

**Estimates for Selected Risk Factors and Health Indicators
by Michigan Prosperity Region**

State of Michigan

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

2016-2018

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

For this report, data from the 2016-2018 Michigan BRFSS were combined. The total sample sizes by year were: 12,024 in 2016, 10,889 in 2017, and 10,322 in 2018. Not all questions were included annually in the survey. The table subtitles indicate which years were used for that particular analysis.

For the 2016 through 2018 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 2016-2018 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. No additional weighting factors were computed at the regional level, thus the weights used might not always provide accurate regional estimates, particularly when regional demographic distributions vary greatly from that of the state.

Michigan BRFSS data from 2016-2018 were analyzed by Michigan Prosperity region. A map identifying each of Michigan's ten prosperity regions is included on the following page. Population-based prevalence estimates and asymmetric confidence intervals were calculated for indicators of health status, health risk behaviors, clinical preventive practices, and chronic conditions among the adult population in Michigan. All analyses were performed in SAS-Callable SUDAAN®, a statistical computing that is 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%.

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 Yan Tian at TianY@michigan.gov.

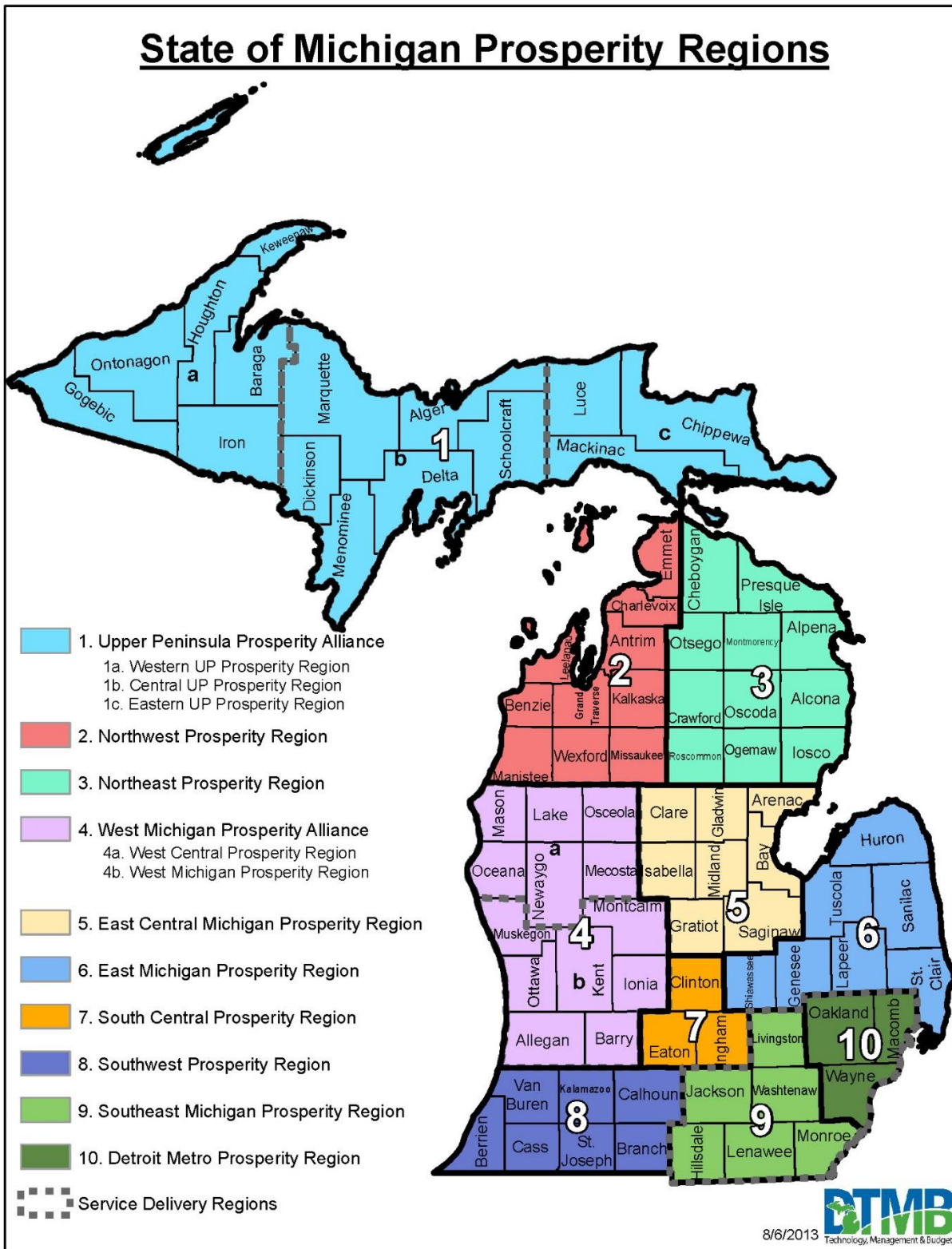


Table 1: Health Status by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	General Health, Fair or Poor^a	
	%	95% Confidence Interval
Michigan Total	18.6	(18.1-19.1)
Prosperity Region		
Upper Peninsula	20.1	(16.8-23.8)
Northwest	17.2	(14.5-20.3)
Northeast	20.3	(16.3-25.0)
West Michigan	16.2	(14.8-17.9)
East Central Michigan	19.9	(17.3-22.8)
East Michigan	22.2	(20.0-24.5)
South Central	17.0	(14.4-19.9)
Southwest	18.6	(16.3-21.2)
Southeast Michigan	14.7	(13.1-16.5)
Detroit Metro	19.1	(18.0-20.3)

