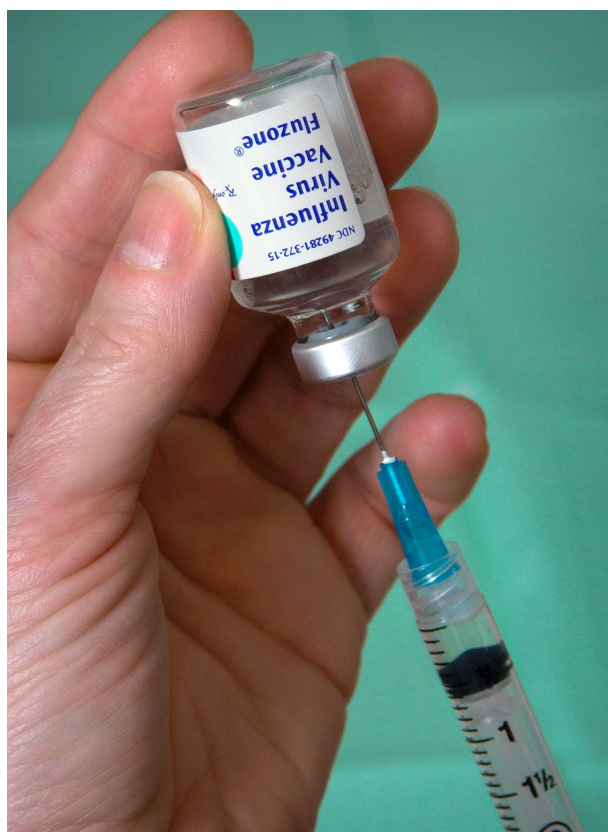


HEALTH RISK BEHAVIORS WITHIN THE STATE OF MICHIGAN



2019 BEHAVIORAL RISK FACTOR SURVEY 33RD ANNUAL REPORT



Michigan Department of Health & Human Services

GRETCHEN WHITMER, GOVERNOR | ELIZABETH HERTEL, DIRECTOR

2019 Behavioral Risk Factor Survey

Health Risk Behaviors
within the State of Michigan

www.michigan.gov/brfs

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BRFSS Methods

The Michigan Behavioral Risk Factor Survey (MiBRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older that is conducted through a collaborative effort between the Population Health Surveillance Branch (PHSB) of the Centers for Disease Control and Prevention (CDC), the Michigan State University Institute for Public Policy and Social Research (IPPSR), and the Michigan Department of Health & Human Services (MDHHS). Michigan Behavioral Risk Factor Surveillance System (MiBRFSS) data contribute to the CDC Behavioral Risk Factor Surveillance System (BRFSS) that is conducted within every state, the District of Columbia, and several U.S. territories.

In 2019, the MiBRFS collected data from both landline and cell phone respondents. The sample of landline telephone numbers was selected using a list-assisted, random-digit-dialed methodology with a disproportionate stratification based on phone bank density, and whether or not the phone numbers were directory listed. The sample of cell phone numbers was randomly selected from dedicated cellular telephone banks sorted on the basis of area code and exchange.

A weighting methodology known as iterative proportional fitting or raking was used in 2019 to allow for the incorporation of cell phone data and to improve the accuracy of prevalence estimates based on MiBRFS data. Estimates based on this weighting methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor that adjusted for the distribution of the Michigan adult population by telephone source (landline or cell phone), detailed race/ethnicity, education level, marital status, age by gender, gender by race/ethnicity, age by race/ethnicity, and renter/owner status.

Due to the BRFSS methodology changes that were implemented in 2011, the 2019 MiBRFS estimates provided within this report should only be compared to estimates from 2011-2018 and not to estimates from years prior to 2011. Due to the BRFSS methodology changes that were implemented in the Fruits and Vegetables Module in 2019, estimates from this module should not be compared to years prior.

Prevalence estimates and asymmetric 95% confidence intervals (95% CIs) were calculated using SAS-Callable SUDAAN (version 11.0.1), a statistical computing program that was designed for analyzing data from multistage sample surveys.¹ If the 95% CIs for two estimates from different subpopulations or survey years did not overlap, they were considered to be statistically different. Unless otherwise specified, respondents who answered that they did not know or refused to answer were not included in the calculation of estimates. For comparison purposes, the median estimates from all 50 states and the District of Columbia were used as national estimates.

In addition to this report, the MiBRFSS releases several additional publications each year. These publications provide statewide health estimates for Michigan adults as well as estimates among demographic and geographic subpopulations. MiBRFSS Surveillance Briefs are also published on a quarterly basis and highlight new topical data from the MiBRFSS, including data from MiBRFSS state-added questions. All of these publications can be found on the MiBRFSS website (www.michigan.gov/brfs).

Sample Results for the 2019 MiBRFS

The total sample size for the 2019 MiBRFS was 10,518 (land line = 3,541; cell phone = 6,977). The response rate for the landline portion of the 2019 MiBRFS was 55.6%, while the response rate for the cell phone portion of the survey was 47.0%. The overall weighted response rate (landline and cell phones combined) for the 2019 MiBRFS was 51.5%. The overall weighted U.S. median response rate for 2019 was 49.4%.²

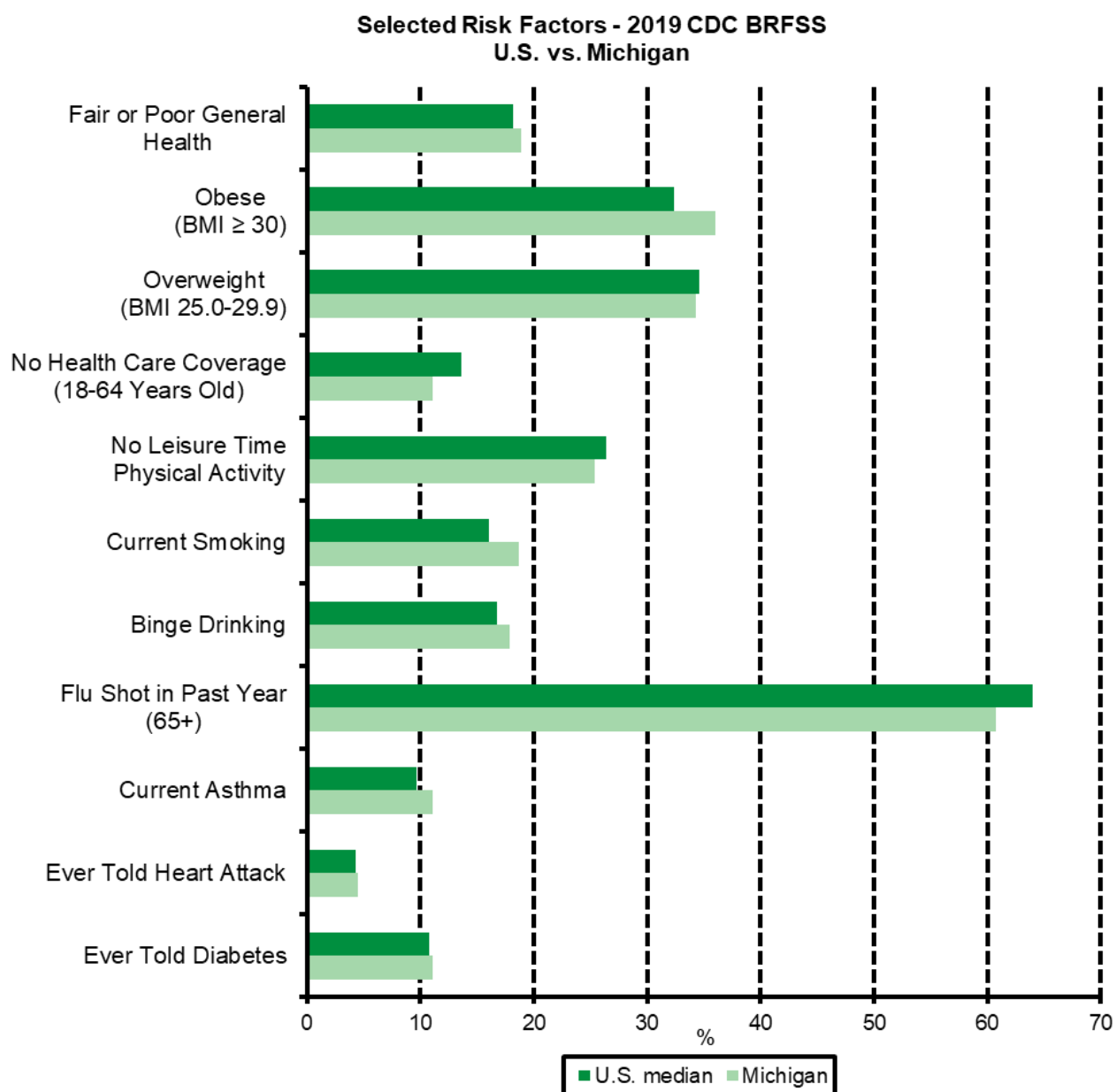
Over the past several years, MDHHS has been able to maintain an annual MiBRFS sample size of at least 8,000 completed interviews. A larger annual sample size increases the utility of the survey by providing more precise estimates, allowing for an increased number of topics to be covered each year, and enables the calculation of estimates for more demographic and geographic subpopulations.



Summary

This report presents estimates from the 2019 MiBRFS, a statewide landline and cell phone survey of Michigan residents aged 18 years and older. It is the only source of state-specific, population-based estimates of the prevalence of various health behaviors, medical conditions, and preventive health care practices among Michigan adults. The survey findings are used by public health agencies, academic institutions, nonprofit organizations, and others to develop programs that promote the health of Michigan citizens.

All of the results from the 2019 MiBRFS presented within this report have been weighted as described in the methods section and can be interpreted as prevalence estimates among the Michigan adult population. Due to the BRFSS methodology changes that took place in 2011, these estimates should only be compared to MiBRFS estimates from 2011-2018 and not to MiBRFS estimates from years prior to 2011. Due to the BRFSS methodology changes that were implemented in the Fruits and Vegetables Module in 2017, estimates from this module should not be compared to years prior.



Summary, continued

Public Health Implications of Findings

A number of themes emerge from the findings of the 2019 MiBRFS that have implications for public health.

✧ Michigan continues to make strides in increasing access to health care coverage.

In 2019, an estimated 11.1% (95% CI: 10.1-12.2) of Michigan adults aged 18-64 years reported not having any form of health care coverage. This represents a significant decrease of 5.5 percentage points since 2012 (16.6%). From 2012 to 2019, the prevalence of no health care coverage decreased among males (2012: 18.9% vs. 2019: 13.0%) and females (2012: 14.2% vs. 2019: 9.2%), as well as white, non-Hispanic (2012: 15.1% vs. 2019: 9.5%) and Black, non-Hispanic adults (2012: 24.3% vs. 2019: 13.2%). The Healthy Michigan Plan, which was implemented on April 1, 2014, makes health care benefits available to individuals at a low cost. As the Healthy Michigan Plan continues, we hope to observe further decreases in the number of Michigan adults aged 18-64 years who report not having any form of health care coverage.

✧ Multiple chronic conditions continue to be a problem among Michigan adults.

In 2019, an estimated 9.4% of Michigan adults have ever been told by a doctor that they had some form of cardiovascular disease (CVD). These include heart attack (4.5%), angina or coronary heart disease (4.5%), and stroke (3.6%). Black, non-Hispanic adults had the highest prevalence of any CVD. Black, non-Hispanic adults were significantly more likely to have ever been told they had a stroke compared to white, non-Hispanic adults (5.4% and 3.3%, respectively). All three CVD measures increased in prevalence as household income decreased, and all three CVD measures were statistically more likely to be present among adults with disabilities. An estimated 13.5% of Michigan adults have ever been told that they had cancer of any type. Among adults with disabilities, 17.1% also had ever been told they had cancer, significantly greater than those with no disabilities (12.0%).

✧ Racial disparities in weight status among Michigan adults has increased.

In 2019, an estimated 36.0% of Michigan adults were classified as being obese (BMI \geq 30.0). In 2014, the disparity in obesity had diminished with the prevalence of obesity among Black, non-Hispanic adults (33.6%) being similar to that of white, non-Hispanic adults (30.2%). The racial disparity had reemerged in 2015, and continued into 2019 with 43.8% of Black, non-Hispanic adults reporting obesity compared to only 35.0% of white, non-Hispanic adults. In addition to targeting Michigan's high burden populations, the Michigan Nutrition, Physical Activity and Obesity Program continues to develop initiatives that focus on improving nutrition and increasing physical activity among the Michigan population.

✧ Smoking and secondhand smoke exposure have stabilized, but more progress is needed.

In 2019, an estimated 18.7% of Michigan adults reported that they currently smoke cigarettes on a regular basis. Unfortunately, this means that one in every five Michigan adults currently smoke cigarettes. Even with the passage of the Michigan Smoke-Free Air Law on May 1, 2010, secondhand smoke exposure continues to be a problem in Michigan with an estimated 22.4% of adults reporting that they were exposed to secondhand smoke in their home or in a car within the past seven days. With a sustained emphasis on smoking cessation and smoke-free regulations, the MDHHS Tobacco Program anticipates that the prevalence of smoking and secondhand smoke exposure will start to decrease again within the coming years.

✧ E-cigarettes is an emerging issue within the state's young adult population.

In 2019, an estimated 6.8% of Michigan adults reported that they used e-cigarettes. E-cigarette usage was significantly higher than the state average among 18-24 year olds with 18.8% reporting usage (95% CI: 14.4-24.2). Among current smokers, the prevalence of e-cigarette use was 14.7% (95%CI: 11.7-18.4) compared to 4.4% (95% CI: 3.4-5.6) among never smokers.

Summary, continued

Future of the Michigan Behavioral Risk Factor Survey

The target sample size for the 2020 MiBRFS is 7,500 total completed interviews. Of these 7,500 interviews, 2,256 will be completed with landline respondents, while the remaining 5,244 will be completed with cell phone respondents. The 2020 questionnaire will include approximately 100 state-added questions on numerous topics, including binge drinking, cancer genomics, cancer survivorship, cognitive decline, excess sun exposure, family planning, lead exposure, lung cancer screening, oral health, prescription drug use, radon awareness, and so on. The full 2020 MiBRFS questionnaire is available on the MiBRFSS website (www.michigan.gov/brfs).

The BRFSS continues to adapt to challenges and expand its utility. The representativeness and validity of MiBRFS estimates have been improved. For example, due to the drastic increase in the utilization of cell phone communication, the BRFSS now collects over half of the data from cell phone respondents. Furthermore, the CDC has implemented a new raking weighting methodology so that BRFSS estimates are more representative than ever before. Michigan has also expanded the utility of the MiBRFS through the following projects:

- The maintenance of a larger MiBRFS sample size will allow for more precise estimates among racial/ethnic populations, especially when multiple years of data are combined.
- Standalone BRFSS-like oversample surveys of minority subpopulations are conducted on an annual basis as funding is available. The results of these minority oversample surveys are available on the MiBRFSS website.
- Since 2005, questions have been included that randomly select one child in each household and obtain demographic characteristics of that child. This information allows us to ask health-related questions about this child and then to calculate estimates for childhood conditions, such as asthma.
- An Asthma Call-Back survey that follows up on children and adults who were identified as having asthma during the MiBRFS interview has been conducted since 2005, allowing for collection of more detailed information on asthma management, clinical care, and impact of the disease on people's lives. It is anticipated that this methodology could be useful for other subpopulations in the future.
- MiBRFSS estimates are used as progress indicators for federal grants focusing on the prevention and control of diabetes, heart disease, obesity and their associated risk factors (CDC 1422/1305).
- The MiBRFSS is a main source of data for a number of the chronic disease and health promotion indicators that are routinely updated and readily available on the MDHHS website.
- The MiBRFSS is the source for seven of the 20 indicators included within the Michigan Health and Wellness Dashboard (<https://midashboard.michigan.gov/health-and-wellness>). This project provides a quick assessment of the health and wellness of Michigan residents.
- Several BRFSS indicators are used in the Robert Wood Johnson County Health Rankings. These rankings measure the overall health of nearly all counties within the United States and rank them within states.

In conclusion, the MiBRFS continues to serve the needs of public health officials, health care providers, researchers and local and state level policy makers, while presenting a number of opportunities for expanding our understanding of the risk factors and preventive behaviors for the major causes of disease and disability in Michigan.

General Health Status

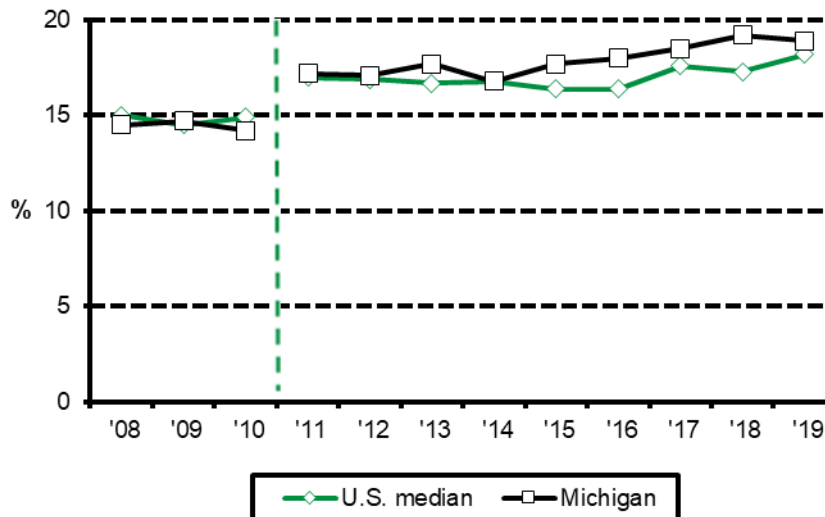
Self-assessed health is a measure of how a person perceives their own health. Self-assessed health status has been validated as a useful indicator of health among different populations and allows for broad comparisons across a variety of health conditions.³

- ◆ In 2019, an estimated 18.9% of Michigan adults reported that their general health was either fair or poor.
- ◆ Fair or poor general health increased with age and decreased with increasing household income level.
- ◆ The prevalence of fair or poor general health was similar by gender and health insurance status.
- ◆ White, non-Hispanic adults (17.4%) reported a significantly lower prevalence of fair or poor general health than Black, non-Hispanic adults (26.6%).
- ◆ Adults with disabilities (41.9%) reported a significantly higher prevalence of fair to poor health than adults without disabilities (8.9%).
- ◆ The BRFSS methodology changes that were implemented in 2011 resulted in a spike in the prevalence of fair or poor general health among Michigan adults, but since these changes, the prevalence of fair to poor general health has remained within the 17% -19% range.
- ◆ In 2019, the prevalence of fair or poor general health among Michigan adults (18.9%) was higher than that of the U.S. median prevalence (18.2%).

