

**Health Indicators and Risk Estimates by
Community Health Assessment Regions
&
Local Health Departments**

State of Michigan

Selected Tables

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

2021-2023

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

*Prepared by Yan Tian
October 2024*

This report has been modified from the original format to present data specific to the Branch Hillsdale St. Joseph Community Health Agency. The complete report is located at https://www.michigan.gov/mdhhs/-/media/ProjectWebsites/mdhhs/Keeping-Michigan-Healthy/Communicable-and-Chronic-Diseases/Epidemiology-Services/2021-2023_MiBRFSS_Reg-LHD_Tables.pdf

Table of Contents

Table of Contents	2
Introduction	3
Community Health Assessment and Improvement Regions	4
Local Health Departments	5
Table 1: Health Status	6
Table 2: Poor Physical Health on at Least 14 Days in the Past Month.....	6
Table 3: Poor Mental Health on at Least 14 Days in the Past Month	6
Table 4: Activity Limitation on at Least 14 Days in the Past Month	7
Table 5: Disability	7
Table 6: Weight Status	7
Table 7: No Health Care Coverage Among Those Aged 18-64 Years	8
Table 8: Health Care Access	8
Table 9: No Leisure Time Physical Activity.....	8
Table 10: Adequate Physical Activity.....	9
Table 11: Cigarette Smoking	9
Table 12: Alcohol Consumption	10
Table 13: High Blood Pressure.....	10
Table 14: Cholesterol Screening and Awareness.....	10
Table 15: No Routine Checkup in Past Year	11
Table 16: Immunizations Among Adults Aged 65 Years and Older	11
Table 17: HIV Testing Among Adults Aged 18-64 Years.....	11
Table 18: Asthma	12
Table 19: Chronic Obstructive Pulmonary Disease (COPD)	12
Table 20: Arthritis.....	12
Table 21: Heart Attack.....	13
Table 22: Angina or Coronary Heart Disease.....	13
Table 23: Stroke	13
Table 24: Cardiovascular Disease	14
Table 25: Cancer	14
Table 26: Diabetes.....	14
Table 27: Kidney Disease.....	15
Table 28: Depression.....	15

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

State-specific, population-based prevalence estimates (and asymmetric 95% confidence intervals) of health risk behaviors, preventive health practices, and chronic conditions are calculated using annual data sets (see Annual Tables at the [MiBRFSS website](http://www.michigan.gov/brfs) [<http://www.michigan.gov/brfs>]). However, region-specific and local health department-specific prevalence rates are usually computed using BRFS data combined across years.

For this report, data from the 2021-2023 Michigan BRFS were combined. The total sample sizes by year were: 9,425 in 2021, 10,058 in 2022, and 9,978 in 2023. Not all questions were included annually in the survey. The table subtitles indicate which years were used for that particular analysis.

For the 2021 through 2023 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.

