

**Estimates for Selected Risk Factors and Health Indicators  
by Michigan Economic Development Collaborative Region**

**State of Michigan**

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

**2013**

Chronic Disease Epidemiology Section  
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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 Community Health. Michigan BRFS data contribute to the national [Behavioral Risk Factor Surveillance System](#) that is managed by the PHSB at the CDC.

In 2013, the total sample size of completed interviews for the core survey was 12,759 (land line = 8,762; cell phone = 3,997). Due to variability in response rates to individual questions and differences in specific sub-populations of interest for particular questions, not all estimates are based on a total sample size of 12,759. As a result, item-by-item sample sizes and population descriptions are included within each table. Furthermore, only comparisons between estimates with non-overlapping 95% confidence intervals should be considered significantly different.

For the 2013 Michigan BRFS, 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. In addition, census tracts with a high population density of African Americans were oversampled within the land line portion of the survey. The sample of cell phone numbers used within the 2013 Michigan BRFS data collection process 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 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 level, thus the weights used might not always provide accurate regional estimates, particularly when regional demographic distributions vary greatly from that of the state.

In 2013, Michigan BRFS data from the 2013 survey year were analyzed by Michigan Economic Development Collaborative (MEDC) region. A map identifying each of Michigan's ten economic development collaborative 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 BRFS methodology changes that took place in 2011, the estimates provided within the following tables should only be compared to Michigan BRFS estimates from 2011-2012 and not to Michigan BRFS 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 MDCH, by phone, (517) 335-8144, or by email, [MIBRFSS@michigan.gov](mailto:MIBRFSS@michigan.gov).



<b>Table 1: Health Status by MEDC Region 2013 Michigan BRFSS</b>		
	<b>General Health, Fair or Poor<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>17.7</b>	<b>(16.8-18.7)</b>
<b>MEDC Region</b>		
Upper Peninsula	16.7	(14.0-19.9)
Northwest	12.0	(9.6-15.0)
Northeast	18.3	(14.5-22.8)
West Central	16.9	(14.7-19.5)
Bay	17.4	(14.1-21.3)
Southwest	18.7	(15.8-21.9)
Central	14.7	(11.8-18.2)
East Central	16.3	(13.4-19.8)
South Central	16.6	(13.9-19.7)
Southeast	19.3	(17.6-21.2)

<sup>a</sup> Among all adults, the proportion who reported that their health, in general, was either fair or poor. (N = 12,745)

**Table 2: Health Status on at Least 14 Days in the Past Month by MEDC Region  
2013 Michigan BRFS**

	Poor Physical Health <sup>a</sup>		Poor Mental Health <sup>b</sup>		Activity Limitation <sup>c</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>12.7</b>	<b>(12.0-13.6)</b>	<b>12.0</b>	<b>(11.2-12.8)</b>	<b>8.8</b>	<b>(8.1-9.5)</b>
<b>MEDC Region</b>						
Upper Peninsula	11.2	(9.2-13.5)	10.5	(8.3-13.1)	8.1	(6.3-10.4)
Northwest	9.1	(6.7-12.2)	10.0	(7.6-13.2)	6.7	(4.6-9.8)
Northeast	14.3	(11.0-18.3)	12.2	(9.0-16.3)	7.7	(5.4-10.9)
West Central	11.9	(10.2-13.8)	12.0	(10.1-14.2)	8.8	(7.2-10.8)
Bay	15.0	(11.8-18.9)	11.0	(8.5-14.1)	10.3	(7.5-14.0)
Southwest	13.2	(10.8-15.9)	12.6	(10.0-15.6)	10.9	(8.5-13.8)
Central	11.5	(9.0-14.6)	12.1	(9.2-15.8)	7.3	(5.3-10.0)
East Central	12.8	(10.2-16.0)	11.3	(8.6-14.8)	8.4	(6.2-11.3)
South Central	11.9	(9.8-14.5)	12.4	(9.9-15.6)	7.7	(5.8-10.2)
Southeast	13.3	(11.8-14.9)	12.4	(11.0-14.1)	9.0	(7.8-10.3)

<sup>a</sup> 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. (N = 12,585)

<sup>b</sup> 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. (N = 12,601)

<sup>c</sup> 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 respondents from doing their usual activities, such as self-care, work, and recreation. (N = 12,657)

**Table 3: Mean Number of Days of Poor Physical Health, Poor Mental Health, and Activity Limitations by MEDC Region  
2013 Michigan BRFSS**

	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>4.1</b>	<b>(3.9-4.3)</b>	<b>3.9</b>	<b>(3.7-4.1)</b>	<b>2.7</b>	<b>(2.5-2.9)</b>
<b>MEDC Region</b>						
Upper Peninsula	3.8	(3.3-4.4)	3.5	(2.9-4.0)	2.6	(2.0-3.1)
Northwest	3.4	(2.7-4.1)	3.2	(2.5-3.9)	1.9	(1.4-2.4)
Northeast	4.6	(3.7-5.5)	3.6	(2.7-4.5)	2.5	(1.8-3.3)
West Central	3.9	(3.4-4.4)	3.9	(3.3-4.4)	2.7	(2.2-3.1)
Bay	4.8	(3.8-5.7)	3.7	(2.9-4.4)	3.1	(2.3-4.0)
Southwest	4.3	(3.6-5.0)	4.1	(3.4-4.8)	3.3	(2.7-3.9)
Central	3.5	(2.8-4.1)	3.9	(3.1-4.7)	2.3	(1.7-2.8)
East Central	4.1	(3.4-4.9)	3.9	(3.1-4.7)	2.8	(2.1-3.5)
South Central	3.9	(3.3-4.5)	4.1	(3.4-4.8)	2.4	(1.9-2.8)
Southeast	4.2	(3.8-4.6)	4.1	(3.7-4.5)	2.7	(2.4-3.0)