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

Table 2: Health Status on at Least 16 Days in the Past Month by Prosperity Region Michigan BRFSS, 2016-2018 Combined						
	Poor Physical Health^a		Poor Mental Health^b		Activity Limitation^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	9.7	(9.3-10.2)	9.3	(8.9-9.8)	10.4	(9.9-10.8)
Prosperity Region						
Upper Peninsula	8.8	(6.3-12.0)	6.5	(4.3-9.7)	12.2	(9.6-15.5)
Northwest	6.5	(4.9-8.4)	5.5	(4.0-7.4)	9.8	(7.7-12.3)
Northeast	5.3	(3.6-7.7)	4.6	(2.8-7.4)	12.0	(8.8-16.1)
West Michigan	7.8	(6.7-9.0)	6.3	(5.4-7.4)	9.0	(7.8-10.3)
East Central Michigan	8.3	(6.5-10.6)	6.4	(4.7-8.7)	11.4	(9.3-14.0)
East Michigan	8.3	(6.9-9.9)	6.5	(5.2-8.1)	11.4	(9.8-13.2)
South Central	7.6	(5.8-9.9)	7.5	(5.7-9.8)	8.9	(7.1-11.1)
Southwest	7.5	(6.0-9.4)	8.2	(6.5-10.4)	9.7	(7.9-11.7)
Southeast Michigan	6.4	(5.3-7.7)	7.4	(6.2-9.0)	8.6	(7.3-10.2)
Detroit Metro	7.5	(6.8-8.3)	7.0	(6.3-7.8)	11.0	(10.1-12.0)

^a Among all adults, the proportion who reported 16 or more days of poor physical health, which includes physical illness and injury, during the past 30 days.
^b Among all adults, the proportion who reported 16 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days.
^c Among all adults, the proportion who reported 16 or more days in the past 30 days in which either poor physical health or poor mental health kept respondents from doing their usual activities, such as self-care, work, and recreation.

**Table 3: Mean Number of Days of Poor Physical Health, Poor Mental Health, and Activity Limitations by Prosperity Region
Michigan BRFSS, 2016-2018 Combined**

	Poor Physical Health ^a		Poor Mental Health ^b		Activity Limitation ^c	
	Mean # of days	95% Confidence Interval	Mean # of days	95% Confidence Interval	Mean # of days	95% Confidence Interval
Michigan Total	4.5	(4.4-4.7)	4.4	(4.2-4.5)	3.1	(3.0-3.3)
Prosperity Region						
Upper Peninsula	5.3	(4.4-6.2)	4.3	(3.5-5.2)	3.5	(2.7-4.2)
Northwest	4.1	(3.5-4.8)	3.8	(3.2-4.4)	2.8	(2.3-3.4)
Northeast	5.6	(4.6-6.7)	4.2	(3.2-5.2)	3.5	(2.6-4.4)
West Michigan	4.4	(4.0-4.8)	3.9	(3.6-4.3)	2.8	(2.5-3.1)
East Central Michigan	5	(4.3-5.6)	4.5	(3.8-5.2)	3.2	(2.6-3.7)
East Michigan	5.2	(4.7-5.7)	4.3	(3.8-4.8)	3.5	(3.0-3.9)
South Central	4.2	(3.7-4.8)	4.3	(3.8-4.9)	2.8	(2.3-3.3)
Southwest	4.5	(3.9-5.0)	4.5	(3.9-5.0)	3.1	(2.6-3.5)
Southeast Michigan	4.1	(3.6-4.5)	4.2	(3.8-4.6)	2.8	(2.4-3.1)
Detroit Metro	4.5	(4.3-4.8)	4.4	(4.2-4.7)	3.3	(3.1-3.6)

^a Among all adults, the mean number of days during the past 30 days in which physical health, including illness and injury, was not good.

^b Among all adults, the mean number of days during the past 30 days in which mental health, including stress, depression, and problems with emotions, was not good.

^c Among all adults, the mean number of days during the past 30 days in which poor physical health or poor mental health kept respondent from doing their usual activities, such as self-care, work, and recreation.

