

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

**State of Michigan**

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

**2020-2022**

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

## Table of Contents

<b>Introduction</b> .....	3
<b>Map of Michigan Prosperity Regions</b> .....	4
<b>Health Status Tables</b>	
Table 1: General Health Status .....	5
Table 2: Health Status on at Least 16 Days in the Past Month .....	6
Table 3: Mean Number of Days of Poor Physical Health, Poor Mental Health, and Activity Limitations .....	7
Table 4: Disability .....	8
Table 5: Weight Status .....	9
Table 6: Health Care Coverage Among Adults 18-64 Years Old .....	10
Table 7: Health Care Access .....	11
<b>Risk Behaviors Tables</b>	
Table 8: No Leisure Time Physical Activity .....	12
Table 9: Cigarette Smoking .....	13
Table 10: Current Smokers Who Attempted to Quit .....	14
Table 11: Hookah Use .....	15
Table 12: Alcohol Consumption .....	18
Table 13: Mean Number of Binge Drinking Occassions During the Past Month Among Binge Drinkers .....	17
<b>Clinical Preventative Practices</b>	
Table 14: No Routine Checkup in Past Year .....	18
Table 15: Breast Cancer Screening Among Women 40 Years and Older .....	19
Table 16: Cervical Cancer Screening Among Women 21-65 Years Old .....	20
Table 17: Colorectal Cancer Screening Among Adults 50 Years and Older .....	21
Table 18: Oral Health .....	22
Table 19: Immunizations Among Adults Aged 65 Years and Older .....	23
Table 20: HIV Testing Among Adults Aged 18 - 64 Years .....	24
<b>Chronic Conditions</b>	
Table 21: Asthma Among Adults .....	25
Table 22: Asthma Among Children .....	26
Table 23: Chronic Obstructive Pulmonary Disease (COPD) .....	27
Table 24: Arthritis .....	28
Table 25: Cardiovascular Disease .....	29
Table 26: Cancer .....	30
Table 27: Diabetes .....	31
Table 28: Kidney Disease .....	32
Table 29: Depression .....	33

## 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 ICF Macro Inc., 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 2020-2022 Michigan BRFSS were combined. The total sample sizes by year were: 7,269 in 2020, 9,425 in 2021, and 10,058 in 2022. Not all questions were included annually in the survey. The table subtitles indicate which years were used for that particular analysis.

For the 2020 through 2022 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.

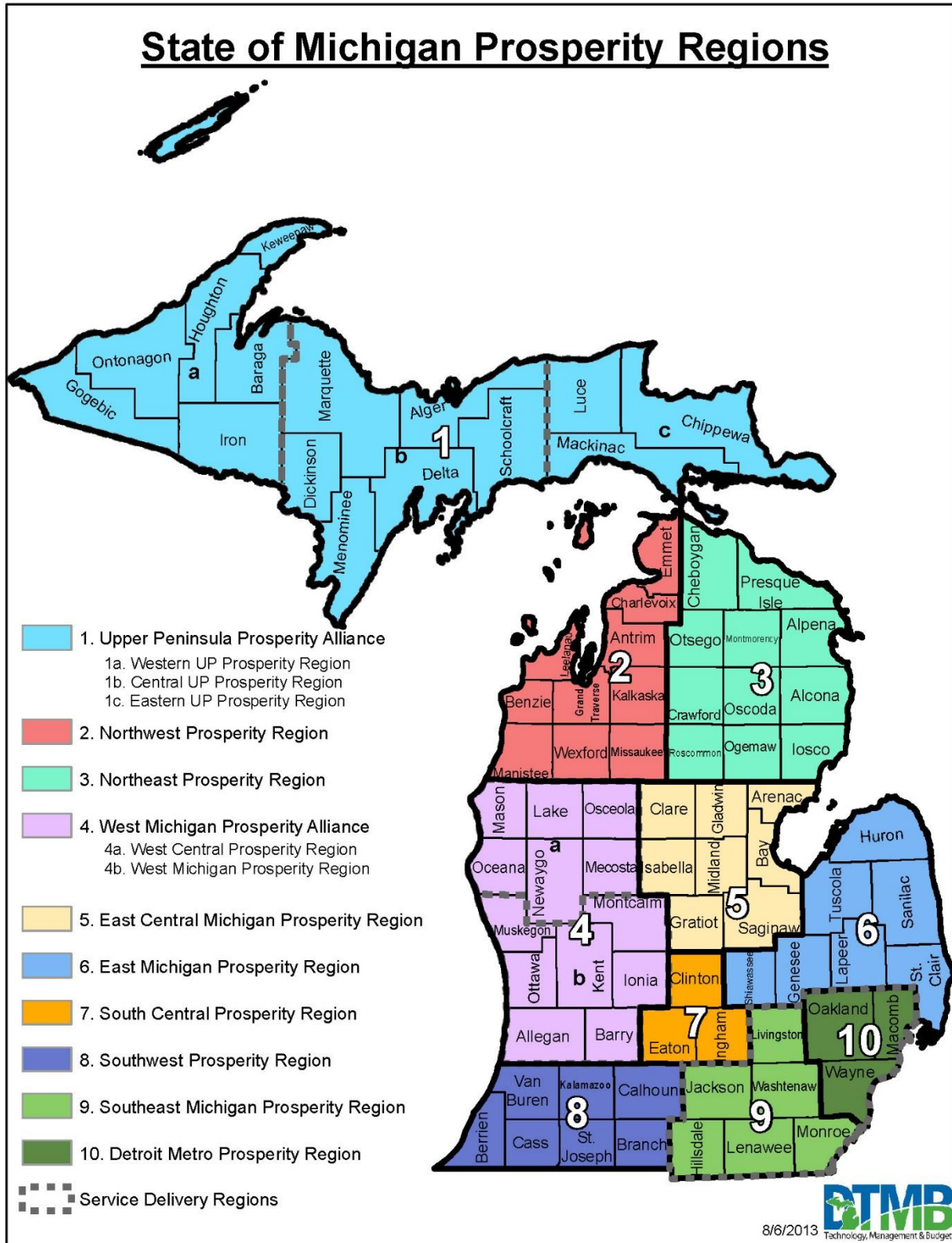
Iterative proportional fitting or raking was the weighting methodology used to make the 2020-2022 Michigan BRFSS data representative of the current Michigan adult population. Estimates based on this methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor 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 2020-2022 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](mailto:TianY@michigan.gov).