<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. (N = 12,585)

<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. (N = 12,601)

<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. (N = 12,657)

<b>Table 4: Disability by MEDC Region 2013 Michigan BRFS</b>						
	<b>Total Disability<sup>a</sup></b>		<b>Any Activity Limitation<sup>b</sup></b>		<b>Used Special Equipment<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>25.5</b>	<b>(24.5-26.6)</b>	<b>23.0</b>	<b>(22.0-24.1)</b>	<b>9.6</b>	<b>(9.0-10.3)</b>
<b>MEDC Region</b>						
Upper Peninsula	23.2	(20.5-26.1)	20.7	(18.2-23.5)	7.3	(5.9-9.1)
Northwest	19.7	(16.5-23.5)	18.0	(14.9-21.6)	6.5	(4.7-9.0)
Northeast	29.0	(24.1-34.4)	25.7	(21.1-31.0)	12.7	(9.5-16.7)
West Central	25.7	(23.3-28.3)	23.5	(21.1-26.0)	9.1	(7.7-10.6)
Bay	27.2	(23.4-31.4)	25.1	(21.4-29.3)	8.8	(6.3-12.1)
Southwest	27.1	(23.9-30.6)	24.7	(21.6-28.1)	10.2	(8.3-12.4)
Central	20.2	(17.0-23.9)	18.8	(15.6-22.4)	8.1	(6.1-10.6)
East Central	26.2	(22.4-30.3)	22.5	(19.0-26.5)	10.4	(8.1-13.2)
South Central	24.4	(21.4-27.8)	22.7	(19.7-26.0)	8.1	(6.5-10.0)
Southeast	26.6	(24.7-28.6)	23.8	(22.0-25.8)	10.8	(9.5-12.2)

<sup>a</sup> 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. (N = 12,556)

<sup>b</sup> Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems. (N = 12,563)

<sup>c</sup> 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. (N = 12,595)

**Table 5: Weight Status by MEDC Region  
2013 Michigan BRFSS**

	Obese <sup>a</sup>		Overweight <sup>b</sup>		Healthy Weight <sup>c</sup>		Underweight <sup>d</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>31.5</b>	<b>(30.4-32.6)</b>	<b>34.7</b>	<b>(33.6-35.9)</b>	<b>32.5</b>	<b>(31.3-33.7)</b>	<b>1.3</b>	<b>(1.0-1.6)</b>
<b>MEDC Region</b>								
Upper Peninsula	32.9	(29.6-36.3)	34.9	(31.4-38.5)	30.9	(27.4-34.6)	-- <sup>e</sup>	-- <sup>e</sup>
Northwest	32.6	(28.0-37.6)	36.4	(31.9-41.2)	29.8	(25.5-34.5)	-- <sup>e</sup>	-- <sup>e</sup>
Northeast	32.4	(27.1-38.2)	38.1	(32.3-44.3)	27.8	(22.3-34.1)	-- <sup>e</sup>	-- <sup>e</sup>
West Central	32.8	(30.1-35.5)	35.6	(32.9-38.4)	30.5	(27.8-33.2)	1.2	(0.7-2.1)
Bay	34.8	(30.7-39.2)	36.1	(31.7-40.8)	27.9	(24.2-32.0)	-- <sup>e</sup>	-- <sup>e</sup>
Southwest	33.4	(29.6-37.4)	31.3	(27.8-35.0)	33.7	(29.9-37.7)	-- <sup>e</sup>	-- <sup>e</sup>
Central	28.2	(24.1-32.7)	29.7	(25.5-34.2)	40.5	(35.5-45.6)	-- <sup>e</sup>	-- <sup>e</sup>
East Central	31.9	(27.8-36.4)	35.1	(31.0-39.6)	31.7	(27.6-36.2)	-- <sup>e</sup>	-- <sup>e</sup>
South Central	29.7	(26.3-33.2)	34.0	(30.5-37.6)	34.5	(31.0-38.3)	-- <sup>e</sup>	-- <sup>e</sup>
Southeast	30.9	(28.8-33.0)	35.5	(33.3-37.6)	32.6	(30.5-34.8)	1.0	(0.6-1.6)

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. (N = 12,177)

<sup>a</sup> Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.

<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.

<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.

<sup>d</sup> Among all adults, the proportion of respondents whose BMI was less than 18.5.

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

**Table 6: Health Care Access by MEDC Region  
2013 Michigan BRFSS**

	No Health Care Coverage <sup>a</sup> (Among 18 - 64 year olds)		No Personal Health Care Provider <sup>b</sup>		No Health Care Access During Past 12 Months Due to Cost <sup>c</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>17.4</b>	<b>(16.3-18.6)</b>	<b>17.0</b>	<b>(16.0-18.0)</b>	<b>15.5</b>	<b>(14.5-16.4)</b>
<b>MEDC Region</b>						
Upper Peninsula	19.1	(15.7-23.0)	15.1	(12.5-18.2)	12.4	(10.2-15.0)
Northwest	22.2	(17.8-27.3)	13.8	(10.6-17.7)	15.3	(12.2-19.1)
Northeast	21.3	(15.2-29.0)	17.7	(13.1-23.4)	14.1	(10.4-18.8)
West Central	16.8	(14.1-19.9)	14.4	(12.2-16.9)	15.4	(13.1-17.9)
Bay	17.5	(13.6-22.3)	16.4	(13.2-20.1)	12.9	(10.4-16.0)
Southwest	17.2	(13.7-21.4)	22.6	(19.1-26.4)	17.4	(14.5-20.8)
Central	13.7	(10.2-18.1)	16.5	(12.8-20.9)	14.4	(11.1-18.5)
East Central	13.8	(10.4-18.0)	14.3	(10.9-18.4)	17.7	(14.4-21.7)
South Central	14.2	(10.9-18.2)	15.8	(12.9-19.1)	12.3	(9.8-15.4)
Southeast	18.8	(16.6-21.1)	17.0	(15.3-18.9)	16.7	(14.9-18.6)

