

**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)**

**2012**

Chronic Disease Epidemiology Unit  
Surveillance and Program Evaluation Section  
Lifecourse Epidemiology and Genomics Division  
Bureau of Disease Control, Prevention, and Epidemiology  
Michigan Department of Community Health

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## Introduction

The Michigan Behavioral Risk Factor Survey (BRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older that is conducted through a collaborative effort among the Division of Behavioral Surveillance (DBS) 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 DBS at the CDC.

In 2012, the total sample size of completed interviews for the core survey was 10,499 (land line = 8,414; cell phone = 2,085). 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 10,499. 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 2012 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 2012 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 2012 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.

In 2013, Michigan BRFS data from the 2012 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. Respondents who refused to answer a question were removed from the denominator during the analysis of such questions. Those who responded "Don't Know/Not Sure" were also excluded from the denominator unless indicated otherwise. All analyses were performed in SAS-Callable SUDAAN®, a statistical computing that is designed for complex sample surveys.

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 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 2012 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>17.1</b>	<b>(16.1-18.1)</b>
<b>MEDC Region</b>		
Upper Peninsula	14.8	(10.9-19.8)
Northwest	16.3	(11.4-22.8)
Northeast	30.6	(23.5-38.8)
West Central	14.4	(12.1-16.9)
Bay	21.2	(17.7-25.3)
Southwest	19.0	(15.4-23.2)
Central	14.6	(11.3-18.6)
East Central	21.1	(17.3-25.5)
South Central	13.4	(11.0-16.4)
Southeast	17.3	(15.6-19.2)

<sup>a</sup> Among all adults, the proportion who reported that their health, in general, was either fair or poor. (N = 10,485)

<b>Table 2: Health Status on at Least 14 Days in the Past Month by MEDC Region 2012 Michigan BRFS</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>13.5</b>	<b>(12.6-14.4)</b>	<b>13.0</b>	<b>(12.1-14.0)</b>	<b>9.0</b>	<b>(8.3-9.8)</b>
<b>MEDC Region</b>						
Upper Peninsula	12.7	(9.5-16.7)	5.6	(3.7-8.3)	7.8	(5.1-11.7)
Northwest	13.6	(9.9-18.4)	13.9	(10.1-18.9)	9.3	(6.4-13.4)
Northeast	26.3	(19.4-34.6)	17.7	(12.0-25.2)	18.5	(12.3-27.0)
West Central	12.5	(10.3-15.0)	10.9	(8.8-13.5)	7.2	(5.7-9.0)
Bay	15.7	(12.5-19.6)	12.7	(9.8-16.3)	11.1	(8.3-14.6)
Southwest	15.2	(12.0-19.1)	14.7	(11.5-18.7)	11.5	(8.6-15.2)
Central	13.6	(10.3-17.7)	10.6	(7.5-14.8)	7.2	(5.0-10.3)
East Central	18.2	(14.6-22.5)	15.6	(12.1-19.8)	11.4	(8.3-15.5)
South Central	10.4	(8.4-12.8)	12.3	(9.9-15.3)	7.1	(5.4-9.2)
Southeast	12.3	(10.9-13.9)	13.9	(12.2-15.7)	8.9	(7.7-10.3)

<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 = 10,344)

<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 = 10,378)

<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 = 10,419)

**Table 3: Mean Number of Days of Poor Physical Health, Poor Mental Health, and Activity Limitations by MEDC Region  
2012 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>4.2</b>	<b>(4.0-4.4)</b>	<b>4.1</b>	<b>(3.9-4.4)</b>	<b>2.8</b>	<b>(2.6-2.9)</b>
<b>MEDC Region</b>						
Upper Peninsula	3.7	(2.8-4.6)	2.4	(1.8-3.0)	2.4	(1.5-3.3)
Northwest	4.0	(3.0-5.1)	4.4	(3.3-5.5)	3.0	(2.1-3.8)
Northeast	8.1	(6.0-10.2)	5.1	(3.6-6.7)	4.9	(3.3-6.5)
West Central	4.0	(3.4-4.6)	3.6	(3.0-4.2)	2.3	(1.9-2.8)
Bay	4.4	(3.6-5.2)	3.9	(3.1-4.7)	3.1	(2.3-3.8)
Southwest	4.3	(3.6-5.1)	4.6	(3.7-5.5)	3.4	(2.6-4.1)
Central	4.5	(3.5-5.4)	3.9	(3.0-4.8)	2.5	(1.8-3.1)
East Central	5.8	(4.8-6.8)	4.8	(3.9-5.8)	3.4	(2.5-4.4)
South Central	3.5	(2.9-4.1)	4.0	(3.3-4.7)	2.3	(1.8-2.8)
Southeast	3.9	(3.5-4.3)	4.3	(3.9-4.7)	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 = 10,344)

<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 = 10,378)

<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 = 10,419)

<b>Table 4: Disability by MEDC Region 2012 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>24.6</b>	<b>(23.5-25.7)</b>	<b>22.3</b>	<b>(21.3-23.4)</b>	<b>8.7</b>	<b>(8.1-9.4)</b>
<b>MEDC Region</b>						
Upper Peninsula	22.4	(17.5-28.2)	19.6	(15.2-24.9)	8.7	(5.8-13.0)
Northwest	23.7	(18.8-29.4)	22.7	(17.9-28.3)	8.5	(5.7-12.5)
Northeast	35.5	(28.0-43.9)	33.1	(25.8-41.4)	13.9	(8.6-21.5)
West Central	23.6	(20.9-26.4)	21.7	(19.1-24.5)	7.9	(6.5-9.7)
Bay	29.1	(25.0-33.6)	26.5	(22.5-30.9)	9.2	(7.1-11.9)
Southwest	26.1	(22.3-30.2)	23.4	(19.9-27.3)	9.4	(6.9-12.7)
Central	24.4	(20.3-29.1)	21.3	(17.4-25.7)	8.7	(6.4-11.6)
East Central	26.6	(22.6-31.0)	24.8	(20.8-29.1)	10.0	(7.6-13.0)
South Central	22.2	(19.1-25.5)	21.1	(18.1-24.4)	5.9	(4.6-7.6)
Southeast	24.6	(22.7-26.6)	21.9	(20.1-23.8)	9.4	(8.3-10.7)

