BURDEN OF RISKY ALCOHOL USE IN LA CROSSE COUNTY

September 2017 update

Changing the Culture
of RISKY DRINKING BEHAVIOR COALITION

ACKNOWLEDGEMENTS

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This Burden of Risky Alcohol Use is the final report for these projects, and we are grateful for the involvement of all of our many partners through the years. Many others not listed here were integral contributors to the Changing the Culture of Risky Drinking Behavior Coalition and subcommittees over the years, and we especially want to acknowledge the long-term support and partnership we have had with the La Crosse Police Department, currently led by Chief Ronald Tischer. We thank each and every team member, community supporter, and partner who helped make this project a success.

EXECUTIVE SUMMARY

Alcohol use and misuse has long been documented as a serious concern for residents of Wisconsin, and La Crosse County is known for having one of the state's highest binge drinking rates. After a series of alcohol-related drownings and other deaths over the past two decades, community and media attention spurred local action to address the harms arising from risky alcohol use in La Crosse County. This report will summarize some of these harms as they apply to individuals as well as their impact on the community. This is the fourth Burden of Risky Alcohol Use report for the La Crosse County community. It will update information from the previous report in 2015 as well as introduce new data on risks, harms, and progress made towards creating a safer community.

Risky Alcohol Use

- **Middle School Students**. Since 2017 was the first year that middle school students were surveyed in La Crosse County, no trends over time can be determined; however, some important conclusions can be made:
    - Alcohol use among middle school students is low; fewer than 5% reported 30-day use and fewer than 2% reported binge drinking. This compares favorably to high school students, 19% of whom reported 30-day use and 11% reported binge drinking.
    - School performance (usually measured by grades) and assets (such as family support) were strong among middle school students, and these prove to be extremely important, as they are highly correlated to alcohol use among middle school students.
        - ✓ Middle school students with mostly D's and F's were 8 times more likely to binge drink, whereas high school students with mostly D's and F's were 2.5 times more likely to binge drink.
        - ✓ Middle school students who reported low instances of family or teachers caring about them were 9-10 times more likely to binge drink, compared to high school students who were 2-3 times more likely to binge drink if they reported this.
- **High School Students**. There has been a significant decline in risky alcohol use among high school students in La Crosse County since 2010.
    - Driving after drinking has declined from 7.1% in 2010 to 3.9% in 2017. Driving after drinking increased with:
        - ✓ Increasing age
        - ✓ Other risk-taking behavior (tobacco use, drug use, violence, bullying, texting and driving, low seat belt use)
        - ✓ Less healthy behaviors (obesity, poor sleep, low physical activity, poor nutrition)
    - Binge drinking has declined from 20.4% in 2010 to 11.4%., Binge drinking rates increased with:
        - ✓ Increasing age
        - ✓ Gender (males have higher rates)

        - ✓ Other risk-taking behavior (tobacco use, drug use, violence, bullying, texting and driving, low seat belt use)
        - ✓ Less healthy behaviors (obesity, poor sleep, low physical activity, poor nutrition)
    - Specific groups of students with riskier alcohol behaviors include:
    - Hispanic, Native American, Pacific Islander, and those of multiple races
    - Students who identify as LGBTQ
    - Students who are poor academic performers
    - Students who perceive their teachers or family don't care about them, or they don't belong at their school
- **College Students.** There are many health issues affecting students at La Crosse's college campuses; including alcohol use and its related impacts.
    - Overall, 68% of college students reported drinking alcohol in the past month; 16% of males and 6% of females reported binge drinking in the past 2 weeks.
    - The rates of risky drinking (binge drinking and drinking and driving) have declined since the 2015 survey.
    - There are many self-reported negative consequences of alcohol use and poor mental health that affect student's ability to learn. Other health measures suggested a less than healthy culture on college campuses.
- The increase in 30-day use of alcohol and binge drinking between high school and college was significant.
    - 19% of high school students reported 30-day use, compared to 66.7% of college students.
    - 11% of high school students reported binge drinking, compared to 35% of college students.
- **Adults**. Among adults, the binge drinking rate of about 28%, while on the decline, was higher than other counties in the area, and was much higher than the national rate.
    - Binge drinking was highest among younger males, decreasing among both males and females with increasing age.
    - Binge drinking decreased with increasing education and was highest among white, working adults in La Crosse County.
    - Those with poorer health (self-rated health, excess stress, and anxiety) or poorer health habits (tobacco use, diet, physical activity, sleep, and seat belt use) were more likely to report binge drinking.
- The heavy drinking rate of 5% was lower than the state average of 7%, and lower than the national rate.
    - Heavy drinking increased with age. Heavy drinking was higher among older females (50+) and increased 3.5 times from 2010 to 2016 in women over age 65 in La Crosse County.
    - Heavy drinking was highest among white, working adults in La Crosse County but didn't vary by education level.

- Those with poorer health (self-rated health, excess stress, depression and anxiety) or poorer health habits (tobacco use, diet, physical activity, sleep and seat belt use) were more likely to report heavy drinking.

Consequences of Risky Alcohol Use

- The rate of **alcohol-related citations** has declined steadily since 2007 in La Crosse County as well as the city of La Crosse. This decline was also seen at the state level, suggesting the decline was not necessarily a shift in personnel or focus, but a possible decline in illegal behavior.
- **Underage alcohol citations** have declined more significantly than all other violations, and the number has declined more for males than females.
    - Fewer underage people are being cited for repeat offenses in more recent years.
    - More underage people are being cited in bars and taverns than at private house parties. This could partially be explained by the existence of a social host ordinance.
    - Weekends and the months of September and October continue to be the most common times for all citations.
- 3.4% of all **motor vehicle crashes** in La Crosse County from 2011-2013 involved alcohol use by the driver of the vehicle. This was higher than the state rate for the same time period and is a slight increase from the rate for 2008-2010.
    - The age group most affected by alcohol-related motor vehicle crashes was 25 to 44-year-olds, which was consistent with the rest of the state.
    - Motor vehicle crashes involving alcohol happened most frequently on local roads (as opposed to county roads, state highways, or federal interstates), with more than half of alcohol-related crashes involving individuals aged 16 to 24 occurring on local roads.
- Risky alcohol use can lead to **injuries** that require medical attention, either in the emergency department (ED) setting or in an inpatient setting.
    - Among individuals aged 12 to 24, injuries from alcohol-related assaults were the most prevalent seen in local EDs. This trend is consistent with inpatient admissions for this age group.
    - Self-inflicted injuries that involved alcohol were the most prevalent type of injury seen in EDs for individuals aged 25 and older. This was the case in inpatient admissions for this age group as well.
- Alcohol-related ED visits for **motor vehicle crash (MVC) injuries** have declined among 12 to 24-year-olds between 2004-2006 and 2012-2014, and this trend was seen among inpatient admissions as well. There was a slight increase in alcohol-related MVC injuries among inpatient admissions from 2012-2014 for those aged 25 and older.
- Alcohol-related injury ED visits and inpatient admissions from **falls** increased among individuals aged 25 and older in 2012-2014, as compared to earlier years.
- Approximately 150 **deaths** of La Crosse County residents can be attributed to alcohol each year. This is approximately 16% of all deaths in the county.
    - The rate of alcohol-attributed deaths has declined slowly since 2004.

    - Injury death rates have increased significantly from 43.05 to 68.59/100,000 among La Crosse County residents from 2003 to 2014.
    - This rate has increased significantly in those over age 65, however it is not the primary cause of death in this age group.
    - Injury is most significant in the 15-24 age group. However, the rate of injury deaths in this age group has not increased significantly since 2003-2006.
    - While the number of deaths due to Alcoholic Liver Disease are low overall, the rate has significantly increased in the 25-64 age group.
- One-quarter of **violent deaths** occurring in La Crosse County from 2004-2013 involved individuals who had a reported alcohol problem during their life. Males were more affected than females.
    - Among those decedents who had a reported alcohol problem, the most common manner of violent death during these years was suicide.
    - In La Crosse County, 16% of male suicide decedents between 2010 and 2014 had a blood alcohol content above the state's legal limit at the time of death, while 30% of female suicide decedents during these same years had a blood alcohol content above the state's legal limit at the time of death.

The Alcohol Environment and Response to the Issue

- The perception of alcohol use being a major concern in the community has declined significantly since 2014. Illegal drug use, prescription drug use, and over-the-counter drug misuse have become the dominant concerns among La Crosse County residents.
- In general, there was moderate-to-strong support for strategies to control illegal or risky alcohol use, such as conducting compliance checks, increasing the penalty for drinking and driving, or eliminating all-you-can-drink specials. There is still moderate support for these policies; and a general agreement that underage and binge drinking is not acceptable
- In La Crosse County, municipal licenses to sell alcohol per 500 population varied from 0.3 to 2.0 licenses per 500 people, with the total La Crosse County average at 1.3 and the Wisconsin average of 1.5.
- Overall, there were minor changes in people per license or licenses per 500 people in La Crosse County from 2007 to 2016.
- There is strong scientific evidence to support that regulating alcohol outlet density is one of the most effective strategies for reducing excessive alcohol consumption and related harms.
- Overall, the number of alcohol compliance checks conducted in La Crosse County municipalities has decreased between 2012 and 2016, although the pass rates have remained steady, between 80%-88%.
- The annual economic cost of excessive alcohol use in La Crosse County is $105 million.
- Excessive alcohol use in La Crosse County costs $915.72 annually per person (all ages).
- State and national research reports that binge drinking is responsible for most (76%-77%) of the economic cost of excessive alcohol use. Further, 2 of every 5 dollars of these costs were

paid by federal, state, and local governments, demonstrating that we are all paying for excessive alcohol use.

- Beginning in 2007, the Changing the Culture of Risky Drinking Behavior coalition addressed the issues of underage and binge drinking in La Crosse County through a series of funded projects.
    - A planning effort led to the first Burden of Risky Alcohol Use Report in 2008, along with a five-year plan to address education and policy needs.
    - A three-year effort to address underage drinking resulted in training for bartenders, parents, and families as well as increased enforcement of underage drinking laws through compliance checks and party patrols.
    - During this same time frame, a related effort focused on binge drinking resulted in an annual assessment of safety practices at festivals, further education efforts, youth and college student engagement in marketing and leadership training, and a recognition program for area taverns engaged in safe practices.
    - A final five-year effort focused on policy change and resulted in Social Host ordinances being passed in all municipalities and the County, a training on alcohol policymaking for local elected officials, continued marketing to parents and families about underage access, and a City Council resolution recommending safe alcohol practices at festivals and events. A proposed ban on all-you-can-drink specials did not pass, and the coalition worked with State legislators to revise current statute to include social host language.

Burden of Risky Alcohol Use

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INTRODUCTION

The city of La Crosse, Wisconsin, located on the banks of the Mississippi River, has always had alcohol ingrained into its history as a community. In 1858, two German immigrants, Gotlieb Heileman and John Gund, started a small brewery in La Crosse. By 1983, G. Heileman Brewing Company was the fourth largest brewery in the United States and had become a billion-dollar company, one of the largest employers in La Crosse, employing more than 1,700 people. Wisconsin and La Crosse are approaching two centuries of brewing history. In 1960, the G. Heileman Brewing Company and the La Crosse Chamber of Commerce created Oktoberfest in La Crosse as a working-class festival to celebrate its brewing industry and encourage tourism to the area to showcase local businesses and products.

These roots in brewing and celebrating its products has contributed to a culture of permissive alcohol use and tolerance of risky drinking behaviors. This is borne out in the community's (and state's) high rates of alcohol misuse; La Crosse County is known for having one of the state's highest rates of binge drinking. Along with this over-consumption of alcohol comes a burden of alcohol-related injury and mortality that is much higher than what is found in the state of Wisconsin as a whole. A series of alcohol-related drownings and other deaths in the past two decades brought added community and media attention to the issue of risky alcohol use in the La Crosse area and prompted action from local citizen groups.

One of these groups was the Changing the Culture of Risky Drinking Behavior Coalition, which was launched in 2007 by a partnership of the La Crosse Medical Health Science Consortium (community partner), the Injury Research Center at the Medical College of Wisconsin (academic partner), Cooperative Education Service Agency #4, Coulee Council on Addictions, and Gundersen Health System (also a Consortium partner). They were funded through a series of planning and implementation grants from the Healthier Wisconsin Partnership Program at the Medical College of Wisconsin (2007-2008, 2009-2012, and 2012-2017) and the Strategic Prevention Framework State Incentive Grant from the Wisconsin Department of Health Services (2009-2012).

Alcohol use and misuse is the third leading cause of preventable deaths nationwide. Risky alcohol use is a concern to any community, as it is related to a variety of issues related to injury and violence. Up to 70% of drownings, domestic abuse and manslaughters involve alcohol use. At-risk use of alcohol is associated with 60% of rapes, 20-40% of suicides, and 40-50% of traffic fatalities (Figure 1).

Figure 1. Impact of At-Risk Alcohol Use and Abuse

Source: Cisler RA, Hargarten SH. Public health strategies to reduce and prevent alcohol-related illness, injury and death in Wisconsin and Milwaukee County. WMJ 2000; 99 (June): 71-78.

This report will summarize some of these harms as they apply to the individual, as well as their impact on the community. This is the fourth Burden of Risky Alcohol Use report for the La Crosse community. The report will update information from previous editions as well as introduce new data on risks, harms, and progress made towards creating a safer community.

RISKY ALCOHOL USE

Risky Alcohol Use Among Youth

Approximately every two years, La Crosse County schools have participated in the Youth Risk Behavior Survey (YRBS), which provides statistics on a variety of health behaviors among youth. This survey, which is nationally developed and state-implemented, is administered voluntarily by local schools. Survey procedures are designed to protect the privacy of students by allowing anonymous and voluntary participation. Parent permission procedures are followed before administration, including informing parents that their child's participation is voluntary. Students complete the self-administered, anonymous questionnaire using the Wisconsin Department of Public Instruction's Online Survey System. Data from all schools within La Crosse County are combined into one report. High school data are compared to state and national benchmarks; no such benchmarks are available for middle school data. In La Crosse County, all public and some private high schools participated in the survey in spring of 2010, 2013, 2015, and 2017. Additionally, in 2017, four middle schools also completed the survey, which was tailored especially for middle-school students.

Middle School Student Alcohol Use

Four La Crosse County middle schools participated in the most recent (2017) survey, with a total of 1,132 students completing the survey. Demographics of the sample are shown in Table 1.

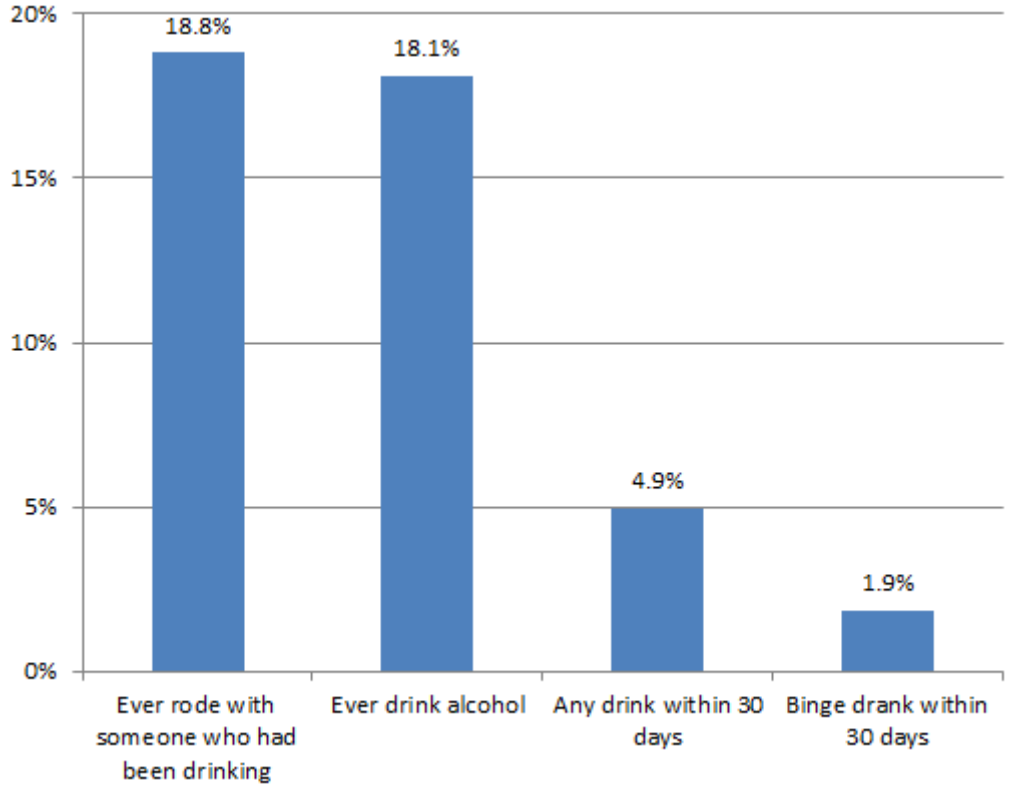
Table 1. Demographics of La Crosse County Middle School Youth Risk Behavior Participants, YRBS 2017

(N=1132)

	N	%
Grade		
6th	249	22.0%
7th	223	19.7%
8th	657	58.0%
Gender		
Female	554	48.9%
Male	574	50.7%
Race		
White	868	76.7%
Non-white	264	23.3%
Native American	15	1.3%
Asian	97	8.6%
Black	41	3.6%
Hawaiian/Pacific Islander	7	0.6%
Other (multiple)	103	9.1%

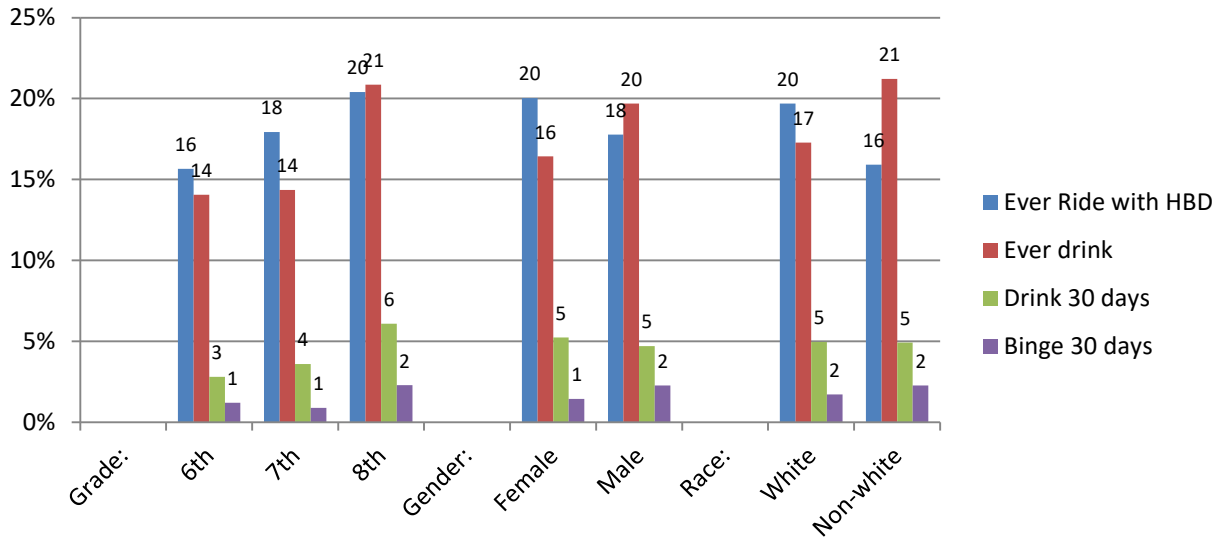
Middle school students were asked whether they had ever ridden in a car with someone who had been drinking (HBD) as well as about their own drinking behavior. Results are shown in Figure 2. Overall, about one in five middle school students had ridden with someone who had been drinking, and the same amount had had an alcoholic drink at some point in their life. About 5% had had a drink within the past 30 days, and 2% reported binge drinking in the past 30 days.

Figure 2. Alcohol behaviors among La Crosse County Middle School Students, YRBS 2017



Examination of these behaviors showed an increase in high risk behavior associated with an increase in age (grade), but no major differences between males and females or between white and nonwhite students (Figure 3).

Figure 3. Difference in Drinking Behaviors by Student Demographics. La Crosse County Middle School Students, YRBS 2017



In general, middle school students report strong assets and risky alcohol behavior varies with these assets (Table 2). Overall, 83% of students reported getting mostly A/Bs. Those reporting mostly D/Fs were 2.8 times more likely to report ever drinking, 4.7 times more likely to report drinking in the past 30 days, and 8.1 times more likely to report binge drinking. Between 84 and 92% of middle school students also reported that family or teachers cared about them, or reported feelings of belonging at their school. If they reported this, they were much less likely to ever ride with someone who had been drinking or to report they have ever drunk alcohol, had drunk in the past 30 days, or had binge drunk in the past 30 days.

Table 2. Alcohol Behavior by Student Assets, La Crosse County Middle School Students, YRBS 2017

	% overall	Ever ride with someone who HBD	Ever drink	Drink 30 days	Binge 30 days
Grades:					
Mostly A/B	83.4%	17.8%	15.7%	3.9%	1.4%
Mostly C/Not sure	13.7%	23.2% (1.3x)*	29.0% (1.8x)	9.0% (2.3x)	3.2% (2.3x)
Mostly D/F	2.4%	33.3% (1.9x)	44.4% (2.8x)	18.5% (4.7x)	11.1% (8.1x)
Family loves you and gives you support when you need it:					
Strongly agree, agree, not sure	92.3%	17.4%	15.6%	3.3%	1.1%
Disagree, strongly disagree	7.1%	38.8% (2.2x)	52.5% (3.4x)	26.3% (7.8x)	11.3% (9.8x)
Teacher cares and gives you encouragement:					
Strongly agree, agree, not sure	84.0%	16.7%	14.3%	2.8%	0.8%
Disagree, strongly disagree	15.3%	31.2% (1.9x)	40.5% (2.8x)	16.8% (5.9x)	7.5% (8.9x)
Belong at this school:					
Strongly agree, agree, not sure	84.4%	16.0%	15.1%	2.7%	0.6%
Disagree, strongly disagree	14.9%	35.5% (2.2x)	36.7% (2.4x)	17.8% (6.5x)	8.9% (14.1x)

*number in () indicates the degree to which risk increases for youth with this response compared to the lowest-risk response (e.g., C students are 1.3 times more at risk than A/B students)

High School Student Alcohol Use

The 2017 La Crosse County High School Youth Risk Behavior Survey was completed by 3,265 high school students in La Crosse County in February-March, 2017, in all the public school districts and one private school district. 100% of public schools and one private school participated. The student response rate was 67%, with 3,265 of the 4,872 students enrolled in the participating schools responding to questionnaires. Demographics of those sampled are shown in Table 3. The full report (available at http://www.lacrossecpn.org/statistics.htm) summarizes findings from eight priority areas: protective assets, traffic safety, weapons and violence, suicide, tobacco use, alcohol and other drug use, sexual behavior, and nutrition and exercise.

Table 3. Demographics of La Crosse County High School Students, YRBS 2017 (N= 3,265)

	Female	Male	9th	10th	11th	12th	Other	Declined
Number	1587	1662	907	955	783	596	15	9
Percent	49%	51%	28%	29%	24%	18%	0.5%	0.3%

	White	Asian	Multi-Ethnic	Hispanic	Black	Native American	Pacific Islander	Declined
Number	2518	290	159	158	66	32	14	28
Percent	77%	9%	5%	5%	2%	1%	0.4%	0.9%

Risky alcohol consumption rates from 2010 to 2017 are shown in Figure 4. Overall binge drinking (5 or more drinks on one occasion), has declined from 20% in 2010 to 11% in 2017, and any alcohol use in the past 30 days has declined from 32% to 19%. Rates of drinking and driving, and riding with someone who had been drinking, are shown in Figure 5. These rates have also declined significantly since 2010.