<b>Table 1: Health Status by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>General Health, Fair or Poor<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>16.3</b>	<b>(15.7-16.9)</b>
<b>Prosperity Region</b>		
Upper Peninsula	18.1	(15.1-21.5)
Northwest	13.7	(10.8-17.2)
Northeast	16.2	(12.5-20.7)
West Michigan	15.0	(13.4-16.6)
East Central Michigan	17.0	(14.5-19.9)
East Michigan	19.3	(17.3-21.5)
South Central	13.9	(11.5-16.6)
Southwest	20.3	(17.9-22.9)
Southeast Michigan	14.4	(13.0-15.9)
Detroit Metro	16.1	(15.1-17.1)
<sup>a</sup> Among all adults, the proportion who reported that their health, in general, was either fair or poor.		

<b>Table 2: Health Status on at Least 16 Days in the Past Month by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>						
	<b>Poor Physical Health<sup>a</sup></b>		<b>Poor Mental Health<sup>b</sup></b>		<b>Activity Limitation<sup>c</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>11.9</b>	<b>(11.4-12.5)</b>	<b>16.0</b>	<b>(15.4-16.6)</b>	<b>9.7</b>	<b>(9.2-10.2)</b>
<b>Prosperity Region</b>						
Upper Peninsula	14.2	(11.4-17.4)	13.1	(10.6-16.2)	9.4	(7.2-12.2)
Northwest	9.6	(7.3-12.6)	15.3	(11.9-19.4)	8.7	(6.5-11.6)
Northeast	11.5	(8.7-15.1)	14.6	(11.1-18.9)	8.3	(5.7-12.0)
West Michigan	11.7	(10.2-13.3)	15.3	(13.7-17.0)	9.4	(8.2-10.7)
East Central Michigan	11.7	(9.7-14.1)	17.1	(14.3-20.4)	10.0	(8.1-12.3)
East Michigan	16.0	(14.0-18.1)	18.3	(16.1-20.7)	12.1	(10.4-14.1)
South Central	9.6	(7.8-11.8)	15.8	(13.3-18.7)	6.8	(5.2-8.9)
Southwest	13.5	(11.7-15.7)	17.4	(15.0-20.1)	11.1	(9.2-13.3)
Southeast Michigan	11.2	(10.0-12.6)	15.5	(14.0-17.2)	9.3	(8.1-10.6)
Detroit Metro	11.5	(10.7-12.4)	15.6	(14.6-16.7)	9.5	(8.7-10.3)

<sup>a</sup> 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.  
<sup>b</sup> 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.  
<sup>c</sup> 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, 2020-2022 Combined**

	Poor Physical Health <sup>a</sup>		Poor Mental Health <sup>b</sup>		Activity Limitation <sup>c</sup>	
	Mean # of days	95% Confidence Interval	Mean # of days	95% Confidence Interval	Mean # of days	95% Confidence Interval
<b>Michigan Total</b>	<b>3.8</b>	<b>(3.7-3.9)</b>	<b>5.1</b>	<b>(4.9-5.2)</b>	<b>3.1</b>	<b>(2.9-3.2)</b>
<b>Prosperity Region</b>						
Upper Peninsula	4.4	(3.6-5.1)	4.5	(3.8-5.2)	3.0	(2.4-3.6)
Northwest	3.2	(2.5-3.8)	5.0	(4.0-6.0)	2.5	(1.9-3.1)
Northeast	3.5	(2.7-4.3)	4.3	(3.4-5.1)	2.6	(1.8-3.4)
West Michigan	3.8	(3.4-4.2)	4.8	(4.4-5.2)	2.9	(2.6-3.2)
East Central Michigan	3.8	(3.2-4.4)	5.5	(4.8-6.1)	3.2	(2.7-3.7)
East Michigan	4.6	(4.1-5.1)	5.5	(4.9-6.0)	3.7	(3.3-4.2)
South Central	3.2	(2.7-3.7)	5.1	(4.5-5.7)	2.3	(1.9-2.8)
Southwest	4.3	(3.8-4.8)	5.5	(4.8-6.1)	3.2	(2.7-3.6)
Southeast Michigan	3.6	(3.3-3.9)	5.0	(4.7-5.4)	3.0	(2.7-3.3)
Detroit Metro	3.7	(3.5-4.0)	5.0	(4.8-5.3)	3.1	(2.9-3.3)

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

<sup>b</sup> 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.