<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 = 10,382)

<sup>b</sup> Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems. (N = 10,390)

<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 = 10,395)

**Table 5: Weight Status by MEDC Region  
2012 Michigan BRFSS**

	Obese <sup>a</sup>		Overweight <sup>b</sup>		Normal 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>31.1</b>	<b>(29.8-32.3)</b>	<b>34.6</b>	<b>(33.3-35.8)</b>	<b>32.8</b>	<b>(31.5-34.1)</b>	<b>1.6</b>	<b>(1.3-2.0)</b>
<b>MEDC Region</b>								
Upper Peninsula	27.3	(21.9-33.4)	36.2	(30.0-43.0)	33.3	(26.8-40.5)	3.2	(1.0-10.2)
Northwest	27.9	(21.7-35.0)	37.7	(31.6-44.3)	34.4	(28.0-41.3)	0.0	(---)
Northeast	37.2	(29.4-45.7)	32.0	(25.4-39.5)	27.8	(20.4-36.6)	3.0	(1.4-6.4)
West Central	27.3	(24.4-30.5)	36.3	(33.2-39.7)	34.5	(31.3-37.8)	1.8	(1.0-3.2)
Bay	33.3	(29.1-37.9)	36.1	(31.7-40.8)	28.8	(24.6-33.5)	1.7	(0.8-3.8)
Southwest	32.4	(28.3-36.7)	37.6	(33.1-42.2)	28.4	(24.4-32.7)	1.7	(0.8-3.5)
Central	33.2	(28.1-38.8)	32.0	(27.1-37.4)	30.4	(25.4-36.0)	4.3	(2.1-8.5)
East Central	33.5	(29.0-38.4)	33.7	(29.2-38.5)	31.6	(27.1-36.6)	1.1	(0.5-2.6)
South Central	30.0	(26.3-34.0)	34.9	(31.0-39.0)	34.0	(30.2-38.1)	1.1	(0.4-2.8)
Southeast	32.2	(30.1-34.5)	32.9	(30.7-35.1)	33.6	(31.3-35.9)	1.3	(0.9-1.9)

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 = 10,052)

<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.

**Table 6: Health Care Access by MEDC Region  
2012 Michigan BRFS**

	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>16.6</b>	<b>(15.4-17.8)</b>	<b>15.8</b>	<b>(14.8-16.9)</b>	<b>15.1</b>	<b>(14.1-16.1)</b>
<b>MEDC Region</b>						
Upper Peninsula	12.0	(7.0-19.9)	16.9	(11.4-24.4)	11.7	(7.5-17.9)
Northwest	19.0	(13.1-26.7)	18.0	(12.4-25.4)	15.6	(10.4-22.8)
Northeast	31.8	(22.7-42.5)	21.1	(14.3-30.1)	19.2	(13.2-27.1)
West Central	13.9	(11.4-16.8)	12.1	(9.8-14.8)	14.1	(12.0-16.6)
Bay	17.7	(13.4-23.1)	13.7	(10.3-17.9)	15.7	(12.4-19.6)
Southwest	17.6	(13.8-22.3)	16.8	(13.4-21.0)	13.8	(10.9-17.4)
Central	8.4	(5.2-13.2)	14.1	(10.4-19.0)	14.0	(10.2-18.9)
East Central	16.0	(12.1-20.9)	13.4	(10.2-17.5)	15.5	(12.2-19.5)
South Central	12.3	(9.1-16.5)	11.3	(9.0-14.2)	12.2	(9.4-15.7)
Southeast	18.3	(16.1-20.6)	17.0	(15.1-19.0)	16.4	(14.6-18.3)

<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 = 6,820)

<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 = 10,453)

<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 = 10,477)

<b>Table 7: No Leisure-Time Physical Activity by MEDC Region 2012 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>23.3</b>	<b>(22.2-24.5)</b>
<b>MEDC Region</b>		
Upper Peninsula	20.0	(15.2-25.8)
Northwest	20.1	(14.7-26.9)
Northeast	27.9	(21.4-35.5)
West Central	20.6	(18.0-23.5)
Bay	28.9	(24.8-33.4)
Southwest	27.8	(23.6-32.4)
Central	19.1	(15.2-23.8)
East Central	25.1	(21.1-29.5)
South Central	16.6	(13.7-20.0)
Southeast	24.9	(22.9-27.0)
<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 = 10,490)		

