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)

2013-2015

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

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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 BRFS 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 2013-2015 MiBRFS dataset was equal to 29,644 completed interviews (both landline and cell phone). The 2013-2015 combined dataset included 24,432 White, Non-Hispanics; 2,823 Black, Non-Hispanics; 404 Asian or Other Pacific Islander, Non-Hispanics; 255 American Indian/Alaska Native, Non-Hispanics; 747 Other/Multi-racial, Non-Hispanics, 356 Arab, Non-Hispanics; and 627 Hispanics. Those with unknown race/ethnicity were excluded from this analysis.

For the 2013 through 2015 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 2013-2015 Michigan BRFS 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.

If you have any questions regarding any of the estimates within the following tables, please contact Chris Fussman at FussmanC@michigan.gov.

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

<u>Key Points</u>

*All significant comparisons (i.e., non-overlapping 95% confidence intervals) mentioned below are based on age-adjusted estimates only.

Chronic Health Conditions:
- o Black, non-Hispanics reported higher prevalences of diabetes, current asthma, COPD, overall cardiovascular disease (CVD), kidney disease and disability, and a lower prevalence of cancer when compared to White, non-Hispanics.
- o Asian or Other Pacific Islander, non-Hispanics reported lower prevalences of lifetime and current asthma, arthritis, depression and disability when compared to White, non-Hispanics.
- o American Indian/Alaskan Native, non-Hispanics reported higher prevalences of lifetime and current asthma, COPD, CVD, and disability when compared to White, non-Hispanics.
- o Other/Multi-racial, non-Hispanics reported higher prevalences for all the chronic health conditions except for cancer and kidney disease when compared to White, non-Hispanics.
- o Hispanics reported a higher prevalence rate of diabetes, and a lower prevalence of cancer when compared to White, non-Hispanics.

Health Risk Behaviors:
- o Black, non-Hispanics reported higher prevalences of obesity, no leisure time physical activity, vegetable consumption less than once per day and high blood pressure, and lower prevalences of all three alcohol consumption indicators when compared to White, non-Hispanics.
- o Asian, non-Hispanics reported lower prevalences of obesity, fruit consumption less than once per day, current smoking, any alcohol consumption, and binge drinking when compared to White, non-Hispanics.
- o American Indian/Alaskan Native, non-Hispanics reported higher prevalences of no leisure time physical activity, fruit consumption less than once per day, and current smoking and a lower prevalence of alcohol consumption when compared to White, non-Hispanics.
- o Arab, non-Hispanics reported a higher prevalence of no leisure time physical activity and a lower prevalence of any alcohol consumption when compared to White, non-Hispanics.

Health Indicators:
- o Black, non-Hispanics reported higher prevalences of poor general health, poor physical health, activity limitations, no health care coverage, no personal health care provider, and cost prevented care when compared to White, non-Hispanics.
- o Asian, non-Hispanics reported lower prevalences of poor general health, poor mental health, and no health care coverage when compared to White, non-Hispanics.
- o American Indian/Alaskan Native, non-Hispanics reported higher prevalences of poor general health, poor physical health, poor mental health, and activity limitations when compared to White, non-Hispanics.
- o Hispanics reported higher prevalences for all of the health indicators except for poor mental health and no personal health care provider when compared to White, non-Hispanics.

Preventive Health Practices:
- o Black, non-Hispanics, American Indian/Alaskan Native, non-Hispanics, Other/Multi-racial, non-Hispanics and Hispanics all reported a higher HIV testing prevalence when compared to White, non-Hispanics.