<sup>c</sup> 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.

<b>Table 4: Disability by Prosperity Region Michigan BRFSS, 2019 and 2020 Combined</b>		
	<b>Total Disability<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>28.8</b>	<b>(28.0-29.5)</b>
<b>Prosperity Region</b>		
Upper Peninsula	28.2	(24.4-32.2)
Northwest	30.0	(25.6-34.9)
Northeast	37.0	(31.6-42.8)
West Michigan	27.4	(25.5-29.5)
East Central Michigan	31.6	(28.2-35.2)
East Michigan	32.8	(30.3-35.5)
South Central	24.3	(21.4-27.5)
Southwest	34.0	(31.1-37.0)
Southeast Michigan	27.2	(25.5-29.1)
Detroit Metro	27.6	(26.4-28.9)
<sup>a</sup> Among all adults, the proportion who reported having serious difficulty hearing, visual impairment, difficulty concentrating, remembering, or making decisions, difficulty walking or climbing stairs, difficulty dressing or bathing, or difficulty doing errands alone.		



2020-2022 Michigan BRFSS Estimates by Prosperity Region  
December 2023

<b>Table 5: Weight Status by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>								
	<b>Obese<sup>a</sup></b>		<b>Overweight<sup>b</sup></b>		<b>Healthy Weight<sup>c</sup></b>		<b>Underweight<sup>d</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>34.7</b>	<b>(33.9-35.5)</b>	<b>33.9</b>	<b>(33.1-34.7)</b>	<b>29.3</b>	<b>(28.6-30.1)</b>	<b>2.1</b>	<b>(1.8-2.4)</b>
<b>Prosperity Region</b>								
Upper Peninsula	34.2	(30.0-38.7)	33.6	(29.6-37.9)	30.9	(26.9-35.1)	-- <sup>e</sup>	-- <sup>e</sup>
Northwest	30.4	(26.2-34.9)	34.0	(29.7-38.7)	33.9	(29.5-38.6)	-- <sup>e</sup>	-- <sup>e</sup>
Northeast	38.4	(33.0-44.1)	35.3	(30.1-40.8)	23.8	(19.3-29.1)	-- <sup>e</sup>	-- <sup>e</sup>
West Michigan	34.5	(32.4-36.7)	35.0	(32.9-37.2)	29.0	(27.0-31.2)	1.5	(1.0-2.1)
East Central Michigan	41.3	(37.4-45.2)	32.6	(29.2-36.2)	22.9	(20.0-26.0)	3.3	(1.8-5.9)
East Michigan	39.7	(36.9-42.6)	33.6	(30.9-36.4)	24.6	(22.1-27.3)	2.1	(1.3-3.6)
South Central	32.8	(29.5-36.4)	32.6	(29.2-36.2)	33.1	(29.6-36.9)	-- <sup>e</sup>	-- <sup>e</sup>
Southwest	37.0	(34.1-40.0)	33.1	(30.4-36.0)	28.9	(26.0-31.9)	1.0	(0.6-1.7)
Southeast Michigan	33.3	(31.4-35.3)	32.4	(30.5-34.4)	32.3	(30.4-34.4)	2.0	(1.3-3.0)
Detroit Metro	33.8	(32.5-35.2)	34.9	(33.5-36.3)	28.9	(27.6-30.3)	2.4	(1.9-3.0)
<p>Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)<sup>2</sup>]. Weight and height were self-reported. Pregnant women were excluded.</p> <p><sup>a</sup> Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.</p> <p><sup>b</sup> Among all adults, the proportion of respondents whose BMI was greater than or equal to 25.0, but less than 30.0.</p> <p><sup>c</sup> Among all adults, the proportion of respondents whose BMI was greater than or equal to 18.5, but less than 25.0.</p> <p><sup>d</sup> Among all adults, the proportion of respondents whose BMI was less than 18.5.</p> <p><sup>e</sup> Suppressed due to a denominator &lt; 50 and/or a relative standard error &gt; 30%.</p>								

<b>Table 6: Health Care Coverage Among Adults 18-64 Years Old by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>No Health Care Coverage<sup>a</sup> (Among 18 - 64 year olds)</b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>6.8</b>	<b>(6.2-7.3)</b>
<b>Prosperity Region</b>		
Upper Peninsula	6.0	(3.9-9.1)
Northwest	13.6	(7.9-22.3)
Northeast	8.5	(4.7-15.1)
West Michigan	7.3	(5.9-9.0)
East Central Michigan	6.6	(4.7-9.2)
East Michigan	7.1	(5.5-9.1)
South Central	4.8	(3.1-7.3)
Southwest	6.2	(4.7-8.3)
Southeast Michigan	5.1	(4.1-6.5)
Detroit Metro	5.7	(4.9-6.6)
<sup>a</sup> 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.		