Figure 4. Alcohol Use and Binge Drinking La Crosse County High School Students, YRBS 2010-2017

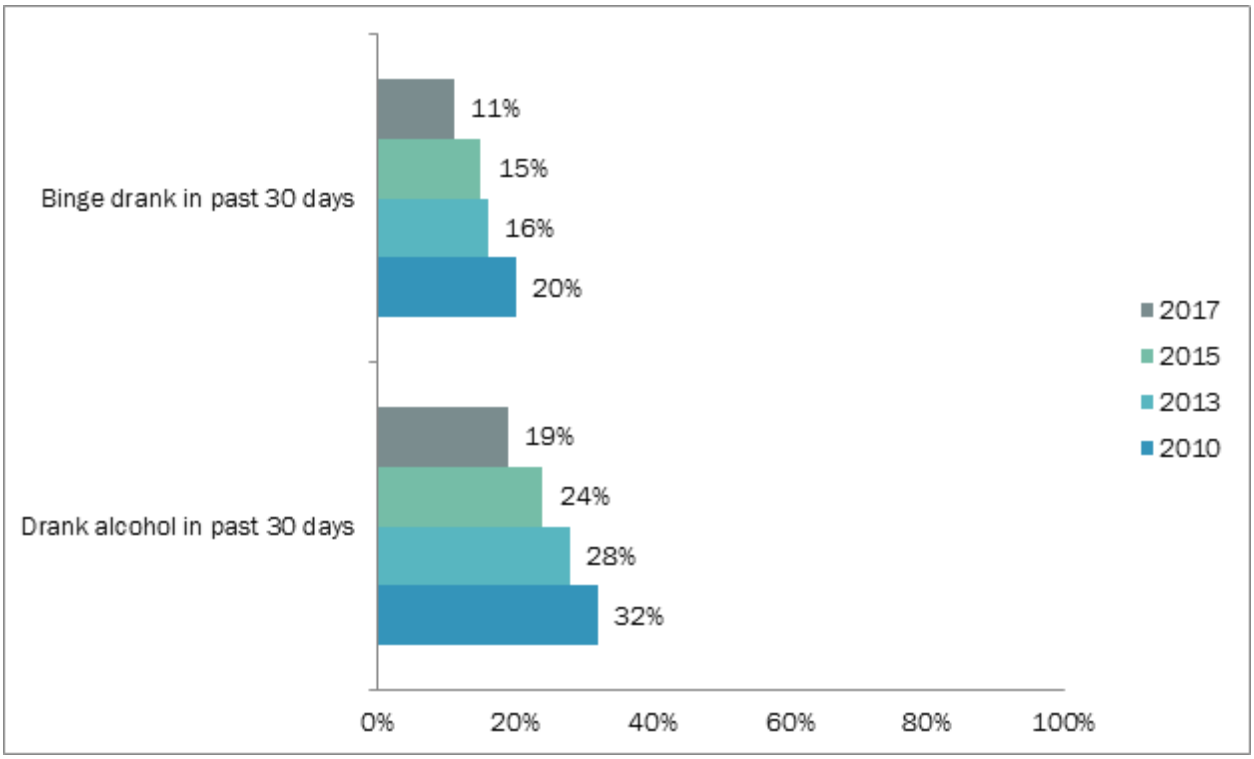
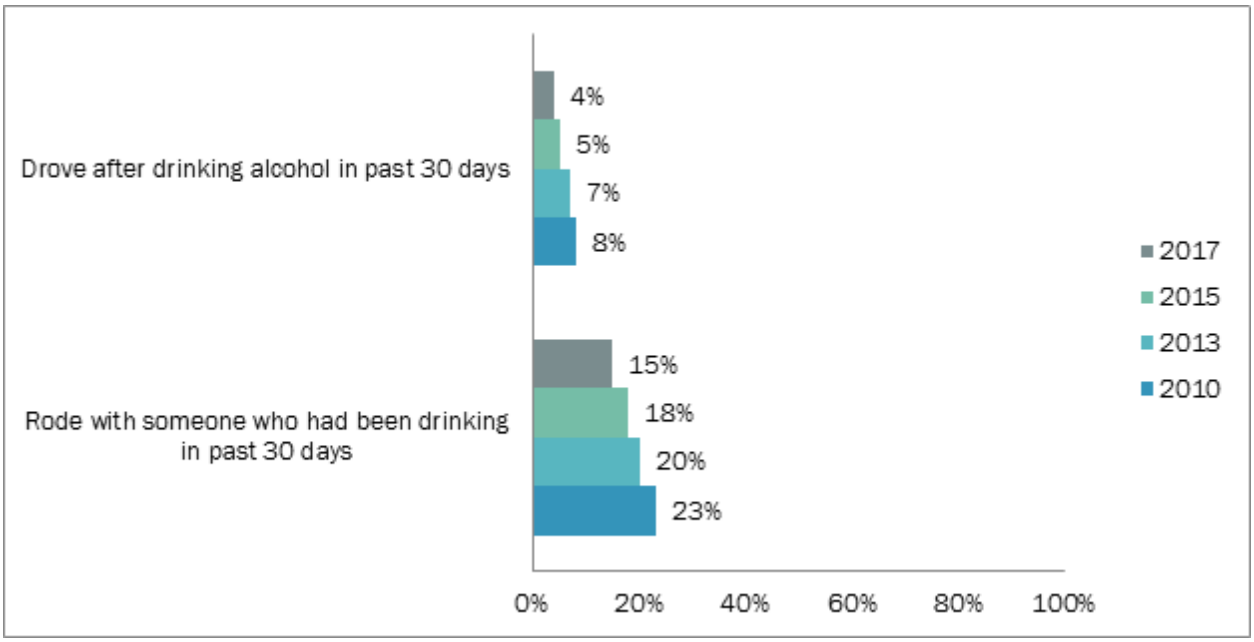
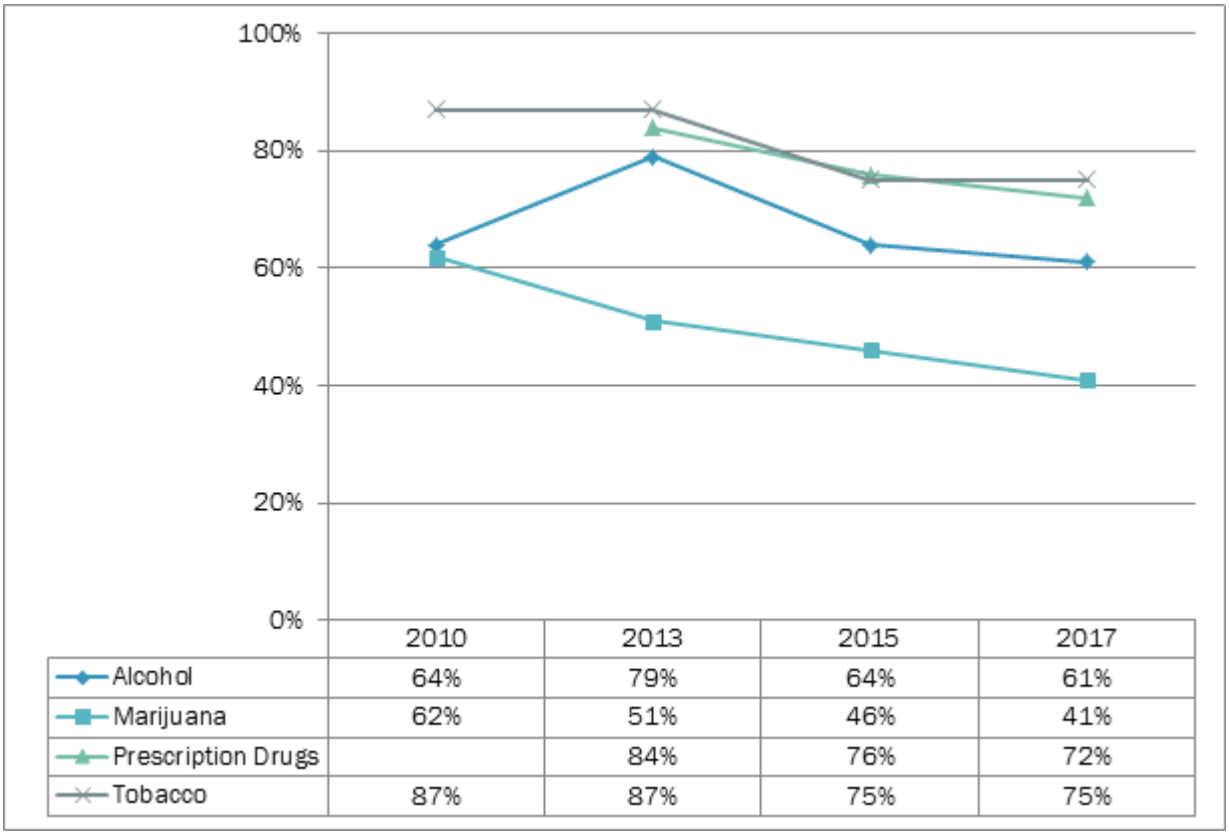


Figure 5. Drinking and Driving, La Crosse County High School Students, YRBS 2010-2017



High school students were asked about their perception of harm to students if they drank alcohol, smoked tobacco or marijuana, or used prescription drugs. While the consumption of alcohol has declined since 2010, overall, the perception that the use of these products is harmful to students has also declined (Figure 6). Prescription drug use is perceived to be a greater harm to students than alcohol. Marijuana use is seen as the least harmful.

Figure 6. Perception of Harm–Moderate or Great Risk, La Crosse County High School YRBS, 2010-2017



	2010	2013	2015	2017
Alcohol	64%	79%	64%	61%
Marijuana	62%	51%	46%	41%
Prescription Drugs		84%	76%	72%
Tobacco	87%	87%	75%	75%

An In-Depth Look at Alcohol Use Among High School Students

For an in-depth look at alcohol use, multiple alcohol use indicators from the survey were classified into two types of risk: risky driving and risky consumption. For the figures below, if a student reported both driving after drinking and riding with someone who had been drinking (HBD), they were placed in the "drove after HBD" category. If they reported riding but not driving, they were placed in the medium risk category, "rode with someone who HBD." Similarly, if the student reported any alcohol use in the past 30 days *and* binge drinking, they were placed in the highest risk category, "binge drank in the past 30 days." If they reported alcohol use in the past 30 days but *no* binge drinking, they were placed in the "drank in the past 30 days" category. Driving after drinking declined from 7.1% to 3.9% from 2010 to 2017 (Figure 7). Binge drinking also declined from 20.4% to 11.4% over this timeframe (Figure 8). Percentages are given for the highest risk categories to show trends.

In the paragraphs below, these risk categories for alcohol use are examined with demographics such as grade level and gender; other behaviors such as smoking, drug use, obesity, and depression risk; and characteristics that may put the student at high risk, like lack of assets, such as perceived lack of family support, or belonging at school.

Figure 7. Drinking and Driving Past 30 days, YRBS 2010-2017

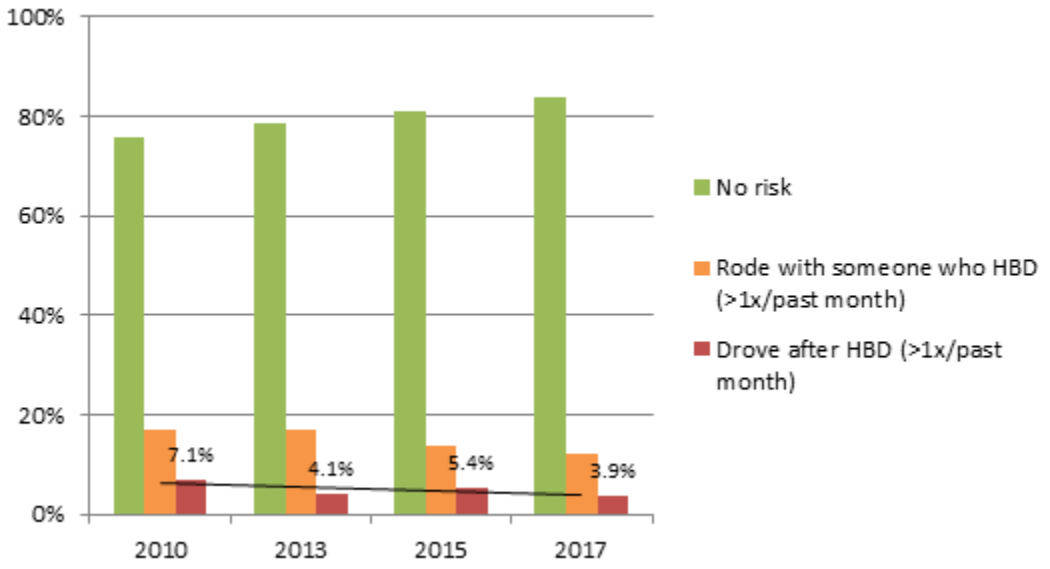
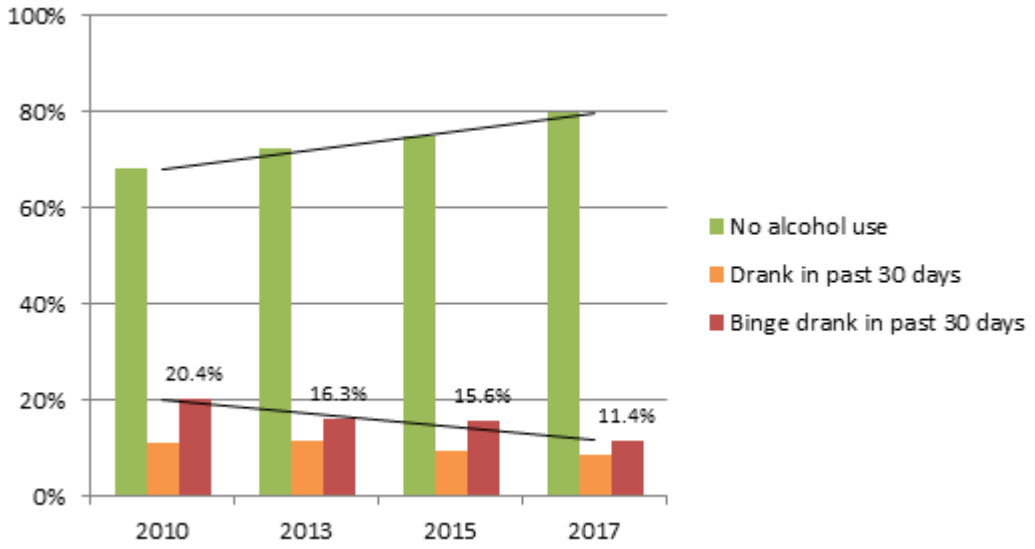


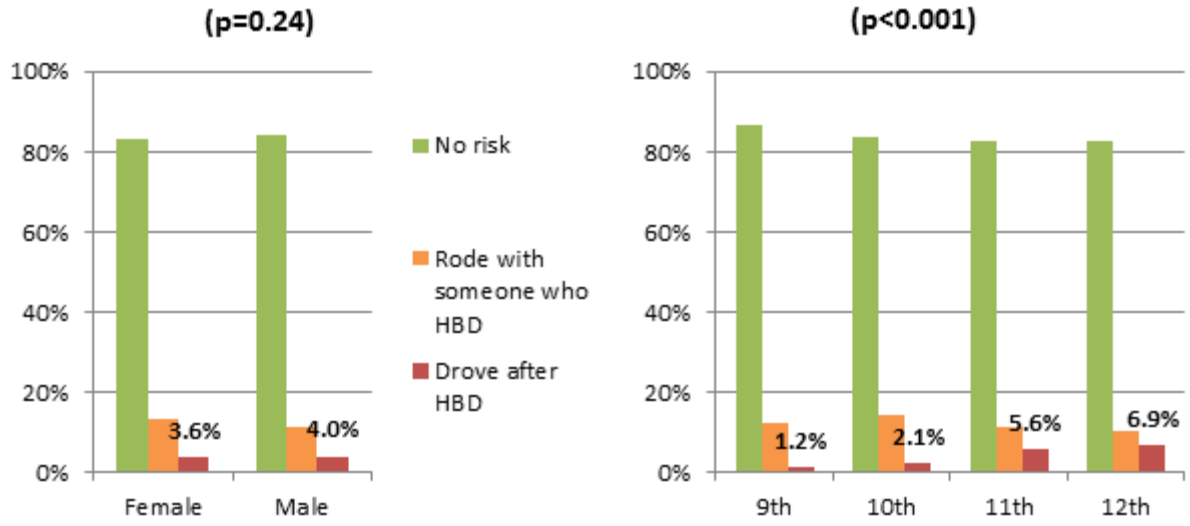
Figure 8. Risky Alcohol Consumption Past 30 days, YRBS 2010-2017



Risky Alcohol Behavior and Demographics

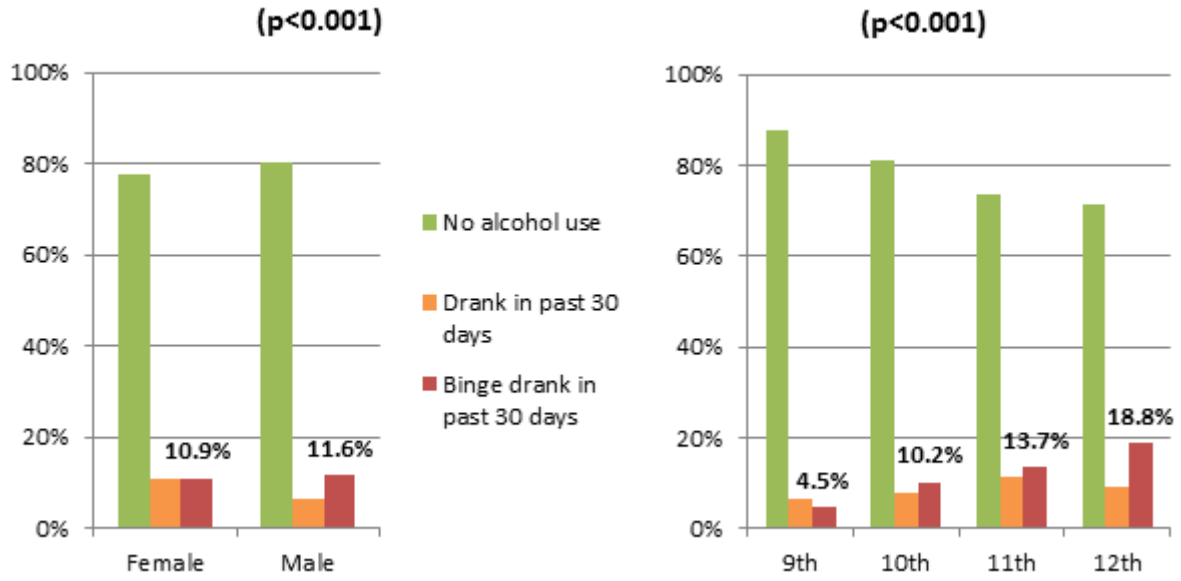
In the 2017 survey, males were more likely to report driving after drinking, and females were more likely to report riding with someone who had been drinking, although this difference was not statistically significant (Figure 9). This pattern has remained the same since 2010 and parallels national trends. Driving after drinking increased with grade level. In 2010, 16.5% of 12th graders reported they had driven after drinking. In 2017, 7% of 12th graders reported this.

Figure 9. Gender and Grade Differences for Drinking-and-Driving Risk, YRBS 2017



In 2017, binge drinking behavior was fairly similar for male and female students; however, overall, fewer females reported no alcohol consumption in the past 30 days. 81% of males reported no alcohol use in the past month, whereas 78% of females reported this (Figure 10). This gender difference hasn't changed significantly since 2010. As was seen with drinking and driving, binge drinking increased with grade level, from 4.5% in 9th grade to 18.8% among 12th graders. Of note, in 2010, 34% of 12th graders reported binge drinking. In 2010, 76% of 9th graders reported no alcohol use in the past month. By 2017 this had increased to 88%.

Figure 10. Gender and Grade Differences for Risky Alcohol Consumption, YRBS 2017



Risky Alcohol Behavior and Other Risk-Taking Behaviors

Risky driving behavior and risky alcohol consumption were compared to several other behaviors or risks among students. These behaviors were found to be strongly related to risky alcohol use (Table 4). Daily tobacco users were 12.9 times more likely to drive after drinking and 7.3 times more likely to binge drink than someone who reported no tobacco use in the past 30 days. 63% of students reporting daily use of tobacco reported binge drinking in the past 30 days; 35% reported driving after drinking. Students who reported using marijuana were 11.1 times more likely to report binge drinking (35%) and 8.5 times more likely to drive after drinking (11.4%). This was similar to students reporting any drug use. Students classified as high risk for depression (made a plan for, or attempted, suicide in the past 12 months) were 3.5 times more likely to report driving after drinking (14.6%), and 2.8 times more likely to binge drink (24.4%). Students who were considered "obese" based on self-reported height and weight were 2 times more likely to drive after drinking. There was a slight increased risk of binge drinking for overweight and obese students, but this was not statistically significant.

Students getting insufficient sleep were more twice as likely to drive after drinking (4.5%) and 1.7 times more likely to binge drink (12.8%). Those students who reported texting and driving in the past 30 days were nearly 10 times more likely to drive after drinking (11.8%), and 4.2 times more likely to binge drink

(26.2%). Students who reported being bullied on school property or being electronically bullied were 2.6 times more likely to drive after drinking (6.6%), and twice as likely to binge drink (17%). Other risky behaviors found to be significantly related to risky alcohol use included being in a fight, feeling unsafe at school, carrying or using a weapon, engaging in risky sexual behavior, using smokeless tobacco (including e-cigarettes), consuming excess soda pop or energy drinks, spending excess screen time (3+ hours per day watching television or being on a computer or smartphone), and using laxatives or vomiting to control weight.

Table 4. Other Behavioral Risks, Risky Driving, and Risky Alcohol Consumption, YRBS 2017

	Rode with someone HBD		Drove after HBD		Drank past 30 days		Binge drank past 30 days	
	% reported	Increased risk	% reported	Increased risk	% reported	Increased risk	% reported	Increased risk
Smoking:								
None	11.4%	--	2.8%	--	7.9%	--	8.5%	--
30 day use	27.6%	2.4x*	16.4%	6.0x	20.4%	2.6x	49.3%	5.8x
Daily	14.6%	1.3x	35.4%	12.9x	10.4%	1.3x	62.5%	7.3x
Marijuana use (any or past 30 day)								
No	9.8%	--	1.4%	--	5.5%	--	3.2%	--
Yes	19.3%	2.0x	11.4%	8.5x	17.7%	3.2x	35.4%	11.1x
Any other drug use								
No	10.7%	--	2.0%	--	7.2%	--	6.6%	--
Yes	20.7%	1.9x	14.6%	7.3x	16.3%	2.3x	38.1%	5.7x
Risk for depression								
Low risk (sad, hopeless, consider)	10.5%	--	2.8%	--	7.6%	--	8.9%	--
High risk (plan, attempt, injure)	21.4%	2.0x	9.8%	3.5x	13.8%	1.8x	24.4%	2.8x
Obesity status								
Normal weight	11.9%	--	3.4%	--	9.1%	--	10.7%	--
Overweight	12.5%	1.0x	3.0%	0.9x	7.8%	0.9x	12.5%	1.2x
Obese	13.6%	1.1x	6.7%	2.0x	7.6%	0.8x	13.6%	1.3x
Hours of sleep on a school night								
8+ hours	10.9%	--	2.2%	--	7.0%	--	7.4%	--
<8 hours	12.7%	1.2x	4.5%	2.0x	9.1%	1.3x	12.8%	1.7x
Texting and driving (past 30 days)								
Never	11.6%	--	1.2%	--	6.8%	--	6.2%	--
1+/day	12.8%	1.1x	11.8%	9.9x	13.6%	2.0x	26.2%	4.2x
Bullied on school property (ever) or e-bullied (past 12 months)								
No	10.0%	--	2.6%	--	7.7%	--	8.5%	--
Yes	16.8%	1.7x	6.6%	2.6x	10.2%	1.3x	17.0%	2.0x

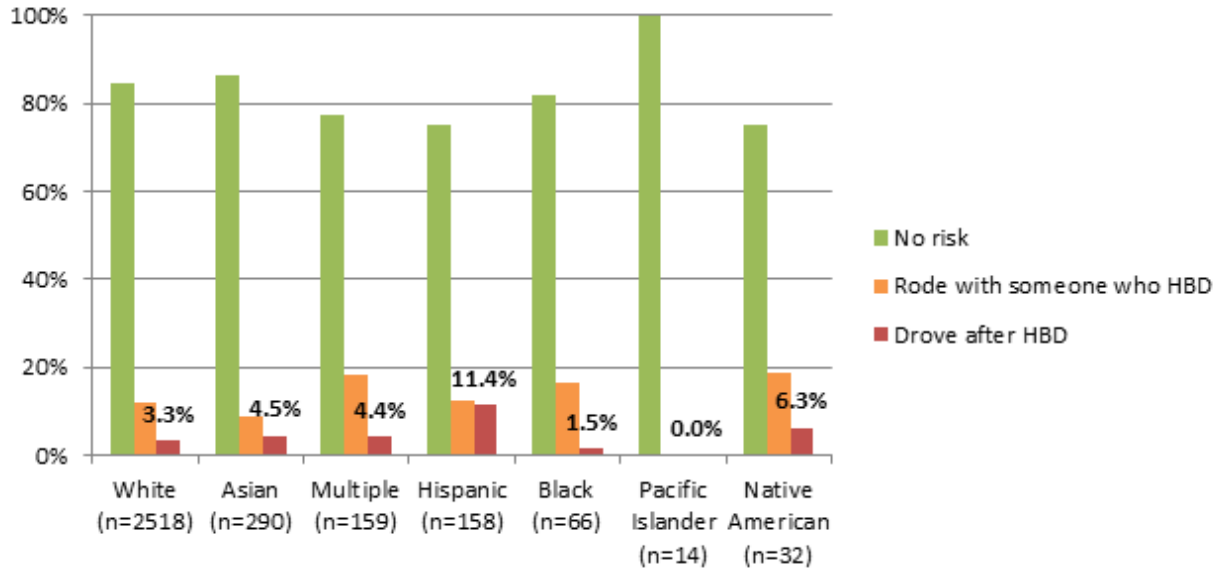
*"Increased risk" indicates the degree to which risk increases for youth with this response compared to the lowest-risk response (e.g., 30-day use smokers are 2.4 times more at risk than non-smokers).