Table 4: Disability by Prosperity Region Michigan BRFSS, 2016-2018 Combined						
	Total Disability^a		Any Activity Limitation^b		Used Special Equipment^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	27.1	(26.5-27.8)	24.4	(23.8-25.0)	11.3	(10.9-11.7)
Prosperity Region						
Upper Peninsula	28.8	(25.0-32.9)	26.6	(22.9-30.7)	11.3	(8.9-14.3)
Northwest	26.1	(22.8-29.6)	24.3	(21.1-27.7)	8.8	(6.9-11.1)
Northeast	32.9	(28.0-38.1)	30.2	(25.5-35.4)	12.1	(9.2-15.8)
West Michigan	25.2	(23.5-27.0)	23.3	(21.6-25.1)	9.5	(8.4-10.8)
East Central Michigan	29.2	(26.0-32.7)	27.2	(24.0-30.7)	11.1	(9.0-13.6)
East Michigan	29.7	(27.4-32.2)	26.9	(24.6-29.3)	12.5	(10.9-14.4)
South Central	23.5	(20.5-26.8)	20.3	(17.6-23.5)	8.5	(6.7-10.8)
Southwest	28.8	(26.1-31.8)	26.2	(23.5-29.0)	11.2	(9.4-13.2)
Southeast Michigan	24.9	(22.9-27.1)	22.3	(20.4-24.4)	9.5	(8.2-10.9)
Detroit Metro	26.7	(25.4-28.0)	23.9	(22.7-25.2)	11.6	(10.8-12.5)

^a Among all adults, 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.

^b Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems.

^c Among all adults, the proportion who reported that they required use of special equipment (such as a can, a wheelchair, a special bed, or a special telephone) due to a health problem.

**Table 5: Weight Status by Prosperity Region
Michigan BRFSS, 2016-2018 Combined**

	Obese ^a		Overweight ^b		Healthy Weight ^c		Underweight ^d	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	32.6	(31.9-33.3)	34.8	(34.1-35.5)	30.8	(30.1-31.5)	1.8	(1.6-2.0)
Prosperity Region								
Upper Peninsula	34.1	(29.8-38.7)	36.2	(31.9-40.7)	27.6	(23.7-31.8)	-- ^e	-- ^e
Northwest	32.2	(28.7-35.8)	37.1	(33.5-40.8)	29.3	(25.9-33.0)	-- ^e	-- ^e
Northeast	36.0	(30.9-41.4)	34.0	(29.0-39.3)	28.3	(23.7-33.4)	-- ^e	-- ^e
West Michigan	31.9	(29.9-33.9)	34.7	(32.7-36.8)	32.2	(30.2-34.3)	1.2	(0.8-1.8)
East Central Michigan	39.1	(35.6-42.7)	33.5	(30.2-37.0)	26.5	(23.4-29.8)		
East Michigan	35.2	(32.7-37.8)	36.1	(33.6-38.8)	26.7	(24.4-29.2)	1.9	(1.2-3.0)
South Central	32.6	(29.1-36.4)	33.0	(29.5-36.8)	33.0	(29.4-36.8)	-- ^e	-- ^e
Southwest	35.2	(32.1-38.5)	32.8	(29.8-36.0)	30.0	(27.0-33.1)	2.0	(1.1-3.5)
Southeast Michigan	31.6	(29.3-33.9)	33.9	(31.5-36.3)	33.2	(30.8-35.7)	1.4	(0.8-2.2)
Detroit Metro	31.0	(29.6-32.4)	35.9	(34.4-37.3)	31.0	(29.6-32.4)	2.2	(1.7-2.7)

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.

^b Among all adults, the proportion of respondents whose BMI was greater than or equal to 25.0, but less than 30.0.

^c Among all adults, the proportion of respondents whose BMI was greater than or equal to 18.5, but less than 25.0.

^d Among all adults, the proportion of respondents whose BMI was less than 18.5.

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

Table 6: Health Care Coverage Among Adults 18-64 Years Old by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	No Health Care Coverage^a (Among 18 - 64 year olds)	
	%	95% Confidence Interval
Michigan Total	9.6	(9.0-10.1)
Prosperity Region		
Upper Peninsula	8.2	(5.6-11.9)
Northwest	10.6	(8.0-14.0)
Northeast	11.7	(7.9-17.1)
West Michigan	10.1	(8.6-11.8)
East Central Michigan	10.2	(7.7-13.4)
East Michigan	10.5	(8.6-12.8)
South Central	8.6	(6.2-11.8)
Southwest	10.5	(8.1-13.7)
Southeast Michigan	8.4	(6.8-10.3)
Detroit Metro	9.3	(8.3-10.5)
^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.		

Table 7: Health Care Access by Prosperity Region Michigan BRFSS, 2016-2018 Combined				
	No Personal Health Care Provider^a		No Health Care Access During Past 12 Months Due to Cost^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	14.9	(14.4-15.5)	12.0	(11.5-12.5)
Prosperity Region				
Upper Peninsula	13.9	(11.0-17.6)	10.6	(8.2-13.7)
Northwest	15.1	(12.4-18.2)	10.4	(8.3-13.0)
Northeast	16.2	(12.6-20.6)	10.7	(7.7-14.8)
West Michigan	12.3	(10.8-13.9)	11.2	(10.0-12.6)
East Central Michigan	12.1	(9.7-15.0)	9.8	(7.9-12.2)
East Michigan	14.1	(12.1-16.2)	12.1	(10.4-14.0)
South Central	16.4	(13.5-19.7)	11.0	(8.9-13.5)
Southwest	18.6	(16.1-21.6)	11.4	(9.5-13.6)
Southeast Michigan	13.9	(12.2-15.9)	11.1	(9.6-12.9)
Detroit Metro	14.0	(13.0-15.2)	13.7	(12.7-14.8)
^a 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. ^b Among all adults, the proportion who reported that in the past 12 months, they could not see a doctor when they needed to due to the cost.				