**Table 8: Cigarette Smoking by MEDC Region  
2012 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>23.3</b>	<b>(22.1-24.6)</b>	<b>25.8</b>	<b>(24.7-26.9)</b>	<b>50.9</b>	<b>(49.6-52.2)</b>
<b>MEDC Region</b>						
Upper Peninsula	21.7	(15.9-28.8)	30.5	(25.0-36.6)	47.8	(41.0-54.7)
Northwest	20.8	(15.0-28.1)	32.3	(26.7-38.4)	46.9	(40.3-53.7)
Northeast	37.8	(29.7-46.7)	27.9	(22.0-34.8)	34.3	(27.3-42.0)
West Central	21.2	(18.3-24.4)	27.8	(25.0-30.8)	51.0	(47.6-54.3)
Bay	22.8	(18.8-27.3)	29.3	(25.3-33.7)	47.9	(43.2-52.7)
Southwest	28.5	(24.0-33.4)	24.6	(21.2-28.2)	47.0	(42.5-51.5)
Central	14.9	(11.3-19.5)	31.6	(26.7-37.0)	53.4	(47.8-58.9)
East Central	28.1	(23.7-33.0)	24.0	(20.4-27.9)	47.9	(43.0-52.8)
South Central	18.0	(14.7-21.9)	26.5	(23.0-30.2)	55.5	(51.4-59.7)
Southeast	23.9	(21.8-26.1)	23.3	(21.6-25.1)	52.8	(50.4-55.1)

<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. (N = 10,361)

<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 = 10,361)

<b>Table 9: Current Smokers Who Attempted to Quit by MEDC Region 2012 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>64.3</b>	<b>(61.2-67.3)</b>
<b>MEDC Region</b>		
Upper Peninsula	64.4	(48.0-78.0)
Northwest	71.6	(54.6-84.2)
Northeast	63.8	(48.7-76.7)
West Central	62.1	(53.6-69.9)
Bay	73.4	(62.7-81.9)
Southwest	54.5	(44.1-64.5)
Central	73.7	(59.3-84.3)
East Central	59.6	(49.1-69.2)
South Central	59.6	(47.4-70.6)
Southeast	66.1	(60.9-70.8)

<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 = 1,830)

<b>Table 10: Smokeless Tobacco Use by MEDC Region 2012 Michigan BRFSS</b>		
	<b>Current Smokeless Tobacco Use<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>3.9</b>	<b>(3.3-4.5)</b>
<b>MEDC Region</b>		
Upper Peninsula	10.5	(6.0-17.8)
Northwest	1.6	(0.7-3.6)
Northeast	4.2	(1.7-10.0)
West Central	4.3	(3.0-6.1)
Bay	4.4	(2.8-6.9)
Southwest	3.4	(1.8-6.2)
Central	3.6	(1.8-7.2)
East Central	4.0	(2.2-7.2)
South Central	4.6	(3.0-7.1)
Southeast	2.8	(2.1-3.8)

<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 = 10,380)

<b>Table 11: Alcohol Consumption by MEDC Region 2012 Michigan BRFSS</b>				
	<b>Heavy Drinking<sup>a</sup></b>		<b>Binge Drinking<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>6.1</b>	<b>(5.4-6.8)</b>	<b>19.2</b>	<b>(18.1-20.3)</b>
<b>MEDC Region</b>				
Upper Peninsula	8.7	(5.5-13.6)	21.5	(15.9-28.5)
Northwest	6.0	(3.5-10.1)	15.3	(11.2-20.7)
Northeast	9.1	(4.5-17.6)	16.1	(10.4-24.1)
West Central	6.4	(4.6-8.8)	19.3	(16.5-22.4)
Bay	5.5	(3.6-8.2)	18.8	(15.0-23.4)
Southwest	6.0	(4.1-8.5)	17.5	(14.1-21.5)
Central	6.0	(3.6-9.7)	22.5	(17.8-28.0)
East Central	6.7	(4.8-9.4)	18.5	(15.1-22.5)
South Central	6.5	(4.7-8.7)	20.2	(16.9-23.9)
Southeast	5.5	(4.5-6.6)	19.3	(17.4-21.4)

<sup>a</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 = 10,215)

<sup>b</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 = 10,223)

<b>Table 12: Mean Number of Binge Drinking Occasions during the Past Month among Binge Drinkers by MEDC Region 2012 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>4.3</b>	<b>(3.9-4.7)</b>
<b>MEDC Region</b>		
Upper Peninsula	3.7	(2.8-4.5)
Northwest	4.2	(1.8-6.6)
Northeast	7.2	(3.9-10.5)
West Central	4.6	(3.5-5.7)
Bay	3.9	(2.7-5.0)
Southwest	3.4	(2.6-4.2)
Central	4.2	(2.5-6.0)
East Central	4.5	(3.0-6.0)
South Central	3.5	(2.8-4.2)
Southeast	4.5	(3.7-5.4)

<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 = 1,422)

<b>Table 13: Drove Motor Vehicle After Drinking by MEDC Region 2012 Michigan BRFSS</b>		
	<b>Drove Motor Vehicle After Drinking<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>1.9</b>	<b>(1.6-2.3)</b>
<b>MEDC Region</b>		
Upper Peninsula	2.5	(1.0-5.9)
Northwest	1.5	(0.6-3.8)
Northeast	1.4	(0.5-4.0)
West Central	1.9	(1.1-3.2)
Bay	2.9	(1.5-5.8)
Southwest	1.4	(0.7-2.8)
Central	2.7	(1.2-6.0)
East Central	2.8	(1.6-5.1)
South Central	1.7	(1.0-3.0)
Southeast	1.5	(1.0-2.1)

<sup>a</sup> Among all adults, the proportion who reported that they had driven when they'd had too much to drink at least once in the previous month. (N = 10,306)

