

MICHIGAN ALCOHOL SURVEILLANCE BRIEF



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Self-reported Experience with Drinking & Driving in MI Youth

Motor-vehicle crashes are the leading cause of death in the United States for persons aged 16-24 years, and a substantial proportion of these crashes are alcohol-related.¹ Alcohol has been identified as one of the most important preventable causes of motor vehicle collisions for more than 4 decades.² In 2006 alone, 38,588 fatal collisions led to 42,642 fatalities, of which 41 percent occurred while at least one of the drivers or non-motorists involved in the fatal crash had a blood alcohol concentration (BAC) above the legal limit.³ However, not all drivers are equally at risk of alcohol-related motor vehicle crashes. Younger drivers have reported a higher rate of driving under the influence and male drivers have a twofold higher chance of being under the influence of alcohol in a fatal crash.⁴ Not only are drivers aged less than 21 years more likely than older drivers to be involved in fatal crashes, but their added risk for fatal crash involvement increases more sharply at all levels of alcohol use.⁵

Data from the 2009 **Michigan's Youth Risk Behavior Survey (MiYRBS)** can be used to examine the prevalence of Michigan teenagers riding in a vehicle with a drinking driver & driving after drinking alcohol. Among MiYRBS respondents, the overall proportion of non-drinkers was 63.0%, while 37.0% of respondents reported being current drinkers and 23.2% reported binge drinking. Overall, high school males and females had similar prevalence of current (36.0% of males and 37.0% of females) & binge (23.8% of males and 22.4% of females) drinking. Compared to youth who didn't drink alcohol, youth who drank in the past 30 days were significantly more likely to ride with a driver that had been drinking.

Alcohol Use Definitions

"Non-drinkers" reported not drinking any alcohol in the past 30 days. "Current drinkers" reported having at least one drink of alcohol in the past 30 days. "Binge drinking" was defined as having five or more drinks of alcohol in a row during the past 30 days.

Current and binge drinkers had higher prevalence estimates of both riding in a vehicle with a drinking driver and driving a vehicle after drinking in the past 30 days compared to non-drinkers. While binge drinkers reported a slightly larger percentage of riding in a vehicle with a driver that had been drinking than current drinkers, there was not a significant difference between the two groups. A statistically significant difference existed between drinkers, (both current & binge) and non-drinkers (see Table below). In the past 30 days, most current and non-drinking youth did not ride with a driver who had been drinking. Youth who drank were four to five times more likely to ride with a driver who had been drinking than non-drinkers. While not statistically different, females tended to ride more frequently with drivers who had been drinking, while males tended to drive after drinking (Figures 1 & 2). Among those who consumed alcohol, binge drinkers reported higher frequencies of getting a ride from a drinking driver than current drinkers. Binge and current drinkers reported riding with a drinking driver two to three times in the past 30 days with the highest frequency, as evidenced in Figures 3 and 4. Most female youth who rode with a drinking driver did so less than four times in the previous 30 days. Male youth did not report this pattern.

Although the majority of youth who drank alcohol did not drive

References: 1 Centers for Disease Control and Prevention (CDC). Involvement by young drivers in fatal alcohol-related motor-vehicle crashes--United States, 1982-2001. MMWR Morb Mortal Wkly Rep. 2002 Dec 6;51(48):1089-91. 2 Schermer CR. (2006) Alcohol and Injury Prevention. J. Trauma, Vol. 60, pp. 447-451. 3 National Highway Traffic Safety Administration. Traffic safety facts 2000: alcohol. Washington, DC: U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, 2001 (publication no. DOT-HS-809-323). 4 Shults RA. (2004) Child Passenger Deaths Involving Drinking Drivers--United States, 1997-2002 (Reprinted from MMWR, Vol 53, pp. 77-79, 2004). JAMA, Vol. 291, pp. 934-935. 5 Zador PL, Krawchuk SA, Voas RB. Alcohol-related relative risk of driver fatalities and driver involvement in fatal crashes in relation to driver age and gender: an update using 1996 data. J Stud Alcohol 2000;61:387-95.

