HEALTH RISK BEHAVIORS WITHIN THE STATE OF MICHIGAN

2017 BEHAVIORAL RISK FACTOR SURVEY

31ST ANNUAL REPORT

MDHHS

Michigan Department of Health & Human Services

2017 Behavioral Risk Factor Survey

Health Risk Behaviors within the State of Michigan

www.michigan.gov/brfs

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Table of Contents

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 2017, 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 2017 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 2017 MiBRFS estimates provided within this report should only be compared to estimates from 2011-2017 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 2017, 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 2017 MiBRFS

The total sample size for the 2017 MiBRFS was 10,889 (land line = 4,240; cell phone = 6,649). The response rate for the landline portion of the 2017 MiBRFS was 50.0%, while the response rate for the cell phone portion of the survey was 44.3%. The overall weighted response rate (landline and cell phones combined) for the 2017 MiBRFS was 47.3%. The overall weighted U.S. median response rate for 2017 was 45.9%.[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.

Number of Interviews by Survey Year Michigan BRFS 2000-2017
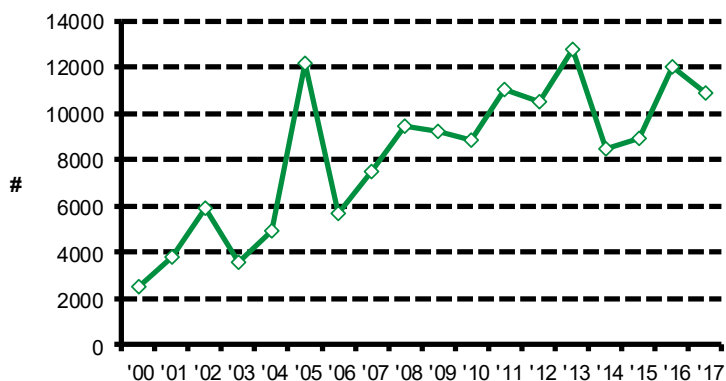
Summary

This report presents estimates from the 2017 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 2017 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 2011-2017 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.

Selected Risk Factors - 2017 CDC BRFSS
U.S. vs. Michigan
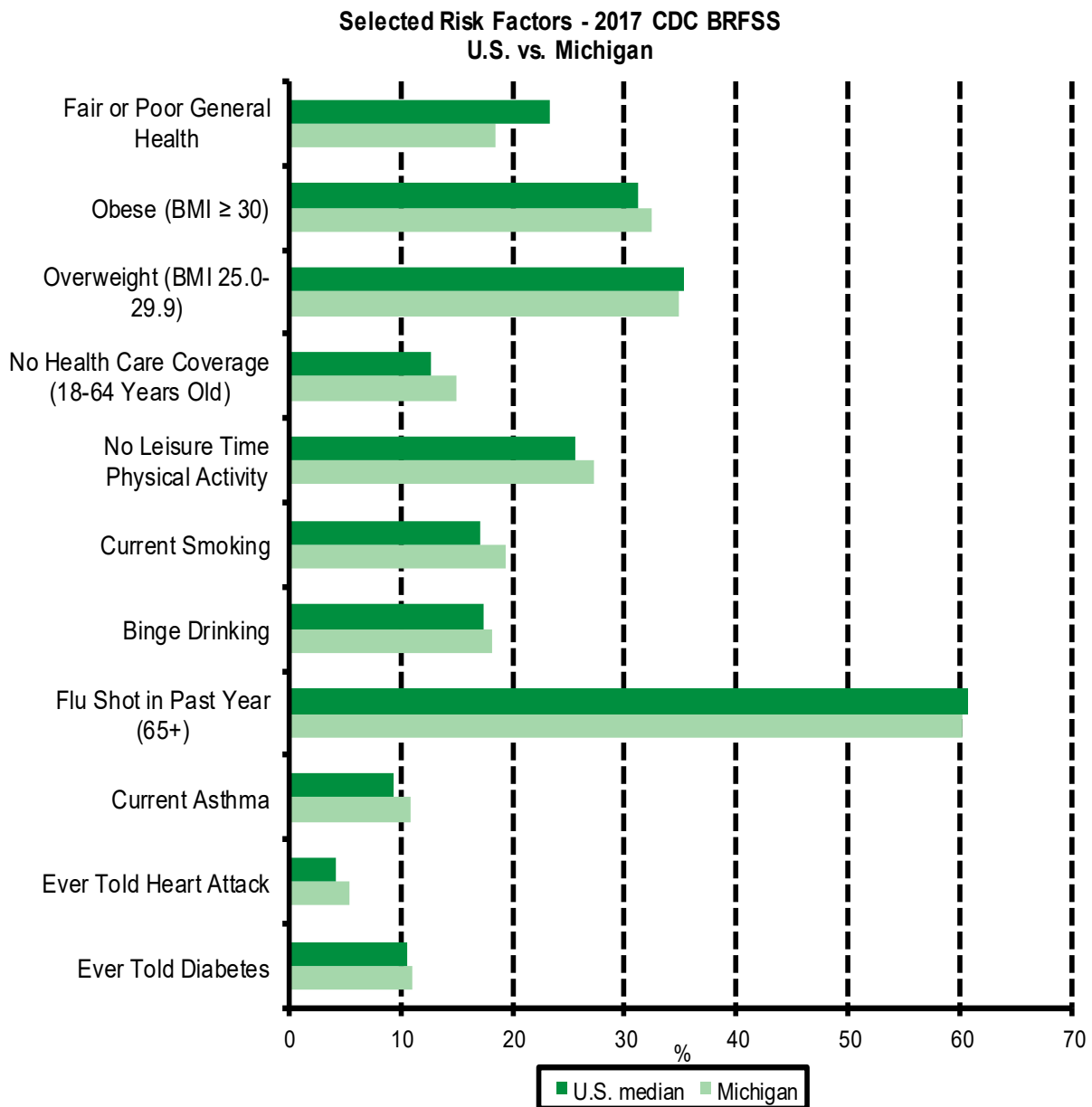
Summary, continued

Public Health Implications of Findings

A number of themes emerge from the findings of the 2017 MiBRFS that have implications for public health.

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

In 2017, an estimated 9.8% (95% CI: 8.9-10.8) of Michigan adults aged 18-64 years reported not having any form of health care coverage. This represents a significant decrease of 6.8 percentage points since 2012 (16.6%). From 2012 to 2017, the prevalence of no health care coverage decreased among males (2012: 18.9% vs. 2017: 12.3%) and females (2012: 14.2% vs. 2017: 7.3%), as well as White, non-Hispanic (2012: 15.1% vs. 2017: 7.8%) and Black, non-Hispanic adults (2012: 24.3% vs. 2017: 13.7%). 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 2017, an estimated 10.5% of Michigan adults have ever been told by a doctor that they had some form of cardiovascular disease (CVD). These include heart attack (5.4%), angina or coronary heart disease (5.2%), and stroke (3.7%). 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 (5.5% and 3.4%, 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 12.7% of Michigan adults have ever been told that they had cancer of any type. Among adults with disabilities, 22% also had ever been told they had cancer, significantly greater than those with no disabilities (9.5%).

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

In 2017, an estimated 32.4% of Michigan adults were classified as being obese (BMI ≥ 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 2017 with 41.2% of Black, non-Hispanic adults reporting obesity compared to only 31.0% 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 2017, an estimated 19.4% 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 22.6% 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 2017, an estimated 4.9% 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 12.7% reporting usage (95% CI: 10.2-15.8). Among current smokers, the prevalence of e-cigarette use was 12.2% (95%CI: 10.1-14.3) compared to 2.1% (95% CI: 1.6-2.8) among never smokers.

Summary, continued

Future of the Michigan Behavioral Risk Factor Survey

The target sample size for the 2018 MiBRFS is 10,860 total completed interviews. Of these 10,860 interviews, 3,258 will be completed with landline respondents, while the remaining 7,602 will be completed with cell phone respondents. The 2018 questionnaire will include approximately 100 state-added questions on numerous topics, including arthritis management, cancer survivorship, caregiving, radon awareness, binge drinking, family planning, and cognitive decline, gambling, and reactions to race. The full 2018 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 has 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 BRFS-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 2017, an estimated 18.5% 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 (16.6%) reported a significantly lower prevalence of fair or poor general health than Black, non-Hispanic adults (29.0%).

♦ Adults with disabilities (47.7%) reported a significantly higher prevalence of fair to poor health than adults without disabilities (7.7%).

♦ 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 2017, the prevalence of fair or poor general health among Michigan adults (18.5%) was higher that that of the U.S. median prevalence (17.6%).

Demographic Characteristics	General Health, Fair or Poor[a]	
	%	95% Confidence Interval
Total	**18.5**	**(17.5-19.5)**
Age		
18 - 24	10.4	(8.1-13.2)
25 - 34	11.5	(9.3-14.2)
35 - 44	14.5	(12.0-17.4)
45 - 54	20.8	(18.4-23.5)
55 - 64	24.1	(21.9-26.5)
65 - 74	23.8	(21.5-26.2)
75 +	26.4	(23.5-29.6)
Gender		
Male	17.7	(16.4-19.2)
Female	19.2	(17.9-20.5)
Race/Ethnicity		
White, non-Hispanic	16.6	(15.6-17.6)
Black, non-Hispanic	29.0	(25.8-32.5)
Other, non-Hispanic	20.6	(16.2-25.9)
Hispanic	17.5	(12.3-24.3)
Household Income		
< $20,000	40.4	(37.1-43.7)
$20,000 - $34,999	25.0	(22.4-27.9)
$35,000 - $49,999	17.4	(15.0-20.2)
$50,000 - $74,999	12.3	(10.3-14.6)
≥ $75,000	5.9	(5.0-7.0)
Health Insurance		
Insured	18.8	(17.8-19.8)
Uninsured	15.7	(12.4-19.6)
Disability Status		
No disabilities	7.7	(6.9-8.6)
Adults with disabilities	47.7	(45.4-50.1)

[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, 2008-2017
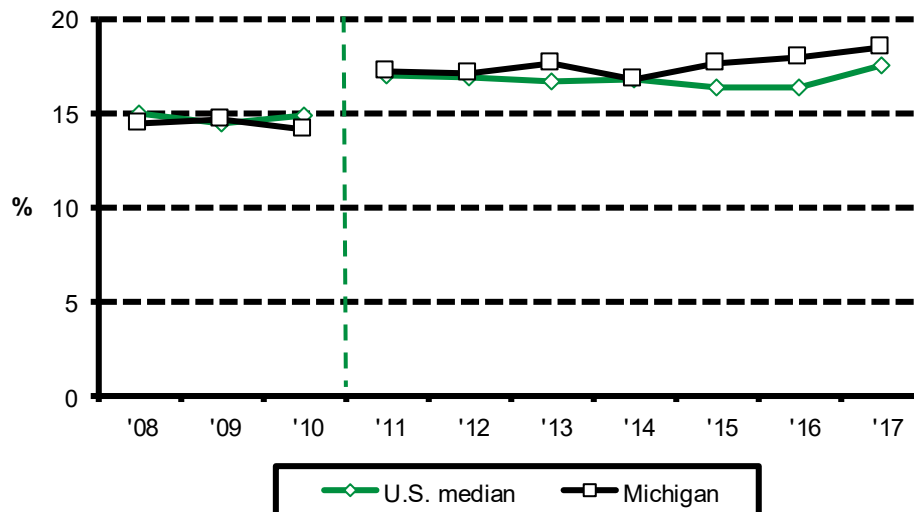
Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

1

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 2017, an estimated 14.8% of Michigan adults reported poor physical health and 13.7% 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 prevalences of both poor physical health and poor mental health (16.4% and 16.5%, respectively) than males (13.2% and 10.6%, respectively).

♦ The prevalence of both poor physical health was similar by race/ethnicity. The prevalence of poor mental health was significantly higher in Black, non-Hispanic adults (17.5%) compared to White, non-Hispanic adults (13.1%).

♦ Adults with disabilities were more likely to have reported both poor physical health and poor mental health (42.9% and 29.4%, respectively) than adults without disabilities (4.7% and 8.0%).

♦ 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, but these prevalences have plateaued since 2011.

Demographic Characteristics	Poor Physical Health[a]		Poor Mental Health[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**14.8**	**(14.0-15.7)**	**13.7**	**(12.8-14.6)**
Age				
18 - 24	7.0	(5.1-9.6)	19.3	(16.3-22.8)
25 - 34	8.4	(6.5-10.7)	15.4	(13.0-18.1)
35 - 44	10.8	(8.8-13.3)	14.5	(12.2-17.1)
45 - 54	17.9	(15.7-20.4)	14.3	(12.3-16.5)
55 - 64	22.0	(19.9-24.3)	12.8	(11.1-14.7)
65 - 74	18.5	(16.4-20.7)	9.7	(8.2-11.5)
75 +	19.0	(16.4-21.8)	7.5	(5.9-9.5)
Gender				
Male	13.2	(12.1-14.5)	10.6	(9.5-11.8)
Female	16.4	(15.2-17.6)	16.5	(15.3-17.9)
Race/Ethnicity				
White, non-Hispanic	14.3	(13.3-15.3)	13.1	(12.2-14.2)
Black, non-Hispanic	17.6	(15.0-20.5)	17.5	(14.8-20.6)
Other, non-Hispanic	15.4	(11.6-20.1)	13.2	(9.9-17.4)
Hispanic	12.8	(9.0-17.9)	15.0	(10.8-20.5)
Household Income				
< $20,000	29.2	(26.3-32.3)	27.3	(24.4-30.3)
$20,000 - $34,999	18.2	(15.9-20.8)	15.9	(13.7-18.5)
$35,000 - $49,999	14.4	(12.1-17.1)	12.0	(9.9-14.6)
$50,000 - $74,999	10.9	(9.0-13.0)	10.2	(8.3-12.4)
≥ $75,000	6.7	(5.7-7.9)	7.1	(6.0-8.4)
Health Insurance				
Insured	15.2	(14.3-16.1)	13.7	(12.8-14.7)
Uninsured	11.1	(8.6-14.4)	13.6	(10.7-17.0)
Disability Status				
No disabilities	4.7	(4.1-5.3)	8.0	(7.2-8.8)
Adults with disabilities	42.9	(40.5-45.3)	29.4	(27.2-31.7)

[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, 2008-2017
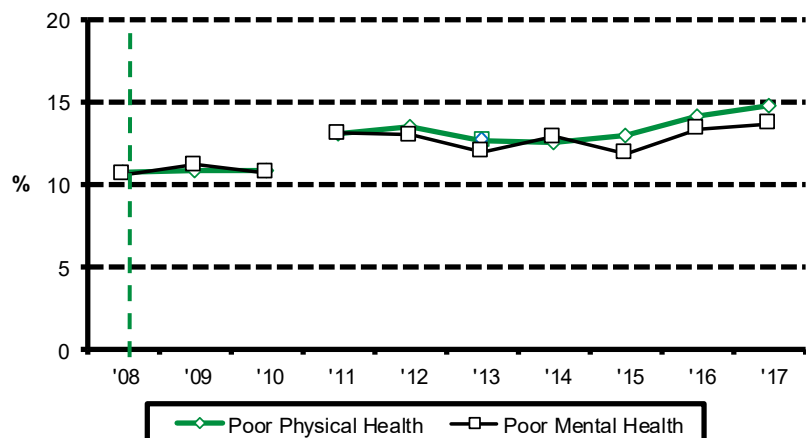
Legend: —◇— Poor Physical Health —□— Poor Mental Health

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.

2

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 2017, an estimated 26.9% of Michigan adults reported being disabled, which was defined as being limited in any activities because of physical, mental, or emotional problems or requiring the use of special equipment, such as a cane, a wheelchair, a special bed, or a special telephone due to a health problem.

- When looking at each component of the disability indicator, an estimated 24.3% of Michigan adults reported being limited in their activities, while 11.0% reported that they required the use of special equipment due to a health problem.

- The prevalence of disability increased with age and decreased with increasing household income level.

- The prevalence of disability was similar by gender and race/ethnicity.

- The prevalence of disability is significantly higher for Michigan adults with insurance.