<b>Table 14: Seatbelt Use by MEDC Region 2012 Michigan BRFSS</b>		
	<b>Always Uses a Seatbelt<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>88.4</b>	<b>(87.4-89.3)</b>
<b>MEDC Region</b>		
Upper Peninsula	84.7	(78.7-89.2)
Northwest	89.8	(85.3-93.1)
Northeast	84.8	(78.3-89.7)
West Central	87.7	(85.3-89.8)
Bay	88.1	(84.3-91.0)
Southwest	87.9	(83.9-91.1)
Central	89.3	(84.9-92.5)
East Central	89.4	(86.1-92.0)
South Central	89.7	(86.9-92.0)
Southeast	89.0	(87.2-90.6)

<sup>a</sup> Among all adults, the proportion who reported always using a seatbelt when driving or riding in a car. (N = 10,302)

<b>Table 15: No Routine Checkup in Past Year by MEDC Region 2012 Michigan BRFSS</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>33.5</b>	<b>(32.2-34.8)</b>
<b>MEDC Region</b>		
Upper Peninsula	35.9	(29.4-43.1)
Northwest	30.5	(24.4-37.4)
Northeast	35.8	(28.0-44.5)
West Central	34.2	(31.0-37.6)
Bay	34.6	(30.0-39.5)
Southwest	37.7	(33.4-42.3)
Central	31.2	(26.0-36.8)
East Central	35.7	(31.0-40.6)
South Central	34.8	(30.8-39.1)
Southeast	31.1	(28.9-33.3)

<sup>a</sup> Among all adults, the proportion who reported that they did not have a routine checkup in the past year. (N = 10,400)

**Table 16: Clinical Breast Exam Indicators Among Women Aged 20 Years and Older by MEDC Region**  
2012 Michigan BRFSS

	Ever Had Clinical Breast Exam <sup>a</sup>		Had Appropriately Timed Clinical Breast Exam <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>91.4</b>	<b>(90.2-92.5)</b>	<b>66.7</b>	<b>(65.1-68.3)</b>
<b>MEDC Region</b>				
Upper Peninsula	93.2	(88.3-96.1)	63.2	(55.0-70.7)
Northwest	92.8	(87.4-96.0)	64.6	(56.6-71.9)
Northeast	91.9	(84.2-96.0)	65.1	(55.4-73.8)
West Central	94.0	(91.0-96.1)	73.5	(69.5-77.0)
Bay	92.6	(88.8-95.2)	64.4	(58.7-69.6)
Southwest	89.0	(83.6-92.8)	61.4	(55.4-67.0)
Central	93.8	(88.2-96.8)	72.8	(65.8-78.8)
East Central	88.7	(83.1-92.6)	60.5	(54.3-66.4)
South Central	93.6	(90.4-95.8)	68.4	(63.6-72.8)
Southeast	91.0	(88.9-92.7)	67.2	(64.4-69.9)

<sup>a</sup> Among women aged 20 years and older, the proportion who reported ever having a clinical breast exam. (N = 6,022)

<sup>b</sup> Among women aged 20 years and older, the proportion whose last clinical breast exam was within the previous three years for women age 20-39 years and within the previous year for women aged 40 years and older. (N = 5,954)

**Table 17: Mammography Indicators Among Women Aged 40 Years and Older by MEDC Region  
2012 Michigan BRFS**

	Ever Had Mammogram <sup>a</sup>		Had Mammogram in Past Year <sup>b</sup>		Had Mammogram in Past Two Years <sup>c</sup>		Had Clinical Breast Exam and Mammogram in Past Year <sup>d</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>94.5</b>	<b>(93.6-95.3)</b>	<b>59.2</b>	<b>(57.5-61.0)</b>	<b>76.6</b>	<b>(75.0-78.1)</b>	<b>50.4</b>	<b>(48.6-52.2)</b>
<b>MEDC Region</b>								
Upper Peninsula	92.8	(87.3-96.1)	55.3	(47.0-63.3)	72.2	(64.1-79.0)	45.9	(37.9-54.0)
Northwest	94.8	(89.7-97.4)	56.6	(48.1-64.8)	82.1	(74.8-87.6)	45.1	(36.9-53.6)
Northeast	94.3	(87.4-97.6)	59.6	(49.3-69.2)	80.7	(71.7-87.3)	54.6	(44.3-64.6)
West Central	95.6	(93.1-97.2)	62.6	(58.1-66.9)	80.2	(76.3-83.6)	55.9	(51.4-60.3)
Bay	96.7	(93.7-98.3)	57.4	(51.2-63.3)	74.5	(68.8-79.5)	48.4	(42.3-54.5)
Southwest	89.5	(84.9-92.9)	49.5	(43.1-56.0)	65.4	(58.7-71.5)	38.7	(32.8-45.1)
Central	96.2	(91.3-98.4)	62.2	(54.3-69.5)	79.1	(71.8-84.9)	54.7	(46.8-62.3)
East Central	96.9	(93.1-98.6)	61.3	(54.7-67.5)	79.8	(73.8-84.7)	53.1	(46.5-59.6)
South Central	93.8	(90.8-95.9)	59.8	(54.5-65.0)	74.3	(69.4-78.7)	52.8	(47.4-58.1)
Southeast	94.5	(92.8-95.8)	60.4	(57.3-63.4)	77.7	(75.0-80.2)	50.8	(47.6-53.9)

Note: Data included diagnostic tests.