Riding with a Drinking Driver and Driving after Drinking Reported by Alcohol Consumption among 9th-12th grade students- 2009 MiYRBS

	Non-Drinkers		Current Drinkers				Binge Drinkers					
	Male	Female	Male	Female	Male	Female	Male	Female				
	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)		
Rode with Drinking Driver												
Never	88.1	(85.9-90.4)	86.8	(83.6-90.0)	56.0	(50.6-61.3)	51.7	(47.6-55.8)	47.6	(42.2-53.0)	43.0	(37.2-48.7)
Ever	11.9	(9.6-14.1)	13.2	(10.0-16.4)	44.0	(38.7-49.4)	48.3	(44.2-52.4)	52.4	(47.0-57.8)	57.0	(51.3-62.8)
1	4.9	(3.4-6.5)	6.1	(4.4-7.9)	14.3	(11.0-17.7)	17.7	(14.6-20.9)	15.3	(11.4-19.2)	19.1	(14.6-23.5)
2-3	3.5	(2.3-4.7)	5.3	(3.2-7.4)	17.2	(13.1-21.2)	21.2	(17.4-25.0)	19.9	(15.4-24.3)	26.1	(20.6-31.6)
4+	3.4	(1.9-4.9)	1.8	(1.0-2.5)	12.5	(9.5-15.5)	9.3	(6.2-12.4)	17.2	(13.0-21.4)	11.9	(7.5-16.2)
Drove after Drinking												
Never	100.0	100.0	100.0	100.0	72.9	(68.0-77.8)	81.0	(77.7-84.3)	65.5	(59.4-71.5)	74.6	(70.8-78.3)
Ever	0.0	0.0	0.0	0.0	27.1	(22.2-32.0)	19.0	(15.7-22.3)	34.5	(28.5-40.6)	25.4	(21.7-29.2)
1	0.0	0.0	0.0	0.0	11.6	(7.8-15.3)	9.6	(6.6-12.6)	13.8	(9.4-18.2)	13.0	(9.4-16.5)
2-3	0.0	0.0	0.0	0.0	9.1	(6.5-11.6)	6.0	(4.2-7.8)	11.8	(7.8-15.8)	7.2	(3.1-8.6)
4+	0.0	0.0	0.0	0.0	6.5	(4.3-8.9)	3.4	(1.9-5.0)	9.0	(6.3-11.6)	5.2	(4.7-10.9)

All bolded values indicate significant difference of p<0.05 (χ² test) compared to non-drinkers.

Impaired Driving of Current & Binge Drinking MI Youth (Cont.)

afterwards, approximately one in four current & binge drinkers drank and drove at least once in the past month. When asked about driving after drinking alcohol, binge drinkers were more likely to report a higher prevalence than current drinkers. Male and female current drinkers reported higher frequencies of never driving after drinking than male and female binge drinkers. Binge drinkers had higher prevalence estimates of driving multiple times after consuming alcohol. Males reported higher percentages of driving after drinking when compared to females (Figures 1 & 2). For both sexes, Michigan adolescents were more likely to drive one time after drinking, with less reporting multiple episodes of drinking and driving in the past month for both current and binge drinkers.

Addressing the issue of drinking and driving among Michigan youth is of critical importance. High school students may be at a greater risk of motor vehicle crash injury and death because they have less driving experience and may become more easily distracted by their peers compared to adult drivers. Data from the MiYRBS are especially alarming because they demonstrate increasing and similar trends of binge drinking and driving observed in adults (data not shown). Appropriate interventions are needed to prevent Michigan adolescents from establishing unsafe patterns of drinking and driving that may continue into adulthood.

Figure 1. Percentage of Riding with Drinking Driver & Driving After Drinking in Non-drinkers, Current & Binge Male Youth

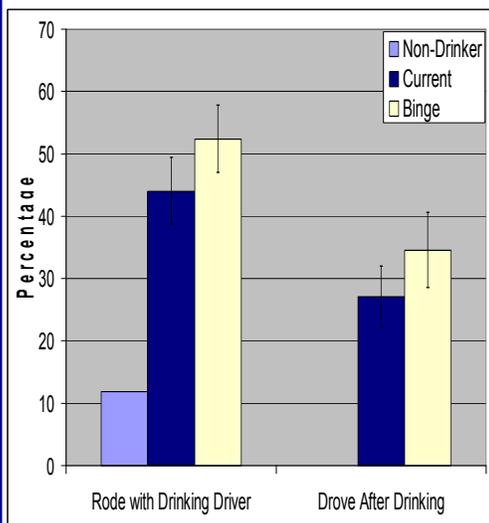


Figure 3. Number of Times Riding with Drinking Driver in Non-drinkers, Current & Binge Drinking Male Youth

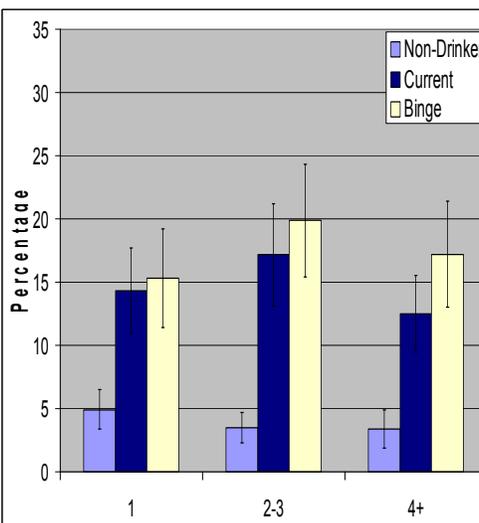


Figure 5. Number of Driving After Drinking Episodes in Current & Binge Drinking Male Youth