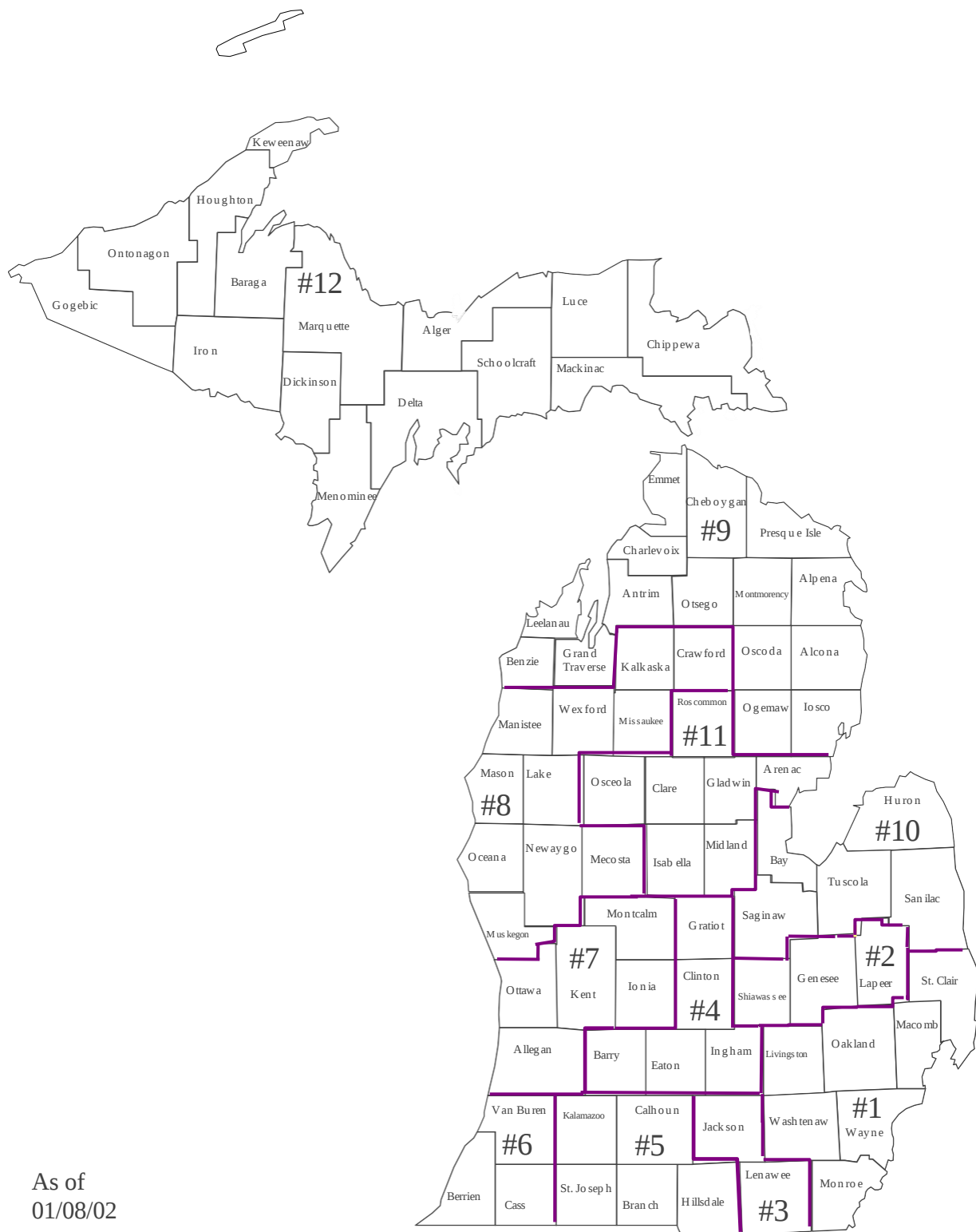
Iterative proportional fitting or raking was the weighting methodology used to make the 2021-2023 Michigan BRFS data representative of the current Michigan adult population. Estimates based on this methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor that 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. No additional weighting factors were computed at the regional or local health department (LHD) level, thus the weights used might not always provide accurate regional and/or LHD estimates, particularly when regional and/or LHD demographic distributions vary greatly from that of the state.

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 at the regional and local health department level. 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 us at MIBRFSS@michigan.gov.