Demographic Characteristics	General Health, Fair or Poor ^a	
	%	95% Confidence Interval
Total	18.9	(17.8-19.9)
Age		
18 - 24	11.5	(8.8-14.9)
25 - 34	14.5	(11.9-17.5)
35 - 44	17.2	(14.4-20.5)
45 - 54	21.5	(18.8-24.4)
55 - 64	23.0	(20.7-25.6)
65 - 74	21.9	(19.7-24.3)
75 +	23.6	(20.9-26.6)
Gender		
Male	18.1	(16.6-19.7)
Female	19.5	(18.2-21.0)
Race/Ethnicity		
White, non-Hispanic	17.4	(16.3-18.5)
Black, non-Hispanic	26.6	(23.1-30.4)
Other, non-Hispanic	17.4	(12.9-22.9)
Hispanic	19.8	(14.7-26.3)
Household Income		
< \$20,000	39.5	(35.7-43.4)
\$20,000 - \$34,999	26.8	(23.8-29.9)
\$35,000 - \$49,999	15.9	(13.3-18.8)
\$50,000 - \$74,999	13.2	(11.2-15.6)
≥ \$75,000	7.9	(6.6-9.3)
Health Insurance		
Insured	18.5	(17.4-19.6)
Uninsured	22.5	(18.6-27.0)
Disability Status		
No disabilities	8.9	(8.0-9.8)
Adults with disabilities	41.9	(39.6-44.4)

^a Among all adults, the proportion reporting that their health, in general, was either fair or poor.

**General Health, Fair or Poor
U.S. vs. Michigan, 2008-2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Quality of Life

Physically and mentally unhealthy days measure the number of days within the past 30 days that individuals rate their physical and mental health as not good. Poor physical and mental health was defined as 14 or more days within the past 30 days in which the adult respondents rated their physical and mental health as not good.

- ◆ In 2019, an estimated 13.9% of Michigan adults reported poor physical health and 16.2% reported poor mental health.
- ◆ Poor physical health increased with age, while poor mental health decreased with age.
- ◆ Both poor physical health and poor mental health decreased with increasing household income level.
- ◆ Females reported higher prevalence of poor mental health (18.7%) than males (13.6%).
- ◆ The prevalence of both poor physical health was similar by race/ethnicity.
- ◆ Adults with disabilities were more likely to have reported both poor physical health and poor mental health (32.9% and 31.9%, respectively) than adults without disabilities (5.7% and 9.3%).
- ◆ Uninsured adults were more likely not to have poor mental health (23.3%) when compared to insured adults (15.4%).
- ◆ The BRFSS methodology changes that were implemented in 2011 resulted in a spike in the prevalence of poor physical and mental health among Michigan adults. The prevalence of physical health decreased from 2017 to 2019, but the prevalence of mental health increased from 2017 to 2019.

Demographic Characteristics	Poor Physical Health ^a		Poor Mental Health ^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	13.9	(13.0-14.8)	16.2	(15.2-17.3)
Age				
18 - 24	6.7	(4.7-9.6)	21.9	(18.5-25.7)
25 - 34	8.5	(6.5-11.1)	21.0	(18.0-24.2)
35 - 44	11.9	(9.6-14.6)	18.4	(15.7-21.4)
45 - 54	17.5	(15.1-20.2)	17.8	(15.3-20.5)
55 - 64	17.6	(15.6-19.7)	14.1	(12.3-16.2)
65 - 74	16.9	(15.0-19.0)	9.6	(8.1-11.4)
75 +	18.3	(15.9-21.1)	8.3	(6.5-10.6)
Gender				
Male	12.8	(11.6-14.2)	13.6	(12.3-15.1)
Female	14.9	(13.7-16.1)	18.7	(17.3-20.2)
Race/Ethnicity				
White, non-Hispanic	13.7	(12.7-14.7)	15.7	(14.6-16.8)
Black, non-Hispanic	14.0	(11.5-17.0)	16.3	(13.4-19.7)
Other, non-Hispanic	13.0	(9.7-17.2)	17.7	(13.8-22.4)
Hispanic	13.3	(9.1-19.0)	19.1	(14.1-25.5)
Household Income				
< \$20,000	26.7	(23.5-30.2)	28.3	(24.9-32.0)
\$20,000 - \$34,999	18.5	(16.1-21.2)	21.8	(19.0-24.9)
\$35,000 - \$49,999	12.8	(10.5-15.6)	14.0	(11.6-16.9)
\$50,000 - \$74,999	10.7	(8.9-12.9)	13.1	(10.8-15.7)
≥ \$75,000	6.6	(5.5-7.8)	9.3	(8.0-10.7)
Health Insurance				
Insured	13.9	(13.0-14.8)	15.4	(14.4-16.5)
Uninsured	13.5	(10.6-17.0)	23.3	(19.4-27.9)
Disability Status				
No disabilities	5.7	(5.0-6.5)	9.3	(8.5-10.3)
Adults with disabilities	32.9	(30.6-35.2)	31.9	(29.6-34.2)

^a Among all adults, the proportion reporting 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.

^b Among all adults, the proportion reporting 14 or more days of poor mental health, which includes stress, depression, and problems with emotions during the past 30 days.

Poor Physical and Mental Health Michigan, 2008-2019



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

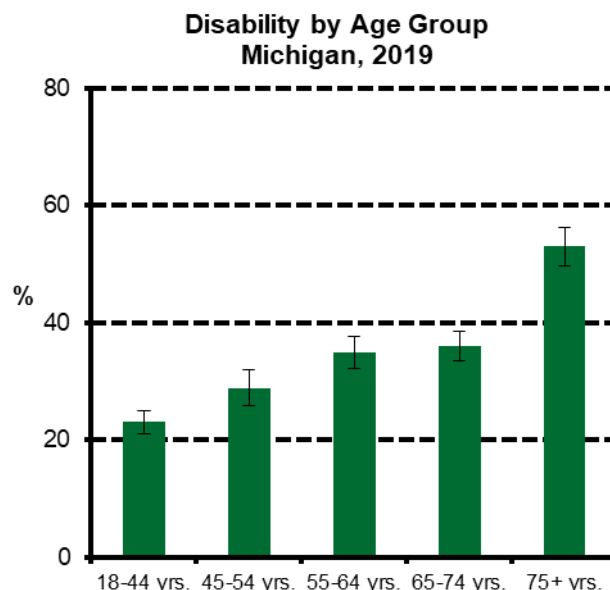
Disability

Through the Americans with Disabilities Act, an individual with a disability is defined as a person who has a physical or mental impairment that substantially limits one or more major life activities, a person who has a history of such an impairment, or a person who is perceived by others as having such an impairment.⁴

- ◆ In 2019, an estimated 30.4% of Michigan adults reported being disabled, which was defined as having serious difficulty hearing, visual impairment, difficulty concentrating, remembering, or making decisions, difficulty walking or climbing stairs, difficulty dressing or bathing, or difficulty doing errands alone.
- ◆ The prevalence of disability increased with age and decreased with increasing household income level.
- ◆ Females reported higher prevalence of disability (32.1%) than males (28.7%).
- ◆ Hispanic adults (39.6%) reported a significantly higher prevalence of disability than white, non-Hispanic adults (29.4%).
- ◆ The prevalence of disability was similar by health insurance status.
- ◆ When assessing disability by age group, Michigan adults 75 years and older reported more disability (53.0%) when compared to all other age groups.

Demographic Characteristics	Total Disability ^a	
	%	95% Confidence Interval
Total	30.4	(29.2-31.6)
Age		
18 - 24	24.3	(20.4-28.7)
25 - 34	22.3	(19.3-25.7)
35 - 44	22.6	(19.6-25.9)
45 - 54	28.8	(25.8-31.9)
55 - 64	34.8	(32.2-37.6)
65 - 74	35.9	(33.4-38.5)
75 +	53.0	(49.7-56.3)
Gender		
Male	28.7	(27.0-30.5)
Female	32.1	(30.5-33.7)
Race/Ethnicity		
White, non-Hispanic	29.4	(28.1-30.7)
Black, non-Hispanic	33.2	(29.3-37.3)
Other, non-Hispanic	24.7	(20.2-29.8)
Hispanic	39.6	(32.3-47.4)
Household Income		
< \$20,000	56.4	(52.5-60.3)
\$20,000 - \$34,999	42.2	(38.9-45.5)
\$35,000 - \$49,999	29.7	(26.3-33.3)
\$50,000 - \$74,999	23.5	(20.8-26.4)
≥ \$75,000	14.4	(12.9-16.1)
Health Insurance		
Insured	30.0	(28.8-31.2)
Uninsured	33.3	(28.7-38.2)

^a Among all adults, the proportion who reported having serious difficulty hearing, visual impairment, difficulty concentrating, remembering, or making decisions, difficulty walking or climbing stairs, difficulty dressing or bathing, or difficulty doing errands alone.



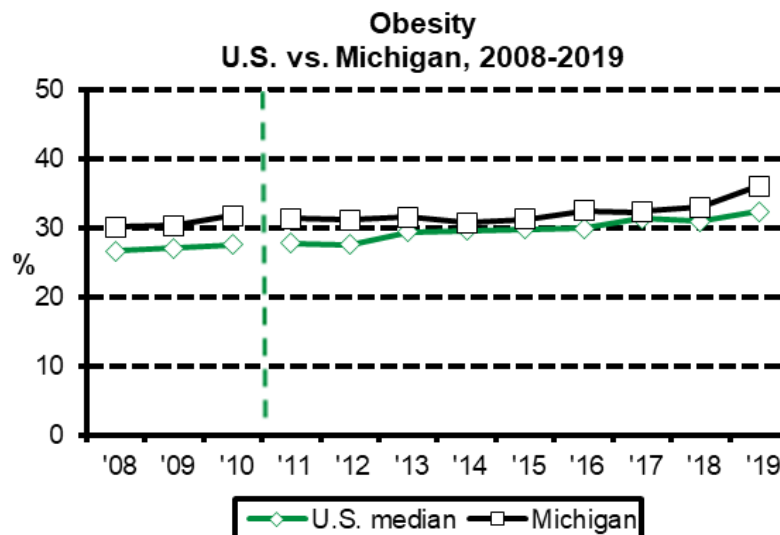
Weight Status

Overweight and obesity have been proven to increase the risk of many diseases and health conditions such as high blood pressure, diabetes, coronary heart disease, stroke, gallbladder disease, high cholesterol, and some forms of cancer.⁵ The medical care costs associated with adult obesity in the U.S. are projected to be in the \$150 billion range.⁶ Overweight is defined as having a body mass index (BMI) between 25.0 and 29.9, and obesity is defined as a BMI greater than or equal to 30.0.

- ◆ In 2019, an estimated 36.0% of Michigan adults were classified as obese, with an additional 34.3% of Michigan adults being classified as overweight. The prevalence of obesity in Michigan is comparable to the U.S. median prevalence (32.4%), while the prevalence of overweight is comparable to that of the U.S. median (34.6%).
- ◆ The prevalence of obesity increased through the 55-64 year age group and then dropped within the 65+ years age groups.
- ◆ The prevalence of obesity was similar by gender and health insurance status.
- ◆ Black, non-Hispanic adults (43.8%) reported a significantly higher prevalence of obesity than white, non-Hispanic adults (35.0%).
- ◆ Adults with disabilities (45.2%) were more likely to be classified as obese than adults without disabilities (32.1%).
- ◆ The Healthy People (HP) 2020 target for obesity among adults is set at 30.5%. In order to meet this target, the obesity prevalence among Michigan adults will need to decrease by 5.5 percentage points over the next year.⁷

Demographic Characteristics	Obese ^a	
	%	95% Confidence Interval
Total	36.0	(34.7-37.3)
Age		
18 - 24	20.0	(16.4-24.1)
25 - 34	33.9	(30.4-37.6)
35 - 44	37.3	(33.8-40.9)
45 - 54	43.9	(40.6-47.2)
55 - 64	43.1	(40.3-46.0)
65 - 74	38.6	(36.0-41.3)
75 +	28.3	(25.4-31.5)
Gender		
Male	34.8	(33.0-36.7)
Female	37.1	(35.4-38.9)
Race/Ethnicity		
White, non-Hispanic	35.0	(33.6-36.4)
Black, non-Hispanic	43.8	(39.6-48.1)
Other, non-Hispanic	23.3	(18.8-28.4)
Hispanic	46.1	(38.6-53.8)
Household Income		
< \$20,000	44.6	(40.7-48.7)
\$20,000 - \$34,999	39.4	(36.1-42.7)
\$35,000 - \$49,999	35.0	(31.4-38.7)
\$50,000 - \$74,999	36.9	(33.7-40.3)
≥ \$75,000	32.3	(30.2-34.5)
Health Insurance		
Insured	36.2	(34.9-37.5)
Uninsured	32.3	(27.8-37.1)
Disability Status		
No disabilities	32.1	(30.6-33.6)
Adults with disabilities	45.2	(42.7-47.6)

Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)²]. Weight and height were self-reported. Pregnant women were excluded.
^a Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

No Health Care Coverage (Among Adults 18 - 64 Years)

Adults who do not have health care coverage are less likely to access health care services and are more likely to delay getting needed medical attention.⁸

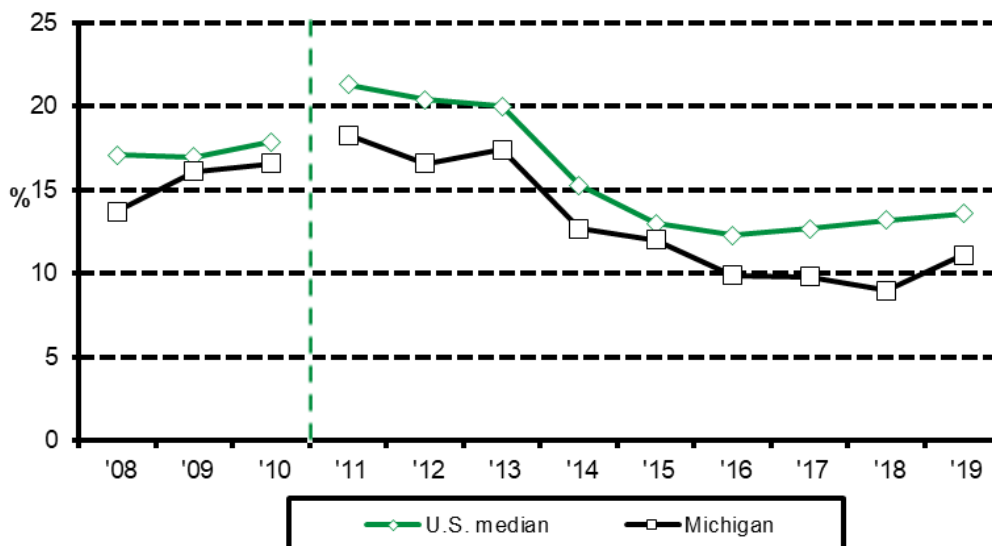
- ◆ In 2019, an estimated 11.1% of Michigan adults aged 18-64 years reported having no health care coverage. The prevalence of no health care coverage among Michigan adults 18-64 years of age is lower than the U.S. median prevalence (13.6%).
- ◆ The prevalence of no health care coverage decreased with age and increasing household income level.
- ◆ Males (13.0%) reported a significantly higher prevalence of no health care coverage than females (9.2%).
- ◆ Hispanic adults (24.1%) reported a higher prevalence of no health care coverage than white, non-Hispanic adults (9.5%) and Black, non-Hispanic adults (13.2%).
- ◆ The prevalence of no health care coverage was significantly higher in Michigan adults with disabilities.
- ◆ The HP 2020 target for health care coverage is to have 100% of adults insured by 2020. Since the prevalence of no health care coverage among Michigan adults 18-64 years of age is currently at 11.1%, this prevalence will need to decrease by roughly 11.1 percentage points in the next year in order to meet the HP 2020 goal.⁷

No Health Care Coverage Among Adults 18-64 Years^a

Demographic Characteristics	%	95% Confidence Interval
Total	11.1	(10.1-12.2)
Age		
18 - 24	14.2	(11.3-17.7)
25 - 34	14.0	(11.6-16.9)
35 - 44	10.4	(8.3-12.9)
45 - 54	10.5	(8.4-12.9)
55 - 64	7.4	(6.0-9.1)
Gender		
Male	13.0	(11.5-14.7)
Female	9.2	(8.0-10.7)
Race/Ethnicity		
White, non-Hispanic	9.5	(8.4-10.7)
Black, non-Hispanic	13.2	(10.3-16.9)
Other, non-Hispanic	11.1	(8.1-15.2)
Hispanic	24.1	(17.9-31.6)
Household Income		
< \$20,000	15.0	(11.9-18.7)
\$20,000 - \$34,999	17.6	(14.5-21.2)
\$35,000 - \$49,999	14.5	(11.4-18.4)
\$50,000 - \$74,999	8.6	(6.4-11.5)
≥ \$75,000	4.9	(3.8-6.2)
Disability Status		
No disabilities	10.1	(8.9-11.3)
Adults with disabilities	13.4	(11.3-15.8)

^a Among adults aged 18-64 years, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare or Indian Health Services.

**No Health Care Coverage
Among Adults Aged 18 to 64 Years
U.S. vs. Michigan, 2008-2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Health Insurance Type (Among Adults 18+ Years)

There are several different types of health insurance plans, all of which are designed to meet slightly different needs.⁹

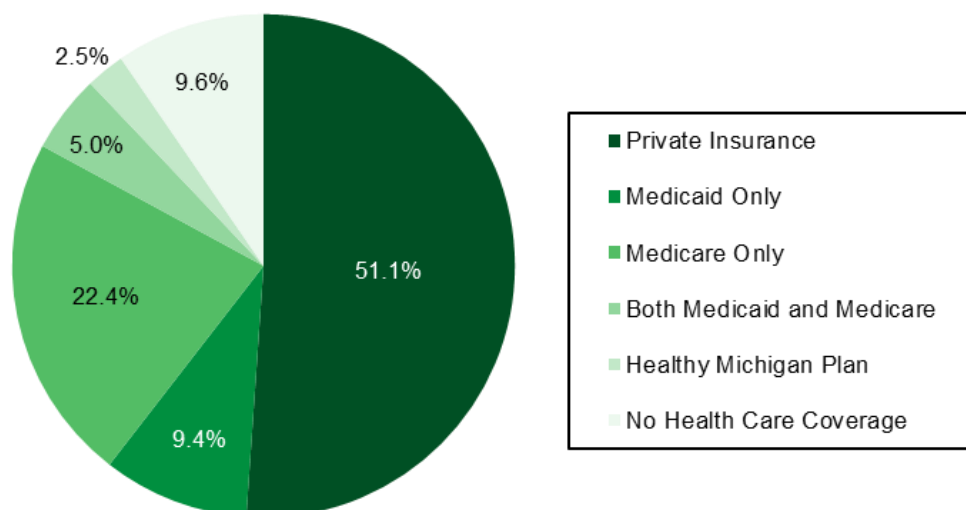
- ◆ In 2019, an estimated 51.1% of Michigan adults reported having private insurance, 9.4% reported having Medicaid only, 2.5% reported having Healthy Michigan Plan, and 9.6% reported having no health care coverage.
- ◆ Females (12.3%) were more likely than males (6.4%) to have Medicaid only. Males were more likely to have private insurance or no health care coverage (53.7% and 11.6%, respectively) than females (48.6% and 7.7%).
- ◆ White, non-Hispanic adults (53.8%) were more likely to have private insurance than Black, non-Hispanic adults (39.5%). Black, non-Hispanic adults (18.6%) were more likely to have Medicaid only and no health care coverage (18.6% and 11.8%, respectively) than white, non-Hispanic adults (7.3% and 7.9%).
- ◆ Adults with disabilities (13.6%) were more likely to have Medicaid only than adults without disabilities (7.5%).