- When assessing disability by age group and severity, Michigan adults 75 years and older reported more severe disability (i.e., both activities limited and use of special equipment indicated) when compared to all other age groups.

Demographic Characteristics	Total Disability[a]	
	%	95% Confidence Interval
Total	**26.9**	**(25.8-28.0)**
Age		
18 - 24	13.6	(10.7-17.2)
25 - 34	14.4	(12.0-17.2)
35 - 44	17.5	(14.9-20.4)
45 - 54	29.3	(26.5-32.2)
55 - 64	37.3	(34.8-39.9)
65 - 74	37.5	(35.0-40.1)
75 +	42.4	(39.1-45.7)
Gender		
Male	24.5	(22.9-26.0)
Female	29.2	(27.8-30.8)
Race/Ethnicity		
White, non-Hispanic	26.8	(25.6-28.1)
Black, non-Hispanic	31.1	(27.8-34.7)
Other, non-Hispanic	20.6	(16.2-25.7)
Hispanic	20.1	(14.8-26.7)
Household Income		
< $20,000	48.3	(44.9-51.7)
$20,000 - $34,999	32.6	(29.7-35.5)
$35,000 - $49,999	26.2	(23.4-29.3)
$50,000 - $74,999	21.2	(18.5-24.1)
≥ $75,000	14.1	(12.7-15.7)
Health Insurance		
Insured	27.7	(26.6-28.9)
Uninsured	18.8	(15.3-22.9)

[a] Among all adults, the proportion reporting being limited in any activities because of physical, mental, or emotional problems, or reporting that they required the use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem.

Disability by Age Group and Severity Michigan, 2017

Legend: Not disabled | Limited, no equip. | Not limited, use equip. | Limited and use equip.

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 2017, an estimated 32.4% of Michigan adults were classified as obese, with an additional 34.9% of Michigan adults being classified as overweight. The prevalence of obesity in Michigan is comparable to the U.S. median prevalence (31.3%), while the prevalence of overweight is comparable to that of the U.S. median (35.3%).

♦ The prevalence of obesity increased through the 65-74 year age group and then dropped within the 75+ years age group.

♦ The prevalence of obesity was similar by gender and health insurance status.

♦ Black, non-Hispanic adults (41.2%) reported a significantly higher prevalence of obesity than White, non-Hispanic adults (31.0%).

♦ Adults with disabilities (42.7%) were more likely to be classified as obese than adults without disabilities (28.6%).

♦ 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 1.9 percentage points over the next three years.[7]

Demographic Characteristics	Obese[a]	
	%	95% Confidence Interval
Total	**32.4**	**(31.2-33.6)**
Age		
18 - 24	18.3	(15.2-21.8)
25 - 34	29.3	(26.1-32.8)
35 - 44	35.6	(32.2-39.3)
45 - 54	38.0	(35.1-41.0)
55 - 64	37.2	(34.7-39.8)
65 - 74	37.9	(35.3-40.5)
75 +	24.7	(21.9-27.8)
Gender		
Male	31.6	(29.9-33.3)
Female	33.2	(31.6-34.9)
Race/Ethnicity		
White, non-Hispanic	31.0	(29.7-32.3)
Black, non-Hispanic	41.2	(37.5-45.1)
Other, non-Hispanic	24.2	(19.4-29.9)
Hispanic	38.2	(31.1-45.8)
Household Income		
< $20,000	39.0	(35.6-42.4)
$20,000 - $34,999	35.0	(32.0-38.1)
$35,000 - $49,999	34.0	(30.7-37.4)
$50,000 - $74,999	33.1	(30.0-36.4)
≥ $75,000	28.5	(26.5-30.5)
Health Insurance		
Insured	32.9	(31.7-34.2)
Uninsured	27.3	(22.9-32.1)
Disability Status		
No disabilities	28.6	(27.3-30.0)
Adults with disabilities	42.7	(40.3-45.1)

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.

Obesity
U.S. vs. Michigan, 2008-2017

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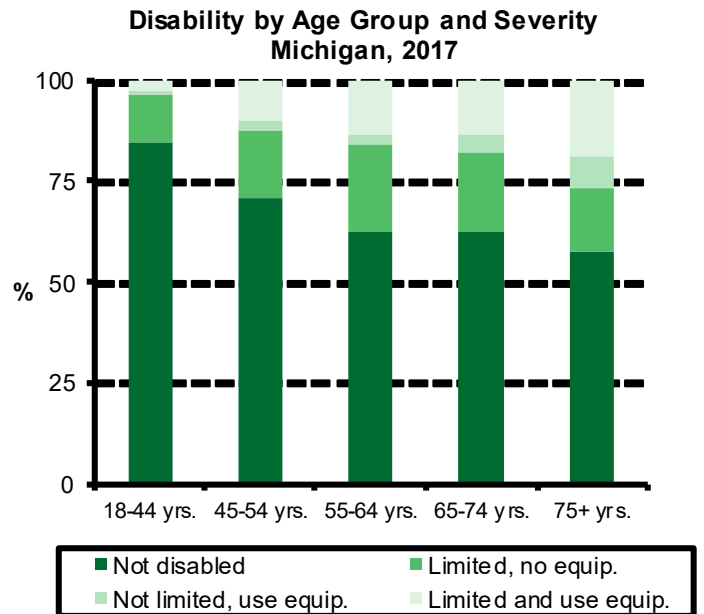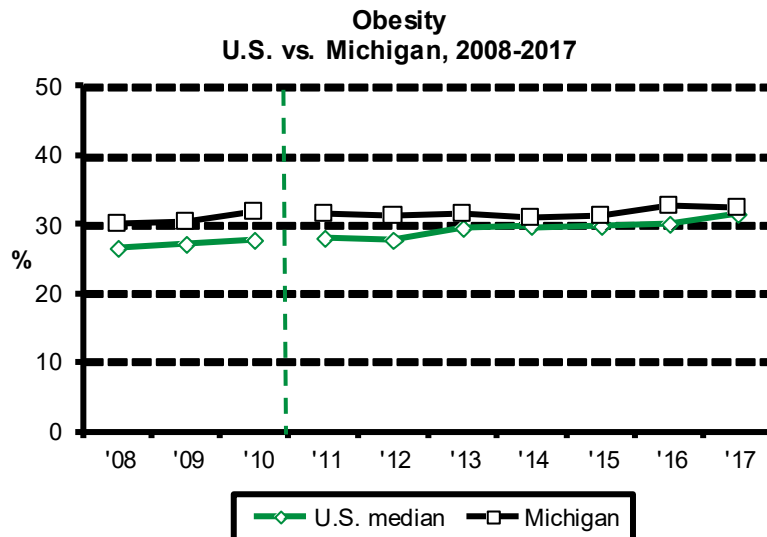
No Health Care Coverage (Among Adults 18 - 64 Years)

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 2017, an estimated 9.8% 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 (12.7%).

- The prevalence of no health care coverage decreased with age and increasing household income level.

- Males (12.3%) reported a significantly higher prevalence of no health care coverage than females (7.3%).

- Hispanic adults (19.6%) and Black, non-Hispanic adults (13.7%) both reported a higher prevalence of no health care coverage than White, non-Hispanic adults (7.8%).

- The prevalence of no health care coverage was significantly lower 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 9.8%, this prevalence will need to decrease by roughly 3 percentage points each year in order to meet the HP 2020 goal.[7]

Demographic Characteristics	No Health Care Coverage Among Adults 18-64 Years[a]	
	%	95% Confidence Interval
Total	**9.8**	**(8.9-10.8)**
Age		
18 - 24	13.2	(10.4-16.5)
25 - 34	10.8	(8.8-13.2)
35 - 44	10.2	(8.0-13.0)
45 - 54	8.4	(6.9-10.3)
55 - 64	7.3	(6.0-8.8)
Gender		
Male	12.3	(10.8-13.9)
Female	7.3	(6.2-8.4)
Race/Ethnicity		
White, non-Hispanic	7.8	(6.9-8.8)
Black, non-Hispanic	13.7	(11.0-17.1)
Other, non-Hispanic	14.3	(9.8-20.3)
Hispanic	19.6	(13.6-27.3)
Household Income		
< $20,000	15.2	(12.5-18.4)
$20,000 - $34,999	15.1	(12.2-18.6)
$35,000 - $49,999	9.3	(7.0-12.1)
$50,000 - $74,999	6.9	(5.1-9.3)
≥ $75,000	4.6	(3.6-6.0)
Disability Status		
No disabilities	10.4	(9.3-11.7)
Adults with disabilities	7.2	(5.7-9.1)

[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, 2008-2017**
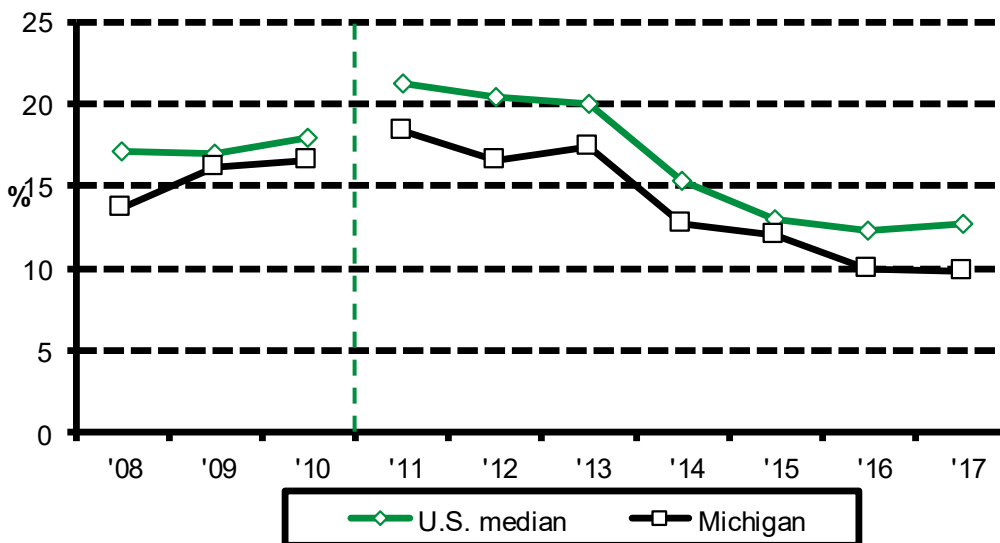
Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

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 2017, an estimated 52.5% of Michigan adults reported having private insurance, 9.8% reported having Medicaid only, 2.1% reported having Healthy Michigan Plan, and 8.6% reported having no health care coverage.

- Females (12.4%) were more likely than males (7.1%) to have Medicaid only.

- White, non-Hispanic adults (56.1%) were more likely to have private insurance than Black, non-Hispanic adults (36.2%).

- Adults with disabilities (14.3%) were more likely to have Medicaid only than adults without disabilities (7.9%).

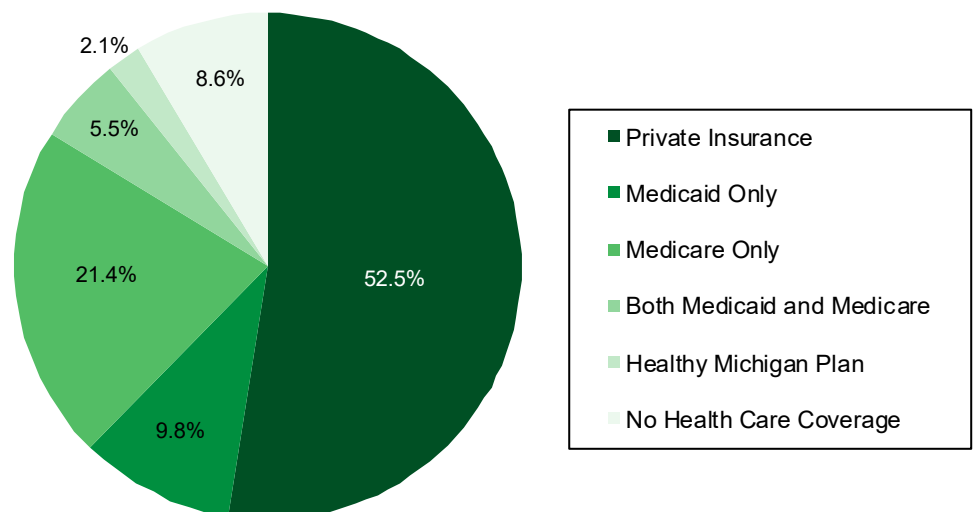| Demographic Characteristics	Private Insurance[a] %	95% Confidence Interval	Medicaid Only[a] %	95% Confidence Interval	Healthy Michigan Plan[a] %	95% Confidence Interval	No Health Care Coverage[a] %	95% Confidence Interval
Total	**52.5**	**(51.3-53.8)**	**9.8**	**(9.1-10.7)**	**2.1**	**(1.7-2.5)**	**8.6**	**(7.9-9.5)**
Age								
18 - 24	61.3	(56.8-65.6)	14.9	(11.8-18.6)	2.5	(1.4-4.2)	15.0	(12.0-18.8)
25 - 34	63.9	(60.3-67.3)	15.0	(12.7-17.8)	3.0	(2.0-4.5)	11.7	(9.5-14.2)
35 - 44	68.6	(65.0-72.0)	12.6	(10.3-15.3)	2.1	(1.3-3.4)	10.7	(8.4-13.5)
45 - 54	68.3	(65.4-71.1)	11.0	(9.1-13.3)	2.5	(1.7-3.6)	8.8	(7.1-10.8)
55 - 64	65.4	(62.8-67.8)	7.5	(6.2-9.1)	2.9	(2.2-3.9)	7.6	(6.2-9.1)
65 - 74	7.2	(5.9-8.7)	3.9	(2.9-5.1)	--[b]	--[b]	1.5	(1.0-2.2)
75 +	4.5	(3.3-6.2)	2.0	(1.3-3.1)	--[b]	--[b]	3.6	(2.3-5.5)
Gender								
Male	54.6	(52.8-56.5)	7.1	(6.1-8.2)	2.1	(1.7-2.7)	11.1	(9.8-12.5)
Female	50.6	(48.9-52.3)	12.4	(11.2-13.7)	2.0	(1.6-2.6)	6.4	(5.5-7.3)
Race/Ethnicity								
White, non-Hispanic	56.1	(54.7-57.4)	7.6	(6.8-8.5)	1.9	(1.5-2.3)	6.8	(6.0-7.6)
Black, non-Hispanic	36.2	(32.7-40.0)	20.3	(17.4-23.7)	2.9	(2.0-4.3)	12.7	(10.2-15.6)
Other, non-Hispanic	50.6	(44.4-56.7)	14.3	(10.5-19.1)	--[b]	--[b]	15.7	(11.1-21.7)
Hispanic	48.5	(41.1-56.0)	13.3	(9.1-19.2)	--[b]	--[b]	19.1	(13.4-26.4)
Household Income								
< $20,000	13.0	(10.9-15.6)	28.1	(25.0-31.5)	5.4	(4.1-7.0)	13.9	(11.5-16.8)
$20,000 - $34,999	31.2	(28.2-34.4)	15.0	(12.7-17.7)	2.7	(1.9-4.0)	12.3	(10.0-14.9)
$35,000 - $49,999	51.7	(48.2-55.2)	7.7	(6.0-10.0)	1.9	(1.1-3.3)	7.7	(6.0-9.9)
$50,000 - $74,999	68.0	(64.8-71.0)	3.3	(1.9-5.6)	--[b]	--[b]	5.8	(4.3-7.8)
≥ $75,000	83.4	(81.8-84.9)	0.8	(0.5-1.2)	--[b]	--[b]	4.4	(3.4-5.6)
Disability Status								
No disabilities	61.1	(59.7-62.5)	7.9	(7.1-8.9)	1.9	(1.5-2.4)	9.3	(8.3-10.3)
Adults with disabilities	30.5	(28.3-32.8)	14.3	(12.5-16.2)	2.6	(1.9-3.5)	5.8	(4.7-7.2)

[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, 2017

Legend:
- Private Insurance — 52.5%
- Medicaid Only — 9.8%
- Medicare Only — 21.4%
- Both Medicaid and Medicare — 5.5%
- Healthy Michigan Plan — 2.1%
- No Health Care Coverage — 8.6%

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.