Community Health Assessment and Improvement Regions State of Michigan



As of
01/08/02

Local Health Departments State of Michigan

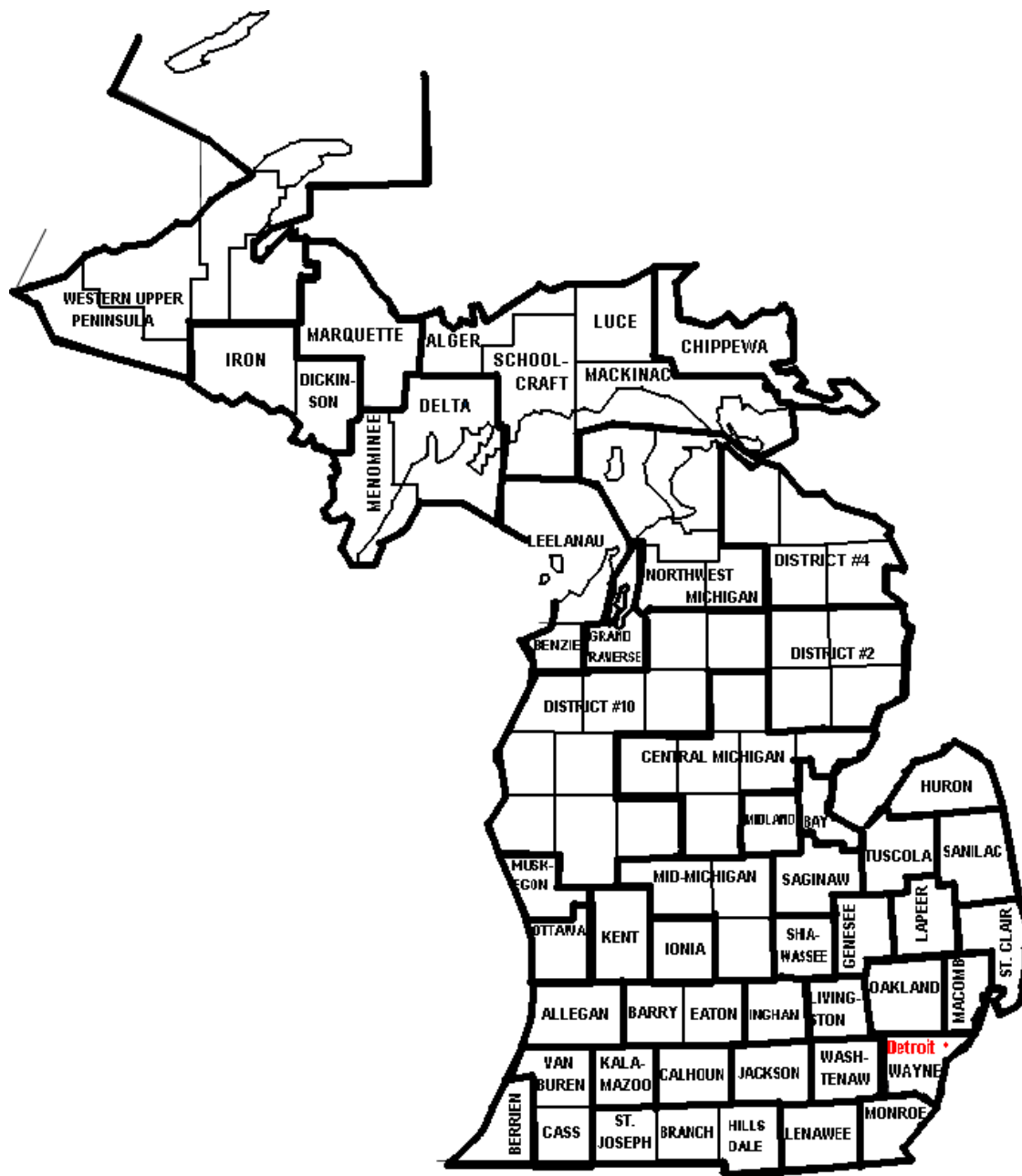


Table 1: Health Status Michigan BRFSS, 2021-2023 Combined			
Geographic Area	General Health, Fair or Poor The proportion of adults who reported that their health, in general, was either fair or poor		
	N	%	95% Confidence Interval
Michigan Total	29,381	17.4	(16.8-18.0)
Region 5	1,845	19.2	(16.9-21.8)
Branch-Hillsdale-St. Joseph	435	22.4	(18.0-27.4)

Table 2: Poor Physical Health on at Least 14 Days in the Past Month Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Poor Physical Health The proportion of adults who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes physical illness and injury.		
	N	%	95% Confidence Interval
Michigan Total	28,769	12.8	(12.3-13.3)
Region 5	1,813	13.8	(11.8-16.1)
Branch-Hillsdale-St. Joseph	424	17.6	(13.7-22.2)