Risky Alcohol Behavior and High Risk Populations

Race

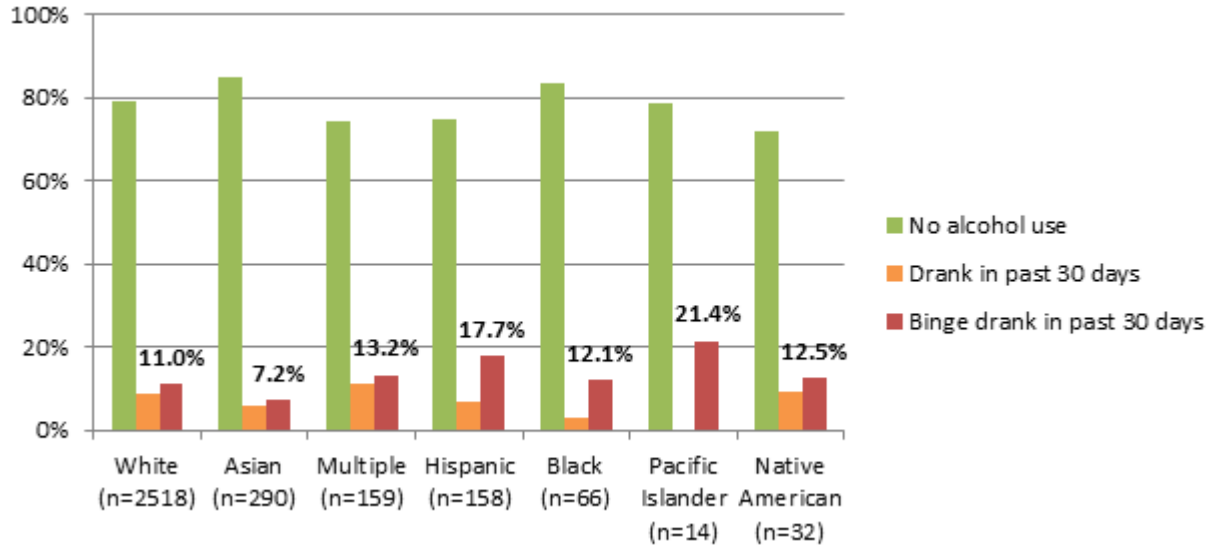
Among La Crosse County students, drinking and driving and risky alcohol consumption varied by race (Figure 11). Students of Hispanic ethnicity were at the highest risk of driving after drinking. Native American students were also significantly more likely to report this than all other races.

Figure 11. Race/Ethnicity by Drinking and Driving Risk, YRBS 2017 ($p<0.001$)



Students of Pacific Islander, Native American, multiple races, or Hispanic ethnicity were more likely to report binge drinking in the past than students who reported being White or Asian (Figure 12).

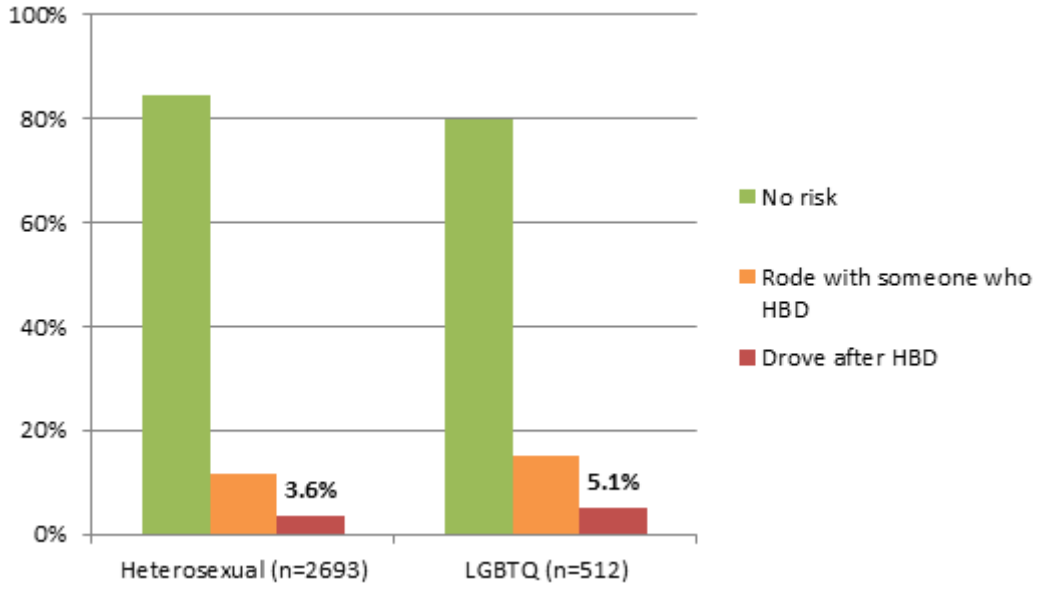
Figure 12. Race/Ethnicity by Alcohol Consumption Risk, YRBS 2017 (p=0.03)



Sexual Orientation

Students reporting their sexual orientation as not heterosexual were at higher risk of driving or riding after drinking. (Figure 13.) There was no difference in binge or any alcohol consumption based on sexual orientation.

Figure 13. Sexual Orientation and Driving Risk, YRBS 2017 (p=0.024)



Academic Success

Students who report they get mostly D/F's were more than 4 times more likely to report drinking and driving than A/B students (Figure 14). Similarly, these students were also 2.5 times more likely to report binge drinking in the past month (24%) compared to A/B students (9.5%) (Figure 15).

Figure 14. Academic Success and Driving Risk, YRBS 2017 (p<0.001)

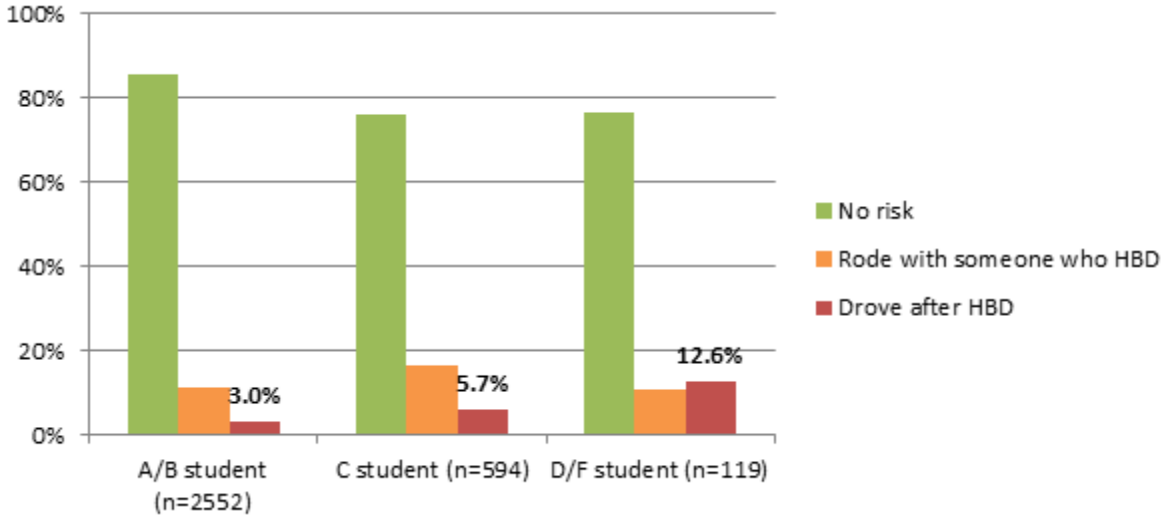
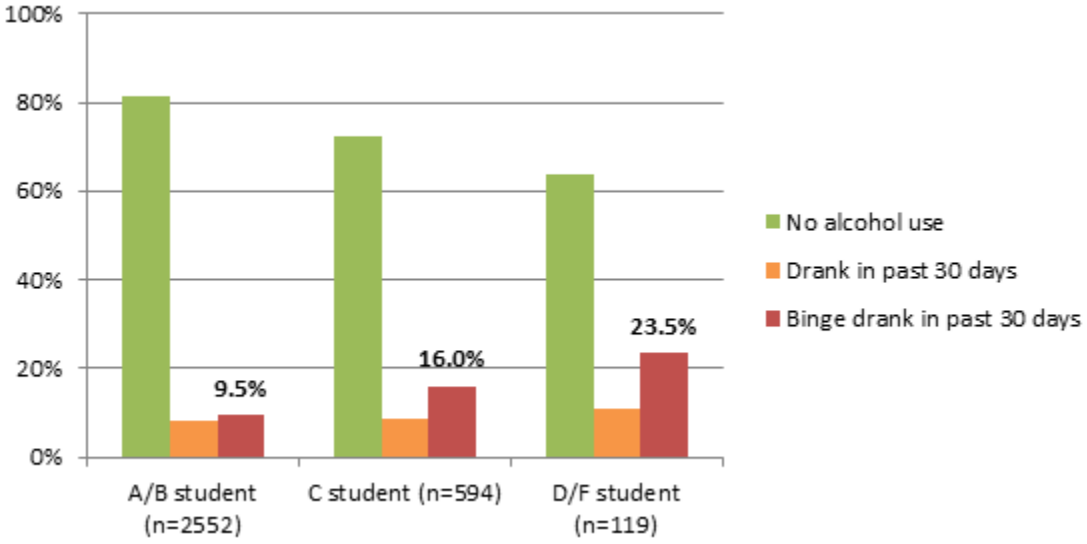


Figure 15. Academic Success and Alcohol Consumption Risk, YRBS 2017 (p<0.001)



Assets

Students who reported that their teachers or family members didn't care about them or encourage them, or who felt they didn't belong in their school were much more likely to report driving after drinking or riding with someone who had been drinking (Figure 16). A similar pattern was seen for binge drinking or any alcohol use in the past 30 days (Figure 17).

Figure 16. Assets and Driving Risk, YRBS 2017 (p's<0.001)

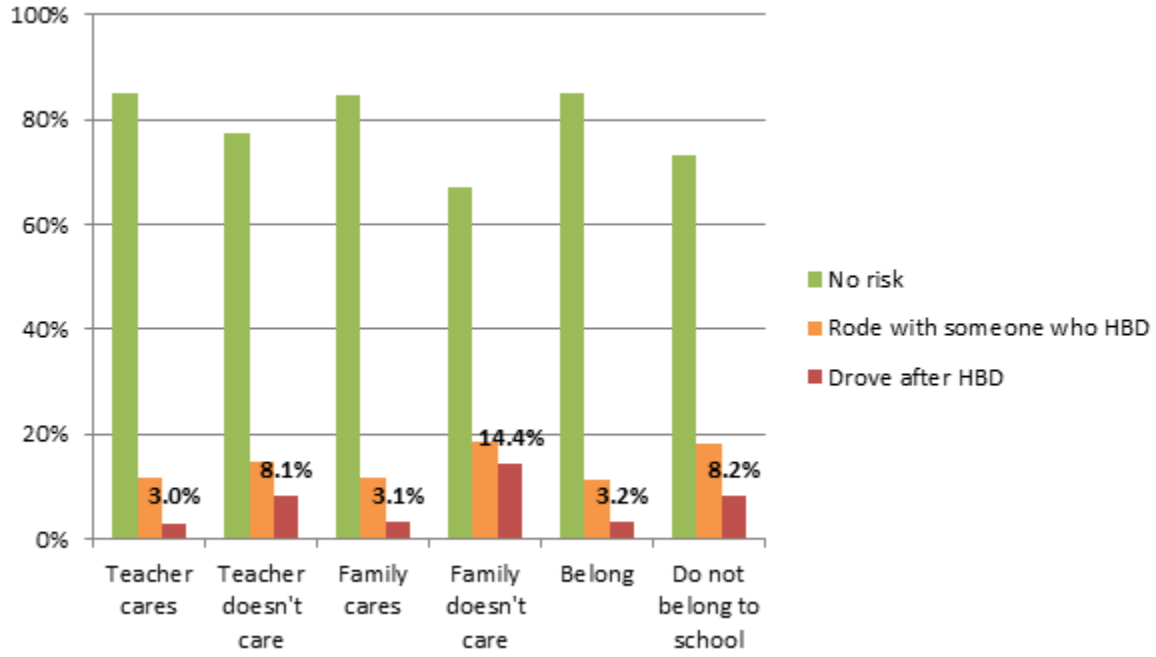
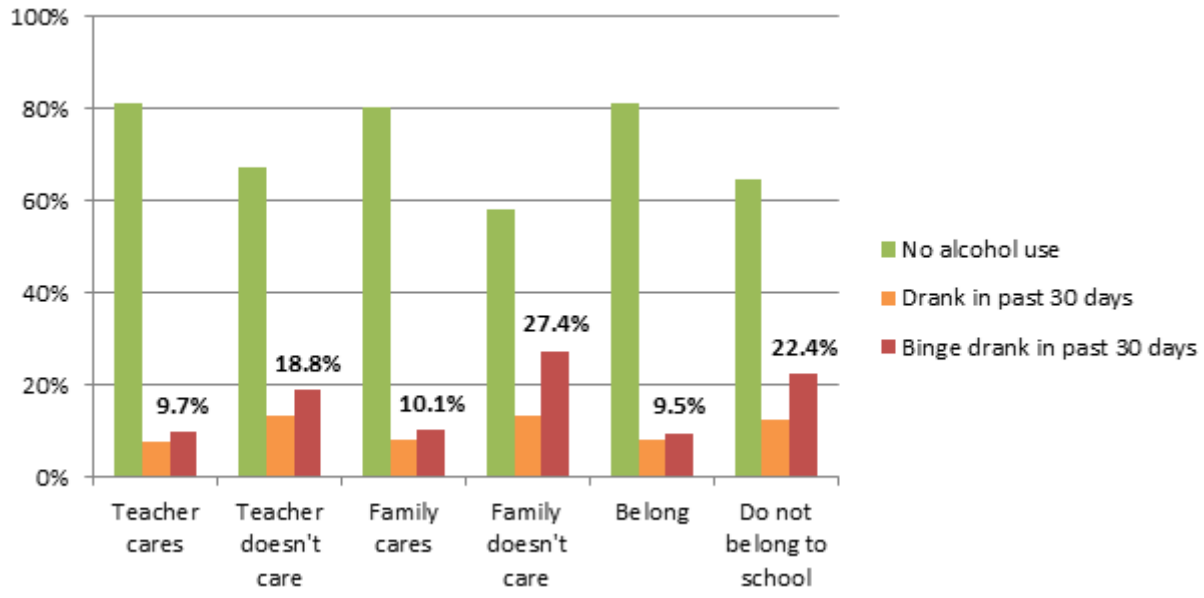


Figure 17. Assets and alcohol consumption risk, YRBS 2017 (p's<0.001)



Summary of Risk to Middle and High School Students

- Since this is the first survey of middle school students, no trends over time can be determined; however, some important conclusions can be made.
    - Alcohol use among middle school students is low; fewer than 5% report 30-day use and fewer than 2% report binge drinking. This compares favorably to high school students, 19% of whom reported 30-day use and 11% reported binge drinking.
    - School performance (usually measured by grades) and assets (such as family support) are strong among middle school students, and these prove to be extremely important, as they are highly correlated to alcohol use in middle school students.
        - ✓ Middle school students with mostly D/F's were 8 times more likely to binge drink, whereas with high school students, those with D/F's were 2.5 times more likely to binge drink.
        - ✓ Middle school students who report low family or teachers caring were 9-10 times more likely to binge drink, compared to high school students, who were 2-3 times more likely to binge drink if they reported this.
- There has been a significant decline in risky alcohol use among high school students in La Crosse County since 2010.
    - Driving after drinking has declined from 7.1% in 2010 to 3.9% in 2017
    - Binge drinking has declined from 20.4% in 2010 to 11.4%
        - ✓ Binge drinking among 12th grade students has declined from 34% in 2010 to 19% in 2017.
- Driving after drinking increased with:
    - Increasing age
    - Other risk-taking behavior (tobacco use, drug use, violence, bullying, texting and driving, low seat belt use)
    - Less healthy behaviors (obesity, poor sleep, low physical activity, poor nutrition)
- Binge drinking rates increased with:
    - Increasing age
    - Gender (males have higher rates)
    - Other risk-taking behavior (tobacco use, drug use, violence, bullying, texting and driving, seat belt use)
    - Less healthy behaviors (obesity, sleep, physical activity, poor nutrition)
- Specific groups of students with riskier alcohol behaviors include:
    - Hispanic, Native American, Pacific Islander, and those of multiple races
    - Students who identify as LGBTQ
    - Students who are poor academic performers
    - Students who perceive their teachers or family don't care about them, or they don't belong at their school

Risky Alcohol Use Among College Students

Periodically, the three institutes for higher learning in La Crosse County participate in a national survey known as the National College Health Assessment (NCHA). It is a nationally-recognized research survey of college students covering a variety of health issues, including alcohol, tobacco, other drug use, sexual health, weight, nutrition, exercise, mental health, personal safety, and violence. Locally, college students are encouraged to complete the survey online. In 2010, data were combined from all three colleges in La Crosse County (Viterbo University, Western Technical College, and University of Wisconsin-La Crosse) to produce an all-community report on college student risk behaviors. We combined data from 2008 and 2009 and compared data to a national benchmark in 2009. Viterbo and Western repeated this survey in 2011, and these results were compared to a 2011 national benchmark. In 2014, data was combined from the Spring 2013 survey at Viterbo, Spring 2014 survey at UW-La Crosse, and Fall 2014 survey at Western and compared to Spring 2014 benchmarks (Table 5). More recent data is not available at this time.

Table 5. National College Health Assessment (NCHA)-Survey Methodology

	2009		2011		2014	
Population	**Survey time frame**	**Number responding**	**Survey time frame**	**Number responding**	**Survey time frame**	**Number responding**
Viterbo University	Spring 2009	541	Spring 2011	764	Spring 2013	687
Western Technical College	Fall 2008	750	Fall 2011	1022	Fall 2014	645
University of Wisconsin-La Crosse	Spring 2008	391	N/A	N/A	Spring 2014	501
Total – La Crosse County		**1,682**		**1,786**		**1,833**
National Benchmark	Spring 2009	87,105	Spring 2011	105,781	Spring 2014	66,887

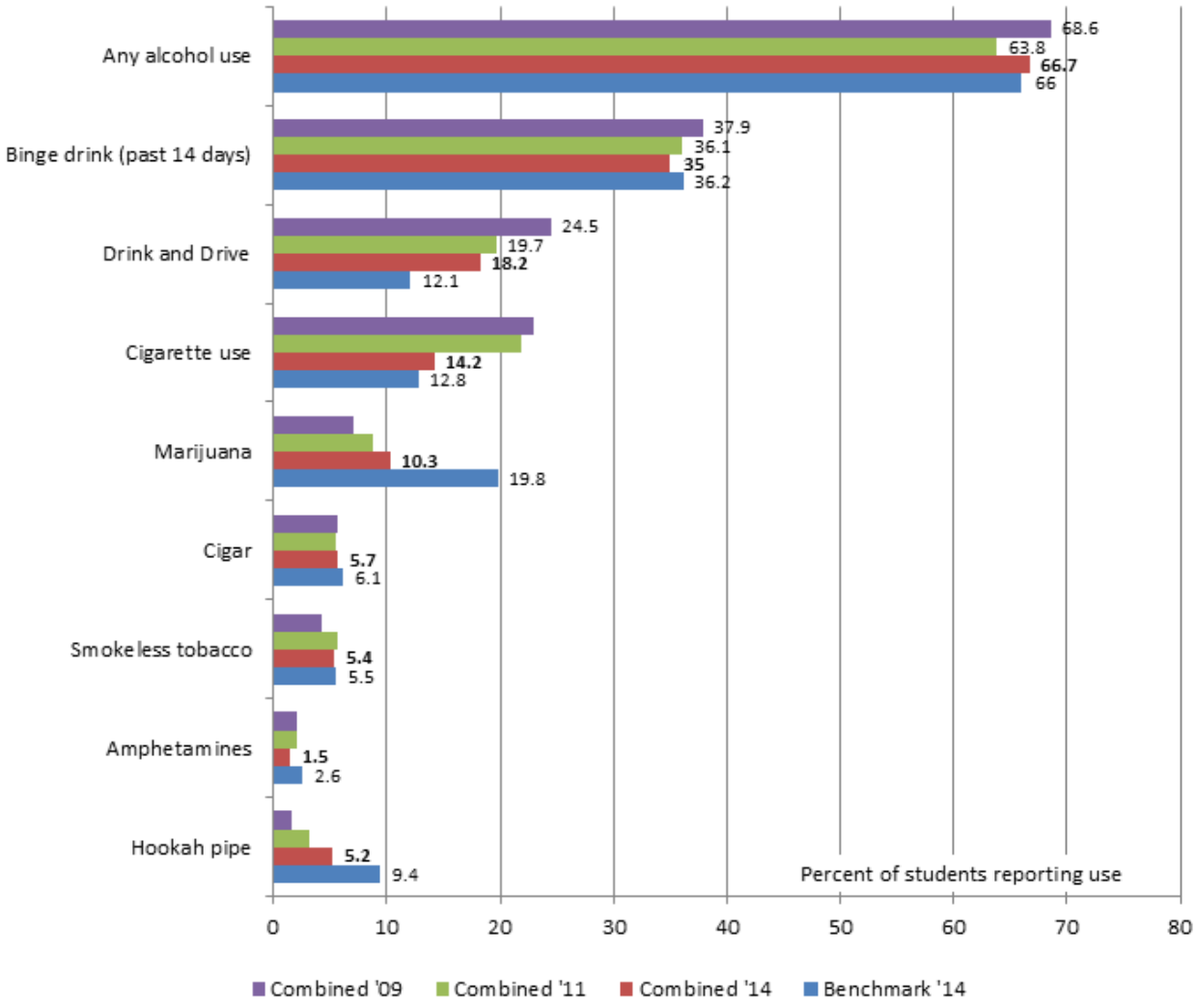
The sample demographics for the 2014 combined survey, compared to the national benchmark, are shown in Table 6. Overall, respondents from La Crosse were more likely to be older and female than the national respondent group, most likely due to sampling a non-traditional 2-year technical college (an older population), and a private university (more female).

Table 6. NCHA - Survey Demographics – 2014

	Viterbo University	Western Technical College	University of WI- La Crosse	Total Combined Sample	Benchmark - Spring 2014
Respondents	687	645	501	1833	66,887
Age					
18-20	273	263	284	820 (44.7%)	55.3%
21-23	196	116	188	500 (27.3%)	34.3%
24+	199	264	20	483 (26.4%)	6.8%
Gender					
Male	130	219	141	490 (26.7%)	33.3%
Female	550	420	350	1320 (72.0%)	65.6%

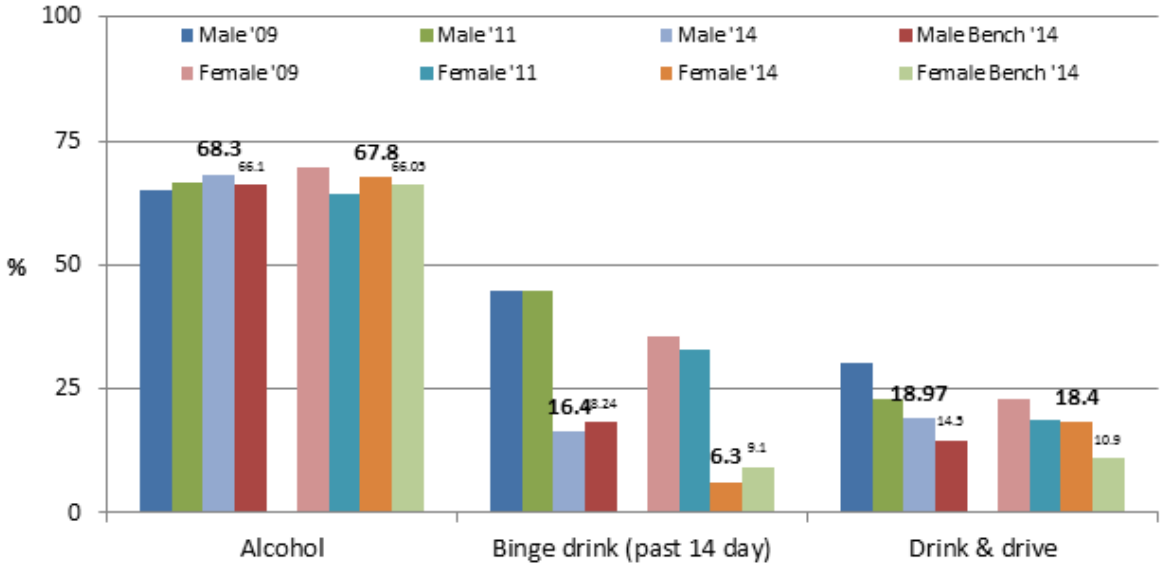
Alcohol and other drug use for the combined data are shown in Figure 18. Alcohol use is the most common substance use reported by all college students, with two-thirds of students reporting *at least* one drink of alcohol in the past 30 days; this is consistent with national data. More than one-third (35%) of students reported binge drinking in the past 14 days in La Crosse colleges, compared to 36.2% of students nationally. Drinking and driving rates were higher than national rates among La Crosse students, with nearly one in five students reporting driving after drinking in the past 30 days; however, these rates have declined since the previous survey. Tobacco use is higher among La Crosse college students as well; however, most other drug use is lower than the national rates.

