



# MICHIGAN BRFS SURVEILLANCE BRIEF

A NEWSLETTER FROM THE CHRONIC DISEASE EPIDEMIOLOGY SECTION, MDHHS

## Alcohol Screening among the Michigan Adult Population

**Background.** Alcohol misuse is the third leading cause of death in the United States, contributing to deaths from falls, drowning, motor vehicle crashes, murder and suicide. Misuse also plays a role in the development of many forms of chronic disease, including liver disease, high blood pressure, certain cancers and depression. The U.S. Preventive Services Task Force recommends that clinicians screen adults aged 18 years or older for alcohol misuse and provide persons engaged in risky or hazardous drinking with brief behavioral counseling interventions. Multiple contacts using this method has been shown to reduce consumption among adults.<sup>1</sup> The use of electronic screening and brief tailored interventions in a variety of settings, including primary care, has also been found to reduce frequency of binge drinking and the mean number of drinks consumed, as well as increase the proportion of adults who change their drinking patterns.<sup>2</sup> In August of 2015, the Michigan Quality Improvement Consortium adopted screening, diagnosis and referral guidelines for substance abuse disorders.<sup>3</sup>

More than one half (57.0%) of Michigan adults use alcohol, with 18.9% and 6.8% reporting binge and heavy drinking, respectively.<sup>4</sup> To date, no population-level data regarding the prevalence of screening for alcohol use by health care providers has been available to assess the reach of these interventions.

**Methods.** Questions related to alcohol consumption and demographics were included within the 2014 Michigan Behavioral Risk Factor Survey (MiBRFS). State-added questions focusing on alcohol screenings and interventions that took place during recent health checkups (within the past two years) were also included within the 2014 MiBRFS. The alcohol screening questions focused on the respondent's most recent health checkup and inquired about whether or not they were asked, either in person or on a form, if they drank alcohol, how much they drank, and if they ever binge drank. Binge drinking was defined as five or more drinks on an occasion for men and four or more drinks on an occasion for women within the past month.

The alcohol intervention questions also focused on the respondent's most recent health checkup and asked whether or not their healthcare provider offered them advice regarding the level of drinking that is harmful or risky to their health and if their healthcare provider advised them to reduce or quit their drinking.

These data were used to determine the prevalence of alcohol screenings and interventions among Michigan adults who have had a routine health checkup within the past two years. Subpopulations based on demographics were compared to determine if significant differences existed among these alcohol screening and intervention indicators.

**Results.** In 2014, an estimated 78.6% of Michigan adults who had a routine health checkup within the past two years reported being asked by their healthcare provider, either in person or on a form, if they currently drank alcohol (Table 1). A similar percentage (70.8%)

**Table 1. Alcohol Screening among Michigan Adults Who Have Had a Routine Health Checkup Within the Past Two Years, 2014 Michigan BRFS**

	Asked if You Drink Alcohol (at last checkup)		Asked How Much Alcohol You Drink (at last checkup)		Asked if You Binge Drink (at last checkup)	
	%	95% CI	%	95% CI	%	95% CI
<b>Total</b>	<b>78.6</b>	<b>(76.0-81.0)</b>	<b>70.8</b>	<b>(67.9-73.5)</b>	<b>35.7</b>	<b>(32.8-38.7)</b>
<b>Age</b>						
18-44 years	82.0	(76.7-86.3)	71.0	(65.0-76.4)	37.8	(32.1-43.8)
45-64 years	80.6	(77.1-83.7)	74.9	(71.2-78.3)	36.5	(32.3-40.9)
65+ years	68.7	(64.7-72.5)	63.3	(59.2-67.2)	30.9	(27.0-35.2)
<b>Gender</b>						
Male	80.1	(76.3-83.4)	71.6	(67.3-75.6)	39.9	(35.3-44.7)
Female	77.3	(73.8-80.5)	70.1	(66.2-73.7)	32.0	(28.4-35.9)
<b>Race</b>						
White	79.4	(76.6-82.0)	72.3	(69.1-75.3)	35.1	(31.8-38.4)
Black	76.4	(68.9-82.6)	64.0	(56.0-71.4)	41.4	(33.4-49.8)
Other	71.5	(58.3-81.9)	66.8	(53.7-77.7)	32.4	(21.8-45.1)
<b>Education</b>						
Less than HS	67.3	(53.9-78.4)	57.6	(44.7-69.5)	33.2	(22.8-45.6)
HS grad	77.2	(72.4-81.3)	65.2	(59.6-70.3)	37.2	(32.0-42.7)
Some college	80.7	(76.9-84.0)	73.9	(69.5-77.9)	35.2	(30.2-40.4)
College grad or more	82.4	(79.0-85.4)	79.2	(75.6-82.3)	36.0	(31.6-40.8)
<b>Alcohol Consumption</b>						
Yes	84.0	(80.7-86.8)	77.2	(73.3-80.6)	38.1	(34.1-42.3)
No	70.8	(66.6-74.8)	61.9	(57.4-66.1)	32.7	(28.5-37.2)
<b>Binge Drinking</b>						
Yes	88.8	(82.6-93.0)	72.2	(63.2-79.7)	41.9	(33.8-50.5)
No	76.5	(73.7-79.2)	70.3	(67.3-73.2)	34.6	(31.5-37.8)

### MiBRFSS News

- The 2014 MiBRFS annual tables and 2014 MiBRFS Annual Report have been released and are now available on the MiBRFSS website ([www.michigan.gov/brfs](http://www.michigan.gov/brfs)).
- The final 2016 MiBRFS questionnaire will be available very soon.
- Did you miss an issue of *Michigan BRFS Surveillance Brief*? Back issues are available on the MiBRFSS website.

reported being asked how much they normally drank, while only 35.7% reported being asked if they ever binge drank. The prevalence of being asked by their healthcare provider if they drank alcohol was lower among the oldest age group, similar by gender and race, increased with education level, and was significantly greater among those who reported any alcohol consumption or binge drinking within the past month (Table 1).