<b>Table 7: Health Care Access by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>				
	<b>No Personal Health Care Provider<sup>a</sup></b>		<b>No Health Care Access During Past 12 Months Due to Cost<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>12.4</b>	<b>(11.8-13.0)</b>	<b>7.9</b>	<b>(7.5-8.4)</b>
<b>Prosperity Region</b>				
Upper Peninsula	12.3	(9.6-15.6)	6.1	(4.4-8.3)
Northwest	14.5	(10.2-20.1)	6.7	(4.8-9.4)
Northeast	10.0	(7.3-13.7)	6.9	(4.3-10.8)
West Michigan	10.7	(9.2-12.3)	8.4	(7.1-9.8)
East Central Michigan	13.8	(11.1-17.0)	9.8	(7.7-12.3)
East Michigan	12.1	(10.2-14.4)	9.0	(7.5-10.8)
South Central	14.8	(12.2-17.9)	7.7	(5.9-9.9)
Southwest	13.1	(11.1-15.4)	8.3	(6.6-10.4)
Southeast Michigan	11.4	(10.0-12.8)	6.8	(5.7-8.1)
Detroit Metro	11.1	(10.2-12.1)	7.2	(6.5-8.0)
<sup>a</sup> 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. <sup>b</sup> 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.				

<b>Table 8: No Leisure Time Physical Activity by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>No Leisure Time Physical Activity<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>22.6</b>	<b>(22.0-23.3)</b>
<b>Prosperity Region</b>		
Upper Peninsula	23.0	(19.9-26.6)
Northwest	20.2	(15.9-25.4)
Northeast	27.8	(23.1-33.1)
West Michigan	20.4	(18.8-22.2)
East Central Michigan	23.6	(20.8-26.6)
East Michigan	28.9	(26.5-31.5)
South Central	19.4	(16.7-22.4)
Southwest	23.2	(20.9-25.7)
Southeast Michigan	20.1	(18.6-21.8)
Detroit Metro	22.5	(21.4-23.7)

<sup>a</sup> 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, 2020-2022 Combined**

	Current Smoking <sup>a</sup>		Former Smoking <sup>b</sup>		Never Smoked	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>16.9</b>	<b>(16.3-17.6)</b>	<b>26.5</b>	<b>(25.8-27.3)</b>	<b>56.6</b>	<b>(55.7-57.4)</b>
<b>Prosperity Region</b>						
Upper Peninsula	18.5	(15.4-22.0)	30.4	(26.8-34.3)	51.1	(46.9-55.3)
Northwest	17.6	(14.1-21.7)	27.7	(23.7-32.1)	54.7	(49.7-59.6)
Northeast	23.8	(18.9-29.5)	31.3	(26.4-36.8)	44.9	(39.4-50.4)
West Michigan	17.4	(15.5-19.4)	25.6	(23.9-27.5)	57.0	(54.7-59.2)
East Central Michigan	19.0	(16.3-22.1)	30.3	(26.9-34.0)	50.7	(46.9-54.4)
East Michigan	19.8	(17.6-22.3)	30.2	(27.7-32.8)	50.0	(47.1-52.9)
South Central	14.5	(11.9-17.4)	24.6	(21.7-27.8)	60.9	(57.3-64.5)
Southwest	18.7	(16.3-21.4)	28.3	(25.9-31.0)	53.0	(50.0-55.9)
Southeast Michigan	13.8	(12.4-15.4)	27.3	(25.6-29.1)	58.9	(56.9-60.9)
Detroit Metro	16.1	(15.1-17.2)	25.2	(24.0-26.5)	58.7	(57.2-60.1)

<sup>a</sup> 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.

<sup>b</sup> 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.

<b>Table 10: Current Smokers Who Attempted to Quit by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Tried to Quit Smoking One Day or Longer in Past Year<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>55.2</b>	<b>(52.9-57.6)</b>
<b>Prosperity Region</b>		
Upper Peninsula	51.3	(40.7-61.9)
Northwest	55.4	(42.8-67.3)
Northeast	37.1	(25.7-50.1)
West Michigan	51.3	(44.6-58.0)
East Central Michigan	52.4	(43.4-61.3)
East Michigan	56.3	(49.1-63.1)
South Central	59.4	(48.6-69.3)
Southwest	57.1	(48.8-65.0)
Southeast Michigan	49.1	(42.6-55.5)
Detroit Metro	60.3	(56.2-64.2)

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

<b>Table 11: Current Hookah Use by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Current Hookah Use<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>2.0</b>	<b>(1.7-2.4)</b>
<b>Prosperity Region</b>		
Upper Peninsula	--b	--b
Northwest	--b	--b
Northeast	--b	--b
West Michigan	1.5	(0.9-2.5)
East Central Michigan	--b	--b
East Michigan	1.7	(0.9-3.1)
South Central	--b	--b
Southwest	--b	--b
Southeast Michigan	1.5	(1.0-2.2)
Detroit Metro	3.0	(2.3-3.8)

