99	1.09	1.11	1.16	1.23	1.14
US	0.73	0.73	0.74	0.74	0.76	0.78	0.80	0.80	0.81
Rate ratio	1.33	1.41	1.41	1.34	1.43	1.42	1.45	1.54	1.41
Total	2007	2008	2009	2010	2011	2012	2013	2014	2015
MN	2.45	2.60	2.59	2.42	2.44	2.70	2.72	2.80	2.73
US	2.31	2.31	2.29	2.27	2.28	2.33	2.34	2.32	2.32
Rate ratio	1.06	1.12	1.13	1.07	1.07	1.16	1.16	1.21	1.18

Data Source: NSDUH



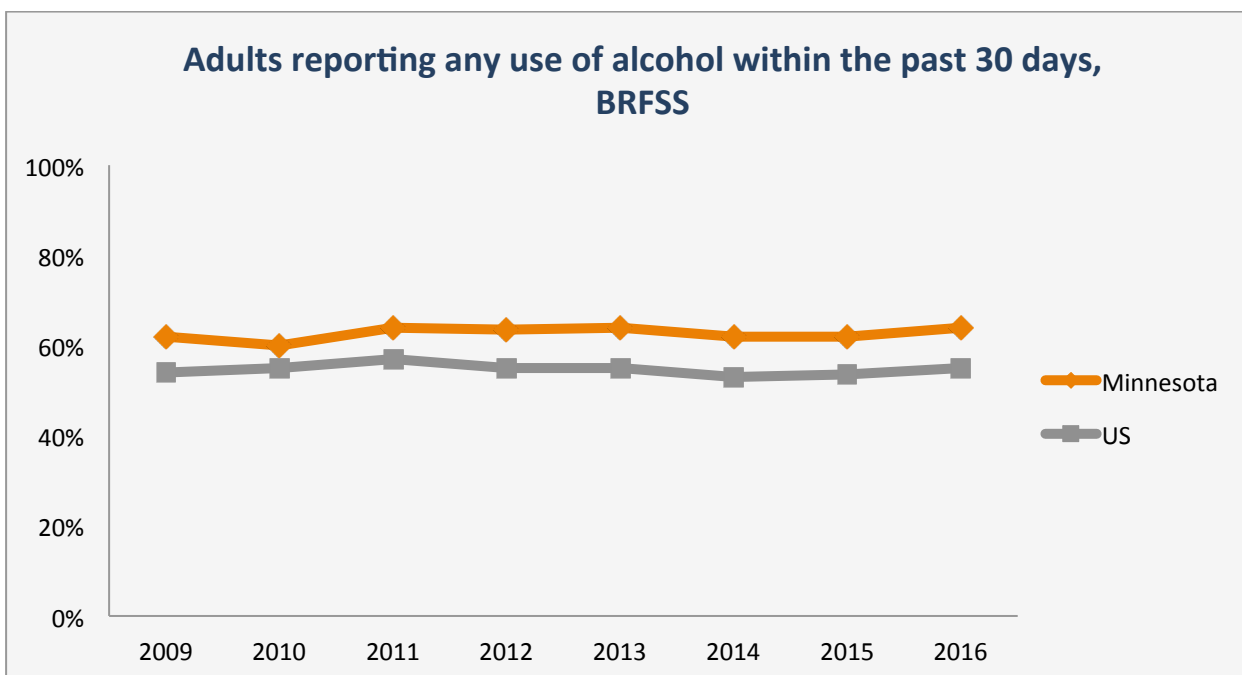
Adults Reporting Any Use of Alcohol within the Past 30 Days

Minnesota	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Alcohol use 12+	59.5%	58.6%	58.9%	58.8%	59.4%	59.7%
Ages 12 thru 17	13.1%	13.1%	11.9%	10.7%	10.7%	10.4%
Ages 18 thru 25	67.5%	64.2%	64.7%	64.7%	65.6%	66.5%
Ages 26 and Over	63.8%	63.2%	63.6%	63.6%	64.2%	64.4%
United States	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Alcohol use 12+	51.8%	51.9%	52.1%	52.4%	52.2%	51.2%
Ages 12 thru 17	13.5%	13.1%	12.2%	11.6%	10.6%	9.4%
Ages 18 thru 25	61.0%	60.5%	59.9%	59.6%	59.0%	57.8%
Ages 26 and Over	55.0%	55.3%	55.7%	56.2%	56.0%	55.1%
Total current alcohol*	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Alcohol use 12+	1.15	1.13	1.13	1.12	1.14	1.16

NOTE: Total percent represents the total number of survey respondents reporting use divided by the total number of survey respondents who answered the question. Percent within an age group, for example, represents the total number of survey respondents in the age group reporting use, divided by the total number of survey respondents in that age group who answered the question. Estimates are based on a survey-weighted hierarchical Bayes estimation approach. For NSDUH, percentages are presented for the 2 years combined.

*Ratio of MN relative to US; A score above 1 means MN rates are above US rates; a score below 1 means MN rates are below US rates

Data Source: BRFSS



Minnesota Adults Reporting Any Use of Alcohol in the Past 30 Days by Gender, Age, and Race/Ethnicity

		2009	2010	2011	2012	2013	2014	2015	2016
Gender	Male	67%	64%	69%	69%	68%	65%	66%	68%
	Female	56%	55%	59%	58%	59%	58%	57%	60%
Age	Ages 18 thru 24	50%	N/A	57%	57%	59%	53%	54%	55%
	Ages 25 thru 34	66%	64%	71%	69%	71%	66%	68%	68%
	Ages 35 thru 44	70%	67%	68%	67%	68%	69%	66%	70%
	Ages 45 thru 54	70%	68%	69%	69%	69%	67%	66%	68%
	Ages 55 thru 64	65%	61%	63%	65%	62%	63%	64%	66%
	Ages 65 and over	44%	47%	52%	52%	51%	51%	52%	55%
Race/Ethnicity	White	63%	62%	66%	66%	67%	65%	65%	67%
	Black	N/A	N/A	50%	44%	52%	37%	38%	38%
	Hispanic	N/A	N/A	44%	46%	50%	46%	40%	47%
	Other	N/A	N/A	50%	48%	41%	45%	50%	N/A
	Multiracial	N/A	N/A	N/A	53%	54%	56%	61%	57%

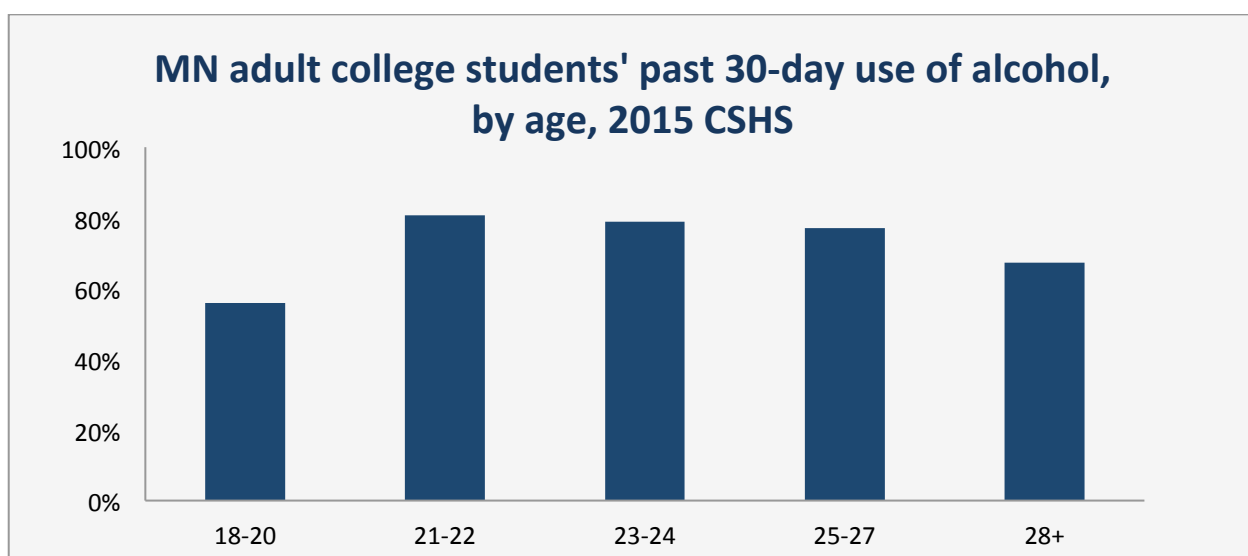
N/A = Not available if the un-weighted sample size for the denominator was < 30 or was unavailable.

NOTE: Use caution in comparing 2011 estimates to those from 2010 or earlier. The addition of a cell-phone sample in 2011 may have resulted in significant mode effects.

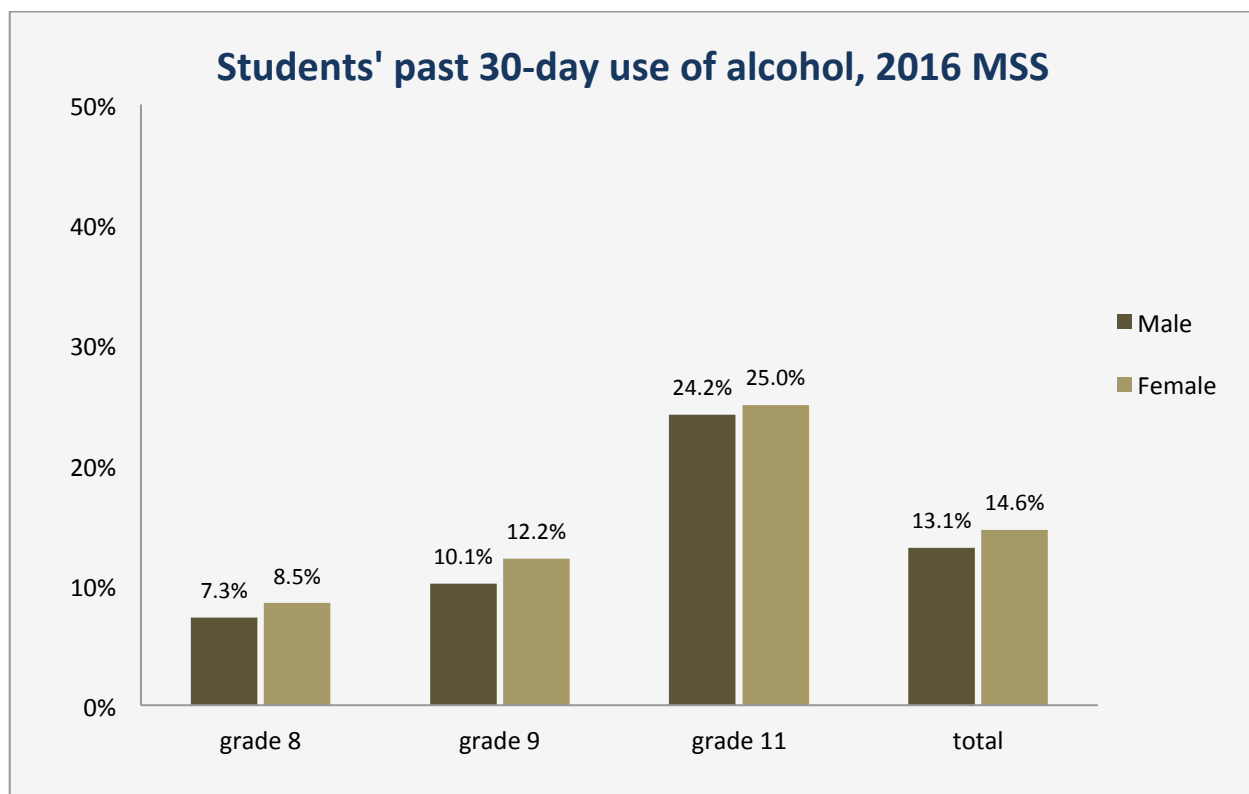
Data Source: MNSASU

Percent of Minnesota Adults Reporting any Use of Alcohol within the Past 30 Days, 2015 MNSASU				
		2004	2010	2015
Age	Ages 18 thru 24	54.6%	51.4%	50.1%
	Ages 25 thru 44	66.4%	62.8%	59.7%
	Ages 45 thru 64	62.7%	59.5%	56.9%
	Ages 65 and over	42.3%	40.9%	45.7%
Race/Ethnicity	African American or Black	33.4%	30.0%	26.1%
	American Indian	48.8%	33.4%	29.3%
	Asian American/Pacific Islander	34.2%	32.8%	36.0%
	Hispanic/Latino	32.7%	31.7%	27.2%
	Bi-Racial/Multi-Racial	48.2%	51.0%	46.8%
	White	62.8%	60.1%	59.2%
Gender	Male	66.9%	63.9%	59.9%
	Female	52.9%	49.9%	49.9%
	Total	59.8%	56.8%	54.8%
Sexual Orientation	Lesbian, Gay, Bisexual, and Transgender	N/A	N/A	57.9%
	Heterosexual	N/A	N/A	56.1%

NOTE: Total percent represents the total number of survey respondents reporting use divided by the total number of survey respondents who answered the question. Percent within an age group, for example, represents the total number of survey respondents in the age group reporting use, divided by the total number of survey respondents in that age group who answered the question.



Data Source: MSS



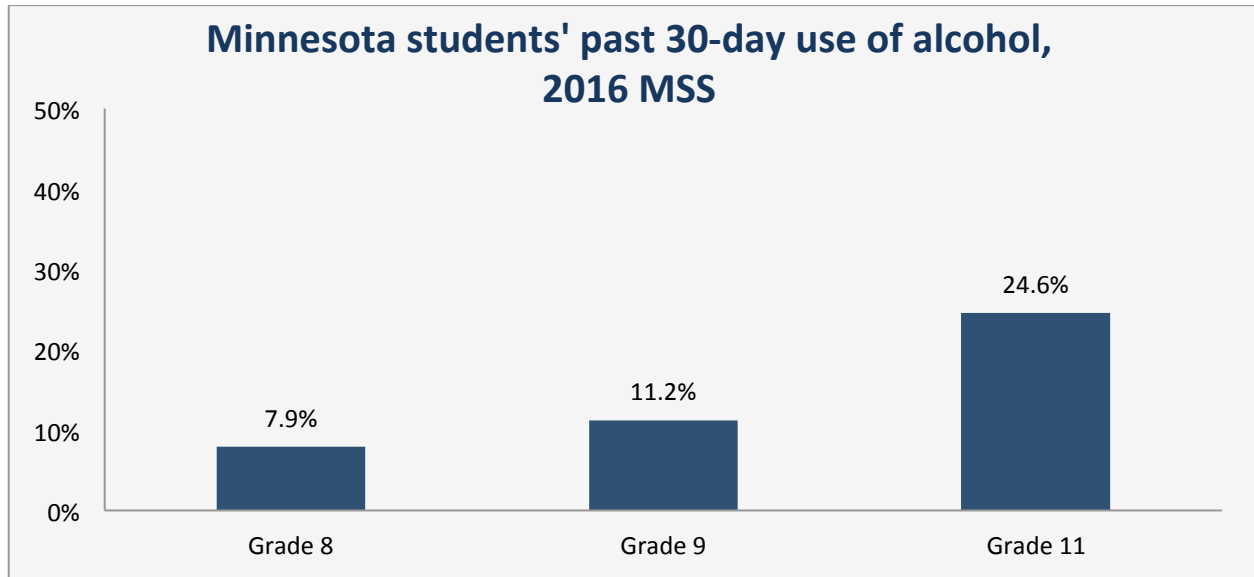
Students Reporting Any Use of Alcohol in the Past 30 Days, 2016 MSS

	N (#)	%
Male	7,672	13.1%
Female	8,653	14.6%
8 th Graders	3,325	7.9%
9 th Graders	4,692	11.2%
11 th Graders	8,351	24.6%

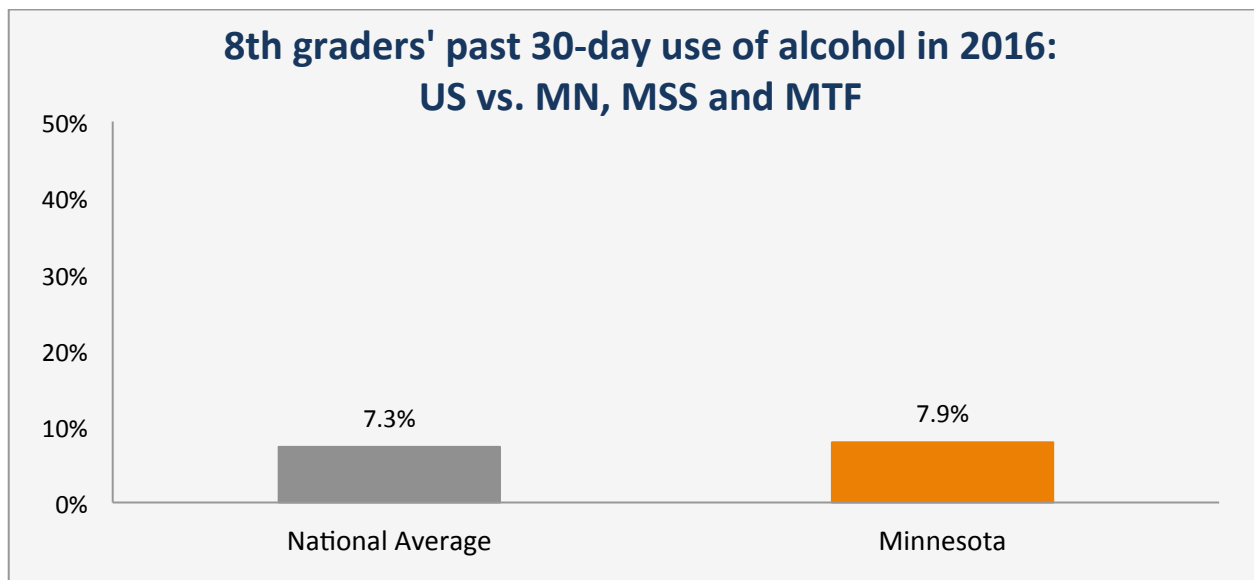
Minnesota 9th Graders Reporting Use of Alcohol in the Past 30 Days, MSS