Demographic Characteristics	Private Insurance ^a		Medicaid Only ^a		Healthy Michigan Plan ^a		No Health Care Coverage ^a	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Total	51.1	(49.8-52.4)	9.4	(8.6-10.3)	2.5	(2.1-3.0)	9.6	(8.7-10.5)
Age								
18 - 24	60.8	(55.8-65.5)	14.2	(11.0-18.2)	2.4	(1.4-4.1)	17.1	(13.7-21.2)
25 - 34	59.5	(55.7-63.3)	14.8	(12.3-17.7)	3.9	(2.7-5.5)	15.2	(12.6-18.3)
35 - 44	65.3	(61.6-68.8)	13.8	(11.4-16.5)	2.6	(1.7-4.0)	10.9	(8.8-13.5)
45 - 54	68.3	(65.0-71.4)	10.2	(8.3-12.5)	3.2	(2.2-4.6)	10.9	(8.8-13.5)
55 - 64	66.8	(64.0-69.4)	6.8	(5.5-8.5)	3.7	(2.7-5.2)	7.8	(6.3-9.5)
65 - 74	7.5	(6.1-9.2)	2.1	(1.4-3.0)	-- ^b	-- ^b	2.3	(1.4-3.7)
75 +	4.1	(3.0-5.7)	2.6	(1.5-4.5)	-- ^b	-- ^b	1.7	(1.0-3.0)
Gender								
Male	53.7	(51.7-55.7)	6.4	(5.4-7.5)	2.2	(1.7-2.9)	11.6	(10.3-13.0)
Female	48.6	(46.8-50.4)	12.3	(11.1-13.7)	2.7	(2.2-3.4)	7.7	(6.7-8.9)
Race/Ethnicity								
White, non-Hispanic	53.8	(52.4-55.3)	7.3	(6.5-8.1)	2.1	(1.8-2.6)	7.9	(7.1-8.9)
Black, non-Hispanic	39.5	(35.4-43.7)	18.6	(15.5-22.1)	4.2	(2.8-6.4)	11.8	(9.2-15.0)
Other, non-Hispanic	57.6	(51.4-63.6)	12.5	(9.0-17.1)	-- ^b	-- ^b	12.4	(9.1-16.6)
Hispanic	35.7	(28.8-43.3)	18.5	(13.2-25.3)	-- ^b	-- ^b	24.8	(18.5-32.3)
Household Income								
< \$20,000	12.6	(10.0-15.7)	30.1	(26.5-34.0)	7.2	(5.5-9.5)	13.7	(11.0-16.9)
\$20,000 - \$34,999	28.0	(24.9-31.3)	15.3	(12.9-18.2)	5.3	(3.9-7.1)	13.5	(11.2-16.2)
\$35,000 - \$49,999	45.2	(41.4-49.2)	8.3	(6.1-11.1)	1.4	(0.7-2.5)	10.7	(8.4-13.6)
\$50,000 - \$74,999	64.4	(61.2-67.5)	2.1	(1.3-3.4)	-- ^b	-- ^b	7.3	(5.5-9.7)
≥ \$75,000	82.1	(80.4-83.6)	-- ^b	-- ^b	-- ^b	-- ^b	4.6	(3.6-5.8)
Disability Status								
No disabilities	61.3	(59.8-62.8)	7.5	(6.6-8.4)	2.4	(2.0-3.0)	9.0	(8.0-10.1)
Adults with disabilities	27.8	(25.5-30.1)	13.6	(11.9-15.5)	2.7	(2.0-3.6)	10.4	(8.8-12.2)

^a Among all adults, the proportion who reported currently having private insurance, Medicaid only, Healthy Michigan Plan or no health care coverage. All of the insurance types included within this question can be found within the table below.

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

Health Insurance Type
Michigan, 2019



Limited Health Care Coverage

Two additional indicators related to health care access are: 1) not having a personal doctor or health care provider and 2) having had a time during the past 12 months when an individual needed to see a doctor but could not because of the cost. Increases in access to primary care have been shown to substantially improve health-related outcomes.¹⁰

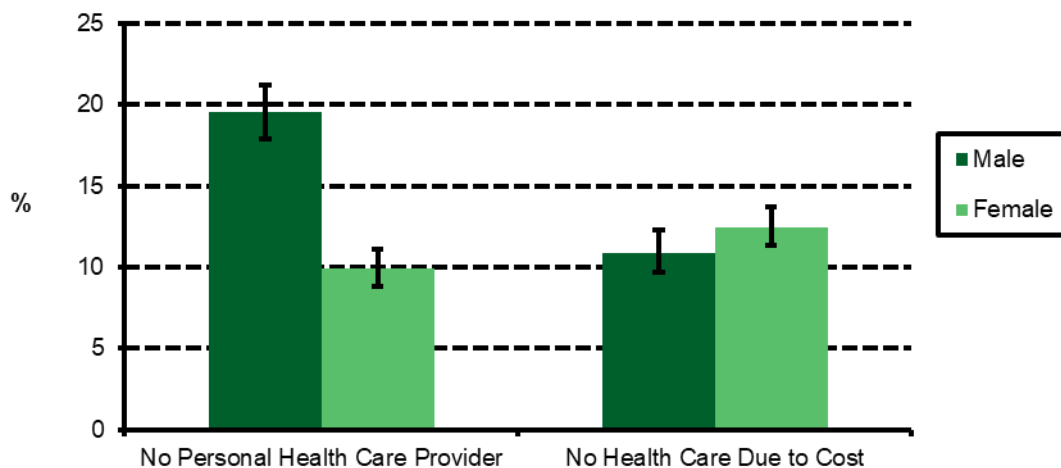
- ◆ In 2019, an estimated 14.5% of Michigan adults reported not having a personal health care provider, while 11.7% reported not seeing the doctor within the past 12 months due to cost.
- ◆ The prevalences of both of these indicators decreased with age and increasing household income level.
- ◆ Males (19.5%) were more likely than females (9.9%) to not have a personal health care provider.
- ◆ Black, non-Hispanic adults (19.0%) and Hispanic adults (30.1%) were both more likely than white, non-Hispanic adults (12.5%) not to have a personal health care provider.
- ◆ Other, non-Hispanic adults (16.4%) were more likely than white, non-Hispanic adults (10.6%) not to have seen a doctor within the past 12 months due to cost.
- ◆ Uninsured adults were more likely not to have a personal health care provider and not to have seen a doctor within the past 12 months due to cost (45.0% and 32.9%, respectively) when compared to insured adults (11.5% and 9.6%).

Demographic Characteristics	No Personal Health Care Provider ^a		No Health Care Access Due to Cost ^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	14.5	(13.6-15.6)	11.7	(10.8-12.6)
Age				
18 - 24	28.9	(25.0-33.2)	12.4	(9.6-16.0)
25 - 34	28.5	(25.2-32.0)	16.0	(13.4-18.9)
35 - 44	17.1	(14.4-20.2)	14.0	(11.6-16.8)
45 - 54	11.1	(9.1-13.5)	14.3	(12.1-16.9)
55 - 64	6.5	(5.3-8.0)	11.3	(9.7-13.1)
65 - 74	4.3	(3.2-5.8)	5.4	(4.3-6.7)
75 +	3.6	(2.4-5.3)	5.2	(4.0-6.8)
Gender				
Male	19.5	(17.9-21.2)	10.9	(9.7-12.3)
Female	9.9	(8.8-11.1)	12.4	(11.3-13.7)
Race/Ethnicity				
White, non-Hispanic	12.5	(11.5-13.6)	10.6	(9.7-11.6)
Black, non-Hispanic	19.0	(15.7-22.8)	13.2	(10.7-16.3)
Other, non-Hispanic	19.8	(15.7-24.6)	16.4	(12.5-21.3)
Hispanic	30.1	(23.3-38.0)	16.0	(10.9-22.9)
Household Income				
< \$20,000	21.4	(18.1-25.2)	18.8	(15.8-22.1)
\$20,000 - \$34,999	19.2	(16.4-22.3)	20.1	(17.4-23.0)
\$35,000 - \$49,999	13.1	(10.5-16.3)	13.8	(11.3-16.8)
\$50,000 - \$74,999	14.6	(12.2-17.4)	10.2	(8.2-12.6)
≥ \$75,000	9.2	(7.9-10.7)	5.0	(4.1-6.2)
Health Insurance				
Insured	11.5	(10.6-12.5)	9.6	(8.8-10.5)
Uninsured	45.0	(40.1-50.0)	32.9	(28.5-37.7)
Disability Status				
No disabilities	14.9	(13.7-16.1)	7.8	(7.0-8.7)
Adults with disabilities	13.4	(11.6-15.4)	20.4	(18.4-22.6)

^a Among all adults, the proportion reporting that they did not have anyone that they thought of as their personal doctor or health care provider

^b Among all adults, the proportion reporting that in the past 12 months, they could not see a doctor when they needed to due to the cost.

**Health Care Access Indicators by Gender
Michigan, 2019**



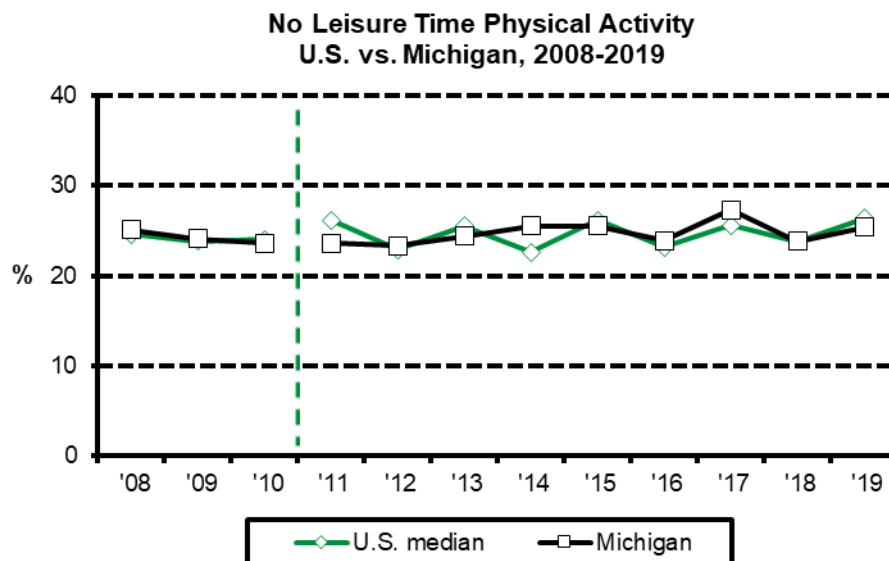
No Leisure Time Physical Activity

Regular physical activity among adults has been shown to reduce the risk of many diseases including cardiovascular disease, diabetes, colon and breast cancers, and osteoporosis. Keeping physically active also helps to control weight, maintain healthy bones, muscles, and joints, and relieve symptoms of depression.¹¹

- ◆ In 2019, an estimated 25.4% of Michigan adults reported no leisure time physical activity within the past month. The prevalence of no leisure time physical activity among Michigan adults is slightly higher than the U.S. median prevalence (26.4%) for this indicator.
- ◆ The prevalence of no leisure time physical activity increased with age and decreased with increasing household income level.
- ◆ White, non-Hispanic adults (23.8%) reported a significantly lower prevalence of no leisure time physical activity than Black, non-Hispanic adults (34.4%).
- ◆ The HP 2020 target for no leisure time physical activity among adults is set at 32.6%. The prevalence of no leisure time physical activity among Michigan adults will need to increase by roughly 7.2 percentage points in the next year in order to meet the HP 2020 goal.⁷

Demographic Characteristics	No Leisure Time Physical Activity ^a	
	%	95% Confidence Interval
Total	25.4	(24.3-26.6)
Age		
18 - 24	18.9	(15.5-23.0)
25 - 34	20.8	(17.9-24.0)
35 - 44	21.3	(18.2-24.6)
45 - 54	27.1	(24.2-30.3)
55 - 64	29.9	(27.3-32.6)
65 - 74	27.4	(25.1-29.9)
75 +	35.9	(32.7-39.2)
Gender		
Male	24.9	(23.2-26.7)
Female	25.9	(24.4-27.4)
Race/Ethnicity		
White, non-Hispanic	23.8	(22.6-25.1)
Black, non-Hispanic	34.4	(30.5-38.5)
Other, non-Hispanic	25.9	(20.7-31.9)
Hispanic	21.5	(16.2-28.0)
Household Income		
< \$20,000	39.6	(35.7-43.5)
\$20,000 - \$34,999	32.1	(29.0-35.3)
\$35,000 - \$49,999	27.8	(24.5-31.4)
\$50,000 - \$74,999	22.6	(19.9-25.6)
≥ \$75,000	14.7	(13.1-16.5)
Health Insurance		
Insured	24.8	(23.6-26.0)
Uninsured	32.3	(27.9-37.1)
Disability Status		
No disabilities	19.5	(18.2-20.8)
Adults with disabilities	39.0	(36.7-41.3)

^a Among all adults, the proportion reporting they had not participated in any leisure time physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise during the past month.



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Adequate Physical Activity

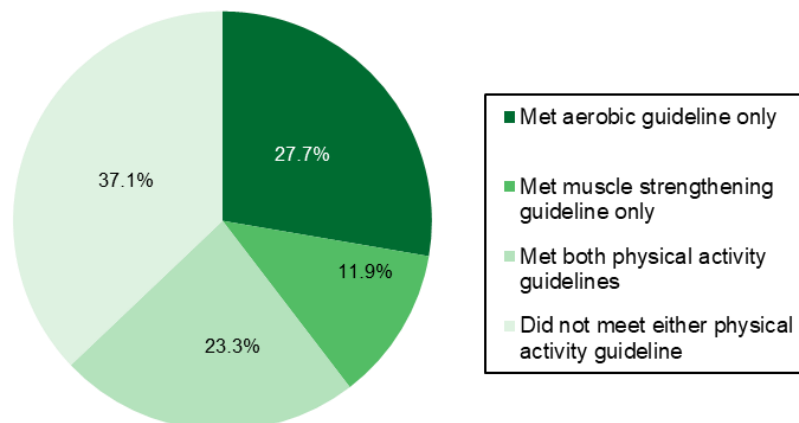
In 2008, the U.S. Department of Health and Human Services released the new physical activity guidelines for Americans. These guidelines recommend that adults participate in both aerobic physical activity and muscle strengthening activities. To meet the aerobic physical activity component, adults must participate in moderate physical activities for at least 150 minutes per week, vigorous physical activities for at least 75 minutes per week, or an equivalent combination of moderate and vigorous physical activities. To meet the muscle strengthening component, adults must participate in muscle strengthening activities on two or more days per week.¹²

- ◆ In 2019, an estimated 20.8% of Michigan adults met both the aerobic and muscle strengthening components of the new physical activity guidelines (i.e. adequate physical activity).
- ◆ Adequate physical activity decreased with increasing age.
- ◆ The prevalence of adequate physical activity was similar by gender, while adults with disabilities (16.9%) were less likely to have reported adequate physical activity than adults without disabilities (23.4%).
- ◆ Michigan is currently above the HP 2020 targets for the aerobic (MI: 46.7% vs. HP 2020: 47.9%) and muscle strengthening (MI: 32.8% vs. HP 2020: 24.1%) components, but below the combined aerobic and muscle strengthening target (MI: 20.8% vs. HP 2020: 20.1%).⁷
- ◆ 62.9% of Michigan adults reported participating in at least one component of the physical activity guidelines (Aerobic only = 27.7%; Muscle strengthening only = 11.9%; Both aerobic and muscle strengthening = 23.3%).

Demographic Characteristics	Adequate Physical Activity ^a	
	%	95% Confidence Interval
Total	20.8	(19.8-21.8)
Age		
18 - 24	24.8	(21.1-28.9)
25 - 34	21.0	(18.2-24.2)
35 - 44	21.0	(18.2-24.0)
45 - 54	20.4	(17.9-23.1)
55 - 64	19.7	(17.7-21.9)
65 - 74	21.3	(19.3-23.4)
75 +	19.5	(17.1-22.2)
Gender		
Male	21.8	(20.3-23.3)
Female	19.8	(18.5-21.3)
Race/Ethnicity		
White, non-Hispanic	10.3	(9.5-11.2)
Black, non-Hispanic	12.1	(9.6-15.2)
Other, non-Hispanic	10.8	(8.1-14.3)
Hispanic	12.7	(9.0-17.6)
Household Income		
< \$20,000	17.5	(14.8-20.5)
\$20,000 - \$34,999	18.8	(16.4-21.5)
\$35,000 - \$49,999	19.1	(16.2-22.4)
\$50,000 - \$74,999	22.8	(20.0-25.7)
≥ \$75,000	25.8	(23.9-27.9)
Health Insurance		
Insured	21.4	(20.3-22.5)
Uninsured	15.7	(12.7-19.3)
Disability Status		
No disabilities	23.4	(22.1-24.8)
Adults with disabilities	16.9	(15.2-18.8)

^a Among all adults, the proportion reporting that they do either moderate physical activities for at least 150 minutes per week, vigorous physical activities for at least 75 minutes per week, or an equivalent combination of moderate and vigorous physical activities and also participate in muscle strengthening activities on two or more days per week.

**Adequate Physical Activity Guidelines
Michigan, 2019**



Fruit and Vegetable Consumption

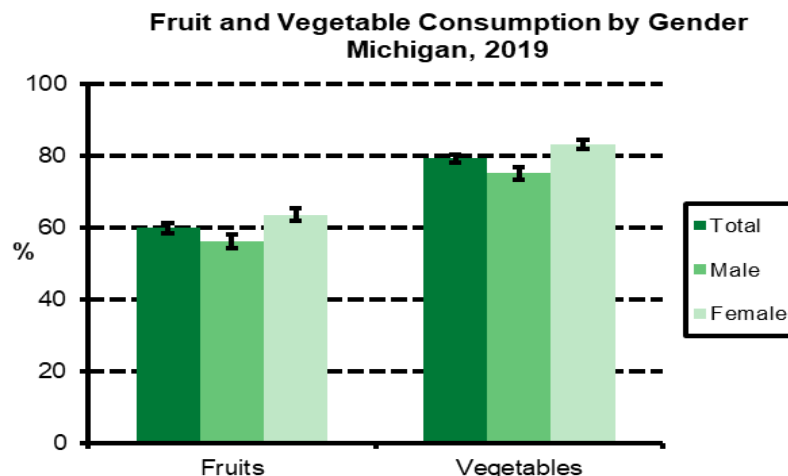
A healthy diet rich in fruits and vegetables may reduce the risk of cancer and other chronic conditions.¹³ In 2019, the Centers for Disease Control and Prevention changed the Fruits and Vegetables module to make it shorter and simpler to answer. They based it on an existing, validated module used in the National Cancer Institute's Dietary Screener Questionnaire.