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

**Table 12: Alcohol Consumption by Prosperity Region**  
Michigan BRFSS, 2020-2022 Combined

	Any Alcohol in Past Month <sup>a</sup>		Heavy Drinking <sup>b</sup>		Binge Drinking <sup>c</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>54.8</b>	<b>(54.0-55.6)</b>	<b>6.8</b>	<b>(6.4-7.2)</b>	<b>16.9</b>	<b>(16.2-17.5)</b>
<b>Prosperity Region</b>						
Upper Peninsula	55.2	(50.9-59.4)	8.8	(6.6-11.6)	22.3	(18.7-26.2)
Northwest	58.3	(53.0-63.4)	7.4	(5.4-10.2)	15.5	(12.4-19.2)
Northeast	49.1	(43.5-54.7)	9.8	(7.0-13.5)	16.7	(12.8-21.4)
West Michigan	55.6	(53.3-57.8)	7.3	(6.0-8.7)	16.7	(15.0-18.5)
East Central Michigan	52.6	(48.8-56.3)	7.4	(5.7-9.4)	18.0	(14.9-21.4)
East Michigan	51.4	(48.5-54.3)	6.5	(5.2-8.1)	17.8	(15.5-20.4)
South Central	56.1	(52.4-59.7)	6.2	(4.7-8.1)	18.6	(15.8-21.9)
Southwest	53.3	(50.3-56.3)	7.5	(6.0-9.3)	16.0	(13.8-18.4)
Southeast Michigan	57.5	(55.4-59.5)	6.9	(5.8-8.2)	16.4	(14.8-18.1)
Detroit Metro	55.5	(54.0-56.9)	6.0	(5.3-6.7)	15.9	(14.9-17.1)

<sup>a</sup> Among all adults, the proportion who reported consuming at least one drink of any alcoholic beverage in the previous month.  
<sup>b</sup> 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.  
<sup>c</sup> 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.



<b>Table 13: Mean Number of Binge Drinking Occasions during the Past Month among Binge Drinkers by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Number of Binge Drinking Occasions<sup>a</sup></b>	
	<b>Mean</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>5.2</b>	<b>(4.8-5.5)</b>
<b>Prosperity Region</b>		
Upper Peninsula	5.3	(3.9-6.7)
Northwest	6.6	(4.4-8.8)
Northeast	9	(4.6-13.4)
West Michigan	5.7	(4.6-6.8)
East Central Michigan	5	(3.8-6.2)
East Michigan	5.1	(4.1-6.2)
South Central	3.4	(2.7-4.0)
Southwest	5.4	(4.4-6.5)
Southeast Michigan	4.8	(3.8-5.7)
Detroit Metro	4.7	(4.2-5.3)

<sup>a</sup> 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.

<b>Table 14: No Routine Checkup in Past Year by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Had No Routine Checkup in Past Year<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>22.3</b>	<b>(21.6-23.0)</b>
<b>Prosperity Region</b>		
Upper Peninsula	21.4	(18.0-25.2)
Northwest	20.7	(16.0-26.3)
Northeast	16.8	(13.1-21.4)
West Michigan	22.8	(21.0-24.8)
East Central Michigan	21.3	(18.4-24.6)
East Michigan	22.3	(19.9-24.9)
South Central	22.4	(19.4-25.7)
Southwest	23.8	(21.3-26.5)
Southeast Michigan	26.0	(24.2-27.9)
Detroit Metro	20.7	(19.6-21.9)

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

<b>Table 15: Breast Cancer Screening Among Women Aged 40 Years and Older by Prosperity Region Michigan BRFSS, 2020 and 2022 Combined</b>		
	<b>Had Mammogram in Past Two Years<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>73.0</b>	<b>(71.6-74.4)</b>
<b>Prosperity Region</b>		
Upper Peninsula	70.0	(61.9-77.1)
Northwest	77.8	(70.5-83.6)
Northeast	71.0	(60.6-79.6)
West Michigan	74.8	(71.2-78.0)
East Central Michigan	70.8	(63.8-77.0)
East Michigan	74.8	(70.0-79.0)
South Central	76.3	(70.5-81.3)
Southwest	71.1	(65.9-75.8)
Southeast Michigan	72.4	(68.7-75.8)
Detroit Metro	72.9	(70.3-75.3)

<sup>a</sup> Among women aged 40 years and older, the proportion who reported having a mammogram in the past two years.

<b>Table 16: Cervical Cancer Screening Among Women Aged 21-65 Years Old by Prosperity Region Michigan BRFSS, 2022</b>		
	<b>Had Appropriately Timed Pap Test<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>54.6</b>	<b>(51.9-57.4)</b>
<b>Prosperity Region</b>		
Upper Peninsula	58.4	(42.0-73.1)
Northwest	69.9	(54.5-81.8)
Northeast	72.2	(50.4-86.9)
West Michigan	58.7	(51.1-65.9)
East Central Michigan	49.0	(38.1-60.0)
East Michigan	53.3	(42.5-63.9)
South Central	59.3	(46.1-71.4)
Southwest	48.1	(37.7-58.6)
Southeast Michigan	55.7	(49.1-62.1)
Detroit Metro	55.1	(50.4-59.8)

<sup>a</sup> Among women aged 21-65 years old, the proportion who reported having a cervical cancer screening test within the previous three years.