Figure 18. NCHA - Alcohol and Other Drug Use - Past 30 Days



Alcohol use was examined for males and females separately (Figure 19). Among La Crosse college students, males were similar to females in their self-reported use of any alcohol (68% for males) or drinking and driving (19% for males). These rates were also higher than the national sample's gender-specific data. Males in the most recent survey were much more likely to report binge drinking than females (16.4% compared to 6.3%); however, the rate of binge drinking for both males and females had significantly declined from previous surveys.

Figure 19. NCHA - Alcohol and Tobacco Use by Gender



Data on the negative consequences of risky alcohol use are shown in Figure 20. More than 25% of respondents reported doing something regretful as a result of their alcohol use. One in four admitted to forgetting where they were or what they had done as a result of their drinking. Unprotected sex was reported among 17% of students. Nearly 10% of students reported injuring themselves. 4% of students reported alcohol affecting their course work, either by negatively affecting their grade or having to drop a class. These negative consequences have fluctuated little over the three survey years and compare similarly to national benchmark results.

Figure 20. NCHA - Consequences of Risky Alcohol Use

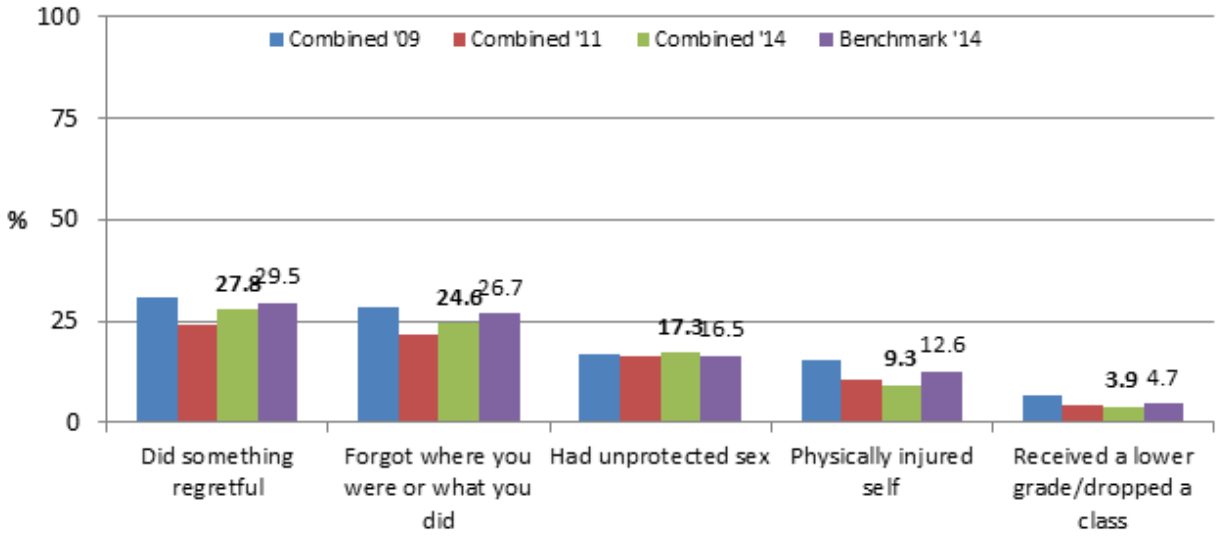


Table 7 shows other health risks of La Crosse college students, who tend to report similar health habits compared to the national benchmark. La Crosse students were slightly more likely to report being "very overweight" and trying to lose weight. However, they were also more likely to report wearing a helmet and less likely to report being "very lonely," feeling "hopeless," or feeling "depressed." La Crosse students were slightly more likely to report ever being diagnosed for depression and less likely to consider or attempt suicide, compared with national benchmarks.

Table 7. NCHA - Other Health Risk Behaviors (% reporting)

	Combined '09	Combined '11	Combined '14	Benchmark '14
Health Habits				
< 5 fruits & vegetables/day	94.4	95.6	93.9	94.0
< 5 days/week exercise	86.8	83.1	66.9	67.9
Very overweight	7.2	10.2	7.3	4.6
Trying to lose weight	56.6	58.8	54.6	50.9
Wear a seatbelt (never/rarely)	4.8	3.6	2.0	2.0
Wear a helmet (never/rarely)	76.4	40.5	60.2	75.6
<3 days/week get enough sleep	40.0	59.7	41.4	38.1
Violence				
Physical Fight	5.3	7.1	4.6	5.6
Assaulted	4.2	4.2	2.8	3.7
Emotionally abusive relationship	13.7	12.8	10.4	9.4
Mental Health Issues				
Overwhelmed	89.4	84.5	86.3	87.0
Exhausted	81.1	77.9	81.5	82.5
Very lonely	19.4	48.7	49.7	60.5
Very sad	62.0	54.4	61.5	63.2
Hopeless	46.2	42.3	41.4	47.8
Overwhelming anxiety	44.0	46.4	53.1	54.7
Tremendous stress	8.7	9.6	9.5	10.6
Felt depressed	29.9	27.5	26.9	33.1
Ever diagnosed	24.0	27.7	23.3	19.5
Current treatment for depression	13.4	16.6	12.9	10.0
Considered suicide	5.7	6.2	5.3	8.6
Attempted suicide	1.1	1.1	0.9	1.4

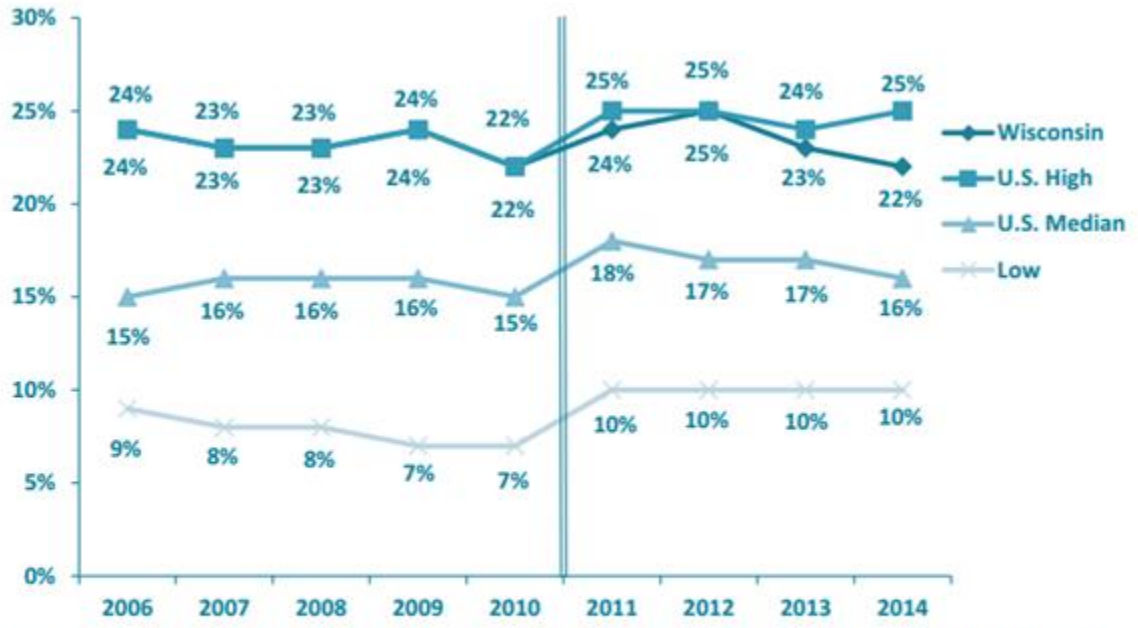
Summary of Risk to College Students

- There are many health issues affecting college students at La Crosse campuses, including alcohol use and its related impacts.
    - Overall, 68% of college students reported drinking alcohol in the past month; 16% of males and 6% of females reported binge drinking in the past 2 weeks.
    - The rates of risky drinking (binge drinking and drinking and driving) have declined since the 2015 survey.
    - There are many self-reported negative consequences of alcohol use and poor mental health that affect student's ability to learn. Other health measures suggested a less than healthy culture on college campuses.
    - The increase in 30-day use of alcohol and binge drinking between high school and college was significant.
        - ✓ 19% of high school students reported 30-day use compared to 66.7% of college students.
        - ✓ 11% of high school students reported binge drinking compared to 35% of college students.

Risky Alcohol Use Among Adults

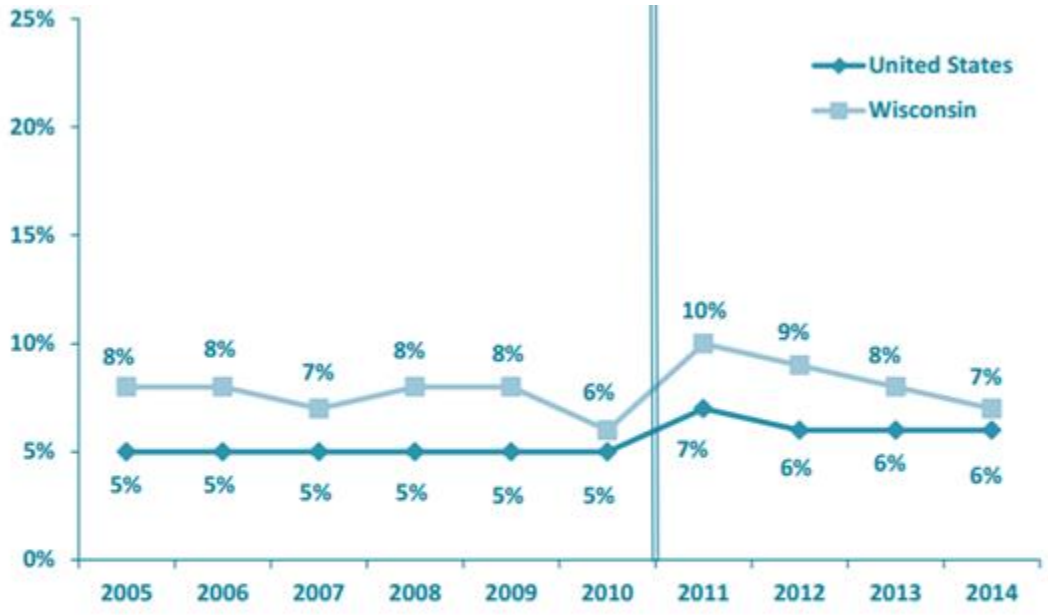
Wisconsin has a long tradition of being one of the highest ranked states for adult alcohol consumption, binge drinking (four drinks for women and five drinks for men on one occasion), and heavy alcohol consumption (more than one drink for women and more than two drinks per day for men). According to the Centers for Disease Control and Prevention (CDC), the rate of current alcohol use among Wisconsin adults had dropped slightly since the early 2000s; however, the rate remains highest or second highest in the nation from year to year. As of 2014, Wisconsin's binge drinking rate was 22%, dropping from a high of 25% in 2012 (Figure 21). Heavy drinking among Wisconsin adults has also declined slightly since 2011; however, Wisconsin rates are still above the national average (Figure 22).

Figure 21. Adult Binge Drinking, Range of State Estimates: Wisconsin, U.S. High, U.S. Median, and U.S. Low, 2006-2014
(Figure from WI EPI Profile, 2016)



Source: Behavioral Risk Factor Surveillance System, Division of Public Health, Wisconsin Department of Health Services/Centers for Disease Control and Prevention.
Note: The median is the midpoint of the range of estimates for all U.S. states and territories. Differences between groups and time periods may not be statically significant. Double line indicates trend break due to methodological changes.

Figure 22. Heavy drinking among adults, Wisconsin compared to U.S. median, 2005-2014
(Figure from WI Epi Profile, 2016)



Source: Behavioral Risk Factor Surveillance System, Division of Public Health, Wisconsin Department of Health Services/Centers for Disease Control and Prevention.
Note: Differences between groups and time periods may not be statistically significant. Double line indicates trend break due to methodological changes.

Wisconsin's 2010 and 2016 Epidemiological Profile on Alcohol and Other Drug Use presents data on the use and abuse of alcohol (and other substances) in Wisconsin and the resulting consequences. Due to small survey samples, multiple years are combined for these reports. The rate of binge drinking for adults in La Crosse County in 2005-2007 was 18% and lowest among the surrounding counties and the statewide average for the same time (Table 8). In 2010, methodology for this survey changed, adding cell phone survey data to the sampling methodology. The rate reported for La Crosse County adults in later years is much higher, and is higher than the surrounding counties and the state average. In 2012-2014, 28% of adults in La Crosse County reported binge drinking.

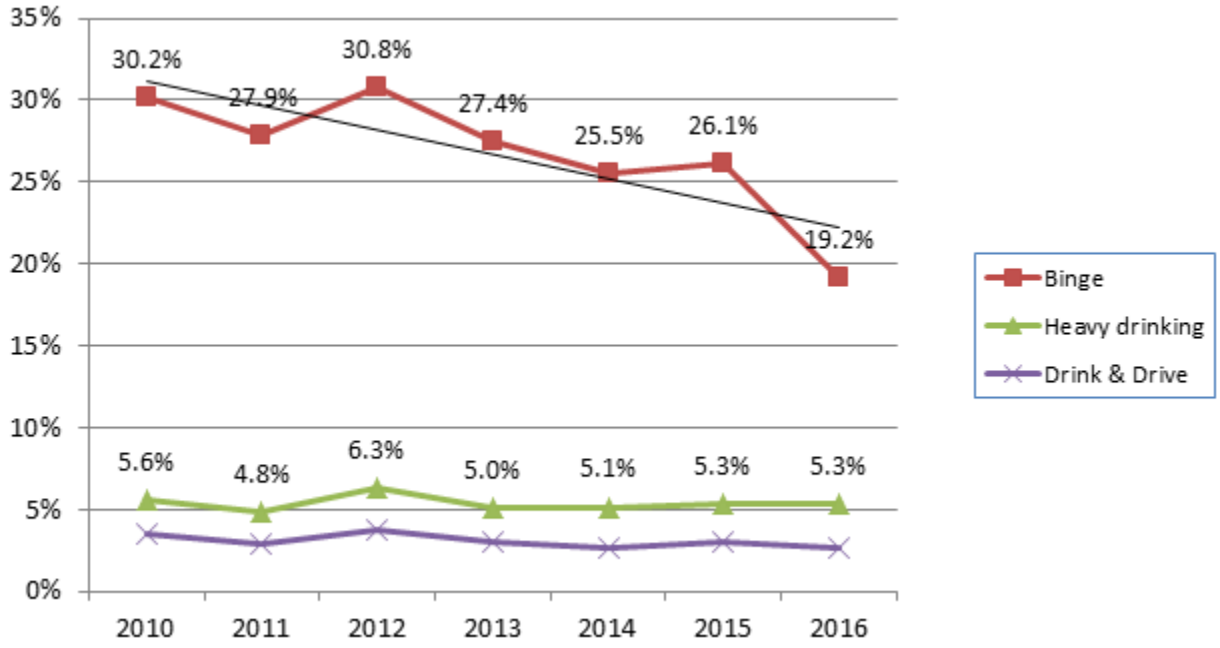
Table 8. Adult Binge Drinking Rates for Wisconsin Counties

County	2004-2006[1]	2005-2007[1]	2011-2013[2]	2012-2014[2]
La Crosse	19%	18%	31%	28%
Monroe	26%	25%	20%	17%
Trempealeau	25%	22%	29%	26%
Vernon	23%	26%	24%	18%
State average	23%	23%	24%	23%

Source: [1]WI 2010 Epidemiological Profile on Alcohol and Other Drug Use. [2]WI 2016 Epidemiological Profile on Alcohol and Other Drug Use.

Local data were made available from Gundersen Health System from findings of a personal health assessment given to employees since 2010 (Figure 23). Over 25,000 adults in La Crosse County have completed the survey. These findings are large enough to be generalizable to the working population in La Crosse County. The rate of binge drinking has declined from 30% in 2010 to less than 20% in 2016. Binge drinking rates in this sample are very comparable to those reported above; the average rate from 2012-2014 was 28.2%. Heavy drinking has remained the same over the past 6 years at about 5%; this is lower than the state average of about 7%. Approximately 3% have reported driving after having too much to drink.

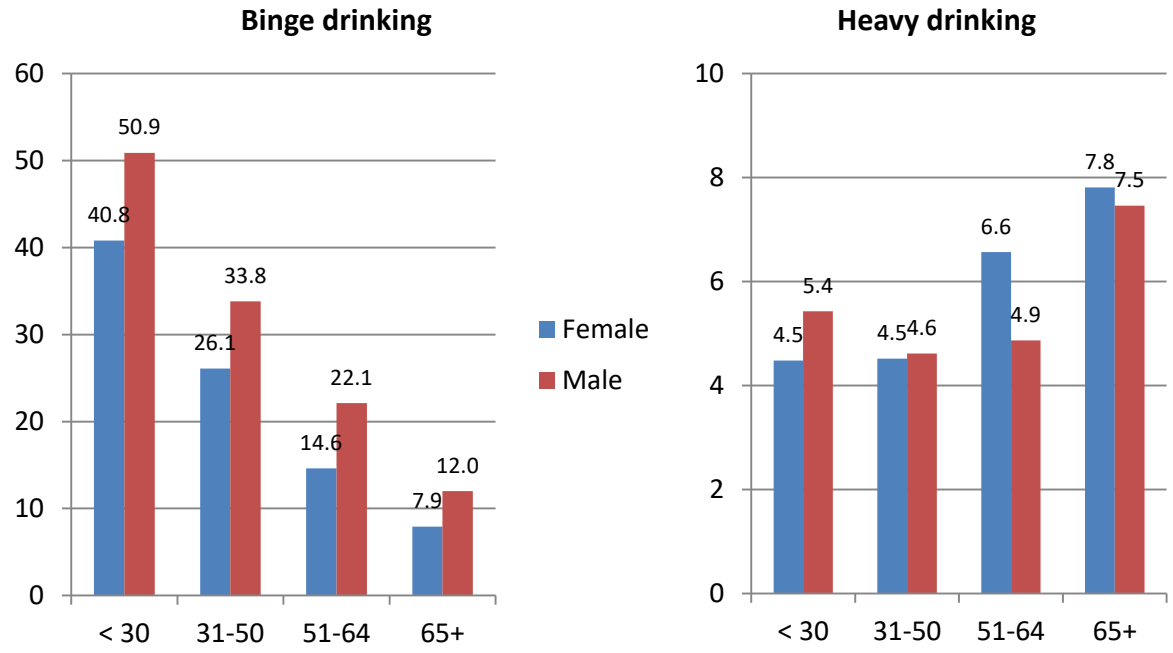
Figure 23. Trends in La Crosse County adult binge drinking, heavy alcohol consumption, and drinking and driving (2010-2016)



Source: Gundersen Health System, Working Population Survey

While binge drinking among men and women follows patterns found in national studies, a concerning finding in this data is the rate of heavy consumption among women being higher than among men, and especially higher among women over age 65 (Figure 24). The rate of heavy consumption among women over age 65 has increased 3.5 times from 2% in 2011 to more than 9% in 2016, and remained relatively flat for all other age and gender groups. This is problematic for older women, as alcohol is metabolized slower as one ages, can increase the risk of falls, or can interfere with medications like blood pressure medications, making them less effective. Heavy alcohol use by women can also increase the risk of breast and other cancers.

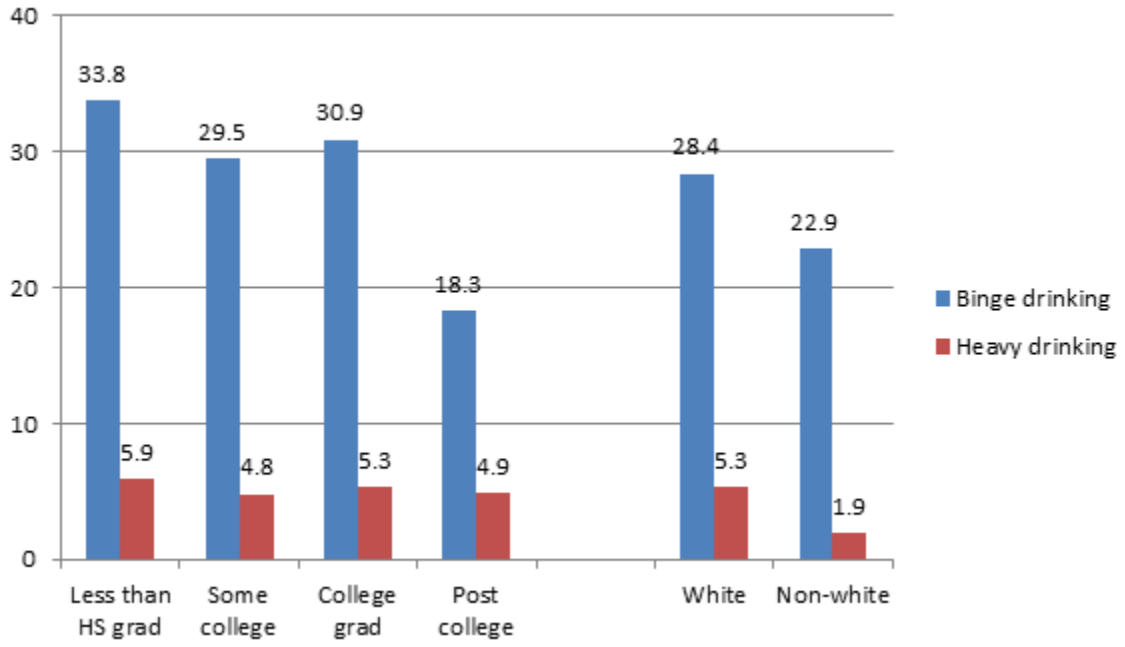
Figure 24. Binge drinking and heavy alcohol use by age and gender



Source: Gundersen Health System, Working Population Survey

Binge drinking was found to be higher among less educated adults in this sample, and higher among white than nonwhite participants (Figure 25.) Heavy drinking was also higher among white participants, but did not vary by education. This finding for education matches national studies, however the racial difference for heavy use is counter to state and national findings (WI Epi Profile, 2016). Overall, non-white individuals were underrepresented in the survey.

Figure 25. Binge drinking and heavy alcohol use by education and race



Source: Gundersen Health System, Working Population Survey

Similar to the findings reported by youth, adults who reported binge drinking or heavy drinking were more likely to have other negative health behaviors or poor health outcomes (Table 9). Those with fair or poor health were 1.3 times more likely to report binge drinking and 1.6 times more likely to report heavy consumption compared to those who had excellent or very good health. Those with high stress or anxiety were more likely to report binge and heavy consumption. Those with depression were more likely to report heavy alcohol use. Adults who reported daily or occasional tobacco use were 2 times more likely to binge drink and 2.7 times more likely to report heavy drinking. Low fruit and vegetable consumption, physical inactivity, poor sleep quality, and low seat belt use were also found to be related to increased rates of binge and heavy drinking.

