

**Crude and Age-Adjusted Estimates for Chronic Health Conditions,
Risk Factors, Health Indicators, and Preventive Health Practices by
Expanded Race/Ethnicity**

State of Michigan

Selected Tables

**Michigan Behavioral Risk Factor Surveillance System
(Michigan BRFSS)**

2017-2019

Lifecourse Epidemiology and Genomics Division
Bureau of Epidemiology and Population Health
Michigan Department of Health and Human Services

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Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Introduction

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 among 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 and Human Services. Michigan BRFSS data contribute to the national [Behavioral Risk Factor Surveillance System](#) that is managed by the PHSB at the CDC.

The total sample size for the combined 2017-2019 MiBRFS dataset was equal to 31,035 completed interviews (both landline and cell phone). The 2017-2019 combined dataset included 25,228 White, Non-Hispanics; 2,920 Black, Non-Hispanics; 489 Asian or Other Pacific Islander, Non-Hispanics; 255 American Indian/Alaska Native, Non-Hispanics; 803 Other/Multi-racial, Non-Hispanics, 472 Arab, Non-Hispanics; and 868 Hispanics. Those with unknown race/ethnicity were excluded from this analysis.

For the 2017 through 2019 Michigan Behavioral Risk Factor Surveys, the sample of land line telephone numbers that were utilized for data collection 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 used within each survey year was randomly selected from dedicated cellular telephone banks sorted on the basis of area code and exchange within the State of Michigan.

Iterative proportional fitting or raking was the weighting methodology used to make the 2017-2019 Michigan BRFSS data representative of the current Michigan adult population. Estimates based on this methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor that adjusted for the distribution of Michigan adults by telephone source (land line vs. cell phone), detailed race/ethnicity, education level, marital status, age by gender, gender by race/ethnicity, age by race/ethnicity, and renter/owner status.

Both crude and age-adjusted[‡], population-based prevalence estimates and asymmetric 95% confidence intervals were calculated for indicators of health status, health risk behaviors, clinical preventive practices, and chronic conditions among the overall adult population in Michigan, as well as for seven racial/ethnic groups. All analyses were performed in SAS-Callable SUDAAN®, a statistical computing program that was designed for complex sample surveys. In an effort to provide the most reliable information possible, prevalence estimates are suppressed if they are based on a denominator of less than 50 respondents or have a relative standard error of greater than 30%. Comparisons between estimates with non-overlapping 95% confidence intervals should be considered significantly different.

Due to the BRFSS methodology changes that took place in 2011, the estimates provided within the following tables should not be compared to Michigan BRFSS estimates from years prior to 2011. Methodology changes also took place in 2017 for Fruit and Vegetable Consumption; therefore, these variables were excluded from multi-year analysis.

If you have any questions regarding any of the estimates within the following tables, please contact Yan Tian at TianY@michigan.gov.

[‡] Klein RJ, Schoenborn CA. Age Adjustment Using the 2000 Projected U.S. Population. *Healthy People 2010 Stat Notes*. 2001:1-10.