Table 1: Prevalence Estimates among the Overall Michigan Population (N = 29,644) Michigan BRFSS (2013-2015 Combined) % (95% Confidence Interval)				
Chronic Health Conditions	**Crude**		**Age-Adjusted***	
Ever Told Diabetes[1]	10.5	(10.1-10.9)	9.1	(8.8-9.5)
Ever Told Have Asthma[2]	15.9	(15.3-16.5)	16.1	(15.5-16.7)
Still Have Asthma[3]	10.9	(10.4-11.3)	10.9	(10.4-11.4)
Ever Told Chronic Obstructive Pulmonary Disease[4]	8.4	(8.0-8.8)	7.6	(7.2-8.0)
Ever Told Arthritis[5]	31.1	(30.4-31.7)	28.0	(27.4-28.7)
Ever Told Any Cardiovascular Disease[6]	9.7	(9.4-10.1)	8.5	(8.2-8.9)
Ever Told Cancer[7]	12.0	(11.6-12.4)	10.5	(10.2-10.9)
Ever Told Kidney Disease[8]	3.2	(3.0-3.5)	3.0	(2.7-3.2)
Ever Told Depression[9]	20.5	(19.9-21.1)	20.7	(20.1-21.4)
Disability[10]	25.2	(24.5-25.8)	23.6	(23.0-24.3)
Health Risk Behaviors				
Obese[11]	31.1	(30.4-31.8)	31.0	(30.2-31.8)
No Leisure Time Physical Activity[12]	25.1	(24.5-25.8)	24.7	(24.0-25.5)
Adequate Physical Activity[13]	19.5	(18.8-20.3)	19.9	(19.0-20.7)
Fruit Consumption (< 1 Time / Day)[14]	38.7	(37.8-39.6)	39.2	(38.2-40.1)
Vegetable Consumption (< 1 Time / Day)[15]	24.7	(23.9-25.6)	25.1	(24.2-26.0)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	14.9	(14.2-15.5)	14.9	(14.2-15.6)
Current Smoker[17]	21.1	(20.4-21.8)	22.2	(21.5-23.0)
Any Alcohol Consumption[18]	56.8	(56.1-57.6)	58.2	(57.4-59.0)
Heavy Drinking[19]	6.5	(6.2-6.9)	6.6	(6.2-7.1)
Binge Drinking[20]	18.8	(18.2-19.4)	20.1	(19.4-20.8)
Ever Told High Blood Pressure[21]	33.9	(33.1-34.7)	30.9	(30.1-31.6)
Health Indicators				
General Health, Fair or Poor[22]	29.7	(24.6-35.4)	16.5	(15.9-17.1)
Poor Physical Health on at least 14 Days in the Past Month[23]	12.8	(12.3-13.3)	12.1	(11.6-12.6)
Poor Mental Health on at least 14 Days in the Past Month[24]	12.2	(11.7-12.8)	12.6	(12.0-13.2)
Activity Limitation on at least 14 Days in the Past Month[25]	8.8	(8.4-9.3)	8.5	(8.1-9.0)
No Health Care Coverage (Among 18 – 64 year olds)[26]	14.0	(13.4-14.7)	15.8	(14.9-16.7)
No Personal Health Care Provider[27]	15.9	(15.4-16.6)	17.3	(16.6-18.0)
No Health Care Access During Past 12 Months Due to Cost[28]	14.2	(13.7-14.8)	14.9	(14.3-15.6)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	28.8	(28.1-29.5)	30.6	(29.8-31.3)
Cholesterol Ever Checked[30]	83.3	(82.5-84.0)	81.4	(80.6-82.2)
Ever Told High Cholesterol[31]	39.4	(38.5-40.3)	32.8	(31.9-33.7)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	40.9	(40.0-41.9)	43.4	(42.3-44.6)
* 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 = 24,432)
Michigan BRFSS (2013-2015 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes[1]	10.2	(9.8-10.7)	8.4	(8.0-8.9)
Ever Told Have Asthma[2]	15.3	(14.7-15.9)	15.8	(15.1-16.5)
Still Have Asthma[3]	10.3	(9.8-10.8)	10.3	(9.8-10.9)
Ever Told Chronic Obstructive Pulmonary Disease[4]	8.2	(7.8-8.6)	7.0	(6.6-7.4)
Ever Told Arthritis[5]	32.8	(32.1-33.6)	28.4	(27.7-29.1)
Ever Told Any Cardiovascular Disease[6]	10.0	(9.5-10.4)	8.2	(7.8-8.5)
Ever Told Cancer[7]	13.9	(13.4-14.4)	11.4	(11.0-11.8)
Ever Told Kidney Disease[8]	3.2	(3.0-3.5)	2.8	(2.6-3.0)
Ever Told Depression[9]	21.0	(20.3-21.7)	21.4	(20.6-22.1)
Disability[10]	25.1	(24.4-25.8)	23.0	(22.3-23.8)
Health Risk Behaviors				
Obese[11]	30.3	(29.6-31.1)	29.9	(29.0-30.7)
No Leisure Time Physical Activity[12]	23.7	(22.9-24.4)	22.7	(21.9-23.5)
Adequate Physical Activity[13]	19.3	(18.5-20.1)	20.0	(19.1-20.9)
Fruit Consumption (< 1 Time / Day)[14]	38.2	(37.2-39.2)	39.2	(38.1-40.3)
Vegetable Consumption (< 1 Time / Day)[15]	22.7	(21.9-23.6)	23.3	(22.3-24.3)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	14.4	(13.8-15.1)	14.5	(13.7-15.3)
Current Smoker[17]	20.2	(19.4-20.9)	21.9	(21.0-22.7)