	2001	2004	2007	2010	2013	2016
Male	30%	26%	23%	18%	14%	10%
Female	30%	29%	25%	20%	15%	12%
Total	30%	28%	24%	19%	15%	11%

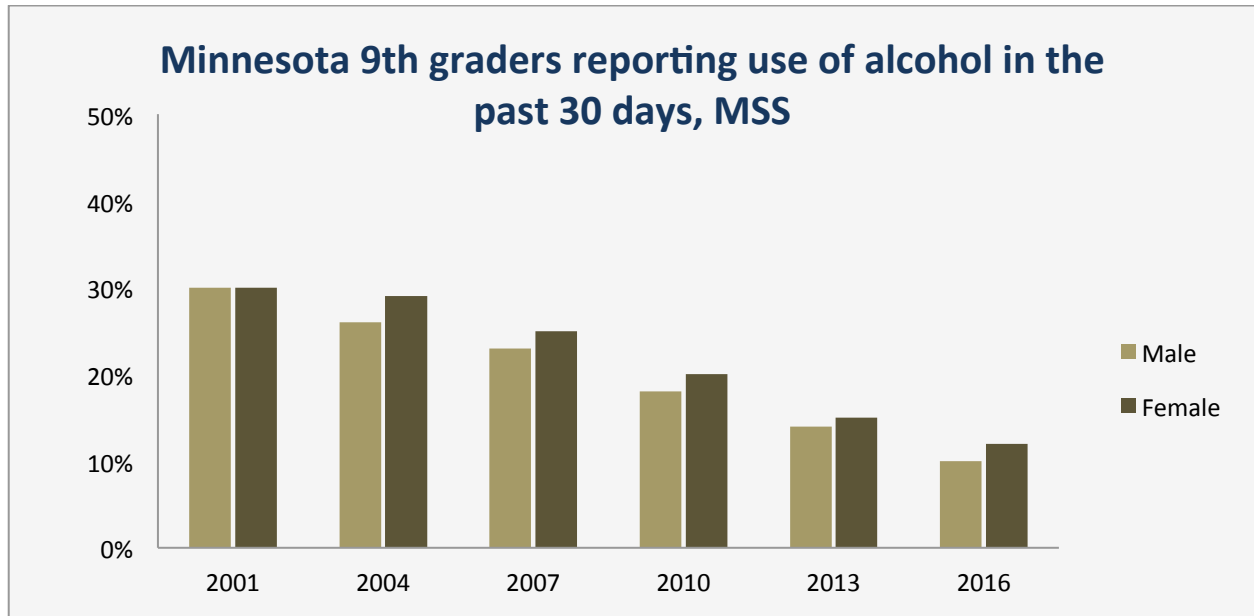
Data Source: MSS and MTF



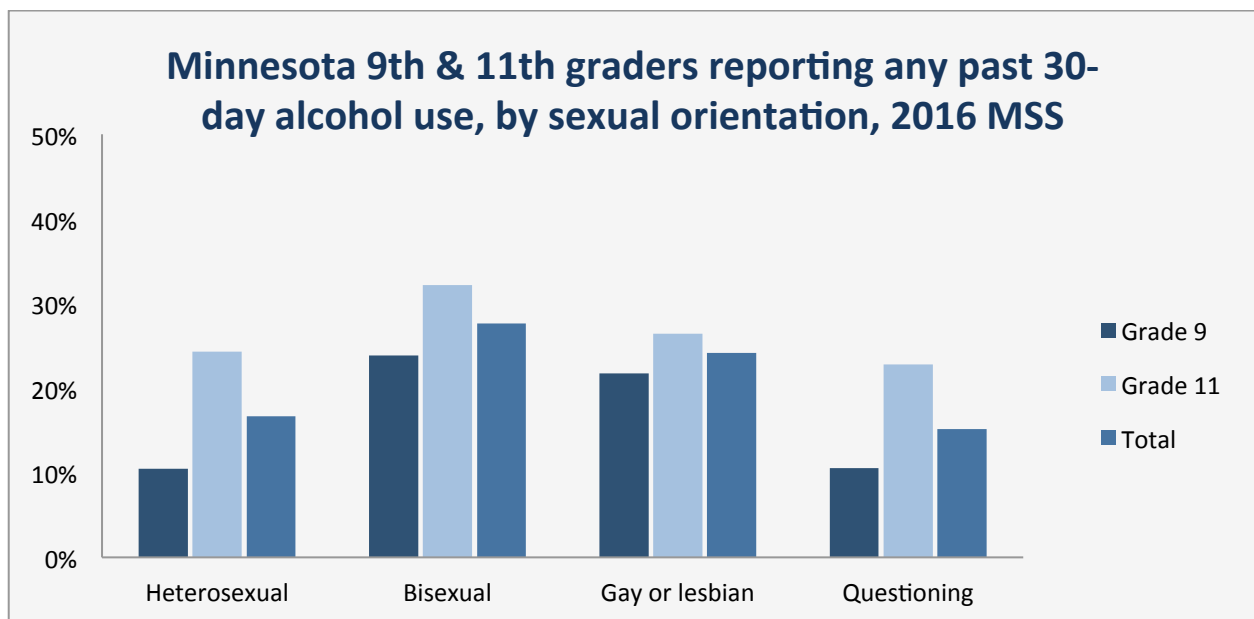
8th graders' past 30-day use of alcohol in 2013 was slightly higher than the national average (7.9% vs. 7.3%). Past 30-day use by 9th graders is decreasing.



Data Source: MSS



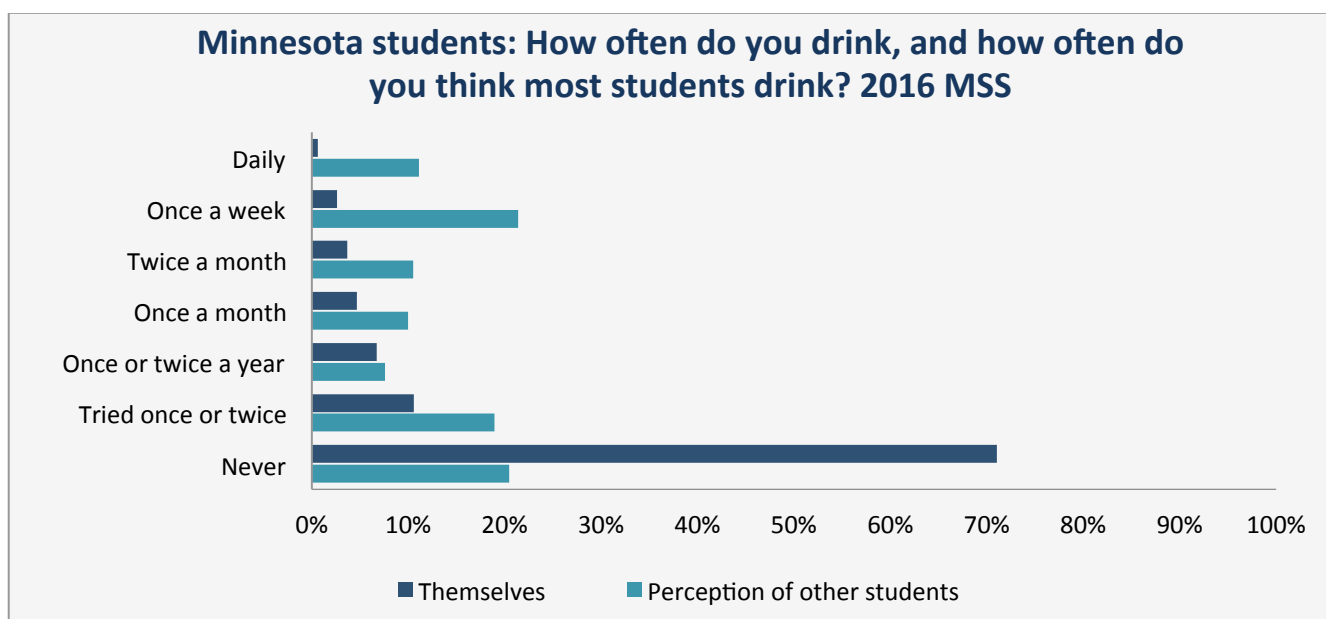
Bisexual, gay and lesbian students, and those questioning their sexual orientation, are all more likely to drink, compared to their heterosexual classmates.



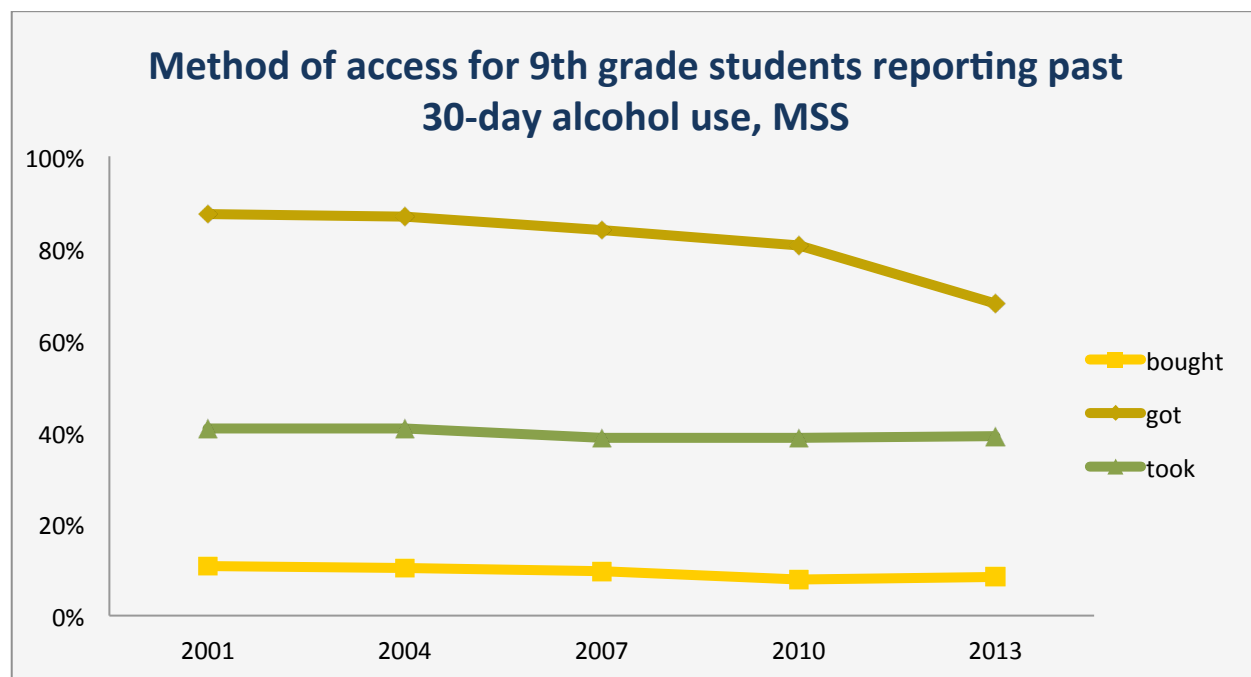
Data Source: MSS

While Minnesota students tend to drink at a relatively low rate, their perception generally is that other students drink more than they actually do.

Students who believe most other students drink often are more likely to report drinking often, themselves.



Data Source: MSS



Method of Access for Students Reporting Past 30-Day Alcohol Use, MSS

	2001	2004	2007	2010	2013
Students reporting past 30 day alcohol use who "bought" the alcohol (from a store, bar, restaurant, or the internet)	10.8%	10.3%	9.6%	7.8%	8.4%
Students reporting past 30 day alcohol use who "got" the alcohol (from a from friends, parents, other family members, someone buying for them, or parties)	87.4%	86.9%	83.9%	80.6%	67.9%
Students reporting past 30 day alcohol use who "took" the alcohol (from their home, a friend's home, or from stores)	40.7%	40.8%	38.7%	38.7%	39.1%

NOTE: This question was not included in the 2016 version of the Minnesota Student Survey.

Recent Binge Drinking

About the Indicator

Binge drinking has been associated with alcohol-related injuries and deaths, as well as violence and crime. Up until 2006, BRFSS defined binge drinking as having 5 or more drinks in a row on one occasion. In 2006, binge drinking was defined as 5 or more drinks for males or 4 or more drinks for females in a row on one occasion. MNSASU used the later definition; both captured binge drinking in the past 30 days. NSDUH also changed its binge drinking definition: until the 2015 survey redesign, it defined binge drinking as 5 or more drinks on the same occasion (i.e., at the same time or within a couple of hours of each other) on at least 1 day in the past 30 days; in 2015, it changed to match the BRFSS definition. MSS continues to define binge drinking as 5 or more drinks in a row on one occasion in the past 30 days (for males or females).

Adult is defined as persons aged 18 and older. Youth data from the MSS include 9th and 11th graders.

Data Source(s)

Adults

National Survey on Drug Use and Health (NSDUH), Behavioral Risk Factor Surveillance System (BRFSS), and the Minnesota Survey of Adult Substance Use (MNSASU)

Youth

Minnesota Student Survey (MSS)

Section Summary

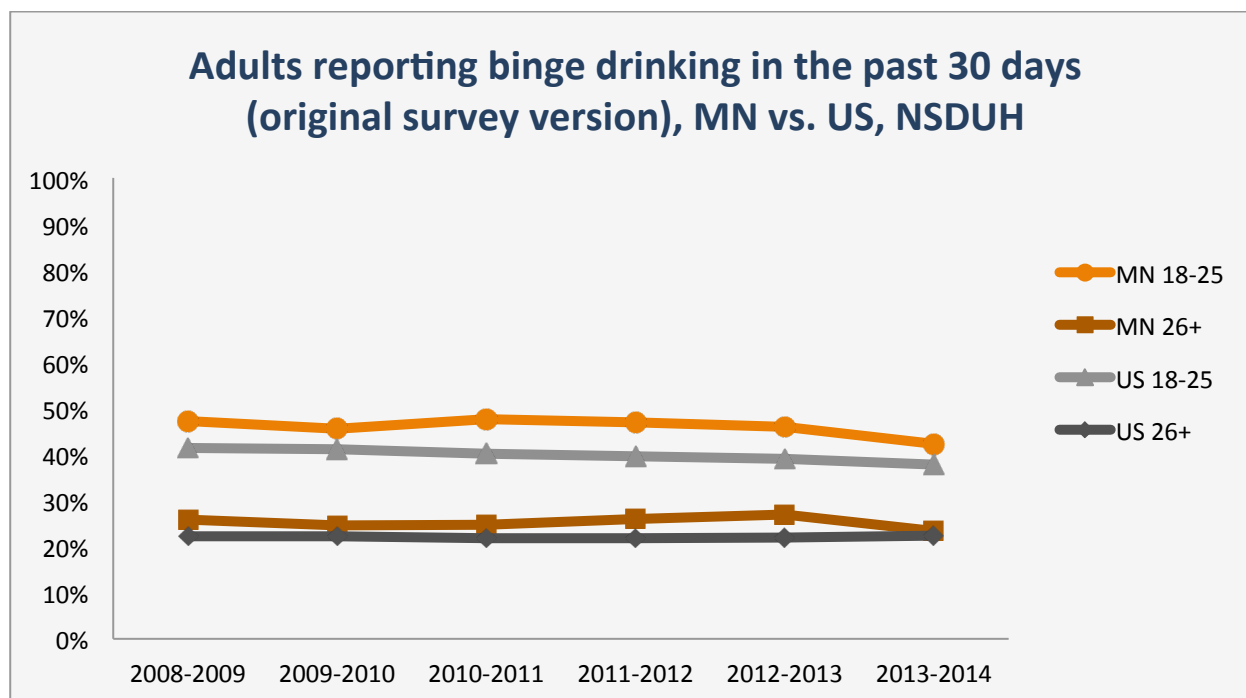
Adults

- Minnesotans report higher rates of binge drinking than the national average, although the trend shows a slight decrease in rates over the past 7 years.
- Males had higher rates of recent binge drinking than females, regardless of age, race/ethnicity, or region. Surveys broadly agree that young adult males binge drink at the highest rates.