<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. (N = 8,411)

<sup>b</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. (N = 12,705)

<sup>c</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. (N = 12,738)

<b>Table 7: No Leisure Time Physical Activity by MEDC Region 2013 Michigan BRFS</b>		
	<b>No Leisure Time Physical Activity<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>24.4</b>	<b>(23.4-25.5)</b>
<b>MEDC Region</b>		
Upper Peninsula	24.5	(21.6-27.7)
Northwest	23.9	(20.0-28.3)
Northeast	24.5	(19.7-29.9)
West Central	23.0	(20.7-25.6)
Bay	26.1	(22.3-30.2)
Southwest	29.3	(25.7-33.1)
Central	20.8	(17.2-25.0)
East Central	23.5	(19.9-27.5)
South Central	23.4	(20.3-26.9)
Southeast	24.8	(22.9-26.8)

<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. (N = 12,214)

	<b>Adequate Aerobic Physical Activity (≥ 150 minutes / week)<sup>a</sup></b>		<b>Adequate Muscle Strengthening (≥ 2 days / week)<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>53.1</b>	<b>(51.8-54.3)</b>	<b>28.8</b>	<b>(27.7-30.0)</b>
<b>MEDC Region</b>				
Upper Peninsula	57.1	(53.3-60.8)	27.5	(24.1-31.3)
Northwest	58.1	(53.1-62.9)	31.0	(26.4-35.9)
Northeast	56.5	(50.3-62.4)	25.2	(20.3-30.7)
West Central	51.8	(48.9-54.7)	26.1	(23.7-28.7)
Bay	52.1	(47.4-56.7)	26.9	(22.9-31.3)
Southwest	51.5	(47.4-55.6)	27.2	(23.8-30.9)
Central	54.8	(49.8-59.8)	33.2	(28.6-38.2)
East Central	54.8	(50.0-59.5)	28.4	(24.3-32.9)
South Central	56.3	(52.4-60.0)	30.0	(26.7-33.6)
Southeast	52.0	(49.7-54.3)	29.7	(27.6-31.9)
<sup>a</sup> Among all adults, 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. (N = 11,826) <sup>b</sup> Among all adults, the proportion who reported that they do muscle strengthening activities on two or more days per week. (N = 12,068)				

<b>Table 9: Adequate Physical Activity by MEDC Region 2013 Michigan BRFS</b>		
	<b>Adequate Physical Activity<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>19.5</b>	<b>(18.6-20.5)</b>
<b>MEDC Region</b>		
Upper Peninsula	20.0	(16.9-23.5)
Northwest	23.0	(18.8-27.9)
Northeast	18.6	(14.3-23.9)
West Central	17.8	(15.7-20.1)
Bay	18.2	(15.0-22.0)
Southwest	18.3	(15.4-21.6)
Central	21.5	(17.7-26.0)
East Central	18.6	(15.1-22.7)
South Central	21.6	(18.7-24.8)
Southeast	19.9	(18.1-21.9)

<sup>a</sup> Among all adults, 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. (N = 11,732)

**Table 10: Fruit and Vegetable Consumption by MEDC Region  
2013 Michigan BRFSS**

	Fruits ( $< 1$ time / day) <sup>a</sup>		Vegetables ( $< 1$ time / day) <sup>b</sup>		Fruits and Vegetables ( $\geq 5$ times / day) <sup>c</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>37.7</b>	<b>(36.5-38.9)</b>	<b>24.8</b>	<b>(23.6-25.9)</b>	<b>15.3</b>	<b>(14.5-16.2)</b>
<b>MEDC Region</b>						
Upper Peninsula	36.1	(32.6-39.7)	22.0	(19.0-25.2)	13.1	(11.0-15.6)
Northwest	30.9	(26.6-35.5)	16.1	(12.6-20.3)	17.7	(13.8-22.2)
Northeast	37.2	(31.1-43.8)	18.6	(14.6-23.5)	13.9	(10.3-18.5)
West Central	39.7	(36.9-42.6)	27.1	(24.4-30.0)	13.7	(11.9-15.7)
Bay	40.2	(35.7-44.8)	28.5	(24.2-33.2)	13.5	(11.0-16.5)
Southwest	41.1	(37.1-45.2)	24.9	(21.3-28.9)	15.9	(13.0-19.3)
Central	39.7	(34.8-44.7)	26.2	(21.9-31.1)	13.2	(10.3-16.8)
East Central	40.2	(35.7-44.9)	24.5	(20.6-28.7)	13.8	(11.0-17.3)
South Central	41.0	(37.3-44.9)	22.3	(19.2-25.8)	15.2	(12.8-17.9)
Southeast	35.3	(33.1-37.5)	25.1	(23.1-27.2)	16.7	(15.2-18.4)