Any Alcohol Consumption[18]	59.2	(58.4-60.0)	60.8	(59.9-61.7)
Heavy Drinking[19]	7.3	(6.9-7.8)	7.5	(7.0-8.1)
Binge Drinking[20]	19.6	(18.9-20.3)	21.7	(20.9-22.6)
Ever Told High Blood Pressure[21]	33.5	(32.7-34.4)	29.0	(28.1-29.8)
Health Indicators				
General Health, Fair or Poor[22]	15.7	(15.1-16.3)	14.7	(14.0-15.3)
Poor Physical Health on at least 14 Days in the Past Month[23]	12.1	(11.6-12.7)	11.2	(10.7-11.8)
Poor Mental Health on at least 14 Days in the Past Month[24]	11.5	(10.9-12.0)	12.0	(11.4-12.7)
Activity Limitation on at least 14 Days in the Past Month[25]	8.2	(7.8-8.7)	7.8	(7.3-8.3)
No Health Care Coverage (Among 18 – 64 year olds)[26]	12.4	(11.7-13.1)	14.0	(13.0-15.0)
No Personal Health Care Provider[27]	14.0	(13.4-14.6)	16.1	(15.4-16.9)
No Health Care Access During Past 12 Months Due to Cost[28]	12.6	(12.0-13.2)	13.6	(13.0-14.3)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	29.7	(28.9-30.4)	32.6	(31.7-33.5)
Cholesterol Ever Checked[30]	85.0	(84.1-85.8)	81.5	(80.6-82.4)
Ever Told High Cholesterol[31]	41.0	(40.0-41.9)	32.9	(31.9-33.9)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	35.7	(34.8-36.7)	38.3	(37.0-39.6)
* 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 3: Prevalence Estimates among Black, Non-Hispanics in Michigan (N = 2,823)
Michigan BRFSS (2013-2015 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes[1]	12.9	(11.6-14.4)	12.3	(11.1-13.7)
Ever Told Have Asthma[2]	18.3	(16.6-20.2)	17.9	(16.2-19.8)
Still Have Asthma[3]	13.4	(11.9-15.1)	13.2	(11.7-14.9)
Ever Told Chronic Obstructive Pulmonary Disease[4]	10.5	(9.1-12.1)	10.4	(9.0-12.0)
Ever Told Arthritis[5]	28.5	(26.5-30.5)	27.8	(26.1-29.6)
Ever Told Any Cardiovascular Disease[6]	9.9	(8.7-11.2)	9.8	(8.6-11.1)
Ever Told Cancer[7]	6.0	(5.0-7.1)	6.2	(5.2-7.4)
Ever Told Kidney Disease[8]	4.3	(3.4-5.4)	4.3	(3.3-5.5)
Ever Told Depression[9]	18.7	(16.9-20.7)	18.6	(16.8-20.7)
Disability[10]	27.5	(25.4-29.7)	26.8	(24.8-29.0)
Health Risk Behaviors				
Obese[11]	37.7	(35.3-40.1)	37.7	(35.3-40.2)
No Leisure Time Physical Activity[12]	31.9	(29.6-34.2)	32.2	(29.8-34.7)
Adequate Physical Activity[13]	21.2	(18.7-24.0)	21.1	(18.5-23.9)
Fruit Consumption (< 1 Time / Day)[14]	40.6	(37.7-43.6)	40.0	(37.1-43.0)
Vegetable Consumption (< 1 Time / Day)[15]	35.7	(32.8-38.7)	35.7	(32.7-38.8)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	16.2	(14.2-18.4)	16.5	(14.4-18.8)
Current Smoker[17]	24.7	(22.6-27.1)	24.7	(22.5-27.1)
Any Alcohol Consumption[18]	49.8	(47.4-52.3)	50.2	(47.8-52.7)
Heavy Drinking[19]	3.6	(2.7-4.7)	3.7	(2.8-4.8)
Binge Drinking[20]	14.4	(12.7-16.3)	14.6	(12.8-16.6)
Ever Told High Blood Pressure[21]	42.5	(39.7-45.3)	42.8	(40.2-45.3)
Health Indicators				
General Health, Fair or Poor[22]	25.1	(23.1-27.3)	24.6	(22.5-26.7)
Poor Physical Health on at least 14 Days in the Past Month[23]	15.3	(13.6-17.1)	14.9	(13.4-16.7)
Poor Mental Health on at least 14 Days in the Past Month[24]	15.2	(13.5-17.1)	15.0	(13.3-16.9)
Activity Limitation on at least 14 Days in the Past Month[25]	12.1	(10.6-13.8)	12.0	(10.5-13.7)
No Health Care Coverage (Among 18 – 64 year olds)[26]	18.9	(16.8-21.2)	22.4	(19.6-25.5)
No Personal Health Care Provider[27]	21.3	(19.2-23.5)	21.5	(19.4-23.7)
No Health Care Access During Past 12 Months Due to Cost[28]	19.3	(17.4-21.4)	19.2	(17.3-21.4)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	21.3	(19.3-23.4)	21.6	(19.6-23.8)
Cholesterol Ever Checked[30]	81.1	(78.5-83.4)	81.2	(78.8-83.4)
Ever Told High Cholesterol[31]	34.5	(31.7-37.4)	31.0	(28.5-33.7)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	69.4	(66.8-71.9)	72.4	(69.3-75.2)
* 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.