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 2017, an estimated 15.0% of Michigan adults reported not having a personal health care provider, while 11.4% 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 (20.9%) were more likely than females (9.4%) to not have a personal health care provider.

♦ Hispanic adults (29.5%) were more likely than White, non-Hispanic adults (29.5%) not to have a personal health care provider.

♦ Black, non-Hispanic adults (16.7%) and Hispanic adults (17.0%) were both more likely than White, non-Hispanic adults (10.1%) 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 (48.7% and 28.8%, respectively) when compared to insured adults (12.0% and 9.9%).

Demographic Characteristics	No Personal Health Care Provider[a]		No Health Care Access Due to Cost[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**15.0**	**(14.1-16.0)**	**11.4**	**(10.6-12.3)**
Age				
18 - 24	26.1	(22.7-29.9)	11.8	(9.4-14.6)
25 - 34	30.3	(27.1-33.6)	16.4	(13.9-19.2)
35 - 44	19.0	(16.1-22.2)	12.8	(10.5-15.4)
45 - 54	9.9	(8.2-11.8)	11.8	(10.0-14.0)
55 - 64	8.2	(6.9-9.9)	12.1	(10.5-14.0)
65 - 74	4.6	(3.6-6.0)	6.5	(5.4-7.9)
75 +	3.5	(2.4-4.9)	5.2	(3.7-7.2)
Gender				
Male	20.9	(19.4-22.6)	10.4	(9.3-11.6)
Female	9.4	(8.4-10.5)	12.4	(11.3-13.6)
Race/Ethnicity				
White, non-Hispanic	13.5	(12.5-14.6)	10.1	(9.3-11.0)
Black, non-Hispanic	15.6	(13.0-18.6)	16.7	(14.0-19.8)
Other, non-Hispanic	23.7	(18.9-29.4)	13.4	(9.9-17.9)
Hispanic	29.5	(22.7-37.3)	17.0	(12.0-23.5)
Household Income				
< $20,000	17.9	(15.4-20.8)	23.2	(20.4-26.3)
$20,000 - $34,999	19.5	(16.8-22.6)	14.6	(12.4-17.1)
$35,000 - $49,999	16.0	(13.5-18.9)	13.8	(11.5-16.6)
$50,000 - $74,999	14.1	(11.6-17.0)	7.1	(5.5-9.0)
≥ $75,000	10.9	(9.4-12.5)	5.0	(4.1-6.1)
Health Insurance				
Insured	12.0	(11.1-12.9)	9.9	(9.2-10.7)
Uninsured	48.7	(43.8-53.7)	28.8	(24.6-33.4)
Disability Status				
No disabilities	16.7	(15.6-18.0)	9.0	(8.1-9.9)
Adults with disabilities	9.0	(7.5-10.7)	17.4	(15.7-19.3)

[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, 2017
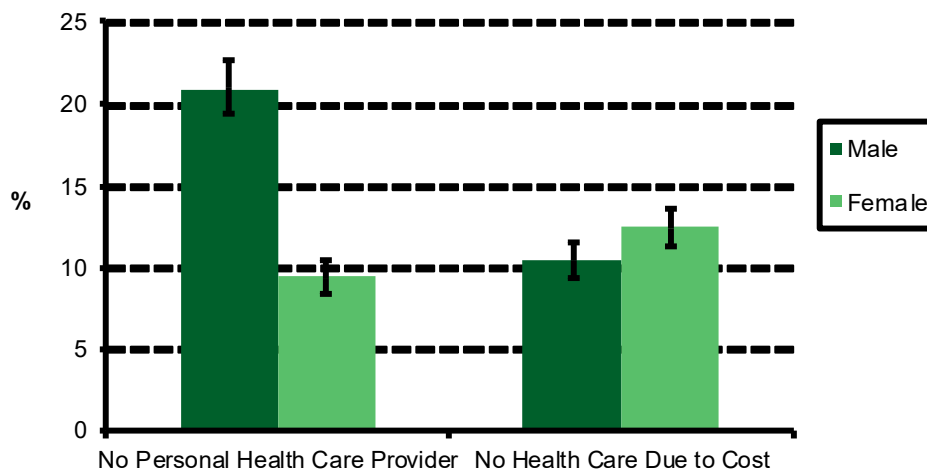
Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

7

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 2017, an estimated 27.3% 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 (25.6%) for this indicator.

♦ The prevalence of no leisure time physical activity increased with age and decreased with increasing household income level.

♦ Females (29.2%) were more likely than males (25.2%) to report no leisure time physical activity within the past month.

♦ White, non-Hispanic adults (25.7%) reported a significantly lower prevalence of no leisure time physical activity than Black, non-Hispanic adults (35.2%).

♦ 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 is currently more than five percentage points below this goal, so if Michigan can maintain the current prevalence for this indicator the HP 2020 target will easily be met by 2020.[7]

Demographic Characteristics	No Leisure Time Physical Activity[a]	
	%	95% Confidence Interval
Total	**27.3**	**(26.1-28.4)**
Age		
18 - 24	19.5	(16.3-23.1)
25 - 34	28.4	(25.2-31.9)
35 - 44	25.4	(22.2-28.9)
45 - 54	25.4	(22.8-28.2)
55 - 64	30.2	(27.9-32.7)
65 - 74	27.4	(25.1-29.9)
75 +	36.4	(33.1-39.9)
Gender		
Male	25.2	(23.6-26.9)
Female	29.2	(27.6-30.8)
Race/Ethnicity		
White, non-Hispanic	25.7	(24.5-26.9)
Black, non-Hispanic	35.2	(31.5-39.0)
Other, non-Hispanic	27.2	(21.8-33.3)
Hispanic	32.5	(25.2-40.7)
Household Income		
< $20,000	35.6	(32.4-38.9)
$20,000 - $34,999	35.1	(32.0-38.3)
$35,000 - $49,999	27.0	(24.0-30.2)
$50,000 - $74,999	25.6	(22.7-28.7)
≥ $75,000	17.0	(15.3-18.8)
Health Insurance		
Insured	26.5	(25.3-27.6)
Uninsured	36.9	(31.9-42.2)
Disability Status		
No disabilities	22.4	(21.2-23.8)
Adults with disabilities	40.6	(38.3-43.0)

[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.
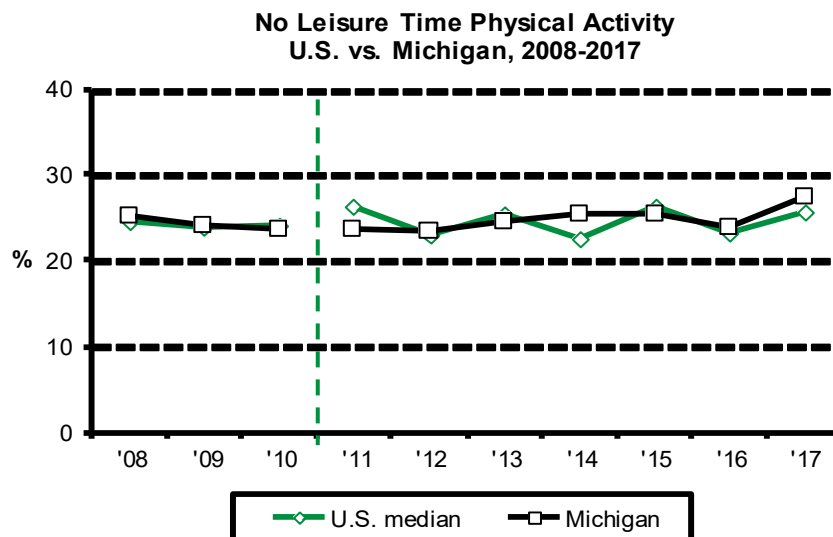
No Leisure Time Physical Activity
U.S. vs. Michigan, 2008-2017

Legend: U.S. median, Michigan
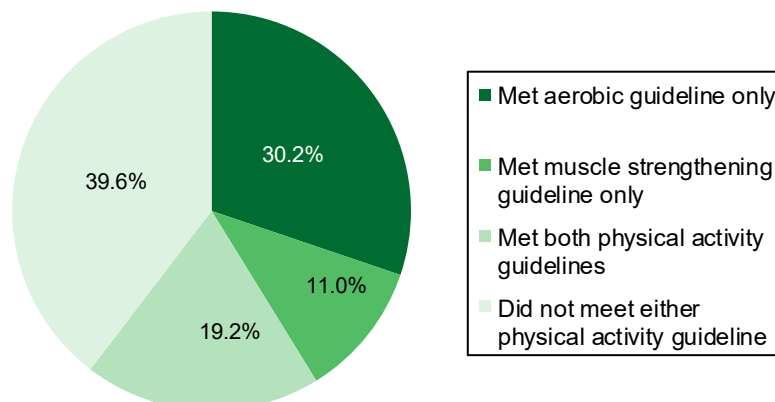
Adequate Physical Activity

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 2017, an estimated 19.2% 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 (12.3%) were less likely to have reported adequate physical activity than adults without disabilities (21.7%).

♦ Michigan is currently above the HP 2020 targets for the aerobic (MI: 49.5% vs. HP 2020: 47.9%) and muscle strengthening (MI: 30.0% vs. HP 2020: 24.1%) components, but below the combined aerobic and muscle strengthening target (MI: 19.2% vs. HP 2020: 20.1%).[7]

♦ 60.4% of Michigan adults reported participating in at least one component of the physical activity guidelines (Aerobic only = 30.2%; Muscle strengthening only = 11.0%; Both aerobic and muscle strengthening = 19.2%).

Demographic Characteristics	Adequate Physical Activity[a]	
	%	95% Confidence Interval
Total	**19.2**	**(18.2-20.2)**
Age		
18 - 24	28.8	(24.9-32.9)
25 - 34	21.6	(18.8-24.7)
35 - 44	17.8	(15.1-20.9)
45 - 54	18.0	(15.9-20.4)
55 - 64	15.1	(13.3-17.0)
65 - 74	18.1	(16.2-20.1)
75 +	15.7	(13.5-18.2)
Gender		
Male	21.3	(19.8-22.9)
Female	17.1	(15.8-18.4)
Race/Ethnicity		
White, non-Hispanic	18.8	(17.8-20.0)
Black, non-Hispanic	19.7	(16.6-23.4)
Other, non-Hispanic	21.1	(16.4-26.7)
Hispanic	18.7	(13.7-25.0)
Household Income		
< $20,000	14.4	(11.9-17.3)
$20,000 - $34,999	13.8	(11.8-16.2)
$35,000 - $49,999	17.5	(14.9-20.3)
$50,000 - $74,999	18.6	(16.1-21.4)
≥ $75,000	25.6	(23.6-27.7)
Health Insurance		
Insured	19.0	(18.0-20.1)
Uninsured	18.5	(14.7-23.0)
Disability Status		
No disabilities	21.7	(20.4-23.0)
Adults with disabilities	12.3	(10.8-13.9)

[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, 2017

- Met aerobic guideline only
- Met muscle strengthening guideline only
- Met both physical activity guidelines
- Did not meet either physical activity guideline

30.2%
11.0%
19.2%
39.6%

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.

Fruit and Vegetable Consumption

A healthy diet rich in fruits and vegetables may reduce the risk of cancer and other chronic conditions.[13] In 2017, 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 2017, an estimated 59% of Michigan adults reported consuming at least one fruit per day, while 74.3% 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 fruit (60.3%) or vegetable (76.7%) per day than Black, non-Hispanic adults (51.4% and 64.1%, respectively).

♦ Those with no disabilities were significantly more likely to consume at least one fruit or 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	59.0	(57.8-60.2)	74.3	(73.2-75.4)
Age				
18 - 24	56.6	(52.5-60.6)	64.6	(60.6-68.5)
25 - 34	56.7	(53.2-60.2)	75.0	(71.8-78.0)
35 - 44	59.0	(55.5-62.5)	75.4	(72.2-78.4)
45 - 54	55.9	(53.0-58.8)	76.4	(73.7-78.9)
55 - 64	59.7	(57.2-62.2)	76.5	(74.3-78.6)
65 - 74	61.9	(59.4-64.4)	77.8	(75.5-80.0)
75 +	68.1	(64.9-71.1)	73.2	(70.0-76.2)
Gender				
Male	55.8	(54.0-57.6)	71.2	(69.5-72.9)
Female	62.2	(60.5-63.7)	77.2	(75.8-78.6)
Race/Ethnicity				
White, non-Hispanic	60.3	(59.0-61.7)	76.7	(75.5-77.8)
Black, non-Hispanic	51.4	(47.7-55.1)	64.1	(60.4-67.6)
Other, non-Hispanic	56.7	(50.8-62.4)	71.6	(66.0-76.5)
Hispanic	60.6	(53.2-67.5)	68.7	(61.4-75.2)
Household Income				
< $20,000	50.9	(47.6-54.2)	65.5	(62.2-68.6)
$20,000 - $34,999	55.5	(52.4-58.6)	72.6	(69.6-75.4)
$35,000 - $49,999	60.2	(56.8-63.5)	78.0	(75.0-80.7)
$50,000 - $74,999	64.0	(60.7-67.3)	79.4	(76.3-82.2)
≥ $75,000	66.7	(64.5-68.8)	83.2	(81.3-84.8)
Health Insurance				
Insured	59.6	(58.3-60.8)	74.9	(73.8-76.0)
Uninsured	53.3	(48.4-58.1)	68.2	(63.4-72.7)
Disability Status				
No disabilities	62.6	(61.2-64.0)	78.1	(76.8-79.3)
Adults with disabilities	56.3	(53.9-58.6)	71.7	(69.5-73.8)

[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.

Fruit and Vegetable Consumption by Gender Michigan, 2017
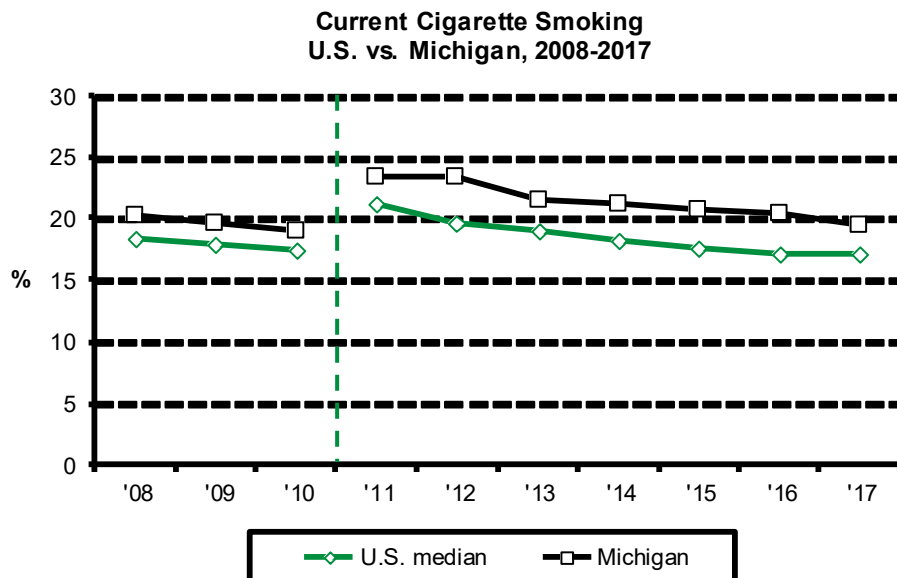
Due to Fruit and Vegetable Module methodology changes that took place in 2017, BRFSS estimates from 2017 and moving forward cannot be compared to BRFSS estimates from 2015 and earlier (Fruit and Vegetable Module data are collected in odd years).

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 2017, an estimated 19.4% 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 (17.1%).

- Current smoking prevalence was highest among adults aged 35-44, and lower among both the oldest and youngest age groups.

- Current smoking decreased with both increasing household income level.

- Males (22.0%) reported a higher prevalence of current smoking than females (17.0%).

- Adults with disabilities (25.5%) were more likely to have reported current smoking than adults without disabilities (17.0%).

- Uninsured adults (34.2%) were more likely to have reported current smoking than insured adults (18.2%).