<b>Table 17: Colorectal Cancer Screening Among Adults Aged 50 Years and Older by Prosperity Region Michigan BRFSS, 2020 &amp; 2022 Combined</b>		
	<b>Appropriate Colorectal Cancer Screening<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>75.4</b>	<b>(74.3-76.5)</b>
<b>Prosperity Region</b>		
Upper Peninsula	78.4	(73.2-82.8)
Northwest	73.4	(65.7-79.9)
Northeast	74.5	(66.7-81.0)
West Michigan	75.7	(72.6-78.5)
East Central Michigan	79.1	(74.1-83.3)
East Michigan	76.5	(72.6-80.1)
South Central	80.5	(75.8-84.4)
Southwest	75.3	(71.4-78.8)
Southeast Michigan	76.7	(74.1-79.1)
Detroit Metro	74.9	(72.9-76.9)
<sup>a</sup> 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.		

<b>Table 18: Oral Health by Prosperity Region Michigan BRFSS, 2020 and 2022 Combined</b>				
	<b>No Dental Visit in Past Year<sup>a</sup></b>		<b>6+ Teeth Missing<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>30.7</b>	<b>(29.8-31.7)</b>	<b>14.2</b>	<b>(13.5-14.9)</b>
<b>Prosperity Region</b>				
Upper Peninsula	33.4	(28.3-39.0)	24.1	(19.5-29.4)
Northwest	29.1	(22.8-36.3)	16.6	(11.2-24.0)
Northeast	35.7	(29.5-42.3)	24.1	(18.8-30.4)
West Michigan	29.0	(26.6-31.6)	13.9	(11.9-16.0)
East Central Michigan	35.9	(31.3-40.8)	15.7	(12.9-18.9)
East Michigan	32.5	(29.2-35.9)	17.7	(15.3-20.3)
South Central	26.1	(22.3-30.2)	10.0	(7.7-13.0)
Southwest	32.8	(29.3-36.4)	17.0	(14.5-19.8)
Southeast Michigan	27.4	(25.1-29.8)	13.0	(11.4-14.7)
Detroit Metro	29.7	(28.1-31.4)	12.6	(11.5-13.7)
<sup>a</sup> Among all adults, the proportion who reported that they had not visited a dentist or dental clinic for any reason within the previous year. <sup>b</sup> 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.				

<b>Table 19: Immunizations among Adults Aged 65 Years and Older by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>				
	<b>Had Flu Vaccine in Past Year<sup>a</sup></b>		<b>Ever Had Pneumonia Vaccine<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>72.0</b>	<b>(70.8-73.2)</b>	<b>72.8</b>	<b>(71.5-74.0)</b>
<b>Prosperity Region</b>				
Upper Peninsula	72.3	(65.8-78.1)	76.9	(70.3-82.5)
Northwest	77.3	(70.3-83.1)	70.9	(62.8-77.9)
Northeast	67.7	(58.3-75.8)	76.6	(68.8-82.9)
West Michigan	74.2	(71.2-77.0)	75.5	(72.4-78.3)
East Central Michigan	66.7	(60.7-72.3)	69.8	(63.5-75.4)
East Michigan	65.1	(60.6-69.4)	68.5	(63.9-72.7)
South Central	77.8	(72.6-82.2)	79.5	(74.3-83.8)
Southwest	76.6	(72.7-80.1)	74.1	(69.9-77.9)
Southeast Michigan	72.8	(69.9-75.5)	73.2	(70.4-75.9)
Detroit Metro	73.1	(70.8-75.2)	71.9	(69.6-74.1)

<sup>a</sup> 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.  
<sup>b</sup> Among adults aged 65 years and older, the proportion who reported that they ever had a pneumococcal vaccine.

<b>Table 20: HIV Testing among Adults Aged 18 - 64 Years by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Ever Had an HIV Test<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>43.5</b>	<b>(42.5-44.6)</b>
<b>Prosperity Region</b>		
Upper Peninsula	34.9	(29.9-40.3)
Northwest	37.4	(31.3-44.0)
Northeast	43.4	(35.9-51.2)
West Michigan	40.7	(37.9-43.6)
East Central Michigan	38.6	(33.8-43.6)
East Michigan	39.0	(35.5-42.6)
South Central	45.1	(40.5-49.7)
Southwest	47.4	(43.5-51.4)
Southeast Michigan	42.3	(39.8-45.0)
Detroit Metro	48.1	(46.2-49.9)

<sup>a</sup> 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.