- ◆ In 2019, an estimated 59.9% of Michigan adults reported consuming at least one fruit per day, while 79.3% reported consuming at least one vegetable per day.
- ◆ Both fruit and vegetable consumption improved with increasing age and household income level, and males were more likely than females to eat fewer fruits and vegetables.
- ◆ White, non-Hispanic adults were more likely to consume at least one vegetable (80.4%) per day than Black, non-Hispanic adults (70.9%).
- ◆ Those with no disabilities were significantly more likely to consume at least one vegetable per day than those with disabilities.

Demographic Characteristics	Fruits (At least 1 / Day) ^a		Vegetables (At least 1 / Day) ^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	59.9	(58.5-61.2)	79.3	(78.2-80.4)
Age				
18 - 24	54.5	(49.8-59.2)	71.7	(67.1-75.8)
25 - 34	52.5	(48.7-56.3)	78.5	(75.1-81.5)
35 - 44	59.7	(55.9-63.3)	83.0	(80.0-85.7)
45 - 54	57.2	(53.9-60.5)	78.9	(76.0-81.4)
55 - 64	62.8	(60.0-65.6)	80.8	(78.4-83.0)
65 - 74	64.5	(61.9-67.0)	80.7	(78.5-82.8)
75 +	72.7	(69.4-75.8)	80.3	(77.1-83.2)
Gender				
Male	56.1	(54.1-58.1)	75.2	(73.4-76.9)
Female	63.5	(61.7-65.2)	83.2	(81.8-84.5)
Race/Ethnicity				
White, non-Hispanic	60.4	(59.0-61.9)	80.4	(79.2-81.6)
Black, non-Hispanic	59.0	(54.6-63.2)	70.9	(66.7-74.8)
Other, non-Hispanic	59.6	(53.3-65.7)	84.3	(79.5-88.2)
Hispanic	53.8	(46.1-61.4)	76.8	(69.1-83.0)
Household Income				
< \$20,000	53.1	(49.0-57.2)	71.2	(67.2-74.9)
\$20,000 - \$34,999	56.4	(53.0-59.7)	75.9	(72.8-78.7)
\$35,000 - \$49,999	58.3	(54.3-62.1)	80.6	(77.2-83.5)
\$50,000 - \$74,999	60.2	(56.7-63.5)	81.0	(78.1-83.6)
≥ \$75,000	64.6	(62.3-66.8)	84.4	(82.7-86.0)
Health Insurance				
Insured	61.0	(59.6-62.3)	79.8	(78.6-80.9)
Uninsured	48.4	(43.3-53.5)	74.4	(69.7-78.6)
Disability Status				
No disabilities	60.8	(59.2-62.4)	80.6	(79.3-81.9)
Adults with disabilities	57.5	(55.1-60.0)	76.1	(73.9-78.3)

^a Among all adults, the proportion who reported consuming at least one fruit per day, including fruit juice.

^b Among all adults, the proportion who reported consuming at least one vegetable per day.



Cigarette Smoking

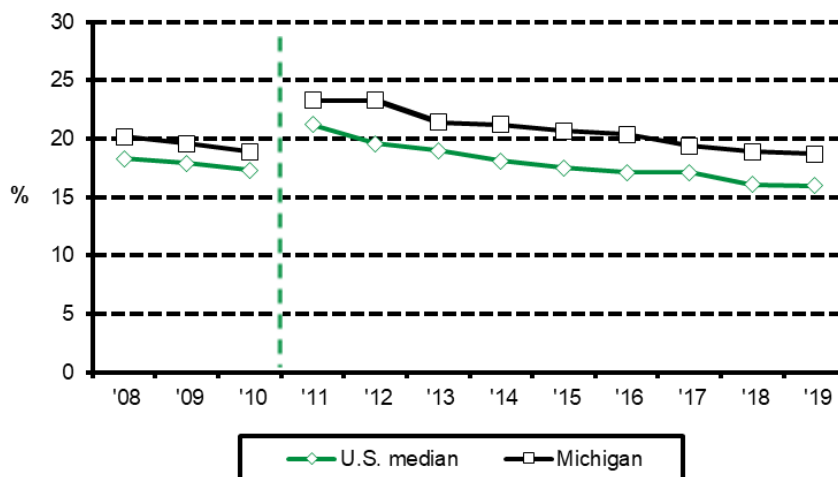
Cigarette smoking is the leading cause of preventable death in the U.S., accounting for more than 480,000 deaths each year.¹⁴

- ◆ In 2019, an estimated 18.7% of Michigan adults reported that they currently smoke cigarettes on a regular basis. The prevalence of current smoking among Michigan adults was higher than the U.S. median prevalence (16.0%).
- ◆ Current smoking prevalence was highest among adults aged 25-34, and lower among both the oldest and youngest age groups.
- ◆ Current smoking decreased with increasing household income level.
- ◆ The prevalence of current smoking was similar by gender.
- ◆ Adults with disabilities (27.8%) were more likely to have reported current smoking than adults without disabilities (14.8%).
- ◆ Uninsured adults (30.0%) were more likely to have reported current smoking than insured adults (17.6%).
- ◆ The HP 2020 target for current smoking among adults is set at 12.0%. In order to meet this target, the current smoking prevalence among Michigan adults will need to decrease by 6.7 percentage points during the next year.⁷
- ◆ The BRFSS methodology changes that were implemented in 2011 resulted in a spike in the prevalence of current smoking among Michigan adults, but the prevalence of current smoking has declined by nearly five percentage points since 2011.

Demographic Characteristics	Current Smoking ^a	
	%	95% Confidence Interval
Total	18.7	(17.6-19.8)
Age		
18 - 24	11.1	(8.2-14.9)
25 - 34	25.7	(22.5-29.3)
35 - 44	24.5	(21.4-27.8)
45 - 54	24.1	(21.3-27.2)
55 - 64	19.7	(17.5-22.2)
65 - 74	12.4	(10.7-14.3)
75 +	6.1	(4.4-8.5)
Gender		
Male	20.2	(18.5-21.9)
Female	17.2	(15.9-18.7)
Race/Ethnicity		
White, non-Hispanic	17.8	(16.7-19.1)
Black, non-Hispanic	21.9	(18.5-25.8)
Other, non-Hispanic	18.0	(14.0-22.8)
Hispanic	24.7	(18.4-32.4)
Household Income		
< \$20,000	37.1	(33.2-41.2)
\$20,000 - \$34,999	22.4	(19.8-25.3)
\$35,000 - \$49,999	20.8	(17.5-24.5)
\$50,000 - \$74,999	15.3	(12.9-18.1)
≥ \$75,000	10.4	(9.0-12.0)
Health Insurance		
Insured	17.6	(16.5-18.7)
Uninsured	30.0	(25.6-34.8)
Disability Status		
No disabilities	14.8	(13.6-16.0)
Adults with disabilities	27.8	(25.5-30.1)

^a Among all adults, the proportion reporting that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

**Current Cigarette Smoking
U.S. vs. Michigan, 2008-2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

E-Cigarette Use

E-cigarette use (also known as “vaping”) is a form of tobacco use that is rapidly increasing among youth and young adults. While e-cigarette smoke may contain fewer toxic chemicals than regular cigarettes, they still contain many harmful substances, including nicotine, heavy metals, and chemicals that cause cancer. E-cigarettes are especially dangerous for youth, young adults, and pregnant women.¹⁵

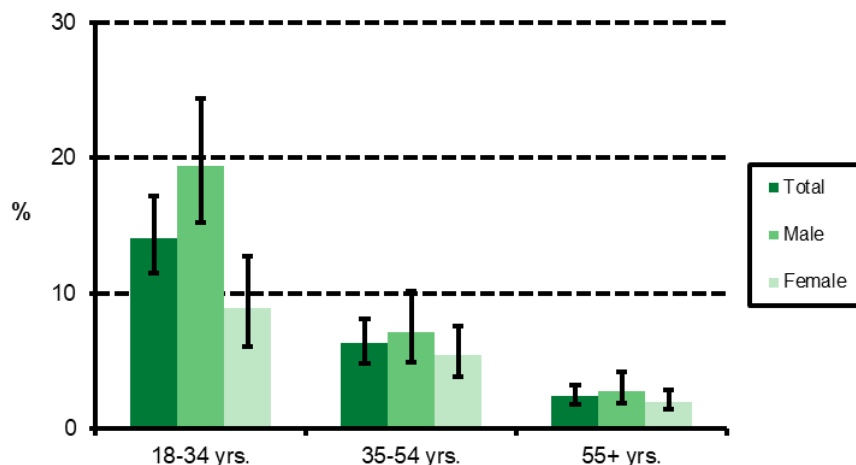
- ◆ In 2019, an estimated 6.8% of Michigan adults reported that they currently smoke cigarettes on a regular basis. The prevalence of current e-cigarette use among Michigan adults was higher than the U.S. median prevalence (4.6%) in 2017.
- ◆ Current e-cigarette use was highest among the 18-24 year old age group (18.8%).
- ◆ Males (8.8%) were more likely to report current e-cigarette use than females (4.8%).
- ◆ Current e-cigarette use was lowest among ≥\$75,000 household income level (4.7%).
- ◆ Adults with disabilities (9.4%) were more likely to have reported current e-cigarette use than adults without disabilities (5.6%).
- ◆ Among current smokers, the prevalence of e-cigarette use is 14.7% (11.7-18.4), compared to 6.2% (4.8-8.1) among former smokers and 4.4% (3.4-5.6) among never smokers.
- ◆ Males aged 18-34 years had the highest prevalence of current e-cigarette use (19.4%), while females aged 55 years or older had the lowest prevalence (2.0%).

Demographic Characteristics	Current E-Cigarette Use ^a	
	%	95% Confidence Interval
Total	6.8	(5.8-7.8)
Age		
18 - 24	18.8	(14.4-24.2)
25 - 34	10.3	(7.5-14.1)
35 - 44	6.8	(4.7-9.7)
45 - 54	5.9	(4.1-8.5)
55 - 64	2.8	(1.8-4.2)
65 - 74	3.3	(2.2-4.8)
75 +	-- ^b	-- ^b
Gender		
Male	8.8	(7.3-10.6)
Female	4.8	(3.9-6.1)
Race/Ethnicity		
White, non-Hispanic	6.5	(5.5-7.7)
Black, non-Hispanic	5.5	(3.3-8.9)
Other, non-Hispanic	7.4	(4.3-12.6)
Hispanic	13.1	(7.3-22.4)
Household Income		
< \$20,000	6.6	(4.4-9.6)
\$20,000 - \$34,999	7.9	(5.6-11.1)
\$35,000 - \$49,999	7.5	(4.9-11.3)
\$50,000 - \$74,999	8.0	(5.8-10.8)
≥ \$75,000	4.7	(3.4-6.5)
Health Insurance		
Insured	6.5	(5.6-7.6)
Uninsured	9.7	(6.0-15.2)
Disability Status		
No disabilities	5.6	(4.7-6.7)
Adults with disabilities	9.4	(7.4-11.9)

^a Among all adults, the proportion reporting that they currently use e-cigarettes or other electronic vaping products, either every day or on some days.

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

**Current E-Cigarette Use by Age and Gender
Michigan, 2019**



Hookah Use

Hookah (water pipe) use has become a popular tobacco smoking method within the U.S., with increasing popularity among the college campus population. Hookah use should not be considered as a safe alternative to smoking cigarettes. The charcoal used to heat the tobacco and the smoke generated from hookahs contain many toxic agents that are known to cause lung, bladder, and oral cancers.¹⁶

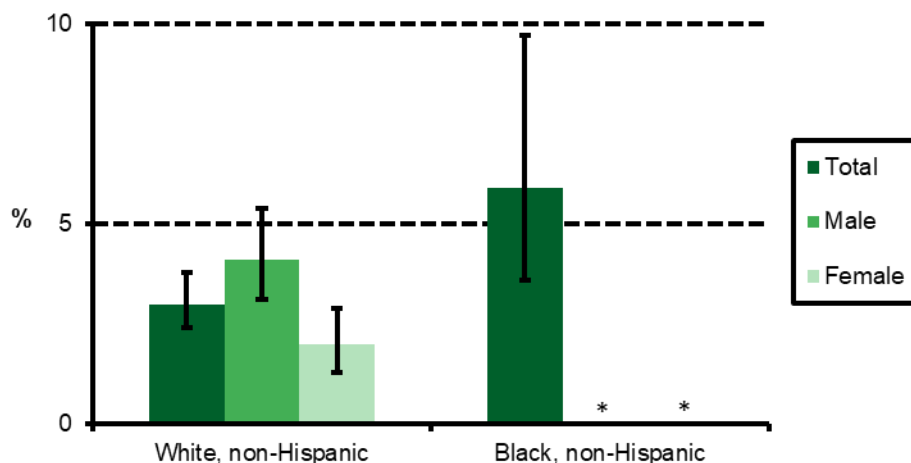
- ◆ In 2019, an estimated 3.7% of Michigan adults reported that they smoked tobacco using a hookah on one or more days out of the previous month.
- ◆ Current hookah use was highest among the 18-24 year old age group (9.0%).
- ◆ Current hookah use decreased with increasing household income level.
- ◆ Uninsured adults (7.6%) were more likely to report current hookah use than insured adults (3.4%).
- ◆ The prevalence of current hookah use was similar by gender.
- ◆ White, non-Hispanic adults (3.0%) were less likely to report current hookah use than Other, non-Hispanic adults (7.1%).

Demographic Characteristics	Current Hookah Use ^a	
	%	95% Confidence Interval
Total	3.7	(3.0-4.5)
Age		
18 - 24	9.0	(6.0-13.2)
25 - 34	5.3	(3.5-8.0)
35 - 44	4.4	(2.7-7.2)
45 - 54	3.3	(2.0-5.6)
55 - 64	1.8	(1.1-2.9)
65 - 74	1.7	(1.0-2.9)
75 +	-- ^b	-- ^b
Gender		
Male	4.6	(3.6-5.9)
Female	2.9	(2.1-3.9)
Race/Ethnicity		
White, non-Hispanic	3.0	(2.4-3.8)
Black, non-Hispanic	5.9	(3.6-9.7)
Other, non-Hispanic	7.1	(4.0-12.3)
Hispanic	-- ^b	-- ^b
Household Income		
< \$20,000	5.0	(3.1-8.0)
\$20,000 - \$34,999	5.9	(3.9-8.9)
\$35,000 - \$49,999	-- ^b	-- ^b
\$50,000 - \$74,999	3.5	(2.3-5.4)
≥ \$75,000	2.9	(1.9-4.3)
Health Insurance		
Insured	3.4	(2.7-4.2)
Uninsured	7.6	(4.5-12.5)
Disability Status		
No disabilities	3.7	(2.9-4.6)
Adults with disabilities	3.8	(2.7-5.5)

^a Among all adults, the proportion reporting smoking tobacco using a hookah, narghile, or water pipe on one or more days during the previous thirty days.

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

**Current Hookah Use by Race and Gender
Michigan, 2019**



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

Secondhand Smoke Exposure

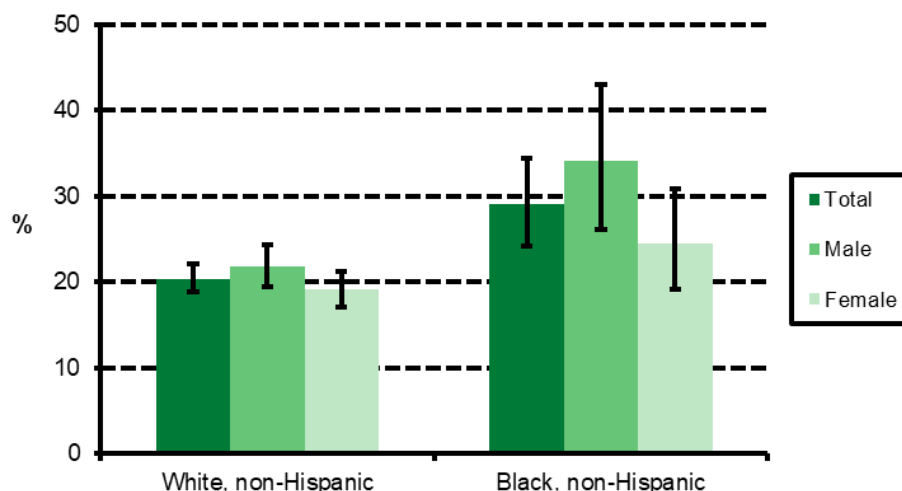
Among adults who have never smoked, secondhand smoke exposure causes an estimated 34,000 heart disease deaths and 7,300 lung cancer deaths within the U.S. each year.¹⁴

- ◆ In 2019, an estimated 22.4% of Michigan adults reported that they were exposed to secondhand smoke in their home or car within the past seven days.
- ◆ Secondhand smoke exposure decreased with both increasing age and household income level.
- ◆ The prevalence of secondhand smoke exposure was similar by gender.
- ◆ Black, non-Hispanic adults (29.1%) and Hispanic adults (31.5%) reported a significantly higher prevalence of secondhand smoke exposure than white, non-Hispanic adults (20.4%).
- ◆ Uninsured adults and adults with disabilities (41.8% and 33.7%, respectively) were more likely to have reported recent secondhand smoke exposure than insured adults and adults without disabilities (20.6% and 17.4%, respectively).
- ◆ White, non-Hispanic females reported the lowest prevalence of recent secondhand smoke exposure at 19.1%, while Black, non-Hispanic males reported the highest prevalence (34.1%).