<sup>a</sup> Among all adults, the proportion whose total reported consumption of fruits (including juice) was less than one time per day (N = 12,270)  
<sup>b</sup> Among all adults, the proportion whose total reported consumption of vegetables was less than one time per day. (N = 12,047)  
<sup>c</sup> Among all adults, the proportion whose total reported consumption of fruits (including juice) and vegetables was five or more times per day. (N = 11,869)

**Table 11: Cigarette Smoking by MEDC Region  
2013 Michigan BRFSS**

	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>21.4</b>	<b>(20.3-22.5)</b>	<b>27.0</b>	<b>(26.0-28.0)</b>	<b>51.6</b>	<b>(50.4-52.8)</b>
<b>MEDC Region</b>						
Upper Peninsula	19.8	(17.1-22.9)	32.6	(29.4-36.1)	47.5	(43.9-51.2)
Northwest	20.6	(17.0-24.9)	28.9	(24.9-33.3)	50.5	(45.6-55.3)
Northeast	25.9	(20.8-31.8)	34.8	(29.5-40.5)	39.3	(33.3-45.6)
West Central	20.1	(17.7-22.8)	27.6	(25.3-30.0)	52.3	(49.4-55.1)
Bay	23.7	(19.8-27.9)	26.7	(23.0-30.7)	49.7	(45.2-54.1)
Southwest	22.6	(19.3-26.2)	27.7	(24.4-31.2)	49.7	(45.7-53.8)
Central	19.8	(16.0-24.2)	25.2	(21.5-29.3)	55.0	(50.1-59.9)
East Central	25.7	(21.7-30.1)	24.1	(20.6-27.9)	50.2	(45.6-54.8)
South Central	18.3	(15.2-21.7)	27.7	(24.7-30.9)	54.1	(50.3-57.8)
Southeast	21.8	(19.8-23.9)	26.5	(24.7-28.5)	51.7	(49.4-53.9)

<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. (N = 12,519)

<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. (N = 12,519)

<b>Table 12: Current Smokers Who Attempted to Quit by MEDC Region 2013 Michigan BRFSS</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>62.7</b>	<b>(59.9-65.4)</b>
<b>MEDC Region</b>		
Upper Peninsula	52.3	(44.1-60.3)
Northwest	50.9	(40.2-61.6)
Northeast	54.4	(41.7-66.5)
West Central	63.1	(56.0-69.6)
Bay	57.2	(47.2-66.6)
Southwest	66.9	(57.7-74.9)
Central	60.7	(48.7-71.5)
East Central	60.5	(50.6-69.6)
South Central	64.4	(54.7-73.0)
Southeast	65.5	(60.3-70.4)

<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. (N = 2,146)

<b>Table 13: Smokeless Tobacco Use by MEDC Region 2013 Michigan BRFSS</b>		
	<b>Current Smokeless Tobacco Use<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>4.0</b>	<b>(3.5-4.5)</b>
<b>MEDC Region</b>		
Upper Peninsula	6.3	(4.7-8.4)
Northwest	4.2	(2.7-6.5)
Northeast	3.8	(2.2-6.5)
West Central	4.0	(3.0-5.4)
Bay	5.7	(4.0-8.2)
Southwest	5.6	(3.8-8.1)
Central	-- <sup>b</sup>	-- <sup>b</sup>
East Central	3.8	(2.3-6.3)
South Central	4.8	(3.1-7.3)
Southeast	3.0	(2.3-4.0)
<sup>a</sup> Among all adults, the proportion who reported that they currently use chewing tobacco, snuff or snus, either every day or on some days. (N = 12,545)		
<sup>b</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.		

**Table 14: Alcohol Consumption by MEDC Region  
2013 Michigan BRFSS**

	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>56.6</b>	<b>(55.3-57.8)</b>	<b>6.2</b>	<b>(5.7-6.9)</b>	<b>18.9</b>	<b>(17.9-19.9)</b>
<b>MEDC Region</b>						
Upper Peninsula	59.3	(55.6-62.9)	9.6	(7.5-12.1)	22.4	(19.3-25.8)
Northwest	58.9	(54.0-63.6)	9.6	(7.1-13.0)	18.6	(14.9-22.9)
Northeast	56.6	(50.5-62.6)	6.6	(4.3-10.0)	18.3	(14.2-23.1)
West Central	57.3	(54.4-60.2)	6.5	(5.3-8.1)	18.8	(16.6-21.1)
Bay	52.9	(48.3-57.3)	6.5	(4.6-9.1)	17.6	(14.3-21.4)
Southwest	48.3	(44.3-52.3)	6.9	(5.1-9.4)	15.7	(12.9-18.9)
Central	61.6	(56.7-66.2)	7.0	(4.9-9.9)	24.4	(20.2-29.3)
East Central	51.1	(46.4-55.7)	5.5	(3.9-7.9)	16.9	(13.6-20.7)
South Central	61.3	(57.6-64.9)	6.1	(4.6-8.1)	18.2	(15.4-21.4)
Southeast	57.3	(55.0-59.5)	5.6	(4.7-6.8)	19.1	(17.3-20.9)

<sup>a</sup> Among all adults, the proportion who reported consuming at least one drink of any alcoholic beverage in the previous month. (N = 12,458)

<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. (N = 12,346)

<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. (N = 12,368)