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 1: Prevalence Estimates among the Overall Michigan Population (N = 31,035)				
Michigan BRFSS (2017-2019 Combined)				
% (95% Confidence Interval)				
Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	11.3	(10.9-11.7)	9.7	(9.3-10.1)
Ever Told Have Asthma ²	16.1	(15.6-16.7)	16.5	(15.9-17.1)
Still Have Asthma ³	11.1	(10.6-11.6)	11.2	(10.7-11.7)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	8.6	(8.2-9.0)	7.5	(7.1-7.9)
Ever Told Arthritis ⁵	31.1	(30.5-31.8)	27.6	(27.0-28.2)
Ever Told Any Cardiovascular Disease ⁶	9.9	(9.5-10.3)	8.4	(8.1-8.8)
Ever Told Cancer ⁷	13.0	(12.6-13.4)	11.0	(10.6-11.4)
Ever Told Kidney Disease ⁸	3.5	(3.3-3.8)	3.1	(2.9-3.4)
Ever Told Depression ⁹	22.7	(22.1-23.3)	23.1	(22.4-23.8)
Disability ¹⁰	27.3	(26.6-28.1)	25.1	(24.3-26.0)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	25.5	(24.8-26.1)	24.8	(24.1-25.5)
Fruit Consumption (< 1 Time / Day) ¹²	38.3	(37.4-39.2)	38.7	(37.8-39.7)
Vegetable Consumption (< 1 Time / Day) ¹³	19.5	(18.7-20.3)	19.6	(18.7-20.4)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	14.2	(13.6-14.9)	14.4	(13.7-15.1)
Current Smoker ¹⁵	19.0	(18.4-19.6)	20.3	(19.6-20.9)
Any Alcohol Consumption ¹⁶	56.8	(56.0-57.5)	58.3	(57.5-59.1)
Heavy Drinking ¹⁷	6.5	(6.1-6.8)	6.6	(6.2-7.1)
Binge Drinking ¹⁸	18.1	(17.5-18.7)	19.7	(19.0-20.3)
Ever Told High Blood Pressure ¹⁹	34.9	(34.1-35.8)	31.4	(30.6-32.2)
Health Indicators				
General Health, Fair or Poor ²⁰	18.9	(18.3-19.5)	18.0	(17.4-18.7)
Poor Physical Health on at least 14 Days in the Past Month ²¹	14.3	(13.8-14.9)	13.4	(12.9-14.0)
Poor Mental Health on at least 14 Days in the Past Month ²²	14.7	(14.2-15.3)	15.3	(14.7-15.9)
Activity Limitation on at least 14 Days in the Past Month ²³	10.3	(9.9-10.8)	9.9	(9.4-10.4)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	10.0	(9.4-10.5)	10.1	(9.6-10.8)
No Personal Health Care Provider ²⁵	14.8	(14.3-15.4)	16.3	(15.7-16.9)
No Health Care Access During Past 12 Months Due to Cost ²⁶	11.6	(11.2-12.1)	12.1	(11.6-12.7)
Obese ²⁷	33.8	(33.1-34.5)	33.6	(32.9-34.4)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	22.3	(21.6-22.9)	24.1	(23.4-24.8)
Cholesterol Ever Checked ²⁹	93.6	(93.1-94.1)	92.4	(91.7-92.9)
Ever Told High Cholesterol ³⁰	33.6	(32.8-34.5)	28.8	(28.0-29.6)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	46.3	(45.4-47.2)	48.6	(47.7-49.6)

* Age-adjusted by direct method using the 2000 U.S. Census.

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 2: Prevalence Estimates among White, Non-Hispanics in Michigan (N = 25,228)				
Michigan BRFSS (2017-2019 Combined)				
% (95% Confidence Interval)				
Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	11.0	(10.6-11.5)	8.8	(8.4-9.2)
Ever Told Have Asthma ²	15.5	(14.9-16.1)	16.2	(15.5-16.9)
Still Have Asthma ³	10.4	(9.9-11.0)	10.7	(10.1-11.3)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	8.6	(8.2-9.1)	7.2	(6.8-7.6)
Ever Told Arthritis ⁵	32.8	(32.1-33.5)	27.6	(26.9-28.3)
Ever Told Any Cardiovascular Disease ⁶	9.9	(9.5-10.4)	7.8	(7.4-8.2)
Ever Told Cancer ⁷	15.2	(14.7-15.7)	11.9	(11.4-12.3)
Ever Told Kidney Disease ⁸	3.7	(3.4-3.9)	3.0	(2.8-3.3)
Ever Told Depression ⁹	23.2	(22.5-23.9)	24.1	(23.4-24.9)
Disability ¹⁰	27.5	(26.6-28.3)	24.7	(23.8-25.7)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	24.0	(23.3-24.7)	22.7	(22.0-23.5)
Fruit Consumption (< 1 Time / Day) ¹²	37.9	(36.9-38.9)	38.6	(37.5-39.8)
Vegetable Consumption (< 1 Time / Day) ¹³	18.5	(17.7-19.3)	18.7	(17.8-19.6)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	13.5	(12.8-14.2)	13.5	(12.7-14.3)
Current Smoker ¹⁵	18.3	(17.6-19.0)	20.0	(19.2-20.8)
Any Alcohol Consumption ¹⁶	59.0	(58.2-59.8)	60.9	(59.9-61.8)
Heavy Drinking ¹⁷	7.0	(6.6-7.5)	7.4	(6.9-7.9)
Binge Drinking ¹⁸	18.8	(18.1-19.5)	21.4	(20.6-22.2)
Ever Told High Blood Pressure ¹⁹	35.0	(34.1-36.0)	30.0	(29.1-30.9)
Health Indicators				
General Health, Fair or Poor ²⁰	17.4	(16.8-18.0)	16.3	(15.6-17.0)
Poor Physical Health on at least 14 Days in the Past Month ²¹	14.2	(13.6-14.8)	13.2	(12.6-13.8)
Poor Mental Health on at least 14 Days in the Past Month ²²	14.3	(13.7-14.9)	15.4	(14.7-16.1)
Activity Limitation on at least 14 Days in the Past Month ²³	9.8	(9.3-10.3)	9.4	(8.8-9.9)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	8.4	(7.8-9.0)	8.8	(8.2-9.5)
No Personal Health Care Provider ²⁵	13.2	(12.6-13.8)	15.4	(14.7-16.2)
No Health Care Access During Past 12 Months Due to Cost ²⁶	10.2	(9.7-10.8)	11.1	(10.5-11.7)
Obese ²⁷	32.9	(32.1-33.7)	32.3	(31.5-33.2)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	22.6	(21.9-23.3)	25.5	(24.7-26.4)
Cholesterol Ever Checked ²⁹	94.0	(93.5-94.6)	92.0	(91.3-92.7)
Ever Told High Cholesterol ³⁰	35.4	(34.5-36.3)	28.8	(27.9-29.8)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	41.8	(40.8-42.8)	44.4	(43.3-45.5)