Table 4: Prevalence Estimates among Asian or Other Pacific Islander, Non-Hispanics in Michigan (N = 404)
Michigan BRFSS (2013-2015 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes[1]	4.8	(3.2-7.2)	10.8	(7.3-15.6)
Ever Told Have Asthma[2]	8.4	(5.5-12.7)	6.1	(4.1-9.0)
Still Have Asthma[3]	3.2	(1.8-5.5)	2.9	(1.7-4.9)
Ever Told Chronic Obstructive Pulmonary Disease[4]	--[a]	--[a]	--[a]	--[a]
Ever Told Arthritis[5]	6.4	(4.3-9.4)	12.2	(8.6-17.1)
Ever Told Any Cardiovascular Disease[6]	2.8	(1.6-4.7)	6.1	(3.4-10.6)
Ever Told Cancer[7]	--[a]	--[a]	--[a]	--[a]
Ever Told Kidney Disease[8]	--[a]	--[a]	--[a]	--[a]
Ever Told Depression[9]	7.0	(4.6-10.4)	7.1	(4.7-10.6)
Disability[10]	7.0	(4.8-10.2)	9.6	(6.4-14.2)
Health Risk Behaviors				
Obese[11]	10.5	(7.4-14.7)	10.9	(7.8-15.1)
No Leisure Time Physical Activity[12]	22.2	(17.2-28.2)	19.6	(15.2-25.0)
Adequate Physical Activity[13]	16.4	(11.6-22.6)	21.5	(15.7-28.8)
Fruit Consumption (< 1 Time / Day)[14]	37.6	(30.4-45.4)	27.2	(22.0-33.1)
Vegetable Consumption (< 1 Time / Day)[15]	23.6	(17.5-31.1)	19.0	(14.2-25.0)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	15.2	(10.8-21.0)	18.1	(12.5-25.4)
Current Smoker[17]	8.8	(5.7-13.2)	7.2	(4.7-10.9)
Any Alcohol Consumption[18]	46.2	(40.3-52.1)	44.5	(38.5-50.7)
Heavy Drinking[19]	--[a]	--[a]	--[a]	--[a]
Binge Drinking[20]	14.1	(10.3-18.9)	10.4	(7.5-14.2)
Ever Told High Blood Pressure[21]	13.6	(9.9-18.5)	26.2	(21.6-31.5)
Health Indicators				
General Health, Fair or Poor[22]	5.0	(3.0-8.0)	6.4	(3.9-10.4)
Poor Physical Health on at least 14 Days in the Past Month[23]	--[a]	--[a]	--[a]	--[a]
Poor Mental Health on at least 14 Days in the Past Month[24]	4.0	(2.5-6.5)	3.7	(2.3-6.0)
Activity Limitation on at least 14 Days in the Past Month[25]	--[a]	--[a]	--[a]	--[a]
No Health Care Coverage (Among 18 – 64 year olds)[26]	8.8	(5.9-12.8)	7.0	(4.3-11.3)
No Personal Health Care Provider[27]	25.5	(20.6-31.0)	18.6	(15.0-23.0)
No Health Care Access During Past 12 Months Due to Cost[28]	10.9	(7.5-15.6)	9.2	(6.2-13.4)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	34.8	(29.3-40.6)	28.7	(24.3-33.6)
Cholesterol Ever Checked[30]	69.9	(62.3-76.5)	80.7	(75.4-85.1)
Ever Told High Cholesterol[31]	22.5	(16.8-29.3)	27.1	(20.3-35.1)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	21.7	(16.9-27.6)	24.2	(18.2-31.3)