<b>Table 15: Mean Number of Binge Drinking Occasions during the Past Month among Binge Drinkers by MEDC Region 2013 Michigan BRFSS</b>		
	<b>Number of Binge Drinking Occasions<sup>a</sup></b>	
	<b>Mean</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>4.4</b>	<b>(4.1-4.8)</b>
<b>MEDC Region</b>		
Upper Peninsula	5.2	(4.0-6.3)
Northwest	3.4	(2.5-4.3)
Northeast	6.0	(3.7-8.3)
West Central	3.9	(3.4-4.5)
Bay	4.2	(3.3-5.1)
Southwest	5.8	(4.2-7.4)
Central	4.5	(3.3-5.6)
East Central	3.1	(2.5-3.6)
South Central	4.4	(3.4-5.5)
Southeast	4.7	(4.0-5.4)

<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. (N = 1,930)

<b>Table 16: Seatbelt Use by MEDC Region 2013 Michigan BRFSS</b>		
	<b>Always Uses a Seatbelt<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>89.6</b>	<b>(88.8-90.4)</b>
<b>MEDC Region</b>		
Upper Peninsula	84.0	(80.5-87.0)
Northwest	88.6	(84.9-91.5)
Northeast	90.8	(87.4-93.4)
West Central	89.0	(86.9-90.8)
Bay	87.2	(83.7-90.0)
Southwest	90.3	(87.6-92.4)
Central	89.0	(85.0-92.1)
East Central	88.7	(85.3-91.3)
South Central	89.5	(86.7-91.8)
Southeast	90.9	(89.3-92.2)

<sup>a</sup> Among all adults, the proportion who reported always using a seatbelt when driving or riding in a car. (N = 12,109)

	Ever Told HBP <sup>a</sup>		Taking BP Medication <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>34.6</b>	<b>(33.5-35.7)</b>	<b>75.7</b>	<b>(73.8-77.5)</b>
<b>MEDC Region</b>				
Upper Peninsula	36.2	(33.0-39.5)	79.8	(74.9-84.0)
Northwest	32.7	(28.6-37.2)	74.5	(67.4-80.4)
Northeast	43.0	(37.2-48.9)	81.2	(73.9-86.9)
West Central	34.0	(31.5-36.6)	71.6	(66.9-75.8)
Bay	37.7	(33.4-42.2)	73.7	(65.0-80.8)
Southwest	33.4	(30.1-37.0)	79.4	(74.1-83.9)
Central	30.2	(26.4-34.4)	77.2	(69.7-83.3)
East Central	35.7	(31.6-40.1)	73.7	(66.8-79.7)
South Central	31.8	(28.6-35.3)	73.4	(66.3-79.4)
Southeast	36.3	(34.2-38.3)	77.7	(74.4-80.7)

<sup>a</sup> 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 = 12,728)

<sup>b</sup> Among adults who were ever told that they had HBP, the proportion that reported they were currently taking blood pressure (BP) medicines for their HBP. (N = 5,280)

**Table 18: Cholesterol Screening and Awareness by MEDC Region  
2013 Michigan BRFSS**

	Cholesterol Ever Checked <sup>a</sup>		Checked Within Past Five Years <sup>b</sup>		Ever Told High Cholesterol <sup>c</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>83.2</b>	<b>(82.1-84.2)</b>	<b>79.4</b>	<b>(78.3-80.5)</b>	<b>40.6</b>	<b>(39.4-41.8)</b>
<b>MEDC Region</b>						
Upper Peninsula	82.9	(79.3-85.9)	78.9	(75.2-82.1)	43.2	(39.5-47.0)
Northwest	86.3	(82.1-89.7)	82.3	(77.8-86.0)	38.8	(34.1-43.8)
Northeast	83.5	(76.8-88.6)	77.6	(70.4-83.5)	49.3	(43.2-55.5)
West Central	82.9	(80.3-85.3)	79.8	(77.1-82.2)	41.0	(38.2-43.9)
Bay	82.5	(78.0-86.3)	79.1	(74.5-83.1)	44.5	(39.9-49.2)
Southwest	77.7	(73.6-81.3)	72.2	(68.0-76.0)	43.0	(39.0-47.1)
Central	82.2	(77.6-86.0)	78.1	(73.3-82.3)	39.2	(34.3-44.2)
East Central	86.4	(82.8-89.4)	82.7	(78.8-86.0)	40.1	(35.5-44.9)
South Central	84.7	(81.3-87.6)	78.6	(74.8-81.9)	39.4	(35.7-43.3)
Southeast	84.1	(82.1-85.9)	81.0	(78.9-82.9)	39.8	(37.6-42.0)

<sup>a</sup> Among all adults, the proportion who reported ever having had their blood cholesterol checked. (N = 12,524)

<sup>b</sup> Among all adults, the proportion who reported that they have had their blood cholesterol checked within the past five years. (N = 12,394)

<sup>c</sup> 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 = 11,093)

<b>Table 19: No Routine Checkup in Past Year by MEDC Region 2013 Michigan BRFS</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>30.1</b>	<b>(29.0-31.3)</b>
<b>MEDC Region</b>		
Upper Peninsula	31.0	(27.7-34.6)
Northwest	31.1	(26.6-35.9)
Northeast	29.5	(23.8-35.9)
West Central	30.5	(27.9-33.2)
Bay	32.1	(27.8-36.7)
Southwest	34.6	(30.8-38.6)
Central	30.3	(25.9-35.2)
East Central	28.6	(24.6-32.9)
South Central	33.2	(29.6-36.9)
Southeast	27.7	(25.7-29.7)

<sup>a</sup> Among all adults, the proportion who reported that they did not have a routine checkup in the past year. (N = 12,602)

**Table 20: Colorectal Cancer Screening (Blood Stool Test) Among Adults Aged 50 Years and Older by MEDC Region**  
2013 Michigan BRFS