Table 8: No Leisure Time Physical Activity by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	No Leisure Time Physical Activity^a	
	%	95% Confidence Interval
Michigan Total	24.9	(24.3-25.6)
Prosperity Region		
Upper Peninsula	26.2	(22.4-30.4)
Northwest	24.4	(21.4-27.8)
Northeast	29.9	(25.0-35.3)
West Michigan	24.1	(22.3-26.0)
East Central Michigan	26.9	(23.8-30.1)
East Michigan	28.1	(25.8-30.6)
South Central	22.8	(19.7-26.3)
Southwest	25.8	(23.1-28.7)
Southeast Michigan	22.7	(20.6-24.9)
Detroit Metro	26.3	(25.0-27.7)
^a 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.		

**Table 9: Cigarette Smoking by Prosperity Region
Michigan BRFSS, 2016-2018 Combined**

	Current Smoking ^a		Former Smoking ^b		Never Smoked	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	19.6	(19.0-20.2)	26.3	(25.7-26.9)	54.1	(53.4-54.8)
Prosperity Region						
Upper Peninsula	21.5	(17.9-25.5)	30.8	(26.9-35.0)	47.7	(43.2-52.2)
Northwest	19.9	(17.0-23.1)	28.2	(25.1-31.4)	52.0	(48.3-55.6)
Northeast	25.6	(20.9-30.9)	31.9	(27.0-37.1)	42.6	(37.4-47.8)
West Michigan	17.9	(16.2-19.6)	27.7	(25.9-29.6)	54.5	(52.3-56.6)
East Central Michigan	20.7	(17.7-24.0)	28.3	(25.4-31.4)	51.0	(47.4-54.6)
East Michigan	23.7	(21.4-26.2)	29.4	(27.1-31.8)	46.9	(44.3-49.5)
South Central	17.3	(14.4-20.6)	22.7	(19.8-25.8)	60.0	(56.2-63.7)
Southwest	20.1	(17.5-23.0)	26.4	(23.8-29.2)	53.5	(50.2-56.7)
Southeast Michigan	17.0	(15.1-19.1)	26.4	(24.4-28.6)	56.6	(54.1-59.0)
Detroit Metro	20.8	(19.6-22.1)	25.3	(24.0-26.5)	53.9	(52.4-55.4)

^a Among all adults, the proportion who reported 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.

^b Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life, but they do not smoke cigarettes now.

Table 10: Current Smokers Who Attempted to Quit by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Tried to Quit Smoking One Day or Longer in Past Year^a	
	%	95% Confidence Interval
Michigan Total	59.2	(57.5-60.8)
Prosperity Region		
Upper Peninsula	60.5	(50.4-69.7)
Northwest	47.4	(38.8-56.2)
Northeast	48.0	(36.7-59.6)
West Michigan	58.5	(53.2-63.6)
East Central Michigan	54.3	(45.4-62.9)
East Michigan	59.1	(53.1-64.9)
South Central	57.8	(47.8-67.2)
Southwest	56.6	(48.8-64.1)
Southeast Michigan	62.2	(55.9-68.2)
Detroit Metro	62.5	(59.1-65.9)

^a Among current smokers, the proportion who reported that during the past 12 months, they had tried to quit smoking for one day or longer.

Table 11: Current Hookah Use by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Current Hookah Use^a	
	%	95% Confidence Interval
Michigan Total	3.3	(3.0-3.7)
Prosperity Region		
Upper Peninsula	-- ^b	-- ^b
Northwest	2.4	(1.4-4.2)
Northeast	-- ^b	-- ^b
West Michigan	3.0	(2.3-3.9)
East Central Michigan	2.2	(1.4-3.7)
East Michigan	2.6	(1.8-3.8)
South Central	3.6	(2.3-5.6)
Southwest	1.9	(1.2-3.2)
Southeast Michigan	2.7	(1.9-3.8)
Detroit Metro	4.4	(3.7-5.2)

^a Among all adults, the proportion who reported smoking tobacco using a hookah, narghile, or water pipe on one or more days during the previous thirty day.
^b Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

Table 12: Alcohol Consumption by Prosperity Region
Michigan BRFSS, 2016-2018 Combined

	Any Alcohol in Past Month ^a		Heavy Drinking ^b		Binge Drinking ^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	56.9	(56.2-57.6)	6.7	(6.3-7.0)	18.5	(17.9-19.0)
Prosperity Region						
Upper Peninsula	56.5	(51.9-60.9)	7.2	(5.1-10.0)	17.2	(14.0-21.0)
Northwest	56.0	(52.2-59.7)	11.7	(9.4-14.3)	17.4	(14.7-20.6)
Northeast	51.8	(46.5-57.1)	7.3	(4.9-10.9)	17.9	(14.2-22.4)
West Michigan	58.8	(56.7-60.9)	7.1	(6.1-8.2)	18.5	(16.8-20.3)
East Central Michigan	54.0	(50.4-57.6)	7.9	(6.2-10.0)	19.8	(17.0-23.0)
East Michigan	53.5	(50.8-56.1)	5.6	(4.5-7.0)	18.3	(16.2-20.5)
South Central	56.5	(52.6-60.3)	8.0	(6.2-10.3)	19.3	(16.4-22.6)
Southwest	53.8	(50.6-57.1)	6.2	(4.8-8.0)	16.9	(14.5-19.6)
Southeast Michigan	60.2	(57.8-62.6)	7.1	(5.9-8.6)	18.9	(16.9-21.0)
Detroit Metro	59.3	(57.8-60.7)	6.1	(5.4-6.9)	18.4	(17.3-19.7)

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

^b Among all adults, the proportion who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the previous month.