* Age-adjusted by direct method using the 2000 U.S. Census.

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 3: Prevalence Estimates among Black, Non-Hispanics in Michigan (N = 2,920)				
Michigan BRFSS (2017-2019 Combined)				
% (95% Confidence Interval)				
Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	14.9	(13.4-16.4)	14.2	(12.9-15.7)
Ever Told Have Asthma ²	21.0	(19.2-22.9)	20.7	(18.8-22.6)
Still Have Asthma ³	15.7	(14.1-17.4)	15.2	(13.5-16.9)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	9.6	(8.4-10.9)	8.9	(7.8-10.3)
Ever Told Arthritis ⁵	30.5	(28.5-32.5)	29.3	(27.5-31.3)
Ever Told Any Cardiovascular Disease ⁶	11.2	(9.9-12.6)	11.0	(9.7-12.3)
Ever Told Cancer ⁷	6.8	(5.8-7.9)	6.5	(5.6-7.6)
Ever Told Kidney Disease ⁸	4.2	(3.5-5.2)	4.1	(3.2-5.1)
Ever Told Depression ⁹	20.7	(18.9-22.6)	20.0	(18.2-22.0)
Disability ¹⁰	30.1	(27.7-32.7)	29.3	(26.9-31.8)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	33.5	(31.3-35.7)	33.0	(30.8-35.3)
Fruit Consumption (< 1 Time / Day) ¹²	41.1	(38.3-44.1)	40.9	(37.9-43.9)
Vegetable Consumption (< 1 Time / Day) ¹³	26.5	(23.9-29.2)	26.5	(23.9-29.4)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	16.1	(14.1-18.3)	16.4	(14.2-18.8)
Current Smoker ¹⁵	22.3	(20.4-24.3)	22.3	(20.4-24.4)
Any Alcohol Consumption ¹⁶	50.9	(48.6-53.2)	51.7	(49.4-54.0)
Heavy Drinking ¹⁷	4.0	(3.2-5.1)	4.1	(3.2-5.1)
Binge Drinking ¹⁸	15.1	(13.4-17.0)	15.4	(13.7-17.4)
Ever Told High Blood Pressure ¹⁹	44.0	(41.3-46.7)	42.0	(39.5-44.5)
Health Indicators				
General Health, Fair or Poor ²⁰	27.1	(25.2-29.2)	26.7	(24.7-28.8)
Poor Physical Health on at least 14 Days in the Past Month ²¹	16.1	(14.6-17.8)	15.8	(14.2-17.5)
Poor Mental Health on at least 14 Days in the Past Month ²²	16.0	(14.4-17.7)	15.8	(14.1-17.6)
Activity Limitation on at least 14 Days in the Past Month ²³	12.3	(10.9-13.8)	11.8	(10.4-13.4)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	12.2	(10.5-14.0)	12.1	(10.5-14.0)
No Personal Health Care Provider ²⁵	17.4	(15.6-19.3)	17.8	(15.9-19.7)
No Health Care Access During Past 12 Months Due to Cost ²⁶	15.3	(13.7-17.0)	15.2	(13.6-17.1)
Obese ²⁷	41.8	(39.5-44.2)	42.3	(40.0-44.7)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	17.2	(15.5-19.1)	17.5	(15.8-19.5)
Cholesterol Ever Checked ²⁹	93.8	(92.3-95.1)	93.3	(91.6-94.7)
Ever Told High Cholesterol ³⁰	32.2	(29.6-34.9)	29.4	(27.0-32.0)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	72.9	(70.4-75.2)	74.7	(72.3-76.9)
* Age-adjusted by direct method using the 2000 U.S. Census.				