Youth

- Binge drinking is more prevalent among older students than younger students, and is higher among males as compared to females.

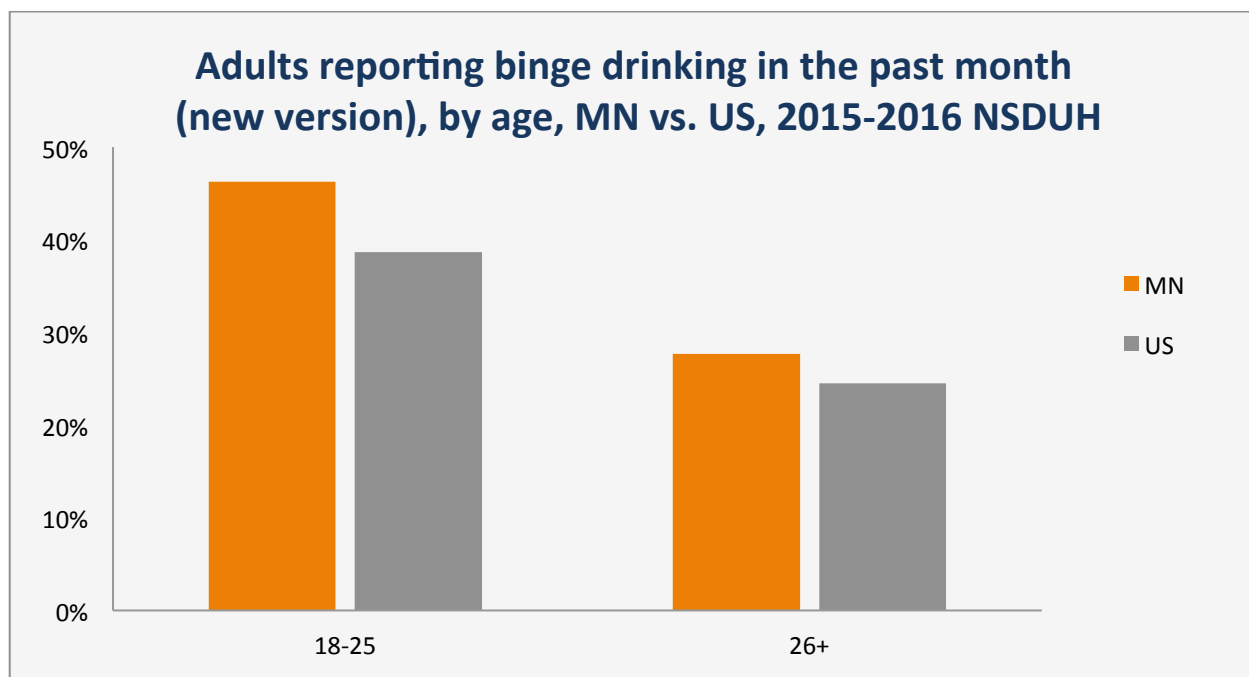
Data Source: NSDUH



Adults Reporting Binge Drinking in the Past 30 Days (Original Survey Version), NSDUH

Minnesota	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Binge drinking 12+	26.9%	25.9%	26.2%	26.9%	27.1%	24.1%
Ages 12 thru 17	8.0%	7.9%	8.3%	7.9%	6.6%	5.1%
Ages 18 thru 25	47.2%	45.6%	47.7%	46.9%	45.5%	42.3%
Ages 26 and Over	25.8%	24.7%	24.7%	25.9%	26.6%	23.4%
United States	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Binge drinking 12+	23.5%	23.4%	22.9%	22.8%	22.9%	22.9%
Ages 12 thru 17	8.8%	8.4%	7.6%	7.3%	6.7%	6.2%
Ages 18 thru 25	41.4%	41.2%	40.2%	39.7%	38.7%	37.8%
Ages 26 and Over	22.3%	22.2%	21.8%	21.8%	22.2%	22.4%
MN:US rate ratio	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014
Binge drinking 12+	1.14	1.11	1.15	1.18	1.18	1.05

Data Source: NSDUH

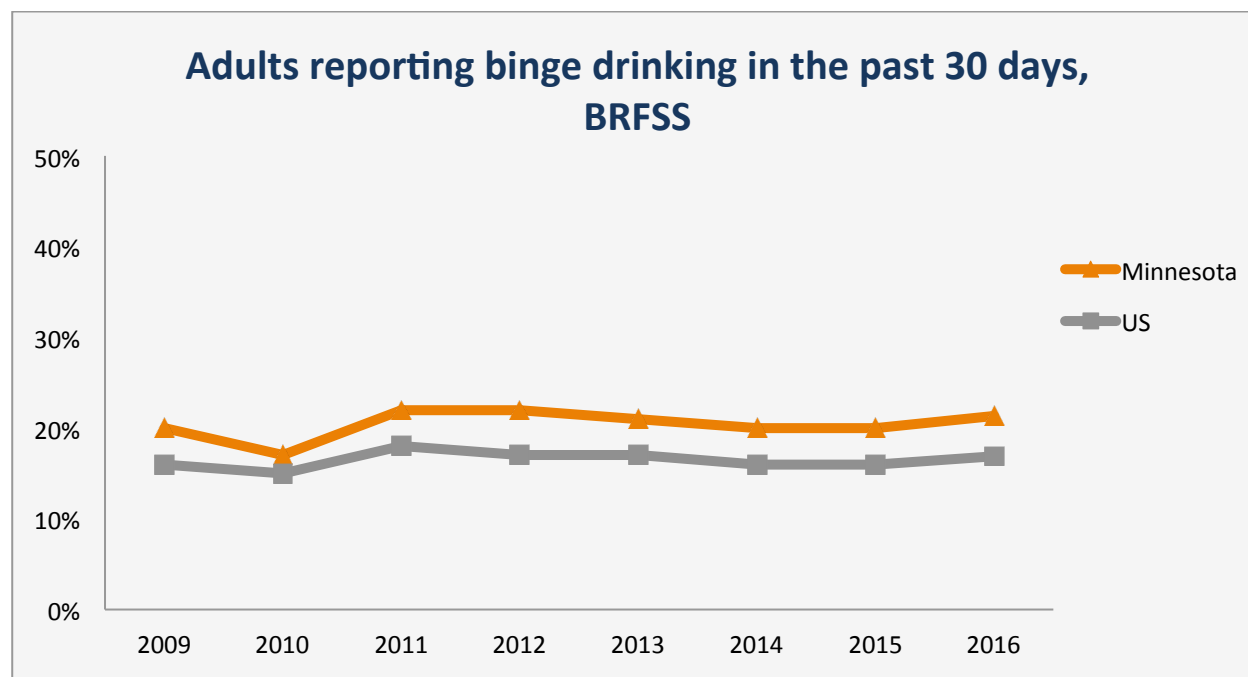


Adults Reporting Binge Drinking in the Past Month (New Survey Version), NSDUH

Minnesota	2015-2016
Binge Drinking 12+	28.0%
Ages 12 thru 17	5.3%
Ages 18 thru 25	46.3%
Ages 26 and Over	27.7%
United States	2015-2016
Binge Drinking 12+	24.6%
Ages 12 thru 17	5.3%
Ages 18 thru 25	38.7%
Ages 26 and Over	24.5%
MN:US rate ratio	2015-2016
Binge Drinking 12+	1.14

NOTE: Due to changes in the 2015 National Survey on Drug Use and Health (NSDUH), the measure of past-month binge drinking is not comparable after the 2013-2014 survey. Past trend data up to the 2013-2014 survey are presented separately from data from 2015 and later.

Data Source: BRFSS



Minnesota Adults Reporting Binge Drinking in the Past 30 Days by Gender, Age, and Race/Ethnicity, BRFSS

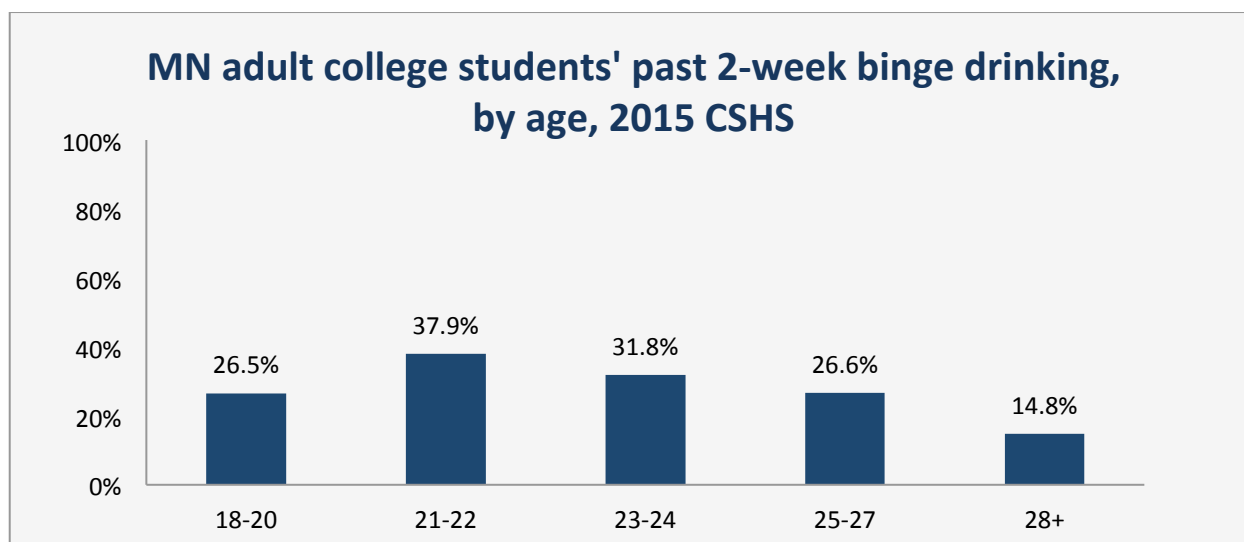
		2009	2010	2011	2012	2013	2014	2015	2016
Gender	Male	25%	22%	29%	29%	27%	25%	25%	27%
	Female	15%	12%	16%	16%	15%	15%	14%	16%
Age	Ages 18 thru 24	28%	20%	33%	32%	30%	29%	30%	31%
	Ages 25 thru 34	28%	28%	34%	36%	33%	30%	29%	32%
	Ages 35 thru 44	24%	21%	26%	26%	23%	24%	25%	27%
	Ages 45 thru 54	23%	19%	22%	23%	24%	20%	20%	22%
	Ages 55 thru 64	14%	11%	14%	13%	15%	14%	14%	16%
	Ages 65 and over	4%	4%	5%	5%	4%	5%	5%	7%
Race/Ethnicity	White	21%	18%	23%	23%	22%	20%	20%	22%
	Black	N/A	8%	17%	12%	20%	12%	10%	12%
	Hispanic	13%	7%	22%	22%	16%	20%	17%	20%
	Other	N/A	N/A	19%	21%	15%	14%	22%	N/A
	Multiracial	N/A	N/A	N/A	25%	28%	24%	26%	28%

N/A = Not available if the un-weighted sample size for the denominator was < 30 or the indicator was unavailable for the year.
 NOTE: Use caution in comparing 2011 estimates to those from 2010 or earlier. The addition of a cell-phone sample in 2011 may have resulted in significant mode effects.

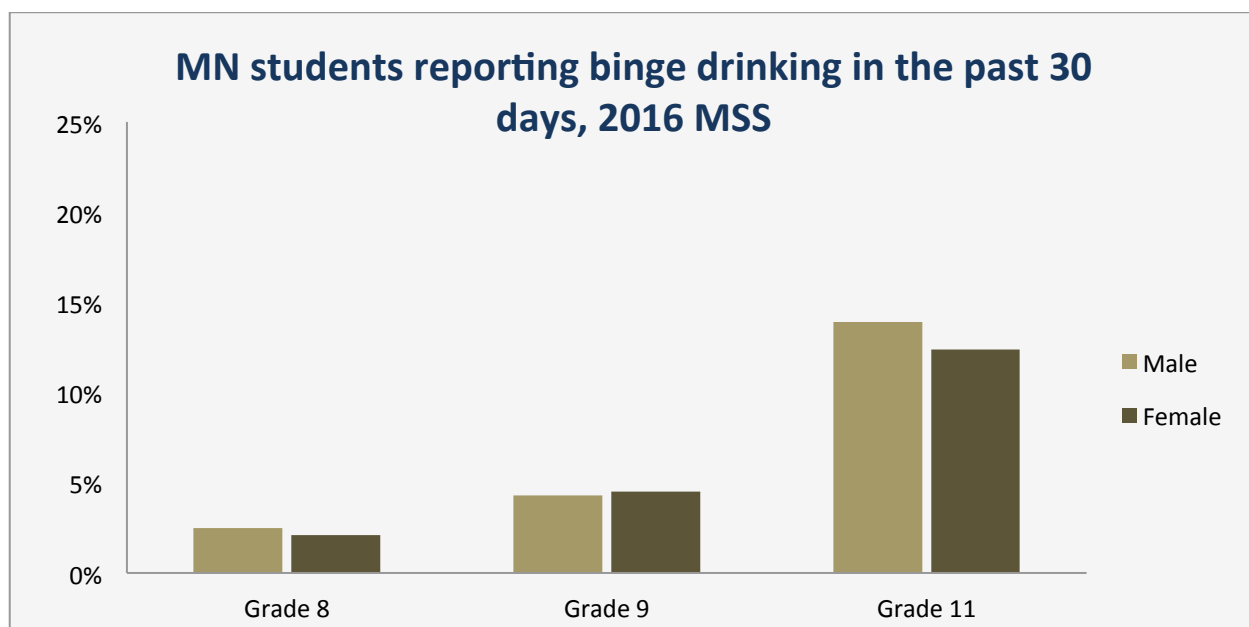
Data Source: MNSASU

Percent of Minnesota Adults Reporting Binge Drinking Within the Past 30 Days by Gender, Age, Race/Ethnicity, and Sexual Orientation, 2015 MNSASU		2004	2010	2015
Age	Ages 18 thru 24	35.2%	33.4%	27.8%
	Ages 25 thru 44	24.0%	25.4%	18.8%
	Ages 45 thru 64	13.3%	13.2%	10.3%
	Ages 65 and over	2.7%	2.5%	2.1%
Race/Ethnicity	African American or Black	9.5%	9.8%	6.8%
	American Indian	30.5%	20.3%	16.1%
	Asian American/Pacific Islander	13.0%	5.8%	8.1%
	Hispanic/Latino	15.1%	13.3%	11.6%
	Bi-Racial/Multi-Racial	20.2%	25.1%	18.5%
	White	19.3%	15.0%	14.6%
Gender	Male	24.3%	23.4%	17.9%
	Female	13.4%	13.3%	10.2%
	Total	18.8%	18.2%	13.9%
Sexual Orientation	Lesbian, Gay, Bisexual, and Transgender	N/A	N/A	17.1%
	Heterosexual	N/A	N/A	14.1%

Note: Adults are defined as persons aged 18 and older. Total percent represents the total number of survey respondents reporting use divided by the total number of survey respondents who answered the question. Percent within an age group, for example, represents the total number of survey respondents in the age group reporting use, divided by the total number of survey respondents in that age group who answered the question.



Data Source: MSS



In 2013, the Minnesota Student Survey question on binge drinking changed from reporting binge drinking in the past 2 weeks, to reporting binge drinking in the past 30 days. This brought Minnesota in line with other national and state student surveys.

Minnesota Students Reporting Binge Drinking in the Past 30 Days, 2016 MSS				
	Male		Female	
	N (#)	%	N (#)	%
8 th Grade	503	2.5%	437	2.1%
9 th Grade	845	4.3%	898	4.5%
11 th Grade	2,240	13.9%	2,027	12.4%

Other Problematic Alcohol Use

About the Indicator

Other risky patterns of alcohol use measured in surveys include daily use and participation in drinking games. Daily alcohol use can pose an increased health risk depending on a combination of factors, including quantity consumed and family medical history. Heavy use of alcohol, as measured by the Behavioral Risk Factor Surveillance System (BRFSS), is defined as average daily alcohol consumption greater than 2 drinks for men and 1 drink for women.

Drinking games can lead to risky alcohol consumption, as they encourage participants to drink more in one sitting than they otherwise would, through peer pressure and competition. In 2015, the MNSASU asked how often respondents have participated in drinking games involving alcohol (for example: beer pong, flip cup, or card games) in the past 30 days.