Demographic Characteristics	Secondhand Smoke Exposure ^a	
	%	95% Confidence Interval
Total	22.4	(20.9-23.9)
Age		
18 - 24	26.9	(21.9-32.5)
25 - 34	34.7	(29.9-39.8)
35 - 44	22.3	(18.4-26.7)
45 - 54	27.0	(23.1-31.3)
55 - 64	19.3	(16.6-22.5)
65 - 74	12.9	(10.7-15.4)
75 +	10.5	(7.9-13.9)
Gender		
Male	24.3	(22.0-26.7)
Female	20.6	(18.7-22.6)
Race/Ethnicity		
White, non-Hispanic	20.4	(18.8-22.1)
Black, non-Hispanic	29.1	(24.2-34.4)
Other, non-Hispanic	25.7	(19.3-33.3)
Hispanic	31.5	(22.7-41.9)
Household Income		
< \$20,000	43.0	(38.0-48.2)
\$20,000 - \$34,999	26.5	(22.8-30.5)
\$35,000 - \$49,999	27.0	(22.3-32.4)
\$50,000 - \$74,999	20.0	(16.5-24.1)
≥ \$75,000	12.1	(10.2-14.3)
Health Insurance		
Insured	20.6	(19.1-22.1)
Uninsured	41.8	(35.3-48.7)
Disability Status		
No disabilities	17.4	(15.8-19.1)
Adults with disabilities	33.7	(30.7-36.9)

^a Among all adults, the proportion reporting being exposed to secondhand smoke in their home or a car within the past seven days.

Secondhand Smoke Exposure by Race and Gender
Michigan, 2019



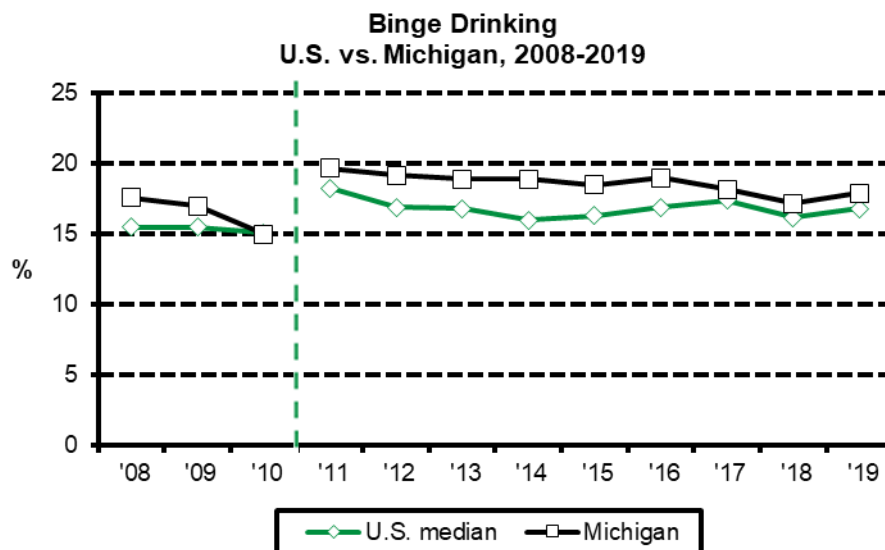
Alcohol Consumption

Excessive alcohol use contributes to approximately 95,000 deaths each year within the U.S.¹⁷ Binge drinking is defined as consuming five or more alcoholic drinks per occasion (for men) or four or more alcoholic drinks per occasion (for women) at least once in the past month. Heavy drinking is defined as consuming an average of more than two alcoholic drinks per day for men or more than one alcoholic drink per day for women in the past month.

- ◆ In 2019, an estimated 56.7% (95% CI: 56.7-59.1) of Michigan adults reported some form of alcohol consumption within the past month. Furthermore, an estimated 17.9% of Michigan adults reported binge drinking on at least one occasion within the past month, and 6.2% (95% CI: 6.1-7.4) reported heavy drinking over the past month.
- ◆ Both binge drinking and heavy drinking are more prevalent within the younger age groups and decrease significantly within the older age groups.
- ◆ The prevalence of binge drinking is highest within the 25-34 year old age group (30.4%), followed by the 18-24 year old (23.6%) and 35-44 year old (23.6%) age groups.
- ◆ Males (22.7%) reported a significantly higher prevalence of binge drinking than females (13.4%).
- ◆ Adults with disabilities (14.5%) reported a significantly lower prevalence of binge drinking than adults without disabilities (19.5%).
- ◆ The prevalence of binge drinking among Michigan adults has decreased slightly since the BRFSS methodology changes in 2011, and is now comparable to the U.S. median prevalence (16.8%).

Demographic Characteristics	Binge Drinking ^a	
	%	95% Confidence Interval
Total	17.9	(16.9-19.0)
Age		
18 - 24	23.6	(20.2-27.5)
25 - 34	30.4	(27.1-33.9)
35 - 44	23.6	(20.7-26.7)
45 - 54	16.7	(14.4-19.3)
55 - 64	14.2	(12.3-16.4)
65 - 74	8.7	(7.2-10.5)
75 +	3.2	(2.1-4.7)
Gender		
Male	22.7	(21.2-24.4)
Female	13.4	(12.2-14.7)
Race/Ethnicity		
White, non-Hispanic	18.5	(17.4-19.7)
Black, non-Hispanic	14.5	(11.6-17.9)
Other, non-Hispanic	14.8	(11.1-19.4)
Hispanic	22.6	(17.0-29.4)
Household Income		
< \$20,000	14.0	(11.5-17.0)
\$20,000 - \$34,999	14.9	(12.7-17.5)
\$35,000 - \$49,999	17.8	(14.9-21.0)
\$50,000 - \$74,999	20.0	(17.3-23.1)
≥ \$75,000	23.4	(21.5-25.4)
Health Insurance		
Insured	17.8	(16.7-18.9)
Uninsured	19.7	(16.1-23.8)
Disability Status		
No disabilities	19.5	(18.2-20.8)
Adults with disabilities	14.5	(12.8-16.3)

^a Among all adults, the proportion reporting consumption of five or more drinks per occasion (for males) or four or more drinks per occasion (for women) at least once in the previous month.



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

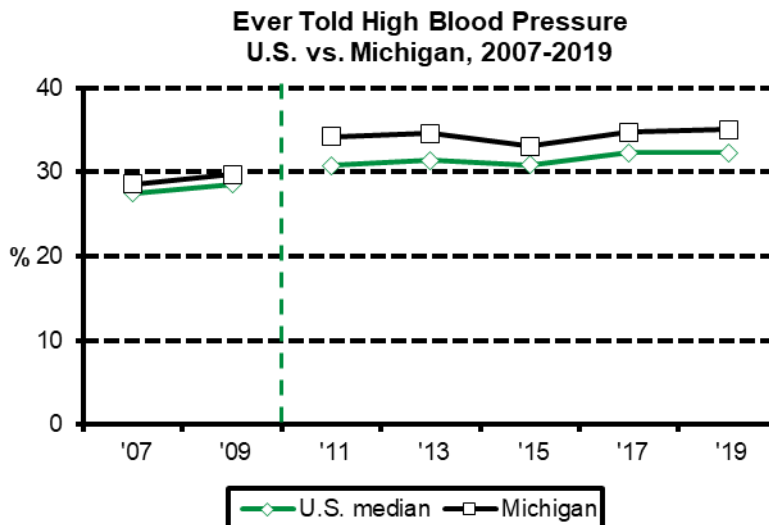
Hypertension Awareness and Medication Use

Adults with high blood pressure are at a higher risk for heart disease, stroke, congestive heart failure, and kidney disease.¹⁸

- ◆ In 2019, an estimated 35.1% of Michigan adults reported ever being told by a doctor that they had high blood pressure (HBP). Furthermore, 76.3% (95% CI: 74.4-78.2) of Michigan adults with HBP were currently taking medications for their HBP.
- ◆ The prevalence of HBP increased significantly with age and decreased with increasing household income level.
- ◆ The prevalence of HBP was higher among males (37.7%) than females (32.6%).
- ◆ Among those with HBP, males (72.5% [95%CI: 69.6-75.2]) reported a significantly lower prevalence of HBP medication use than females (80.5% [95% CI: 77.9-82.9]).
- ◆ Black, non-Hispanic adults (42.7%) reported a significantly higher prevalence of high blood pressure than both white, non-Hispanic (35.2%) and Hispanic adults (26.8%).
- ◆ Adults with disabilities (51.6%) were more likely to have reported high blood pressure than adults without disabilities (28.3%), and insured adults (36.0%) were more likely to have reported high blood pressure than uninsured adults (25.9%).
- ◆ Insured adults with HBP (78.4% [95% CI: 76.5-80.3]) were more likely to report current HBP medication use than uninsured adults with HBP (47.3% [95% CI: 37.8-57.1]).
- ◆ In 2019, the prevalence of high blood pressure in Michigan (35.1%) was higher than the U.S. median prevalence (32.3%).

Demographic Characteristics	Ever Told HBP ^a	
	%	95% Confidence Interval
Total	35.1	(33.9-36.3)
Age		
18 - 24	6.0	(4.2-8.5)
25 - 34	15.4	(12.8-18.3)
35 - 44	22.1	(19.2-25.4)
45 - 54	39.1	(35.9-42.3)
55 - 64	49.6	(46.9-52.4)
65 - 74	57.9	(55.3-60.5)
75 +	62.3	(59.0-65.5)
Gender		
Male	37.7	(35.9-39.6)
Female	32.6	(31.1-34.2)
Race/Ethnicity		
White, non-Hispanic	35.2	(33.9-36.5)
Black, non-Hispanic	42.7	(38.7-46.8)
Other, non-Hispanic	24.4	(19.8-29.7)
Hispanic	26.8	(20.8-33.7)
Household Income		
< \$20,000	41.9	(38.2-45.8)
\$20,000 - \$34,999	39.0	(35.9-42.2)
\$35,000 - \$49,999	36.5	(33.1-40.1)
\$50,000 - \$74,999	36.3	(33.2-39.6)
≥ \$75,000	28.7	(26.8-30.7)
Health Insurance		
Insured	36.0	(34.8-37.3)
Uninsured	25.9	(21.8-30.5)
Disability Status		
No disabilities	28.3	(27.0-29.7)
Adults with disabilities	51.6	(49.2-54.0)

^a Among all adults, the proportion reporting that they were ever told by a doctor that they had high blood pressure (HBP). Women who had HBP only during pregnancy and adults who were borderline hypertensive were considered not to have been diagnosed.



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Routine Checkup in Past Year

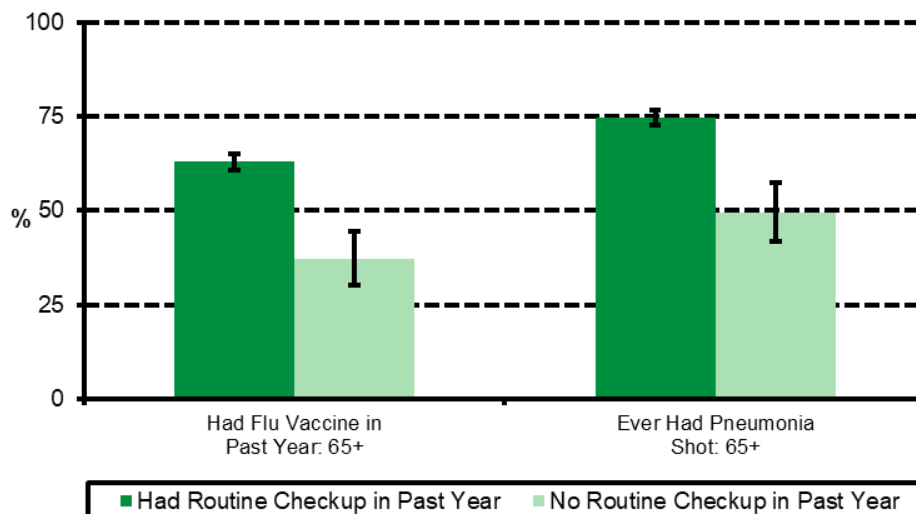
A yearly routine checkup is a great way to remain proactive about one's health. The benefits of having an annual checkup include early diagnosis and treatment of existing conditions and prevention of future medical problems.¹⁹

- ◆ In 2019, an estimated 80.2% of Michigan adults reported having a routine medical checkup within the past year.
- ◆ The prevalence of having a routine checkup within the past year increased with age.
- ◆ Males (75.7%) reported a significantly lower prevalence of having a routine checkup within the past year than females (84.5%).
- ◆ The prevalence of having had a routine checkup within the past year was similar by race/ethnicity.
- ◆ Insured adults and adults with disabilities (82.7% and 83.0%, respectively) were more likely to have had a routine checkup within the past year than uninsured adults and adults without disabilities (54.6% and 78.7%, respectively).
- ◆ Michigan adults 65+ years who had a routine checkup within the past year were more likely to have had a flu vaccine within the past year (63.1%) or ever had a pneumonia shot in the past year (74.7%) when compared to those who had not had a routine checkup within the past year (37.1% and 49.6%, respectively).

Demographic Characteristics	Had a Routine Checkup Within The Past Year ^a	
	%	95% Confidence Interval
Total	80.2	(79.1-81.3)
Age		
18 - 24	70.7	(66.4-74.6)
25 - 34	68.5	(64.9-71.9)
35 - 44	73.8	(70.4-76.9)
45 - 54	82.3	(79.8-84.6)
55 - 64	85.8	(83.7-87.7)
65 - 74	90.7	(89.0-92.2)
75 +	93.5	(91.4-95.1)
Gender		
Male	75.7	(74.0-77.4)
Female	84.5	(83.1-85.8)
Race/Ethnicity		
White, non-Hispanic	80.2	(78.9-81.3)
Black, non-Hispanic	83.4	(79.7-86.4)
Other, non-Hispanic	79.0	(73.7-83.4)
Hispanic	73.8	(66.5-80.0)
Household Income		
< \$20,000	78.3	(74.5-81.7)
\$20,000 - \$34,999	78.6	(75.6-81.3)
\$35,000 - \$49,999	79.3	(75.6-82.6)
\$50,000 - \$74,999	78.7	(75.6-81.5)
≥ \$75,000	81.9	(80.0-83.6)
Health Insurance		
Insured	82.7	(81.6-83.7)
Uninsured	54.6	(49.6-59.4)
Disability Status		
No disabilities	78.7	(77.3-80.0)
Adults with disabilities	83.0	(80.9-84.9)

^a Among all adults, the proportion reporting a routine medical checkup within the past year.

**Immunizations by Routine Checkup Status
Michigan, 2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Cholesterol Screening and Awareness

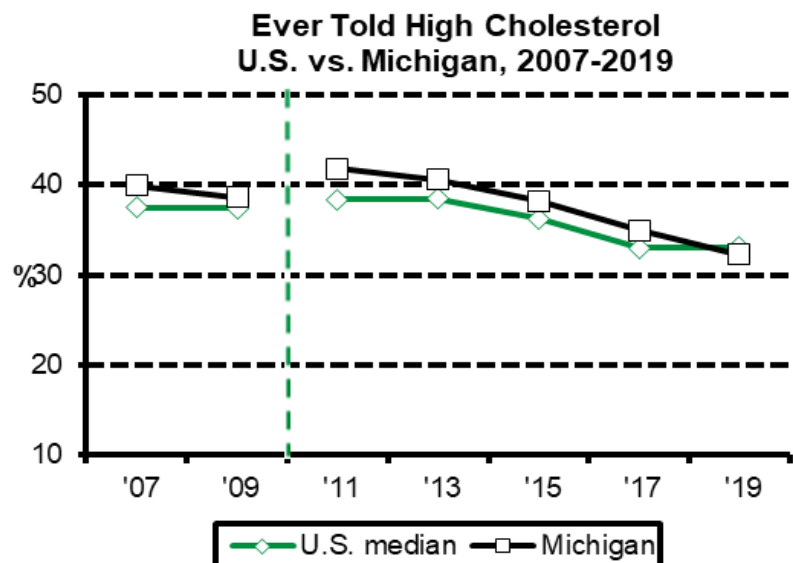
High blood cholesterol is a major risk factor for coronary heart disease, the leading cause of death in the U.S.²⁰

- ◆ In 2019, an estimated 90.6% of Michigan adults reported having their cholesterol checked within the past five years.
- ◆ Among Michigan adults who have ever had their cholesterol checked, an estimated 32.3% have been told by a doctor that they had high blood cholesterol.
- ◆ The prevalence of cholesterol screening within the past five years increased with increasing age and household income level.
- ◆ Females (93.0%) were more likely than males (88.0%) to have had a cholesterol screening within the past five years, but reported similar high cholesterol prevalence estimates.
- ◆ White, non-Hispanic adults (34.2%) and Black, non-Hispanic adults (29.2%) both reported a significantly higher prevalence of high cholesterol than Hispanic adults (17.7%).
- ◆ Insured adults and adults with disabilities (33.4% and 43.5%, respectively) were more likely to have been diagnosed with high cholesterol than uninsured adults and adults without disabilities (20.2% and 27.9%, respectively).
- ◆ The HP 2020 target for cholesterol screening within the past five years is set at 82.1%. The prevalence of cholesterol screening among Michigan adults is currently more than eight percentage points above this goal, so if Michigan can maintain the current prevalence for this indicator the HP 2020 target will easily be met by 2020.⁷
- ◆ In 2019, the prevalence of high cholesterol among Michigan adults (32.3%) was slightly lower than the U.S. median prevalence (33.1%).

Demographic Characteristics	Cholesterol Checked Within the Past 5 Years ^a		Ever Told High Cholesterol ^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	90.6	(89.7-91.4)	32.3	(31.2-33.5)
Age				
18 - 24	77.8	(73.2-81.7)	5.3	(3.5-7.9)
25 - 34	80.0	(76.5-83.2)	9.9	(7.8-12.4)
35 - 44	88.9	(86.3-91.1)	20.9	(18.0-24.0)
45 - 54	94.3	(92.6-95.7)	36.9	(33.8-40.2)
55 - 64	95.2	(93.8-96.3)	44.3	(41.5-47.0)
65 - 74	97.5	(96.3-98.4)	56.8	(54.1-59.4)
75 +	97.1	(95.2-98.3)	51.2	(47.9-54.6)
Gender				
Male	88.0	(86.5-89.4)	33.1	(31.4-34.9)
Female	93.0	(92.0-94.0)	31.6	(30.1-33.2)
Race/Ethnicity				
White, non-Hispanic	91.0	(90.0-91.9)	34.2	(32.9-35.5)
Black, non-Hispanic	92.2	(89.3-94.3)	29.2	(25.6-33.1)
Other, non-Hispanic	88.0	(83.4-91.5)	26.1	(21.1-31.9)
Hispanic	86.1	(79.7-90.7)	17.7	(13.1-23.5)
Household Income				
< \$20,000	88.9	(86.1-91.2)	34.6	(30.9-38.4)
\$20,000 - \$34,999	89.0	(86.5-91.1)	34.5	(31.6-37.6)
\$35,000 - \$49,999	90.6	(87.4-93.1)	33.6	(30.2-37.1)
\$50,000 - \$74,999	89.8	(87.2-91.9)	33.8	(30.7-37.0)
≥ \$75,000	94.0	(92.7-95.1)	29.8	(27.9-31.9)
Health Insurance				
Insured	92.3	(91.5-93.1)	33.4	(32.2-34.7)
Uninsured	72.5	(67.5-77.0)	20.2	(16.5-24.6)
Disability Status				
No disabilities	89.9	(88.8-90.9)	27.9	(26.6-29.3)
Adults with disabilities	92.1	(90.4-93.5)	43.5	(41.2-45.9)

^a Among all adults, the proportion reporting that they have had their blood cholesterol checked within the past five years.