<b>Table 21: Asthma among Adults by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>				
	<b>Lifetime Asthma Prevalence<sup>a</sup></b>		<b>Current Asthma Prevalence<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>16.2</b>	<b>(15.6-16.8)</b>	<b>11.5</b>	<b>(11.0-12.0)</b>
<b>Prosperity Region</b>				
Upper Peninsula	16.6	(13.8-19.9)	11.6	(9.4-14.4)
Northwest	16.3	(12.0-21.8)	12.4	(8.4-18.0)
Northeast	14.6	(11.2-18.9)	11.0	(8.0-15.0)
West Michigan	14.8	(13.3-16.5)	10.0	(8.7-11.3)
East Central Michigan	14.0	(11.6-16.9)	11.0	(8.8-13.8)
East Michigan	16.9	(14.9-19.0)	11.9	(10.2-13.8)
South Central	18.0	(15.4-20.9)	13.1	(10.8-15.7)
Southwest	15.5	(13.5-17.9)	12.1	(10.2-14.2)
Southeast Michigan	16.8	(15.3-18.5)	12.5	(11.1-13.9)
Detroit Metro	17.1	(16.0-18.2)	11.8	(10.9-12.7)
<sup>a</sup> 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. <sup>b</sup> Among all adults, the proportion who reported that they still had asthma.				

<b>Table 22: Asthma among Children by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>				
	<b>Lifetime Asthma Prevalence<sup>a</sup></b>		<b>Current Asthma Prevalence<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	10.9	(9.7-12.1)	7.4	(6.4-8.5)
<b>Prosperity Region</b>				
Upper Peninsula	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Northwest	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Northeast	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
West Michigan	10.2	(7.6-13.5)	6.9	(4.9-9.6)
East Central Michigan	9.4	(5.4-15.7)	-- <sup>c</sup>	-- <sup>c</sup>
East Michigan	13.5	(9.6-18.6)	8.1	(4.9-13.0)
South Central	11.5	(7.7-16.9)	7.0	(4.3-11.4)
Southwest	10.6	(7.0-15.7)	7.4	(4.5-11.9)
Southeast Michigan	8.5	(6.6-10.8)	5.9	(4.4-8.0)
Detroit Metro	12.5	(10.4-14.9)	8.1	(6.4-10.2)
<sup>a</sup> 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. <sup>b</sup> Estimated proportion of Michigan children aged 0-17 years who still have asthma, using proxy information from the adult respondent. <sup>c</sup> 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.

<b>Table 23: Chronic Obstructive Pulmonary Disease (COPD) by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Ever Told COPD, Emphysema or Chronic Bronchitis<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>8.3</b>	<b>(7.9-8.8)</b>
<b>Prosperity Region</b>		
Upper Peninsula	9.4	(7.2-12.2)
Northwest	6.5	(4.7-8.9)
Northeast	13.6	(10.1-18.1)
West Michigan	6.9	(6.0-8.0)
East Central Michigan	10.9	(8.9-13.4)
East Michigan	10.5	(9.1-12.2)
South Central	8.0	(6.3-10.2)
Southwest	8.6	(7.2-10.3)
Southeast Michigan	7.7	(6.7-8.8)
Detroit Metro	8.3	(7.6-9.0)
<sup>a</sup> 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.		

<b>Table 24: Arthritis by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Ever Told Arthritis<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>30.0</b>	<b>(29.3-30.7)</b>
<b>Prosperity Region</b>		
Upper Peninsula	35.7	(32.0-39.7)
Northwest	30.0	(26.2-34.1)
Northeast	40.4	(35.3-45.7)
West Michigan	28.8	(27.1-30.6)
East Central Michigan	34.5	(31.3-37.8)
East Michigan	35.4	(32.9-37.9)
South Central	29.5	(26.5-32.6)
Southwest	33.5	(30.9-36.2)
Southeast Michigan	29.2	(27.5-30.9)
Detroit Metro	29.1	(28.0-30.3)

<sup>a</sup> 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 25: Cardiovascular Disease by Prosperity Region**  
Michigan BRFSS, 2020-2022 Combined

	Ever Told Heart Attack <sup>a</sup>		Had Told Angina or Coronary Heart Disease <sup>b</sup>		Ever Told Stroke <sup>c</sup>		Ever Told Any Cardiovascular Disease <sup>d</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>4.8</b>	<b>(4.5-5.2)</b>	<b>4.6</b>	<b>(4.3-4.9)</b>	<b>3.6</b>	<b>(3.3-3.8)</b>	<b>9.8</b>	<b>(9.4-10.3)</b>
<b>Prosperity Region</b>								
Upper Peninsula	6.1	(4.6-8.1)	6.6	(4.6-9.6)	3.2	(2.2-4.7)	12.3	(9.7-15.5)
Northwest	5.1	(3.6-7.4)	3.9	(2.7-5.6)	3.1	(2.1-4.5)	9.5	(7.5-12.1)
Northeast	6.6	(4.4-9.7)	5.6	(3.7-8.6)	6.0	(3.9-9.0)	14.7	(11.4-18.8)
West Michigan	4.2	(3.5-5.1)	4.2	(3.5-5.1)	3.2	(2.6-3.9)	8.4	(7.4-9.6)
East Central Michigan	6.9	(5.2-9.2)	4.8	(3.6-6.3)	3.4	(2.5-4.7)	11.3	(9.2-13.7)
East Michigan	4.8	(3.9-5.9)	5.1	(4.2-6.2)	4.6	(3.7-5.8)	10.9	(9.5-12.6)
South Central	5.2	(3.8-7.2)	4.1	(3.1-5.4)	2.7	(1.9-3.8)	9.7	(7.9-11.9)
Southwest	5.3	(4.2-6.6)	4.9	(3.9-6.1)	3.9	(3.0-5.0)	10.6	(9.0-12.3)
Southeast Michigan	4.5	(3.9-5.3)	4.8	(4.1-5.6)	3.1	(2.5-3.8)	9.5	(8.5-10.7)
Detroit Metro	4.7	(4.1-5.3)	4.8	(4.3-5.4)	3.6	(3.2-4.1)	9.8	(9.1-10.7)