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 4: Prevalence Estimates among Asian or Other Pacific Islander, Non-Hispanics in Michigan (N = 489)				
Michigan BRFSS (2017-2019 Combined)				
% (95% Confidence Interval)				
Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	4.4	(2.7-7.0)	7.9	(4.6-13.2)
Ever Told Have Asthma ²	10.5	(7.3-14.9)	12.0	(8.0-17.7)
Still Have Asthma ³	5.8	(3.4-9.7)	7.9	(4.5-13.5)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	-- ^a	-- ^a	-- ^a	-- ^a
Ever Told Arthritis ⁵	7.0	(4.9-9.9)	13.6	(9.2-19.7)
Ever Told Any Cardiovascular Disease ⁶	-- ^a	-- ^a	-- ^a	-- ^a
Ever Told Cancer ⁷	-- ^a	-- ^a	8.3	(5.0-13.6)
Ever Told Kidney Disease ⁸	-- ^a	-- ^a	-- ^a	-- ^a
Ever Told Depression ⁹	9.7	(6.8-13.7)	8.3	(5.9-11.6)
Disability ¹⁰	8.6	(5.4-13.5)	8.9	(5.6-13.8)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	22.9	(18.1-28.5)	22.6	(17.9-28.2)
Fruit Consumption (< 1 Time / Day) ¹²	38.3	(31.3-45.9)	35.4	(27.7-43.9)
Vegetable Consumption (< 1 Time / Day) ¹³	14.6	(10.4-20.3)	13.0	(9.1-18.3)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	16.7	(11.8-23.0)	16.4	(11.5-22.9)
Current Smoker ¹⁵	9.0	(6.1-13.1)	7.7	(5.2-11.0)
Any Alcohol Consumption ¹⁶	44.5	(39.0-50.2)	41.2	(35.4-47.1)
Heavy Drinking ¹⁷	-- ^a	-- ^a	-- ^a	-- ^a
Binge Drinking ¹⁸	10.4	(7.3-14.7)	8.8	(6.1-12.5)
Ever Told High Blood Pressure ¹⁹	14.7	(10.6-20.0)	21.7	(16.2-28.4)
Health Indicators				
General Health, Fair or Poor ²⁰	9.4	(6.2-14.0)	10.1	(6.8-14.8)
Poor Physical Health on at least 14 Days in the Past Month ²¹	4.7	(3.0-7.5)	5.0	(3.1-8.0)
Poor Mental Health on at least 14 Days in the Past Month ²²	6.2	(4.0-9.4)	5.0	(3.3-7.7)
Activity Limitation on at least 14 Days in the Past Month ²³	4.8	(2.8-8.1)	4.4	(2.6-7.2)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	9.9	(7.0-13.8)	9.3	(6.5-13.2)
No Personal Health Care Provider ²⁵	20.0	(16.1-24.6)	14.9	(11.8-18.8)
No Health Care Access During Past 12 Months Due to Cost ²⁶	10.4	(7.4-14.4)	9.9	(7.0-13.8)
Obese ²⁷	11.6	(8.5-15.7)	12.2	(8.8-16.6)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	24.7	(20.2-29.9)	20.2	(16.3-24.8)
Cholesterol Ever Checked ²⁹	91.0	(86.3-94.2)	93.5	(90.2-95.8)
Ever Told High Cholesterol ³⁰	19.6	(14.4-26.0)	23.7	(17.9-30.6)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	25.9	(20.9-31.5)	28.1	(22.9-33.9)

* Age-adjusted by direct method using the 2000 U.S. Census.

