



MICHIGAN BRFSS SURVEILLANCE BRIEF

A NEWSLETTER FROM THE CHRONIC DISEASE EPIDEMIOLOGY UNIT, MDCH

The Health of Michigan Adults of Reproductive Age

Background. Chronic conditions, such as obesity, hypertension, heart disease and asthma are among the leading causes of preventable death and disability within the United States.¹ Approximately 70% of deaths among Americans are due to chronic conditions² and nearly 50% of all American adults have at least one chronic illness.³ Furthermore, much of the illness, disability and early death related to chronic disease can be linked to four modifiable health behaviors: lack of physical activity; poor nutrition; tobacco use; and excessive alcohol consumption.¹ Chronic disease prevention and healthy behaviors are important throughout life, especially for adults of reproductive age and their children. Monitoring and improving the ‘preconception’ health of women of reproductive age is recognized as a critical component in improving maternal and infant health outcomes.⁴ Although the health of fathers has not received the same attention, men’s health can also impact maternal, infant and child health. Public health surveillance provides relevant data to monitor the chronic disease burden and the progress of prevention within this population.

Methods. Michigan Behavioral Risk Factor Surveillance System (MiBRFSS) data were used to estimate the prevalence of selected behavioral risk factors and chronic conditions among Michigan adults of reproductive age (18-44 years). Gender-specific prevalence estimates and trends over time for these selected risk factors and chronic conditions were also assessed.

Results. In 2010, an estimated 19.3% of Michigan adults of reproductive age reported no leisure-time physical activity within the past month, while 22.5% reported that they were current smokers, 19.7% reported binge drinking on at least one occasion within the past month, and 61.1% were classified as either overweight or obese (Table 1). Furthermore, an estimated 11.8% of these adults reported having current asthma, 1.9% reported ever being told that they had some form of cardiovascular disease, and 3.9% reported ever being told they had diabetes. In 2009, 14.2% of Michigan adults of reproductive age reported ever being told that they had high blood pressure, while 20.9% of these adults reported ever being told that they had high cholesterol.

When comparing males and females of reproductive age, males reported significantly higher prevalence rates of binge drinking (24.2% vs. 15.2%), overweight or obesity (66.4% vs. 55.4%), ever told high blood pressure (19.0% vs. 9.4%), and ever told high cholesterol (24.4% vs. 17.6%) when compared to females (Table 1). On the other hand, females of reproductive age reported a significantly higher prevalence of current asthma (14.9% vs. 8.8%) when compared to males of reproductive age.

Table 1. Prevalence of Selected Risk Factors and Chronic Conditions among Adults of Reproductive Age by Gender, Michigan BRFSS

	%	95% CI
No Leisure-time Physical Activity		
Total	19.3	(17.2-21.7)
Male	17.7	(14.6-21.2)
Female	21.0	(18.1-24.2)
Current Smoking		
Total	22.5	(20.2-24.9)
Male	25.3	(21.8-29.2)
Female	19.5	(16.9-22.5)
Binge Drinking		
Total	19.7	(17.6-22.0)
Male	24.2	(20.8-27.9)
Female	15.2	(12.7-18.0)
Overweight or Obese		
Total	61.1	(58.3-63.9)
Male	66.4	(62.3-70.3)
Female	55.4	(51.6-59.2)
Ever Told High Blood Pressure*		
Total	14.2	(12.5-16.2)
Male	19.0	(16.0-22.4)
Female	9.4	(7.8-11.3)
Ever Told High Cholesterol*		
Total	20.9	(18.6-23.3)
Male	24.4	(20.8-28.5)
Female	17.6	(15.0-20.5)
Current Asthma		
Total	11.8	(10.1-13.7)
Male	8.8	(6.7-11.4)
Female	14.9	(12.5-17.6)
Ever Told Cardiovascular Disease		
Total	1.9	(1.3-2.7)
Male	2.0	(1.2-3.5)
Female	1.7	(1.0-2.7)
Ever Told Diabetes		
Total	3.9	(2.9-5.2)
Male	4.9	(3.3-7.2)
Female	2.9	(2.0-4.3)

* 2009 MiBRFSS data. All other data is from the 2010 MiBRFSS.

MiBRFSS News

- The CDC BRFSS is implementing a new weighting methodology starting with the 2011 data year. Michigan BRFS estimates based on this new methodology should be available by June of 2012.
- The 2012 CDC BRFSS Annual Meeting was held in Atlanta, GA on March 24-27, 2012.
- Did you miss an issue of *Michigan BRFSS Surveillance Brief*? Back issues are also available on our website.