* 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 (2013-2015 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes[1]	12.9	(8.5-19.1)	12.1	(8.1-17.8)
Ever Told Have Asthma[2]	27.8	(20.7-36.1)	27.5	(20.2-36.3)
Still Have Asthma[3]	20.3	(14.4-28.0)	20.3	(13.9-28.8)
Ever Told Chronic Obstructive Pulmonary Disease[4]	14.9	(10.1-21.4)	13.2	(9.0-19.0)
Ever Told Arthritis[5]	33.4	(25.9-41.7)	31.7	(25.2-39.0)
Ever Told Any Cardiovascular Disease[6]	16.2	(10.8-23.5)	15.9	(11.0-22.4)
Ever Told Cancer[7]	11.3	(7.3-17.1)	11.6	(7.7-17.3)
Ever Told Kidney Disease[8]	--[a]	--[a]	--[a]	--[a]
Ever Told Depression[9]	31.3	(24.0-39.6)	27.3	(21.2-34.5)
Disability[10]	38.4	(30.3-47.1)	36.8	(29.7-44.6)
Health Risk Behaviors				
Obese[11]	32.7	(25.1-41.3)	33.0	(25.8-41.1)
No Leisure Time Physical Activity[12]	36.6	(27.7-46.6)	34.8	(25.9-44.9)
Adequate Physical Activity[13]	--[a]	--[a]	--[a]	--[a]
Fruit Consumption (< 1 Time / Day)[14]	54.0	(42.7-64.9)	54.5	(42.9-65.6)
Vegetable Consumption (< 1 Time / Day)[15]	21.2	(14.2-30.3)	20.6	(13.9-29.6)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	--[a]	--[a]	--[a]	--[a]
Current Smoker[17]	50.7	(41.8-59.6)	48.7	(39.4-58.1)
Any Alcohol Consumption[18]	43.0	(34.6-51.9)	43.8	(35.0-53.0)
Heavy Drinking[19]	--[a]	--[a]	--[a]	--[a]
Binge Drinking[20]	16.3	(10.9-23.7)	15.9	(10.2-23.9)
Ever Told High Blood Pressure[21]	42.0	(32.2-52.6)	39.2	(29.5-49.8)
Health Indicators				
General Health, Fair or Poor[22]	28.2	(21.3-36.3)	25.9	(19.7-33.1)
Poor Physical Health on at least 14 Days in the Past Month[23]	27.1	(20.1-35.4)	25.0	(18.8-32.3)
Poor Mental Health on at least 14 Days in the Past Month[24]	24.1	(17.2-32.6)	23.4	(16.5-32.1)
Activity Limitation on at least 14 Days in the Past Month[25]	19.7	(13.5-27.8)	18.3	(12.8-25.5)
No Health Care Coverage (Among 18 – 64 year olds)[26]	16.3	(10.4-24.8)	20.3	(12.4-31.4)
No Personal Health Care Provider[27]	21.0	(14.8-28.8)	22.8	(16.5-30.7)
No Health Care Access During Past 12 Months Due to Cost[28]	16.3	(11.0-23.4)	16.1	(10.8-23.2)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	31.8	(24.4-40.3)	33.0	(25.2-41.9)
Cholesterol Ever Checked[30]	80.1	(68.3-88.2)	79.5	(72.0-85.4)
Ever Told High Cholesterol[31]	40.6	(30.2-51.9)	29.8	(22.3-38.5)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	55.2	(44.7-65.3)	60.8	(48.7-71.7)