Table 9. Health Behaviors or Outcomes

	Binge drank		Heavy consumption	
If adult had this characteristic:	% reported	Increased risk	% reported	Increased risk
Self-Rated Health				
Excellent/Very good	26.0	--	4.6	--
Good	32.8	1.3x	6.2	1.4x
Fair/Poor	33.7	1.3x	7.3	1.6x
Daily Stress				
Low stress	27.4	--	4.8	--
High stress	31.2	1.1x	6.7	1.4x
Depression				
No risk	28.2	--	5.0	--
Yes/high risk	28.2	1.0x*	6.1	1.2x
Anxiety				
No risk	27.7	--	4.9	--
Yes/high risk	31.4	1.1x	7.1	1.5x
Smoking:				
No use	26.1	--	4.6	--
Daily/occasional use	52.7	2.0x	12.3	2.7x
Obese				
Not obese	28.1	--	5.3	--
Obese	28.3	1.0x*	4.9	0.9x*
Fruits and vegetables				
5+/day	19.4	--	4.7	--
< 5/day	31.3	1.6x	5.3	1.1x
Physical Activity				
Active	27.1	--	4.9	--
Sedentary	29.3	1.1x	5.4	1.1x
Sleep Quality				
Good	27.6	--	4.8	--
Poor	34	1.2x	8.9	1.9x
Sleep hours/night				
7+ hours	27.7	--	5.2	--
<7 hours	30.8	1.1x	5	1.0x*
Seat belt use				
Always	27.1	--	4.9	--
Less than always	44.5	1.6x	8.1	1.7x

*indicates increased risk was **not** statistically significant

Source: Gundersen Health System, Working Population Survey

Summary of Risks to Adults:

- La Crosse's adult binge drinking rate of about 28%, while on the decline, was higher than other counties in the area and were much higher than national rates.
    - Binge drinking was highest among younger males; the rate decreased for both males and females as age increased.
    - Binge drinking decreased with increasing education and was highest among white working adults in La Crosse County.
    - Those with poorer health (self-rated health, excess stress, and anxiety) or poorer health habits (tobacco use, poor diet, low physical activity, poor sleep, and low seat belt use) were more likely to report binge drinking.
- La Crosse's heavy drinking rate of 5% was lower than the state average of 7% and lower than national rates.
    - Heavy drinking increased with age. Heavy drinking was higher among older females (50+) and increased 3.5 times from 2010 to 2016 in women over age 65.
    - Heavy drinking was highest among white working adults in La Crosse County but didn't vary by education level.
    - Those with poorer health (self-rated health, excess stress, depression and anxiety) or poorer health habits (tobacco use, poor diet, low physical activity, poor sleep and low seat belt use) were more likely to report heavy drinking.

CONSEQUENCES OF RISKY ALCOHOL USE

Alcohol-Related Citations

La Crosse County Compared to State of Wisconsin, 2007 to 2015

The Wisconsin Office of Justice Assistance (OJA) Statistical Analysis Center has a collection of crime data reported by Wisconsin law enforcement agencies. Grouped alcohol-related citation statistics for all municipalities in La Crosse County and the state were obtained through the Center. The accuracy of the data is dependent upon the reporting of each municipality. Figures 26 and 27 illustrate two specific alcohol-related arrests: operating-while-intoxicated (OWI) and liquor law violations for La Crosse County and for the state for 2007-2015. For the state, there was an overall 40% decline in OWI arrests and a 60% decline in liquor law violations over the 9 years. La Crosse County statistics indicated a 30% decline in OWI arrests and a 60% decline in liquor law violations over the same timeframe.

Figure 26. OWI Arrest Rate per 100,000 - La Crosse County and State of Wisconsin - 2007-2015

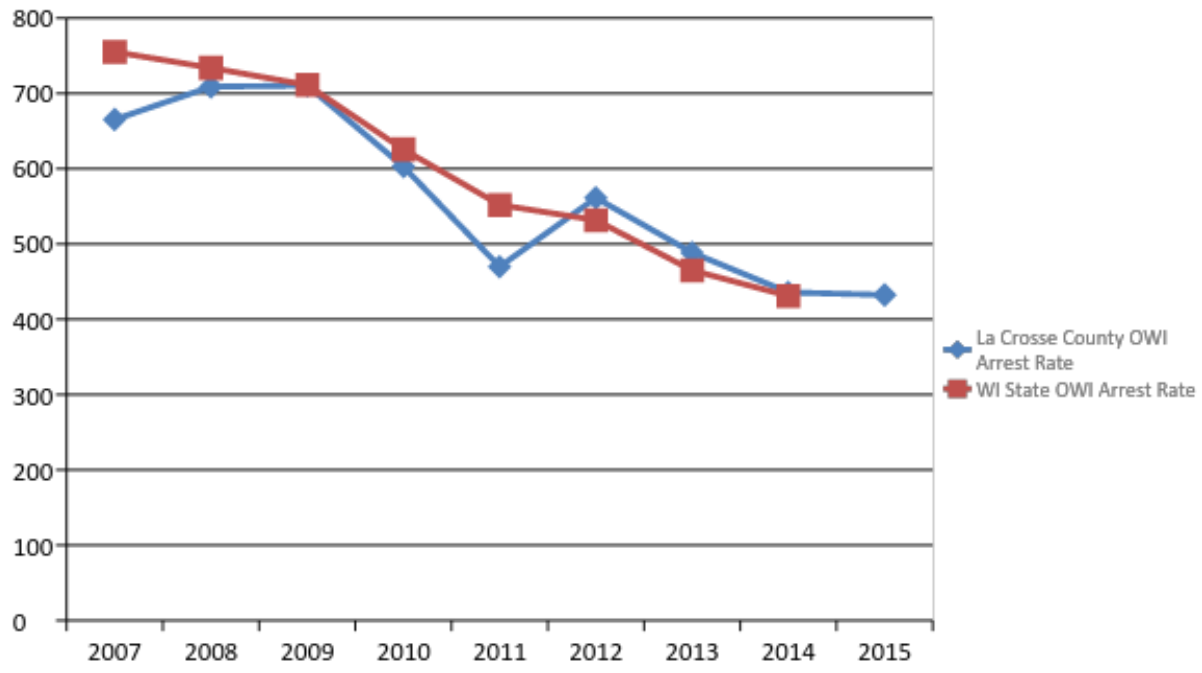


Figure 27. Liquor Law Violations[1] per 100,000 - La Crosse County and State of Wisconsin 2007-2015

[1]Violations of state or local laws or ordinances prohibiting the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages, not including driving under the influence and drunkenness

Within the county, 60% of the 5,826 OWI arrests occurred in the city of La Crosse; 20% were outside of city/town jurisdiction and reported by the County Sheriff; 20% were reported by other jurisdictions (Table 10). From 2007 to 2015, there was a 32% reduction in OWI arrests within the city of La Crosse. OWI citations in other jurisdictions have remained fairly stable. Two-thirds of the 15,150 liquor law violations occurred within the city of La Crosse (Table 11). University of Wisconsin-La Crosse police account for approximately 20% of the county's liquor law violation reports. There was a 65% reduction in liquor law violations in the City of La Crosse from 2007-2015, with similar reductions in the other municipalities.

Table 10. OWI Citations by Jurisdiction, 2007-2015

	2007	2008	2009	2010	2011	2012	2013	2014	2015	**TOTAL**
Bangor	4	8	6	0	0	6	8	2	3	**37 (1%)**
Campbell	26	17	12	10	4	20	16	8	6	**119 (2%)**
Holmen	12	11	21	12	14	20	9	8	15	**122 (2%)**
County Sheriff	77	179	146	147	125	127	100	91	87	**1079 (19%)**
La Crosse	506	439	458	400	283	350	354	344	345	**3479 (60%)**
Onalaska	92	106	126	84	76	80	49	25	21	**659 (11%)**
UWL	16	23	23	23	28	26	19	11	7	**176 (3%)**
West Salem	12	20	15	15	12	22	14	22	26	**158 (3%)**
County Rate (per 100,000)	665	709	710	603	470	561	489	436	432	
State Rate (per 100,000)	755	734	711	626	552	532	465	431	NA	

Table 11. Liquor Law Violations[1] by Jurisdiction, 2007-2015

	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
Bangor	0	2	5	3	3	2	0	0	0	**15 (1%)**
Campbell	29	22	24	24	4	19	13	20	4	**159 (1%)**
Holmen	36	45	46	17	17	32	20	7	4	**224 (1%)**
County sheriff	137	112	156	138	127	71	73	72	63	**949 (6%)**
La Crosse	1835	1789	1353	788	849	1166	808	723	645	**9956 (66%)**
Onalaska	87	121	138	163	162	123	60	23	18	**895 (6%)**
UW-L	278	258	316	441	334	401	317	282	256	**2883 (19%)**
West Salem	15	2	0	1	7	16	17	3	8	**69 (1%)**
County Rate (per 100,000)	**2158**	**2075**	**1794**	**1374**	**1303**	**1578**	**1123**	**964**	**851**	
State Rate (per 100,000)	**774**	**738**	**665**	**559**	**437**	**466**	**361**	**300**	**NA**	

[1]Violations of state or local laws or ordinances prohibiting the manufacture, sale, purchase, transportation, possession, or use of alcoholic beverages, not including driving under the influence and drunkenness

A Deeper Look at Citations in the City of La Crosse, 2009 to 2016

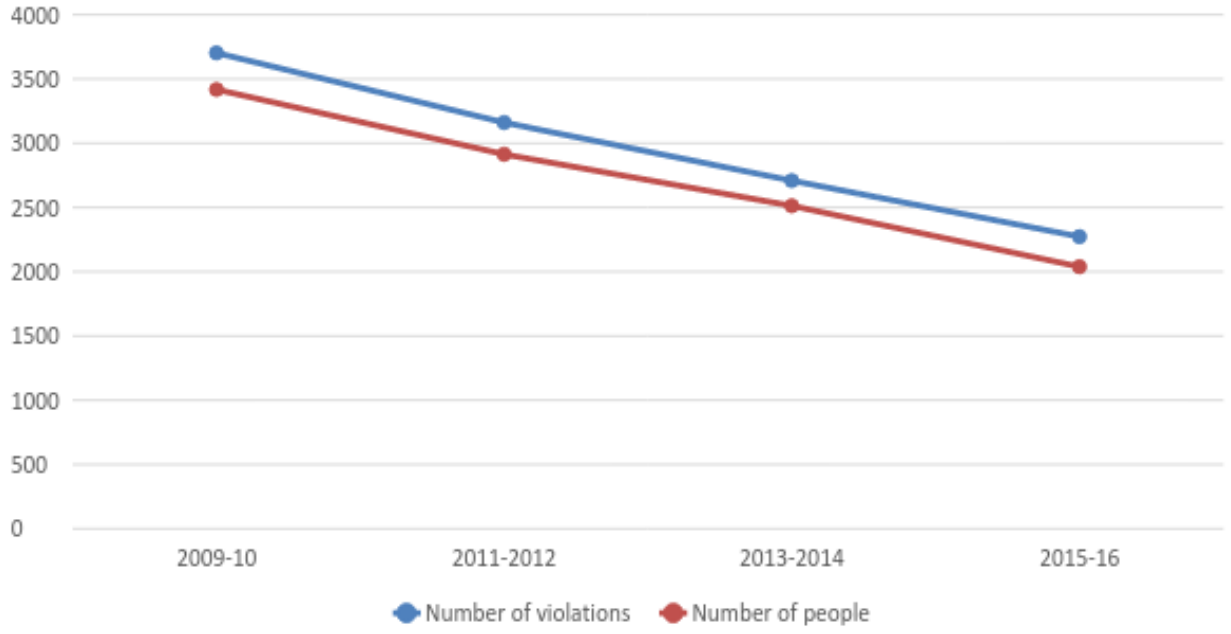
Alcohol-related citation information was obtained from the La Crosse Police Department for the years 2009-2016. During this time, 10,884 people were given 11,846 citations within the city (Table 12). Individuals may have received more than one citation. For example, someone under age 21 in a bar may have been issued an underage consumption violation as well as a false identification citation on the same occasion.

Table 12. Alcohol-Related Violations, City of La Crosse, 2009-2016

	2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Number of violations	2206	1497	1335	1826	1423	1286	1228	1045	**11,846**
Number of people	2049	1369	1229	1685	1309	1204	1097	942	**10,884**

The number of all citations and the number of unique individuals have steadily declined from 2009 to 2016 by about 40%. (Figure 28.)

Figure 28. All Alcohol Citations - City of La Crosse 2009-2016



Overall, 68% of all citations written from 2009 to 2016 were given to males; 61% were given to people under age 21 (Figure 29). A significant number of citations were given to adults over the age of 25. The decline in citations since 2009 for males has been slightly greater than the decline in citations written for females (Figure 30). There has also been a more dramatic decline in the number of alcohol citations for those under age 21 compared to older adults since 2009 (Figure 31).

Figure 29. Alcohol Citations by Gender and Age, City of La Crosse

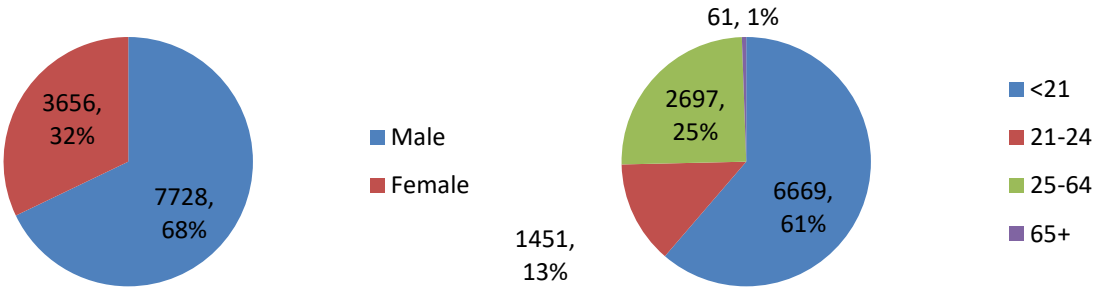


Figure 30. Alcohol Citations by Gender, City of La Crosse

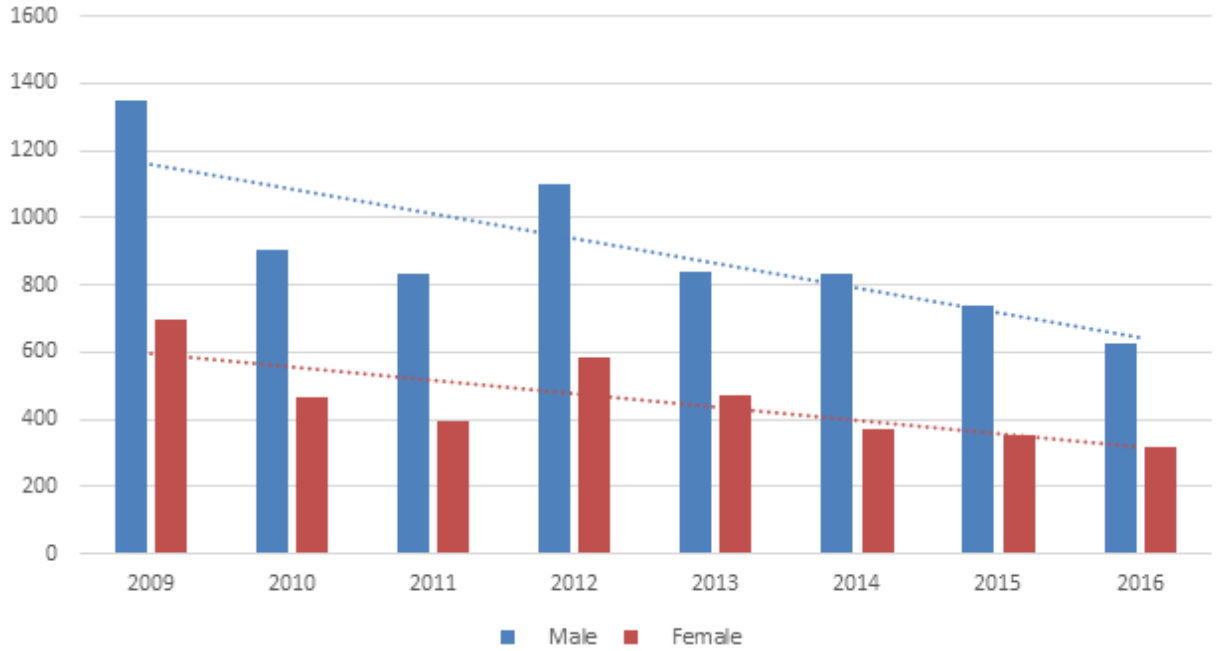


Figure 31. Alcohol Citations by Age, City of La Crosse

Underage citations have been on the decline since 2009 (Figure 32). The rates of driving violations, public intoxication violations, and violations related to the sale of alcohol have been more stable.

Figure 32. Type of Alcohol Citation by year, City of La Crosse

Females are more likely to receive an underage drinking violation than any other type of alcohol-related citation (Figure 33). Those over the age of 25 were more likely to receive driving violations (Figure 34).

Figure 33. Alcohol Related Violations by Gender, City of La Crosse 2009-2016

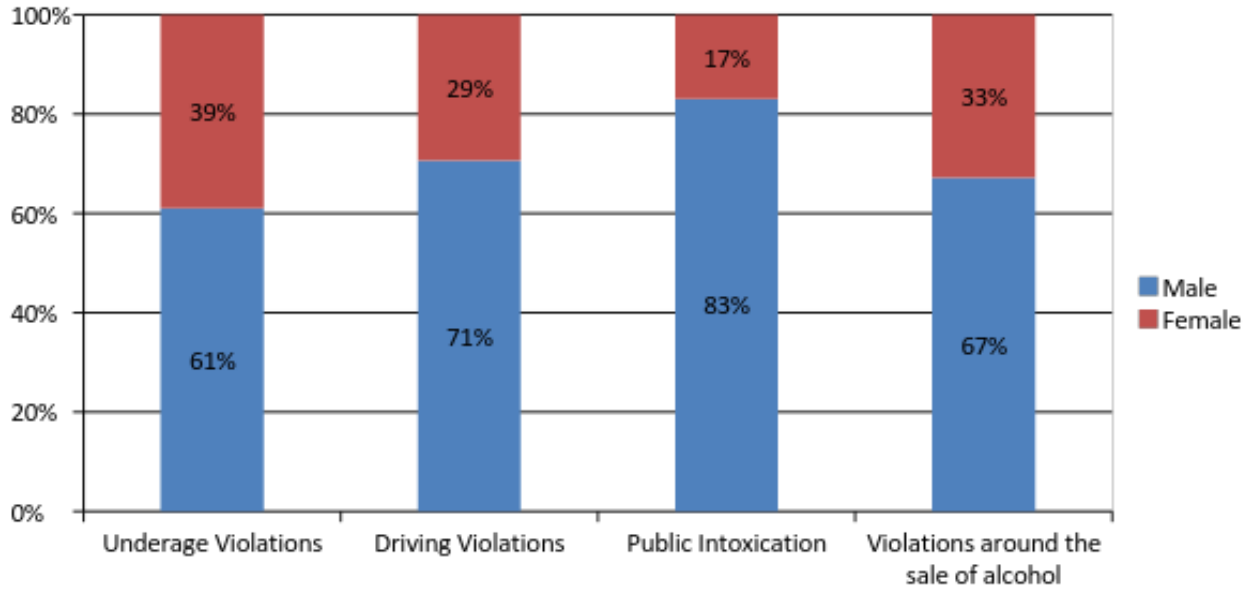
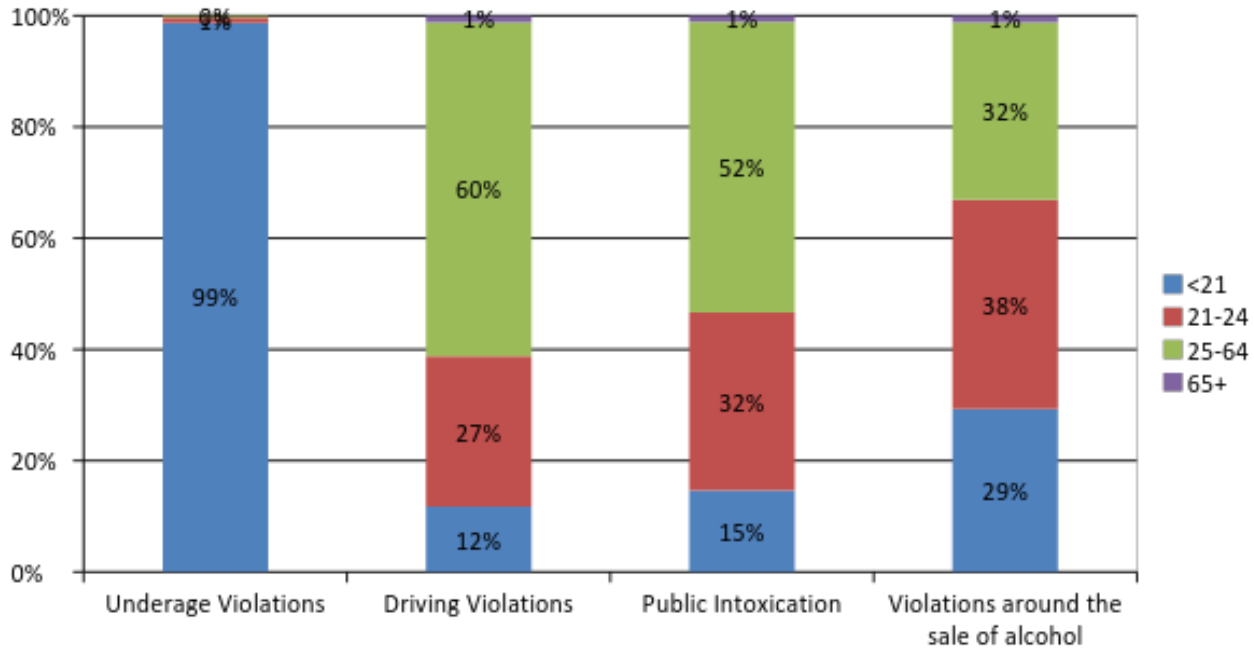


Figure 34. Alcohol Related Violations by Age, City of La Crosse 2009-2016



A description of the underage violations from 2009 to 2016 are found in Table 13. The rate of first time underage alcohol violations, compared to 2nd to 5th offense violations, has increased since 2009-2010. In 2009-2010, 1st offense underage violations were 81% of the total, while from 2015-2016, 90% of

underage alcohol violations were 1st offense violations. Thus, fewer people are receiving repeat underage violations. The number of identification card violations has remained relatively stable since 2009.

Table 13. Description of Underage Violation, City of La Crosse, 2009 to 2016

	2009-2010	2011-2012	2013-2014	2015-2016	TOTAL
Number of violations	2150	2046	1447	1292	6935
Procure/Attempt to Procure Alcohol	0	0	0	4	4
Underage Present/Tavern/Bar/ Minor on Premise	3	3	6	53	65
All Underage Alcohol/liquor Violations (1-5th offense)	1966	1861	1283	1053	6163
Underage Alcohol/liquor Violation - 1st offense	1601 (81%)	1582 (85%)	1119 (87%)	955 (90%)	5257 (85%)
Underage Alcohol/liquor Violation - 2nd offense	268	207	125	82	682
Underage Alcohol/liquor Violation - 3rd offense	71	43	24	13	151
Underage Alcohol/liquor Violation - 4th offense	17	13	10	2	42
Underage Alcohol/liquor Violation - 5th offense	9	16	5	1	31
False ID/Identification Card Violations	181	182	158	182	703

The location of each underage citation was coded as a bar or restaurant. Those citations that were not in a public location (and assumed to be a private residence) were then examined to see where more than one citation occurred at the same date and time (Figure 35). Between 2009 and 2016, the percent of citations occurring in bars has increased from 22% of underage citations in 2009 to 38% of underage citations in 2016. The number of underage citations occurring at private residences has decreased from 16% in 2009 to 11% in 2016. It could be hypothesized that some of the decline in citations occurring in private residences could be due to the manpower necessary to cover neighborhoods. It could also be that there are fewer house parties, possibly due to the existence of the social host ordinance in the City of La Crosse since 2014. See Table 14 for information on the description of social host violations and Figure 36 for location of the citations. It is possible that a benefit of having this ordinance has been to deter such house parties.