Data Source(s)

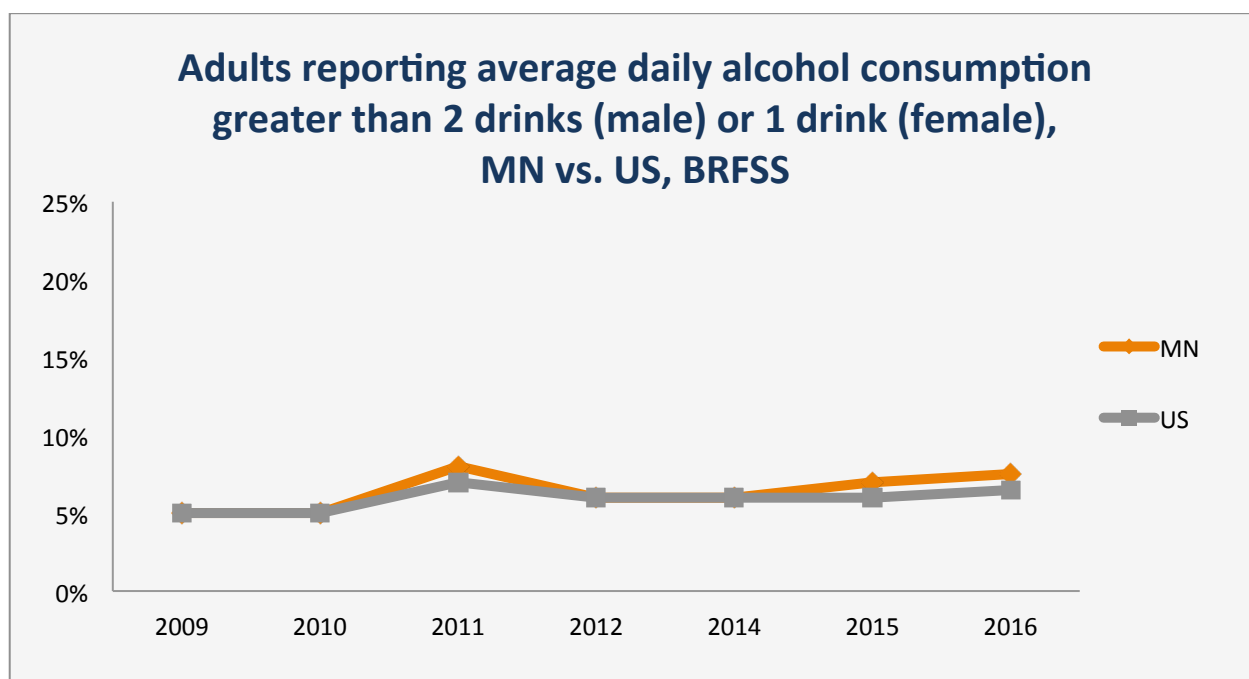
Adults

Behavioral Risk Factor Surveillance System (BRFSS), the Minnesota Survey of Adult Substance Use (MNSASU), and the College Student Health Survey (CSHS)

Section Summary

- Historically, Minnesota's heavy drinking rate has been similar to—or slightly higher than—the national average.
- Minnesota women reported rates of heavy drinking higher than that of men in the state: 8% vs. 7%.
- Estimates of heavy drinking are highest among Minnesotans ages 25-34 and 45-54.
- Drinking games are most prevalent in those aged 18 to 24.

Data Source: BRFSS

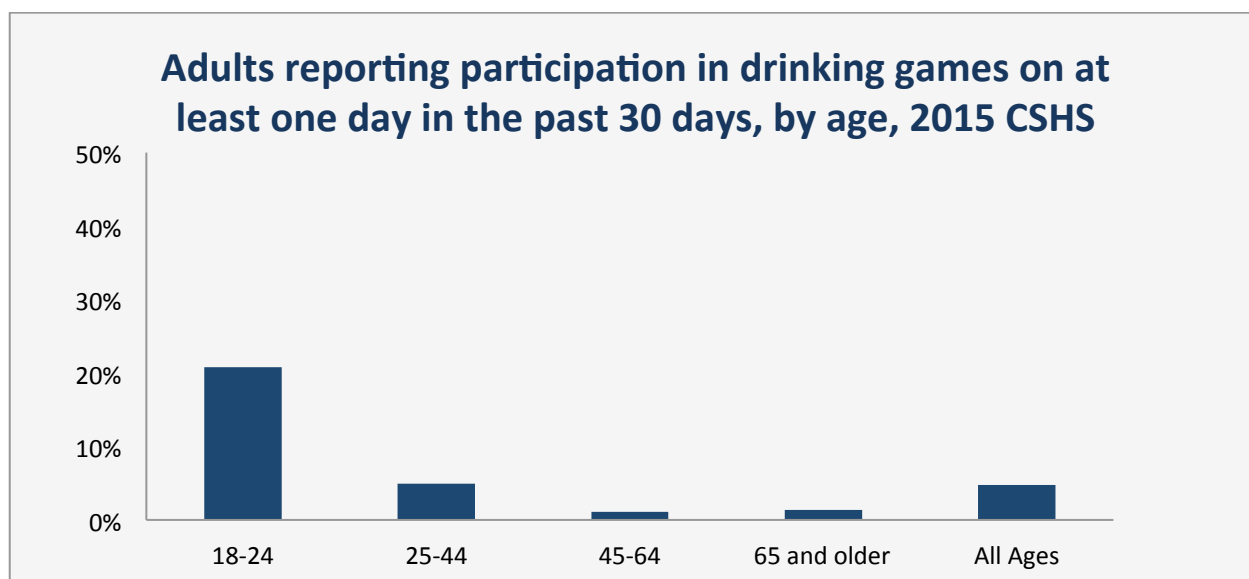


Minnesota Adults Reporting Average Daily Alcohol Consumption Greater than 2 Drinks (Male) or Greater than 1 Drink (Female) Per Day, BRFSS

		2009	2010	2011	2012	2013	2014	2015	2016
Gender	Male	5%	5%	9%	7%	8%	7%	6%	7%
	Female	5%	5%	7%	6%	7%	6%	7%	8%
Age	Ages 18 thru 24	5%	7%	11%	8%	6%	7%	9%	8%
	Ages 25 thru 34	5%	4%	10%	7%	9%	8%	6%	9%
	Ages 35 thru 44	4%	4%	7%	6%	7%	6%	8%	8%
	Ages 45 thru 54	7%	6%	9%	7%	10%	7%	7%	9%
	Ages 55 thru 64	6%	5%	7%	6%	8%	7%	7%	7%
	Ages 65 and over	2%	3%	4%	4%	4%	5%	4%	5%
Race/Ethnicity	White	5%	5%	8%	6%	8%	7%	7%	8%
	Black	4%	1%	7%	6%	N/A	N/A	N/A	3%
	Hispanic	1%	3%	N/A	N/A	N/A	N/A	N/A	4%
	Other	1%	5%	4%	7%	N/A	3%	N/A	N/A
	Multiracial	N/A	N/A	N/A	N/A	N/A	N/A	10%	11%

Data Source: MNSASU

Adults reporting participation in drinking games on at least one day in the past 30 days, 2015 MNSASU		
		2015
Age	Ages 18 thru 24	20.8%
	Ages 25 thru 44	4.9%
	Ages 45 thru 64	1.1%
	Ages 65 and over	1.4%
Race/Ethnicity	African American or Black	*
	American Indian	*
	Asian American/ Pacific Islander	5.3%
	Hispanic/Latino	2.8%
	Bi-Racial/Multi-Racial	*
	White	5.0%
Gender	Male	5.4%
	Female	4.1%
	Total	4.8%
Sexual Orientation	Lesbian, Gay, and Bisexual	6.3%
	Heterosexual	4.9%



Self-Reported Impaired Driving

About the Indicator

As a depressant, alcohol use interferes with coordination, judgment and reaction time. The following data sources contain reported behavior of impaired driving or riding with an impaired driver. Penalties related to impaired driving are included in the upcoming section. Adult is defined as persons aged 18 and older. Youth include 9th and 11th graders.

Data Source(s)

Adults

Behavioral Risk Factor Surveillance System (BRFSS)

Youth

Minnesota Student Survey (MSS)

Section Summary

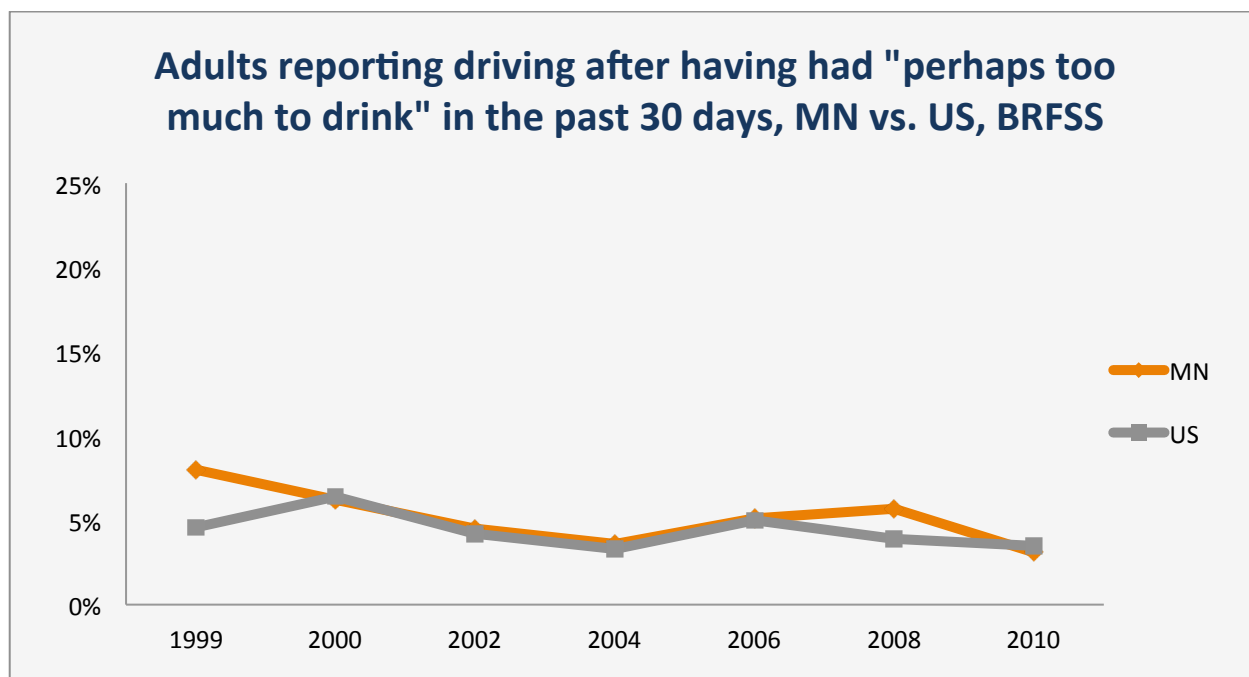
Adults

- From 1999 to 2010, rates of reported impaired driving among Minnesota adults were similar to national rates—both rising after 2004, but with an overall decline since 1999.

Youth

- Impaired driving among 9th graders has decreased steadily since 1998.

Data Source: BRFSS

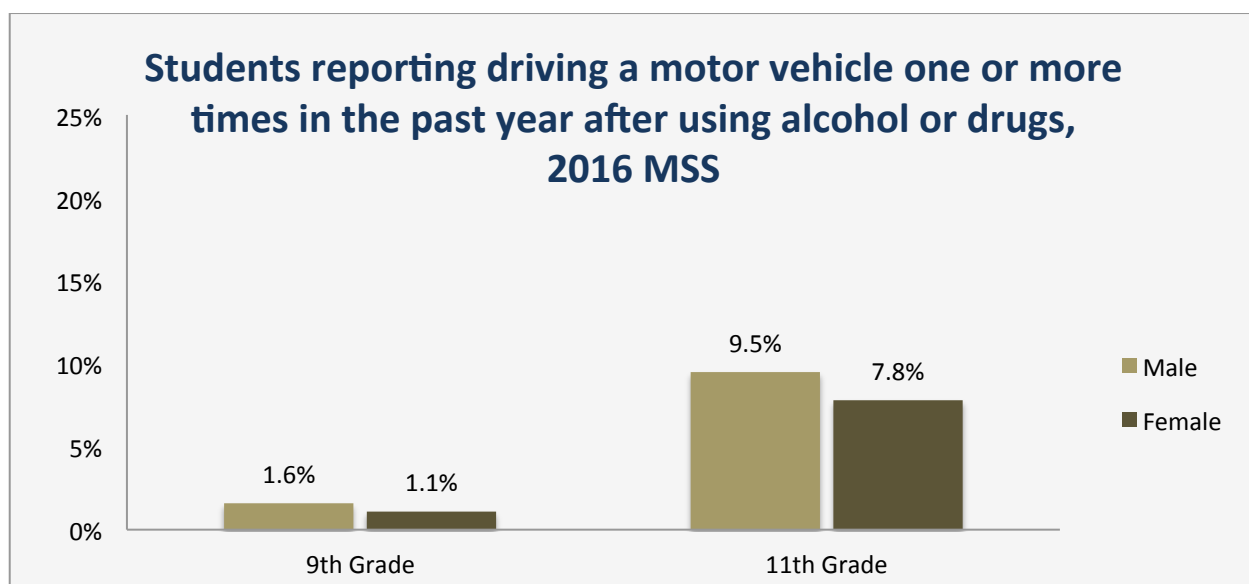
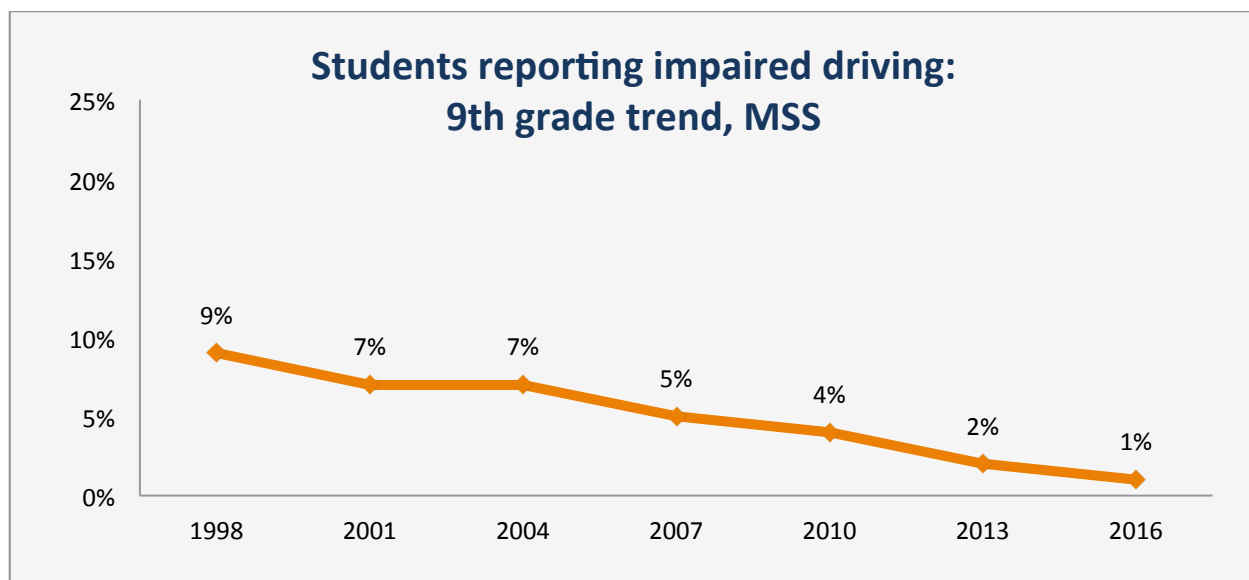


Adults Reporting Driving After Having Had "Perhaps Too Much to Drink" in the Past 30 Days, BRFSS

	1999	2000	2002	2004	2006	2008	2010
MN	8.0%	6.2%	4.5%	3.6%	5.1%	5.7%	3.1%
US	4.6%	6.4%	4.2%	3.3%	5.0%	3.9%	3.5%
MN:US*	1.7	0.97	1.07	1.09	1.02	1.46	0.89

NOTE: This question was not included in the survey after 2010.

Data Source: MSS



**Students Reporting Driving a Motor Vehicle 1 or More Times in the Last 12 Months
After Using Alcohol or Drugs, 2016 MSS**

	Male		Female		Total	
	N (#)	%	N (#)	%	N (#)	%
9th Grade	315	1.6%	224	1.1%	539	1.3%
11th Grade	1545	9.5%	1292	7.8%	2837	8.7%
Total	1860	5.1%	1516	4.1%	3376	4.6%

Alcohol in Minnesota: Consequences

Fatal Alcohol-Related Motor Vehicle Crashes

About the Indicator

As a depressant, alcohol use interferes with coordination, judgment and reaction time and can have fatal consequences. Driving while impaired puts the driver and others at risk.

The following measures report the number of fatal alcohol related crashes and number of deaths in which at least one driver, pedestrian, or cyclist has been drinking.