^c Among all adults, the proportion who reported consuming five or more drinks per occasion (for men) or 4 or more drinks per occasion (for women) at least once in the previous month.

Table 13: Mean Number of Binge Drinking Occasions during the Past Month among Binge Drinkers by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Number of Binge Drinking Occasions^a	
	Mean	95% Confidence Interval
Michigan Total	4.6	(4.4-4.9)
Prosperity Region		
Upper Peninsula	6.2	(3.9-8.4)
Northwest	6.5	(4.8-8.3)
Northeast	6.4	(3.6-9.2)
West Michigan	4.4	(3.8-5.0)
East Central Michigan	5.1	(4.0-6.2)
East Michigan	4.1	(3.3-4.8)
South Central	4.4	(3.6-5.2)
Southwest	4.2	(3.2-5.1)
Southeast Michigan	3.9	(3.2-4.5)
Detroit Metro	4.5	(4.0-4.9)

^a 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.

Table 16: Seatbelt Use by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Always Uses a Seatbelt^a	
	%	95% Confidence Interval
Michigan Total	89.1	(88.6-89.6)
Prosperity Region		
Upper Peninsula	86.8	(83.2-89.8)
Northwest	89.5	(86.8-91.7)
Northeast	85.4	(80.7-89.1)
West Michigan	88.7	(87.1-90.1)
East Central Michigan	88.2	(85.4-90.5)
East Michigan	87.6	(85.7-89.4)
South Central	89.7	(86.8-92.1)
Southwest	87.9	(85.2-90.2)
Southeast Michigan	89.6	(87.7-91.2)
Detroit Metro	91.0	(90.0-91.9)

^a Among all adults, the proportion who reported always using a seatbelt when driving or riding in a car.

Table 15: No Routine Checkup in Past Year by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Had No Routine Checkup in Past Year^a	
	%	95% Confidence Interval
Michigan Total	24.6	(24.0-25.3)
Prosperity Region		
Upper Peninsula	30.3	(26.2-34.7)
Northwest	27.5	(24.2-31.0)
Northeast	28.3	(23.5-33.6)
West Michigan	25.6	(23.7-27.5)
East Central Michigan	25.6	(22.5-29.0)
East Michigan	25.9	(23.5-28.4)
South Central	26.7	(23.4-30.2)
Southwest	27.8	(24.9-30.8)
Southeast Michigan	28.7	(26.4-31.0)
Detroit Metro	25.6	(24.3-27.0)

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

Table 18: Breast Cancer Screening Among Women Aged 40 Years and Older by Prosperity Region Michigan BRFSS, 2016 and 2018 Combined		
	Had Mammogram in Past Two Years^a	
	%	95% Confidence Interval
Michigan Total	74.0	(72.4-75.5)
Prosperity Region		
Upper Peninsula	72.8	(65.1-79.4)
Northwest	74.1	(67.2-80.0)
Northeast	67.1	(56.2-76.5)
West Michigan	74.9	(70.8-78.5)
East Central Michigan	76.1	(70.0-81.4)
East Michigan	75.0	(69.8-79.5)
South Central	75.6	(68.5-81.5)
Southwest	72.8	(66.7-78.2)
Southeast Michigan	75.4	(70.2-80.0)
Detroit Metro	73.4	(70.5-76.1)

^a Among women aged 50 years and older, the proportion who reported having a mammogram in the past two years.

Table 17: Cervical Cancer Screening Among Women Aged 18 Years and Older by Prosperity Region Michigan BRFSS, 2016 and 2018 Combined		
	Had Appropriately Timed Pap Test^a	
	%	95% Confidence Interval
Michigan Total	72.5	(70.7-74.3)
Prosperity Region		
Upper Peninsula	65.2	(56.4-73.1)
Northwest	74.4	(66.6-80.9)
Northeast	71.3	(59.5-80.8)
West Michigan	72.9	(68.2-77.1)
East Central Michigan	77.0	(68.8-83.5)
East Michigan	76.8	(71.7-81.3)
South Central	69.6	(62.2-76.1)
Southwest	70.1	(62.8-76.5)
Southeast Michigan	72.1	(66.0-77.5)
Detroit Metro	73.4	(70.3-76.3)

^a Among women aged 18 years and older, the proportion who reported having a Pap test within the previous three years.