Figure 35. Location of Underage Citations, City of La Crosse

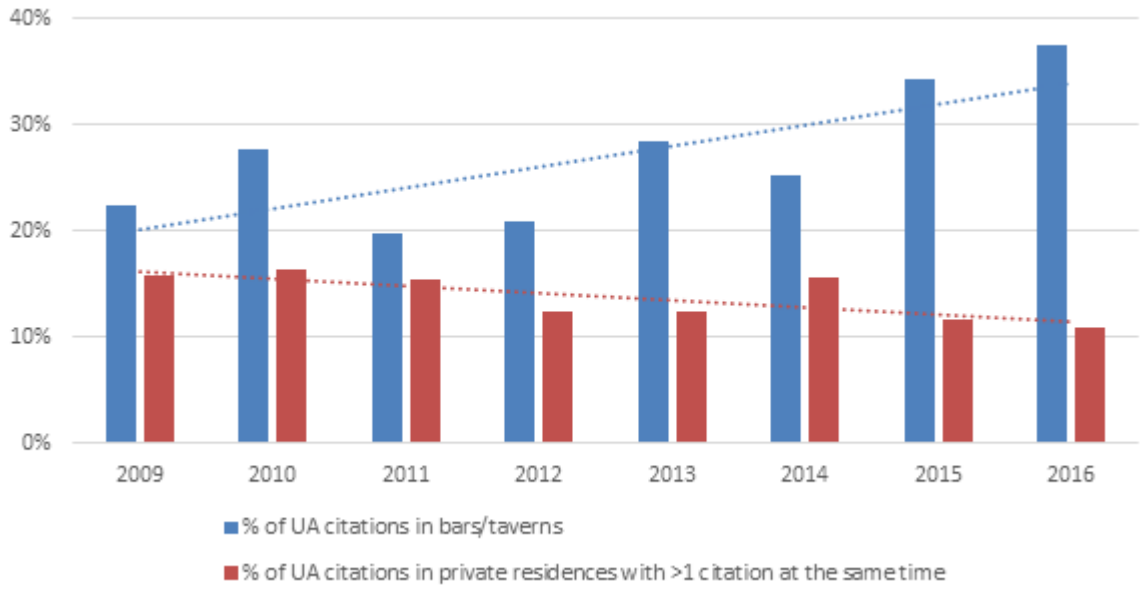
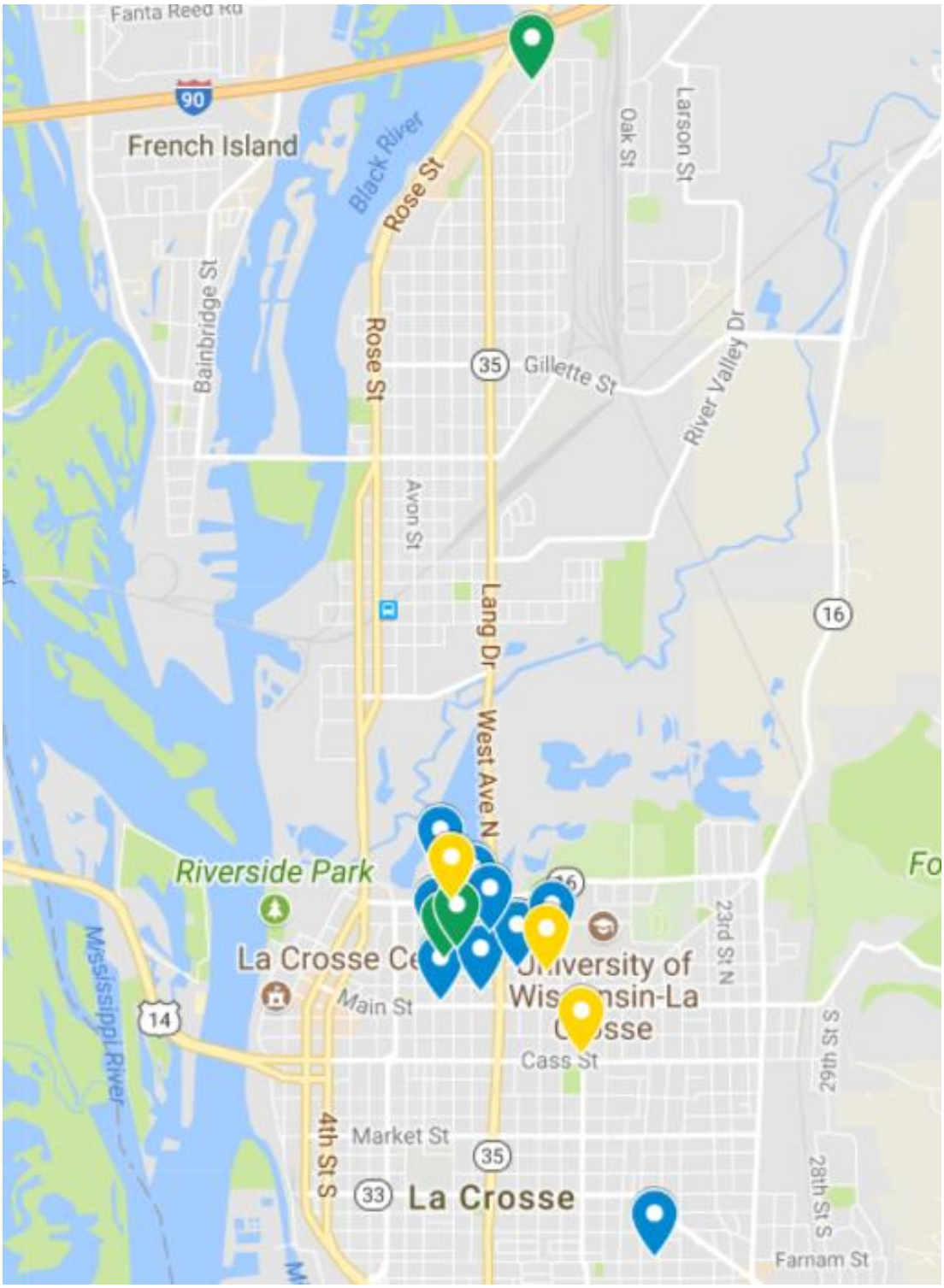


Table 14. Description of Social Host Citations, City of La Crosse 2014-2016

Date/time	Age	Gender
2014 – 13 Occasions		
5/29/14 12:47 AM	22	M
6/9/14 10:58 PM	21	F
7/24/14 12:04 AM	20/20	M/M
9/20/14 11:24 PM	19	M
9/26/14 6:02 PM	20	M
9/26/14 7:09 PM	19	M
9/26/14 8:23 PM	19	M
9/27/14 8:05 PM	20	M
9/27/14 8:21 PM	21	M
9/27/14 8:27 PM	19/21	F/M
9/27/14 8:54 PM	20	M
10/2/14 12:00 PM	19	M
12/21/14 12:46 AM	20	M
2015 – 3 Occasions		
9/13/15 3:20 PM	21	M
10/2/15 9:07 PM	21	M
10/3/15 9:39 PM	23	M
2016 – 3 Occasions		
2/6/16 1:26 AM	18	M
4/1/16 10:17 PM	20	M
9/21/16 11:04 PM	19/19/19/20	M

Figure 36. Map of Social Host Citations, City of La Crosse 2014-2016



Blue marker = 2014, Green marker = 2015, Yellow marker = 2016

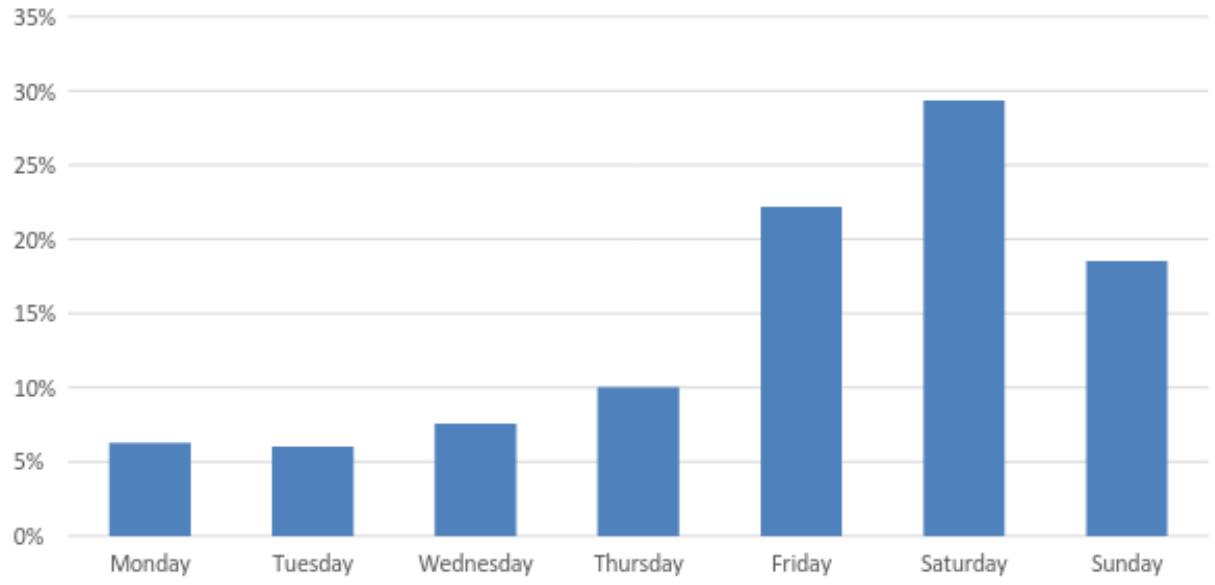
A description of drinking and driving violations from 2009 to 2016 are found in Table 15. Detail on the 2nd through 4th offenses was not available for all years, thus data had to be combined. The rate of 5th offense OWI's has remained consistent at about 2% of all OWIs each year.

Table 15. Description of Drinking and Driving Violations, City of La Crosse, 2009 to 2016

	2009-2010	2011-2012	2013-2014	2015-2016	TOTAL
Number of violations	1033	789	900	799	3521
Violate Absolute Sobriety Law (<21)	29	22	15	11	77
Operating with Prohibited Alcohol Concentration	0	1	27	5	33
Operating while Intoxicated 1-4th offense (including boat)	939	693	773	717	3122
Operating while Intoxicated (5th+)	21 (2%)	24 (3%)	16 (2%)	18 (2%)	79 (2%)
Cause Injury/Operating While Intoxicated (including controlled substance)	20	17	15	14	66
Operate with Controlled Substance/Detectable amount of restricted substance (drug)	24	32	54	34	144

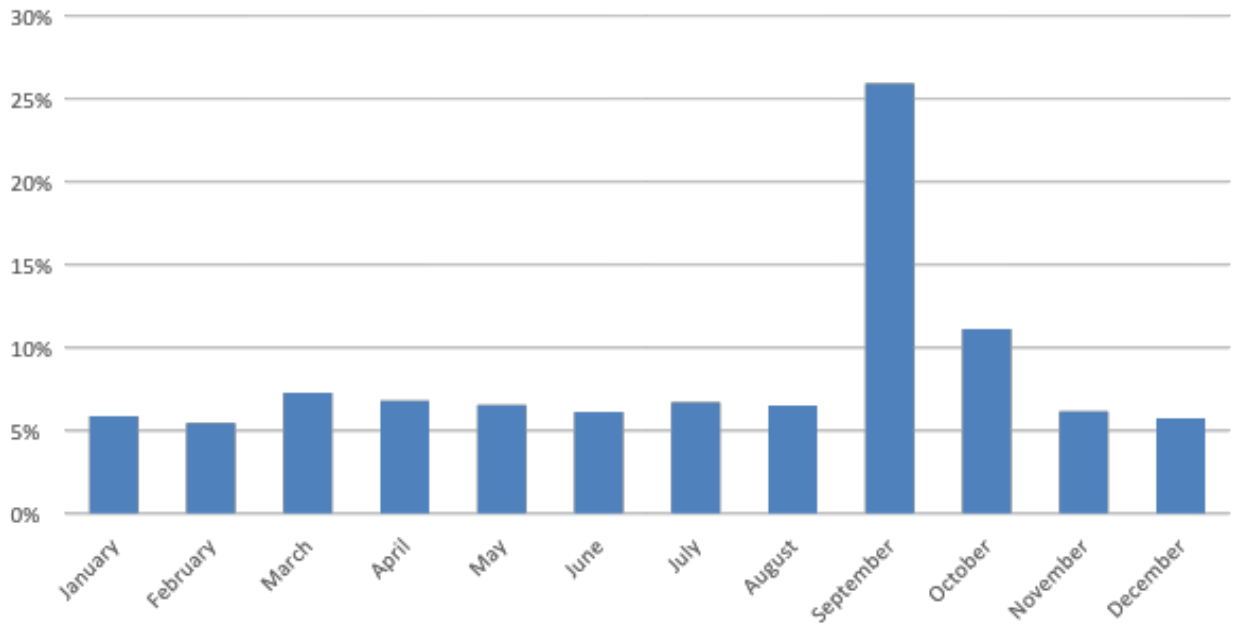
Most citations occur on the weekend (Friday through Sunday early morning, Figure 37). These accounted for 70% of all citations.

Figure 37. Day of Week - All Citations, City of La Crosse



Most citations occurred in September and October (Figure 38). Overall, 26% of citations occurred in September, 11% in October. This coincides with the first six weeks of school, in which students are most likely to experiment with underage and other risky drinking behavior (NIAAA, 2015).

Figure 38. Month of All Citations, City of La Crosse



Summary of Alcohol-Related Citations

- The rate of alcohol-related citations has declined steadily since 2007 in La Crosse County as well as the city of La Crosse. This decline was also seen at the state level, suggesting the decline was not necessarily a shift in personnel and focus, but a possible decline in illegal behavior.
- Underage alcohol citations have declined more significantly than all other violations, and the number has declined more for males than females.
    - Fewer underage people are being cited for repeat offenses in more recent years.
    - More underage people are being cited in bars and taverns than at private house parties. This could partially be explained by the existence of a social host ordinance.
    - Weekends and the months of September and October continued to be the most common times for all citations.

Motor Vehicle Crashes

While some motor vehicle crash (MVC) data is available in the hospital and emergency room utilization data in the next section, alcohol-related MVCs can also be detailed through the Wisconsin Crash Outcome Data Evaluation System (CODES). CODES data are a probabilistic linkage between crash data and hospital inpatient and emergency department data. Dates included in this section represent alcohol use among drivers of cars and trucks, and we have provided data across a number of years for comparison.

There are some limitations to a linked data set. Approximately 20% of all crash-related hospitalizations were not able to be linked to the data sets. These unlinked cases result in underreporting of the total crash injury burden.

Crashes involving alcohol by age are shown in Table 16. Overall, in 2011-2013, 3.4% (469) of La Crosse County crashes involved alcohol use by the driver, as compared to 2.9% of crashes in all other Wisconsin counties. This is an increase in the rate reported in the 2012 Burden of Risky Alcohol Use report (413 were reported from 2008-2010), but a decrease from the rate reported in the 2008 report (549 were reported from 2002-2004).

Table 16. Motor Vehicle Crashes Involving Alcohol by Age, La Crosse County Compared to All Other WI Counties, Comparison of Years 2002-2004, 2008-2010, 2011-2013
(Wisconsin CODES)

	La Crosse County			All Other WI Counties		
Age (Years)	2002-2004	2008-2010	2011-2013	2002-2004	2008-2010	2011-2013
16-24	4.6% (206/4517)	4.2% (164/3920)	4.3% (174/4024)	5.5%	4.6%	3.7%
25-44	5.6% (249/4428)	3.9% (154/3916)	4.2% (184/4415)	5.7%	4.9%	3.5%
45-64	2.8% (83/2923)	2.2% (71/3288)	2.6% (98/3814)	3.2%	3.0%	2.3%
65-74	1.4% (9/629)	2.3% (15/650)	1.4% (12/846)	1.6%	1.3%	1%
75+	0.1% (2/1632)	0.4% (9/2306)	0.2% (1/590)	0.3%	0.2%	0.5%
TOTAL	3.9% (549/14080)	2.9% (413/14080)	3.4% (469/13689)	4.3%	3.5%	2.9%

In La Crosse County, 16 to 24-year old drivers had the highest percentage of motor vehicle crashes that involved alcohol, as compared with other age groups. This may be due to the fact that these younger drivers are the least experienced drivers. Additionally, 37% of all alcohol-related crashes occurred among 16 to 24-year old drivers (which is a decrease from the previous report), compared to 31% from all other Wisconsin counties (Table 17).

Table 17. Number and percent of drivers using alcohol involved in a MVC, 2008-2010 versus 2011-2013 (Wisconsin CODES)

	La Crosse County		All Other WI Counties		Total	
Age (Years)	2008-2010	2011-2013	2008-2010	2011-2013	2008-2010	2011-2013
16-24	40%	37%	32%	31%	32%	31%
25-44	37%	39%	45%	43%	45%	43%
45-64	17%	21%	20%	23%	20%	23%
65-74	4%	3%	2%	2%	2%	2%
75+	<1%	<1%	1%	1%	1%	1%
TOTAL	413 (100%)	469 (100%)	19,031 (100%)	15,196 (100%)	19,444 (100%)	15,665 (100%)

Type of roadway was examined relative to the crashes in La Crosse County (Table 18). While all drivers are more likely to crash on a local road or a state highway, young drivers are especially more likely to crash on a local road, whereas older drivers are equally as likely to crash on local roads and state highways.

Table 18. Roadway Type and Crash Location When Alcohol Use is Involved, by Age, 2008-2010 versus 2011-2013
(Wisconsin CODES)

Location	16-24 Years Old		25+ Years Old	
	2008-2010	2011-2013	2008-2010	2011-2013
Local Road	55%	52%	46%	45%
County Road	10%	11%	14%	11%
State Highway	34%	35%	35%	42%
Federal Interstate	1%	2%	5%	2%

Summary of Motor Vehicle Crashes

- 3.4% of all motor vehicle crashes in La Crosse County, from 2011-2013, involved alcohol use by the driver of the vehicle. This is higher than the state rate for the same time period and is a slight increase from the rate for 2008-2010.
- The age group most affected by alcohol-related motor vehicle crashes is 25 to 44-year-olds, which is consistent with the rest of the state.
- Motor vehicle crashes involving alcohol happen most frequently on local roads (versus county roads, state highways, and federal interstates), with over half of alcohol-related crashes involving individuals ages 16 to 24 occurring on local roads.

Medical Care for Alcohol-Related Injuries

Risky alcohol use can lead to an increase in injuries that require medical attention, either in the emergency department (ED) setting or in a hospital inpatient setting. According to the 2016 Wisconsin Epidemiological Profile, La Crosse County had 1,101 alcohol-related injuries hospitalizations in 2014, which was the 10th highest number of hospitalizations by county in our state for that year. That same report estimated that charges for alcohol-related hospitalizations exceeded $1.3 billion in 2014; this figure does not include physician or ancillary charges.

In order to examine ED visits and hospital admissions for alcohol-related injuries in La Crosse County specifically, data were obtained from "E" (external cause - injury) codes for ED visits and inpatient admissions from the two hospital systems in La Crosse: Gundersen Health System and Mayo Clinic Health System-Franciscan Healthcare.

Figure 39 outlines the type of alcohol-related injuries treated in the ED among La Crosse County residents in the three study time periods. Among 12 to 24 year olds, the type of alcohol-related injury that was most prevalent across the three time periods was assault-related, while self-harm was the most prevalent type of injury reported for individuals aged 25 and older. MVC-related ED visits that involved alcohol declined across the study years for both age groups, while alcohol-related ED visits for falls increased for both age groups.

Figure 39. Percent of ED Visits for Injury Coded as Alcohol-Related, by Year and Age, La Crosse County Residents

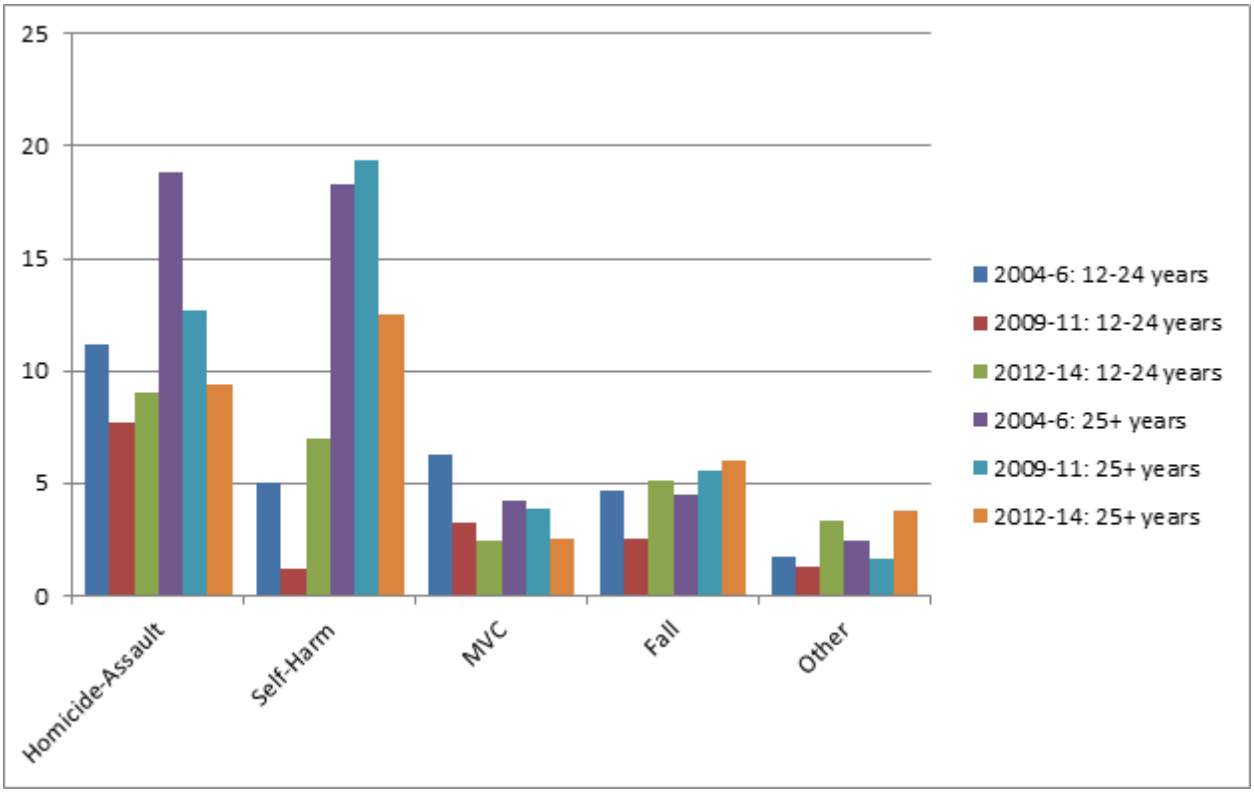
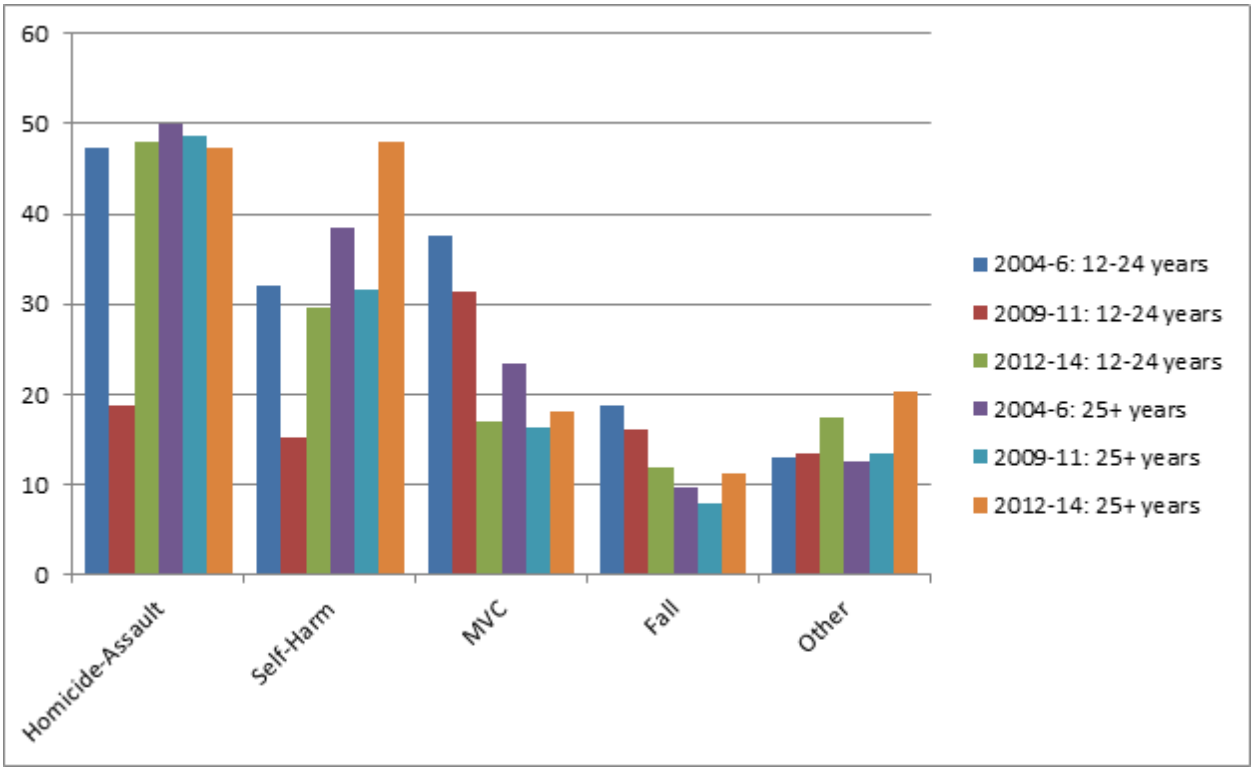


Figure 40 displays the type of alcohol-related injury among La Crosse County residents admitted to the hospital during the three study time periods. Almost half of hospital admissions for assault/homicide across the three study time periods and for both age groups involved alcohol, with the exception of the 12 to 24-year-old group during the 2009-2011 time period. Nearly half of hospital admissions for self-inflicted injuries among individuals aged 25 and older in the 2012-2014 time period involved alcohol. The overall trend for alcohol-related hospital admissions for MVCs and falls decreased over the three time periods for both age groups, although there were slight increases for individuals ages 25 and older in the 2012-2014 time period.