Table 3: Poor Mental Health on at Least 14 Days in the Past Month Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Poor Mental Health The proportion of adults who reported 14 or more days, out of the previous 30, on which their mental health was not good, which includes stress, depression, and problems with emotions.		
	N	%	95% Confidence Interval
Michigan Total	28,968	16.4	(15.8-17.0)
Region 5	1,821	18.4	(15.8-21.3)
Branch-Hillsdale-St. Joseph	429	17.1	(13.0-22.1)

Table 4: Activity Limitation on at Least 14 Days in the Past Month Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Activity Limitation The proportion of adults who reported 14 or more days, out of the previous 30, on which either poor physical health or poor mental health kept them from doing their usual activities, such as self-care, work, and recreation.		
	N	%	95% Confidence Interval
Michigan Total	29,128	10.4	(9.9-10.9)
Region 5	1,830	10.9	(9.0-13.1)
Branch-Hillsdale-St. Joseph	431	14.1	(10.5-18.8)

Table 5: Disability Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Disability 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.		
	N	%	95% Confidence Interval
Michigan Total	27,702	29.9	(29.2-30.7)
Region 5	1,759	33.6	(30.5-36.8)
Branch-Hillsdale-St. Joseph	420	36.6	(30.7-42.9)

Table 6: Weight Status Michigan BRFSS, 2021-2023 Combined							
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.							
Geographic Area	Sample Size	Obese The proportion of adults whose BMI was greater than or equal to 30.0.		Overweight The proportion of adults whose BMI was greater than or equal to 25.0, but less than 30.0.		Healthy Weight The proportion of adults whose BMI was greater than or equal to 18.5, but less than 25.0.	
	N	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	26,157	34.8	(34.0-35.5)	33.5	(32.7-34.2)	29.6	(28.9-30.4)
Region 5	1,672	35.7	(32.7-38.9)	34.6	(31.6-37.8)	27.6	(24.5-31.0)
Branch-Hillsdale-St. Joseph	403	37.1	(31.1-43.5)	37.3	(31.3-43.8)	22.4	(16.8-29.3)

Table 7: No Health Care Coverage Among Those Aged 18-64 Years Michigan BRFSS, 2021-2023 Combined			
Geographic Area	No Health Care Coverage 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.		
	N	%	95% Confidence Interval
Michigan Total	16,642	5.9	(5.4-6.4)
Region 5	1,051	6.5	(4.6-9.2)
Branch-Hillsdale-St. Joseph Suppressed due to a denominator < 50 and/or a relative standard error > 30%.	-- ^c	-- ^c	-- ^c

Table 8: Health Care Access Michigan BRFSS, 2021-2023 Combined						
Geographic Area	No Personal Health Care Provider The proportion of adults who reported that they did not have anyone that they thought of as their personal doctor or health care provider.			No Health Care Access During Past 12 Months Due to Cost The proportion of adults who reported that in the past 12 months there was a time when they needed to see a doctor but could not due to the cost.		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
Michigan Total	29,162	11.6	(11.0-12.1)	29,376	8.3	(7.9-8.8)
Region 5	1,832	12.0	(9.9-14.4)	1,849	8.3	(6.6-10.5)
Branch-Hillsdale-St. Joseph	433	10.1	(6.4-15.7)	438	11.1	(7.1-16.8)

Table 9: No Leisure Time Physical Activity Michigan BRFSS, 2021-2023 Combined			
Geographic Area	No Leisure Time Physical Activity The proportion of adults who reported not participating in any leisure time physical activities or exercises such as running, calisthenics, golf, gardening, or walking during the past month.		
	N	%	95% Confidence Interval
Michigan Total	29,369	24.1	(23.4-24.7)
Region 5	1,848	26.3	(23.7-29.2)
Branch-Hillsdale-St. Joseph	437	29.9	(24.6-35.7)

Table 10: Adequate Physical Activity Michigan BRFSS, 2021 and 2023 Combined			
Geographic Area	Adequate 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 <u>and</u> also participate in muscle strengthening activities on two or more days per week.		
	N	%	95% Confidence Interval
Michigan Total	8,347	30.2	(28.9-31.6)
Region 5	662	27.8	(23.6-32.5)
Branch-Hillsdale-St. Joseph	124	28.6	(20.4-38.5)