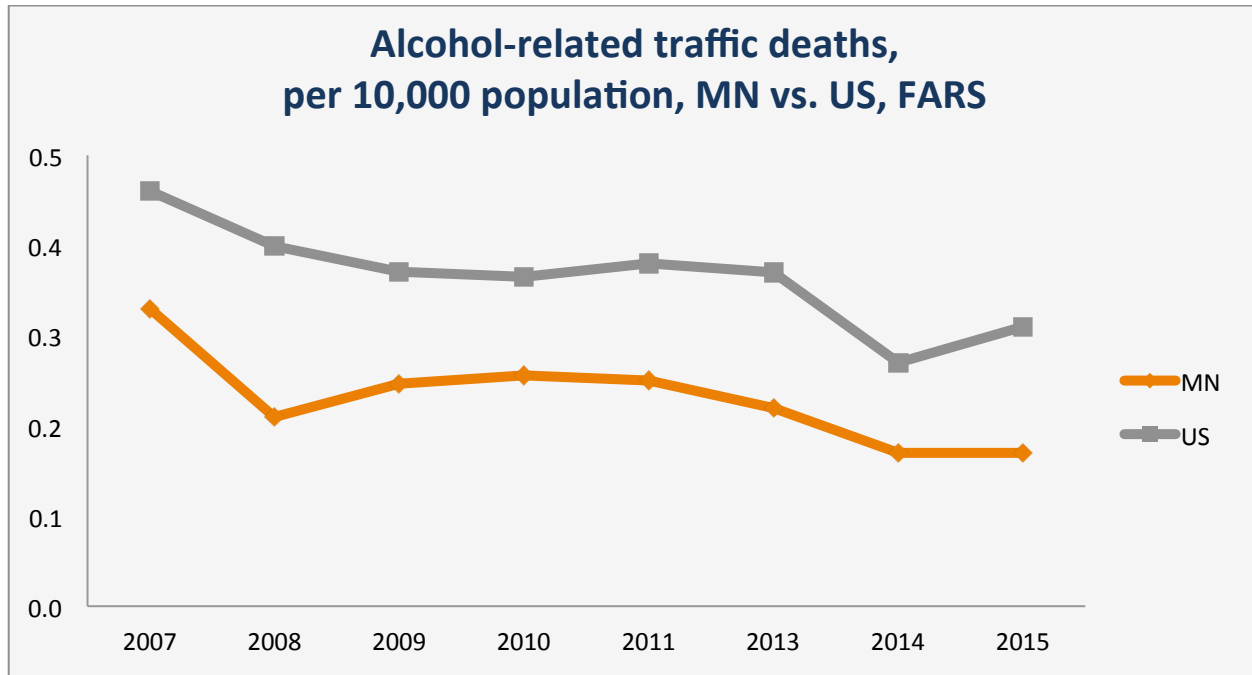
Data Source(s)

Minnesota Office of Traffic Safety (OTS), and US Fatality Analysis Reporting System (FARS)

Section Summary

- About one-third of all fatal motor vehicle crashes in Minnesota are alcohol-related.
- Minnesota consistently has had a lower rate of fatal alcohol-related traffic crashes than the US as a whole, although rates are converging.
- In 2015, of 379 Minnesotans killed in motor vehicle crashes; 144 deaths were alcohol-related.
- The number of drivers killed in alcohol-related crashes generally decreased in the early 2000s, and then remained steady for about 4 years before rising again in 2015.

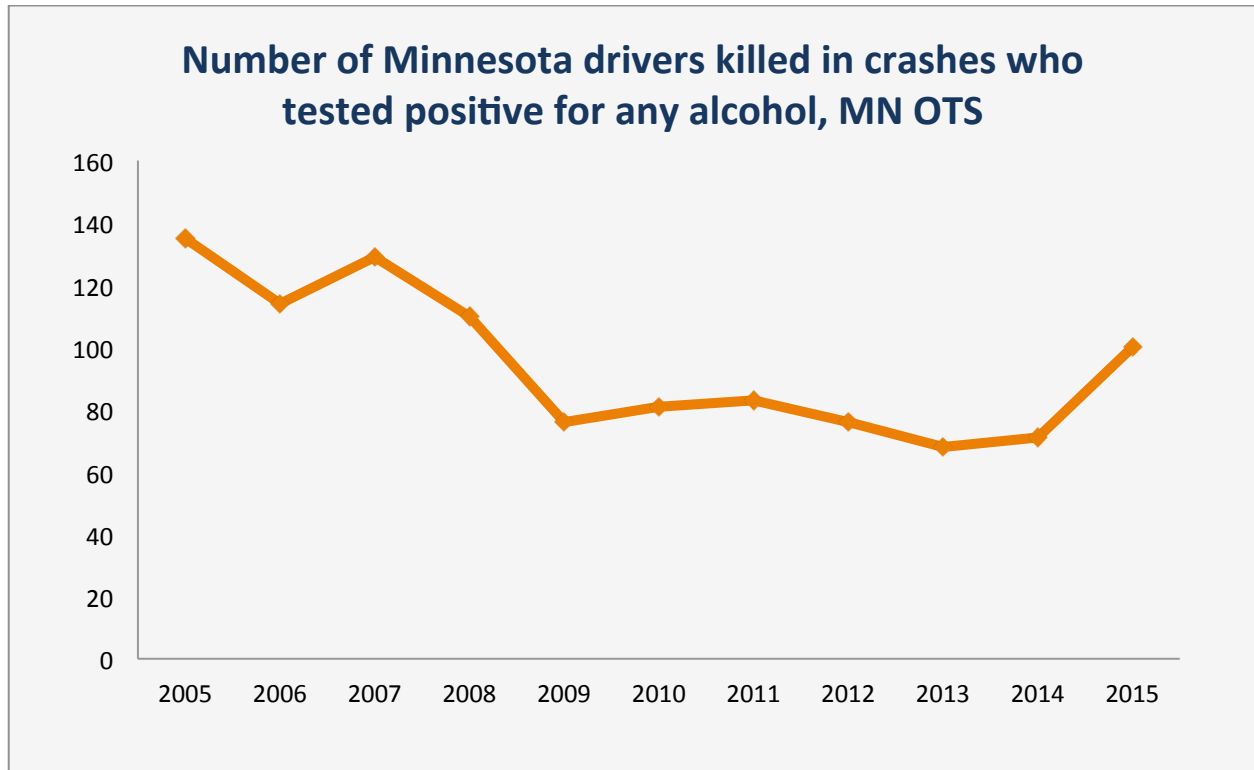
Data Source: FARS



Alcohol-Related Traffic Deaths (0.08 BAC or higher) per 10,000 Population

Minnesota	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of persons killed in fatal alcohol-related crashes	173	132	141	131	136	131	117	92	137
Percent of persons killed in all fatal crashes in MN	34%	29%	34%	32%	37%	33%	30%	28%	33%
Rate per 10,000 population	0.33	0.25	0.21	0.25	0.26	0.25	0.22	0.17	0.17
United States	2007	2008	2009	2010	2011	2012	2013	2014	2015
Number of persons killed in fatal alcohol-related crashes	13,841	11,711	12,149	11,462	11,388	11,960	11,615	8,527	9,982
Percent of persons killed in all fatal crashes in US	32%	31%	36%	35%	35%	35%	35%	28%	31%
Rate per 10,000 population	0.46	0.39	0.40	0.37	0.37	0.38	0.37	0.27	0.31
	2007	2008	2009	2010	2011	2012	2013	2014	2015
MN:US	0.72	0.64	0.53	0.67	0.70	0.65	0.54	0.63	0.54

Data Source: Minnesota Office of Traffic Safety

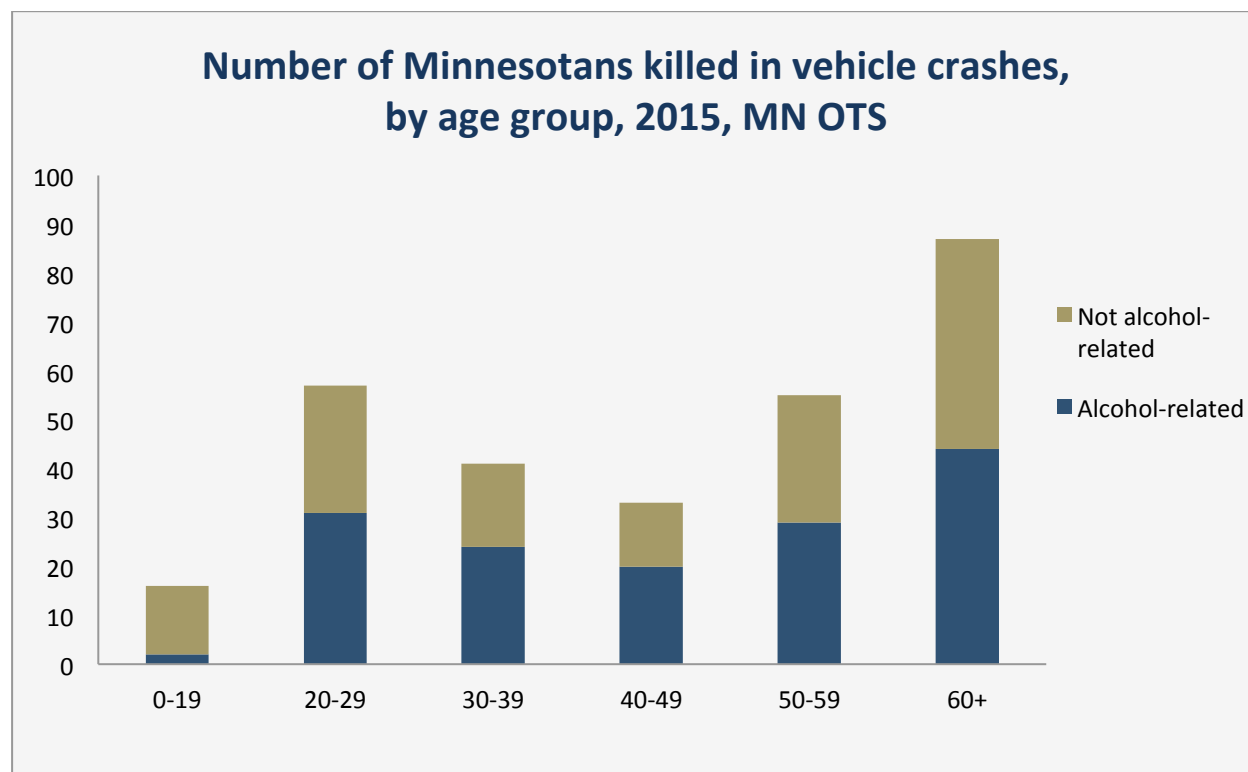


Number of Minnesota Drivers Killed in Crashes, by Blood Alcohol Content

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Drivers who tested 0.01 or higher (any alcohol)	135	114	129	110	76	81	83	76	68	71	100
Drivers who tested over the legal limit (0.08+)	118	99	114	95	63	75	72	71	58	63	78

Alcohol: Consequences

Data Source: Minnesota Office of Traffic Safety

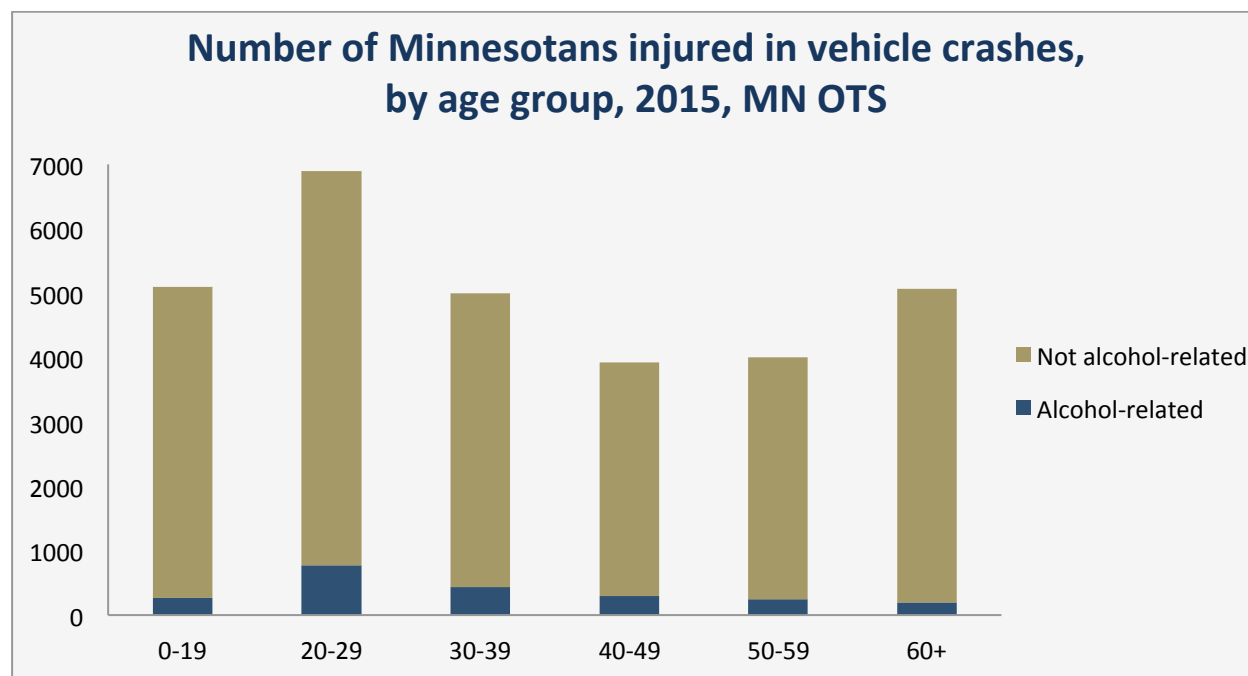


Number of Minnesotans Killed in All Crashes and in Alcohol-Related Crashes (0.01 BAC or Higher), by Age Group

Age Group	2010		2011		2012		2013		2014		2015	
	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related
0-19	61	12	49	17	49	6	47	10	28	4	16	2
20-29	90	48	86	52	89	37	77	41	71	32	57	31
30-39	52	20	33	11	53	29	46	23	55	20	41	24
40-49	53	17	41	15	49	19	41	12	46	19	33	20
50-59	57	18	54	20	55	21	63	20	67	23	55	29
60+	98	11	105	21	99	17	112	11	94	13	87	44

Alcohol: Consequences

Data Source: Minnesota Office of Traffic Safety



Number of Minnesotans Injured in All Crashes and in Alcohol-Related Crashes (0.01 BAC or Higher), by Age Group

Age Group	2010		2011		2012		2013		2014		2015	
	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related	All Crashes	Alcohol-Related
0-19	6,053	353	5,504	280	5,354	340	5,135	297	4,842	227	5,095	263
20-29	7,469	926	7,215	913	6,890	1,016	7,127	799	6,695	765	6,894	774
30-39	4,782	435	4,744	429	4,460	490	5,034	464	4,862	368	4,994	430
40-49	4,468	355	4,405	344	4,091	344	4,288	306	4,148	282	3,922	297
50-59	3,855	248	3,847	241	3,872	263	4,231	259	4,024	238	4,005	246
60+	3,841	134	3,857	143	4,018	172	4,201	149	4,186	130	5,071	193

Impaired Driving Violations

About the Indicator

As a depressant, alcohol use interferes with coordination. Driving with a blood alcohol concentration (BAC) of 0.08% or higher (0.04% or higher for drivers operating a commercial vehicle) is a violation of Minnesota Statute 169.A. Violations for driving while intoxicated (DWIs), also called driving under the influence (DUIs), are entered directly on driver license records maintained by the Minnesota Department of Public Safety. DWIs are also reported to the federal Department of Justice by the Minnesota Bureau of Criminal Apprehension as part of its Uniform Crime Reports (UCR).

In 2015, the Minnesota Office of Traffic Safety reported 22,790 DWIs. According to Uniform Crime Reports, there were 20,995 arrests. The discrepancy is due to different reporting procedures for the two systems. The higher number is more accurate, as it is taken from driver license records. UCR counts are low because not all law enforcement agencies report all their DWI arrests to the Bureau of Criminal Apprehension, and because the counts include only arrests where the most serious offense was the DWI. All states make comparable UCR reports to the US Department of Justice; thus, the UCR DWI counts can be used to compare Minnesota statistics to those of the entire US.