- 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 7.4 percentage points during the next three years.[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 four percentage points since 2011.

Demographic Characteristics	Current Smoking[a]	
	%	95% Confidence Interval
Total	**19.4**	**(18.4-20.5)**
Age		
18 - 24	12.6	(10.0-15.8)
25 - 34	25.3	(22.3-28.6)
35 - 44	26.8	(23.6-30.3)
45 - 54	22.5	(20.1-25.2)
55 - 64	22.7	(20.6-25.1)
65 - 74	13.1	(11.3-15.1)
75 +	4.5	(3.4-6.0)
Gender		
Male	22.0	(20.4-23.6)
Female	17.0	(15.7-18.4)
Race/Ethnicity		
White, non-Hispanic	19.1	(18.0-20.3)
Black, non-Hispanic	22.1	(19.1-25.5)
Other, non-Hispanic	24.3	(19.3-30.1)
Hispanic	16.3	(11.3-23.0)
Household Income		
< $20,000	35.9	(32.7-39.2)
$20,000 - $34,999	24.7	(21.9-27.7)
$35,000 - $49,999	22.2	(19.3-25.5)
$50,000 - $74,999	15.3	(12.9-18.1)
≥ $75,000	10.1	(8.7-11.6)
Health Insurance		
Insured	18.2	(17.2-19.2)
Uninsured	34.2	(29.5-39.3)
Disability Status		
No disabilities	17.0	(15.8-18.2)
Adults with disabilities	25.5	(23.5-27.7)

[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, 2008-2017

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.
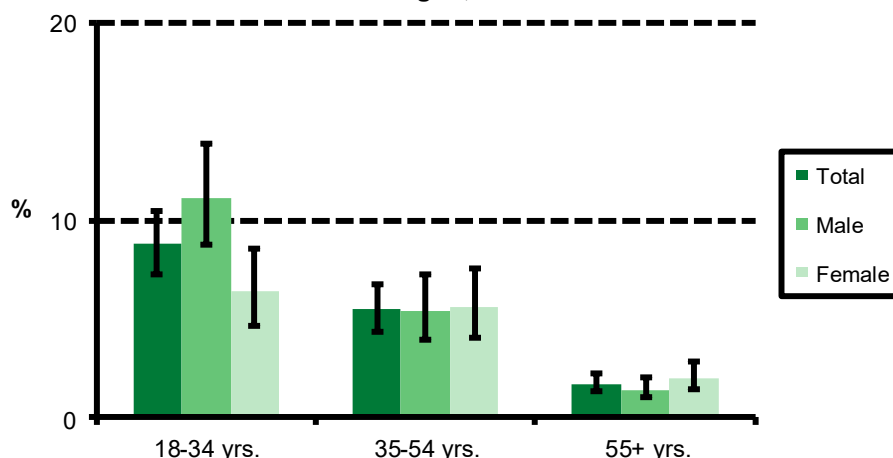
E-Cigarette Use

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 2017, an estimated 4.9% of Michigan adults reported that they currently smoke cigarettes on a regular basis. The prevalence of current e-cigarette use among Michigan adults was comparable to the U.S. median prevalence (4.6%).

♦ Current e-cigarette use was highest among the 18-24 year old age group (12.7%).

♦ Current e-cigarette use decreased with increasing household income level.

♦ Among current smokers, the prevalence of e-cigarette use is 12.2% (10.1-14.3), compared to 5.3% (4.1-6.8) among former smokers and 2.1% (1.6-2.8) among never smokers.

♦ Males aged 18-34 years had the highest prevalence of current e-cigarette use (11.1%), while males aged 55 years or older had the lowest prevalence (1.4%).

Demographic Characteristics	Current E-Cigarette Use[a]	
	%	95% Confidence Interval
Total	**4.9**	**(4.3-5.6)**
Age		
18 - 24	12.7	(10.2-15.8)
25 - 34	5.6	(4.1-7.6)
35 - 44	6.6	(4.8-8.9)
45 - 54	4.4	(3.2-5.9)
55 - 64	2.4	(1.7-3.3)
65 - 74	1.8	(1.2-2.7)
75 +	--[b]	--[b]
Gender		
Male	5.6	(4.7-6.6)
Female	4.3	(3.6-5.2)
Race/Ethnicity		
White, non-Hispanic	5.0	(4.4-5.8)
Black, non-Hispanic	3.7	(2.2-6.0)
Other, non-Hispanic	6.8	(4.3-10.7)
Hispanic	--[b]	--[b]
Household Income		
< $20,000	7.4	(5.6-9.8)
$20,000 - $34,999	5.7	(4.2-7.6)
$35,000 - $49,999	4.1	(2.9-5.7)
$50,000 - $74,999	5.0	(3.6-6.9)
≥ $75,000	3.8	(2.9-5.1)
Health Insurance		
Insured	4.8	(4.2-5.5)
Uninsured	6.0	(4.0-8.9)
Disability Status		
No disabilities	4.7	(4.0-5.4)
Adults with disabilities	5.8	(4.6-7.2)

[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. (N = 10,514)
[b] Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

Current E-Cigarette Use by Age and Gender
Michigan, 2017

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.

12

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]
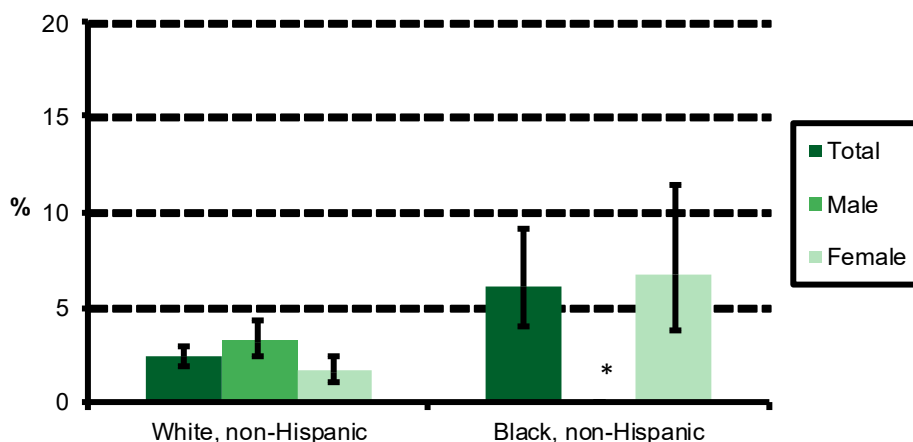
♦ In 2017, an estimated 2.9% of Michigan adults reported that they smoked tobacco using a hookah on one or more days out of the previous month.

♦ Current hookah use was highest among the 18-24 year old age group (7.5%).

♦ Males (3.5%) were more likely to report current hookah use than females (2.4%).

♦ Current hookah use decreased with increasing household income level.

Demographic Characteristics	Current Hookah Use[a]	
	%	95% Confidence Interval
Total	**2.9**	**(2.4-3.6)**
Age		
18 - 24	7.5	(5.3-10.7)
25 - 34	5.0	(3.3-7.5)
35 - 44	3.7	(2.2-6.0)
45 - 54	--[b]	--[b]
55 - 64	1.4	(0.8-2.4)
65 - 74	--[b]	--[b]
75 +	--[b]	--[b]
Gender		
Male	3.5	(2.7-4.5)
Female	2.4	(1.8-3.2)
Race/Ethnicity		
White, non-Hispanic	2.4	(1.9-3.0)
Black, non-Hispanic	6.1	(4.0-9.2)
Other, non-Hispanic	--[b]	--[b]
Hispanic	--[b]	--[b]
Household Income		
< $20,000	5.1	(3.4-7.5)
$20,000 - $34,999	3.7	(2.4-5.8)
$35,000 - $49,999	--[b]	--[b]
$50,000 - $74,999	3.7	(2.2-6.1)
≥ $75,000	1.9	(1.3-2.9)
Health Insurance		
Insured	2.7	(2.1-3.3)
Uninsured	6.3	(3.7-10.4)
Disability Status		
No disabilities	3.1	(2.4-3.8)
Adults with disabilities	2.5	(1.7-3.7)

[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, 2017

*Suppressed due to a denominator of < 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.
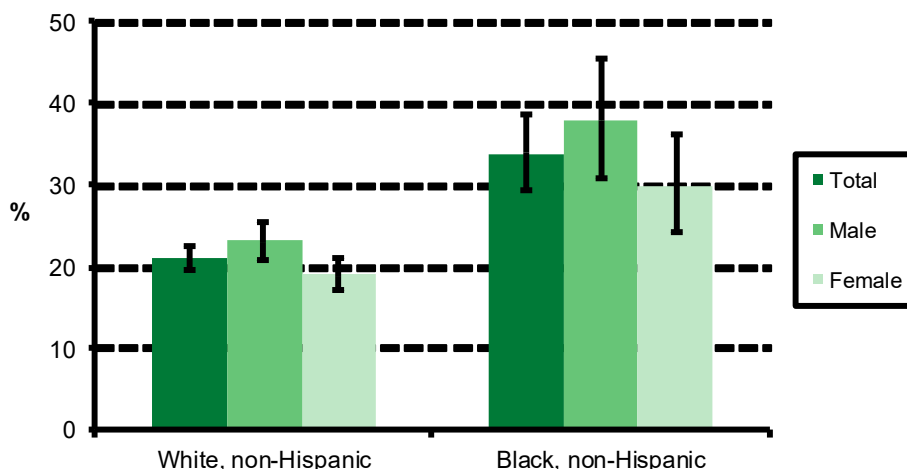
Secondhand Smoke Exposure

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 2017, an estimated 22.6% 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.

- Males (24.8%) were more likely than females (20.4%) to report secondhand smoke exposure.

- Black, non-Hispanic adults (33.8%) reported a significantly higher prevalence of secondhand smoke exposure than White, non-Hispanic adults (21.1%) and Hispanic adults (18.5%).

- Uninsured adults and adults with disabilities (37.9% and 27.3%, respectively) were more likely to have reported recent secondhand smoke exposure than insured adults and adults without disabilities (21.4% and 20.8%, respectively).

- White, non-Hispanic females reported the lowest prevalence of recent secondhand smoke exposure at 19.0%, while Black, non-Hispanic males reported the highest prevalence (37.9%).

Demographic Characteristics	Secondhand Smoke Exposure[a]	
	%	95% Confidence Interval
Total	**22.6**	**(21.2-24.0)**
Age		
18 - 24	34.2	(29.3-39.4)
25 - 34	31.8	(27.6-36.3)
35 - 44	22.2	(18.6-26.3)
45 - 54	23.1	(20.0-26.5)
55 - 64	21.8	(19.1-24.7)
65 - 74	13.4	(11.1-16.0)
75 +	7.1	(5.0-10.0)
Gender		
Male	24.8	(22.7-26.9)
Female	20.4	(18.7-22.3)
Race/Ethnicity		
White, non-Hispanic	21.1	(19.6-22.6)
Black, non-Hispanic	33.8	(29.2-38.7)
Other, non-Hispanic	24.0	(18.0-31.2)
Hispanic	18.5	(12.3-26.8)
Household Income		
< $20,000	43.3	(39.0-47.7)
$20,000 - $34,999	30.1	(26.5-34.0)
$35,000 - $49,999	24.0	(20.4-28.0)
$50,000 - $74,999	19.7	(16.3-23.7)
≥ $75,000	11.0	(9.2-13.0)
Health Insurance		
Insured	21.4	(20.0-22.8)
Uninsured	37.9	(31.7-44.6)
Disability Status		
No disabilities	20.8	(19.3-22.5)
Adults with disabilities	27.3	(24.7-30.0)

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

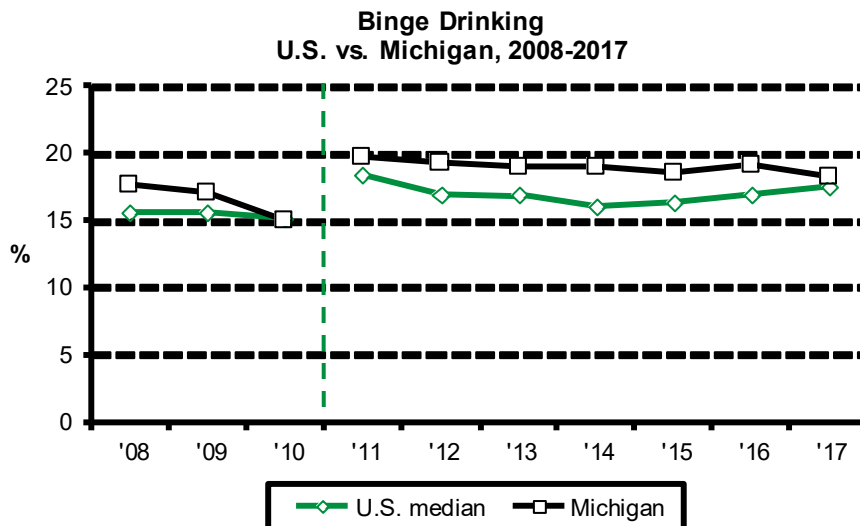**Secondhand Smoke Exposure by Race and Gender Michigan, 2017**

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.

14

Alcohol Consumption

Excessive alcohol use contributes to approximately 88,000 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 2017, an estimated 57.9% (95% CI: 56.7-59.1) of Michigan adults reported some form of alcohol consumption within the past month. Furthermore, an estimated 18.2% of Michigan adults reported binge drinking on at least one occasion within the past month, and 6.7% (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 (29.0%), followed by the 18-24 year old (27.6%) and 35-44 year old (21.9%) age groups.

♦ Males (23.4%) reported a significantly higher prevalence of binge drinking than females (13.2%).

♦ Adults with disabilities (12.3%) reported a significantly lower prevalence of binge drinking than adults without disabilities (20.0%).

♦ 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 (17.4%).

Demographic Characteristics	Binge Drinking[a]	
	%	95% Confidence Interval
Total	**18.2**	**(17.2-19.2)**
Age		
18 - 24	27.6	(24.1-31.4)
25 - 34	29.0	(25.9-32.4)
35 - 44	21.9	(19.0-25.1)
45 - 54	18.6	(16.4-21.1)
55 - 64	13.0	(11.3-14.8)
65 - 74	8.2	(6.8-9.9)
75 +	3.2	(2.2-4.5)
Gender		
Male	23.4	(21.9-25.1)
Female	13.2	(12.0-14.4)
Race/Ethnicity		
White, non-Hispanic	19.0	(17.9-20.2)
Black, non-Hispanic	16.1	(13.3-19.5)
Other, non-Hispanic	13.9	(10.5-18.2)
Hispanic	15.8	(11.5-21.4)
Household Income		
< $20,000	16.4	(13.9-19.3)
$20,000 - $34,999	14.9	(12.7-17.4)
$35,000 - $49,999	15.5	(13.0-18.3)
$50,000 - $74,999	19.4	(16.7-22.3)
≥ $75,000	25.2	(23.2-27.3)
Health Insurance		
Insured	18.2	(17.1-19.2)
Uninsured	19.4	(15.7-23.8)
Disability Status		
No disabilities	20.0	(18.7-21.2)
Adults with disabilities	12.3	(10.8-14.0)

[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.

Binge Drinking
U.S. vs. Michigan, 2008-2017

Legend: U.S. median, Michigan

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.

Motor Vehicle Safety

Seatbelt use has been proven to save lives and prevent injuries. In 2017, 23,551 people died in the U.S. in motor vehicle traffic crashes, of which only 48.0% were restrained. In 2017, seat belts saved an estimated 14,955 lives among motor vehicle occupants 5 years of age and older within the United States.[18,19]

♦ In 2017, an estimated 89.8% of Michigan adults reported always using their seat belt when driving or riding in a car.

♦ Seatbelt use increased slightly with age and with increasing household income.

♦ Males reported a significantly lower prevalence of seatbelt use (86.8% vs. 92.7%) compared to females.

♦ The prevalence of seatbelt use is significantly lower in Black, non-Hispanic adults (86.1%) than in White, non-Hispanic adults (90.1%).

♦ Adults with health insurance (90.3%) were more likely than uninsured adults (84.3%) to always wear their seatbelt.