<sup>a</sup> Among women aged 40 years and older, the proportion who reported ever having a mammogram. (N = 5,053)

<sup>b</sup> Among women aged 40 years and older, the proportion who reported ever having a mammogram in the past year. (N = 5,008)

<sup>c</sup> Among women aged 40 years and older, the proportion who reported having a mammogram in the past two years. (N = 5,008)

<sup>d</sup> Among women aged 40 years and older, the proportion who reported having a clinical breast exam and a mammogram in the past year. (N = 4,994)

**Table 18: Cervical Cancer Screening by MEDC Region  
2012 Michigan BRFSS**

	Ever Had Pap Test <sup>a</sup>		Had Appropriately Timed Pap Test <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>92.1</b>	<b>(90.6-93.4)</b>	<b>79.4</b>	<b>(77.6-81.1)</b>
<b>MEDC Region</b>				
Upper Peninsula	89.5	(75.9-95.8)	72.7	(61.6-81.7)
Northwest	96.9	(91.0-99.0)	82.8	(74.8-88.7)
Northeast	90.7	(77.8-96.4)	77.5	(64.3-86.9)
West Central	92.4	(88.1-95.3)	81.6	(76.9-85.6)
Bay	91.8	(84.0-96.0)	74.7	(67.2-80.9)
Southwest	95.0	(91.1-97.3)	71.7	(64.8-77.8)
Central	93.7	(85.3-97.4)	86.5	(78.9-91.6)
East Central	91.0	(84.5-95.0)	76.0	(69.0-81.8)
South Central	95.8	(92.0-97.8)	79.8	(74.9-83.9)
Southeast	90.6	(87.6-93.0)	81.3	(78.0-84.1)

Note: Data included diagnostic tests.

<sup>a</sup> Among women aged 18 years and older, the proportion who reported ever having a Pap test. (N = 4,262)

<sup>b</sup> Among women aged 18 years and older, the proportion who reported having a Pap test within the previous three years. (N = 4,153)

**Table 19: Prostate Cancer Screening Among Men Aged 50 Years and Older by MEDC Region  
2012 Michigan BRFS**

	Ever Discussed Advantages of PSA Test With Doctor <sup>a</sup>		Doctor Ever Recommended PSA Test <sup>b</sup>		Ever Had PSA Test <sup>c</sup>		Had PSA Test in Past Year <sup>d</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>73.0</b>	<b>(70.6-75.4)</b>	<b>67.3</b>	<b>(64.7-69.7)</b>	<b>72.2</b>	<b>(69.6-74.6)</b>	<b>46.9</b>	<b>(44.4-49.5)</b>
<b>MEDC Region</b>								
Upper Peninsula	69.7	(58.8-78.7)	59.9	(48.6-70.2)	72.8	(62.2-81.3)	45.1	(34.7-55.9)
Northwest	69.7	(58.0-79.2)	61.7	(50.1-72.1)	76.8	(65.4-85.2)	50.9	(39.9-61.8)
Northeast	80.3	(68.2-88.5)	70.6	(57.5-81.0)	79.1	(66.6-87.9)	48.7	(36.5-61.1)
West Central	70.0	(63.6-75.8)	61.9	(55.3-68.0)	66.4	(59.8-72.4)	41.4	(35.4-47.7)
Bay	65.7	(56.2-74.1)	63.4	(54.5-71.5)	71.2	(62.8-78.4)	45.5	(37.1-54.1)
Southwest	68.8	(59.9-76.4)	66.5	(57.7-74.3)	64.9	(55.6-73.2)	43.8	(35.4-52.6)
Central	71.2	(61.1-79.6)	63.9	(53.9-72.9)	75.5	(65.9-83.1)	44.3	(34.9-54.1)
East Central	75.5	(66.7-82.5)	76.9	(68.5-83.7)	73.6	(64.4-81.1)	50.2	(41.2-59.1)
South Central	78.6	(71.2-84.5)	73.2	(65.4-79.7)	76.6	(68.9-82.8)	46.0	(38.4-53.9)
Southeast	75.2	(70.4-79.5)	69.1	(64.0-73.7)	73.3	(68.1-78.0)	49.1	(44.2-54.0)

Among men aged 50 years and older (N = 2,579), the proportion who reported...  
<sup>a</sup> ever discussing the advantages of a Prostate-Specific Antigen (PSA) test with a doctor, nurse, or other health professional.  
<sup>b</sup> ever receiving a recommendation from a doctor, nurse, or other health professional to get a PSA test.  
<sup>c</sup> ever having a PSA test.  
<sup>d</sup> having a PSA test within the past year.

**Table 20: Colorectal Cancer Screening (Blood Stool Test) Among Adults Aged 50 Years and Older by MEDC Region  
2012 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>40.6</b>	<b>(39.1-42.1)</b>	<b>15.8</b>	<b>(14.7-16.9)</b>
<b>MEDC Region</b>				
Upper Peninsula	43.7	(37.3-50.4)	17.4	(13.0-22.9)
Northwest	39.6	(33.1-46.5)	16.4	(11.9-22.2)
Northeast	38.5	(31.2-46.3)	15.0	(10.4-21.0)
West Central	40.3	(36.6-44.1)	13.0	(10.7-15.7)
Bay	47.0	(41.8-52.3)	22.0	(17.9-26.7)
Southwest	39.3	(34.1-44.8)	16.2	(12.5-20.7)
Central	56.7	(50.2-63.0)	23.5	(18.5-29.4)
East Central	36.8	(31.9-42.1)	14.7	(11.4-18.7)
South Central	38.2	(33.8-42.8)	14.5	(11.6-18.1)
Southeast	38.1	(35.5-40.8)	14.1	(12.4-16.1)

<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 = 6,754)

<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 = 6,666)