^b Among adults who have had their blood cholesterol checked, the proportion reporting that a doctor, nurse, or other health professional had told them that their cholesterol was high.



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Immunizations Among Adults 65 Years of Age and Older

Adult immunizations against influenza and pneumococcal disease are important health indicators that need to be routinely monitored since morbidity and mortality are associated with both of these diseases within different demographic groups.²¹

- ◆ In 2019, an estimated 60.7% of Michigan adults ages 65 years and older reported receiving a flu vaccine within the past year, while an estimated 72.6% of this population reported ever receiving a pneumonia vaccine.
- ◆ The prevalence of having a flu vaccine in the past year was similar by gender. Female adults (75.1%) were more likely to have a pneumonia vaccine than male adults (69.4%).
- ◆ White, non-Hispanic adults (62.7% and 74.5%, respectively) were more likely than Black, non-Hispanic adults (50.1% and 58.3%, respectively) to have had a flu vaccine in the past year and to ever have received a pneumonia vaccine.
- ◆ The prevalence of having a flu vaccine in the past year and the prevalence of ever having received a pneumonia vaccine increased with age and with increasing household income level.

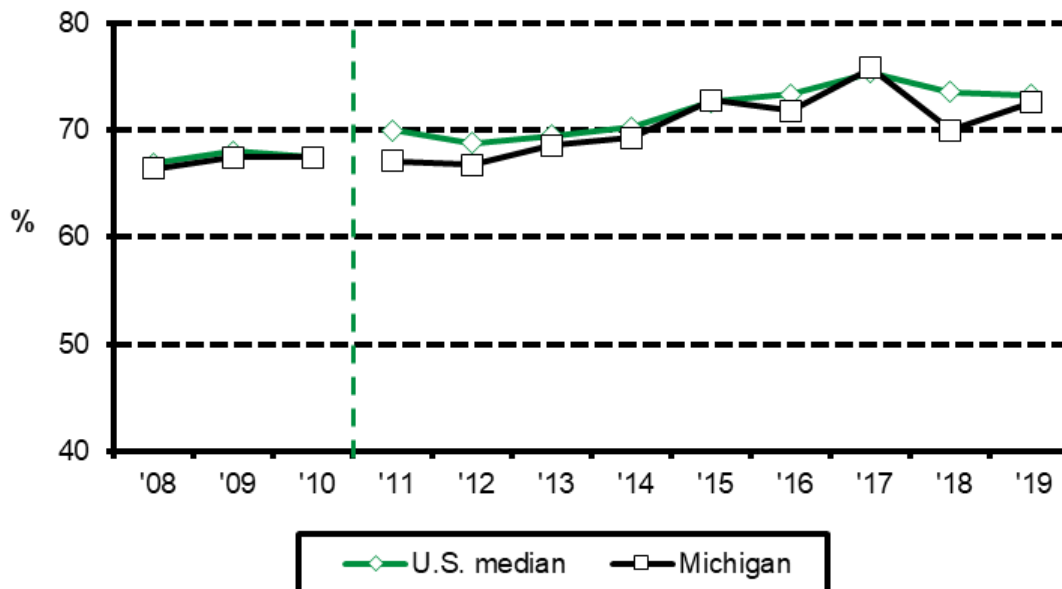
Demographic Characteristics	Had Flu Vaccine in Past Year ^a		Ever Had Pneumonia Vaccine ^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	60.7	(58.6-62.8)	72.6	(70.5-74.5)
Age				
65 - 74	57.0	(54.3-59.7)	68.1	(65.5-70.7)
75 +	66.3	(63.0-69.5)	79.3	(76.3-82.1)
Gender				
Male	62.2	(58.9-65.3)	69.4	(66.1-72.5)
Female	59.5	(56.8-62.2)	75.1	(72.6-77.4)
Race/Ethnicity				
White, non-Hispanic	62.7	(60.6-64.9)	74.5	(72.5-76.4)
Black, non-Hispanic	50.1	(41.4-58.8)	58.3	(49.2-66.9)
Other, non-Hispanic	48.6	(34.8-62.6)	59.1	(44.2-72.6)
Hispanic	-- ^c	-- ^c	-- ^c	-- ^c
Household Income				
< \$20,000	51.6	(44.5-58.7)	60.8	(53.1-68.0)
\$20,000 - \$34,999	57.6	(53.1-62.1)	71.7	(67.3-75.7)
\$35,000 - \$49,999	62.2	(56.9-67.2)	71.9	(66.8-76.6)
\$50,000 - \$74,999	65.3	(60.1-70.2)	75.0	(70.2-79.3)
≥ \$75,000	69.6	(65.0-73.8)	77.6	(73.3-81.3)
Disability Status				
No disabilities	60.7	(57.9-63.4)	71.1	(68.5-73.6)
Adults with disabilities	61.1	(57.8-64.3)	74.9	(71.7-77.9)

^a Among adults aged 65 years and older, the proportion reporting that they had a flu vaccine, either by injection in the arm or sprayed in the nose during the past 12 months.

^b Among adults aged 65 years and older, the proportion reporting that they ever had a pneumococcal vaccine.

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

**Ever Had a Pneumococcal Vaccination
Among Adults Aged 65 Years and Older
U.S. vs. Michigan, 2008-2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

HIV Testing

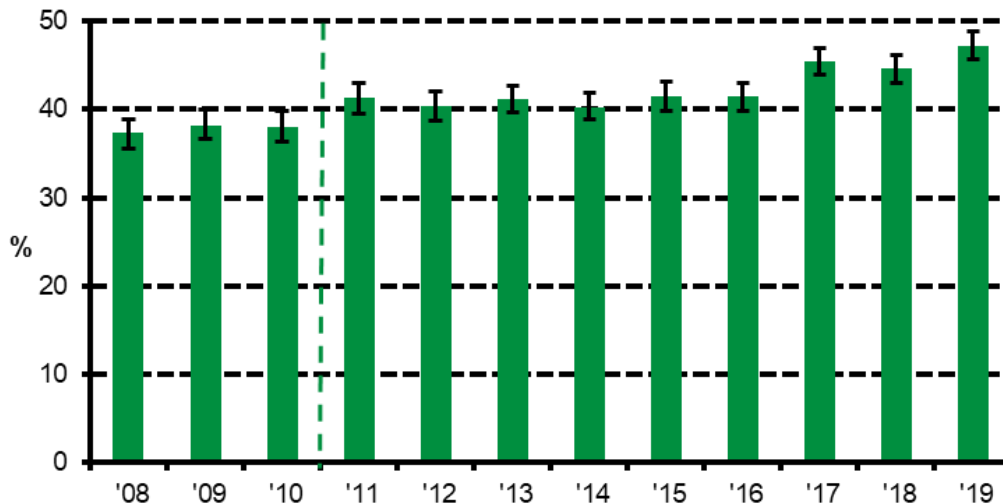
Early awareness of an HIV infection through HIV testing can prevent further spread of the disease, and an early start on antiretroviral therapy can increase the quality of life among those who are living with HIV/AIDS.²²

- ◆ In 2019, an estimated 47.1% of Michigan adults reported ever being tested for HIV.
- ◆ Females (52.5%) reported a significantly higher prevalence of HIV testing than males (41.9%).
- ◆ Black, non-Hispanic adults (71.5%) reported a significantly higher prevalence of HIV testing than both white, non-Hispanic (42.9%) and Hispanic adults (52.1%).
- ◆ The prevalence of HIV testing decreased with increasing household income level.
- ◆ Adults with disabilities (54.2%) were more likely to have been tested for HIV than adults without disabilities (44.6%).
- ◆ Since the BRFSS methodology changes that were implemented in 2011, the prevalence of HIV testing among Michigan adult has remained stable from 2011 to 2016, and then slightly increased from 2016 to 2019.

Demographic Characteristics	Ever Had an HIV Test ^a	
	%	95% Confidence Interval
Total	47.1	(45.5-48.8)
Age		
18 - 24	27.7	(23.7-32.1)
25 - 34	57.1	(53.3-60.9)
35 - 44	62.4	(58.6-66.0)
45 - 54	51.7	(48.4-55.0)
55 - 64	35.7	(33.0-38.5)
Gender		
Male	41.9	(39.6-44.2)
Female	52.5	(50.2-54.8)
Race/Ethnicity		
White, non-Hispanic	42.9	(41.1-44.8)
Black, non-Hispanic	71.5	(66.7-75.8)
Other, non-Hispanic	40.4	(34.0-47.2)
Hispanic	52.1	(43.8-60.3)
Household Income		
< \$20,000	61.9	(57.1-66.5)
\$20,000 - \$34,999	52.9	(48.4-57.3)
\$35,000 - \$49,999	46.8	(41.6-52.1)
\$50,000 - \$74,999	45.7	(41.5-50.0)
≥ \$75,000	42.0	(39.5-44.6)
Health Insurance		
Insured	47.1	(45.4-48.8)
Uninsured	48.6	(43.3-53.9)
Disability Status		
No disabilities	44.6	(42.7-46.5)
Adults with disabilities	54.2	(50.9-57.5)

^a Among adults aged 18-64 years, the proportion reporting that they ever had been tested for HIV, apart from tests that were part of a blood donation.

**Ever Had an HIV Test
Among Adults Aged 18-64 Years
Michigan, 2008-2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Asthma in Adults

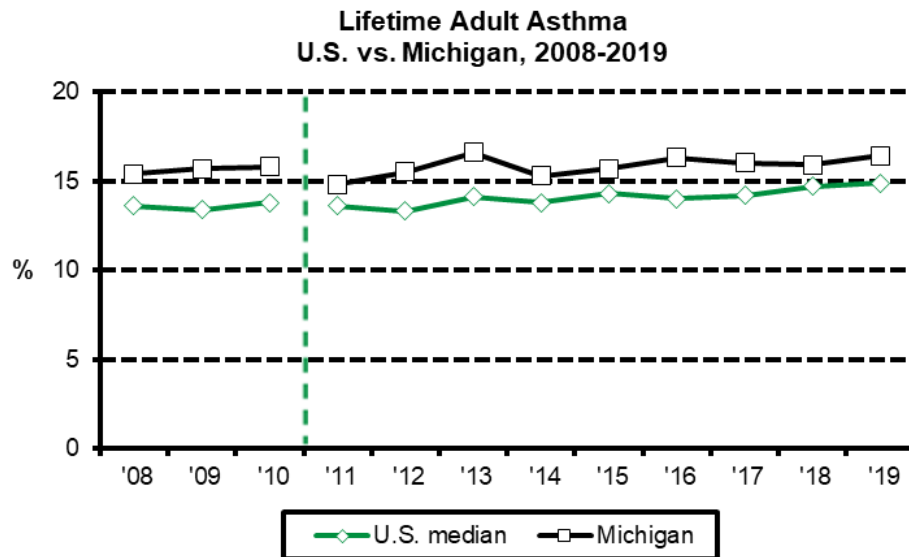
Asthma is a chronic inflammatory disorder of the lungs, characterized by wheezing, coughing, difficulty breathing, and chest tightness. Allergies, a family history of asthma or allergy, low birth weight, and exposure to tobacco smoke are just a few of the potential risk factors that are associated with the development of asthma.²³

- ◆ In 2019, an estimated 16.4% of Michigan adults reported that they were ever diagnosed with asthma and 11.1% reported that they currently have asthma.
- ◆ The prevalence of both lifetime and current asthma decreased with age and increasing household income level.
- ◆ Females reported a significantly higher prevalence than males for both lifetime (18.5% vs. 14.1%) and current asthma (13.6% and 8.6%).
- ◆ Black, non-Hispanic adults reported significantly higher prevalences for both lifetime and current asthma (20.2% and 15.9%, respectively) than white, non-Hispanic adults (15.8% and 10.6%, respectively).
- ◆ Adults with disabilities reported a significantly higher prevalence than adults without disabilities for both lifetime (24.4% vs. 13.1%) and current asthma (18.2% vs. 8.4%).
- ◆ In 2019, the prevalence of ever being diagnosed with asthma among Michigan adults (16.4%) was higher than the U.S. median prevalence (14.9%).

Demographic Characteristics	Lifetime Asthma ^a		Current Asthma ^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	16.4	(15.4-17.4)	11.1	(10.3-12.0)
Age				
18 - 24	22.3	(18.6-26.4)	12.9	(10.0-16.4)
25 - 34	17.3	(14.7-20.2)	11.3	(9.2-13.9)
35 - 44	17.7	(15.0-20.7)	12.0	(9.7-14.7)
45 - 54	16.2	(14.0-18.7)	12.1	(10.2-14.4)
55 - 64	16.0	(14.0-18.3)	11.9	(10.1-14.0)
65 - 74	12.6	(11.1-14.4)	9.0	(7.7-10.6)
75 +	10.8	(9.0-12.9)	7.2	(5.9-8.9)
Gender				
Male	14.1	(12.7-15.6)	8.6	(7.5-9.9)
Female	18.5	(17.2-19.9)	13.6	(12.4-14.8)
Race/Ethnicity				
White, non-Hispanic	15.8	(14.8-16.9)	10.6	(9.7-11.5)
Black, non-Hispanic	20.2	(17.0-23.8)	15.9	(13.0-19.2)
Other, non-Hispanic	15.3	(11.3-20.5)	10.3	(6.8-15.2)
Hispanic	18.3	(12.9-25.5)	10.1	(6.6-15.0)
Household Income				
< \$20,000	26.6	(23.0-30.5)	18.8	(15.8-22.1)
\$20,000 - \$34,999	18.6	(16.1-21.5)	14.6	(12.3-17.4)
\$35,000 - \$49,999	13.1	(10.7-15.9)	9.9	(7.8-12.5)
\$50,000 - \$74,999	13.5	(11.4-15.8)	8.4	(6.8-10.4)
≥ \$75,000	14.0	(12.4-15.7)	8.4	(7.1-9.8)
Health Insurance				
Insured	16.3	(15.3-17.4)	11.2	(10.3-12.1)
Uninsured	15.8	(12.5-19.8)	10.7	(7.9-14.4)
Disability Status				
No disabilities	13.1	(12.1-14.2)	8.4	(7.5-9.3)
Adults with disabilities	24.4	(22.2-26.7)	18.2	(16.3-20.3)

^a Among all adults, the proportion reporting that they were ever told by a doctor, nurse, or other health care professional that they had asthma.

^b Among all adults, the proportion reporting that they still have asthma.



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Asthma in Children

Although asthma can affect people of all ages, in most cases it begins during childhood. More than 25 million people in the U.S. are known to have asthma, and about six million of these people are children.²⁴ Children with a family history of asthma and allergy are at a higher risk of developing asthma during childhood.²³

- ◆ Based on proxy information provided by the adult respondent, the estimated proportion of Michigan children aged 0-17 years who were ever told by a doctor that they had asthma for 2019 was 11.0%, and an estimated 7.8% currently have asthma.
- ◆ The prevalence of both lifetime asthma and current asthma among children was highest among the 10-14 year old age group (15.9% and 12.1%, respectively).
- ◆ The prevalence of both lifetime and current asthma among children was highest among the \$20,000-\$34,999 household income group (15.3% and 11.4% respectively).
- ◆ The prevalence of both lifetime and current asthma among children was similar by gender and race/ethnicity.

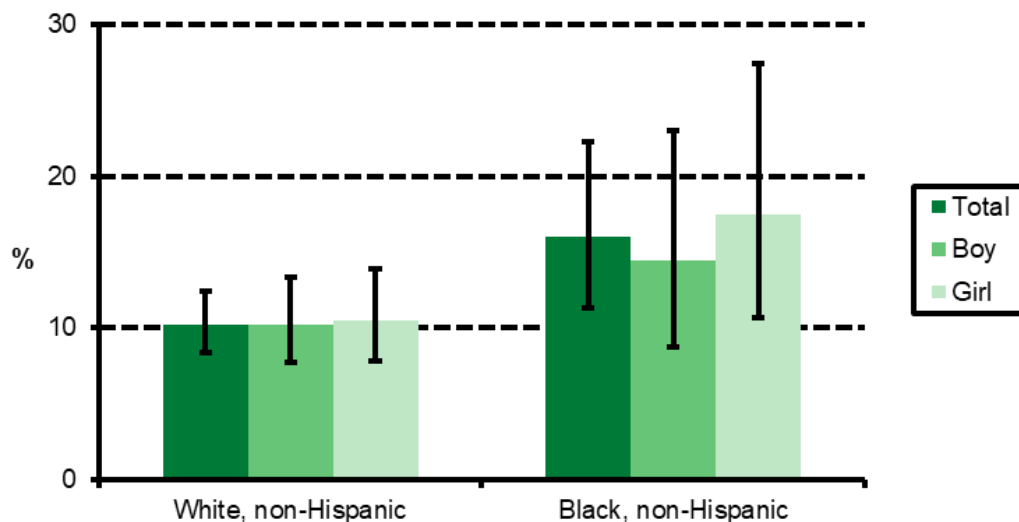
Demographic Characteristics	Lifetime Asthma ^a		Current Asthma ^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	11.0	(9.4-12.8)	7.8	(6.4-9.5)
Age				
0 - 4	4.4	(2.7-7.0)	3.3	(1.9-5.6)
5 - 9	11.7	(8.2-16.4)	8.3	(5.2-12.9)
10 - 14	15.9	(12.1-20.5)	12.1	(8.7-16.6)
15 - 17	14.0	(10.8-17.9)	9.2	(6.7-12.6)
Gender				
Boy	12.6	(10.2-15.4)	8.7	(6.7-11.2)
Girl	9.6	(7.5-12.1)	7.0	(5.2-9.4)
Race/Ethnicity				
White, non-Hispanic	9.9	(8.0-12.3)	7.3	(5.6-9.4)
Black, non-Hispanic	12.1	(8.4-17.2)	9.1	(5.9-13.6)
Other, non-Hispanic	12.4	(8.3-18.2)	7.6	(4.5-12.4)
Hispanic	13.0	(7.5-21.8)	-- ^c	-- ^c
Household Income				
< \$20,000	13.9	(9.1-20.8)	7.5	(4.4-12.4)
\$20,000 - \$34,999	15.3	(10.8-21.3)	11.4	(7.4-17.3)
\$35,000 - \$49,999	11.9	(7.4-18.5)	8.5	(5.0-14.2)
\$50,000 - \$74,999	9.0	(6.2-13.1)	6.3	(3.9-10.1)
≥ \$75,000	9.6	(7.1-12.8)	7.3	(5.0-10.4)

^a Estimated proportion of Michigan children aged 0-17 years ever told by a doctor, nurse, or other health care professional that they had asthma, using proxy information from the adult respondent.

^b Estimated proportion of Michigan children aged 0-17 years who still have asthma, using proxy information from the adult respondent.