♦ The prevalence of seatbelt use among Michigan adults has remained steady since the BRFSS methodology changes in 2011, and is consistently higher among females than males.

Demographic Characteristics	Always Uses a Seatbelt[a]	
	%	95% Confidence Interval
Total	**89.8**	**(88.9-90.6)**
Age		
18 - 24	76.4	(72.3-80.0)
25 - 34	87.5	(84.9-89.7)
35 - 44	89.0	(86.1-91.3)
45 - 54	93.8	(92.1-95.1)
55 - 64	93.5	(92.0-94.7)
65 - 74	92.9	(91.4-94.2)
75 +	94.5	(92.6-96.0)
Gender		
Male	86.8	(85.3-88.1)
Female	92.7	(91.6-93.6)
Race/Ethnicity		
White, non-Hispanic	90.1	(89.2-91.0)
Black, non-Hispanic	86.1	(82.8-88.7)
Other, non-Hispanic	91.3	(87.8-93.9)
Hispanic	90.5	(84.3-94.4)
Household Income		
< $20,000	86.6	(84.0-88.8)
$20,000 - $34,999	88.7	(86.2-90.7)
$35,000 - $49,999	90.3	(87.7-92.3)
$50,000 - $74,999	90.8	(88.4-92.8)
≥ $75,000	91.1	(89.4-92.5)
Health Insurance		
Insured	90.3	(89.4-91.1)
Uninsured	84.3	(79.9-87.9)
Disability Status		
No disabilities	89.2	(88.1-90.2)
Adults with disabilities	91.4	(89.9-92.7)

[a] Among all adults, the proportion reporting that they always used a seatbelt within driving or riding in a car.
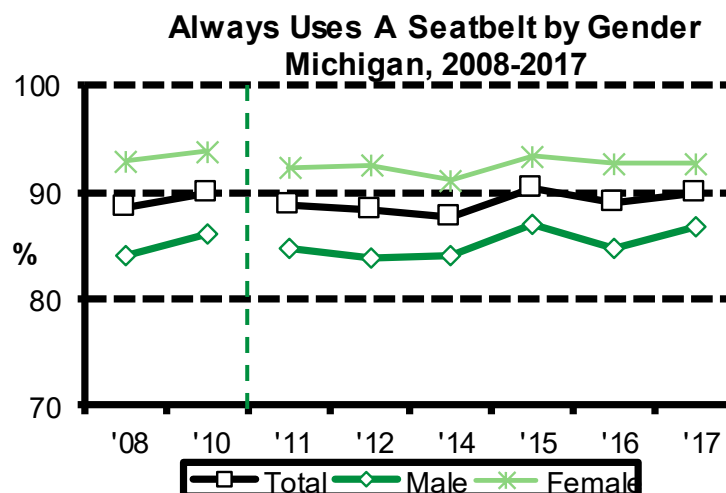
Always Uses A Seatbelt by Gender Michigan, 2008-2017

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.

16

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.[20]

♦ In 2017, an estimated 34.8% of Michigan adults reported ever being told by a doctor that they had high blood pressure (HBP). Furthermore, 76.9% (95% CI: 75.1-78.6) 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 (37.5%) than females (32.2%)

♦ Among those with HBP, males (71.6% [95%CI: 68.9-74.1]) reported a significantly lower prevalence of HBP medication use than females (82.7% [95% CI: 80.3-84.8]).

♦ Black, non-Hispanic adults (44.9%) reported a significantly higher prevalence of high blood pressure than both White, non-Hispanic (34.2%) and Hispanic adults (23.5%).

♦ Adults with disabilities (54.4%) were more likely to have reported high blood pressure than adults without disabilities (28.1%), and insured adults (35.7%) were more likely to have reported high blood pressure than uninsured adults (25.5%).

♦ Insured adults with HBP (79.0% [95% CI: 77.2-80.6]) were more likely to report current HBP medication use than uninsured adults with HBP (45.2% [95% CI: 36.3-54.3]).

♦ In 2017, the prevalence of high blood pressure in Michigan (34.8%) was higher than the U.S. median prevalence (32.3%).

Demographic Characteristics	Ever Told HBP[a]	
	%	95% Confidence Interval
Total	**34.8**	**(33.7-35.9)**
Age		
18 - 24	8.5	(6.5-11.0)
25 - 34	15.3	(12.9-18.1)
35 - 44	21.3	(18.6-24.3)
45 - 54	34.3	(31.5-37.2)
55 - 64	48.8	(46.2-51.3)
65 - 74	60.3	(57.8-62.8)
75 +	66.2	(63.0-69.2)
Gender		
Male	37.5	(35.8-39.2)
Female	32.2	(30.8-33.7)
Race/Ethnicity		
White, non-Hispanic	34.2	(33.0-35.5)
Black, non-Hispanic	44.9	(41.2-48.5)
Other, non-Hispanic	24.7	(20.0-30.1)
Hispanic	23.5	(18.2-29.8)
Household Income		
< $20,000	45.0	(41.7-48.3)
$20,000 - $34,999	41.2	(38.2-44.2)
$35,000 - $49,999	36.0	(32.9-39.2)
$50,000 - $74,999	33.3	(30.4-36.4)
≥ $75,000	25.9	(24.1-27.7)
Health Insurance		
Insured	35.7	(34.5-36.8)
Uninsured	25.5	(21.5-29.9)
Disability Status		
No disabilities	28.1	(26.8-29.3)
Adults with disabilities	54.4	(52.0-56.7)

[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.
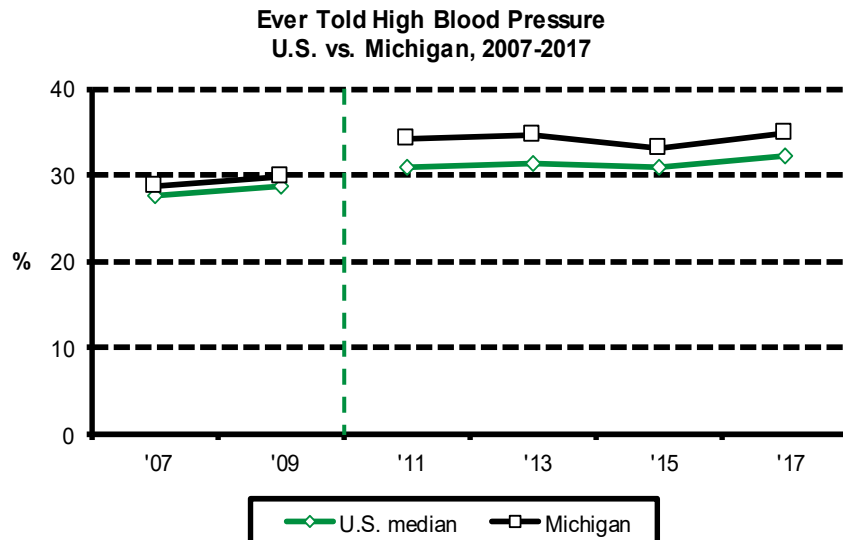
Ever Told High Blood Pressure
U.S. vs. Michigan, 2007-2017

Legend: U.S. median, Michigan

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.[21]

♦ In 2017, an estimated 73.5% 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 (69.7%) reported a significantly lower prevalence of having a routine checkup within the past year than females (77.0%).

♦ White, non-Hispanic adults (72.9%) and Hispanic adults (68.4%) reported a significantly lower prevalence of having had a routine checkup within the past year than did Black, non-Hispanic adults (81.1%).

♦ Insured adults and adults with disabilities (76.0% and 79.7%, respectively) were more likely to have had a routine checkup within the past year than uninsured adults and adults without disabilities (45.4% and 71.3%, 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 (62.4%) when compared to those who had not had a routine checkup within the past year (47.5%).

Demographic Characteristics	Had a Routine Checkup Within The Past Year[a]	
	%	95% Confidence Interval
Total	**73.5**	**(72.3-74.6)**
Age		
18 - 24	62.8	(58.7-66.8)
25 - 34	61.1	(57.7-64.5)
35 - 44	65.5	(62.0-68.8)
45 - 54	75.4	(72.7-77.8)
55 - 64	79.6	(77.4-81.6)
65 - 74	85.4	(83.4-87.1)
75 +	89.8	(87.5-91.7)
Gender		
Male	69.7	(67.9-71.4)
Female	77.0	(75.5-78.4)
Race/Ethnicity		
White, non-Hispanic	72.9	(71.6-74.1)
Black, non-Hispanic	81.1	(78.0-83.9)
Other, non-Hispanic	66.9	(61.0-72.3)
Hispanic	68.4	(60.9-75.1)
Household Income		
< $20,000	75.4	(72.3-78.2)
$20,000 - $34,999	72.5	(69.4-75.3)
$35,000 - $49,999	72.3	(69.1-75.4)
$50,000 - $74,999	71.0	(67.6-74.1)
≥ $75,000	73.7	(71.6-75.7)
Health Insurance		
Insured	76.0	(74.9-77.1)
Uninsured	45.4	(40.5-50.3)
Disability Status		
No disabilities	71.3	(69.9-72.7)
Adults with disabilities	79.7	(77.5-81.6)

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

Immunizations by Routine Checkup Status
Michigan, 2017
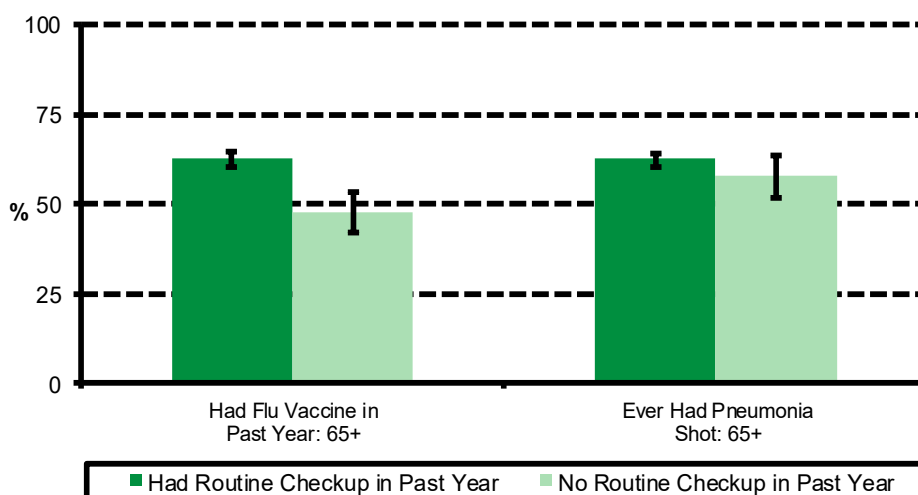
Legend: ■ Had Routine Checkup in Past Year ■ No Routine Checkup in Past Year

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.

18

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.[22]

♦ In 2017, an estimated 89.3% 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 35.0% 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 (91.4%) were more likely than males (87.0%) to have had a cholesterol screening within the past five years, but reported similar high cholesterol prevalence estimates.

♦ White, non-Hispanic adults (36.2%) and Black, non-Hispanic adults (35.2%) both reported a significantly higher prevalence of high cholesterol than Hispanic adults.

♦ Insured adults and adults with disabilities (36.2% and 49.4%, respectively) were more likely to have been diagnosed with high cholesterol than uninsured adults and adults without disabilities (20.2% and 30.1%, 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 2017, the prevalence of high cholesterol among Michigan adults (35.0%) was slightly higher than the U.S. median prevalence (33.0%).

Demographic Characteristics	Cholesterol Checked Within the Past 5 Years[a]		Ever Told High Cholesterol[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**89.3**	**(88.4-90.1)**	**35.0**	**(33.9-36.2)**
Age				
18 - 24	70.5	(66.3-74.5)	8.3	(5.3-12.7)
25 - 34	80.5	(77.4-83.3)	12.8	(10.3-15.7)
35 - 44	88.0	(85.4-90.1)	21.1	(18.2-24.3)
45 - 54	93.6	(91.9-95.0)	33.9	(31.1-36.8)
55 - 64	93.7	(92.2-94.9)	48.3	(45.7-50.8)
65 - 74	97.8	(96.9-98.4)	57.2	(54.6-59.8)
75 +	97.7	(96.6-98.4)	54.0	(50.6-57.3)
Gender				
Male	87.0	(85.6-88.2)	36.8	(35.0-38.6)
Female	91.4	(90.3-92.4)	33.4	(31.8-34.9)
Race/Ethnicity				
White, non-Hispanic	89.4	(88.4-90.3)	36.2	(34.9-37.6)
Black, non-Hispanic	91.8	(89.5-93.6)	35.2	(31.6-39.0)
Other, non-Hispanic	82.8	(77.1-87.3)	25.1	(19.9-31.1)
Hispanic	87.3	(80.9-91.8)	23.7	(18.4-30.0)
Household Income				
< $20,000	88.7	(86.3-90.8)	42.4	(38.9-45.9)
$20,000 - $34,999	88.1	(85.6-90.2)	37.6	(34.6-40.8)
$35,000 - $49,999	86.8	(83.9-89.1)	35.8	(32.6-39.2)
$50,000 - $74,999	90.9	(88.7-92.7)	35.9	(32.7-39.3)
≥ $75,000	91.5	(90.0-92.8)	30.2	(28.2-32.2)
Health Insurance				
Insured	91.1	(90.3-91.9)	36.2	(35.0-37.4)
Uninsured	68.7	(63.8-73.2)	20.2	(16.4-24.5)
Disability Status				
No disabilities	87.7	(86.6-88.8)	30.1	(28.7-31.5)
Adults with disabilities	93.5	(92.1-94.6)	49.4	(47.0-51.9)

[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.
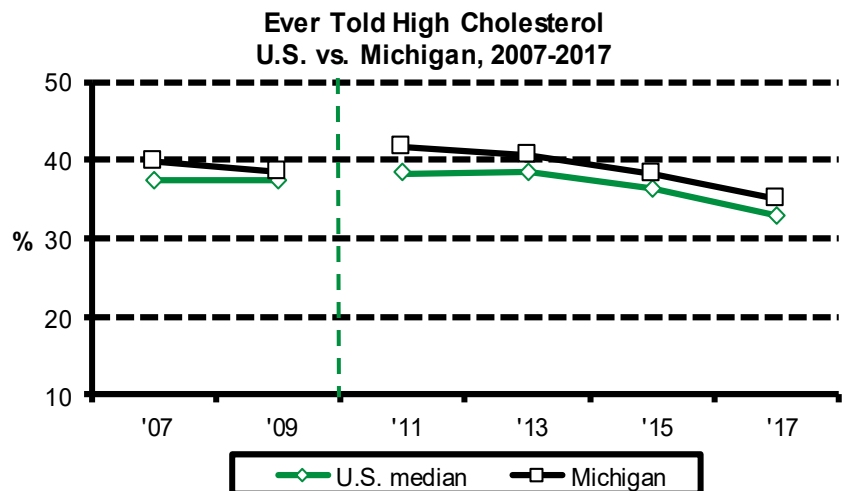
Ever Told High Cholesterol
U.S. vs. Michigan, 2007-2017

Legend: ◇ U.S. median □ Michigan

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.

Colorectal Cancer Screening

In 2016, colorectal cancer was the second leading cause of cancer-related deaths in Michigan with 1,742 deaths.[23] Fecal occult blood tests, sigmoidoscopy, and colonoscopy are screening procedures that are performed to detect colorectal cancer in the early stages. Appropriate colorectal cancer screening consists of a fecal occult blood test within the past year, a sigmoidoscopy within the past five years, or a colonoscopy within the past ten years.

♦ In 2017, an estimated 69.4% of Michigan adults aged 50 years and older reported having a sigmoidoscopy or colonoscopy within the past five years, while 72.8% reported appropriate colorectal cancer screening.

♦ The prevalence of appropriate colorectal cancer screening was similar by gender, but increased with household income level.

♦ The prevalence of appropriate colorectal cancer screening was lower among Black, non-Hispanic adults (66.1%) compared to White, non-Hispanic adults (74.1%).

♦ Insured adults (74.2%) were more likely than uninsured adults (45.5%) to have reported receiving appropriate colorectal cancer screening.