Table 18: Prostate Cancer Screening Among Men Aged 50 Years and Older by Prosperity Region Michigan BRFSS, 2016 and 2018 Combined		
	Had PSA Test in Past Year^a	
	%	95% Confidence Interval
Michigan Total	41.1	(38.9-43.2)
Prosperity Region		
Upper Peninsula	36.0	(27.8-45.0)
Northwest	46.5	(37.3-55.9)
Northeast	40.9	(28.8-54.3)
West Michigan	40.3	(35.0-45.9)
East Central Michigan	36.9	(30.1-44.2)
East Michigan	43.1	(36.4-50.1)
South Central	39.9	(30.3-50.4)
Southwest	37.7	(29.7-46.5)
Southeast Michigan	38.6	(32.7-44.9)
Detroit Metro	42.3	(38.4-46.2)

^a Among men aged 50 years and older, the proportion who reported having has a Prostate-Specific Antigen (PSA) test in the past year.

Table 19: Colorectal Cancer Screening Among Adults Aged 50 Years and Older by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Appropriate Colorectal Cancer Screening^a	
	%	95% Confidence Interval
Michigan Total	69.7	(68.3-71.0)
Prosperity Region		
Upper Peninsula	71.5	(65.4-76.9)
Northwest	66.1	(59.9-71.9)
Northeast	62.4	(53.5-70.4)
West Michigan	72.1	(68.6-75.3)
East Central Michigan	68.4	(63.3-73.0)
East Michigan	69.6	(65.3-73.5)
South Central	73.1	(66.9-78.6)
Southwest	68.4	(63.0-73.3)
Southeast Michigan	71.0	(66.9-74.9)
Detroit Metro	69.5	(67.0-71.9)
^a Among adults aged 50 years and older, the proportion who reported having either a fecal occult blood test within the past year, a sigmoidoscopy within the past five years, or a colonoscopy within the past ten years.		

Table 20: Oral Health by Prosperity Region Michigan BRFSS, 2016 and 2018 Combined				
	No Dental Visit in Past Year^a		6+ Teeth Missing^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	29.9	(28.8-31.0)	16.0	(15.2-16.8)
Prosperity Region				
Upper Peninsula	30.5	(25.8-35.6)	19.0	(15.5-23.0)
Northwest	32.5	(27.9-37.5)	18.0	(14.6-22.0)
Northeast	39.2	(32.0-47.0)	30.9	(24.2-38.6)
West Michigan	28.0	(25.4-30.6)	15.0	(13.1-17.0)
East Central Michigan	32.2	(28.1-36.5)	17.3	(14.5-20.5)
East Michigan	34.2	(30.8-37.7)	18.6	(16.0-21.5)
South Central	23.1	(19.1-27.7)	11.3	(8.8-14.4)
Southwest	31.4	(27.3-35.7)	19.8	(16.5-23.4)
Southeast Michigan	25.8	(22.8-29.0)	13.9	(11.9-16.3)
Detroit Metro	29.2	(27.3-31.1)	15.6	(14.3-17.1)

^a Among all adults, the proportion who reported that they had not visited a dentist or dental clinic for any reason within the previous year.

^b Among all adults, the proportion who reported that they were missing 6+ teeth due to tooth decay or gum disease. This excludes teeth lost for other reasons, such as injury or orthodontics.

Table 21: Immunizations among Adults Aged 65 Years and Older by Prosperity Region Michigan BRFSS, 2016-2018 Combined				
	Had Flu Vaccine in Past Year^a		Ever Had Pneumonia Vaccine^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	56.0	(54.8-57.2)	73.9	(72.8-75.0)
Prosperity Region				
Upper Peninsula	60.8	(53.4-67.7)	68.7	(61.2-75.4)
Northwest	64.8	(59.1-70.1)	82.0	(77.1-86.0)
Northeast	54.0	(45.2-62.5)	65.0	(55.7-73.2)
West Michigan	57.3	(53.8-60.8)	78.0	(75.0-80.8)
East Central Michigan	56.0	(50.3-61.6)	74.0	(69.1-78.5)
East Michigan	54.7	(50.3-59.0)	69.4	(65.1-73.4)
South Central	58.7	(52.1-65.1)	75.4	(69.0-80.8)
Southwest	60.3	(54.9-65.4)	77.8	(73.0-82.0)
Southeast Michigan	57.8	(53.8-61.7)	77.3	(73.7-80.5)
Detroit Metro	58.4	(55.9-60.9)	71.6	(69.2-73.9)

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

Table 22: HIV Testing among Adults Aged 18 - 64 Years by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Ever Had an HIV Test^a	
	%	95% Confidence Interval
Michigan Total	44.4	(43.5-45.2)
Prosperity Region		
Upper Peninsula	38.7	(33.3-44.5)
Northwest	39.7	(35.1-44.5)
Northeast	35.0	(28.9-41.7)
West Michigan	40.6	(38.1-43.2)
East Central Michigan	34.3	(30.2-38.7)
East Michigan	42.7	(39.4-46.0)
South Central	41.7	(37.2-46.4)
Southwest	42.9	(38.8-47.0)
Southeast Michigan	43.2	(40.2-46.3)
Detroit Metro	48.0	(46.2-49.8)

^a 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. Don't know was considered a valid response to this question.