Figure 40. Percent of Hospital Admissions for Injury that are Coded as Alcohol-Related, by Year and Age, La Crosse County Residents



Summary of Medical Care for Alcohol-Related Injuries

- Risky alcohol use can lead to injuries that require medical attention, either in the emergency department setting or in an inpatient setting.
- Among individuals aged 12 to 24, injuries from alcohol-related assaults were the most prevalent injury seen in local emergency departments. This trend is consistent with inpatient admissions for this age group.
- Self-inflicted injuries that involved alcohol were the most prevalent type of injury seen in emergency departments for individuals aged 25 and older. This was the case in inpatient admissions for this age group as well.
- Alcohol-related ED visits for MVC injuries have declined among 12 to 24-year-olds from 2004-2006 to 2012-2014, and this trend was seen among inpatient admissions as well. There was a

slight increase in alcohol-related MVC injuries in the inpatient admissions from 2012-2014 among those aged 25 and older.

- Alcohol-related injury emergency department visits and inpatient admissions from falls increased in individuals aged 25 and older in 2012-2014, as compared to earlier years.

Deaths Likely Due to Alcohol

Alcohol use contributes to many different causes of death. The Centers for Disease Control and Prevention (CDC) has identified 54 chronic and acute conditions that are related to alcohol mortality. Alcohol use contributes to 100% of liver cirrhosis deaths (alcoholic liver disease) and injury deaths, especially in the young. The CDC has estimated that nearly 50% of fatal motor vehicle crashes (MVCs) for males ages 20-34 can be attributed to alcohol ("alcohol attributable fraction"). About 50% of homicides and 23% of suicides can also be attributed to alcohol. (CDC – ARDI). This may even be an underestimate, as described below in the analysis of La Crosse County's violent deaths.

In 2010, the Wisconsin Department of Health Services (DHS) reported that the alcohol-attributable death rate for the state increased from 16.6 in 2000 to 19.6 in 2008 per 100,000 population; in La Crosse County from 2000-2008, the overall rate was 16.9 per 100,000 population (Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2010). In 2014, the Wisconsin DHS estimated 1,748 deaths in 2012 were attributable to excess alcohol use or 22.2 deaths per 100,000 population (Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2014).

In 2014, the World Health Organization released a report on the global impact on alcohol and health. They estimated a net total of 2.2 million alcohol-related deaths worldwide in 2012, approximately 5.9% of all deaths. (Figure 41.) If we apply these same percentages (attributable risk) to deaths occurring among La Crosse County residents based on their main cause of death (as reported on their death certificates), approximately 150 deaths each year are caused by alcohol. This is more than 16% of all deaths, a much higher percent attributed to alcohol than globally (Figure 42). This rate has declined about 0.2% per year.

Figure 41. WHO Alcohol-Attributable Mortality Model

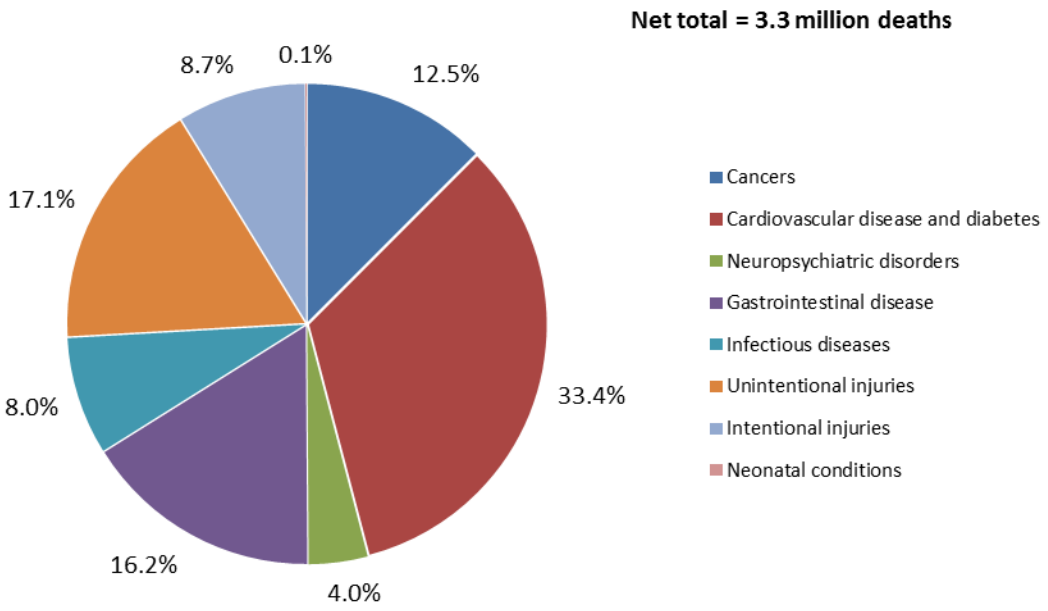
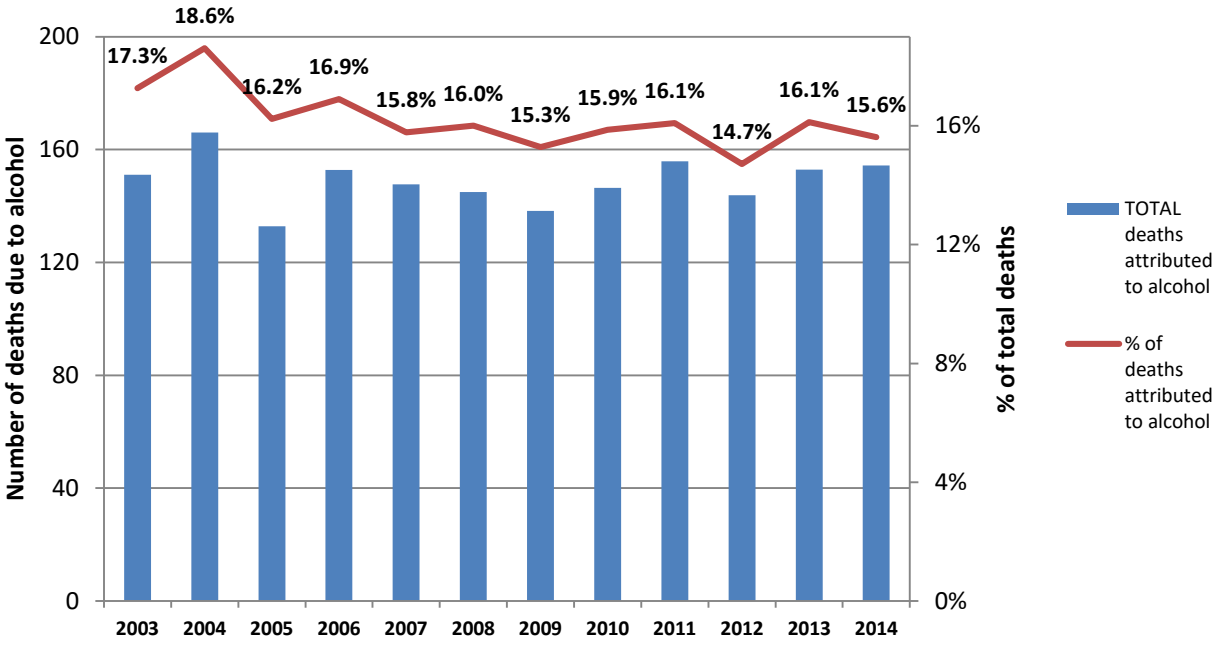
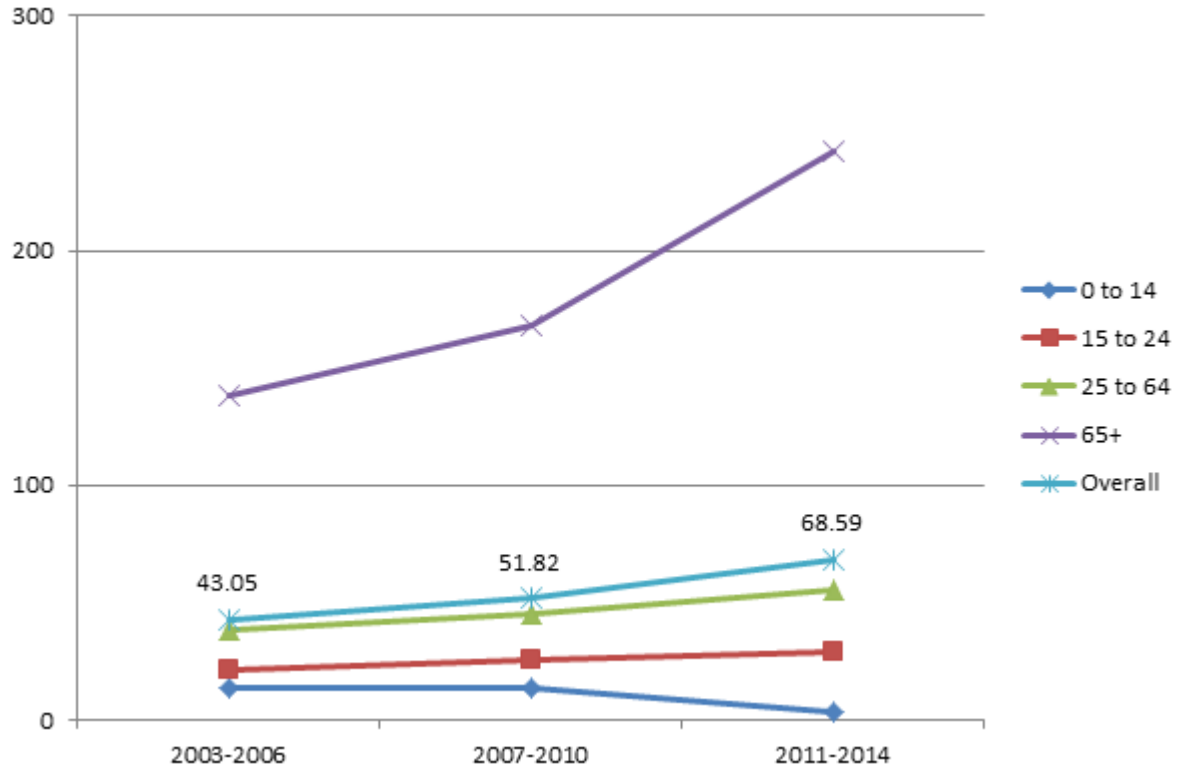


Figure 42. Number and Percent of Deaths Due to Alcohol 2003-2014



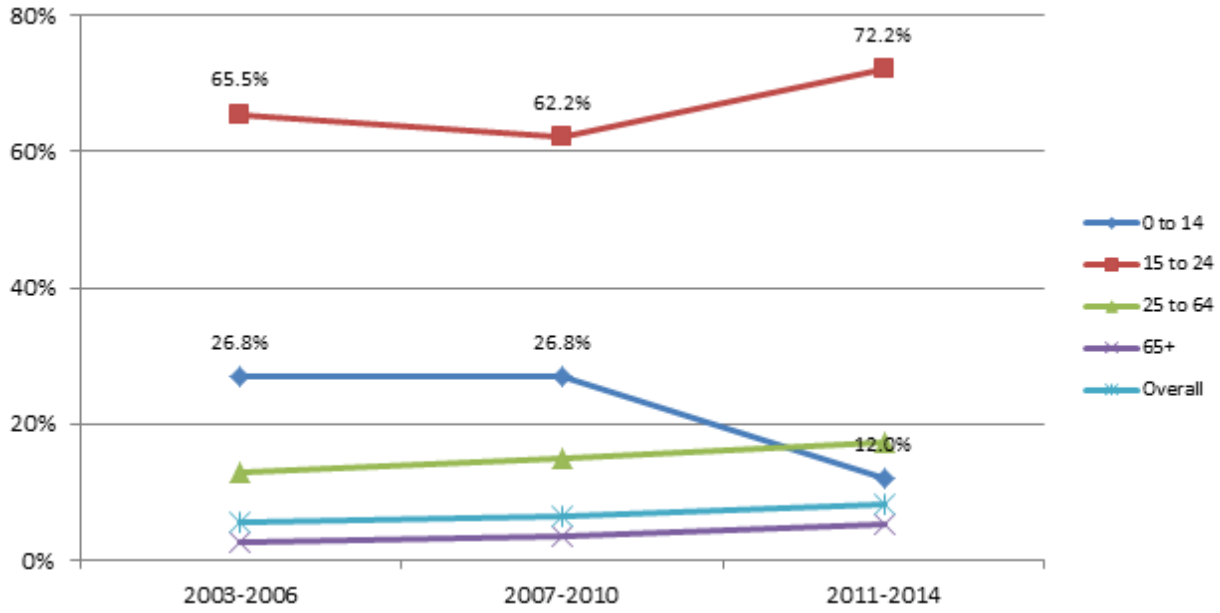
In Wisconsin, the majority of alcohol-attributable deaths are from acute causes: intentional and unintentional causes (accidents, homicides and suicides). Thus we examined the causes of death with a specific focus on injury deaths over time as a proxy for any changes in death that may be alcohol-related. The number of deaths of La Crosse County residents occurring from 2003-2006, 2007-2010 and 2011-2014 by age category are shown in Figure 43.

Figure 43. Injury Death Rates (per 100,000), La Crosse County by Age 2003-2014



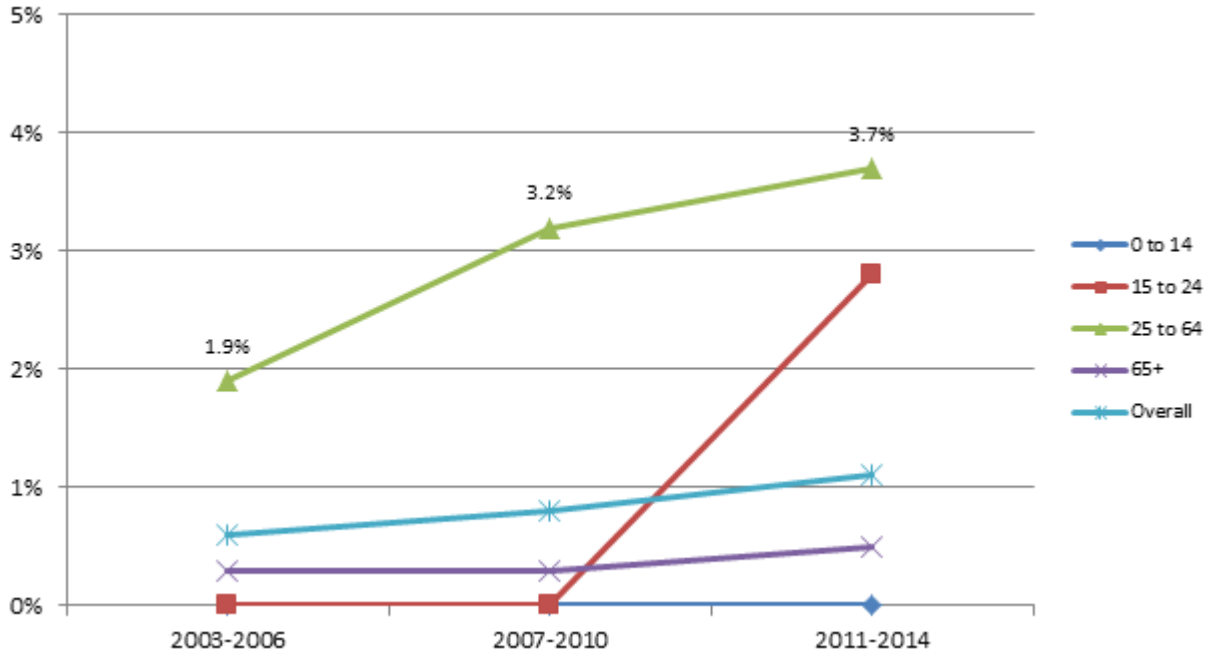
The rate of total injury deaths increased from 43 per 100,000 to 69 per 100,000, a 60% increase. Injury deaths account for a majority of youth deaths (age 15 to 24), and this increased from 65.5% of all deaths in 2003-2006 to 72.2% of all deaths in 2011-2014 (Figure 44).

Figure 44. Percent of Deaths Due to Injury (Intentional and Unintentional) by Age



The number of deaths from alcoholic liver disease also increased from 20 to 30 deaths between these two time frames, a 50% increase (Figure 45).

Figure 45. Percent of Deaths Due to Alcoholic Liver Disease by Age



Summary of Deaths Likely Due to Alcohol

- Approximately 150 deaths of La Crosse County residents each year can be attributed to alcohol. This is approximately 16% of all deaths.
    - The rate of alcohol-attributed deaths has declined slowly since 2004.
- Injury death rates have increased significantly from 43.05 to 68.59/100,000 in La Crosse County residents from 2003 to 2014.
    - The rate has increased significantly in those over age 65, however it isn't the primary cause of death among this age group.
    - Injury is most significant in the 15-24 year age group. However, the rate of injury deaths in this age group has not increased significantly since 2003-2006.
- While the number of deaths due to "Alcoholic Liver Disease" are low overall, the rate has significantly increased in the 25-64 year age group.

Violent Deaths

While alcohol abuse alone is a major health issue, it is also important to understand how alcohol affects other fatal behaviors. This has not been examined in our previous alcohol burden reports. The Wisconsin Violent Death Reporting System (WVDRS) captures data surrounding deaths of a violent nature – this includes homicides, suicides, unintentional firearm deaths, and violent deaths of undetermined intent. Data is compiled from both coroner/medical examiner (C/ME) reports and law enforcement reports, and state data analysts pull circumstantial data from these reports in order to provide a more comprehensive picture of the decedent's life prior to their death. Included in this circumstantial data is information about whether the decedent had a problem with alcohol (defined as "alcohol dependence" or "alcohol problem") prior to their death.

According to the WVDRS, there were 186 violent deaths among Wisconsin residents reported in La Crosse County from 2004 through 2013, a rate of 16.2/100,000. Of those, 46 individuals (roughly 25% or 4.1/100,000) were reported to have an alcohol problem. Table 19 below examines these 46 deaths in more detail.

Table 19. Violent Deaths Involving Alcohol in La Crosse County, 2004-2013

Timeframe	Gender		Manner of Death			
	Male	Female	Homicide	Suicide	Unintentional Firearms	Undetermined
2004-2008	76.2%	23.8%	0%	71.4%	0%	28.6%
2009-2013	63.0%	37.0%	3.7%	70.4%	0%	25.9%

Source: Wisconsin Dept. of Health Services, Division of Public Health, Office of Health Informatics. Wisconsin Interactive Statistics on Health (WISH) data query system

As this table shows, there was an increase in the proportion of violent deaths involving females between the two time periods. Additionally, the most common manner of violent death in which alcohol was a factor was suicide in both time periods; however, more than a quarter of violent deaths involving alcohol for the two time periods had an undetermined intent, meaning that there was not enough information to ascertain whether these deaths were intentional or unintentional.

One caveat with this data is that data abstractors only endorse a certain circumstance as being present in a decedent's life if there is evidence of that circumstance in either the C/ME report or the law enforcement report. As a result, there may be underreporting of these circumstances, as C/MEs or law enforcement may rely on reports from family members or loved ones.

Toxicology data is available from the WVDRS for violent deaths in La Crosse County as well. From 2010 through 2014, there were 68 suicides among males in La Crosse County, and of those, 11 decedents (16%) had a blood alcohol content (BAC) above Wisconsin's legal limit at the time of death; of the 20 female suicides in that same time period, 6 (30%) decedents had a BAC above Wisconsin's legal limit. This is likely an underestimation, as not all deaths were tested, and some of the results of the tests that were conducted are unknown.

In addition, there were 3 violent deaths of undetermined intent (of which there were 15 deaths total) from 2010-2014 in which the decedent had a BAC over the state's legal limit. In all three of these cases, the cause of death was poisoning, and the investigation of the death did not yield enough evidence to classify the death as either intentional or unintentional.

Summary of Violent Deaths

- One-quarter of violent deaths occurring in La Crosse County from 2004 through 2013 involved individuals who had a reported alcohol problem during their life. Males were more affected than females.
- Among those decedents who had a reported alcohol problem, the most common manner of violent death during these years was suicide.
- In La Crosse County, 16% of male suicide decedents between 2010 and 2014 had a blood alcohol content above the state's legal limit at the time of death, while 30% of female suicide decedents during these same years had a blood alcohol content above the state's legal limit at the time of death.
- These figures are likely an underestimation of the burden of alcohol as it relates to violent death.

THE ALCOHOL ENVIRONMENT AND RESPONSE TO THE ISSUE

Community Perception of the Problem

Every three years La Crosse County community members participate in a comprehensive needs assessment conducted by the United Way. This project, referred to as “COMPASS Now,” includes a household survey in which about 1,500 surveys are sent to random community members. Participants are provided a list of 19 issues and asked to rate how much of a concern they feel each is in the community.

In 2011, alcohol use was rated the 3rd most significant issue in the community, behind illegal drug use and financial problems experienced by local governments (See Table 20). In 2014, when the survey was repeated, alcohol use was rated the 2nd biggest concern, only behind illegal drug use. In the most recent survey (results to be published with the 2018 COMPASS report), alcohol use had decreased to the 8th biggest concern. This was now rated behind illegal drug use (and related topics – prescription drug misuse and over-the-counter drug misuse), funding for schools, obesity, hunger and bullying.

Table 20. Ratings of Problems in the Community, 2011, 2014, 2016

Issues in the community	2011 (n=520)	2014 (n=435)	2016 (n=292)
Illegal drug use	2	1	1
Funding for Schools	n/a	9	2
Prescription Drug Misuse	8	3	3
Obesity	4	8	4
Hunger	11	10	5
Bullying	n/a	5	6
Over-the-Counter Drug Misuse	9	6	7
Alcohol Use	**3**	**2**	**8**
Identity Theft	6	4	9
Homelessness	n/a	n/a	10
Domestic Abuse, Child Abuse, Elder Abuse	5	7	11
Financial Problems Experienced by Local Governments	1	14	12
Suicide	13	12	13
Sexual Abuse and Sexual Violence	10	11	14
Excessive Personal Debt	14	17	15
Tobacco Use	7	13	16
Risk of Foreclosure and Bankruptcy	15	18	17
Risk of Losing Your Job	12	16	18
Gambling	15	15	19

Source: COMPASS Now, United Way

Summary of Perception of Alcohol Use as a Problem in the Community

- The perception of alcohol use as a significant concern in the community has declined significantly since 2014. Illegal drug use, prescription drug use and over-the-counter drug misuse have become the dominant concern among La Crosse County residents.

Community Support for Strategies to Address the Issue

In 2009, 2012, and again in 2017, a survey was conducted by CESA #4 to examine community members' perceptions around alcohol (and other drugs) use and support for strategies to address the issues. The survey was sent to 3,600 community members in Buffalo, Jackson, La Crosse, Monroe, Trempealeau and Vernon counties in 2009. In 2012 and 2017 the survey was sent to 2,400 households in La Crosse County. Selected results are summarized below. For the full reports, see the La Crosse County Prevention Network website (http://www.lacrossecpn.org). Overall, each survey's sample respondents had a higher level of education than the general population. The survey samples contained more female, older, and underrepresented households with children (Table 21).

Table 21. Survey Demographics, Community Perception Survey, La Crosse County 2009, 2012, 2017

	2009	2012	2017
Survey sample size (response rate)	692 (19.2%)	329 (13.7%)	534 (22.3%)
% Female	66%	59%	70%
Median age	57 years	55 years	62 years
Non-white	6%	1%	5%
% College degree or higher education	34%	47%	52%
Minor in household	31%	25%	22%
La Crosse County	123 (18%)	329 (100%)	534 (100%)
City of La Crosse		55%	48%
City of Onalaska		21%	22%
Other		24%	30%

Community members' acceptability of *teenagers* (17 and under) drinking was very low in general, between 5% and 11% in 2017 (Table 22). Occasional and binge drinking of *young adults* (age 18-20) is more acceptable to community members than teenagers (ranging from 26% to 45%). This acceptability has increased from the survey in 2012 after an initial decline. Community members in general agreed that binge drinking is more acceptable if people don't drive afterwards.