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

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 5: Prevalence Estimates among American Indian / Alaskan Native, Non-Hispanics in Michigan (N = 255)				
Michigan BRFSS (2017-2019 Combined)				
% (95% Confidence Interval)				
Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	16.1	(11.4-22.1)	13.2	(9.4-18.1)
Ever Told Have Asthma ²	18.6	(13.4-25.1)	17.8	(12.5-24.6)
Still Have Asthma ³	15.9	(11.0-22.3)	15.5	(10.4-22.3)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	17.9	(12.5-25.0)	15.6	(10.2-23.0)
Ever Told Arthritis ⁵	42.1	(34.5-50.0)	37.4	(31.0-44.3)
Ever Told Any Cardiovascular Disease ⁶	18.9	(13.5-25.8)	15.7	(11.2-21.6)
Ever Told Cancer ⁷	12.4	(7.9-18.9)	12.0	(8.3-17.2)
Ever Told Kidney Disease ⁸	-- ^a	-- ^a	-- ^a	-- ^a
Ever Told Depression ⁹	29.8	(23.2-37.5)	29.9	(22.8-38.0)
Disability ¹⁰	39.0	(29.7-49.2)	36.2	(27.2-46.3)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	30.6	(23.7-38.5)	32.5	(24.7-41.5)
Fruit Consumption (< 1 Time / Day) ¹²	35.8	(26.3-46.5)	38.3	(28.5-49.3)
Vegetable Consumption (< 1 Time / Day) ¹³	20.3	(13.1-30.2)	21.4	(14.3-30.9)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	16.8	(11.1-24.6)	15.2	(9.7-22.9)
Current Smoker ¹⁵	42.1	(34.2-50.5)	43.6	(35.4-52.2)
Any Alcohol Consumption ¹⁶	49.2	(41.1-57.3)	50.3	(41.7-59.0)
Heavy Drinking ¹⁷	9.5	(5.4-16.0)	9.3	(5.4-15.6)
Binge Drinking ¹⁸	13.9	(9.3-20.1)	13.4	(9.0-19.5)
Ever Told High Blood Pressure ¹⁹	42.3	(32.9-52.3)	39.9	(30.3-50.4)
Health Indicators				
General Health, Fair or Poor ²⁰	33.7	(26.5-41.9)	27.5	(20.3-36.0)
Poor Physical Health on at least 14 Days in the Past Month ²¹	29.5	(22.7-37.5)	25.3	(19.2-32.4)
Poor Mental Health on at least 14 Days in the Past Month ²²	21.3	(15.5-28.6)	19.2	(13.4-26.6)
Activity Limitation on at least 14 Days in the Past Month ²³	24.2	(17.8-32.1)	22.3	(16.0-30.2)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	17.9	(11.3-27.1)	19.7	(12.5-29.5)
No Personal Health Care Provider ²⁵	19.5	(13.8-26.9)	21.6	(15.4-29.5)
No Health Care Access During Past 12 Months Due to Cost ²⁶	18.9	(13.3-26.1)	20.1	(14.1-27.7)
Obese ²⁷	35.0	(27.4-43.5)	31.5	(24.2-39.7)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	24.5	(17.9-32.5)	24.7	(18.4-32.4)
Cholesterol Ever Checked ²⁹	91.0	(81.0-96.0)	91.3	(82.0-96.0)
Ever Told High Cholesterol ³⁰	39.8	(30.1-50.4)	34.0	(25.0-44.3)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	61.2	(51.4-70.1)	66.2	(57.3-74.1)

* Age-adjusted by direct method using the 2000 U.S. Census.