♦ The prevalence of appropriate colorectal cancer screening among Michigan adults 50 years and older has remained stable since the 2011 BRFSS methodology changes.

Demographic Characteristics	Had Sigmoidoscopy or Colonoscopy in Past 5 Years[a]		Had Appropriate Colorectal Cancer Screening[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	69.4	(67.9-70.9)	72.8	(71.4-74.3)
Age				
50 - 59	61.1	(58.3-63.9)	64.5	(61.7-67.2)
60 - 69	75.2	(72.9-77.4)	78.7	(76.4-80.8)
70 +	73.1	(70.6-75.4)	76.5	(74.1-78.7)
Gender				
Male	70.1	(67.8-72.3)	72.7	(70.5-74.9)
Female	68.9	(66.8-70.8)	72.9	(71.0-74.8)
Race/Ethnicity				
White, non-Hispanic	70.9	(69.3-72.4)	74.1	(72.5-75.6)
Black, non-Hispanic	61.5	(56.0-66.7)	66.1	(60.7-71.1)
Other, non-Hispanic	61.6	(51.0-71.2)	66.8	(56.2-75.9)
Hispanic	60.6	(46.9-72.8)	62.9	(49.1-74.9)
Household Income				
< $20,000	59.9	(55.4-64.3)	66.0	(61.7-70.2)
$20,000 - $34,999	65.5	(61.8-69.1)	69.7	(66.0-73.1)
$35,000 - $49,999	69.7	(65.4-73.6)	73.4	(69.3-77.2)
$50,000 - $74,999	74.7	(70.7-78.2)	76.2	(72.3-79.6)
≥ $75,000	77.6	(75.0-80.0)	79.7	(77.2-82.1)
Health Insurance				
Insured	70.9	(69.4-72.4)	74.2	(72.7-75.6)
Uninsured	40.3	(32.7-48.4)	45.5	(37.6-53.6)
Disability Status				
No disabilities	69.3	(67.5-71.1)	72.2	(70.4-74.0)
Adults with disabilities	69.8	(67.2-72.2)	74.0	(71.5-76.4)

[a] Among adults aged 50 years and older, the proportion reporting having a sigmoidoscopy or colonoscopy within the past five years.
[b] Among adults aged 50 years and older, the proportion reporting having a fecal occult blood test within the past year, a sigmoidoscopy within the past five years, or a colonoscopy within the past ten years.

Appropriate Colorectal Cancer Screening Among Adults Aged 50 Years and Older Michigan, 2004-2017
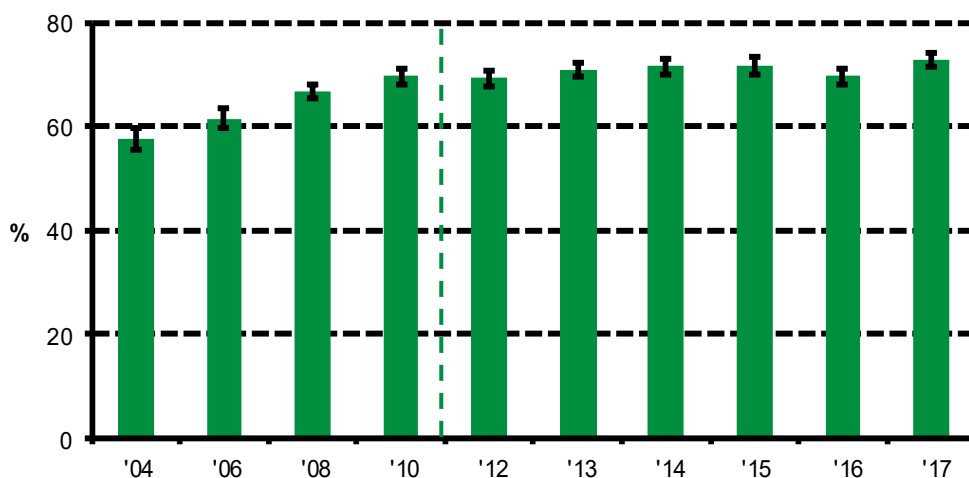
Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

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.[24]

- In 2017, an estimated 60.3% of Michigan adults ages 65 years and older reported receiving a flu vaccine within the past year, while an estimated 75.8% of this population reported ever receiving a pneumonia vaccine.

- The prevalence of having a flu vaccine in the past year and ever having a pneumonia vaccine was similar by gender for both indicators.

- White, non-Hispanic adults (61.2% and 76.7%, respectively) were more likely than Black, non-Hispanic adults (50.8% and 65.6%, respectively) to have had a flu vaccine in the past year and to ever have received a pneumonia vaccine.

- Adults with disabilities (64.3% and 80.0%, respectively) were more likely to have had a flu vaccine the past year and to ever have received a pneumonia vaccine than adults without disabilities (58.0% and 73.0%, respectively).

Demographic Characteristics	Had Flu Vaccine in Past Year[a]		Ever Had Pneumonia Vaccine[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**60.3**	**(58.2-62.3)**	**75.8**	**(73.9-77.6)**
Age				
65 - 74	56.9	(54.3-59.5)	72.1	(69.6-74.4)
75 +	65.1	(61.9-68.2)	81.1	(78.3-83.6)
Gender				
Male	61.2	(58.0-64.3)	73.2	(70.2-76.1)
Female	59.6	(56.9-62.2)	77.9	(75.6-80.0)
Race/Ethnicity				
White, non-Hispanic	61.2	(59.0-63.3)	76.7	(74.8-78.6)
Black, non-Hispanic	50.8	(43.0-58.7)	65.6	(57.8-72.6)
Other, non-Hispanic	66.5	(52.0-78.4)	75.5	(59.7-86.5)
Hispanic	--[c]	--[c]	--[c]	--[c]
Household Income				
< $20,000	57.2	(51.0-63.3)	68.1	(61.9-73.7)
$20,000 - $34,999	58.2	(53.8-62.6)	75.0	(70.9-78.7)
$35,000 - $49,999	58.9	(53.7-63.9)	76.8	(71.9-81.1)
$50,000 - $74,999	66.6	(61.4-71.4)	79.8	(75.1-83.8)
≥ $75,000	66.4	(61.7-70.7)	77.1	(72.8-80.9)
Disability Status				
No disabilities	58.0	(55.3-60.5)	73.0	(70.5-75.3)
Adults with disabilities	64.3	(61.0-67.5)	80.0	(77.1-82.7)

[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, 2008-2017
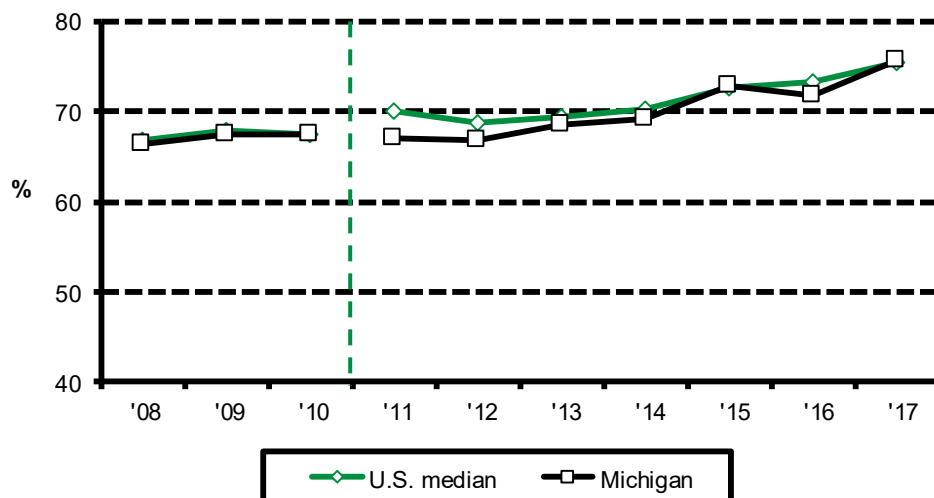
Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.

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.[25]

- In 2017, an estimated 45.5% of Michigan adults reported ever being tested for HIV.

- Females (49.9%) reported a significantly higher prevalence of HIV testing than males (41.0%).

- Black, non-Hispanic adults (72.1%) reported a significantly higher prevalence of HIV testing than both White, non-Hispanic (41.1%) and Hispanic adults (38.8%).

- The prevalence of HIV testing decreased with increasing household income level.

- Adults with disabilities (53.7%) were more likely to have been tested for HIV than adults without disabilities (42.7%).

- Since the BRFSS methodology changes that were implemented in 2011, the prevalence of HIV testing among Michigan adult has remained stable over time.

Demographic Characteristics	Ever Had an HIV Test[a]	
	%	95% Confidence Interval
Total	**45.5**	**(43.9-47.0)**
Age		
18 - 24	30.1	(26.3-34.3)
25 - 34	56.6	(52.9-60.3)
35 - 44	58.6	(54.8-62.2)
45 - 54	50.8	(47.7-53.9)
55 - 64	31.4	(28.9-33.9)
Gender		
Male	41.0	(38.8-43.2)
Female	49.9	(47.8-52.0)
Race/Ethnicity		
White, non-Hispanic	41.1	(39.4-42.8)
Black, non-Hispanic	72.1	(68.0-75.8)
Other, non-Hispanic	45.3	(38.7-52.1)
Hispanic	38.8	(31.3-46.9)
Household Income		
< $20,000	56.9	(52.8-60.9)
$20,000 - $34,999	46.6	(42.4-51.0)
$35,000 - $49,999	44.4	(39.9-48.9)
$50,000 - $74,999	43.8	(39.8-48.0)
≥ $75,000	42.5	(40.0-45.1)
Health Insurance		
Insured	45.8	(44.2-47.4)
Uninsured	45.0	(39.5-50.7)
Disability Status		
No disabilities	42.7	(41.0-44.5)
Adults with disabilities	53.7	(50.5-56.9)

[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.
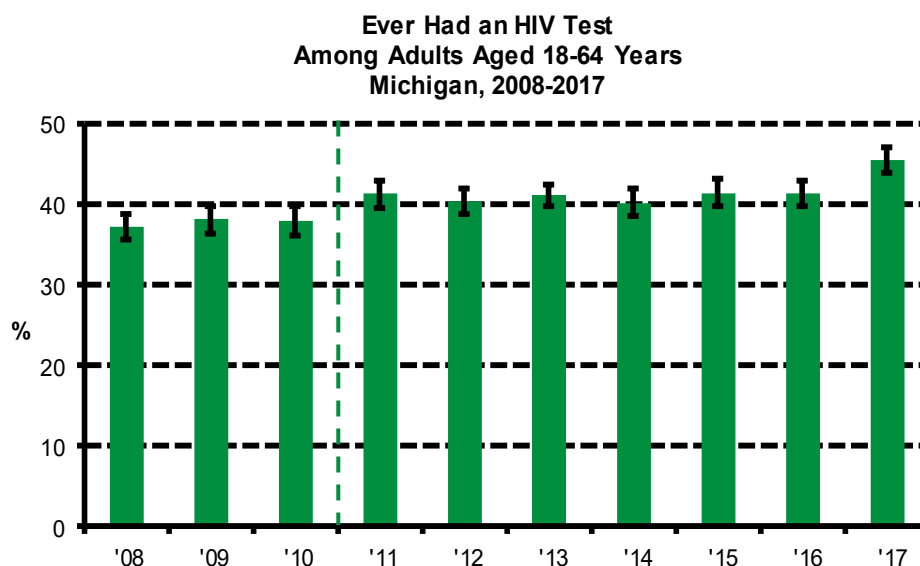
**Ever Had an HIV Test
Among Adults Aged 18-64 Years
Michigan, 2008-2017**

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.

22

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.[26]

♦ In 2017, an estimated 16.0% of Michigan adults reported that they were ever diagnosed with asthma and 10.9% 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 (19.7% vs. 12.2%) and current asthma (14.6% and 7.0%).

♦ Black, non-Hispanic adults reported significantly higher prevalences for both lifetime and current asthma (21.8% and 15.3%, respectively) than White, non-Hispanic adults (15.3% and 10.3%, respectively).

♦ Adults with disabilities reported a significantly higher prevalence than adults without disabilities for both lifetime (24.7% vs. 12.8%) and current asthma (18.9% vs. 7.9%).

♦ In 2017, the prevalence of ever being diagnosed with asthma among Michigan adults (16.0%) was higher than the U.S. median prevalence (14.2%).

Demographic Characteristics	Lifetime Asthma[a]		Current Asthma[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**16.0**	**(15.1-17.0)**	**10.9**	**(10.1-11.7)**
Age				
18 - 24	23.0	(19.6-26.7)	14.8	(12.0-18.2)
25 - 34	17.0	(14.5-19.7)	10.0	(8.1-12.3)
35 - 44	15.8	(13.4-18.5)	9.9	(8.1-12.2)
45 - 54	14.4	(12.4-16.5)	10.3	(8.7-12.2)
55 - 64	15.4	(13.6-17.4)	11.6	(10.0-13.4)
65 - 74	13.1	(11.5-14.8)	9.3	(8.0-10.9)
75 +	12.6	(10.5-15.0)	9.3	(7.5-11.6)
Gender				
Male	12.2	(11.1-13.5)	7.0	(6.1-8.0)
Female	19.7	(18.3-21.1)	14.6	(13.4-15.8)
Race/Ethnicity				
White, non-Hispanic	15.3	(14.3-16.4)	10.3	(9.4-11.2)
Black, non-Hispanic	21.8	(18.9-25.0)	15.3	(12.8-18.2)
Other, non-Hispanic	16.7	(13.0-21.2)	11.1	(8.3-14.7)
Hispanic	12.6	(8.5-18.2)	9.5	(6.0-14.7)
Household Income				
< $20,000	22.6	(19.9-25.5)	17.6	(15.2-20.2)
$20,000 - $34,999	17.3	(14.9-19.9)	11.9	(10.0-14.2)
$35,000 - $49,999	14.6	(12.2-17.4)	10.2	(8.1-12.8)
$50,000 - $74,999	13.3	(11.1-15.8)	8.8	(6.9-11.1)
≥ $75,000	12.7	(11.3-14.3)	7.2	(6.2-8.4)
Health Insurance				
Insured	16.3	(15.4-17.3)	11.1	(10.3-12.0)
Uninsured	12.0	(9.1-15.6)	7.5	(5.4-10.2)
Disability Status				
No disabilities	12.8	(11.9-13.9)	7.9	(7.1-8.7)
Adults with disabilities	24.7	(22.6-26.9)	18.9	(17.1-21.0)

[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.

Lifetime Adult Asthma
U.S. vs. Michigan, 2008-2017
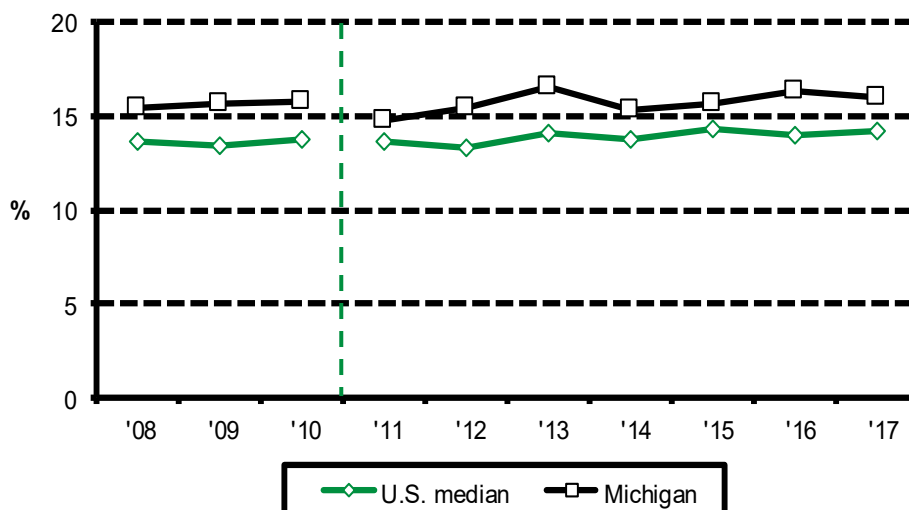
Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.
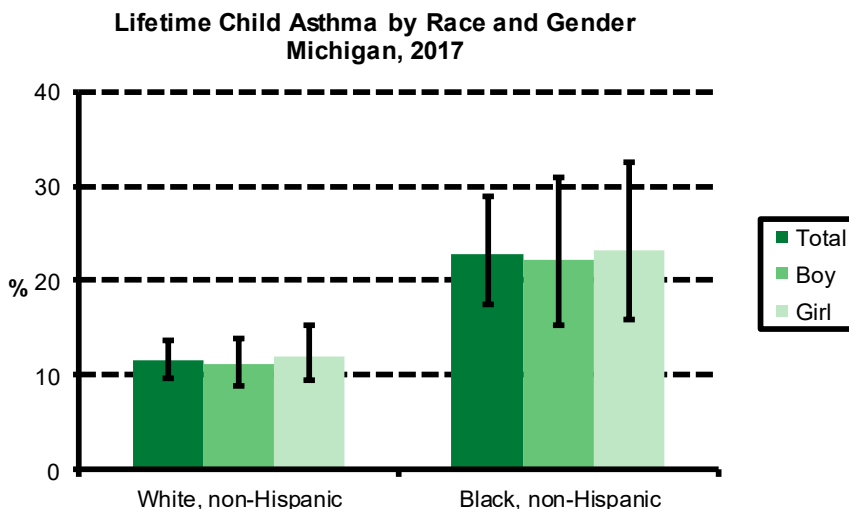
Asthma in Children

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.[26] Children with a family history of asthma and allergy are at a higher risk of developing asthma during childhood.[27]

♦ 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 2017 was 11.9%, and an estimated 8.8% currently have asthma.