* 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 = 747)
Michigan BRFSS (2013-2015 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes[1]	11.7	(8.8-15.3)	11.6	(8.9-15.0)
Ever Told Have Asthma[2]	25.0	(20.7-29.8)	25.9	(21.5-30.8)
Still Have Asthma[3]	16.5	(13.3-20.4)	17.9	(14.4-22.1)
Ever Told Chronic Obstructive Pulmonary Disease[4]	14.7	(11.4-18.8)	15.8	(12.3-20.0)
Ever Told Arthritis[5]	33.6	(29.1-38.5)	35.2	(30.7-39.9)
Ever Told Any Cardiovascular Disease[6]	11.9	(9.0-15.7)	13.1	(10.1-16.8)
Ever Told Cancer[7]	9.0	(7.0-11.6)	9.9	(7.7-12.6)
Ever Told Kidney Disease[8]	2.5	(1.5-3.9)	2.6	(1.6-4.2)
Ever Told Depression[9]	29.0	(24.6-33.9)	30.0	(25.4-34.9)
Disability[10]	32.2	(27.7-37.0)	34.9	(30.1-40.0)
Health Risk Behaviors				
Obese[11]	34.9	(30.2-39.8)	34.9	(30.2-39.9)
No Leisure Time Physical Activity[12]	23.0	(19.0-27.5)	23.9	(19.7-28.5)
Adequate Physical Activity[13]	28.4	(23.4-34.0)	28.5	(23.4-34.3)
Fruit Consumption (< 1 Time / Day)[14]	40.5	(35.0-46.2)	38.9	(33.4-44.8)
Vegetable Consumption (< 1 Time / Day)[15]	26.3	(21.3-31.9)	23.9	(19.4-28.9)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	15.2	(11.7-19.6)	16.4	(12.3-21.5)
Current Smoker[17]	29.6	(25.1-34.5)	28.7	(24.5-33.3)
Any Alcohol Consumption[18]	47.0	(41.9-52.2)	45.3	(40.3-50.4)
Heavy Drinking[19]	4.7	(3.2-6.9)	4.3	(2.9-6.2)
Binge Drinking[20]	17.9	(14.1-22.4)	16.8	(13.1-21.3)
Ever Told High Blood Pressure[21]	34.2	(29.2-39.7)	33.1	(28.3-38.3)
Health Indicators				
General Health, Fair or Poor[22]	23.8	(20.0-28.1)	25.3	(21.2-29.9)
Poor Physical Health on at least 14 Days in the Past Month[23]	20.6	(16.7-25.1)	21.4	(17.5-25.9)
Poor Mental Health on at least 14 Days in the Past Month[24]	17.5	(14.0-21.6)	18.4	(14.6-22.9)
Activity Limitation on at least 14 Days in the Past Month[25]	14.7	(11.7-18.4)	16.0	(12.7-20.1)
No Health Care Coverage (Among 18 – 64 year olds)[26]	20.2	(15.7-25.6)	19.3	(14.1-25.8)
No Personal Health Care Provider[27]	21.8	(17.8-26.4)	20.2	(16.3-24.7)
No Health Care Access During Past 12 Months Due to Cost[28]	19.5	(15.8-24.0)	20.6	(16.5-25.3)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	31.6	(26.9-36.7)	31.4	(26.7-36.5)
Cholesterol Ever Checked[30]	79.7	(74.4-84.1)	82.6	(78.2-86.2)
Ever Told High Cholesterol[31]	40.1	(34.0-46.4)	36.4	(30.8-42.3)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	51.9	(45.9-57.8)	56.0	(49.7-62.1)
* 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 = 356)
Michigan BRFSS (2013-2015 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude		Age-Adjusted*	
Ever Told Diabetes[1]	7.5	(5.2-10.8)	9.7	(6.8-13.7)
Ever Told Have Asthma[2]	14.3	(10.1-19.8)	12.9	(9.1-18.0)
Still Have Asthma[3]	10.9	(7.4-15.8)	9.6	(6.4-14.2)
Ever Told Chronic Obstructive Pulmonary Disease[4]	4.5	(2.6-7.9)	5.8	(3.6-9.2)
Ever Told Arthritis[5]	17.5	(13.6-22.3)	22.3	(18.1-27.2)
Ever Told Any Cardiovascular Disease[6]	7.8	(5.0-11.9)	10.1	(7.1-14.3)
Ever Told Cancer[7]	7.1	(4.9-10.2)	9.6	(7.1-13.0)
Ever Told Kidney Disease[8]	--[a]	--[a]	--[a]	--[a]
Ever Told Depression[9]	12.6	(9.1-17.3)	13.7	(10.0-18.5)
Disability[10]	20.2	(15.5-25.8)	23.8	(18.7-29.7)
Health Risk Behaviors				
Obese[11]	22.1	(16.8-28.4)	24.1	(18.7-30.4)
No Leisure Time Physical Activity[12]	28.5	(22.4-35.5)	30.1	(24.0-37.0)
Adequate Physical Activity[13]	15.5	(10.4-22.5)	14.5	(9.8-21.0)
Fruit Consumption (< 1 Time / Day)[14]	34.7	(27.1-43.1)	33.2	(26.1-41.2)
Vegetable Consumption (< 1 Time / Day)[15]	24.3	(17.4-32.9)	20.2	(14.7-27.1)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	12.0	(8.0-17.8)	12.4	(8.3-18.1)
Current Smoker[17]	21.7	(16.5-28.0)	22.4	(16.8-29.1)
Any Alcohol Consumption[18]	41.9	(35.5-48.5)	43.8	(37.4-50.5)
Heavy Drinking[19]	--[a]	--[a]	--[a]	--[a]
Binge Drinking[20]	11.2	(7.8-15.9)	10.5	(7.2-15.2)
Ever Told High Blood Pressure[21]	22.3	(16.6-29.2)	28.1	(22.1-34.9)
Health Indicators				
General Health, Fair or Poor[22]	16.8	(12.4-22.3)	18.0	(13.6-23.3)
Poor Physical Health on at least 14 Days in the Past Month[23]	10.2	(6.8-14.9)	12.0	(8.1-17.5)
Poor Mental Health on at least 14 Days in the Past Month[24]	13.4	(9.5-18.5)	13.9	(9.7-19.6)
Activity Limitation on at least 14 Days in the Past Month[25]	6.8	(4.2-10.9)	7.3	(4.5-11.7)
No Health Care Coverage (Among 18 – 64 year olds)[26]	20.4	(15.0-27.0)	20.5	(14.2-28.6)
No Personal Health Care Provider[27]	20.4	(15.2-26.8)	16.1	(12.0-21.2)
No Health Care Access During Past 12 Months Due to Cost[28]	17.9	(13.0-24.1)	18.6	(13.7-24.7)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	32.7	(26.9-39.1)	29.4	(23.9-35.6)
Cholesterol Ever Checked[30]	70.9	(62.5-78.1)	78.8	(72.3-84.1)
Ever Told High Cholesterol[31]	38.8	(30.7-47.6)	41.4	(33.5-49.7)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	22.2	(17.0-28.5)	28.3	(20.8-37.2)