Table 23: Asthma among Adults by Prosperity Region Michigan BRFSS, 2016-2018 Combined				
	Lifetime Asthma Prevalence^a		Current Asthma Prevalence^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	16.1	(15.6-16.6)	11.0	(10.6-11.5)
Prosperity Region				
Upper Peninsula	16.6	(13.3-20.5)	12.8	(9.7-16.6)
Northwest	14.3	(12.0-17.1)	11.1	(9.0-13.6)
Northeast	15.7	(12.2-19.9)	13.8	(10.5-17.9)
West Michigan	13.8	(12.5-15.3)	9.1	(8.1-10.4)
East Central Michigan	17.3	(14.5-20.5)	12.3	(9.8-15.3)
East Michigan	16.5	(14.6-18.6)	11.3	(9.7-13.1)
South Central	15.5	(13.0-18.5)	10.7	(8.6-13.2)
Southwest	16.6	(14.3-19.2)	11.0	(9.1-13.2)
Southeast Michigan	17.2	(15.3-19.2)	11.1	(9.6-12.8)
Detroit Metro	16.8	(15.7-17.9)	11.1	(10.1-12.0)
^a 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. ^b Among all adults, the proportion who reported that they still had asthma.				

Table 24: Asthma among Children by Prosperity Region Michigan BRFSS, 2016-2018 Combined				
	Lifetime Asthma Prevalence^a		Current Asthma Prevalence^b	
	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	12.3	(11.4-13.2)	8.7	(8.0-9.6)
Prosperity Region				
Upper Peninsula	10.5	(6.4-16.7)	-- ^c	-- ^c
Northwest	11.0	(7.7-15.6)	5.6	(3.5-8.9)
Northeast	-- ^c	-- ^c	-- ^c	-- ^c
West Michigan	10.2	(8.3-12.5)	7.0	(5.4-9.1)
East Central Michigan	9.9	(6.9-13.9)	6.2	(4.0-9.4)
East Michigan	11.6	(9.2-14.4)	8.3	(6.3-10.8)
South Central	14.5	(10.6-19.5)	10.3	(7.1-14.7)
Southwest	10.2	(7.3-14.2)	7.3	(4.9-10.8)
Southeast Michigan	13.1	(10.8-15.8)	9.8	(7.8-12.3)
Detroit Metro	14.1	(12.5-15.9)	10.6	(9.2-12.2)
^a Estimated proportion of Michigan children aged 0-17 years who were ever told by a doctor, nurse or other health professional that they had asthma, using proxy information from the adult respondent. ^b Estimated proportion of Michigan children aged 0-17 years who still have asthma, using proxy information from the adult respondent. ^c Suppressed due to a denominator < 50 and/or a relative standard error > 30%.				

Table 25: Chronic Obstructive Pulmonary Disease (COPD) by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Ever Told COPD, Emphysema or Chronic Bronchitis^a	
	%	95% Confidence Interval
Michigan Total	8.8	(8.4-9.2)
Prosperity Region		
Upper Peninsula	10.0	(7.8-12.8)
Northwest	8.8	(7.0-11.0)
Northeast	13.2	(9.9-17.3)
West Michigan	7.4	(6.5-8.5)
East Central Michigan	9.5	(7.6-11.7)
East Michigan	11.2	(9.7-13.0)
South Central	7.3	(5.6-9.3)
Southwest	8.8	(7.2-10.8)
Southeast Michigan	7.9	(6.7-9.3)
Detroit Metro	9.1	(8.3-10.0)

^a 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.

Table 26: Arthritis by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Ever Told Arthritis^a	
	%	95% Confidence Interval
Michigan Total	31.5	(30.9-32.1)
Prosperity Region		
Upper Peninsula	35.5	(31.5-39.6)
Northwest	35.9	(32.5-39.3)
Northeast	44.0	(39.0-49.1)
West Michigan	30.1	(28.4-31.9)
East Central Michigan	33.1	(30.1-36.2)
East Michigan	36.0	(33.6-38.5)
South Central	29.2	(26.0-32.6)
Southwest	32.6	(29.8-35.5)
Southeast Michigan	30.1	(28.1-32.3)
Detroit Metro	30.6	(29.4-31.9)

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

Table 27: Cardiovascular Disease by Prosperity Region
Michigan BRFSS, 2016-2018 Combined