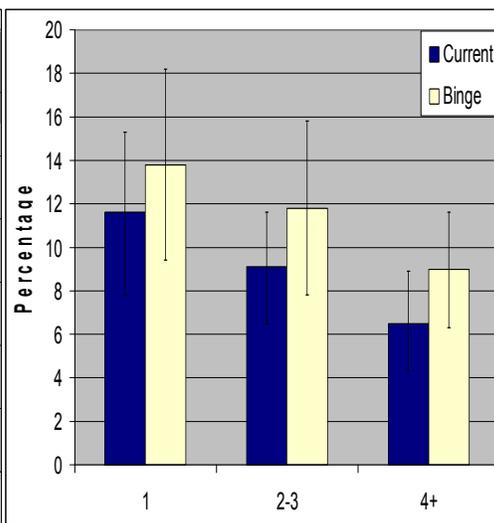


Figure 2. Percentage of Riding with Drinking Driver & Driving After Drinking in Non-drinkers, Current & Binge Female Youth

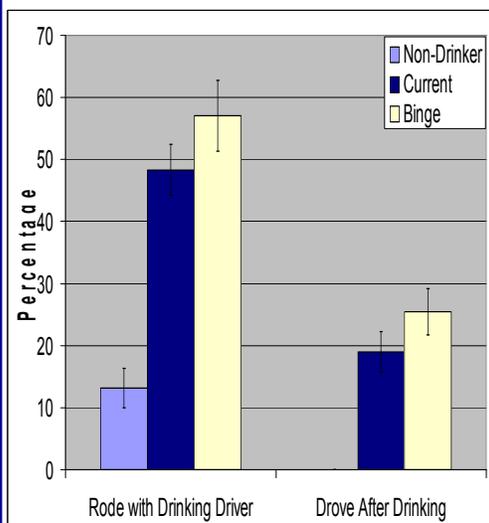


Figure 4. Number of Times Riding with Drinking Driver in Non-drinkers, Current & Binge Drinking Female Youth

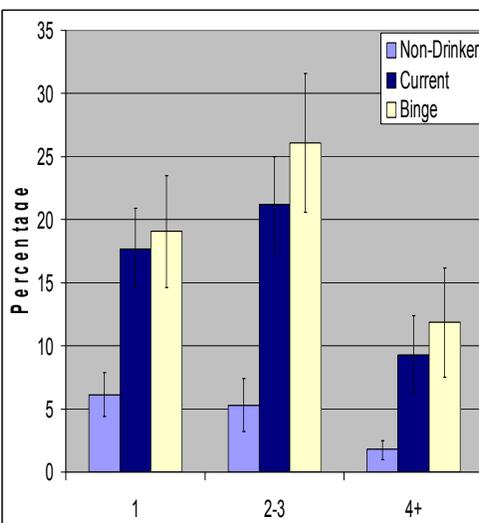
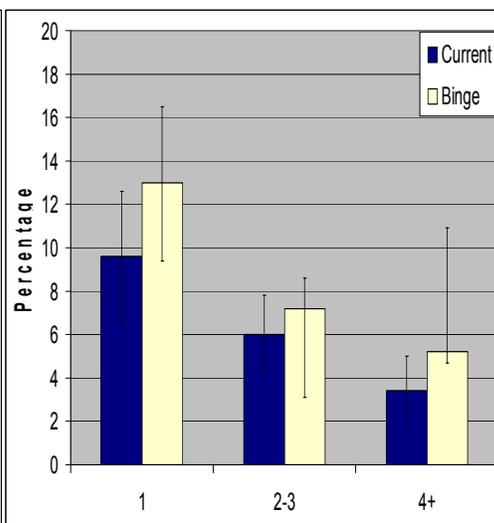


Figure 6. Number of Driving After Drinking Episodes in Current & Binge Drinking Female Youth



The 2009 Michigan Youth Risk Behavioral Survey was designed by the Centers for Disease Control and Prevention for Michigan Department of Education and MDCH as part of the national Youth Risk Behavior Surveillance System (YRBSS). The MiYRBS was completed by 3,411 12- to 18-year old students in grades 9-12 in 43 public high schools in Michigan during the spring of 2009. The overall response rate in Michigan was 69% compared to the national overall response rate of 71%. Prevalence estimates are representative of all students in grades 9-12 attending public schools in the state of Michigan. For more information on the YRBS, visit: <http://www.cdc.gov/HealthyYouth/yrebs/index.htm>