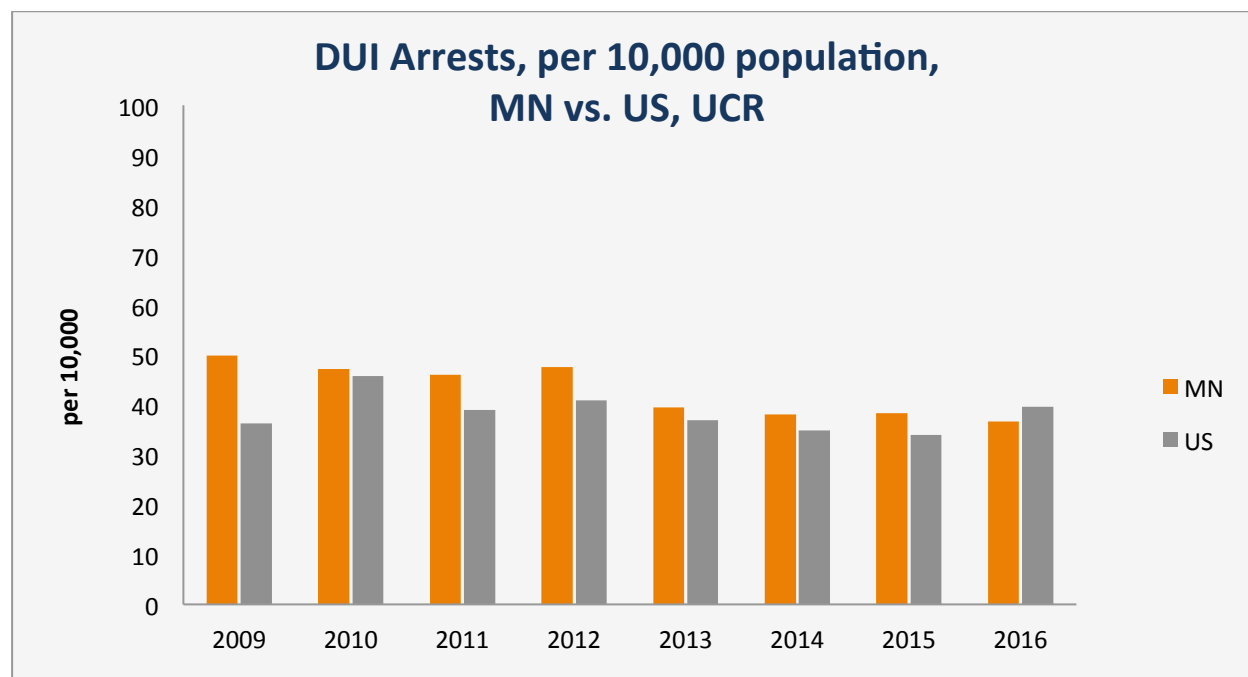
Data Source(s)

The following statistics on gender and age groups of those arrested for DWI are from the Office of Traffic Safety of the Minnesota Department of Public Safety, and are derived from entries on Minnesota driver license records. The statistics on the total number of DWI arrests, the rate per 1,000 population, juvenile versus adult, race and ethnicity, are from the Bureau of Criminal Apprehension's Uniform Crime Reports (UCR).

Section Summary

- DUI arrests are more prevalent among males, and are most prevalent among individuals age 20-24, compared to other age groups.
- Minnesota's DUI arrest rate has decreased steadily since 2006, finally falling below national DUI arrest rates in 2016.

Data Source: UCR

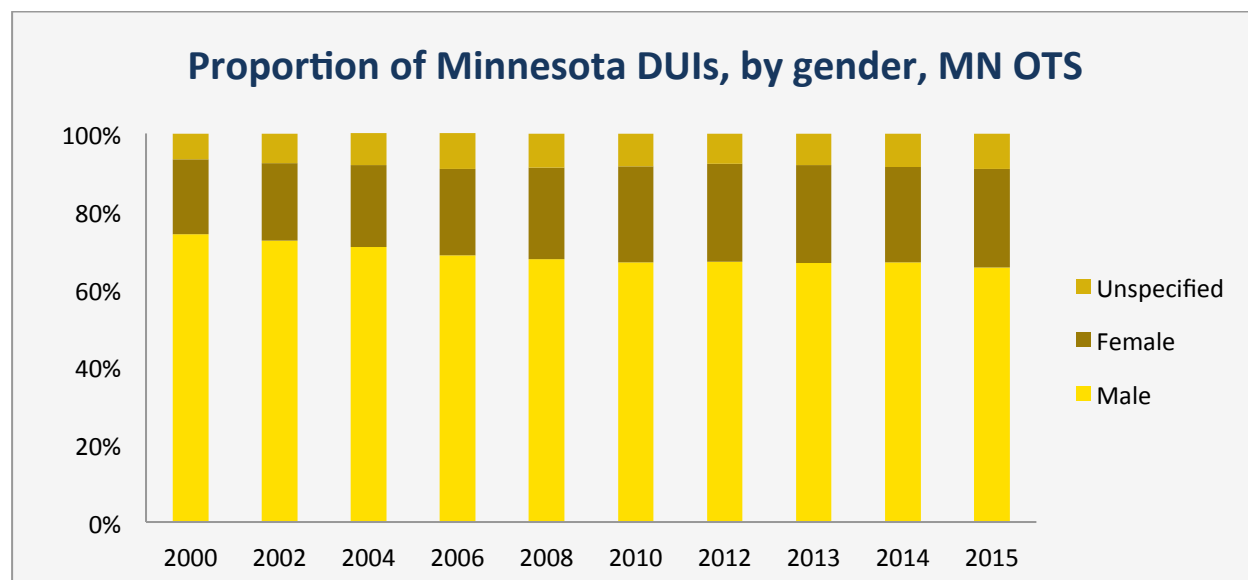


Arrests for DUI per 10,000 Population

Minnesota*	2009	2010	2011	2012	2013	2014	2015	2016
DUI arrests	26,240	24,978	24,548	25,537	21,409	20,656	20,995	19,196
Rate per 10,000 population	49.8	47.1	46	47.5	39.5	38.1	38.3	36.6
United States	2009	2010	2011	2012	2013	2014	2015	2016
DUI arrests	1,112,384	1,412,223	1,215,077	1,282,957	1,166,824	1,117,852	1,089,171	1,017,808
Rate per 10,000 population	36.2	45.7	39	40.9	36.9	34.8	33.9	39.6
	2009	2010	2011	2012	2013	2014	2015	2016
MN:US	1.4	1	1.18	1.16	1.07	1.10	1.13	1.08

* St. Paul Police Department does not submit Part II arrest data to the BCA. Includes only arrests where the most serious offense was the Driving Under the Influence offense

Data Source: MN Office of Traffic Safety

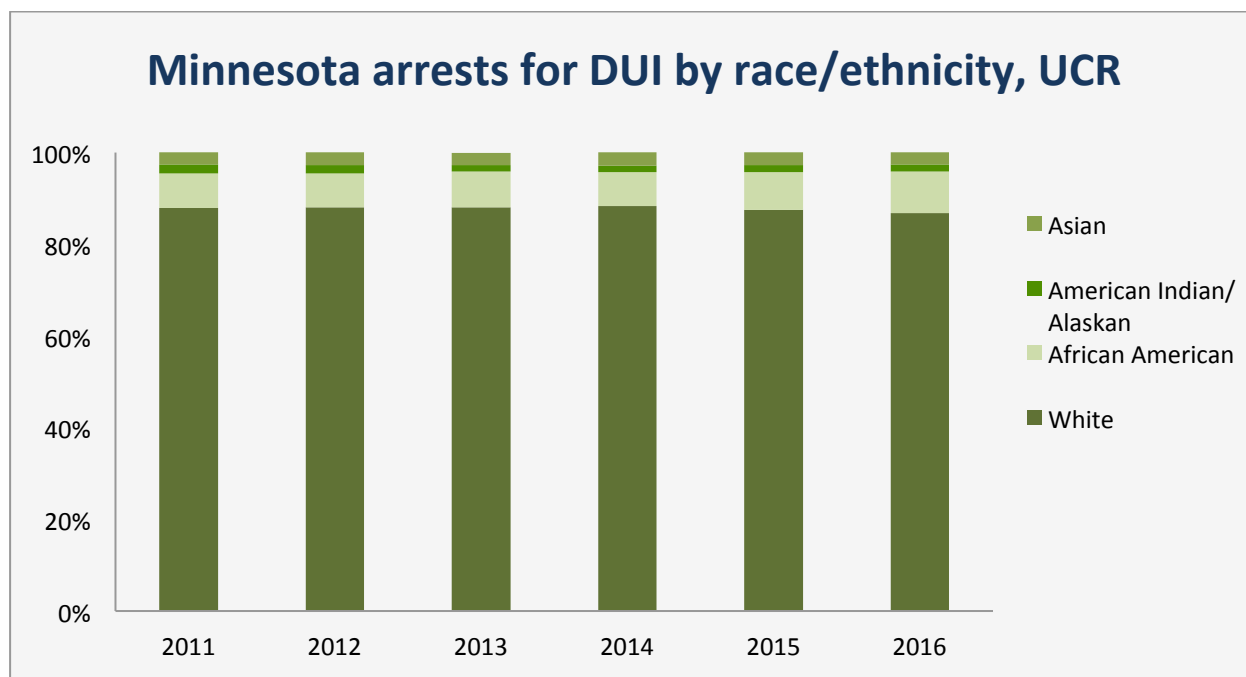


Minnesota Arrests for DUI, by Gender and Age: Violator Data

		2010		2011		2012		2013		2014		2015	
		N (#)	%	N (#)	%	N (#)	%	N (#)	%	N (#)	%	N (#)	%
Gender	Male	19,982	66.8%	19,851	67.8%	19,035	67.0%	17,130	66.6%	16,908	66.9%	16,422	65.5%
	Female	7,410	24.8%	19,851	24.9%	7,156	25.2%	6,497	25.3%	6,189	24.5%	6,368	25.4%
Age	0-14	4	0.0%	1	0.0%	4	0.0%	1	0.0%	0	0.0%	0	0.0%
	15-19	1,294	4.3%	1,154	3.9%	1,117	3.9%	868	3.4%	783	3.1%	787	3.1%
	20-24	6,821	22.8%	6,505	22.2%	6,413	22.6%	5,478	21.3%	5,110	20.2%	4,908	19.6%
	25-29	5,776	19.3%	5,837	20.0%	5,421	19.1%	5,023	19.5%	4,842	19.2%	4,881	19.5%
	30-34	3,934	13.1%	3,895	13.3%	3,950	13.9%	3,766	14.6%	3,592	14.2%	3,553	14.2%
	35-39	2,918	9.8%	2,778	9.5%	2,627	9.2%	2,596	10.1%	2,711	10.7%	2,789	11.1%
	40-44	2,671	8.9%	2,671	9.1%	2,665	9.4%	2,236	8.7%	2,267	9.0%	2,117	8.5%
	45-49	2,565	8.6%	2,393	8.2%	2,212	7.8%	1,950	7.6%	1,864	7.4%	1,873	7.5%
	50-54	1,914	6.4%	1,904	6.5%	1,839	6.5%	1,779	6.9%	1,799	7.1%	1,797	7.2%
	55-59	1,086	3.6%	1,084	3.7%	1,090	3.8%	1,041	4.0%	1,175	4.7%	1,226	4.9%
60-64	543	1.8%	608	2.1%	613	2.2%	557	2.2%	611	2.4%	609	2.4%	
65-69	234	0.8%	231	0.8%	271	1.0%	245	1.0%	318	1.3%	290	1.2%	
70-74	98	0.3%	120	0.4%	135	0.5%	110	0.4%	115	0.5%	121	0.5%	
75+	60	0.2%	73	0.3%	61	0.2%	69	0.3%	71	0.3%	74	0.3%	

Note: In this table, for example, 69.7% for males in 2005 indicates that 69.7% % of all DUI arrests were of males. It does not mean that 69.7% of all males were arrested for DUI. Percentages do not total to 100%—if a person arrested for impaired driving does not have a Minnesota driver’s license, then a record is created, but the new record does *not* show the person’s gender.

Data Source: UCR



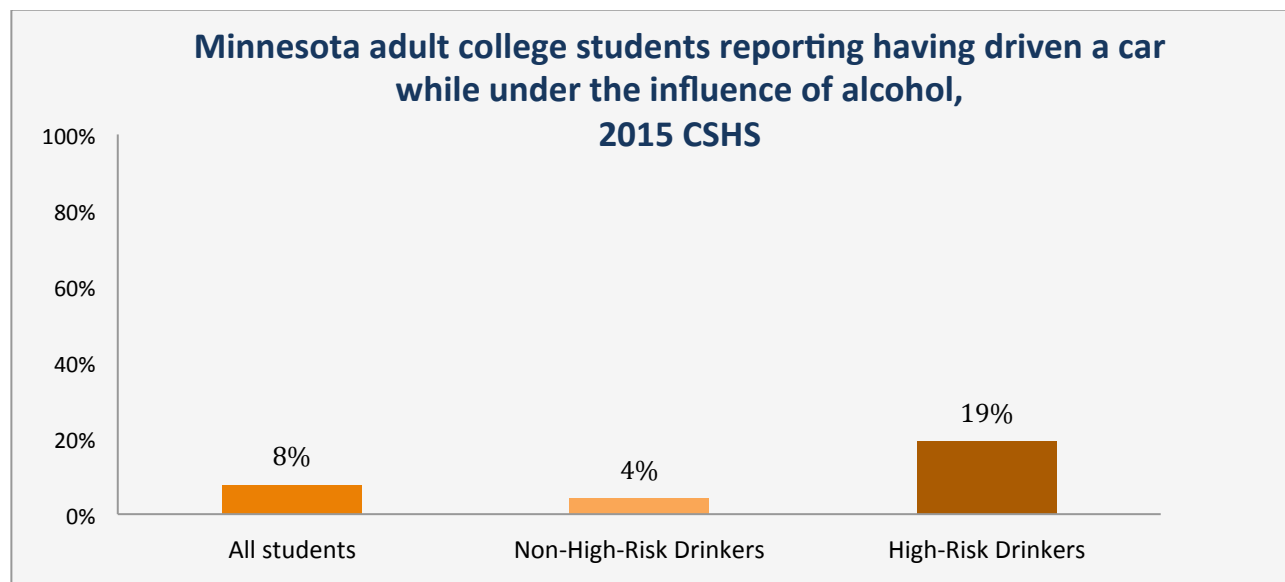
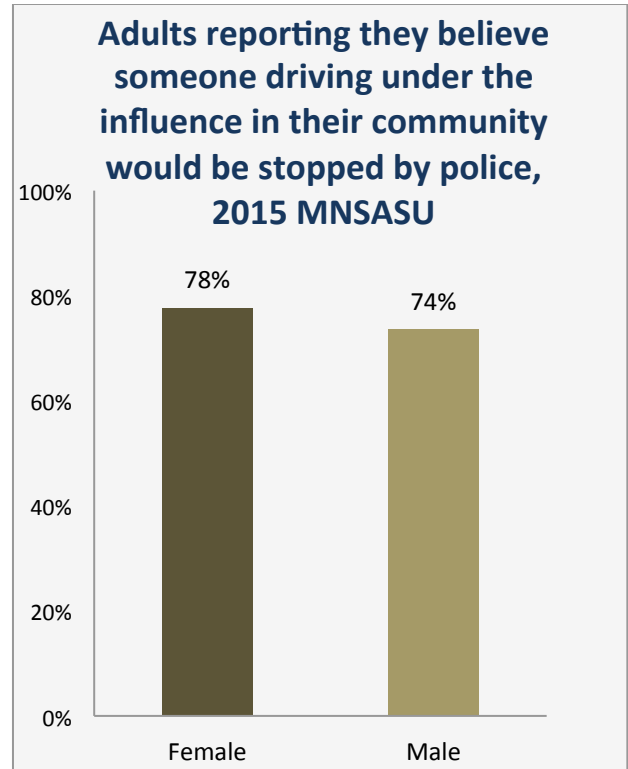
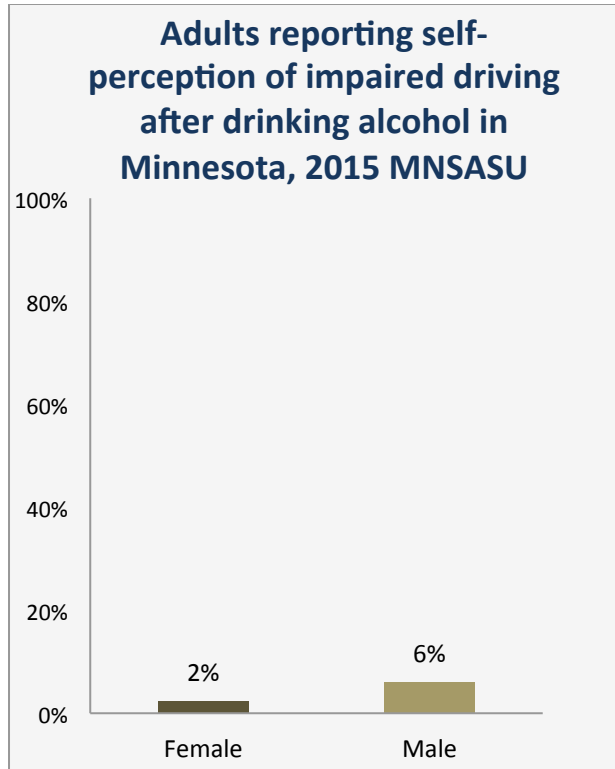
Minnesota Arrests for DUI by Age and Race*

		2011		2012		2013		2014		2015		2016	
		N (#)	%	N (#)	%	N (#)	%	N (#)	%	N (#)	%	N (#)	%
Age	Juvenile	283	1.2	260	1.1	205	1.0	193	0.9	155	0.7	151	0.8
	Adult	24,265	98.8	23,277	98.9	21,181	99.0	20,463	99.1	20,862	99.3	20,077	99.2
Race	White	21,566	87.9	20,725	88.1	18,824	88.0	18,257	88.4	18,394	87.5	17,425	86.8
	African American	1,867	7.6	1,738	7.4	1,669	7.8	1,513	7.3	1,717	8.2	1,805	9.0
	American Indian/Alaskan	458	1.9	407	1.7	306	1.4	293	1.4	309	1.5	314	1.6
	Asian	657	2.7	667	2.8	587	2.7	593	2.9	597	2.8	528	2.6

*St. Paul Police Department does not submit Part II arrest data to the BCA. Includes only arrests where the most serious offense was the Driving Under the Influence offense. Juveniles are defined as persons aged 17 and under; adults are defined as persons aged 18 and older. Note: In this table, for example, 1.9% for juveniles in 2009 indicates that 1.9% of all DUI arrests were of juveniles. It does not mean that 1.9% of all juveniles were arrested for DUI.

