

MICHIGAN BRFSS SURVEILLANCE BRIEF



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Oral Cancer Screening among Michigan Adults

Background

Oral cancer is defined as any cancerous tissue growth located in the mouth, tongue, lips, throat, or parts of the nose or larynx. In 2017, there were almost 50,000 new cases of oral cancer and 9,700 deaths across the United States.¹ Many pre-cancers and cancers can be found early during routine screening exams by a dentist, dental hygienist, or by a medical professional. Regular dental checkups with an oral cancer screening are important to early detection.² Several factors have been known to increase the risk of developing oral cancer including tobacco use, heavy alcohol consumption, Human Papillomavirus (HPV) infection, male gender and increased age.² Currently, there are two Healthy People 2020 Objectives related to oral cancer. One that focuses on detecting oral cancer at the earliest stage and the other on increasing the proportion of adults receiving annual oral cancer screenings.³

Methods

The 2016 Michigan Behavioral Risk Factor Survey (MiBRFS) included demographic questions as well as questions related to the frequency of dental visits. State-added questions focusing on oral cancer screening and dental insurance were also included. The oral cancer screening question asked respondents when they last had an exam for oral cancer in which a doctor or dentist pulled on their tongue, sometimes with gauze wrapped around it and felt under the tongue and inside the cheeks. The dental insurance question asked respondents if they were covered for the entire past twelve months by any type of dental insurance. Respondents who indicated that they were covered for only part of the past 12 months were coded as not having dental insurance. The complete questionnaire that contains these 2016 MiBRFS questions can be found on the MiBRFSS website (www.michigan.gov/brfs).

These data were used to determine the prevalence of oral cancer screening among the Michigan adult population and to assess how demographic characteristics impact access to oral health care. The impact of having dental insurance and visiting a dentist within the past year on having an oral cancer screen was also evaluated. Demographic subpopulations were compared to determine if significant differences existed among these oral health care indicators.

	Had Oral Cancer Screen within Past Year	
	Percent	95% Confidence Interval
Total (N = 3,456)	45.8	(43.6-48.0)
Race/Ethnicity		
White, non-Hispanic	50.4	(47.9-53.0)
Black, non-Hispanic	29.7	(24.1-35.9)
Hispanic	28.4	(20.4-38.0)
Other, non-Hispanic	30.6	(20.4-43.1)
Education		
<High School	22.3	(15.1-31.6)
High School Graduate	38.0	(34.1-42.1)
Some College	46.1	(42.2-50.1)
College Grad	63.6	(60.1-66.9)
Income Category		
<\$20,000	24.1	(19.4-29.6)
\$20,000 - \$34,999	32.1	(27.3-37.2)
\$35,000 - \$49,999	43.9	(37.6-50.3)
\$50,000 - \$74,999	57.7	(51.7-63.5)
\$75,000 +	63.8	(59.2-68.1)
Visited Dentist in Past Year		
Yes	61.2	(58.4-63.9)
No	6.2	(4.5-8.5)
Dental Insurance Entire Year		
Yes	51.6	(48.9-54.3)
No	31.0	(27.3-35.0)

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 MiBRFSS follows 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[®] to account for the complex sampling design.

MiBRFSS News

- 2016 MiBRFS annual tables are available at the MiBRFS website at www.michigan.gov/brfs.
- The 2016 MiBRFS annual report is expected by mid-2018.
- Data collection for the 2018 MiBRFS has begun; 2017 data collection has been completed and submitted to CDC.

Table 2. Oral Cancer Screening among Michigan Adults by Oral Cancer Risk Factors, 2016 Michigan BRFS

	Had Oral Cancer Screen within Past Year	
	Percent	95% Confidence Interval
Age		
18-34	29.8	(25.1-35.0)
35-64	50.8	(47.8-53.9)
65+	53.6	(50.1-57.1)
Gender		
Male	43.2	(39.9-46.5)
Female	48.1	(45.1-51.2)
Smoking Status		
Current Smoker	26.3	(22.1-31.0)
Former Smoker	53.5	(49.6-57.3)
Never Smoked	49.7	(46.5-52.8)
Alcohol Consumption		
Consumed no alcohol ¹	38.9	(35.4-42.5)
Consumed some alcohol ²	50.8	(48.0-53.7)
Heavy alcohol consumption ³	57.8	(49.8-65.5)
Binge drinking ⁴	42.6	(37.3-48.0)

¹Adults reporting no alcohol consumption in past 30 days.

²Adults who reported consuming at least one drink of any alcoholic beverage in the previous month.

³Adults who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the previous month.

⁴Adults who reported consuming five or more drinks per occasion (for men) or four or more drinks per occasion (for women) at least once in the previous month.

Results

In 2016, an estimated 45.8% of Michigan adults reported having an oral cancer screen within the past year (Table 1), slightly lower than it was in 2014 (46.4%). White, non-Hispanic adults were significantly more likely to receive an oral cancer screen than any other race group at 50.4%. An estimated 63.8% of college graduates received an oral cancer screen, which was significantly higher than any other education level group. Those who did not complete high school had a significantly lower prevalence of oral cancer screening than any other education level group at 22.3%. Michigan adults falling into the \$50,000-\$74,999 or \$75,000+ income categories were significantly more likely to have reported oral cancer screening than those in any of the lower income categories. Sixty-one percent of those who visited a dentist in the past year also had an oral cancer screen, while 51.6% of those with dental insurance also had an oral cancer screen.

Table 2 examines oral cancer screening by known risk factors for oral cancer. Adults aged 65 years and older and aged 35-64 were significantly more likely to have an oral cancer screen in the past year than those aged 18-34. Females were more likely to have an oral cancer screen than males). Former smokers had the highest percent of oral cancer screening; oral cancer screening was significantly higher in both former smokers and never smokers than current smokers. Those reporting heavy or some alcohol consumption were significantly more likely to have an oral cancer screen than those consuming no alcohol.

Discussion

An oral cancer screen is an important step to identify cancer at an early stage. Since this question was last asked in 2014 the rate decreased slightly by 1.3%. The United States Department of Health and Human Services Healthy People 2020 and the Michigan Oral Health Program are trying to increase the percent

of adults with an annual oral cancer screening by a dental professional. Michigan is above the current national target of 28.6%. Current smokers were

significantly less likely to have had an oral cancer screening in the past year and men were less likely than females to have had a screening. These are two populations with an increased risk and should be monitored by their dentist regularly for oral cancer. It is possible that the surveyed adults did receive an oral cancer screening at their dental office but were not told or aware that it was being done. Education should also be completed within these at-risk populations to make sure they are aware and asking for screenings at their dental visits.

The Michigan Oral Health Program is currently surveying the dental professionals across the state on their current knowledge, barriers and practices around oral cancer screening in their offices. The goal of this survey is to better understand the dental practices to help break down barriers and educate them on the importance of screenings which will hopefully result in more Michigan adults being screened each year for oral cancer and reduce the number of oral cancer deaths.

¹National Cancer Institute Surveillance, Epidemiology, and End Results Program. <https://seer.cancer.gov/statfacts/html/oralcav.html>

²American Cancer Society. <https://www.cancer.org/cancer/oral-cavity-and-oropharyngeal-cancer/detection-diagnosis-staging/detection.html>

³US Department of Health and Human Services. Healthy People 2020. <https://www.healthypeople.gov/2020/topics-objectives/topic/oral-health/objectives>