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

**Lifetime Child Asthma by Race and Gender
Michigan, 2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Chronic Obstructive Pulmonary Disease (COPD)

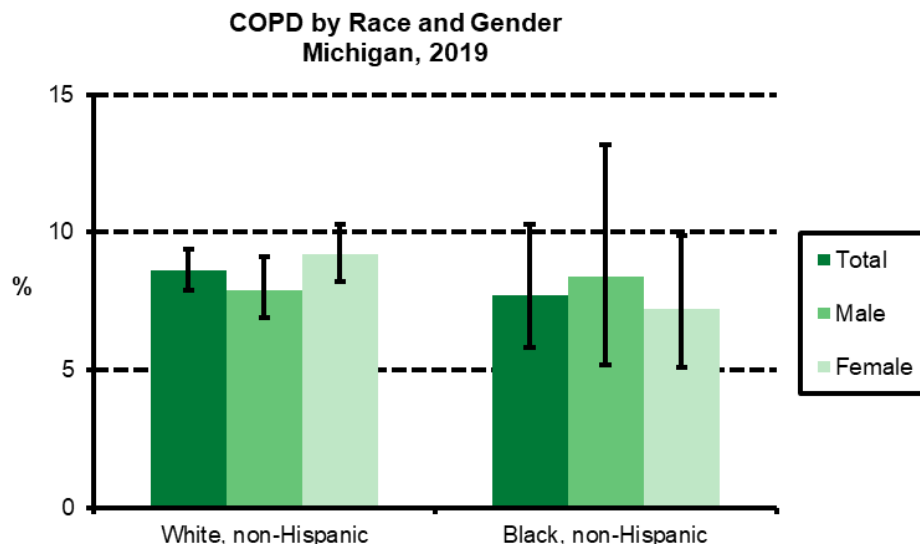
Chronic obstructive pulmonary disease (COPD) is a progressive disease that usually results in coughing, wheezing, shortness of breath, chest tightness, and other symptoms. Cigarette smoking is the leading cause of COPD.²⁵

- ◆ In 2019, an estimated 8.4% of Michigan adults reported ever being told by a doctor that they had COPD.
- ◆ The prevalence of COPD increased with age and decreased with increasing household income level.
- ◆ The prevalence of COPD was similar by gender or race/ethnicity.
- ◆ Adults with disabilities (19.1%) were more likely to have been diagnosed with COPD than adults without disabilities (3.8%).
- ◆ The prevalence of COPD was similar by gender for both white, non-Hispanic and Black, non-Hispanic adults.
- ◆ In 2019, the prevalence of COPD among Michigan adults (8.4%) was higher than the U.S. median prevalence (6.4%).

Demographic Characteristics	Ever Told COPD, Emphysema, or Chronic Bronchitis ^a	
	%	95% Confidence Interval
Total	8.4	(7.7-9.1)
Age		
18 - 24	-- ^b	-- ^b
25 - 34	2.8	(1.7-4.4)
35 - 44	3.0	(2.1-4.4)
45 - 54	8.5	(6.8-10.7)
55 - 64	13.5	(11.6-15.6)
65 - 74	15.7	(13.8-17.8)
75 +	15.2	(12.9-17.9)
Gender		
Male	7.8	(6.8-8.8)
Female	8.9	(8.1-9.9)
Race/Ethnicity		
White, non-Hispanic	8.6	(7.9-9.4)
Black, non-Hispanic	7.7	(5.8-10.3)
Other, non-Hispanic	6.7	(4.3-10.2)
Hispanic	7.0	(4.2-11.4)
Household Income		
< \$20,000	17.4	(14.7-20.4)
\$20,000 - \$34,999	11.2	(9.4-13.2)
\$35,000 - \$49,999	9.0	(7.2-11.2)
\$50,000 - \$74,999	6.0	(4.7-7.6)
≥ \$75,000	2.9	(2.3-3.8)
Health Insurance		
Insured	8.5	(7.8-9.2)
Uninsured	7.1	(4.8-10.4)
Disability Status		
No disabilities	3.8	(3.3-4.4)
Adults with disabilities	19.1	(17.3-20.9)

^a Among all adults, the proportion reporting ever being told by a doctor that they had chronic obstructive pulmonary disease (COPD), emphysema or chronic bronchitis.

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



Arthritis

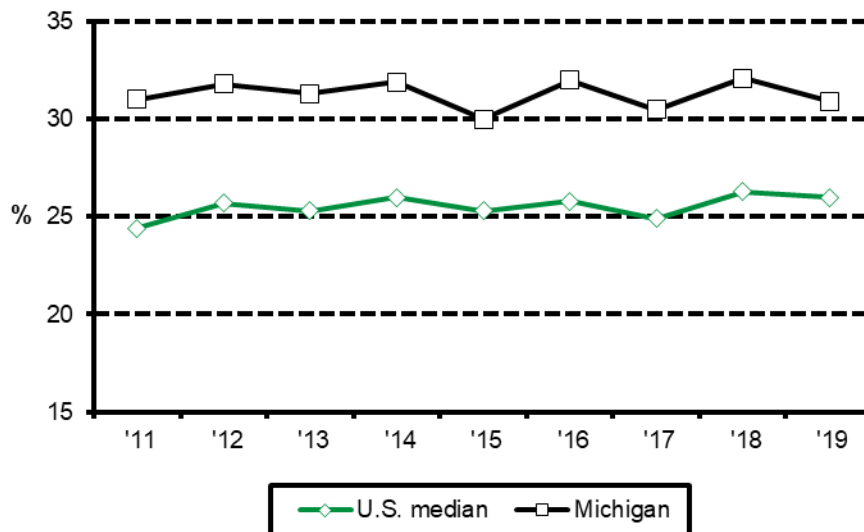
Arthritis and rheumatism are the leading causes of disability within the U.S. These conditions have been diagnosed in more than 54 million U.S. adults.²⁶

- ◆ In 2019, an estimated 30.9% of Michigan adults reported ever being told by a doctor that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.
- ◆ Females (34.8%) reported a significantly higher prevalence of arthritis than males (26.7%).
- ◆ Hispanic adults (18.0%) reported a lower prevalence of arthritis than white, non-Hispanic adults (32.5%) and Black, non-Hispanic adults (30.3%).
- ◆ The prevalence of arthritis increased with age and decreased with increasing household income level.
- ◆ Uninsured adults (20.6%) were less likely to have been diagnosed with arthritis than insured adults (31.9%), while adults with disabilities (52.4%) were more likely to have been diagnosed than adults without disabilities (21.7%).
- ◆ In 2019, the prevalence of arthritis among Michigan adults (30.9%) was significantly higher than the U.S. median prevalence (26.0%).

Demographic Characteristics	Ever Told Arthritis ^a	
	%	95% Confidence Interval
Total	30.9	(29.8-32.0)
Age		
18 - 24	4.6	(3.1-6.8)
25 - 34	8.4	(6.5-10.6)
35 - 44	19.2	(16.4-22.2)
45 - 54	32.3	(29.4-35.4)
55 - 64	45.8	(43.1-48.6)
65 - 74	55.4	(52.8-58.0)
75 +	57.3	(53.9-60.6)
Gender		
Male	26.7	(25.1-28.3)
Female	34.8	(33.3-36.4)
Race/Ethnicity		
White, non-Hispanic	32.5	(31.3-33.8)
Black, non-Hispanic	30.3	(26.8-34.1)
Other, non-Hispanic	18.0	(14.3-22.5)
Hispanic	18.0	(13.5-23.7)
Household Income		
< \$20,000	38.8	(35.1-42.6)
\$20,000 - \$34,999	38.0	(34.9-41.1)
\$35,000 - \$49,999	33.9	(30.6-37.4)
\$50,000 - \$74,999	29.3	(26.5-32.3)
≥ \$75,000	23.2	(21.5-25.0)
Health Insurance		
Insured	31.9	(30.8-33.1)
Uninsured	20.6	(17.0-24.7)
Disability Status		
No disabilities	21.7	(20.6-22.9)
Adults with disabilities	52.4	(50.0-54.8)

^a Among all adults, the proportion reporting ever being told by a doctor that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

**Ever Told Arthritis
U.S. vs. Michigan, 2011-2019**



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Cardiovascular Disease

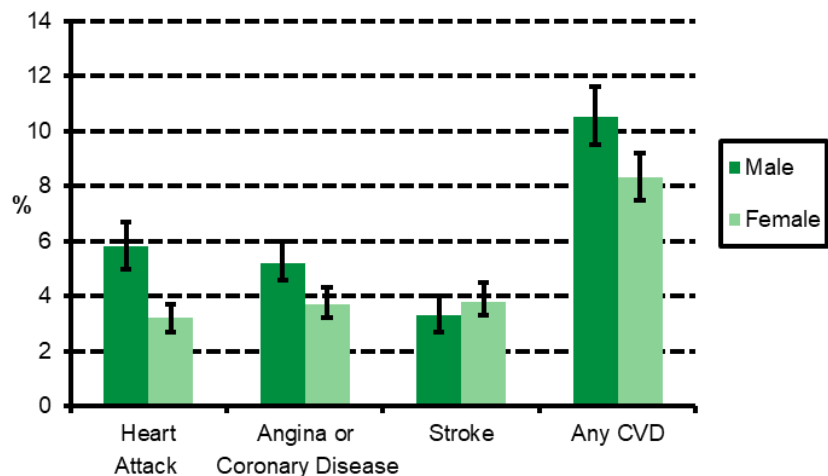
Heart disease and stroke are the first and fifth leading causes of death, respectively, in both Michigan and the U.S.²⁷

- ◆ In 2019, an estimated 4.5% of Michigan adults had ever been told by a doctor that they had a heart attack, 4.5% had ever been told they had angina or coronary heart disease, and 3.6% had ever been told they had a stroke.
- ◆ When combining all three measures into one indicator, an estimated 9.4% of Michigan adults have ever been told by a doctor that they had some form of cardiovascular disease.
- ◆ The prevalence of all three diseases increased with age and decreased with increasing household income level.
- ◆ Males reported higher prevalences than females for heart attack and coronary heart disease, but not stroke.
- ◆ The prevalences of heart attack and coronary heart disease were similar by race/ethnicity. However, Black, non-Hispanic adults (5.4%) reported a significantly higher prevalence of stroke than white, non-Hispanic adults (3.3%).
- ◆ Adults with disabilities were more likely to have been diagnosed with each of the three diseases when compared to adults without disabilities.
- ◆ In 2019, the prevalence of heart attack (4.5%), coronary heart disease (4.5%), and stroke (3.6%) among Michigan adults were all higher than the U.S. median prevalence (heart attack: 4.3%; coronary heart disease: 3.9%; and stroke: 3.2%).

Demographic Characteristics	Ever Told Heart Attack ^a		Ever Told Angina or Coronary Heart Disease ^b		Ever Told Stroke ^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Total	4.5	(4.0-5.0)	4.5	(4.0-4.9)	3.6	(3.2-4.1)
Age						
18 - 34	-- ^d	-- ^d	-- ^d	-- ^d	0.7	(0.3-1.4)
35 - 44	-- ^d	-- ^d	-- ^d	-- ^d	-- ^d	-- ^d
45 - 54	4.1	(2.8-5.7)	3.8	(2.8-5.2)	3.0	(2.0-4.5)
55 - 64	5.8	(4.6-7.3)	5.7	(4.6-7.2)	5.3	(4.1-6.8)
65 - 74	9.1	(7.6-10.7)	9.1	(7.7-10.7)	6.6	(5.4-8.0)
75 +	13.4	(11.2-15.8)	15.5	(13.3-17.9)	9.3	(7.5-11.4)
Gender						
Male	5.8	(5.0-6.7)	5.2	(4.6-6.0)	3.3	(2.7-4.0)
Female	3.2	(2.7-3.7)	3.7	(3.2-4.3)	3.8	(3.3-4.5)
Race/Ethnicity						
White, non-Hispanic	4.5	(4.0-5.0)	4.8	(4.3-5.3)	3.3	(2.9-3.8)
Black, non-Hispanic	4.6	(3.1-6.9)	3.7	(2.5-5.4)	5.4	(3.8-7.7)
Other, non-Hispanic	3.7	(2.2-6.2)	-- ^d	-- ^d	3.2	(2.1-5.0)
Hispanic	-- ^d	-- ^d	-- ^d	-- ^d	-- ^d	-- ^d
Household Income						
< \$20,000	8.4	(6.6-10.7)	6.0	(4.6-7.8)	8.1	(6.3-10.5)
\$20,000 - \$34,999	6.0	(4.8-7.5)	5.8	(4.7-7.2)	4.6	(3.6-6.0)
\$35,000 - \$49,999	4.6	(3.4-6.1)	4.9	(3.6-6.5)	3.7	(2.6-5.2)
\$50,000 - \$74,999	3.7	(2.6-5.3)	4.4	(3.3-5.7)	2.8	(2.0-4.0)
≥ \$75,000	2.3	(1.8-3.0)	2.8	(2.3-3.5)	1.4	(1.0-2.0)
Health Insurance						
Insured	4.5	(4.1-5.1)	4.7	(4.2-5.2)	3.7	(3.3-4.2)
Uninsured	3.4	(2.2-5.5)	1.8	(0.9-3.6)	2.1	(1.1-3.9)
Disability Status						
No disabilities	2.7	(2.2-3.2)	2.8	(2.4-3.3)	1.5	(1.2-1.9)
Adults with disabilities	8.8	(7.7-10.1)	8.5	(7.4-9.6)	8.2	(7.1-9.6)

Among all adults, the proportion ever told by a doctor that: ^a they had a heart attack or myocardial infarction, ^b they had angina or coronary heart disease, or ^c they had a stroke.
^d Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

Cardiovascular Disease by Gender
Michigan, 2019



Cancer

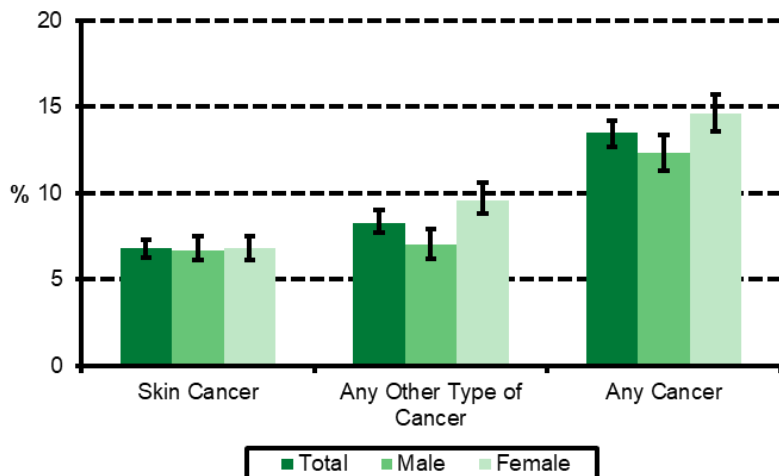
Cancer is the second leading cause of death in both Michigan and the U.S.²⁷ There are more than 100 different types of cancer and there are nearly 1.8 million new cases of cancer expected in 2020 in the U.S. By 2040, the expected number of new cases per year will rise to roughly 29.5 million worldwide.²⁸

- ◆ In 2019, an estimated 6.8% of Michigan adults had ever been told by a doctor that they had skin cancer, and 8.3% reported ever being diagnosed with a type of cancer other than skin cancer.
- ◆ When combining these two measures into one indicator, an estimated 13.5% of Michigan adults had ever been told by a doctor that they had some form of cancer.
- ◆ Females (14.6%) were more likely than males (12.3%) to report ever being diagnosed with cancer.
- ◆ White, non-Hispanic adults (15.5%) reported a significantly higher prevalence of cancer than Black, non-Hispanic adults (7.3%) and Hispanic adults (6.3%).
- ◆ Adults with disabilities reported higher cancer prevalences than adults without disabilities.
- ◆ In 2019, the prevalence for skin cancer among Michigan adults (6.8%) was comparable to the U.S. median prevalence (6.5%). The prevalence for other types of cancer (8.3%) was slightly higher than the U.S. median prevalence (7.3%).