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

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 6: Prevalence Estimates among Other/Multi-Racial, Non-Hispanics in Michigan (N = 803)
Michigan BRFSS (2017-2019 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	10.1	(7.9-12.9)	11.1	(8.7-13.9)
Ever Told Have Asthma ²	23.5	(19.9-27.5)	22.4	(19.0-26.2)
Still Have Asthma ³	16.3	(13.3-19.7)	15.2	(12.5-18.4)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	11.7	(9.1-14.9)	12.0	(9.5-15.0)
Ever Told Arthritis ⁵	29.5	(25.8-33.6)	32.8	(29.0-36.9)
Ever Told Any Cardiovascular Disease ⁶	11.5	(9.1-14.5)	12.8	(10.2-15.9)
Ever Told Cancer ⁷	8.4	(6.5-10.9)	10.2	(8.0-13.0)
Ever Told Kidney Disease ⁸	2.8	(1.8-4.5)	3.0	(2.0-4.5)
Ever Told Depression ⁹	34.9	(30.7-39.3)	33.7	(29.7-37.9)
Disability ¹⁰	32.1	(27.1-37.5)	33.5	(28.5-38.8)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	24.6	(20.9-28.7)	25.6	(22.1-29.5)
Fruit Consumption (< 1 Time / Day) ¹²	40.5	(35.2-46.0)	39.8	(34.6-45.2)
Vegetable Consumption (< 1 Time / Day) ¹³	15.1	(11.6-19.4)	14.7	(11.2-19.1)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	20.4	(16.4-25.0)	20.7	(16.7-25.4)
Current Smoker ¹⁵	27.6	(23.7-31.9)	28.5	(24.6-32.7)
Any Alcohol Consumption ¹⁶	53.2	(48.7-57.7)	51.9	(47.6-56.2)
Heavy Drinking ¹⁷	6.3	(4.5-8.6)	6.1	(4.3-8.5)
Binge Drinking ¹⁸	23.8	(20.0-28.0)	22.4	(18.8-26.5)
Ever Told High Blood Pressure ¹⁹	29.5	(25.0-34.5)	32.0	(27.3-37.0)
Health Indicators				
General Health, Fair or Poor ²⁰	25.1	(21.5-29.1)	25.8	(22.2-29.7)
Poor Physical Health on at least 14 Days in the Past Month ²¹	19.5	(16.2-23.4)	19.8	(16.6-23.4)
Poor Mental Health on at least 14 Days in the Past Month ²²	25.3	(21.5-29.4)	25.0	(21.2-29.2)
Activity Limitation on at least 14 Days in the Past Month ²³	14.0	(11.2-17.3)	14.8	(11.9-18.2)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	11.4	(8.6-14.8)	11.3	(8.4-14.9)
No Personal Health Care Provider ²⁵	22.5	(19.0-26.5)	21.0	(17.7-24.7)
No Health Care Access During Past 12 Months Due to Cost ²⁶	19.4	(16.2-23.1)	18.5	(15.5-21.9)
Obese ²⁷	32.4	(28.4-36.7)	32.1	(28.1-36.3)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	25.8	(22.1-29.8)	25.1	(21.6-29.1)
Cholesterol Ever Checked ²⁹	86.0	(80.7-90.1)	87.6	(82.9-91.2)
Ever Told High Cholesterol ³⁰	26.1	(21.6-31.2)	27.2	(22.8-32.1)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	57.2	(52.1-62.1)	60.2	(55.4-64.8)

* Age-adjusted by direct method using the 2000 U.S. Census.

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 7: Prevalence Estimates among Arab, Non-Hispanics in Michigan (N = 472)				
Michigan BRFSS (2017-2019 Combined)				
% (95% Confidence Interval)				
Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	5.6	(3.7-8.5)	8.9	(6.0-12.9)
Ever Told Have Asthma ²	13.6	(10.1-17.9)	12.6	(9.4-16.7)
Still Have Asthma ³	9.4	(6.4-13.5)	9.1	(6.3-13.0)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	-- ^a	-- ^a	3.9	(2.3-6.7)
Ever Told Arthritis ⁵	14.4	(11.3-18.3)	21.2	(17.2-25.8)
Ever Told Any Cardiovascular Disease ⁶	5.5	(3.6-8.2)	8.3	(5.7-12.1)
Ever Told Cancer ⁷	6.3	(4.4-8.9)	11.0	(8.2-14.5)
Ever Told Kidney Disease ⁸	-- ^a	-- ^a	-- ^a	-- ^a
Ever Told Depression ⁹	16.4	(12.8-20.8)	17.6	(13.9-22.1)
Disability ¹⁰	14.5	(10.5-19.7)	19.8	(14.8-25.9)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	26.3	(21.5-31.7)	28.5	(23.6-34.1)
Fruit Consumption (< 1 Time / Day) ¹²	34.0	(27.6-41.1)	31.1	(25.0-37.9)
Vegetable Consumption (< 1 Time / Day) ¹³	16.1	(11.5-22.2)	15.0	(10.9-20.3)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	14.3	(10.3-19.7)	14.9	(10.7-20.6)
Current Smoker ¹⁵	16.1	(12.3-20.8)	16.9	(13.0-21.6)
Any Alcohol Consumption ¹⁶	41.5	(36.1-47.3)	42.2	(36.8-47.9)
Heavy Drinking ¹⁷	4.5	(2.8-7.3)	4.0	(2.5-6.5)
Binge Drinking ¹⁸	12.7	(9.3-17.2)	10.7	(7.9-14.5)
Ever Told High Blood Pressure ¹⁹	16.9	(12.5-22.3)	24.2	(19.4-29.8)
Health Indicators				
General Health, Fair or Poor ²⁰	12.8	(9.5-17.1)	15.1	(11.3-20.0)
Poor Physical Health on at least 14 Days in the Past Month ²¹	7.1	(4.9-10.1)	10.4	(7.3-14.5)
Poor Mental Health on at least 14 Days in the Past Month ²²	15.4	(11.8-19.9)	14.0	(10.6-18.4)
Activity Limitation on at least 14 Days in the Past Month ²³	7.3	(4.9-10.5)	7.4	(5.0-11.0)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	13.7	(10.1-18.4)	12.1	(8.9-16.3)
No Personal Health Care Provider ²⁵	19.4	(15.2-24.4)	15.9	(12.4-20.1)
No Health Care Access During Past 12 Months Due to Cost ²⁶	18.6	(14.4-23.8)	17.5	(13.5-22.3)
Obese ²⁷	27.8	(22.8-33.5)	28.3	(23.4-33.9)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	23.7	(19.2-29.0)	20.5	(16.6-25.1)
Cholesterol Ever Checked ²⁹	92.5	(87.5-95.6)	93.9	(89.7-96.4)
Ever Told High Cholesterol ³⁰	23.8	(18.6-30.0)	26.8	(21.2-33.2)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	34.3	(28.6-40.5)	36.1	(30.5-42.1)