**Table 21: Colorectal Cancer Screening (Sigmoidoscopy/Colonoscopy) Among Adults Aged 50 Years and Older by MEDC Region  
2012 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>72.7</b>	<b>(71.2-74.1)</b>	<b>55.4</b>	<b>(53.8-57.0)</b>	<b>67.3</b>	<b>(65.8-68.9)</b>
<b>MEDC Region</b>						
Upper Peninsula	71.9	(65.4-77.6)	56.3	(49.4-62.9)	65.7	(58.9-71.9)
Northwest	78.0	(71.5-83.4)	53.0	(46.1-59.9)	71.0	(64.2-76.9)
Northeast	69.6	(61.6-76.6)	49.5	(41.4-57.6)	64.7	(56.4-72.2)
West Central	77.5	(73.8-80.8)	58.5	(54.6-62.4)	71.6	(67.8-75.2)
Bay	71.1	(65.8-75.9)	54.3	(48.9-59.6)	65.1	(59.6-70.2)
Southwest	68.1	(62.4-73.3)	51.3	(45.7-56.8)	61.2	(55.4-66.8)
Central	83.9	(78.5-88.1)	63.9	(57.4-69.8)	75.6	(69.4-80.8)
East Central	70.9	(65.5-75.9)	53.2	(47.6-58.7)	65.8	(60.2-71.0)
South Central	73.8	(69.1-78.1)	56.4	(51.5-61.2)	69.6	(64.7-74.0)
Southeast	69.8	(66.9-72.6)	55.1	(52.2-58.0)	66.1	(63.2-69.0)

<sup>a</sup> Among adults aged 50 years and older, the proportion who reported ever having a sigmoidoscopy or colonoscopy. (N = 6,763)

<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 = 6,687)

<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 = 6,578)

**Table 22: Oral Health by MEDC Region  
2012 Michigan BRFSS**

	No Dental Visit in Past Year <sup>a</sup>		6+ Teeth Missing <sup>b</sup>	
	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>32.0</b>	<b>(30.7-33.3)</b>	<b>15.8</b>	<b>(14.9-16.7)</b>
<b>MEDC Region</b>				
Upper Peninsula	33.8	(27.6-40.5)	14.9	(11.1-19.5)
Northwest	32.6	(26.5-39.4)	12.1	(8.7-16.7)
Northeast	41.9	(34.1-50.2)	25.3	(18.7-33.2)
West Central	30.9	(27.8-34.1)	15.5	(13.4-17.8)
Bay	28.9	(24.8-33.5)	20.8	(17.2-24.8)
Southwest	34.9	(30.6-39.5)	18.4	(15.2-22.0)
Central	25.4	(20.7-30.7)	13.8	(10.6-17.9)
East Central	33.7	(29.1-38.6)	16.7	(13.7-20.2)
South Central	29.4	(25.5-33.6)	12.2	(9.9-15.0)
Southeast	32.7	(30.5-35.1)	15.5	(14.0-17.1)

<sup>a</sup> Among all adults, the proportion who reported that they had not visited a dentist or dental clinic for any reason in the previous year. (N = 10,401)

<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. (N = 10,220)

**Table 23: Immunizations among Adults Aged 65 Years and Older by MEDC Region  
2012 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>55.4</b>	<b>(53.3-57.5)</b>	<b>66.8</b>	<b>(64.6-68.8)</b>
<b>MEDC Region</b>				
Upper Peninsula	56.0	(46.4-65.1)	59.3	(49.7-68.2)
Northwest	63.0	(53.8-71.3)	73.7	(63.5-81.8)
Northeast	53.1	(42.4-63.5)	71.1	(60.6-79.8)
West Central	59.8	(54.4-64.9)	71.9	(66.6-76.6)
Bay	49.2	(42.3-56.2)	66.2	(59.2-72.5)
Southwest	56.8	(48.9-64.3)	72.1	(64.3-78.8)
Central	56.1	(47.2-64.7)	67.8	(58.7-75.7)
East Central	49.5	(42.1-57.0)	62.7	(55.1-69.8)
South Central	61.2	(54.4-67.6)	68.0	(61.1-74.2)
Southeast	53.1	(49.3-56.8)	62.5	(58.5-66.3)

<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 = 3,481)

<sup>b</sup> Among adults aged 65 years and older, the proportion who reported that they ever had a pneumococcal vaccine. (N = 3,383)

<b>Table 24: HIV Testing among Adults Aged 18 - 64 Years by MEDC Region 2012 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>40.4</b>	<b>(38.9-42.0)</b>
<b>MEDC Region</b>		
Upper Peninsula	29.2	(22.0-37.6)
Northwest	39.9	(31.4-49.1)
Northeast	29.0	(20.1-39.8)
West Central	35.4	(31.6-39.4)
Bay	34.5	(29.2-40.2)
Southwest	41.6	(36.3-47.1)
Central	39.8	(33.2-46.8)
East Central	39.2	(33.6-45.0)
South Central	38.2	(33.5-43.1)
Southeast	46.9	(44.2-49.7)

<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 = 6,534)

<b>Table 25: Asthma among Adults by MEDC Region 2012 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>15.5</b>	<b>(14.6-16.6)</b>	<b>10.5</b>	<b>(9.7-11.4)</b>
<b>MEDC Region</b>				
Upper Peninsula	16.1	(11.2-22.5)	9.9	(6.4-14.9)
Northwest	10.4	(7.3-14.7)	9.1	(6.2-13.2)
Northeast	13.7	(9.2-19.9)	8.8	(5.4-14.0)
West Central	14.9	(12.6-17.6)	10.6	(8.6-13.0)
Bay	14.3	(11.1-18.2)	8.5	(6.1-11.7)
Southwest	14.3	(11.5-17.8)	9.5	(7.2-12.5)
Central	17.1	(13.2-21.8)	12.3	(9.1-16.4)
East Central	16.3	(12.8-20.6)	11.7	(8.8-15.4)
South Central	16.0	(13.1-19.4)	12.1	(9.6-15.2)
Southeast	16.0	(14.4-17.9)	10.4	(9.0-11.9)
<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 = 10,465)				
<sup>b</sup> Among all adults, the proportion who reported that they still had asthma. (N = 10,421)				