Table 11: Cigarette Smoking Michigan BRFSS, 2021-2023 Combined							
Geographic Area	Sample Size	Current Smoking The proportion of adults 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.		Former Smoking The proportion of adults who reported that they had ever smoked at least 100 cigarettes (five packs) in their life, but they do not smoke cigarettes now.		Never Smoked	
	N	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	27,406	15.3	(14.7-15.9)	26.5	(25.8-27.1)	58.3	(57.5-59.0)
Region 5	1,745	15.5	(13.3-18.0)	30.1	(27.3-33.1)	54.3	(51.1-57.5)
Branch-Hillsdale-St. Joseph	418	18.1	(13.9-23.2)	35.3	(29.5-41.5)	46.6	(40.3-53.0)

Table 12: Alcohol Consumption
Michigan BRFSS, 2021-2023 Combined

Geographic Area	Sample Size	Any Alcohol in Past Month Among all adults, the proportion who reported consuming at least one drink of any alcoholic beverage in the previous month.		Heavy Drinking 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.		Binge Drinking 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.	
		N	% 95% Confidence Interval	% 95% Confidence Interval	% 95% Confidence Interval	% 95% Confidence Interval	% 95% Confidence Interval
Michigan Total	26,731	53.6	(52.8-54.4)	6.5	(6.1-6.9)	16.1	(15.5-16.7)
Region 5	1,711	51.8	(48.6-55.1)	6.7	(5.3-8.6)	14.6	(12.4-17.2)
Branch-Hillsdale-St. Joseph	402	42.1	(36.0-48.4)	4.6	(2.7-7.8)	11.2	(7.8-15.9)

Table 13: High Blood Pressure
Michigan BRFSS, 2021 and 2023 Combined

Geographic Area	Ever Told HBP 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.		
	N	%	95% Confidence Interval
Michigan Total	19,305	36.2	(35.3-37.0)
Region 5	1,327	40.0	(36.6-43.5)
Branch-Hillsdale-St. Joseph	292	48.4	(41.2-55.6)

Table 14: Cholesterol Screening and Awareness
Michigan BRFSS, 2021 and 2023 Combined

Geographic Area	Cholesterol Ever Checked Among all adults, the proportion who reported ever having had their blood cholesterol checked.			Ever Told High Cholesterol 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.		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
Michigan Total	18,237	91.7	(91.1-92.3)	17,165	36.2	(35.3-37.1)
Region 5	1,255	90.2	(87.2-92.5)	1,179	38.3	(34.8-42.0)
Branch-Hillsdale-St. Joseph	276	85.0	(78.1-90.0)	249	44.2	(36.5-52.1)

Table 15: No Routine Checkup in Past Year Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Had No Routine Checkup in Past Year The proportion of adults who reported that they did not have a routine checkup in the past year.		
	N	%	95% Confidence Interval
Michigan Total	29,141	20.6	(20.0-21.3)
Region 5	1,833	22.5	(19.9-25.3)
Branch-Hillsdale-St. Joseph	432	18.7	(14.0-24.4)

Table 16: Immunizations Among Adults Aged 65 Years and Older Michigan BRFSS, 2021-2023 Combined						
Geographic Area	Had Flu Vaccine in Past Year 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.			Ever Had Pneumonia Vaccine Among adults aged 65 years and older, the proportion who reported that they ever had a pneumococcal vaccine.		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
Michigan Total	10,402	69.3	(68.1-70.5)	10,079	72.8	(71.6-73.9)
Region 5	680	75.2	(70.7-79.2)	652	74.0	(69.2-78.2)
Branch-Hillsdale-St. Joseph	189	74.7	(66.7-81.4)	184	75.9	(67.7-82.5)

Table 17: HIV Testing Among Adults Aged 18-64 Years Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Had an HIV Test 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.		
	N	%	95% Confidence Interval
Michigan Total	14,722	43.6	(42.5-44.6)
Region 5	944	43.3	(39.2-47.4)
Branch-Hillsdale-St. Joseph	192	34.0	(26.4-42.7)