Alcohol: Consequences

Data Source: CSHS and MNSASU



NOTE: High-risk drinkers are defined as adult students who have engaged in binge-drinking (5 or more drinks in one sitting) in the past 2 weeks.

Alcohol-Related Negative Consequences

About the Indicator

The number and severity of negative consequences experienced by drinkers may have an effect on consumption patterns. The College Student Health Survey, administered by the University of Minnesota to 17 colleges and universities in Minnesota, asks adult students about any negative consequences they may have experienced in the past year due to alcohol use. The available negative consequence responses on the survey are:

- Arrested for a DWI/DUI
- Criticized by Someone I Know
- Damaged Property, Pulled Fire Alarm, etc.
- Done Something I Later Regretted
- Driven a Car While Under the Influence
- Got Into an Argument or Fight
- Got Nauseated or Vomited
- Had a Hangover
- Had a Memory Loss
- Have Been Taken Advantage of Sexually
- Have Taken Advantage of Another Sexually
- Hurt or Injured
- Missed a Class
- Performed Poorly on a Test or Important Project
- Seriously Thought About Suicide
- Seriously Tried to Commit Suicide
- Thought I Might Have a Drinking Problem
- Tried Unsuccessfully to Stop Using
- Trouble with Police, Residence Hall, or Other University/College Authorities

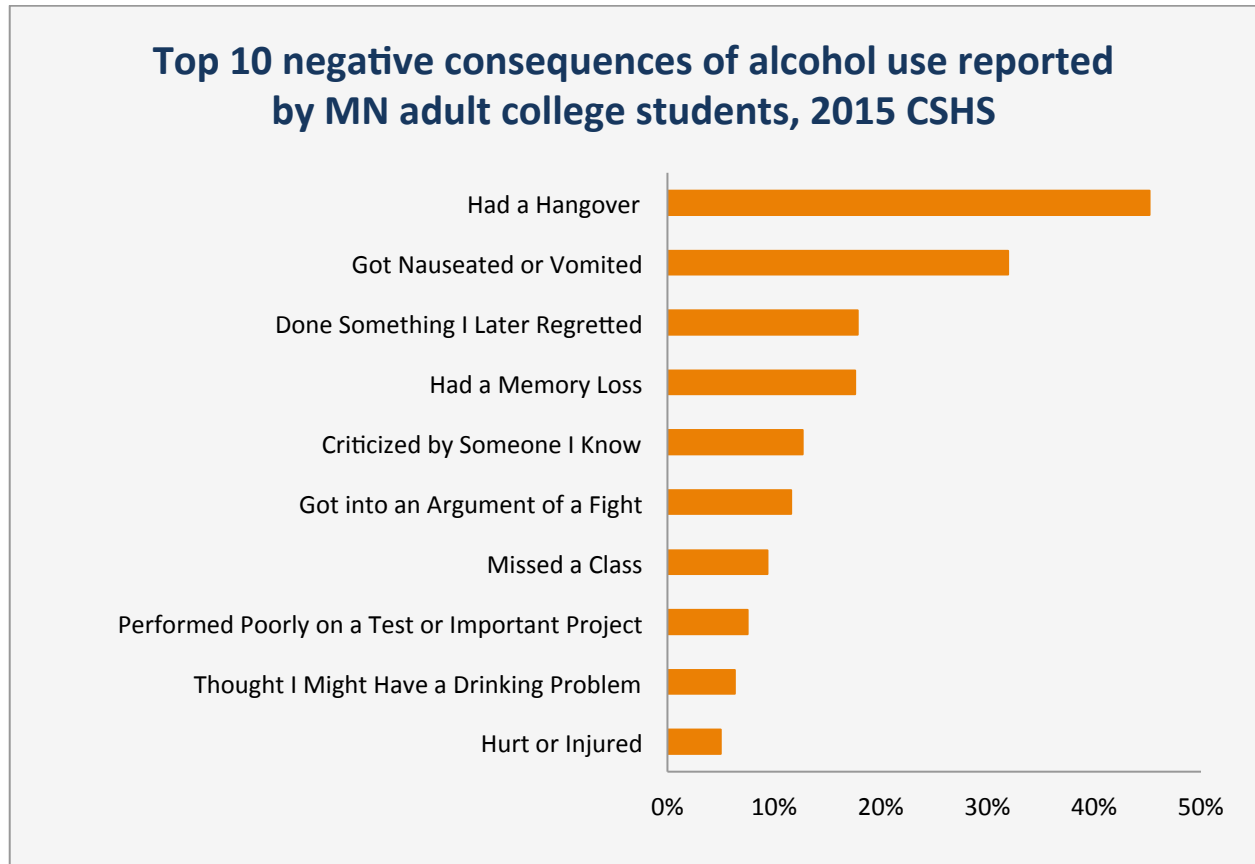
Data Source(s)

College Student Health Survey (CSHS)

Section Summary

- The most frequently reported negative consequence was a hangover.
- While not in the top 10 negative consequences, driving after drinking was reported by 7.6% of students.

Data Source: CSHS



Alcohol-Related Boating Citations

About the Indicator

In Minnesota, the Department of Natural Resources conservation officers and county sheriffs are charged with enforcing boating laws and regulations. Operating a motorboat while under the influence of alcohol, a controlled substance or other illegal chemical is unlawful. As on the roadways, on-water enforcement officers may administer sobriety and/or chemical tests to determine the influence of alcohol on the operator. The alcohol concentration for impaired operation is now 0.08.

As boating is a recreational activity, boating citation levels demonstrate a more elastic response to circumstances such as weather, water levels, and gas prices; therefore, boating citation levels vary more widely than citations for road vehicles.

These data are from all reporting agencies combined.

Citations do not include tickets for underage consumption, or those for which BAC was found to be under 0.08.

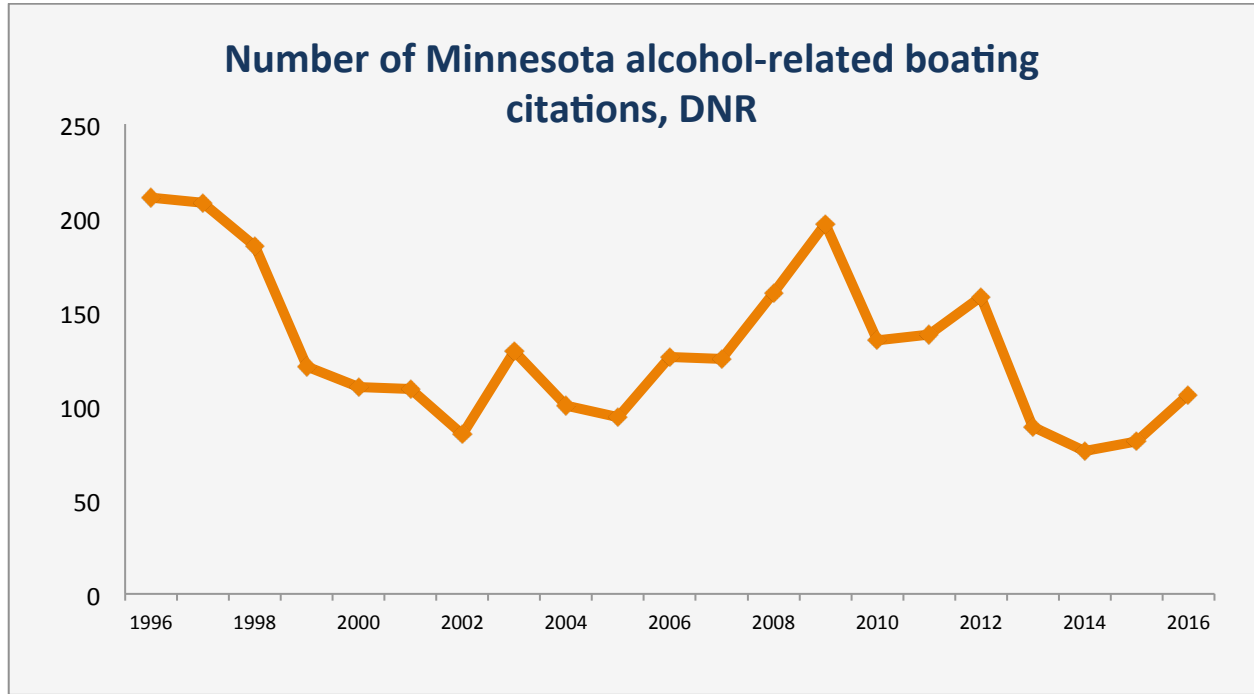
Data Source(s)

Minnesota Department of Natural Resources, Boat & Water Safety Section (obtained by request)

Section Summary

- The number of alcohol-related boating citations in Minnesota declined between 2007 and 2014, but then rose again in 2015 and 2016.

Data Source: Boat & Water Safety Section, DNR



Number of Minnesota Alcohol-Related Boating Citations

	2007	2008	2008	2009	2010	2011	2012	2013	2014	2015	2016
Number of Citations	125	160	160	197	135	138	158	89	76	81	106

Liquor Law Arrests

About the Indicator

With the exception of drunkenness and driving under the influence (DUI), all state or local liquor law violations are placed in this class. Liquor laws include manufacturing, selling, transporting and furnishing, as in maintaining unlawful drinking places. Bootlegging, operating a still, furnishing liquor to a minor and the using of a vehicle for illegal transportation of liquor are also included.

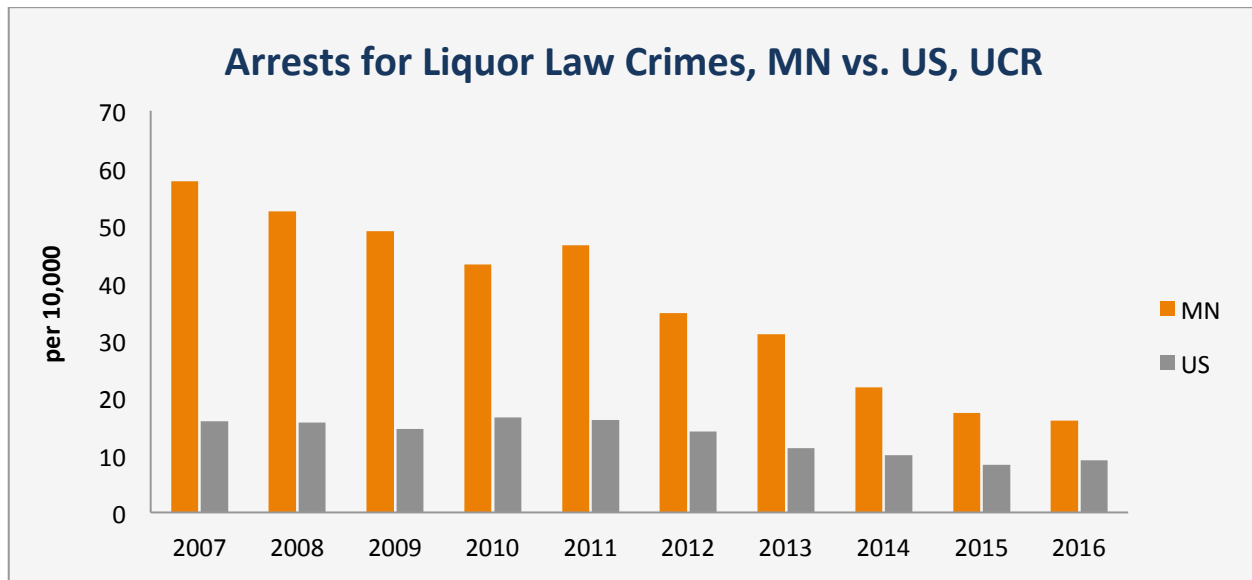
Data Source(s)

Uniform Crime Reports (UCR)

Section Summary

- Minnesota's liquor law arrest rate has been consistently higher than the U.S. average, but has been decreasing.
- The percent of liquor law arrestees in Minnesota who are juveniles has hovered near 21% for the last 5 years.

Data Source: UCR



Arrests for Liquor Law Crimes per 10,000 Population

Minnesota*	2008	2009	2010	2011	2012	2013	2014	2015	2016
Liquor law arrests	27,458	25,784	23,060	24,832	18,667	16,858	11,841	9,889	8,405
Rate per 10,000 population	52.5	49	43.2	46.6	34.7	31.1	21.8	17.3	16.0
United States	2008	2009	2010	2011	2012	2013	2014	2015	2016
Liquor law arrests	478,800	447,496	512,790	500,648	441,532	354,872	321,125	266,250	234,899
Rate per 10,000 population	15.7	14.6	16.6	16.1	14.1	11.2	10.0	8.3	9.1
	2008	2008	2010	2011	2012	2013	2014	2015	2016
MN:US	3.34	3.36	2.6	2.89	2.46	2.78	2.19	2.08	1.76

St. Paul Police Department does not submit Part II arrest data to the BCA. Includes only arrests where the most serious offense was the liquor law offense.

Arrests for Liquor Law Crimes in Minnesota by Gender, Age, and Race/Ethnicity

		2012		2013		2014		2015		2016	
		N (#)	%	N (#)	%	N (#)	%	N (#)	%	N (#)	%
Age	Juvenile	3,979	21.3	2,799	19.8	2,555	21.6	2,088	21.1	1,900	22.6
	Adult	14,688	78.7	11,347	80.2	9,286	78.4	7,801	78.9	6,505	77.4
Race	White	14,305	76.6	10,854	76.7	9,480	80.1	8,003	80.9	6,987	83.1
	African American	2,859	15.3	2,228	15.8	1,552	13.1	1,186	12.0	923	11.0
	Indian/Alaskan	1,073	5.7	819	5.8	485	4.1	494	5.0	338	1.9
	Asian	430	2.0	245	1.7	194	1.6	204	2.1	157	4.0

Note: Persons of Hispanic ethnicity can be of any race. St. Paul Police Department does not submit Part II arrest data to the BCA.

Homicide

About the Indicator

Homicide is closely associated with alcohol abuse. The International Classification of Diseases (ICD-10) measures all homicides, many of which are attributable to substance abuse.

The Centers for Disease Control and Prevention (CDC) provides a measure of Alcohol-Attributable Fractions (AAFs). AAFs are based on direct observations about the relationship between alcohol and a given health outcome. The AAF for homicide for both males and females is 47%.

In order to provide comprehensive data on homicides, both measures are presented.

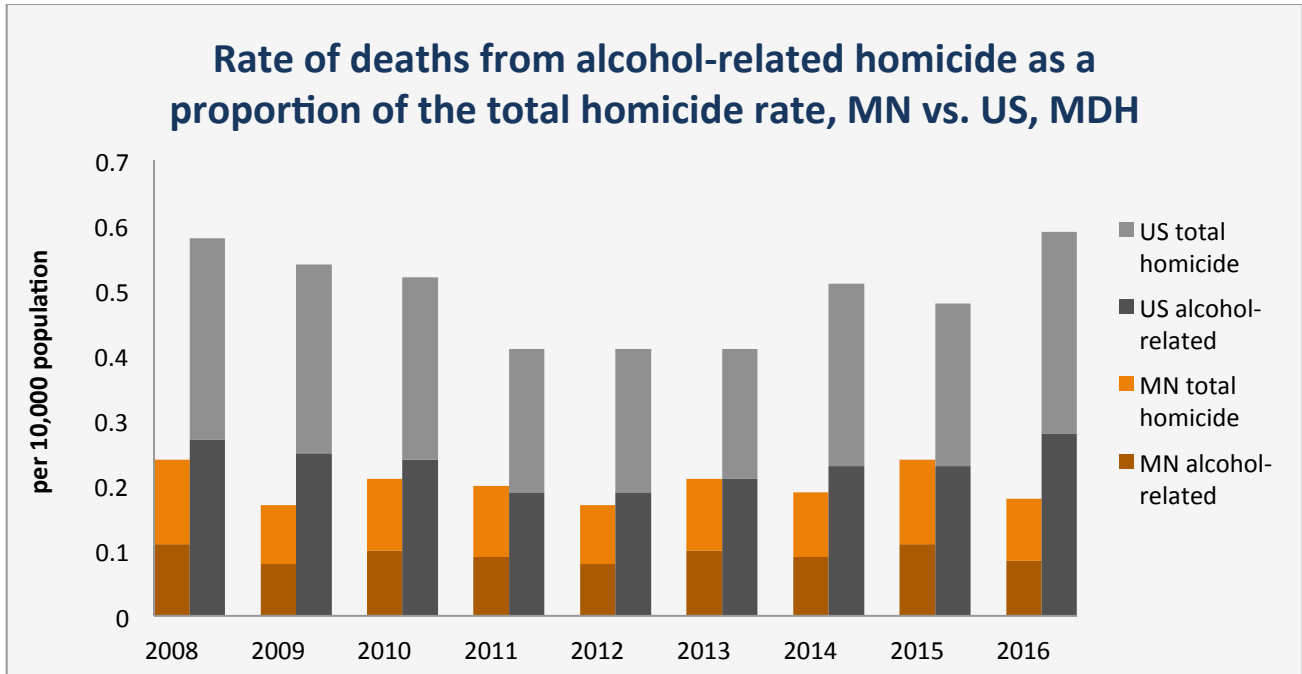
Data Source(s)

Minnesota Center for Health Statistics, Minnesota Department of Health, CDC Wonder Compressed Mortality Data, and the Alcohol-Related Disease Impact

Section Summary

- Minnesota's homicide rate is generally less than half that of the national average.
- The Minnesota homicide rate has stayed relatively stable between 2007 and 2016.