	Ever Told Heart Attack ^a		Had Told Angina or Coronary Heart Disease ^b		Ever Told Stroke ^c		Ever Told Any Cardiovascular Disease ^d	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	5.2	(4.9-5.5)	5.1	(4.8-5.4)	3.5	(3.3-3.8)	10.0	(9.7-10.4)
Prosperity Region								
Upper Peninsula	5.6	(3.9-7.9)	7.3	(5.3-10.0)	4.2	(2.9-6.1)	12.2	(9.7-15.2)
Northwest	6.0	(4.6-7.7)	5.6	(4.2-7.2)	3.1	(2.2-4.4)	11.0	(9.1-13.3)
Northeast	8.7	(6.1-12.3)	9.5	(6.7-13.1)	5.2	(3.2-8.5)	14.4	(11.1-18.6)
West Michigan	3.8	(3.1-4.5)	3.4	(2.9-4.1)	2.8	(2.3-3.5)	7.6	(6.8-8.6)
East Central Michigan	7.3	(5.7-9.2)	7.2	(5.7-9.0)	3.5	(2.5-4.9)	12.2	(10.3-14.5)
East Michigan	6.7	(5.6-8.0)	6.6	(5.6-7.9)	4.1	(3.2-5.2)	12.4	(10.9-14.1)
South Central	4.7	(3.5-6.4)	4.8	(3.6-6.5)	3.8	(2.6-5.5)	10.2	(8.2-12.6)
Southwest	6.3	(4.9-8.1)	6.0	(4.8-7.4)	3.6	(2.5-4.9)	11.2	(9.4-13.2)
Southeast Michigan	4.5	(3.7-5.3)	4.4	(3.6-5.2)	3.0	(2.3-3.9)	8.8	(7.7-10.1)
Detroit Metro	5.1	(4.6-5.8)	5.2	(4.7-5.9)	4.1	(3.6-4.7)	10.5	(9.7-11.4)

Among all adults, the proportion who had ever been told by a doctor that...

^a they had a heart attack or myocardial infarction;

^b they had angina or coronary heart disease;

^c they had a stroke;

^d they had a heart attack, coronary heart disease or a stroke.

Table 28: Cancer by Prosperity Region
Michigan BRFSS, 2016-2018 Combined

	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
Michigan Total	6.1	(5.8-6.3)	8.1	(7.8-8.5)	12.8	(12.4-13.2)
Prosperity Region						
Upper Peninsula	6.8	(5.1-9.2)	9.9	(7.7-12.7)	15.6	(12.8-18.9)
Northwest	8.1	(6.7-9.9)	9.7	(7.8-11.9)	16.7	(14.4-19.3)
Northeast	7.6	(5.1-11.3)	12.6	(9.2-17.1)	17.7	(13.9-22.3)
West Michigan	6.3	(5.5-7.1)	7.8	(6.9-8.7)	12.4	(11.4-13.6)
East Central Michigan	5.3	(4.3-6.7)	8.7	(7.2-10.5)	12.7	(10.9-14.8)
East Michigan	6.0	(5.0-7.2)	8.9	(7.6-10.4)	13.5	(11.9-15.2)
South Central	6.6	(5.3-8.4)	7.1	(5.5-9.0)	12.4	(10.4-14.8)
Southwest	6.0	(4.9-7.3)	9.0	(7.5-10.6)	13.6	(11.9-15.5)
Southeast Michigan	7.0	(6.1-8.0)	6.9	(5.9-8.0)	12.5	(11.2-13.9)
Detroit Metro	5.1	(4.6-5.7)	8.6	(7.9-9.3)	12.2	(11.4-13.1)

^a Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer.

^b Among all adults, the proportion who reported ever being told by a doctor that they had a form of cancer other than skin cancer.

^c Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer or any other type of cancer.

Table 29: Diabetes by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Ever Told Diabetes^a	
	%	95% Confidence Interval
Michigan Total	11.3	(10.9-11.7)
Prosperity Region		
Upper Peninsula	12.5	(10.0-15.6)
Northwest	10.8	(8.8-13.2)
Northeast	13.3	(10.3-16.8)
West Michigan	10.4	(9.3-11.6)
East Central Michigan	12.5	(10.6-14.8)
East Michigan	12.4	(10.9-14.1)
South Central	10.1	(8.2-12.3)
Southwest	13.0	(11.1-15.1)
Southeast Michigan	9.7	(8.4-11.1)
Detroit Metro	11.2	(10.4-12.1)
^a Among all adults, the proportion who reported 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.		

Table 30: Kidney Disease by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Ever Told Kidney Disease^a	
	%	95% Confidence Interval
Michigan Total	3.6	(3.4-3.9)
Prosperity Region		
Upper Peninsula	4.8	(3.3-6.8)
Northwest	4.7	(3.4-6.4)
Northeast	4.0	(2.4-6.7)
West Michigan	3.2	(2.6-4.0)
East Central Michigan	4.1	(2.9-5.8)
East Michigan	3.9	(3.0-4.9)
South Central	3.3	(2.4-4.5)
Southwest	4.2	(3.2-5.6)
Southeast Michigan	3.1	(2.4-4.1)
Detroit Metro	3.9	(3.4-4.5)

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

Table 31: Depression by Prosperity Region Michigan BRFSS, 2016-2018 Combined		
	Ever Told Depression^a	
	%	95% Confidence Interval
Michigan Total	22.9	(22.3-23.5)
Prosperity Region		
Upper Peninsula	24.3	(20.7-28.4)
Northwest	23.6	(20.6-26.9)
Northeast	25.2	(20.9-30.2)
West Michigan	24.5	(22.7-26.3)
East Central Michigan	24.0	(20.8-27.4)
East Michigan	22.3	(20.1-24.6)
South Central	22.7	(19.8-25.9)
Southwest	25.4	(22.6-28.3)
Southeast Michigan	24.8	(22.6-27.0)
Detroit Metro	21.4	(20.2-22.6)
^a 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.		