Table 18: Asthma Michigan BRFSS, 2021-2023 Combined						
Geographic Area	Ever Told Have Asthma The proportion of adults who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma.			Still Have Asthma Among all adults, the proportion who reported that they still had asthma.		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
Michigan Total	29,344	16.7	(16.1-17.3)	29,202	11.5	(11.0-12.0)
Region 5	1,846	15.7	(13.6-18.1)	1,841	11.5	(9.7-13.5)
Branch-Hillsdale-St. Joseph	435	15.4	(11.6-20.2)	435	12.1	(8.7-16.7)

Table 19: Chronic Obstructive Pulmonary Disease (COPD) Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told COPD, Emphysema or Chronic Bronchitis 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.		
	N	%	95% Confidence Interval
Michigan Total	29,324	8.4	(8.0-8.8)
Region 5	1,844	8.9	(7.4-10.6)
Branch-Hillsdale-St. Joseph	438	13.3	(9.8-17.9)

Table 20: Arthritis Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Arthritis 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.		
	N	%	95% Confidence Interval
Michigan Total	29,289	29.8	(29.2-30.5)
Region 5	1,842	32.4	(29.7-35.2)
Branch-Hillsdale-St. Joseph	437	36.7	(31.2-42.6)

Table 21: Heart Attack Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Heart Attack Among all adults, the proportion who had ever been told by a doctor that they had a heart attack or myocardial infarction.		
	N	%	95% Confidence Interval
Michigan Total	29,245	4.7	(4.4-5.0)
Region 5	1,840	5.5	(4.3-7.0)
Branch-Hillsdale-St. Joseph	436	10.4	(7.1-14.8)

Table 22: Angina or Coronary Heart Disease Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Angina or Coronary Heart Disease Among all adults, the proportion who had ever been told by a doctor that they had angina or coronary heart disease.		
	N	%	95% Confidence Interval
Michigan Total	29,170	4.5	(4.2-4.8)
Region 5	1,832	4.9	(3.9-6.2)
Branch-Hillsdale-St. Joseph	429	7.2	(4.7-10.9)

Table 23: Stroke Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Stroke Among all adults, the proportion who had ever been told by a doctor that they had a stroke.		
	N	%	95% Confidence Interval
Michigan Total	29,361	3.7	(3.4-3.9)
Region 5	1,846	4.5	(3.4-6.0)
Branch-Hillsdale-St. Joseph	436	4.1	(2.4-6.9)

Table 24: Cardiovascular Disease Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Any Cardiovascular Disease 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.		
	N	%	95% Confidence Interval
Michigan Total	29,104	9.7	(9.3-10.1)
Region 5	1,833	11.4	(9.6-13.4)
Branch-Hillsdale-St. Joseph	431	16.3	(12.3-21.2)

Table 25: Cancer Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Cancer Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer or any other type of cancer.		
	N	%	95% Confidence Interval
Michigan Total	29,299	12.4	(12.0-12.8)
Region 5	1,839	13.4	(11.8-15.3)
Branch-Hillsdale-St. Joseph	433	16.3	(12.7-20.6)

Table 26: Diabetes Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Diabetes The proportion of adults 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.		
	N	%	95% Confidence Interval
Michigan Total	29,386	11.6	(11.2-12.1)
Region 5	1,849	13.0	(11.1-15.2)
Branch-Hillsdale-St. Joseph	438	16.6	(12.4-22.0)

Table 27: Kidney Disease Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Kidney Disease Among all adults, the proportion who reported ever being told by a doctor that they had kidney disease.		
	N	%	95% Confidence Interval
Michigan Total	29,350	3.9	(3.7-4.2)
Region 5	1,844	4.6	(3.5-6.0)
Branch-Hillsdale-St. Joseph	437	5.8	(3.3-9.9)

Table 28: Depression Michigan BRFSS, 2021-2023 Combined			
Geographic Area	Ever Told Depression 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.		
	N	%	95% Confidence Interval
Michigan Total	29,298	23.2	(22.6-23.9)
Region 5	1,843	26.1	(23.4-29.0)
Branch-Hillsdale-St. Joseph	437	21.7	(17.1-27.0)