* Age-adjusted by direct method using the 2000 U.S. Census.

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

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Table 8: Prevalence Estimates among Hispanics in Michigan (N = 868)				
Michigan BRFSS (2017-2019 Combined)				
% (95% Confidence Interval)				
Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes ¹	10.8	(8.7-13.3)	14.9	(12.0-18.3)
Ever Told Have Asthma ²	15.8	(12.9-19.3)	15.3	(12.6-18.6)
Still Have Asthma ³	10.4	(8.2-13.3)	10.0	(7.9-12.6)
Ever Told Chronic Obstructive Pulmonary Disease ⁴	6.8	(5.0-9.1)	8.1	(6.0-10.8)
Ever Told Arthritis ⁵	21.7	(18.6-25.1)	28.0	(24.5-31.8)
Ever Told Any Cardiovascular Disease ⁶	7.8	(5.8-10.3)	10.4	(7.9-13.6)
Ever Told Cancer ⁷	5.0	(3.6-6.8)	6.8	(5.0-9.2)
Ever Told Kidney Disease ⁸	2.0	(1.3-3.1)	2.7	(1.8-4.1)
Ever Told Depression ⁹	24.7	(21.3-28.5)	25.6	(21.9-29.7)
Disability ¹⁰	23.6	(19.3-28.5)	29.3	(24.8-34.4)
Health Risk Behaviors				
No Leisure Time Physical Activity ¹¹	26.3	(22.5-30.4)	29.2	(25.0-33.7)
Fruit Consumption (< 1 Time / Day) ¹²	40.2	(35.0-45.7)	38.4	(33.3-43.8)
Vegetable Consumption (< 1 Time / Day) ¹³	23.1	(18.6-28.4)	22.0	(17.7-26.9)
Fruit and Vegetable Consumption (≥ 5 Times / Day) ¹⁴	17.8	(14.1-22.3)	19.6	(15.6-24.4)
Current Smoker ¹⁵	22.3	(18.7-26.3)	20.4	(17.2-24.1)
Any Alcohol Consumption ¹⁶	54.0	(49.6-58.3)	50.3	(46.3-54.4)
Heavy Drinking ¹⁷	5.7	(4.2-7.8)	5.3	(3.8-7.3)
Binge Drinking ¹⁸	20.9	(17.6-24.7)	17.2	(14.5-20.2)
Ever Told High Blood Pressure ¹⁹	25.2	(21.1-29.8)	32.2	(28.0-36.9)
Health Indicators				
General Health, Fair or Poor ²⁰	20.6	(17.4-24.3)	23.6	(19.9-27.9)
Poor Physical Health on at least 14 Days in the Past Month ²¹	12.0	(9.6-14.8)	15.6	(12.5-19.2)
Poor Mental Health on at least 14 Days in the Past Month ²²	18.0	(15.0-21.4)	18.3	(15.0-22.2)
Activity Limitation on at least 14 Days in the Past Month ²³	11.8	(9.3-14.9)	12.8	(9.9-16.3)
No Health Care Coverage (Among 18 – 64 year olds) ²⁴	20.1	(16.6-24.1)	18.8	(15.3-22.7)
No Personal Health Care Provider ²⁵	27.3	(23.4-31.6)	23.0	(19.6-26.7)
No Health Care Access During Past 12 Months Due to Cost ²⁶	16.0	(13.0-19.5)	15.2	(12.4-18.4)
Obese ²⁷	40.2	(35.9-44.6)	43.9	(39.6-48.4)
Preventive Health Practices				
No Routine Checkup in Past Year ²⁸	27.8	(24.1-31.9)	25.3	(21.8-29.1)
Cholesterol Ever Checked ²⁹	91.5	(88.0-94.1)	93.6	(90.8-95.5)
Ever Told High Cholesterol ³⁰	20.5	(16.9-24.7)	23.7	(19.9-27.9)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ³¹	47.8	(43.2-52.6)	48.5	(43.8-53.2)
* Age-adjusted by direct method using the 2000 U.S. Census.				