* 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 = 627) Michigan BRFSS (2013-2015 Combined) % (95% Confidence Interval)				
Chronic Health Conditions	**Crude**		**Age-Adjusted***	
Ever Told Diabetes[1]	10.0	(7.7-12.8)	14.0	(11.1-17.6)
Ever Told Have Asthma[2]	17.7	(14.2-21.8)	17.4	(13.8-21.7)
Still Have Asthma[3]	12.7	(9.7-16.6)	12.2	(9.3-15.9)
Ever Told Chronic Obstructive Pulmonary Disease[4]	5.7	(3.8-8.6)	5.7	(3.6-9.1)
Ever Told Arthritis[5]	22.1	(18.4-26.3)	28.7	(24.5-33.2)
Ever Told Any Cardiovascular Disease[6]	6.0	(4.2-8.5)	8.9	(6.4-12.3)
Ever Told Cancer[7]	5.5	(3.7-8.0)	6.5	(4.6-9.2)
Ever Told Kidney Disease[8]	--[a]	--[a]	--[a]	--[a]
Ever Told Depression[9]	22.5	(18.6-27.1)	22.3	(18.4-26.7)
Disability[10]	21.4	(17.6-25.8)	23.8	(19.8-28.4)
Health Risk Behaviors				
Obese[11]	36.9	(32.2-41.8)	39.6	(34.9-44.5)
No Leisure Time Physical Activity[12]	29.3	(24.8-34.2)	30.6	(25.9-35.6)
Adequate Physical Activity[13]	19.6	(15.6-24.4)	17.2	(13.6-21.5)
Fruit Consumption (< 1 Time / Day)[14]	40.7	(35.3-46.4)	40.9	(35.3-46.8)
Vegetable Consumption (< 1 Time / Day)[15]	29.7	(24.6-35.4)	27.1	(22.4-32.4)
Fruit and Vegetable Consumption (≥ 5 Times / Day)[16]	18.8	(14.8-23.6)	19.4	(15.5-24.1)
Current Smoker[17]	23.5	(19.4-28.3)	21.2	(17.3-25.7)
Any Alcohol Consumption[18]	56.6	(51.7-61.3)	56.6	(51.7-61.3)
Heavy Drinking[19]	4.8	(3.1-7.3)	4.8	(3.1-7.3)
Binge Drinking[20]	24.0	(19.9-28.8)	20.4	(16.8-24.6)
Ever Told High Blood Pressure[21]	23.5	(19.4-28.3)	32.4	(28.2-37.0)
Health Indicators				
General Health, Fair or Poor[22]	22.9	(19.0-27.4)	24.2	(20.3-28.7)
Poor Physical Health on at least 14 Days in the Past Month[23]	15.1	(11.8-19.2)	16.7	(13.1-21.1)
Poor Mental Health on at least 14 Days in the Past Month[24]	17.3	(13.7-21.6)	15.4	(12.3-19.2)
Activity Limitation on at least 14 Days in the Past Month[25]	8.9	(6.4-12.3)	9.3	(6.7-12.6)
No Health Care Coverage (Among 18 – 64 year olds)[26]	22.9	(18.8-27.7)	23.0	(17.9-29.1)
No Personal Health Care Provider[27]	22.9	(19.1-27.3)	18.4	(15.3-22.0)
No Health Care Access During Past 12 Months Due to Cost[28]	25.0	(20.9-29.6)	23.0	(19.3-27.2)
Preventive Health Practices				
No Routine Checkup in Past Year[29]	30.2	(26.1-34.7)	28.7	(24.6-33.1)
Cholesterol Ever Checked[30]	72.4	(66.9-77.3)	79.9	(75.9-83.3)
Ever Told High Cholesterol[31]	32.7	(27.2-38.7)	34.4	(29.1-40.2)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[32]	48.4	(43.0-53.8)	46.9	(40.4-53.5)
* 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.