♦ The prevalence of lifetime asthma and current asthma both increased with age.

♦ The prevalence of both lifetime and current asthma among children decreased with increasing household income level, but increased slightly in the $50,000-$74,999 household income group.

♦ The prevalence of both lifetime and current asthma for Black, non-Hispanic children (20.9% and 17.4%, respectively) was significantly higher than for White, non-Hispanic children (9.3% and 6.5%, respectively).

♦ The prevalence of lifetime asthma was similar for boys and girls.

Demographic Characteristics	Lifetime Asthma[a]		Current Asthma[b]	
	%	95% Confidence Interval	%	95% Confidence Interval
Total	**11.9**	**(10.5-13.6)**	**8.8**	**(7.5-10.3)**
Age				
0 - 4	6.7	(4.5-9.7)	4.9	(3.2-7.6)
5 - 9	11.7	(8.8-15.3)	9.4	(6.8-12.8)
10 - 14	15.1	(11.8-19.0)	10.1	(7.4-13.6)
15 - 17	15.6	(12.5-19.3)	11.4	(8.7-14.9)
Gender				
Boy	13.6	(11.4-16.0)	9.6	(7.8-11.8)
Girl	10.2	(8.2-12.5)	7.8	(6.1-10.0)
Race/Ethnicity				
White, non-Hispanic	9.3	(7.8-11.0)	6.5	(5.2-8.0)
Black, non-Hispanic	20.9	(16.0-26.8)	17.4	(12.9-23.0)
Other, non-Hispanic	11.0	(7.1-16.6)	8.2	(4.8-13.5)
Hispanic	14.7	(9.3-22.4)	10.2	(5.9-17.0)
Household Income				
< $20,000	18.5	(13.0-25.6)	16.6	(11.4-23.6)
$20,000 - $34,999	15.2	(11.0-20.8)	9.5	(6.3-14.0)
$35,000 - $49,999	7.7	(4.7-12.6)	6.5	(3.7-11.3)
$50,000 - $74,999	12.1	(8.9-16.2)	9.4	(6.6-13.3)
≥ $75,000	9.5	(7.5-11.9)	6.3	(4.6-8.5)

[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.

Lifetime Child Asthma by Race and Gender
Michigan, 2017

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.
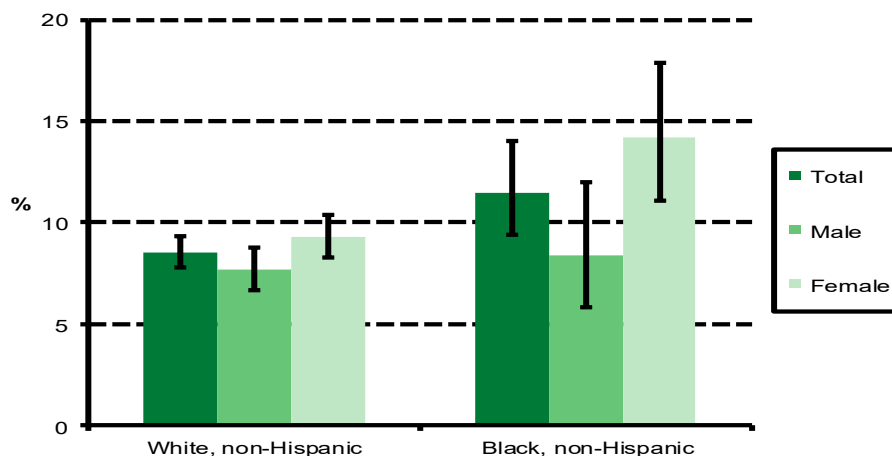
Chronic Obstructive Pulmonary Disease (COPD)

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.[28]

♦ In 2017, an estimated 8.8% 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 significantly higher in females (9.9%) than in males (7.6%).

♦ The prevalence of COPD was higher in Black, non-Hispanic adults (11.5%) when compared to White, non-Hispanic adults (8.5%).

♦ Adults with disabilities (21.6%) were more likely to have been diagnosed with COPD than adults without disabilities (4.2%).

♦ The prevalence of COPD was similar by gender for both White, non-Hispanic and Black, non-Hispanic adults.

♦ In 2017, the prevalence of COPD among Michigan adults (8.8%) was higher than the U.S. median prevalence (6.5%).

Demographic Characteristics	Ever Told COPD, Emphysema, or Chronic Bronchitis[a]	
	%	95% Confidence Interval
Total	**8.8**	**(8.1-9.4)**
Age		
18 - 24	2.6	(1.6-4.2)
25 - 34	2.6	(1.7-4.1)
35 - 44	4.9	(3.5-6.9)
45 - 54	8.8	(7.2-10.7)
55 - 64	14.5	(12.7-16.5)
65 - 74	14.2	(12.4-16.2)
75 +	15.6	(13.2-18.2)
Gender		
Male	7.6	(6.7-8.5)
Female	9.9	(9.0-10.9)
Race/Ethnicity		
White, non-Hispanic	8.5	(7.8-9.2)
Black, non-Hispanic	11.5	(9.3-14.0)
Other, non-Hispanic	8.1	(5.7-11.5)
Hispanic	6.5	(3.7-11.1)
Household Income		
< $20,000	20.3	(17.8-23.0)
$20,000 - $34,999	14.1	(12.2-16.4)
$35,000 - $49,999	7.9	(6.2-10.0)
$50,000 - $74,999	5.0	(3.8-6.4)
≥ $75,000	2.5	(1.9-3.2)
Health Insurance		
Insured	9.0	(8.3-9.7)
Uninsured	5.9	(4.1-8.4)
Disability Status		
No disabilities	4.2	(3.6-4.8)
Adults with disabilities	21.6	(19.7-23.6)

[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.

COPD by Race and Gender
Michigan, 2017

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.

25

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.[29]

♦ In 2017, an estimated 30.5% of Michigan adults reported ever being told by a doctor that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.

♦ Females (35.0%) reported a significantly higher prevalence of arthritis than males (25.8%).

♦ Hispanic adults (23.9%) reported a lower prevalence of arthritis than White, non-Hispanic adults (31.5%) and Black, non-Hispanic adults (29.9%).

♦ The prevalence of arthritis increased with age and decreased with increasing household income level.

♦ Uninsured adults (18.2%) were less likely to have been diagnosed with arthritis than insured adults (31.7%), while adults with disabilities (62.5%) were more likely to have been diagnosed than adults without disabilities (19.4%).

♦ In 2017, the prevalence of arthritis among Michigan adults (30.5%) was significantly higher than the U.S. median prevalence (24.9%).

Demographic Characteristics	Ever Told Arthritis[a]	
	%	95% Confidence Interval
Total	**30.5**	**(29.5-31.6)**
Age		
18 - 24	4.7	(3.3-6.9)
25 - 34	10.7	(8.7-13.1)
35 - 44	16.9	(14.5-19.7)
45 - 54	30.5	(27.8-33.3)
55 - 64	46.1	(43.6-48.6)
65 - 74	55.8	(53.3-58.4)
75 +	59.0	(55.7-62.2)
Gender		
Male	25.8	(24.4-27.4)
Female	35.0	(33.5-36.5)
Race/Ethnicity		
White, non-Hispanic	31.5	(30.3-32.7)
Black, non-Hispanic	29.9	(26.8-33.3)
Other, non-Hispanic	21.0	(16.9-25.8)
Hispanic	23.9	(18.6-30.2)
Household Income		
< $20,000	43.7	(40.5-47.0)
$20,000 - $34,999	37.5	(34.6-40.5)
$35,000 - $49,999	34.3	(31.2-37.5)
$50,000 - $74,999	27.7	(25.0-30.5)
≥ $75,000	18.8	(17.3-20.4)
Health Insurance		
Insured	31.7	(30.6-32.9)
Uninsured	18.2	(15.1-21.8)
Disability Status		
No disabilities	19.4	(18.4-20.5)
Adults with disabilities	62.5	(60.2-64.8)

[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, 2009-2017
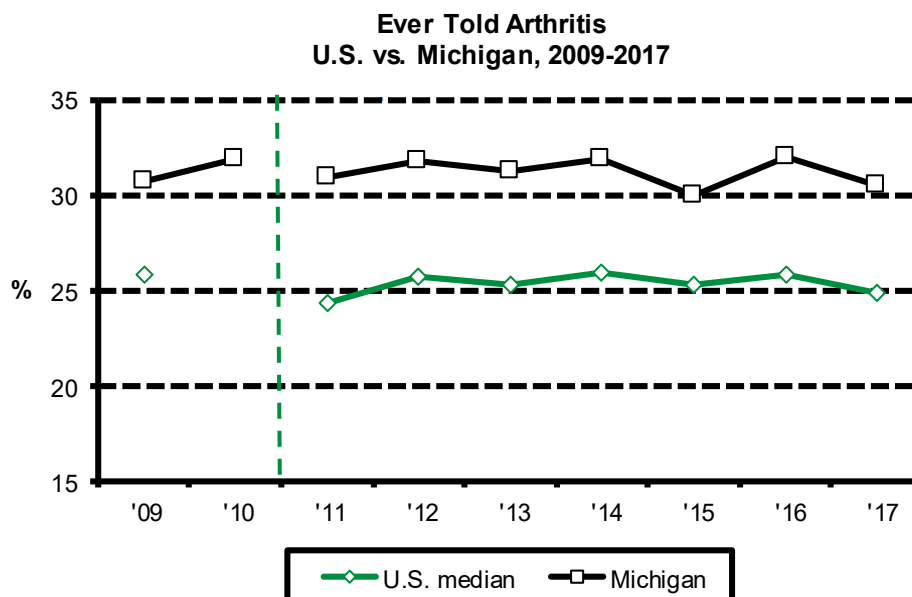
Due to methodology changes that took place in 2011, BRFSS estimates from 2011 and moving forward cannot be compared to BRFSS estimates from 2010 and earlier.
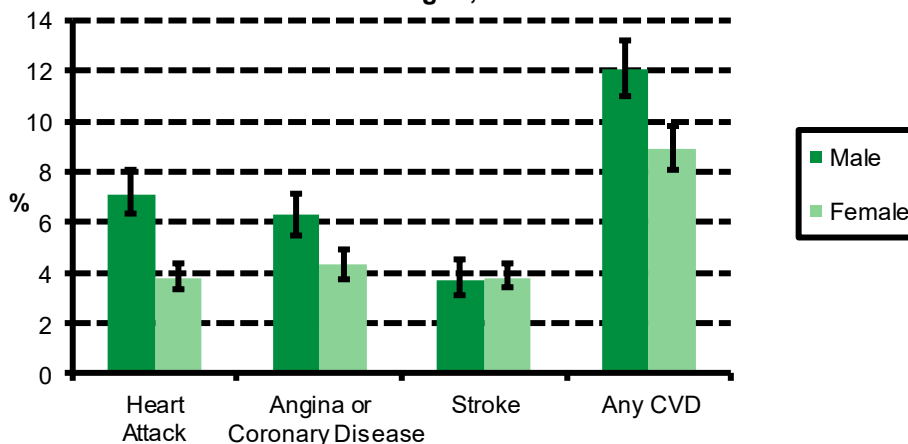
Cardiovascular Disease

Heart disease and stroke are the first and fifth leading causes of death, respectively, in both Michigan and the U.S.[30]

♦ In 2017, an estimated 5.4% of Michigan adults had ever been told by a doctor that they had a heart attack, 5.2% had ever been told they had angina or coronary heart disease, and 3.7% had ever been told they had a stroke.

♦ When combining all three measures into one indicator, an estimated 10.5% 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 (5.5%) reported a significantly higher prevalence of stroke than White, non-Hispanic adults (3.4%).

♦ Adults with disabilities were more likely to have been diagnosed with each of the three diseases when compared to adults without disabilities.

♦ In 2017, the prevalence of heart attack (5.4%), coronary heart disease (5.2%), and stroke (3.7%) among Michigan adults were all higher than the U.S. median preva-lence (heart attack: 4.2%; coronary heart disease: 3.9%; and stroke: 3.0%).

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	**5.4**	**(4.9-5.9)**	**5.2**	**(4.8-5.8)**	**3.7**	**(3.3-4.2)**
Age						
18 - 34	--[e]	--[e]	--[e]	--[e]	--[e]	--[e]
35 - 44	--[e]	--[e]	0.5	(0.2-1.2)	1.4	(0.8-2.4)
45 - 54	4.4	(3.4-5.8)	4.2	(3.1-5.6)	3.7	(2.7-5.0)
55 - 64	7.8	(6.4-9.4)	7.5	(6.2-9.1)	4.8	(3.7-6.2)
65 - 74	11.1	(9.5-13.0)	12.1	(10.4-14.0)	6.5	(5.3-7.9)
75 +	16.9	(14.5-19.7)	17.0	(14.6-19.8)	10.3	(8.6-12.4)
Gender						
Male	7.1	(6.3-8.1)	6.3	(5.5-7.1)	3.7	(3.1-4.5)
Female	3.8	(3.3-4.4)	4.3	(3.7-4.9)	3.8	(3.2-4.4)
Race/Ethnicity						
White, non-Hispanic	5.5	(5.0-6.2)	5.2	(4.7-5.8)	3.4	(3.0-3.9)
Black, non-Hispanic	5.7	(4.3-7.4)	5.8	(4.4-7.7)	5.5	(4.2-7.3)
Other, non-Hispanic	3.7	(2.2-6.1)	4.3	(2.7-7.0)	3.9	(2.4-6.5)
Hispanic	--[e]	--[e]	--[e]	--[e]	--[e]	--[e]
Household Income						
< $20,000	9.2	(7.6-11.2)	10.3	(8.4-12.5)	7.7	(6.2-9.6)
$20,000 - $34,999	9.4	(7.8-11.3)	7.3	(6.0-8.9)	5.8	(4.5-7.5)
$35,000 - $49,999	6.6	(5.1-8.3)	5.5	(4.2-7.0)	4.1	(2.9-5.7)
$50,000 - $74,999	3.4	(2.5-4.6)	3.7	(2.9-4.9)	2.5	(1.7-3.7)
≥ $75,000	2.6	(2.0-3.3)	2.5	(2.0-3.1)	1.3	(0.9-1.8)
Health Insurance						
Insured	5.6	(5.1-6.2)	5.5	(5.0-6.0)	3.8	(3.4-4.3)
Uninsured	3.4	(2.2-5.4)	2.6	(1.5-4.3)	2.9	(1.7-4.8)
Disability Status						
No disabilities	2.9	(2.5-3.4)	2.6	(2.2-3.0)	1.7	(1.4-2.1)
Adults with disabilities	12.3	(10.9-13.9)	12.7	(11.3-14.3)	9.6	(8.3-11.1)

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, 2017

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.
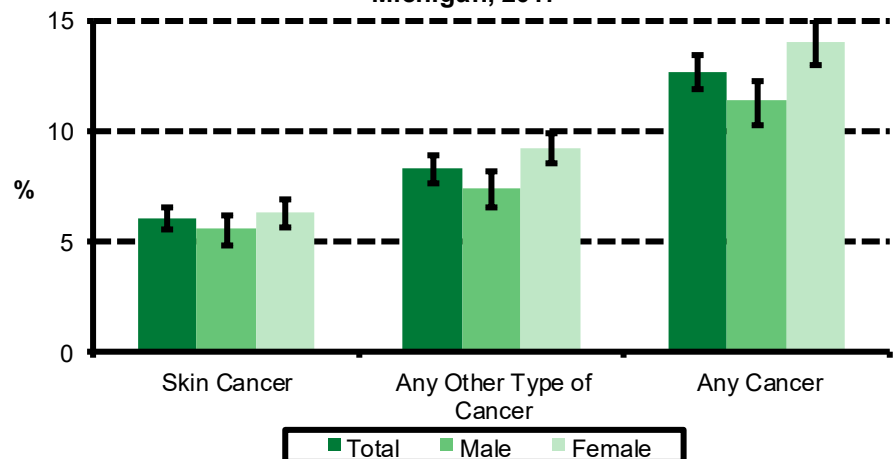
27

Cancer

Cancer is the second leading cause of death in both Michigan and the U.S.[30] There are more than 100 different types of cancer and there are nearly 1.7 million new cases of cancer expected in 2018. By 2030, the expected number of new cases per year will rise to roughly 23.6 million.[31]

♦ In 2017, an estimated 6.0% 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 12.7% of Michigan adults had ever been told by a doctor that they had some form of cancer.