Table 22. Level of Support for Alcohol Consumption in the Community (% Agree or Strongly Agree)

It is acceptable for:	2009	2012	2017
Occasional drinking by teenagers	11%	8%	11%
Binge drinking by teenagers	2%	3%	n/a
Teenagers to drink if they don't drive afterwards	4%	5%	5%
Occasional drinking by 18-20 year olds	46%	38%	45%
Any binge drinking by 18-20 year olds	3%	5%	7%
18-20 year olds to drink if they don't drive afterwards	30%	25%	26%
Adults to binge drink if they don't drive afterwards	n/a	14%	15%

Respondents were generally more supportive of parents offering alcohol to 18-20 year-old adults than they were to those younger than 18 (their own children or other children, Table 23). Most respondents indicate that it is not okay for parents to offer other teenagers alcohol. Overall support for parents supplying alcohol to minors has decreased from 2009 to 2017 (indicating less support for parents supplying alcohol to those not of drinking age).

Table 23. Level of Support for Aspects of Parents Supplying Alcohol to Minors (% Agree or Strongly Agree)

It is acceptable for:	2009	2012	2017
Parents to offer alcohol to a non-relative teenager	1%	2%	1%
Parents to offer alcohol to their own teenager	23%	18%	20%
Parents to offer alcohol to their own 18-20 year old	31%	27%	25%

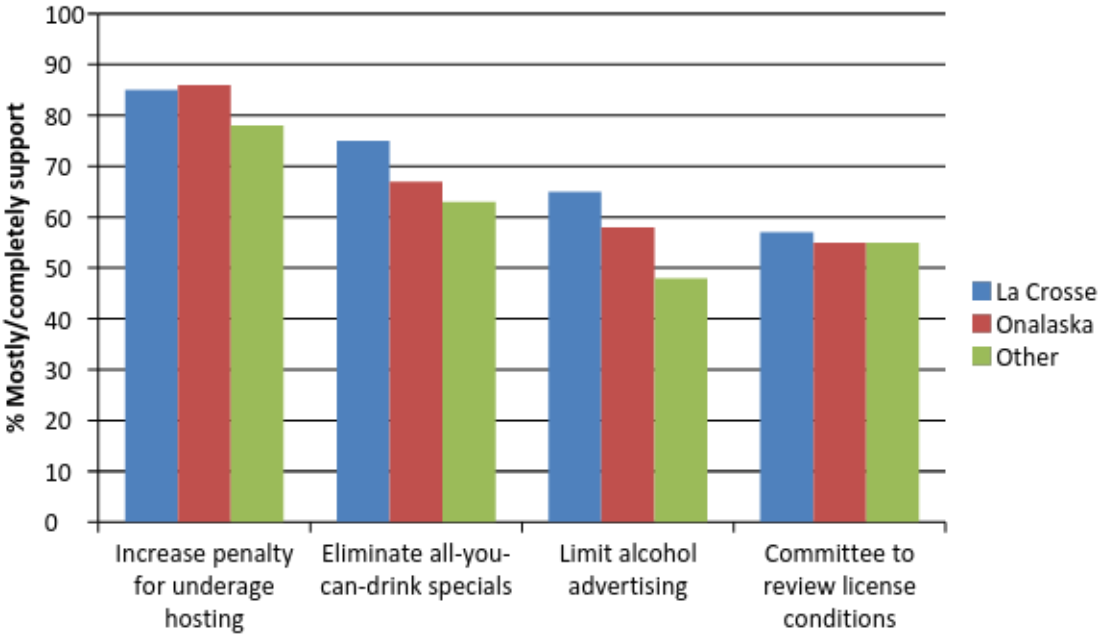
Community support for law enforcement of illegal or risky alcohol use is generally high (Table 24). Respondents to this survey report being mostly or completely supportive of policies and initiatives that attempt to reduce underage drinking and binge drinking within the community. There was strong support for law enforcement conducting compliance checks for illegal purchasing (92% support), as well as strong support of penalties for adults hosting underage drinking parties (83% support). Eighty-three percent of respondents were supportive of increasing the penalties for drinking and driving. Overall, 49% of respondents supported an increase in taxes on alcohol, down slightly since 2012 and 2009. There was moderate support for other policies, such as increasing the alcohol license fee, regulating the number of alcohol liquor licenses, and increasing regulations on how alcohol is served at community festivals. Support for a community committee to review alcohol licenses increased between 2012 and 2017, from 47% to 56%. Support for eliminating all-you-can-drink specials at bars and restaurants had strong support in 2012 and 2017, with 70% support.

Table 24. Community Support for Items Relating to Law Enforcement and Alcohol Regulation (% mostly or completely supportive)

	2009	2012	2017
Law Enforcement and Legal Action			
Conducting retailer compliance checks to prevent the sale of alcohol to teenagers and young adults	94%	89%	92%
Increasing the penalties for adults hosting an underage drinking party (social host ordinance)	n/a	88%	83%
Enforcing the minimum drinking age of 21 years	90%	81%	83%
Increasing the penalties on drinking and driving	74%	80%	83%
Alcohol Regulation			
Increasing taxes on alcohol	51%	55%	49%
Increasing the cost of alcohol license fees if the money went to prevention and treatment	n/a	53%	55%
More regulation on how alcohol is served at community festivals	n/a	59%	55%
More regulation on how alcohol is served at bars/restaurants	n/a	53%	n/a
Eliminating all-you-can-drink specials at bars/restaurants	n/a	69%	70%
More regulation on the number or location of alcohol licenses	n/a	51%	48%
A community committee to review alcohol license conditions and renewals	n/a	47%	56%
Limits on alcohol advertising (billboards, radio, etc.)	65%	63%	59%

City of La Crosse residents responded differently in their level of support for three of the policies compared to residents from the other communities. La Crosse residents were more supportive of a community committee to review alcohol license conditions, eliminating all-you-can-drink specials, and for limiting alcohol advertising. Residents of La Crosse and Onalaska were more supportive of increasing the penalties for hosting underage drinking parties than respondents outside these two communities. (Figure 46).

Figure 46. Support for Policies by Respondent's Residence - 2017



Summary of Community Perceptions Toward Alcohol Use and Policies

- In general, there is moderate-to-strong support for strategies to control illegal or risky alcohol use.
    - Some strategies, such as conducting compliance checks, social host ordinances, and increasing the penalty for drinking and driving, have had community discussion.
    - Some strategies such as eliminating all-you-can-drink specials, or an alcohol review board, are newer to community members in La Crosse.
    - There is still moderate support for these policies; and a general agreement that underage and binge drinking is not acceptable.

Alcohol Licenses

In Wisconsin, municipalities control many of the factors shaping the local alcohol environment. Because municipalities issue alcohol licenses, municipal governments have control over the number and type of establishments selling and serving alcohol, as well as whether sales are concentrated in one area or spread throughout the community (DHS, 2012).

High alcohol outlet density, defined as a high concentration of retail alcohol outlets in a small area, is known to be an environmental risk factor for excessive drinking. To prevent excessive drinking, the Community Preventive Services Task Force recommends "limiting alcohol outlet density through the use of regulatory authority (e.g., licensing and zoning)," which is based on strong scientific evidence of intervention effectiveness (CDC, 2017).

Community-level factors that increase the risk of experiencing problems with alcohol include the per capita number of alcohol outlets in a community (Popova, 2009). Table 25 shows the number of alcohol licenses in relation to the number of people in La Crosse County.

Class A Licenses (fermented malt, liquor) allow the retail sale of malt beverages, intoxicating liquor (including wine), and cider for consumption off premises (examples: grocery & liquor stores, etc.).
Class B Licenses (fermented malt, liquor) allow the retail sale of malt beverages, intoxicating liquor (including wine), and cider for consumption on premises (examples: restaurants, taverns etc.).

Table 25. Alcohol Outlet Density: Licenses per People and per 500 Population, La Crosse County, 2007-2016

Municipality	Population		Licenses Issued				People per license (higher= less dense)		Licenses per 500 population (higher=more dense)	
Listed by most licenses to least licences per 500 people	2007	2015	2007-08	2015-16	Class A (2015-16)	Class B (2015-16)	2007-08	2015-16	2007-08	2015-16
BANGOR - VILLAGE	1,414	1,520	10	6	1	5	141	253	3.5	2.0
WASHINGTON - TOWN	746	544	2	2	0	2	373	272	1.3	1.8
LA CROSSE - CITY	51,580	52,377	190	184	29	155	271	285	1.8	1.8
ROCKLAND- VILLAGE	594	594	0	2	0	2	0	297	0.0	1.7
FARMINGTON - TOWN	1,927	2,083	6	7	1	6	321	298	1.6	1.7
WEST SALEM - VILLAGE	4,823	4,956	13	16	7	9	371	310	1.3	1.6
BARRE - TOWN	1,187	1,260	4	4	0	4	297	315	1.7	1.6
CAMPBELL - TOWN	4,420	4,330	10	12	2	10	442	361	1.1	1.4
Total: La Crosse County	111,791	118,038	312	318	62	256	358	371	1.4	1.3
ONALASKA - CITY	16,425	18,646	38	48	14	34	432	388	1.2	1.3
HAMILTON - TOWN	2,432	2,467	4	5	1	4	608	493	0.8	1.0
BANGOR - TOWN	600	618	1	1	0	1	600	618	0.8	0.8
HOLMEN - VILLAGE	7,594	9,623	13	13	4	9	584	740	0.9	0.7
MEDARY - TOWN	1,553	1,498	4	2	0	2	388	749	1.3	0.7
SHELBY - TOWN	4,842	4,707	7	5	0	5	692	941	0.7	0.5
BURNS - TOWN	993	955	1	1	0	1	993	955	0.5	0.5
HOLLAND - TOWN	3,378	3,967	3	4	1	3	1126	992	0.4	0.5
GREENFIELD - TOWN	1,749	2,116	2	2	1	1	875	1058	0.6	0.5
ONALASKA - TOWN	5,475	5,743	4	4	1	3	1369	1436	0.4	0.3

For Wisconsin, the 2013 people-per-license average is 343, and the national average is 491 people per license, compared to 371 people per license average for La Crosse County in 2015-16. In La Crosse County, municipal licenses vary from 0.3 to 2.0 licenses per 500 people, with the total La Crosse County average at 1.3 and the Wisconsin average at 1.5. Overall, there were slight changes in people per license or licenses per 500 people in La Crosse County from 2007 to 2016.

Differences in alcohol outlet density by municipality are difficult to interpret. Rural municipalities may have a higher number of outlets relative to population, but these outlets may be small and serve fewer people than a single outlet in a large city. Further research is needed to systematically measure alcohol outlet density using a more detailed mapping method considering spatial density of outlets. Furthermore, assessing how the risk of alcohol-attributable harms varies based on the distance between alcohol outlets needs more study in La Crosse and nationally (read more at: https://www.cdc.gov/alcohol/pdfs/CDC-Guide-for-Measuring-Alcohol-Outlet-Density.pdf).

There is strong scientific evidence to support that regulating alcohol outlet density is one of the most effective strategies for reducing excessive alcohol consumption and related harms. Consequently, it is essential for public health agencies to assess alcohol outlet density to help guide the development of strategies to regulate this environmental risk factor, and to support the design and implementation of other evidence-based strategies for preventing excessive alcohol use and related harms.

Summary of Alcohol Licenses

- In La Crosse County, municipal licenses vary from 0.3 to 2.0 licenses per 500 people, with the total La Crosse County average at 1.3 and the Wisconsin average at 1.5.
- Overall, there were slight changes in licensing rates in La Crosse County from 2007 to 2016.
- There is strong scientific evidence to support that regulating alcohol outlet density is one of the most effective strategies for reducing excessive alcohol consumption and related harms.

Compliance Checks

Increasing enforcement against retailers who sell to minors can have a substantial effect on alcohol sales to young people. Even moderate increases in enforcement can reduce sales to minors by as much as 35 percent to 40 percent, especially when combined with media and other community activities (National Research Council and Institute of Medicine, 2004).

Alcohol compliance checks are investigations into the purchase of alcohol by minors from bars, restaurants, convenience stores, liquor stores, and any establishment that sells alcohol. The investigations involve a youth, usually aged 17-19, voluntarily working with the police, who attempts to purchase alcohol using their own (underage) ID. They also must state their real age if asked. If the youth successfully purchases alcohol, the clerk is issued a warning or a citation.

These checks are not “stings” attempting to entrap retailers; retailers are notified in advance, often by letter, of the period of time these checks will occur. Both youth and law enforcement follow a protocol to conduct the compliance check. Officers provide education to servers/sellers on the importance of checking identification and not selling to minors along with the warning or citation.

Experience shows compliance checks are most effective when (Wisconsin Alcohol Policy Project, 2016):
1) scheduled to cover retailers at least twice a year
2) provide advance notification to retailers (not “stings”)
3) use tested and effective protocols
4) build community support for compliance with the law
5) penalize the license holder when appropriate and not simply the clerk or server (although this is not possible in Wisconsin)

While citations written against owners (licensees) are a more effective deterrent over time, they were banned by the Wisconsin State Legislature in 2016.

In La Crosse County, alcohol compliance checks are handled by individual police departments, with the Sheriff's Department conducting checks in outlying municipalities without police departments. Some departments are reimbursed for staff time to conduct checks and provide small incentives for youth through a La Crosse County Drug Free Communities Grant. The number and pass/failure rate are shown in Table 26. The number of compliance checks has declined since 2012, however the pass rate (not selling to the underage person) has remained over 80%.

Table 26. Alcohol Compliance Checks Results for La Crosse County, 2012-2016

Year	Total Checks	Passed	Failed
2012-2013	222	190 (86%)	32 (14%)
2013-2014	167	132 (80%)	35 (20%)
2014-2015	182	147 (81%)	35 (19%)
2015-2016	81	71 (88%)	10 (12%)

Summary of Alcohol Compliance Checks

- Overall, the number of alcohol compliance checks conducted in La Crosse County municipalities has decreased between 2012 and 2016, although the pass rates have remained steady between 80%-88%.

Cost of Excessive Drinking

Excessive alcohol use is known to kill about 88,000 people in the United States each year, but a CDC study suggests it is also a drain on the American economy, mostly due to losses in workplace productivity (Figure 47).

The cost of excessive alcohol use in the United States reached $249 billion in 2010, or about $2.05 per drink. Most (77%) of these costs were due to binge drinking. Further, 2 of every 5 dollars were paid by federal, state, and local governments, demonstrating that we are all paying for excessive alcohol use.

Figure 47. Cost of Excessive Alcohol Use in the United States

Source: CDC (Centers for Disease Control and Prevention, (2017). Excessive Drinking is Draining the U.S. Economy, available: https://www.cdc.gov/features/costsofdrinking/)

Excessive alcohol use cost states and the District of Columbia (D.C.) a median of $3.5 billion in 2010, ranging from $488 million in North Dakota to $35 billion in California. D.C. had the highest cost per person ($1,526, compared to the $807 national average), and New Mexico had the highest cost per drink ($2.77, compared to the $2.05 national average). Various studies show Wisconsin's costs due to excessive alcohol use ranges from $4.5-6.8 billion (Sacks et al., 2010).

The researchers found that the cost of this dangerous behavior impacts many aspects of drinkers' lives and the lives of those around them. However, most of the costs resulted from losses in workplace productivity (72% of the total cost), health care expenses for treating problems caused by excessive drinking (11% of total), law enforcement and other criminal justice expenses (10%), and losses from motor vehicle crashes related to excessive alcohol use (5%).

These estimates update two previous CDC studies that found excessive drinking cost the U.S. $223.5 billion and cost states and D.C. a median of $2.9 billion in 2006. The researchers believe that the study still underestimates the cost of excessive drinking because information on alcohol is often underreported or unavailable, and the study did not include other costs, such as pain and suffering due to alcohol-related injuries and diseases.

A similar study was published in Wisconsin in 2013 (Black & Paltzer, 2013), with results by county, which found the cost per La Crosse County resident to be $915.72 annually (Table 27). Healthcare costs, lost productivity, criminal justice issues, motor vehicle crashes, and other consequences add up to $105 million annually in La Crosse County. Binge drinking is responsible for 76% of the economic cost of excessive alcohol use.

Table 27. Cost of Excessive Alcohol Use in La Crosse County, 2013

The Cost of Excessive Alcohol Use in La Crosse County	
Healthcare costs	$11.5 million
Lost Productivity	$75.8 million
Other: Criminal Justice System Costs, Motor Vehicle Crashes, and Other Consequences	$17.7 million
Total:	$105 million annually
Cost per La Crosse County Resident	$915.72 annually

Summary of the Cost of Excessive Drinking

- The annual economic cost of excessive alcohol use in La Crosse County is $105 million.
- Excessive alcohol use in La Crosse County costs $915.72 annually per resident.
- State and national research reports that binge drinking is responsible for most (76%-77%) of the economic cost of excessive alcohol use. Further, 2 of every 5 dollars were paid by federal, state, and local governments, demonstrating that we are all paying for excessive alcohol use.

OUR RESPONSE TO THE PROBLEM - SUMMARY OF OUR EFFORTS

In 2007, the La Crosse Medical Health Science Consortium partnered with Coulee Council on Addictions and the Cooperative Education Service Agency (CESA) #4 to develop a plan for addressing the culture of risky drinking in La Crosse County and the unintended injuries and deaths that resulted from it. Teaming with the Medical College of Wisconsin's Injury Research Center, they received a $50,000 planning grant from the Healthier Wisconsin Partnership Program (HWPP) to create a strategic plan for reducing **alcohol-related injuries** among 12-24 year-olds in La Crosse County. This resulted in the first Burden of Alcohol Related Injury Report, an inventory of alcohol-related assets in the community, and the formation of a community coalition that developed a five-year strategic plan to achieve its goal.

One of the coalition's first steps was an all-day education event known as "The Plunge," in which community leaders learned about the local alcohol culture and its effect on youth, health, and community. The coalition was funded for three years by HWPP to implement the issues within its plan related to **underage access to alcohol and underage drinking** among 12-20 year-olds in La Crosse County. It embarked on a community-wide education effort, which included providing Responsible Beverage Service training in conjunction with local law enforcement to local restaurants, hotels, and taverns; a "Parents Who Host Lose the Most" marketing campaign to reduce underage serving; a Strengthening Families Program for families with at-risk youth aged 10-14, and visiting speakers for town hall meetings and coalition gatherings. This effort also supported overtime for law enforcement to conduct compliance checks and party patrols on and off campus, worked with campuses to strengthen some alcohol policies through a Tri-Campus Advocacy Group, and provided mini-grants to youth groups for alcohol-alternative activity planning. During this period, the Burden Report was updated in a second edition, and the first Community Perception Survey was completed to gauge public support for the messages, policies, and practices endorsed by the project.

Also in 2009, the coalition was funded for three years by the Wisconsin Department of Health Service's Strategic Prevention Framework State Incentive Grant to address **binge drinking** among 18-24 year-olds in La Crosse County. Through education efforts and relationship-building, the coalition built its own membership to include more stakeholder groups, conducted a YouTube contest to engage college students in the development of anti-binge drinking PSAs, supported youth leadership training, and sent coalition members to training and conferences nationwide. During this period, the coalition began assessing community festivals for alcohol safety best practices annually and followed up with fest organizers to suggest changes. It also developed a seller recognition program in partnership with the local Tavern League and college students, "Partners for a Safer La Crosse County," to recognize taverns that voluntarily used alcohol safety best practices. The coalition conducted key informant interviews with community leaders to determine their awareness of alcohol culture and the impact of coalition work.

In addition to the Changing the Culture coalition's work, CESA #4 and the La Crosse Prevention Network partnered to receive a five-year Drug-Free Communities grant to address alcohol and other substances

among youth, which leveraged many resources with the coalition to benefit both projects. CESA #4 also received a three-year Office of Justice Assistance (OJA) grant focused on youth involvement in alcohol, drugs, truancy, and gangs.

In 2012, the coalition was further funded for five years, through 2017, to pursue policy changes that would address alcohol misuse in La Crosse County and support a safer alcohol environment. During this time, the coalition trained local elected officials in alcohol policy development (developed in partnership with the Wisconsin Alcohol Policy Project), continued the Parents Who Host Lose the Most campaign in conjunction with the Community Perceptions Survey, and continued the Responsible Beverage Service training program. The latter program was permanently sustained through a City Council action setting aside an increase in bartender license fees to support the continued teaching of the program through a commitment of time from the La Crosse Police Department. Policy changes included the establishment of Social Host Policies in all seven municipalities and La Crosse County. Unfortunately, a legal challenge to social host policies in another part of Wisconsin put these local ordinances in jeopardy, but the coalition worked with local representatives of the Wisconsin Legislature to pursue a language change in State statute governing alcohol distribution that would accomplish the same goal. At this writing, this change in statute is still in progress. With data collected from past festival assessments, the coalition also assisted the La Crosse City Council with developing a resolution offering alcohol safety best practices to recipients of Temporary Class B licenses, such as festivals and events, which passed in September 2017. It also assisted the Council in developing language for an ordinance to eliminate all-you-can-drink specials at local taverns, which did not pass, but Council members are continuing to work with local taverns to develop safer practices. Working with college campuses, the coalition assisted the University of Wisconsin-La Crosse with developing a stronger alcohol safety policy for its new Student Union. The Burden Report was partially updated in 2015, followed by the current and final edition of the Burden Report here, and a final Community Perceptions Survey was completed to determine the success of messaging campaigns and changes in support for local alcohol safety practices and policies.

TECHNICAL SPECIFICATIONS/SOURCES OF DATA

Previous Burden Reports:

Alcohol Related Injury and Death in La Crosse County – A Report on the Burden of At Risk Alcohol Use and Abuse. June 2008. Available at: http://www.lacrosseconsortium.org/uploads/content_files/AlcoholRelatedInjuryandDeathinLaCrosseCounty.pdf

Burden of Risky Alcohol Use, La Crosse County. October 2012. Available at: http://www.lacrosseconsortium.org/uploads/content_files/Burden_of_Alcohol_Report_2012.pdf

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Youth Risk Behavior Survey Reports:

2010 Youth Risk Behavior Survey, La Crosse County, Executive Summary. Available at: www.cesa4.k12.wi.us/programs/inst/SHSC/10executivesummary.pdf.

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2015 Youth Risk Behavior Survey, La Crosse County, Executive Summary. Available at: http://www.cesa4.k12.wi.us/cms_files/resources/2015%20YRBS%20Summary-LaX%20County.pdf

2017 Youth Risk Behavior Survey, La Crosse County, Executive Summary. Available at: http://www.lacrossecpn.org/statistics.html

College Student Data:

National College Health Assessment Survey and Benchmark information Available at: http://www.achancha.org/

Adult Prevalence Data:

Wisconsin Department of Health Services, Division of Public Health and Division of Mental Health and Substance Abuse Services. Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2010 (P-45718-10). Prepared by the Population Health Information Section, Division of Public Health, in consultation with DMHSAS and the University of Wisconsin Population Health Institute. November 2010. This report is available online at http://dhs.wisconsin.gov/stats/aoda.htm.

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Alcohol Citations:

Crime statistics obtained from: Wisconsin Office of Justice Assistance (OJA) Statistical Analysis Center https://www.doj.state.wi.us/dles/bjia/ucr-arrest-data

Alcohol-related citation data obtained from the La Crosse Police Department, Records Bureau, 2009-2016.

Motor Vehicle Crashes:

Motor vehicle crash data obtained from: Wisconsin Crash Outcome Data Evaluation System (CODES), University of Wisconsin-Madison and Wisconsin Department of Transportation http://www.chsra.wisc.edu/codes/

Medical Care of Alcohol-Related Injuries:

Unpublished data. Wisconsin Hospital Association Emergency Department and Inpatient Admissions.

All Alcohol-Related Deaths:

Alcohol and Public Health: Alcohol-Related Disease Impact (ARDI) Centers for Disease Control and Prevention. Available at: http://apps.nccd.cdc.gov/DACH_ARDI/Default/Default.aspx

Department of Health Services, Division of Public Health, Office of Health Informatics. Wisconsin Interactive Statistics on Health (WISH)- Mortality Module. Available at: https://www.dhs.wisconsin.gov/wish/mortality/index.htm

Violent Deaths:

Violent death data obtained from the Wisconsin Violent Death Reporting System (WVDRS), Wisconsin Department of Health Services Offices of Health Informatics.
https://www.dhs.wisconsin.gov/wish/violent-death/index.htm
BAC data obtained is unpublished data.

Community Perception of the Problem:
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Community Support to Address the Issue:
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Alcohol Licenses:
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Centers for Disease Control and Prevention. Guide for Measuring Alcohol Outlet Density. Atlanta, GA: Centers for Disease Control and Prevention, US Dept of Health and Human Services; 2017. Available at: https://www.cdc.gov/alcohol/pdfs/CDC-Guide-for-Measuring-Alcohol-Outlet-Density.pdf

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Black, P.D., Paltzer, J. T. (2013). The Burden of Excessive Alcohol Use in Wisconsin, University of Wisconsin Population Health Institute. Available: https://law.wisc.edu/wapp/alcohol_burden_full_report.pdf

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