Michigan BRFS

TOBACCO USE AND SECONDHAND SMOKE EXPOSURE AMONG DISPARATE ADULT POPULATIONS WITHIN MICHIGAN

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MICHIGAN BRFSS SURVEILLANCE BRIEF

A NEWSLETTER FROM THE CHRONIC DISEASE EPIDEMIOLOGY UNIT, MDCH

Disparities in Tobacco Use and Secondhand Smoke Exposure

Background. Within the United States and Michigan, tobacco use is not distributed equally across all populations. Rather, use is increasingly concentrated among individuals within the lowest socioeconomic status (SES). While levels of education, income, and occupation are often used to define SES; underlying oppression related to gender, race, and ethnicity often intersect with these traditional measures to worsen the disparity in tobacco use among the low SES population. People of various racial and ethnic groups are well represented among those of low SES, who as a group suffer the most from tobacco related health disparities. Persons of low SES tend to have high rates of smoking and low rates of quitting success, are likely to suffer disproportionately from tobacco related deaths, and have children who are more likely to start smoking.[1]

Tobacco control policies aimed at reducing the toll of tobacco addiction are routinely promoted across the United States. The passage and implementation of Michigan's Smoke-Free Air Law in 2010 has increased quit rates, decreased consumption, and reduced overall secondhand smoke (SHS) exposure; however, disparities continue to exist between low and high SES groups. To help with this problem, the MDCH Tobacco Prevention and Reduction Program has made a commitment to partner with community-based agencies that represent disparately affected population groups, particularly racial, ethnic, low income, and lesbian, gay, bisexual, and transgender (LGBT) groups. This brief provides data on the prevalence of tobacco use and SHS exposure among these disparately affected population groups in Michigan.

Methods. Questions on race/ethnicity, education, household income, and smoking status were included within the core of the 2011 Michigan Behavioral Risk Factor Survey (MiBRFS). The 2011 MiBRFS also included state-added questions focusing on sexual orientation and SHS exposure in the home within the past seven days.

The education and household income responses were used to construct low and high SES groups. Respondents within the low SES group reported having less than a high school education and an annual household income of less than $20,000. The high SES group consisted of respondents who reported having a college degree and an annual household income of $75,000 or more. The sexual orientation question was used to determine LGBT status.

With exception of the SHS exposure question, all of the questions included within this analysis were asked of all survey respondents and thus analyzed using the CDC's combined landline and cell phone raking weight. CDC did not provide this combined weight for questions that were included on only a portion of the survey, thus all analyses involving the SHS exposure question used data and weights for landline respondents only.

These data were used to assess adult smoking status by race/ethnicity, SES, and LGBT status. The prevalence of recent SHS exposure within the home among non-smokers was also examined. Demographic

Table 1. Smoking Status Among Michigan Adults by SES, LGBT, and Race/Ethnicity, 2011 Michigan BRFS

	Current Smoking % (95% CI)	Never Smoked % (95% CI)
Total (N=11,002)	**23.3% (22.0-24.6)**	**51.0% (49.6-52.4)**
Socioeconomic Status		
Low SES (N=311)	46.8% (38.2-55.7)	32.6% (25.3-40.8)
High SES (N=1,393)	5.4% (4.0-7.1)	69.8% (66.6-72.8)
Lesbian, Gay, Bisexual, or Transgender		
LGBT (N=184)	35.8% (26.4-46.3)	47.0% (36.5-57.8)
Non-LGBT (N=10,272)	23.8% (22.1-24.8)	50.6% (49.1-52.0)
Race/Ethnicity		
White, non-Hispanic (N=8,643)	22.8% (21.4-24.3)	49.3% (47.7-50.9)
Black, non-Hispanic (N=1,299)	27.1% (23.3-31.3)	56.5% (52.2-60.6)
Native American, non-Hispanic (N=150)	33.4% (20.9-48.9)	41.8% (28.7-56.1)
Asian, non-Hispanic (N=102)	6.1% (2.3-15.3)	75.5% (59.2-86.7)
Arab, non-Hispanic (N=86)	19.2% (10.1-33.5)	59.0% (44.0-72.4)
Other, non-Hispanic (N=295)	24.5% (19.0-31.0)	44.3% (35.5-53.5)
Hispanic (N=281)	20.0% (14.0-27.6)	59.3% (50.7-67.3)