Due to significant BRFSS methodology changes that took place in 2011, the estimates within these tables should not be compared to Michigan BRFSS estimates from prior to 2011.

Appendix: Definitions

- ¹ Among all adults, the proportion who reported that they were ever told by a doctor that they have diabetes. Women who had diabetes only during pregnancy and adults who were diagnosed with pre-diabetes were considered to not have been diagnosed with diabetes.
- ² Among all adults, the proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma.
- ³ Among all adults, the proportion who reported that they still had asthma.
- ⁴ Among all adults, the proportion who reported ever being told by a doctor that they had chronic obstructive pulmonary disease (COPD), emphysema or chronic bronchitis.
- ⁵ Among all adults, the proportion who reported ever being told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia.
- ⁶ Among all adults, the proportion who had ever been told by a doctor that they had a heart attack, coronary heart disease or a stroke.
- ⁷ Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer or any other type of cancer.
- ⁸ Among all adults, the proportion who reported ever being told by a doctor that they had kidney disease.
- ⁹ Among all adults, the proportion who reported ever being told by a doctor that they had a depressive disorder including depression, major depression, dysthymia, or minor depression.
- ¹⁰ The proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported that they required use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem (2017 and 2018 combined).
- ¹¹ Among all adults, the proportion who reported not participating in any leisure time physical activities or exercises such as running, calisthenics, golf, gardening, or walking during the past month.
- ¹² Among all adults, the proportion whose total reported consumption of fruits (including juice) was less than one time per day (2017 and 2019 combined).
- ¹³ Among all adults, the proportion whose total reported consumption of vegetables was less than one time per day (2017 and 2019 combined).
- ¹⁴ Among all adults, the proportion whose total reported consumption of fruits (including juice) and vegetables was five or more times per day (2017 and 2019 combined).
- ¹⁵ Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (five packs) in their life and that they smoke cigarettes now, either every day or on some days.
- ¹⁶ Among all adults, the proportion who reported consuming at least one drink of any alcoholic beverage in the previous month.
- ¹⁷ Among all adults, the proportion who reported consuming on average more than two alcoholic beverages per day for men or more than one alcoholic beverage per day for women.
- ¹⁸ Among adults who binge drank in the past month, the mean number of times during which five or more alcoholic beverages (for men) or four or more (for women) were consumed during the past month.
- ¹⁹ Among all adults, the proportion who reported 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 to not have been diagnosed (2017 and 2019 combined).
- ²⁰ Among all adults, the proportion who reported that their health, in general, was either fair or poor.
- ²¹ Among all adults, the proportion who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.
- ²² Among all adults, the proportion who reported 14 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days.
- ²³ Among all adults, the proportion who reported 14 or more days in the past 30 days in which either poor physical health or poor mental health kept them from doing their usual activities, such as self-care, work, and recreation.
- ²⁴ 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.
- ²⁵ Among all adults, the proportion who reported that they did not have anyone that they thought of as their personal doctor or health care provider.
- ²⁶ Among all adults, the proportion who reported that in the past 12 months that there was a time when they could not see a doctor when they needed to due to the cost.

*2017-2019 Michigan BRFSS Results by Expanded Race/Ethnicity
December 2020*

- ²⁷ 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. Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.
- ²⁸ Among all adults, the proportion who reported that they did not have a routine checkup in the past year.
- ²⁹ Among all adults, the proportion who reported ever having had their blood cholesterol checked (2017 and 2019 combined).
- ³⁰ Among adults who ever had their blood cholesterol checked, the proportion who reported that a doctor, nurse, or other health professional had told them that their cholesterol was high (2017 and 2019 combined).
- ³¹ Among adults aged 18 - 64 years, the proportion who reported that they ever had been tested for HIV, apart from tests that were part of a blood donation. Note: "Don't know" was considered a valid response.