Data Source: Minnesota Department of Health and CDC Wonder



Deaths from Alcohol-Related* Homicide per 10,000 Population

Minnesota	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths from alcohol-related* Homicide	60	42	51	49	43	52	47	61	47
Rate per 10,000 population	0.11	0.08	0.10	0.09	0.08	0.10	0.09	0.11	0.08
United States	2008	2009	2010	2011	2012	2013	2014	2015	2016
Deaths from alcohol-related* Homicide	8,263	7,779	7,524	5,952	6,000	6,672	7,430	7,377	7,083
Rate per 10,000 population	0.27	0.25	0.24	0.19	0.19	0.21	0.23	0.23	0.28
MN:US**	0.43	0.31	0.40	0.47	0.42	0.48	0.37	0.48	0.29

*= Alcohol-related homicide data are calculated using the AAF for homicide, 47%

Alcohol in Minnesota: Intervening Variables

Perception of Harm

About the Indicator

The Minnesota Student Survey (MSS) has asked students about their perceptions of the harm from alcohol use since 2007, and the same question was then added to the Minnesota Survey on Adult Substance Use (MNSASU) in 2010.

Both the adults and students taking these surveys were asked how much they thought people risked harming themselves physically or in other ways if they have 5 or more alcoholic drinks in a row on one occasion, once or twice per week. The statistics presented here show the number and percent of respondents who answered either “great risk” or “moderate risk” of harm. The other two selection options on the survey were “slight risk” and “no risk.”

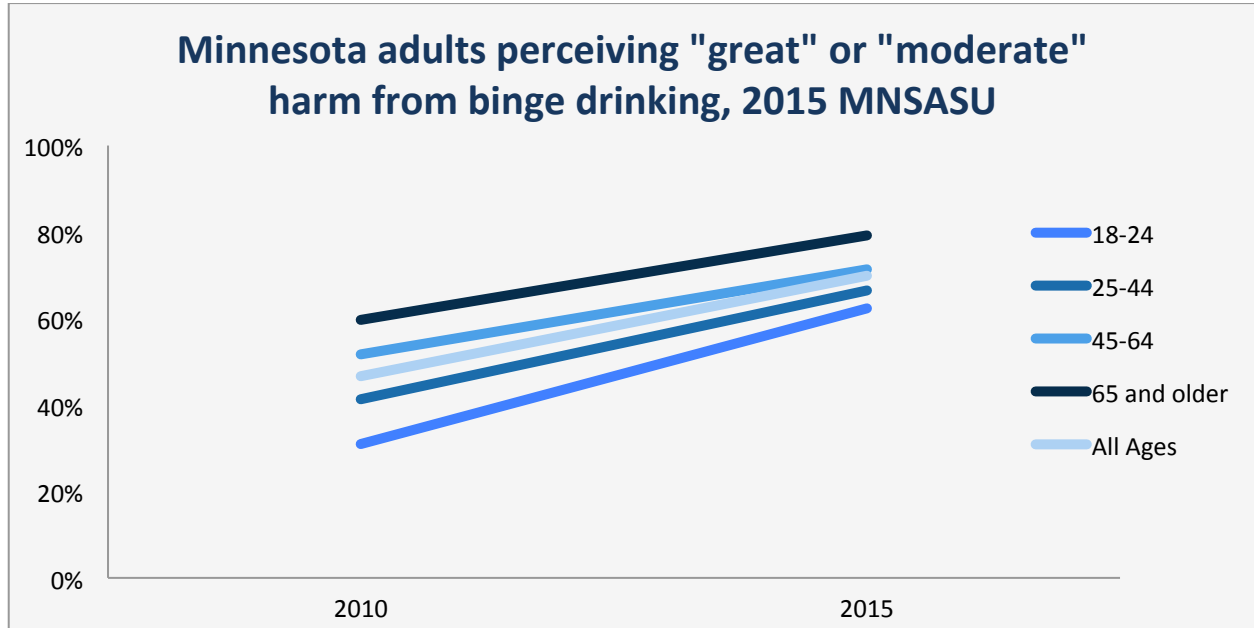
Data Source(s)

Minnesota Survey on Adult Substance Use (MNSASU), Minnesota Student Survey (MSS)

Section Summary

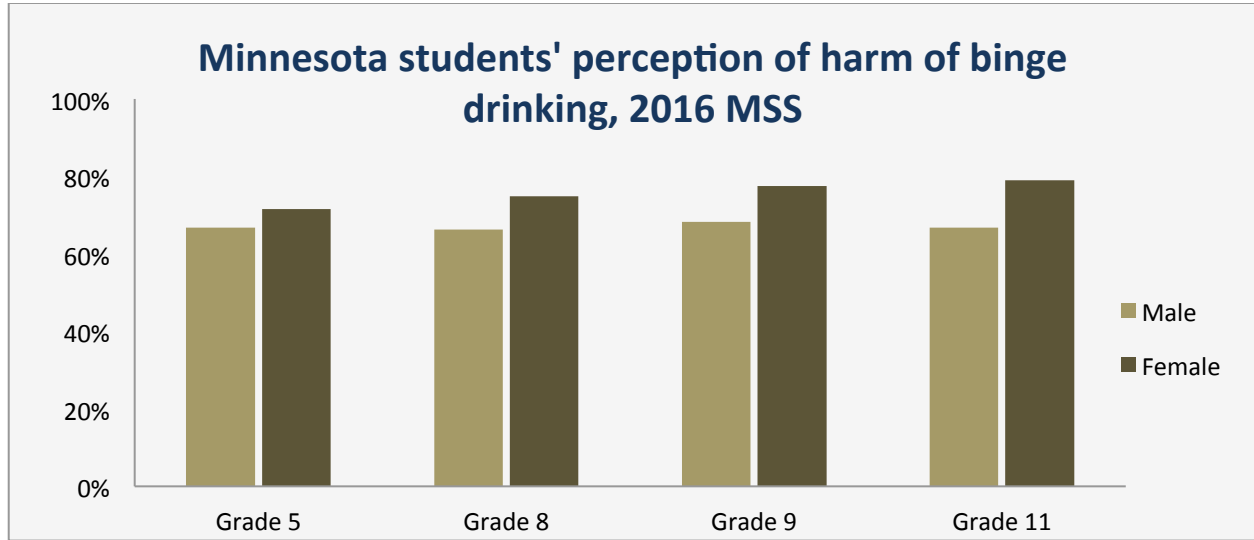
- Female students are more likely than male students to report that they believed people risked harming themselves by frequently binge drinking.
- Perception of harm from binge drinking is highest among 9th graders, but 11th grade girls are the most likely overall to perceive harm.

Data Source: MNSASU



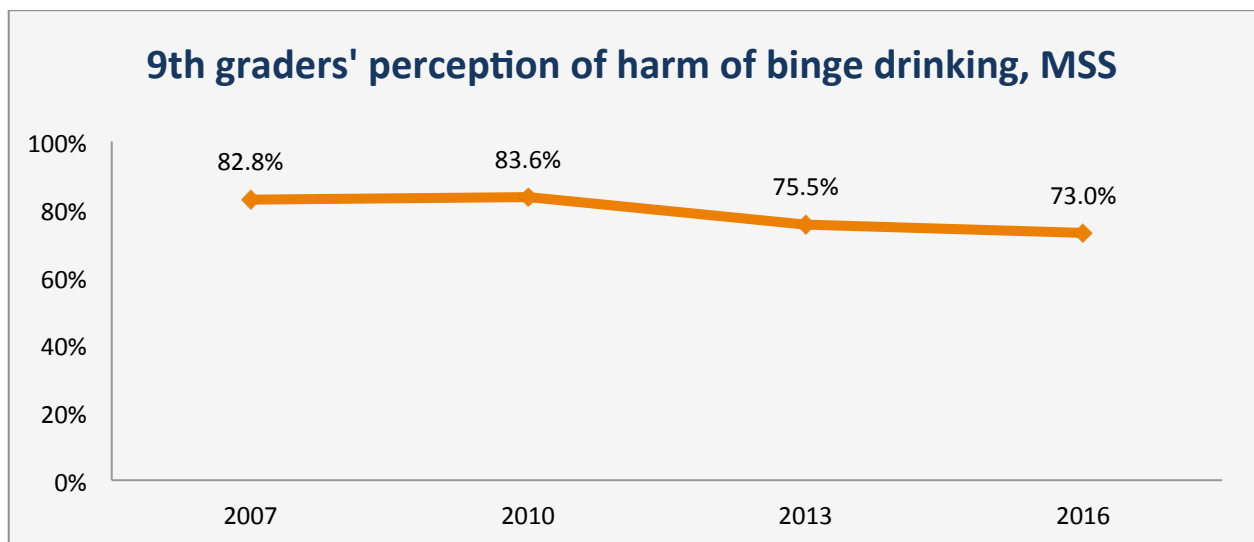
Percent of Minnesota adults reporting a "great" or "moderate" perception of harm of binge drinking once or twice a week, 2015 MNSASU		
		2015
Age	Ages 18 thru 24	62.4%
	Ages 25 thru 44	66.5%
	Ages 45 thru 64	71.3%
	Ages 65 and over	79.2%
Race/Ethnicity	African American or Black	75.9%
	American Indian	62.6%
	Asian American/ Pacific Islander	71.5%
	Hispanic/Latino	79.7%
	Bi-Racial/Multi-Racial	65.4%
	White	69.3%
Gender	Male	63.6%
	Female	75.8%
	Total	69.8%
Sexual Orientation	Lesbian, Gay, Bisexual, and Transgender	73.0%
	Heterosexual	70.0%

Data Source: MSS



Students reporting they think people put themselves at "great" or "moderate" risk of harming themselves physically or in other ways if they have five or more drinks of an alcoholic beverage once or twice a week, 2016 MSS

	Male		Female		Total	
	N (#)	%	N (#)	%	N (#)	%
Grade 5	12,567	66.8%	13,199	71.5%	25,766	65.1%
Grade 8	13,063	66.3%	14,949	74.8%	28,012	72.1%
Grade 9	13,047	68.3%	15,235	77.6%	28,282	75.5%
Grade 11	10,469	66.8%	12,705	79.0%	23,174	74.7%



Perception of Disapproval

About the Indicator

In 2010, students were asked how they thought their parents or guardians would feel if they drank alcohol. Students were also asked how they thought their parents or guardians would feel if they drank alcohol. The statistics presented here show the number and percent of students responding that their close friends would either “greatly disapprove” or “disapprove.” The other two selection options on the survey were “would not care at all” and “would approve.”

In the previous Minnesota Profile the students were asked how their close friends would feel about the same two questions, but if they had 5 or more alcoholic drinks in a row on one occasion, once or twice per week. If you would like to see those data, they are available on the SUMN.org website.

Data Source(s)

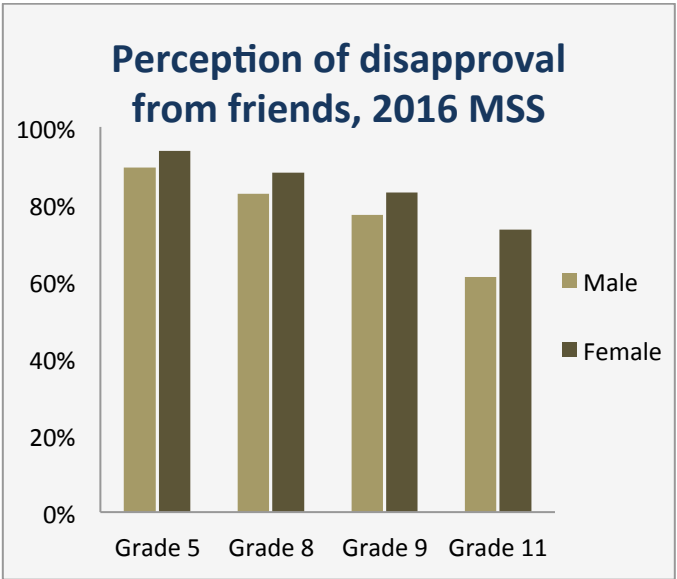
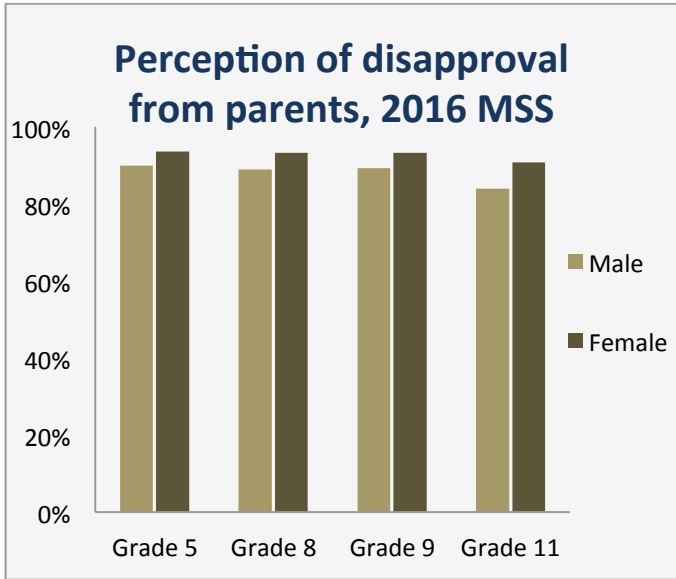
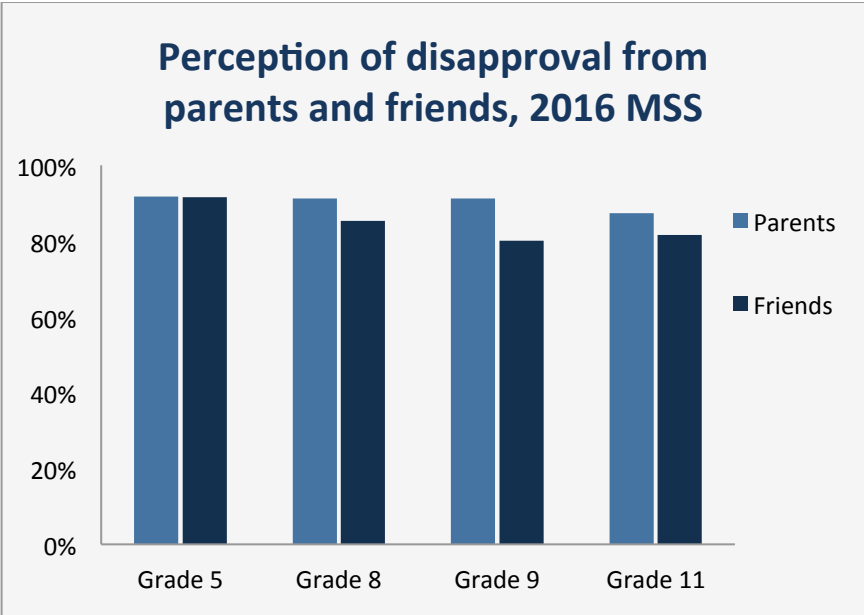
Minnesota Student Survey (MSS)

Section Summary

- Females were more likely than males to report that they believed their parents or guardians would disapprove of them drinking alcohol.
- Perception of parents’ or guardians’ disapproval decreased slightly with increasing grade level, while friends’ disapproval decreased substantially, for both male and female students.

Data Source: MSS

Perception of disapproval:
Students reported thinking their friends or parents would feel it was “very wrong” or “wrong” for them to have one or two drinks of an alcoholic beverage nearly every day



Social Norms and Use Perceptions

About the Indicator

Misperceptions about peer use may lead to skewed social norms: students who perceive their peers to be binge drinkers are more likely to be binge drinkers themselves. The association may work in both directions: those who binge-drink may be more likely to over-estimate others' binge drinking; and those who over-estimate levels of binge-drinking may be more likely to participate in the behavior themselves.

Adult college students were asked to estimate the percentage of students at their institution they thought had five or more drinks in a sitting, in the past 2 weeks (this behavior is referred to as "binge drinking" here). Comparisons were made between high-risk drinkers (those students that had engaged in binge drinking in the past 2 weeks); non-high-risk drinkers (those students that reported past 30-day alcohol use, but not binge drinking); and all students (drinkers and non-drinkers alike).

Data Source(s)

College Student Health Survey (CSHS)

Section Summary

- All categories of students over-estimated the percentage of students who binge drink.
- High-risk drinkers over-estimated the percentage of binge drinkers to be more than twice the actual rate.

Data Source: CSHS