<b>Table 26: Asthma among Children by MEDC Region 2012 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>14.4</b>	<b>(12.8-16.2)</b>	<b>9.5</b>	<b>(8.2-10.9)</b>
<b>MEDC Region</b>				
Upper Peninsula	7.6	(3.3-16.8)	5.2	(2.2-11.4)
Northwest	18.4	(9.5-32.6)	14.4	(6.5-28.9)
Northeast	10.5	(3.7-26.3)	10.5	(3.7-26.3)
West Central	12.5	(9.2-16.8)	7.2	(4.8-10.6)
Bay	23.5	(16.6-32.0)	19.2	(12.8-27.6)
Southwest	11.3	(7.3-17.1)	6.8	(3.8-11.8)
Central	15.3	(8.1-27.1)	12.8	(6.1-24.9)
East Central	11.2	(7.3-16.8)	7.3	(4.2-12.3)
South Central	16.0	(11.2-22.3)	9.7	(6.3-14.6)
Southeast	14.8	(12.3-17.8)	9.3	(7.4-11.6)
<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 = 2,403). <sup>b</sup> Estimated proportion of Michigan children aged 0-17 years who still have asthma, using proxy information from the adult respondent. (N = 2,394)				

<b>Table 27: Chronic Obstructive Pulmonary Disease (COPD) by MEDC Region 2012 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>7.4</b>	<b>(6.8-8.1)</b>
<b>MEDC Region</b>		
Upper Peninsula	7.7	(5.4-10.7)
Northwest	5.1	(3.3-7.8)
Northeast	12.5	(8.0-19.0)
West Central	7.9	(6.1-10.0)
Bay	6.6	(4.8-9.2)
Southwest	6.3	(4.4-8.8)
Central	6.1	(4.1-8.9)
East Central	11.3	(8.5-14.9)
South Central	5.9	(4.5-7.7)
Southeast	7.4	(6.4-8.6)

<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 = 10,445)

<b>Table 28: Arthritis by MEDC Region 2012 Michigan BRFSS</b>		
	<b>Ever Told Arthritis<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>31.8</b>	<b>(30.7-33.0)</b>
<b>MEDC Region</b>		
Upper Peninsula	34.3	(28.5-40.6)
Northwest	34.7	(29.0-40.9)
Northeast	44.8	(37.1-52.9)
West Central	30.5	(27.8-33.4)
Bay	40.3	(35.8-44.9)
Southwest	29.4	(25.7-33.3)
Central	32.4	(27.8-37.5)
East Central	38.6	(34.2-43.2)
South Central	30.5	(27.1-34.1)
Southeast	29.8	(27.9-31.8)
<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 = 10,453)		

**Table 29: Cardiovascular Disease by MEDC Region  
2012 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>(4.7-5.8)</b>	<b>5.1</b>	<b>(4.6-5.6)</b>	<b>3.5</b>	<b>(3.1-3.9)</b>	<b>9.9</b>	<b>(9.2-10.6)</b>
<b>MEDC Region</b>								
Upper Peninsula	6.3	(4.2-9.3)	6.0	(4.1-8.8)	2.3	(1.2-4.4)	10.2	(7.5-13.7)
Northwest	4.1	(2.4-6.9)	5.2	(3.3-8.0)	2.4	(1.4-4.3)	8.4	(5.9-11.9)
Northeast	8.7	(5.2-14.2)	9.5	(5.9-14.9)	3.6	(1.9-6.5)	15.5	(10.9-21.5)
West Central	5.0	(3.8-6.4)	3.9	(3.0-5.0)	3.0	(2.2-4.1)	8.7	(7.2-10.4)
Bay	7.8	(5.6-10.8)	9.8	(7.3-13.2)	3.8	(2.3-6.2)	14.4	(11.4-18.1)
Southwest	5.4	(3.8-7.5)	5.6	(3.9-7.8)	3.7	(2.4-5.7)	10.9	(8.5-13.8)
Central	5.3	(3.5-7.8)	4.4	(2.9-6.6)	3.3	(1.9-5.7)	9.0	(6.6-12.1)
East Central	6.3	(4.5-8.9)	6.6	(4.8-9.1)	3.2	(1.9-5.1)	10.5	(8.2-13.3)
South Central	4.8	(3.5-6.5)	4.1	(3.0-5.5)	4.3	(3.0-6.1)	8.9	(7.1-11.1)
Southeast	4.7	(3.8-5.7)	4.3	(3.6-5.0)	3.7	(3.0-4.6)	9.6	(8.5-10.9)

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 = 10,458);

<sup>b</sup> they had angina or coronary heart disease (N = 10,416);

<sup>c</sup> they had a stroke. (N = 10,458)

<sup>d</sup> they had a heart attack, coronary heart disease or a stroke. (N = 10,401)