	Ever Had Blood Stool Test <sup>a</sup>		Had Blood Stool Test in Past Two Years <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>35.8</b>	<b>(34.4-37.1)</b>	<b>13.3</b>	<b>(12.3-14.3)</b>
<b>MEDC Region</b>				
Upper Peninsula	37.1	(33.3-41.0)	10.9	(8.7-13.7)
Northwest	35.6	(30.5-41.1)	12.7	(9.5-16.9)
Northeast	36.5	(30.4-43.0)	11.6	(8.3-15.9)
West Central	36.6	(33.4-39.8)	11.1	(9.2-13.3)
Bay	42.2	(37.0-47.6)	18.3	(14.5-22.8)
Southwest	37.2	(33.0-41.6)	14.4	(11.5-17.9)
Central	48.6	(42.7-54.6)	18.8	(14.7-23.7)
East Central	36.0	(30.7-41.7)	16.5	(12.6-21.3)
South Central	33.9	(29.9-38.2)	11.5	(9.0-14.6)
Southeast	32.7	(30.2-35.2)	12.3	(10.7-14.2)

<sup>a</sup> Among adults aged 50 years and older, the proportion who reported ever having a blood stool test using a home kit. (N = 7,787)

<sup>b</sup> Among adults aged 50 years and older, the proportion whose reported having a blood stool test within the past two years using a home kit. (N = 7,678)

**Table 21: Colorectal Cancer Screening (Sigmoidoscopy/Colonoscopy) Among Adults Aged 50 Years and Older by MEDC Region  
2013 Michigan BRFSS**

	Ever Had a Sigmoidoscopy or Colonoscopy <sup>a</sup>		Had a Sigmoidoscopy or Colonoscopy in Past 5 Years <sup>b</sup>		Had a Sigmoidoscopy in Past 5 Years or Colonoscopy in Past 10 Years <sup>c</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>74.0</b>	<b>(72.6-75.4)</b>	<b>56.4</b>	<b>(54.9-57.8)</b>	<b>68.7</b>	<b>(67.3-70.1)</b>
<b>MEDC Region</b>						
Upper Peninsula	75.1	(71.4-78.5)	56.4	(52.4-60.4)	69.9	(66.1-73.5)
Northwest	73.7	(68.3-78.5)	57.4	(51.6-62.9)	70.0	(64.4-75.0)
Northeast	71.3	(64.4-77.4)	55.1	(48.2-61.8)	67.7	(60.7-73.9)
West Central	76.0	(72.8-79.0)	55.2	(51.8-58.6)	70.4	(67.1-73.6)
Bay	72.5	(67.1-77.4)	54.8	(49.2-60.3)	67.2	(61.6-72.3)
Southwest	70.6	(66.0-74.8)	53.1	(48.5-57.7)	65.0	(60.3-69.3)
Central	76.7	(70.7-81.8)	59.7	(53.7-65.5)	72.8	(66.7-78.1)
East Central	76.1	(70.4-81.1)	59.5	(53.5-65.2)	71.3	(65.3-76.6)
South Central	72.7	(68.4-76.7)	53.3	(48.8-57.8)	65.8	(61.3-70.0)
Southeast	74.1	(71.5-76.6)	57.7	(54.9-60.5)	68.9	(66.1-71.5)

<sup>a</sup> Among adults aged 50 years and older, the proportion who reported ever having a sigmoidoscopy or colonoscopy. (N = 7,807)

<sup>b</sup> Among adults aged 50 years and older, the proportion who reported having a sigmoidoscopy or colonoscopy in the past five years. (N = 7,726)

<sup>c</sup> Among adults aged 50 years and older, the proportion who reported having a sigmoidoscopy in the past five years or a colonoscopy in the past ten years. (N = 7,618)

**Table 22: Immunizations among Adults Aged 65 Years and Older by MEDC Region  
2013 Michigan BRFSS**

	Had Flu Vaccine in Past Year <sup>a</sup>		Ever Had Pneumonia Vaccine <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>56.8</b>	<b>(54.8-58.9)</b>	<b>68.6</b>	<b>(66.5-70.5)</b>
<b>MEDC Region</b>				
Upper Peninsula	58.4	(52.6-63.9)	73.9	(68.6-78.7)
Northwest	63.1	(54.6-70.9)	67.4	(58.7-75.0)
Northeast	50.0	(40.6-59.3)	67.4	(57.1-76.3)
West Central	58.5	(53.7-63.1)	74.8	(70.4-78.8)
Bay	56.5	(48.8-63.9)	69.8	(62.2-76.5)
Southwest	55.5	(49.3-61.5)	69.1	(62.8-74.6)
Central	72.6	(65.2-79.0)	78.4	(71.3-84.1)
East Central	56.2	(48.1-64.0)	68.4	(60.4-75.5)
South Central	62.1	(56.0-67.9)	70.0	(64.0-75.3)
Southeast	54.1	(50.2-58.0)	64.2	(60.2-68.0)

<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. (N = 4,022)

<sup>b</sup> Among adults aged 65 years and older, the proportion who reported that they ever had a pneumococcal vaccine. (N = 3,869)

<b>Table 23: HIV Testing among Adults Aged 18 - 64 Years by MEDC Region 2013 Michigan BRFSS</b>		
	<b>Ever Had an HIV Test<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>41.2</b>	<b>(39.8-42.7)</b>
<b>MEDC Region</b>		
Upper Peninsula	30.7	(26.7-35.0)
Northwest	32.4	(27.1-38.2)
Northeast	32.3	(25.6-39.7)
West Central	37.5	(34.2-40.8)
Bay	34.2	(29.2-39.7)
Southwest	42.3	(37.4-47.4)
Central	42.3	(36.7-48.2)
East Central	43.3	(37.8-49.0)
South Central	38.0	(33.7-42.4)
Southeast	46.5	(43.8-49.2)