In 2014, an estimated 22.1% of Michigan adults who had a routine health checkup within the past two years reported being given advice from their healthcare provider regarding what level of drinking is harmful or risky to their health (Table 2). The prevalence of this indicator was lower in the 65+ years age group, and was significantly higher among males, those who had consumed some form of alcohol within the past month, and binge drinkers. Furthermore, only 7.1% of Michigan adults who had a routine checkup within the past two years were advised by their healthcare provider to reduce or quit their drinking. The prevalence of this indicator was significantly greater among Michigan adult binge drinkers (13.8%) than non-binge drinkers (5.3%).

**Conclusions.** Only 1 in 3 Michigan adults have been asked about binge drinking and less than 1 in 4 have been advised about harmful drinking levels. However, individuals who report binge drinking within the past month were more frequently asked about binge drinking and more frequently advised about harmful drinking levels and the need to reduce consumption at their last routine health checkup.

The electronic screening and brief intervention method is one of nine interventions recommended by The Community Guide to reduce excessive drinking. Some of the other Community Guide interventions are dram shop liability, limiting hours of sale and outlet density, and enforcing overservice laws.<sup>2</sup> The use of electronic screening could increase the receipt of counseling among adults who drink alcohol, thus reducing the prevalence of excessive drinking in the Michigan population.

#### References

- <sup>1</sup> Moyer V, on behalf of USPSTF. Screening and Behavioral Counseling Interventions in Primary Care to Reduce Alcohol Misuse: US Preventive Services Task Force Recommendation Statement. *Ann Intern Med* 2013;159:210-218.
- <sup>2</sup> Guide to Community Preventive Services. Preventing Excessive Alcohol Consumption: Electronic Screening and Brief Intervention. [www.thecommunityguide.org/alcohol](http://www.thecommunityguide.org/alcohol). Accessed 10/23/15.
- <sup>3</sup> Michigan Quality Improvement Consortium. Screening, Diagnosis and Referral for Substance Abuse Disorders. August, 2015. [www.mqic.org](http://www.mqic.org). Accessed 10/23/15.
- <sup>4</sup> Fussman C. 2015. Health Risk Behaviors within the State of Michigan: 2014 Behavioral Risk Factor Survey. 28th Annual Report. Lansing, MI: MDHHS Lifecourse Epidemiology and Genomics Division, Chronic Disease Epidemiology Section.

**Table 2. Alcohol Intervention among Michigan Adults Who Have Had a Routine Health Checkup Within the Past Two Years, 2014 Michigan BRFSS**

	Advised About Harmful Drinking Levels (at last checkup)		Advised to Reduce or Quit Drinking (at last checkup)	
	%	95% CI	%	95% CI
<b>Total</b>	<b>22.1</b>	<b>(19.8-24.7)</b>	<b>7.1</b>	<b>(5.6-9.0)</b>
<b>Age</b>				
18-44 years	24.6	(20.0-29.8)	6.9	(4.3-10.8)
45-64 years	22.2	(18.9-25.8)	8.3	(6.1-11.2)
65+ years	17.6	(14.6-21.1)	5.4	(3.5-8.2)
<b>Gender</b>				
Male	30.7	(26.7-35.1)	9.4	(7.0-12.5)
Female	14.9	(12.4-17.8)	5.1	(3.4-7.6)
<b>Race</b>				
White	21.4	(18.7-24.2)	6.1	(4.6-8.1)
Black	28.4	(21.7-36.3)	12.2	(7.3-19.7)
Other	19.3	(11.5-30.5)	-- <sup>a</sup>	-- <sup>a</sup>
<b>Education</b>				
Less than HS	24.1	(15.2-35.9)	-- <sup>a</sup>	-- <sup>a</sup>
HS grad	23.3	(18.9-28.2)	10.1	(7.0-14.2)
Some college	21.5	(17.6-26.0)	4.1	(2.8-6.1)
College grad or more	20.8	(17.4-24.6)	5.5	(3.6-8.1)
<b>Alcohol Consumption</b>				
Yes	26.3	(23.0-29.9)	8.0	(5.9-10.8)
No	16.2	(13.0-19.9)	5.7	(3.9-8.3)
<b>Binge Drinking</b>				
Yes	36.9	(29.8-44.7)	13.8	(8.8-20.8)
No	18.8	(16.4-21.5)	5.3	(4.0-6.9)

<sup>a</sup> Suppressed due to a denominator of < 50 and/or a relative standard error > 30%.

## The Michigan Behavioral Risk Factor Surveillance System (MiBRFSS)

The MiBRFSS comprises annual, statewide telephone surveys of Michigan adults aged 18 years and older and is part of the national BRFSS coordinated by the CDC. The annual Michigan Behavioral Risk Factor Surveys (MiBRFS) follow the CDC BRFSS protocol and use the standardized English core questionnaire that focuses on various health behaviors, medical conditions, and preventive health care practices related to the leading causes of mortality, morbidity, and disability. Landline and cell phone interviews are conducted across each calendar year. Data are weighted to adjust for the probabilities of selection and a raking weighting factor is used to adjust for the distribution of the Michigan adult population based on eight demographic variables. All analyses are performed using SAS-callable SUDAAN<sup>®</sup> to account for the complex sampling design.

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