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.

[11] 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.

[12] 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.

[13] Among adults who participate in some form of leisure-time physical activity, the proportion who reported 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. Data for this variable were only collected in 2013 and 2015.

[14] Among all adults, the proportion whose total reported consumption of fruits (including juice) was less than one time per day. Data for this variable were only collected in 2013 and 2015.

[15] Among all adults, the proportion whose total reported consumption of vegetables was less than one time per day. Data for this variable were only collected in 2013 and 2015.

[16] Among all adults, the proportion whose total reported consumption of fruits (including juice) and vegetables was five or more times per day. Data for this variable were only collected in 2013 and 2015.

[17] 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.

[18] Among all adults, the proportion who reported consuming at least one drink of any alcoholic beverage in the previous month.

[19] 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.

[20] Among all adults, the proportion who reported consuming five or more drinks per occasion at least once in the previous month.

[21] 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. Data for this variable were only collected in 2013 and 2015.

[22] Among all adults, the proportion who reported that their health, in general, was either fair or poor.

[23] 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.

[24] 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.

[25] 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.

[26] 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.

[27] 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.

[28] 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.

[29] Among all adults, the proportion who reported that they did not have a routine checkup in the past year.

[30] Among all adults, the proportion who reported ever having had their blood cholesterol checked. Data for this variable were only collected in 2013 and 2015.

[31] 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. Data for this variable were only collected in 2013 and 2015.

[32] 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.