<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. (N = 7,771)

<b>Table 24: Asthma among Adults by MEDC Region 2013 Michigan BRFSS</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>16.6</b>	<b>(15.7-17.5)</b>	<b>11.5</b>	<b>(10.7-12.3)</b>
<b>MEDC Region</b>				
Upper Peninsula	17.3	(14.5-20.4)	11.1	(9.0-13.6)
Northwest	11.8	(9.0-15.2)	8.1	(5.8-11.0)
Northeast	14.0	(9.5-20.0)	9.0	(6.1-13.2)
West Central	14.6	(12.6-16.8)	10.5	(8.8-12.4)
Bay	14.5	(11.7-17.9)	8.7	(6.6-11.4)
Southwest	15.8	(13.0-18.9)	8.9	(7.0-11.1)
Central	17.2	(13.8-21.2)	11.4	(8.7-14.9)
East Central	16.5	(13.4-20.3)	13.3	(10.4-16.9)
South Central	17.8	(14.9-21.1)	10.8	(8.4-13.8)
Southeast	18.4	(16.7-20.3)	13.4	(11.9-15.0)
<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. (N = 12,697) <sup>b</sup> Among all adults, the proportion who reported that they still had asthma. (N = 12,619)				

<b>Table 25: Asthma among Children by MEDC Region 2013 Michigan BRFSS</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>15.2</b>	<b>(13.6-17.0)</b>	<b>10.9</b>	<b>(9.5-12.5)</b>
<b>MEDC Region</b>				
Upper Peninsula	12.4	(8.1-18.6)	8.3	(4.8-14.2)
Northwest	10.7	(6.5-17.1)	-- <sup>c</sup>	-- <sup>c</sup>
Northeast	16.6	(9.2-28.1)	-- <sup>c</sup>	-- <sup>c</sup>
West Central	17.7	(14.1-21.9)	12.8	(9.7-16.6)
Bay	17.1	(11.1-25.3)	11.6	(6.9-18.7)
Southwest	16.7	(10.9-24.6)	10.5	(5.8-18.3)
Central	16.8	(10.7-25.4)	13.6	(8.0-22.0)
East Central	11.7	(7.5-17.8)	8.4	(5.0-13.8)
South Central	15.0	(10.3-21.3)	10.7	(6.6-16.8)
Southeast	14.0	(11.3-17.2)	11.3	(8.8-14.3)
<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. (N = 2,724). <sup>b</sup> Estimated proportion of Michigan children aged 0-17 years who still have asthma, using proxy information from the adult respondent. (N = 2,517) <sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.				

<b>Table 26: Chronic Obstructive Pulmonary Disease (COPD) by MEDC Region 2013 Michigan BRFSS</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>8.8</b>	<b>(8.1-9.5)</b>
<b>MEDC Region</b>		
Upper Peninsula	6.8	(5.4-8.5)
Northwest	6.9	(4.9-9.7)
Northeast	10.6	(7.7-14.6)
West Central	7.4	(6.1-9.0)
Bay	9.7	(7.4-12.4)
Southwest	9.0	(7.1-11.3)
Central	7.1	(5.2-9.7)
East Central	10.6	(8.0-13.8)
South Central	8.7	(6.8-11.2)
Southeast	9.5	(8.3-10.9)

<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. (N = 12,690)

<b>Table 27: Arthritis by MEDC Region 2013 Michigan BRFS</b>				
	<b>Ever Told Arthritis<sup>a</sup></b>		<b>Usual Activities Now Limited<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>31.3</b>	<b>(30.3-32.4)</b>	<b>48.8</b>	<b>(46.8-50.7)</b>
<b>MEDC Region</b>				
Upper Peninsula	37.6	(34.2-41.2)	43.7	(38.2-49.4)
Northwest	33.1	(28.7-37.7)	38.3	(30.6-46.7)
Northeast	43.3	(37.5-49.2)	50.3	(41.8-58.8)
West Central	30.4	(28.0-32.9)	51.8	(47.0-56.5)
Bay	36.0	(32.0-40.3)	45.7	(38.6-53.0)
Southwest	33.2	(29.8-36.7)	49.9	(44.0-55.8)
Central	28.8	(24.9-32.9)	43.2	(35.7-51.0)
East Central	38.2	(34.0-42.6)	53.5	(46.4-60.4)
South Central	31.4	(28.2-34.8)	45.5	(39.3-51.7)
Southeast	29.0	(27.2-30.9)	49.9	(46.3-53.6)
<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. (N = 12,674) <sup>b</sup> Among adults who reported ever being told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia, the proportion who reported that their usual activities are now limited by their arthritis or joint symptoms. (N = 4,770)				