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

<sup>a</sup> they had a heart attack or myocardial infarction;

<sup>b</sup> they had angina or coronary heart disease;

<sup>c</sup> they had a stroke;

<sup>d</sup> they had a heart attack, coronary heart disease or a stroke.

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

<b>Table 26: Cancer by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>						
	<b>Ever Told Skin Cancer<sup>a</sup></b>		<b>Ever Told Any Other Types of Cancer<sup>b</sup></b>		<b>Ever Told Cancer<sup>c</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>5.9</b>	<b>(5.6-6.2)</b>	<b>8.1</b>	<b>(7.8-8.5)</b>	<b>12.4</b>	<b>(12.0-12.9)</b>
<b>Prosperity Region</b>						
Upper Peninsula	6.7	(5.2-8.4)	10.3	(7.9-13.2)	14.7	(12.1-17.7)
Northwest	7.7	(6.0-9.7)	9.3	(7.2-12.0)	15.1	(12.5-18.2)
Northeast	7.9	(5.3-11.6)	10.3	(7.5-14.1)	15.4	(12.0-19.6)
West Michigan	7.0	(6.2-7.8)	7.7	(6.8-8.7)	12.7	(11.6-13.9)
East Central Michigan	6.3	(5.1-7.8)	9.3	(7.7-11.1)	13.9	(12.0-16.0)
East Michigan	6.0	(5.0-7.2)	9.3	(7.9-10.9)	13.6	(12.0-15.4)
South Central	6.0	(4.8-7.4)	7.7	(6.3-9.4)	12.3	(10.5-14.4)
Southwest	7.0	(5.9-8.3)	9.6	(8.1-11.3)	14.5	(12.8-16.5)
Southeast Michigan	6.7	(5.9-7.5)	9.0	(8.0-10.1)	13.9	(12.7-15.1)
Detroit Metro	5.1	(4.6-5.6)	7.5	(6.9-8.2)	11.3	(10.6-12.1)

<sup>a</sup> Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer.  
<sup>b</sup> Among all adults, the proportion who reported ever being told by a doctor that they had a form of cancer other than skin cancer.  
<sup>c</sup> Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer or any other type of cancer.

<b>Table 27: Diabetes by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Ever Told Diabetes<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>11.6</b>	<b>(11.1-12.1)</b>
<b>Prosperity Region</b>		
Upper Peninsula	11.8	(9.3-14.9)
Northwest	8.6	(6.8-11.0)
Northeast	16.4	(12.7-20.7)
West Michigan	11.0	(9.8-12.3)
East Central Michigan	14.1	(11.9-16.6)
East Michigan	13.6	(12.0-15.5)
South Central	9.8	(8.1-11.8)
Southwest	11.5	(9.9-13.3)
Southeast Michigan	11.1	(10.0-12.4)
Detroit Metro	11.9	(11.1-12.9)
<sup>a</sup> 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.		

<b>Table 28: Kidney Disease by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Ever Told Kidney Disease<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>3.6</b>	<b>(3.3-3.9)</b>
<b>Prosperity Region</b>		
Upper Peninsula	3.6	(2.3-5.7)
Northwest	3.8	(2.4-5.9)
Northeast	3.2	(2.0-5.1)
West Michigan	3.8	(3.1-4.7)
East Central Michigan	3.4	(2.5-4.6)
East Michigan	4.4	(3.5-5.6)
South Central	2.8	(2.0-4.0)
Southwest	4.4	(3.5-5.5)
Southeast Michigan	3.7	(3.0-4.5)
Detroit Metro	3.3	(2.8-3.7)

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



<b>Table 29: Depression by Prosperity Region Michigan BRFSS, 2020-2022 Combined</b>		
	<b>Ever Told Depression<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>21.7</b>	<b>(21.1-22.4)</b>
<b>Prosperity Region</b>		
Upper Peninsula	22.0	(18.7-25.5)
Northwest	19.4	(16.1-23.1)
Northeast	21.5	(17.2-26.4)
West Michigan	23.0	(21.2-25.0)
East Central Michigan	23.6	(20.4-27.0)
East Michigan	24.5	(22.0-27.0)
South Central	22.1	(19.3-25.1)
Southwest	25.6	(23.0-28.3)
Southeast Michigan	23.0	(21.3-24.7)
Detroit Metro	19.1	(18.0-20.2)

<sup>a</sup> 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.