♦ Females (14.0%) were more likely than males (11.4%) to report ever being diagnosed with cancer.

♦ White, non-Hispanic adults (14.6%) reported a significantly higher prevalence of cancer than Black, non-Hispanic adults (6.9%) and Hispanic adults (3.5%).

♦ Adults with disabilities reported higher cancer prevalences than adults without disabilities.

♦ In 2017, the prevalence for skin cancer among Michigan adults (6.0%) was comparable to the U.S. median prevalence (6.2%). The prevalence for other types of cancer (8.3%) was slightly higher than the U.S. median prevalence (7.1%).

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	**6.0**	**(5.5-6.5)**	**8.3**	**(7.7-9.0)**	**12.7**	**(12.0-13.5)**
Age						
18 - 34	1.0	(0.5-1.8)	1.5	(0.9-2.4)	1.9	(1.3-2.9)
35 - 44	--[d]	--[d]	3.7	(2.6-5.2)	4.3	(3.1-5.9)
45 - 54	3.5	(2.6-4.7)	5.1	(3.9-6.5)	8.5	(7.0-10.2)
55 - 64	7.5	(6.3-8.8)	11.7	(10.2-13.5)	17.6	(15.8-19.6)
65 - 74	13.7	(12.1-15.5)	17.4	(15.6-19.4)	27.6	(25.4-29.9)
75 +	21.8	(19.2-24.6)	24.7	(21.9-27.7)	39.1	(35.9-42.3)
Gender						
Male	5.6	(5.0-6.4)	7.4	(6.6-8.3)	11.4	(10.5-12.5)
Female	6.3	(5.7-7.0)	9.2	(8.4-10.1)	14.0	(13.0-15.0)
Race/Ethnicity						
White, non-Hispanic	7.4	(6.9-8.1)	9.1	(8.4-9.8)	14.6	(13.8-15.5)
Black, non-Hispanic	--[d]	--[d]	6.5	(5.1-8.2)	6.9	(5.4-8.7)
Other, non-Hispanic	--[d]	--[d]	5.8	(3.4-9.6)	7.6	(4.9-11.5)
Hispanic	--[d]	--[d]	--[d]	--[d]	3.5	(1.9-6.2)
Household Income						
< $20,000	4.5	(3.3-5.9)	12.3	(10.3-14.6)	15.1	(12.9-17.6)
$20,000 - $34,999	7.0	(5.7-8.5)	9.5	(8.0-11.3)	14.3	(12.5-16.3)
$35,000 - $49,999	6.7	(5.4-8.4)	10.4	(8.6-12.7)	14.8	(12.6-17.2)
$50,000 - $74,999	6.5	(5.3-7.9)	7.1	(5.8-8.7)	12.3	(10.6-14.2)
≥ $75,000	5.2	(4.5-6.0)	5.0	(4.3-5.8)	9.3	(8.3-10.3)
Health Insurance						
Insured	6.3	(5.8-6.8)	8.7	(8.1-9.4)	13.4	(12.7-14.2)
Uninsured	2.9	(1.7-5.1)	4.5	(2.9-6.9)	6.0	(4.2-8.5)
Disability Status						
No disabilities	4.7	(4.2-5.2)	6.0	(5.4-6.6)	9.5	(8.9-10.3)
Adults with disabilities	9.6	(8.5-11.0)	15.2	(13.7-17.0)	22.0	(20.2-23.9)

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, 2017

Legend: ■ Total ■ Male ■ Female

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.

Diabetes

In 2017, diabetes was the seventh leading cause of death in both Michigan and the U.S.[28] 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.[32]

- In 2017, an estimated 11.0% 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 (10.5%).

- Uninsured adults (4.9%) were less likely to have been diagnosed with diabetes than insured adults (11.6%), while adults with disabilities (22.5%) were more likely to be have been diagnosed than adults without disabilities (7.1%).

- Obese (19.8% [18.2-21.5]) and overweight (9.9% [8.8-11.2]) adults reported significantly higher lifetime prevalences of diabetes than healthy weight adults (4.1% [3.4-4.9]).

- 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 2017, the prevalence of diabetes among Michigan adults (11.0%) was comparable to the U.S. median prevalence (10.5%).

Demographic Characteristics	Ever Told Diabetes[a]	
	%	95% Confidence Interval
Total	**11.0**	**(10.4-11.8)**
Age		
18 - 24	--[b]	--[b]
25 - 34	--[b]	--[b]
35 - 44	3.9	(2.8-5.4)
45 - 54	11.4	(9.6-13.5)
55 - 64	17.1	(15.3-19.2)
65 - 74	23.0	(20.8-25.3)
75 +	25.2	(22.3-28.3)
Gender		
Male	11.1	(10.1-12.1)
Female	11.0	(10.1-12.0)
Race/Ethnicity		
White, non-Hispanic	10.5	(9.8-11.3)
Black, non-Hispanic	14.6	(12.3-17.2)
Other, non-Hispanic	8.8	(6.2-12.4)
Hispanic	12.2	(8.7-17.0)
Household Income		
< $20,000	16.7	(14.4-19.3)
$20,000 - $34,999	14.4	(12.5-16.5)
$35,000 - $49,999	13.3	(11.2-15.7)
$50,000 - $74,999	9.2	(7.6-11.0)
≥ $75,000	6.1	(5.3-7.1)
Health Insurance		
Insured	11.6	(10.9-12.4)
Uninsured	4.9	(3.4-7.0)
Disability Status		
No disabilities	7.1	(6.5-7.8)
Adults with disabilities	22.5	(20.7-24.5)

[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%.
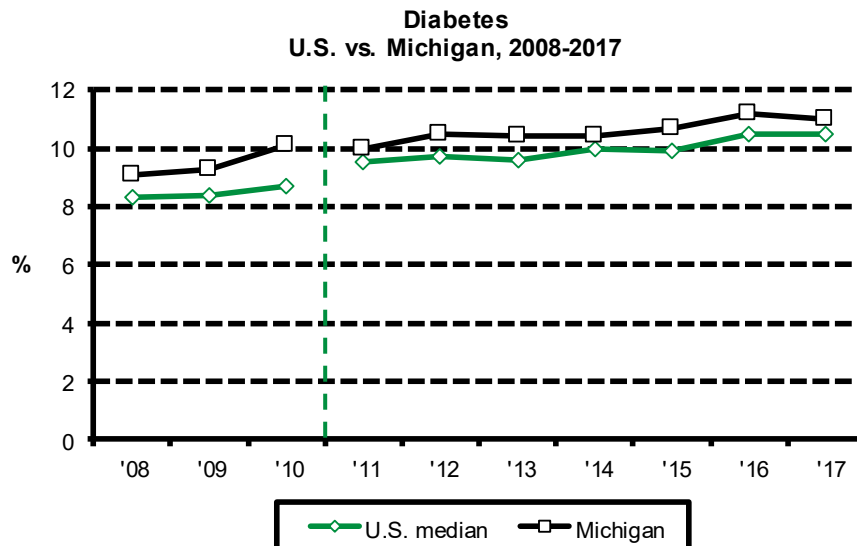
Diabetes
U.S. vs. Michigan, 2008-2017

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.[33]
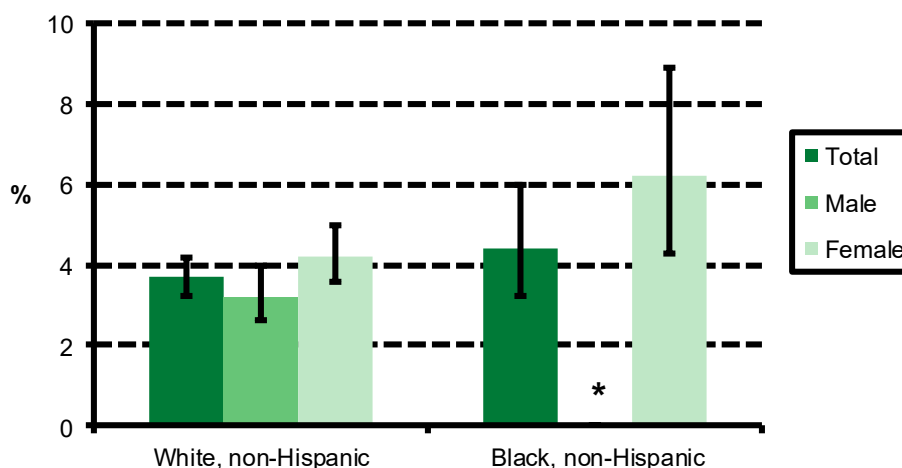
♦ In 2017, an estimated 3.7% of Michigan adults reported ever being told by a doctor that they had kidney disease.

♦ The prevalence of kidney disease increased with age and decreased with increasing household income level.

♦ The prevalence of kidney disease was greater in females (4.3%) than in males (3.0%).

♦ The prevalence of kidney disease was similar by race/ethnicity.

♦ Adults with disabilities (8.3%) were more likely to have been diagnosed with kidney disease than adults without disabilities (2.1%).

♦ Michigan adults with diabetes (12.5% [95% CI: 10.3-14.9]) were over four times more likely to have being diagnosed with kidney disease than adults without diabetes (2.6% [95% CI: 2.3-3.0]).

♦ In 2017, the prevalence of kidney disease among Michigan adults (3.7%) was slightly higher than the U.S. median prevalence (3.0%).

Demographic Characteristics	Ever Told Kidney Disease[a]	
	%	95% Confidence Interval
Total	**3.7**	**(3.3-4.2)**
Age		
18 - 24	--[b]	--[b]
25 - 34	2.5	(1.5-4.0)
35 - 44	2.1	(1.3-3.5)
45 - 54	2.9	(2.1-4.0)
55 - 64	4.3	(3.4-5.4)
65 - 74	6.8	(5.6-8.3)
75 +	8.3	(6.5-10.5)
Gender		
Male	3.0	(2.5-3.7)
Female	4.3	(3.8-5.0)
Race/Ethnicity		
White, non-Hispanic	3.7	(3.2-4.2)
Black, non-Hispanic	4.4	(3.2-6.0)
Other, non-Hispanic	2.4	(1.4-4.3)
Hispanic	3.4	(1.8-6.0)
Household Income		
< $20,000	6.5	(5.1-8.2)
$20,000 - $34,999	5.0	(3.8-6.4)
$35,000 - $49,999	3.8	(2.7-5.4)
$50,000 - $74,999	2.5	(1.8-3.5)
≥ $75,000	2.1	(1.5-2.8)
Health Insurance		
Insured	3.9	(3.5-4.4)
Uninsured	--[b]	--[b]
Disability Status		
No disabilities	2.1	(1.7-2.5)
Adults with disabilities	8.3	(7.2-9.7)

[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, 2017

*Suppressed due to a denominator of <50 and/or a relativ e 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.
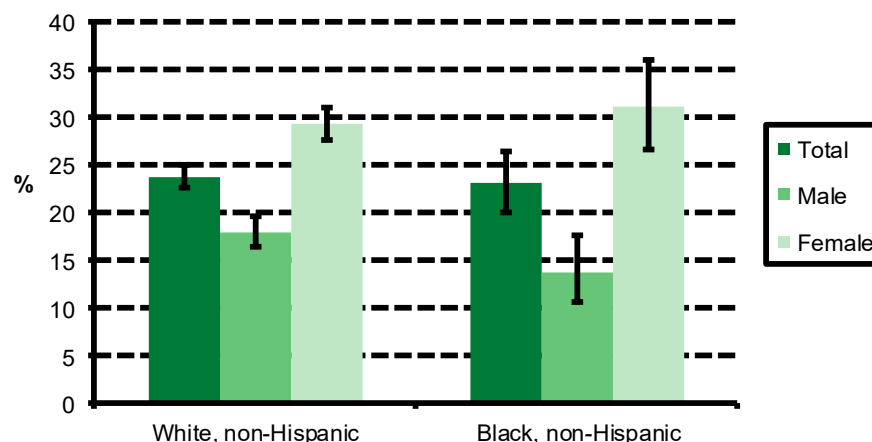
Depression

Depression is a common and treatable medical disorder that is more common among individuals with chronic conditions such as obesity, diabetes, and arthritis.[34]

♦ In 2017, an estimated 23.5% 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 middle age groups and decreased with increasing household income level.

♦ Females (29.4%) reported a significantly higher prevalence of depression than males (17.2%).

♦ The prevalence of depression was similar by race/ethnicity and insurance status.

♦ Adults with disabilities (44.1%) were more likely to have been diagnosed with depression than adults without disabilities (16.0%).

♦ White, non-Hispanic females (29.3%) reported a significantly higher prevalence of depression than White, non-Hispanic males (17.9%).

♦ Black, non-Hispanic females (31.2%) reported a significantly higher prevalence of depression than Black, non-Hispanic males (31.7%).

♦ In 2017, the prevalence of depression among Michigan adults (23.5%) was higher than the U.S. median prevalence (20.5%).

Demographic Characteristics	Ever Told Depression[a]	
	%	95% Confidence Interval
Total	**23.5**	**(22.5-24.6)**
Age		
18 - 24	23.7	(20.3-27.5)
25 - 34	27.2	(24.2-30.4)
35 - 44	23.1	(20.3-26.2)
45 - 54	25.2	(22.7-27.8)
55 - 64	24.2	(22.1-26.4)
65 - 74	22.2	(20.1-24.5)
75 +	15.1	(12.9-17.6)
Gender		
Male	17.2	(15.9-18.7)
Female	29.4	(27.9-31.0)
Race/Ethnicity		
White, non-Hispanic	23.8	(22.6-25.0)
Black, non-Hispanic	23.1	(20.0-26.4)
Other, non-Hispanic	22.7	(18.2-27.8)
Hispanic	23.3	(18.0-29.5)
Household Income		
< $20,000	38.8	(35.7-42.1)
$20,000 - $34,999	25.4	(22.8-28.2)
$35,000 - $49,999	22.5	(19.7-25.5)
$50,000 - $74,999	21.9	(19.2-24.9)
≥ $75,000	16.3	(14.7-18.0)
Health Insurance		
Insured	24.0	(22.9-25.1)
Uninsured	18.8	(15.5-22.7)
Disability Status		
No disabilities	16.0	(14.9-17.1)
Adults with disabilities	44.1	(41.8-46.5)

[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, 2017

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.

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