Figures 1-3 assess the trends over time for selected behavioral risk factors and chronic conditions among Michigan adults of reproductive age. Figure 1 shows that the prevalence of overweight and obesity among Michigan adults of reproductive age increased significantly over time between 2001 and 2010 ($p < 0.001$). Comparing the 2001 and 2010 prevalence estimates for overweight and obesity, the percent increase was 15.5% (2001: 52.9% vs. 2010: 61.1%). The prevalence of current asthma among these adults also increased significantly ($p = 0.001$) with a 22.9% increase (2001: 9.6% vs. 2010: 11.8%) over the same time period (Figure 3).

The prevalence rates of binge drinking ($p = 0.003$) and current smoking ($p < 0.001$) among Michigan adults of reproductive age have decreased significantly over the past ten years (Figures 1 and 2). Comparing the 2001 and 2010 prevalence estimates for binge drinking, the percent decrease was 24.5% (2001: 26.1% vs. 2010: 19.7%). Furthermore, the prevalence of current smoking among this population has decreased from 33.1% in 2001 to 22.5% in 2010; which represents a 31.5% decrease. All of the remaining behavioral risk factors and chronic conditions that were assessed for this population did not show any significant changes over the last ten years.

Conclusions. Decreases in the prevalence of binge drinking and current tobacco use are overshadowed by the fact that the majority of Michigan adults of reproductive age are overweight or obese. The consequences of overweight and obesity are well documented and include increased risk of: cardiovascular disease; type 2 diabetes; some cancers; hypertension; stroke; osteoarthritis; infertility; and poor birth outcomes. In addition, there is a significant economic impact on the health care system, with obesity-related medical care costs estimated to be \$147 billion.⁵ Furthermore, each of these indicators has been associated with adverse reproductive, infant and maternal birth outcomes, and to be successful efforts to improve infant and child health must consider parental health.

References

- ¹ Centers for Disease Control and Prevention (CDC) Chronic diseases and health promotion. Accessed at <http://www.cdc.gov/chronicdisease/overview/index.htm> on March 12, 2012.
- ² Kung HC, Hoyert DL, Xu JQ, Murphy SL. Deaths: final data for 2005. National Vital Statistics Reports 2008;56(10).
- ³ Ogden CL, Carroll MD, McDowell MA, Flegal KM. Obesity among adults in the United States—no change since 2003–2004. NCHS data brief no 1. Hyattsville, MD: National Center for Health Statistics; 2007.
- ⁴ CDC/ASTR preconception care work group. Johnson K., Posner S., et al. Recommendations to improve preconception health and health care—United States. MMWR 2006 55:1-23.
- ⁵ Finkelstein, EA, Trogon, JG, Cohen, JW, and Dietz, W. Annual medical spending attributable to obesity: Payer- and service-specific estimates. *Health Affairs* 2009; 28(6): w822-w831.

Figure 1. Trends in Behavioral Risk Factors among Adults of Reproductive Age, Michigan BRFSS

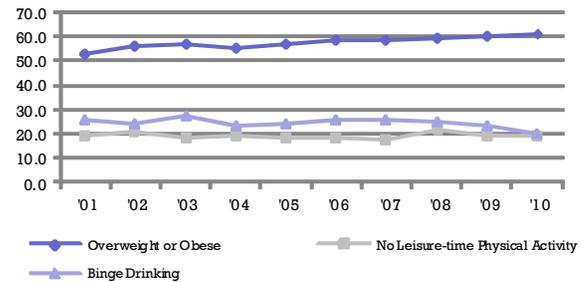


Figure 2. Trends in Behavioral Risk Factors among Adults of Reproductive Age, Michigan BRFSS

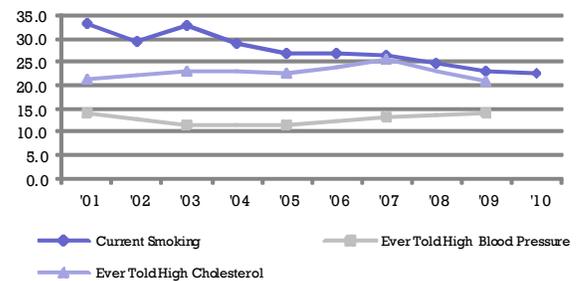
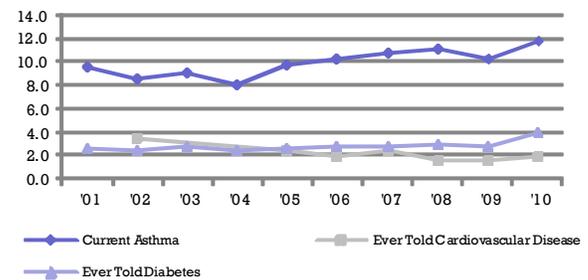


Figure 3. Trends in Chronic Conditions among Adults of Reproductive Age, Michigan BRFSS



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. Interviews are conducted across each calendar year. Data are weighted to adjust for the probabilities of selection and a poststratification weighting factor that adjusts for the sex, age, and race distribution of the adult Michigan population. All analyses are performed using SAS-callable SUDAAN® to account for the complex sampling design.

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