**Table 28: Cardiovascular Disease by MEDC Region  
2013 Michigan BRFSS**

	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>5.2</b>	<b>(4.7-5.7)</b>	<b>5.2</b>	<b>(4.8-5.7)</b>	<b>3.6</b>	<b>(3.2-4.0)</b>	<b>10.1</b>	<b>(9.4-10.8)</b>
<b>MEDC Region</b>								
Upper Peninsula	6.6	(5.1-8.5)	7.0	(5.3-9.1)	3.6	(2.5-5.3)	11.9	(9.9-14.3)
Northwest	5.7	(3.7-8.5)	4.5	(3.2-6.4)	2.8	(1.8-4.5)	9.8	(7.4-12.9)
Northeast	8.5	(6.0-11.9)	7.1	(4.9-10.2)	3.9	(2.3-6.8)	13.6	(10.3-17.8)
West Central	4.8	(3.8-5.9)	5.3	(4.2-6.6)	2.9	(2.1-3.9)	8.9	(7.6-10.5)
Bay	6.0	(4.1-8.5)	6.0	(4.3-8.3)	3.4	(2.2-5.2)	11.1	(8.7-14.1)
Southwest	6.0	(4.5-7.9)	5.8	(4.4-7.6)	3.4	(2.4-4.8)	10.6	(8.7-13.0)
Central	2.4	(1.3-4.3)	3.2	(1.9-5.3)	3.5	(2.1-5.8)	6.3	(4.4-8.9)
East Central	5.7	(3.9-8.3)	5.6	(4.0-7.8)	3.9	(2.6-5.8)	10.9	(8.4-14.0)
South Central	5.8	(4.6-7.5)	5.3	(4.1-6.8)	3.7	(2.6-5.1)	10.5	(8.7-12.6)
Southeast	4.9	(4.2-5.9)	5.2	(4.4-6.1)	4.1	(3.4-5.0)	10.6	(9.4-11.9)

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 (N = 12,685);

<sup>b</sup> they had angina or coronary heart disease (N = 12,648);

<sup>c</sup> they had a stroke. (N = 12,725)

<sup>d</sup> they had a heart attack, coronary heart disease or a stroke. (N = 12,634)

**Table 29: Cancer by MEDC Region  
2013 Michigan BRFSS**

	Ever Told Skin Cancer <sup>a</sup>		Ever Told Any Other Types of Cancer <sup>b</sup>		Ever Told Cancer <sup>c</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>5.4</b>	<b>(5.0-5.8)</b>	<b>7.7</b>	<b>(7.2-8.3)</b>	<b>11.9</b>	<b>(11.2-12.5)</b>
<b>MEDC Region</b>						
Upper Peninsula	6.1	(4.9-7.7)	8.2	(6.7-10.1)	12.3	(10.4-14.5)
Northwest	5.8	(4.3-7.8)	7.5	(5.6-10.0)	12.4	(10.0-15.4)
Northeast	7.9	(5.8-10.7)	9.8	(7.3-13.1)	16.2	(12.9-20.1)
West Central	4.9	(4.1-5.9)	7.0	(5.8-8.3)	11.0	(9.6-12.6)
Bay	5.6	(4.3-7.3)	6.4	(4.7-8.6)	10.8	(8.7-13.3)
Southwest	6.7	(5.4-8.5)	8.8	(7.1-10.8)	14.2	(12.1-16.6)
Central	5.6	(4.2-7.5)	5.9	(4.1-8.3)	10.7	(8.4-13.4)
East Central	5.2	(3.8-7.0)	8.7	(6.7-11.2)	11.7	(9.4-14.4)
South Central	5.6	(4.4-7.1)	8.2	(6.7-10.1)	12.9	(10.9-15.1)
Southeast	5.1	(4.4-5.9)	8.1	(7.1-9.2)	12.0	(10.8-13.2)

<sup>a</sup> Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer. (N = 12,724)

<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. (N = 12,734)

<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. (N = 12,712)

<b>Table 30: Diabetes by MEDC Region 2013 Michigan BRFS</b>		
	<b>Ever Told Diabetes<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>10.4</b>	<b>(9.7-11.0)</b>
<b>MEDC Region</b>		
Upper Peninsula	9.9	(8.3-11.8)
Northwest	10.0	(7.3-13.7)
Northeast	13.0	(9.7-17.3)
West Central	9.0	(7.7-10.6)
Bay	13.7	(11.0-16.8)
Southwest	8.9	(7.1-11.0)
Central	11.1	(8.6-14.2)
East Central	13.0	(10.3-16.3)
South Central	10.2	(8.3-12.5)
Southeast	10.1	(9.0-11.3)
<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. (N = 12,735)		

<b>Table 31: Kidney Disease by MEDC Region 2013 Michigan BRFSS</b>		
	<b>Ever Told Kidney Disease<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>3.0</b>	<b>(2.6-3.4)</b>
<b>MEDC Region</b>		
Upper Peninsula	2.1	(1.5-3.1)
Northwest	-- <sup>b</sup>	-- <sup>b</sup>
Northeast	4.0	(2.7-5.9)
West Central	3.2	(2.5-4.0)
Bay	1.9	(1.2-3.1)
Southwest	3.6	(2.5-5.1)
Central	2.8	(1.7-4.7)
East Central	4.3	(2.9-6.3)
South Central	1.9	(1.3-2.8)
Southeast	3.1	(2.4-4.0)

<sup>a</sup> Among all adults, the proportion who reported ever being told by a doctor that they had kidney disease. (N = 12,697)  
<sup>b</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 32: Depression by MEDC Region 2013 Michigan BRFS</b>		
	<b>Ever Told Depression<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>21.3</b>	<b>(20.4-22.3)</b>
<b>MEDC Region</b>		
Upper Peninsula	21.2	(18.1-24.6)
Northwest	18.6	(15.2-22.4)
Northeast	22.6	(18.2-27.7)
West Central	23.9	(21.5-26.4)
Bay	21.1	(17.7-24.9)
Southwest	22.3	(19.2-25.8)
Central	20.6	(17.0-24.8)
East Central	22.8	(19.2-27.0)
South Central	22.9	(19.8-26.4)
Southeast	20.3	(18.6-22.2)
<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. (N = 12,704)		