Demographic Characteristics	Ever Told Skin Cancer ^a		Ever Told Any Other Types of Cancer ^b		Ever Told Cancer ^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Total	6.8	(6.3-7.3)	8.3	(7.7-9.0)	13.5	(12.7-14.2)
Age						
18 - 34	1.0	(0.5-1.8)	-- ^d	-- ^d	2.2	(1.4-3.3)
35 - 44	2.0	(1.1-3.5)	3.1	(2.1-4.7)	4.6	(3.3-6.5)
45 - 54	4.0	(3.0-5.2)	6.0	(4.8-7.5)	9.6	(8.0-11.4)
55 - 64	8.9	(7.6-10.4)	10.8	(9.2-12.7)	18.2	(16.2-20.4)
65 - 74	13.8	(12.2-15.5)	17.1	(15.1-19.2)	27.9	(25.6-30.3)
75 +	22.8	(20.2-25.5)	25.3	(22.6-28.2)	39.9	(36.8-43.1)
Gender						
Male	6.7	(6.1-7.5)	7.0	(6.2-7.9)	12.3	(11.3-13.4)
Female	6.8	(6.1-7.5)	9.6	(8.8-10.6)	14.6	(13.6-15.7)
Race/Ethnicity						
White, non-Hispanic	8.4	(7.8-9.1)	9.2	(8.5-9.9)	15.5	(14.6-16.4)
Black, non-Hispanic	-- ^d	-- ^d	6.8	(5.0-9.1)	7.3	(5.5-9.8)
Other, non-Hispanic	-- ^d	-- ^d	4.5	(2.9-7.1)	6.4	(4.2-9.8)
Hispanic	-- ^d	-- ^d	4.6	(2.6-7.9)	6.3	(3.7-10.6)
Household Income						
< \$20,000	4.1	(3.0-5.5)	9.1	(7.2-11.4)	11.8	(9.7-14.3)
\$20,000 - \$34,999	6.5	(5.3-8.0)	10.5	(8.9-12.4)	15.2	(13.2-17.4)
\$35,000 - \$49,999	7.5	(6.0-9.4)	9.9	(8.1-12.0)	15.4	(13.1-17.9)
\$50,000 - \$74,999	9.0	(7.5-10.7)	8.1	(6.7-9.8)	14.9	(13.0-17.0)
≥ \$75,000	6.6	(5.7-7.6)	6.0	(5.1-7.0)	11.6	(10.4-12.9)
Health Insurance						
Insured	7.2	(6.7-7.8)	8.9	(8.2-9.6)	14.3	(13.5-15.1)
Uninsured	1.8	(0.9-3.5)	3.4	(2.1-5.5)	5.1	(3.4-7.6)
Disability Status						
No disabilities	6.2	(5.6-6.8)	7.0	(6.4-7.8)	12.0	(11.2-12.9)
Adults with disabilities	8.1	(7.2-9.2)	11.6	(10.3-13.0)	17.1	(15.6-18.8)

Among all adults, the proportion ever told by a doctor that: ^a they had skin cancer, ^b they had a form of cancer other than skin cancer, or ^c they had skin cancer or any other type of cancer.
^d Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

**Ever Told Cancer by Gender
Michigan, 2019**



Diabetes

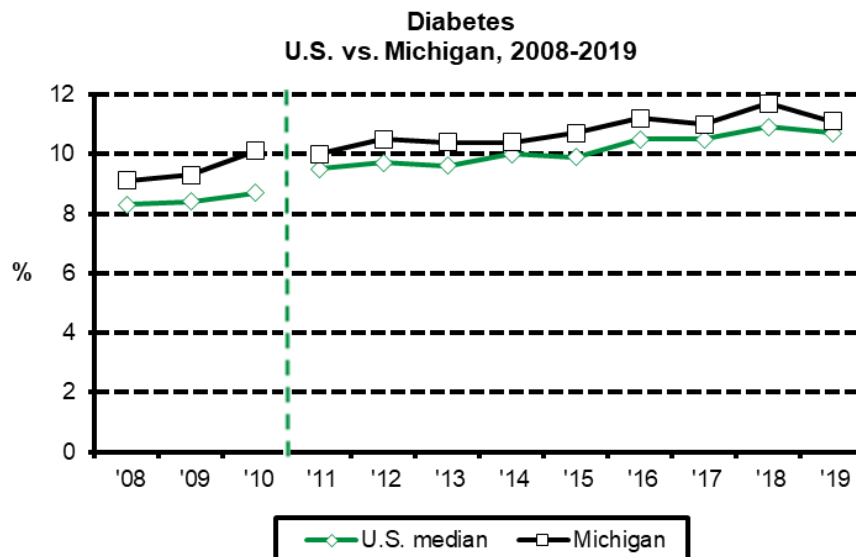
In 2019, diabetes was the seventh leading cause of death in both Michigan and the U.S.²⁷ Obesity, poor diet, physical inactivity, and high blood pressure are just a few of the known risk factors that are associated with the development of diabetes.²⁹

- ◆ In 2019, an estimated 11.1% of Michigan adults reported ever being told by a doctor that they had diabetes.
- ◆ The prevalence of diabetes increased with age and decreased with increasing household income level.
- ◆ The prevalence of diabetes was similar by gender.
- ◆ The prevalence of diabetes was higher among Black, non-Hispanic adults (14.6%) compared to white, non-Hispanic adults (10.9%).
- ◆ Uninsured adults (6.1%) were less likely to have been diagnosed with diabetes than insured adults (11.6%), while adults with disabilities (19.4%) were more likely to have been diagnosed than adults without disabilities (7.6%).
- ◆ Obese (19.1% [17.5-20.7]) and overweight (8.4% [7.4-9.5]) adults reported significantly higher lifetime prevalences of diabetes than healthy weight adults (4.9% [4.0-6.0]).
- ◆ Prior to the BRFSS methodology changes that were implemented in 2011, the prevalence of diabetes among Michigan adults was increasing slightly over time. This trend seems to have stabilized a bit since 2011.
- ◆ In 2019, the prevalence of diabetes among Michigan adults (11.1%) was comparable to the U.S. median prevalence (10.7%).

Demographic Characteristics	Ever Told Diabetes ^a	
	%	95% Confidence Interval
Total	11.1	(10.4-11.8)
Age		
18 - 24	-- ^b	-- ^b
25 - 34	1.6	(0.9-2.7)
35 - 44	5.1	(3.7-7.1)
45 - 54	11.6	(9.8-13.7)
55 - 64	15.9	(13.9-18.0)
65 - 74	24.1	(21.9-26.5)
75 +	22.2	(19.6-25.1)
Gender		
Male	11.5	(10.4-12.6)
Female	10.7	(9.8-11.7)
Race/Ethnicity		
White, non-Hispanic	10.9	(10.1-11.7)
Black, non-Hispanic	14.6	(12.1-17.6)
Other, non-Hispanic	6.8	(4.8-9.7)
Hispanic	9.2	(6.0-13.9)
Household Income		
< \$20,000	17.1	(14.6-20.1)
\$20,000 - \$34,999	13.7	(11.8-15.8)
\$35,000 - \$49,999	10.9	(9.0-13.1)
\$50,000 - \$74,999	10.5	(8.9-12.5)
≥ \$75,000	7.6	(6.6-8.8)
Health Insurance		
Insured	11.6	(10.8-12.4)
Uninsured	6.1	(4.3-8.7)
Disability Status		
No disabilities	7.6	(6.9-8.4)
Adults with disabilities	19.4	(17.8-21.2)

^a Among all adults, the proportion reporting that they were ever told by a doctor that they had diabetes. Adults told they have prediabetes and women who had diabetes only during pregnancy were classified as not having been diagnosed.

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



Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

Kidney Disease

Kidney disease is a condition in which the kidneys are damaged and cannot filter blood properly. Adults with diabetes or hypertension are at increased risk of kidney disease. Kidney disease is also a risk factor for the development of cardiovascular disease.³⁰

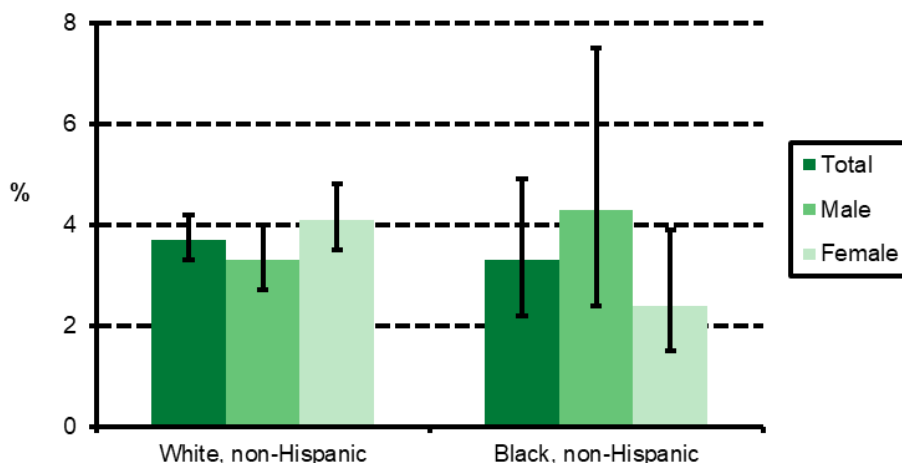
- ◆ In 2019, an estimated 3.4% of Michigan adults reported ever being told by a doctor that they had kidney disease.
- ◆ The prevalence of kidney disease increased with age and decreased with increasing household income level.
- ◆ The prevalence of kidney disease was similar by gender and race/ethnicity.
- ◆ Adults with disabilities (6.9%) were more likely to have been diagnosed with kidney disease than adults without disabilities (2.0%).
- ◆ Michigan adults with diabetes (10.2% [95% CI: 8.5-12.2]) were about four times more likely to have being diagnosed with kidney disease than adults without diabetes (2.6% [95% CI: 2.3-3.0]).
- ◆ In 2019, the prevalence of kidney disease among Michigan adults (3.4%) was slightly higher than the U.S. median prevalence (2.9%).

Demographic Characteristics	Ever Told Kidney Disease ^a	
	%	95% Confidence Interval
Total	3.4	(3.1-3.9)
Age		
18 - 24	-- ^b	-- ^b
25 - 34	-- ^b	-- ^b
35 - 44	1.6	(1.0-2.6)
45 - 54	3.2	(2.2-4.6)
55 - 64	4.8	(3.8-6.1)
65 - 74	6.2	(5.1-7.5)
75 +	8.6	(7.1-10.5)
Gender		
Male	3.3	(2.7-3.9)
Female	3.6	(3.1-4.1)
Race/Ethnicity		
White, non-Hispanic	3.7	(3.3-4.2)
Black, non-Hispanic	3.3	(2.2-4.9)
Other, non-Hispanic	-- ^b	-- ^b
Hispanic	-- ^b	-- ^b
Household Income		
< \$20,000	5.4	(4.1-7.1)
\$20,000 - \$34,999	5.1	(3.9-6.6)
\$35,000 - \$49,999	3.8	(2.8-5.2)
\$50,000 - \$74,999	3.5	(2.6-4.6)
≥ \$75,000	1.7	(1.3-2.2)
Health Insurance		
Insured	3.6	(3.2-4.1)
Uninsured	-- ^b	-- ^b
Disability Status		
No disabilities	2.0	(1.7-2.4)
Adults with disabilities	6.9	(5.9-8.0)

^a Among all adults, the proportion reporting ever being told by a doctor that they had kidney disease.

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

**Kidney Disease by Race and Gender
Michigan, 2019**



Depression

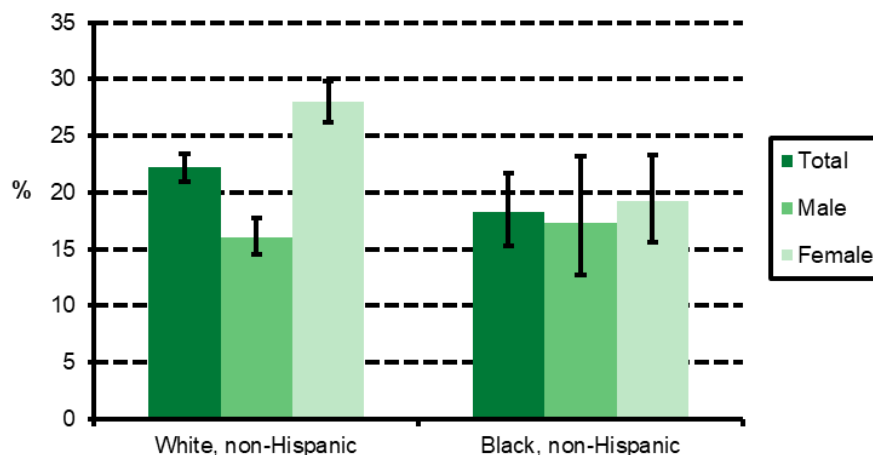
Depression is a common and treatable medical disorder that is more common among individuals with chronic conditions such as obesity, diabetes, and arthritis.³¹

- ◆ In 2019, an estimated 21.4% of Michigan adults reported ever being told by a doctor that they had a depressive disorder including depression, major depression, dysthymia, or minor depression.
- ◆ The prevalence of depression was highest in the younger age group (age 18-24 years) and decreased with increasing household income level.
- ◆ Females (26.6%) reported a significantly higher prevalence of depression than males (16.0%).
- ◆ The prevalence of depression was similar by race/ethnicity and insurance status.
- ◆ Adults with disabilities (40.4%) were more likely to have been diagnosed with depression than adults without disabilities (13.4%).
- ◆ White, non-Hispanic females (28.0%) reported a significantly higher prevalence of depression than white, non-Hispanic males (16.0%).
- ◆ In 2019, the prevalence of depression among Michigan adults (21.4%) was higher than the U.S. median prevalence (19.7%).

Demographic Characteristics	Ever Told Depression ^a	
	%	95% Confidence Interval
Total	21.4	(20.4-22.5)
Age		
18 - 24	25.0	(21.3-29.2)
25 - 34	23.6	(20.5-26.9)
35 - 44	22.0	(19.3-25.0)
45 - 54	23.4	(20.8-26.2)
55 - 64	21.2	(19.0-23.5)
65 - 74	18.4	(16.5-20.5)
75 +	13.4	(11.3-15.8)
Gender		
Male	16.0	(14.5-17.5)
Female	26.6	(25.1-28.1)
Race/Ethnicity		
White, non-Hispanic	22.2	(21.0-23.4)
Black, non-Hispanic	18.3	(15.3-21.7)
Other, non-Hispanic	18.0	(14.1-22.8)
Hispanic	22.1	(16.3-29.2)
Household Income		
< \$20,000	35.8	(32.1-39.6)
\$20,000 - \$34,999	26.4	(23.5-29.4)
\$35,000 - \$49,999	20.4	(17.5-23.6)
\$50,000 - \$74,999	17.2	(14.9-19.8)
≥ \$75,000	14.5	(13.0-16.1)
Health Insurance		
Insured	21.2	(20.2-22.4)
Uninsured	21.9	(18.0-26.4)
Disability Status		
No disabilities	13.4	(12.4-14.5)
Adults with disabilities	40.4	(38.0-42.8)

^a Among all adults, the proportion reporting ever being told by a doctor that they had a depressive disorder including depression, major depression, dysthymia, or minor depression.

**Depression by Race and Gender
Michigan, 2019**



Bibliography

1. Research Triangle Institute. 2012. SUDAAN Language Manual, Volumes 1 and 2, Release 11. Research Triangle Park, NC: Research Triangle Institute.
 2. Centers for Disease Control and Prevention. 2020. 2019 Summary Data Quality Report. https://www.cdc.gov/brfss/annual_data/2019/pdf/2019-sdqr-508.pdf. (January 2021).
 3. Idler E, Benyamini Y. Self-rated Health and Mortality: a Review of Twenty-Seven Community Studies. *J Health Soc Behav.* 1997; 38(1): 21-37.
 4. U.S. Department of Justice, Civil Rights Division. 2020. A Guide to Disability Rights Laws. <https://www.ada.gov/cguide.htm>. (January 2021).
 5. Centers for Disease Control and Prevention. 2020. Adult Overweight and Obesity - Adult Obesity Causes & Consequences. <https://www.cdc.gov/obesity/adult/causes.html>. (January 2021).
 6. Kim DD, Basu A. Estimating the Medical Care Costs of Obesity in the United States: Systematic Review, Meta-Analysis, and Empirical Analysis. *Value Health* 2016; 19(5): 602-613.
 7. U.S. Department of Health and Human Services. 2020. Healthy People 2020 Topics and Objectives. <https://www.healthypeople.gov/2020/topics-objectives>. (January 2021).
 8. Hoffman C, Paradise J. Health Insurance and Access to Health Care in the United States. *Ann N Y Acad Sci.* 2007; 1136: 149-160.
 9. U.S. Centers for Medicare & Medicaid Services. 2017. How to Pick a Health Insurance Plan. <https://www.healthcare.gov/choose-a-plan/plan-types/>. (January 2021).
 10. Starfield B, Leiyu S, Macinko J. 2005. Contribution of Primary Care to Health Systems and Health. *The Milbank Quarterly.* 83(3):457-502.
 11. U.S. Department of Health and Human Services. 2018. Physical Activity and health - The Benefits of Physical Activity. <https://www.cdc.gov/physicalactivity/basics/pa-health/>. (January 2021).
 12. U.S. Department of Health and Human Services. 2018. Physical Activity Guidelines for Americans, 2nd ed. https://health.gov/paguidelines/second-edition/pdf/Physical_Activity_Guidelines_2nd_edition.pdf. (January 2021).
 13. Centers for Disease Control and Prevention. 2018. State Indicator Report on Fruits and Vegetables. <https://www.cdc.gov/nutrition/data-statistics/2018-state-indicator-report-fruits-vegetables.html>. (May 2017).
 14. U.S. Department of Health and Human Services. 2014. The Health Consequences of Smoking - 50 Years of Progress: A Report of the Surgeon General. <https://www.surgeongeneral.gov/library/reports/50-years-of-progress/full-report.pdf>. (January 2021).
 15. Centers for Disease Control and Prevention. 2018. About Electronic Cigarettes. https://www.cdc.gov/tobacco/basic_information/e-cigarettes/about-e-cigarettes.html. (January 2021).
 16. Cobb CO, Ward KD, Mziak W, Shihadeh A, Eissenberg T. Waterpipe Tobacco Smoking: An Emerging Health Crisis in the United States. *American Journal of Health Behavior.* 2010; 34(3): 275-285.
 17. Centers for Disease Control and Prevention. Alcohol and Public Health: Alcohol-Related Disease Impact (ARDI). Annual Average for United States 2011-2015 Alcohol-Attributable Deaths Due to Excessive Alcohol Use, All Ages. 2019. <https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/alcohol-facts-and-statistics>. (January 2021).
 18. Centers for Disease Control and Prevention. 2019. High Blood Pressure - High Blood Pressure Facts. <https://www.cdc.gov/bloodpressure/facts.htm>. (January 2021).
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Bibliography

19. Centers for Disease Control and Prevention. 2020. Family Health - Regular Checkups are Important. <https://www.cdc.gov/family/checkup/>. (January 2021).
20. Centers for Disease Control and Prevention. 2020. High Cholesterol Facts. <https://www.cdc.gov/cholesterol/facts.htm>. (January 2021).
21. Centers for Disease Control and Prevention. 2019. Recommended Adult Immunization Schedule, by Vaccine and Age Group - United States, 2020. <https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>. (January 2021).
22. Panel on Antiretroviral Guidelines for Adults and Adolescents. 2019. Guidelines for the Use of Antiretroviral Agents in HIV-1-Infected Adults and Adolescents. Department of Health and Human Services. <https://clinicalinfo.hiv.gov/en/guidelines/adult-and-adolescent-arv/what-start-initial-combination-regimens-antiretroviral-naive?view=full>. (January 2021).
23. U.S. Department of Health and Human Services, National Heart Lung and Blood Institute. 2020. Who is at Risk for Asthma? <https://www.nhlbi.nih.gov/health/health-topics/topics/asthma/atrisk>. (January 2021).
24. Centers for Disease Control and Prevention. 2020. Asthma—Data, Statistics, and Surveillance. <https://www.cdc.gov/asthma/asthmadata.htm>. (January 2021).
25. U.S. Department of Health and Human Services, National Heart Lung and Blood Institute. 2020. What is COPD? <https://www.nhlbi.nih.gov/health/health-topics/topics/copd>. (January 2021).
26. Centers for Disease Control and Prevention. 2020. Arthritis: Improving the Quality of Life for People With Arthritis. <https://www.cdc.gov/chronicdisease/resources/publications/aag/arthritis.htm>. (January 2021).
27. Michigan Department of Health and Human Services, Division of Vital Records & Health Statistics. 2018 Michigan Death Certificate Registry. <https://www.mdch.state.mi.us/pha/osr/deaths/causrankcnty.asp>. (January 2021).
28. National Cancer Institute. 2020. What is Cancer? <https://www.cancer.gov/about-cancer/understanding/what-is-cancer>. (January 2021).
29. Centers for Disease Control and Prevention. 2020. Diabetes Home - Basics About Diabetes. <https://www.cdc.gov/diabetes/basics/diabetes.html>. (January 2021).
30. Centers for Disease Control and Prevention. 2017. National Chronic Kidney Disease Fact Sheet, 2017. https://www.cdc.gov/diabetes/pubs/pdf/kidney_factsheet.pdf. (January 2021).
31. Centers for Disease Control and Prevention. Current Depression Among Adults - United States, 2006 and 2008. *MMWR* 2010; 59(38): 1229-1235.



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