MiBRFSS News

- The 2013 MiBRFSS is officially underway. The landline survey went into the field on January 10th and the cell phone survey was started on January 17th.
- The CDC BRFSS Annual Meeting will be held in Atlanta, GA on March 23-27.
- Did you miss an issue of *Michigan BRFSS Surveillance Brief?* Back issues are available at www.michigan.gov/brfs.

subpopulations were compared to determine if significant differences existed in smoking status and SHS exposure.

Results. In 2011, an estimated 23.3% of Michigan adults reported that they currently smoke cigarettes, while 51.0% reported never smoking cigarettes (Table 1). When comparing low and high SES adults, low SES adults reported a significantly higher prevalence of current smoking (46.8% vs. 5.4%), whereas high SES adults reported a significantly higher prevalence of never smoking cigarettes (69.8% vs. 32.6%). LGBT adults also reported a significantly higher prevalence of current smoking than non-LGBT adults (35.8% vs. 23.8%). Furthermore, Asian non-Hispanic adults reported a significantly lower prevalence of current smoking (6.1% vs. 23.3%) and a significantly higher prevalence of never smoking (75.5% vs. 51.0%) than the state as a whole .

An estimated 8.4% of Michigan adult non-smokers were exposed to secondhand smoke in their home within the past seven days (Table 2). Non-smoking low SES adults were significantly more likely to have reported recent SHS exposure in their home (13.7%) when compared to non-smoking high SES adults (1.5%).

Conclusions. Higher rates of tobacco use among low SES adults mean a greater percentage of family income is being spent on tobacco. This creates a burden on the already scarce resources of low-income families. As a result, in low-income families with smoking parents or adults, fewer financial resources are available for food, shelter, transportation, education, and other necessities.

Table 2. SHS Exposure Within the Home among Non-Smokers by SES and Race/Ethnicity, 2011 Michigan BRFS

	SHS Exposure Within Home % (95% CI)
Total (N=5,001)	**8.4% (7.1-10.0)**
Socioeconomic Status	
Low SES (N=117)	13.7% (6.8-25.7)
High SES (N=735)	1.5% (0.9-2.7)
Race/Ethnicity	
White, non-Hispanic (N=4,131)	7.9% (6.4-9.7)
Black, non-Hispanic (N=553)	11.6% (7.7-17.1)
Other, non-Hispanic (N=207)	6.1% (3.0-12.0)
Hispanic (N=110)	11.6% (4.2-28.3)

Within the public health arena it is well known that people of lower SES have limited access to evidence-based tobacco cessation programs, and are also less likely to use available cessation programs and quit successfully than people with higher SES.[2]

The MDCH Tobacco Control Program is committed to highlighting the tobacco-related disparities facing low SES populations and examining promising, culturally tailored practices and strategies to provide prevention and cessation services to these underserved populations.

Some of these strategies are to:

- Engage non-traditional, community-based partner organizations and leaders to develop the capacity to implement integrated tobacco control programs,
- Educate health-care providers, such as staff at community health centers, about the available cessation interventions that focus on low SES populations.
- Implement public media campaigns specifically designed to reach low SES populations, and
- Implement culturally tailored, place-based interventions.

References

[1] McLellan DL, Kaufman NJ. Examining the effects of tobacco control policy on low socioeconomic status women and girls: an initiative of the Tobacco Research Network on Disparities. J Epidemiol Community Health. 2006; 60(Supp 2):ii5-ii6.

[2] Vidrine JI, et al. The role of tobacco in cancer health disparities. Current Oncology Report. 2009; 11(6):475-481.

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 that adjusts for the distribution of the Michigan adult population based on eight demographic variables. All analyses are performed using SAS-callable SUDAAN® to account for the complex sampling design.

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