**Table 30: Cancer by MEDC Region  
2012 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>5.7</b>	<b>(5.3-6.2)</b>	<b>7.9</b>	<b>(7.3-8.5)</b>	<b>12.3</b>	<b>(11.6-13.0)</b>
<b>MEDC Region</b>						
Upper Peninsula	3.4	(2.2-5.3)	8.5	(6.1-11.7)	11.1	(8.4-14.6)
Northwest	7.4	(5.3-10.3)	7.2	(5.0-10.3)	12.8	(9.8-16.6)
Northeast	6.6	(4.2-10.2)	9.0	(5.8-13.6)	14.4	(10.4-19.7)
West Central	6.9	(5.6-8.4)	9.3	(7.6-11.4)	14.8	(12.8-17.2)
Bay	6.9	(5.1-9.3)	10.0	(7.8-12.8)	15.5	(12.7-18.8)
Southwest	6.9	(5.1-9.3)	7.9	(5.8-10.6)	12.3	(9.8-15.3)
Central	5.9	(4.2-8.3)	7.5	(5.3-10.7)	12.3	(9.5-15.9)
East Central	6.0	(4.5-8.0)	8.7	(6.4-11.7)	13.7	(11.0-17.1)
South Central	5.7	(4.5-7.3)	6.8	(5.1-9.0)	11.7	(9.6-14.1)
Southeast	4.8	(4.1-5.6)	7.4	(6.5-8.4)	10.8	(9.8-12.0)

<sup>a</sup> Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer. (N = 10,473)

<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 = 10,468)

<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 = 10,454)

<b>Table 31: Diabetes by MEDC Region 2012 Michigan BRFSS</b>		
	<b>Ever Told Diabetes<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>10.5</b>	<b>(9.7-11.2)</b>
<b>MEDC Region</b>		
Upper Peninsula	12.6	(9.2-17.0)
Northwest	12.3	(7.8-18.7)
Northeast	14.2	(10.3-19.4)
West Central	10.4	(8.8-12.2)
Bay	11.1	(8.7-14.0)
Southwest	12.5	(10.0-15.5)
Central	8.7	(6.4-11.6)
East Central	10.4	(8.0-13.5)
South Central	8.9	(7.0-11.1)
Southeast	10.3	(9.0-11.7)
<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 = 10,484)		

<b>Table 32: Kidney Disease by MEDC Region 2012 Michigan BRFSS</b>		
	<b>Ever Told Kidney Disease<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>3.4</b>	<b>(2.9-3.9)</b>
<b>MEDC Region</b>		
Upper Peninsula	2.6	(1.4-4.7)
Northwest	3.4	(1.9-6.1)
Northeast	5.3	(2.1-12.7)
West Central	3.6	(2.7-4.8)
Bay	3.4	(2.3-5.0)
Southwest	2.8	(1.6-4.9)
Central	3.5	(2.1-5.7)
East Central	4.6	(2.9-7.2)
South Central	2.7	(1.7-4.2)
Southeast	3.3	(2.6-4.3)

<sup>a</sup> Among all adults, the proportion who reported ever being told by a doctor that they had kidney disease. (N = 10,471)

<b>Table 33: Depression by MEDC Region 2012 Michigan BRFS</b>		
	<b>Ever Told Depression<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>20.6</b>	<b>(19.5-21.7)</b>
<b>MEDC Region</b>		
Upper Peninsula	15.5	(11.0-21.5)
Northwest	21.6	(16.8-27.3)
Northeast	30.6	(23.4-39.0)
West Central	20.7	(18.1-23.6)
Bay	21.5	(17.8-25.7)
Southwest	23.0	(19.4-27.1)
Central	23.1	(18.6-28.4)
East Central	22.6	(18.6-27.2)
South Central	23.0	(19.8-26.5)
Southeast	18.0	(16.3-19.9)

<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 = 10,464)

<b>Table 34: Visual Impairment by MEDC Region 2012 Michigan BRFS</b>		
	<b>Ever Told Non-Correctable Visual Impairment<sup>a</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>17.1</b>	<b>(16.2-18.1)</b>
<b>MEDC Region</b>		
Upper Peninsula	13.8	(9.7-19.2)
Northwest	11.6	(8.5-15.7)
Northeast	26.2	(19.3-34.6)
West Central	15.5	(13.3-17.9)
Bay	17.2	(14.1-20.8)
Southwest	16.2	(13.3-19.6)
Central	15.6	(12.2-19.7)
East Central	17.6	(14.2-21.7)
South Central	16.3	(13.5-19.6)
Southeast	18.9	(17.1-20.7)
<sup>a</sup> Among all adults, the proportion who reported ever being told by a doctor that they had a visual impairment in one or both eyes, even when wearing glasses. (N = 10,444)		

<b>Table 35: Falls Among Adults Aged 45 Years and Older by MEDC Region 2012 Michigan BRFSS</b>				
	<b>Fell During the Past 12 Months<sup>a</sup></b>		<b>Injured From a Fall During the Past 12 Months<sup>b</sup></b>	
	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>17.4</b>	<b>(16.3-18.6)</b>	<b>6.1</b>	<b>(5.4-7.0)</b>
<b>MEDC Region</b>				
Upper Peninsula	15.8	(11.8-20.9)	5.5	(3.3-9.0)
Northwest	18.4	(13.9-24.0)	6.7	(4.1-10.8)
Northeast	22.0	(15.5-30.2)	8.4	(4.8-14.0)
West Central	14.8	(12.3-17.7)	4.8	(3.5-6.5)
Bay	16.1	(12.7-20.1)	6.5	(4.4-9.4)
Southwest	16.3	(12.7-20.8)	6.3	(3.9-10.1)
Central	16.7	(12.7-21.6)	5.8	(3.5-9.6)
East Central	18.6	(14.8-23.2)	7.1	(4.6-10.9)
South Central	18.3	(15.1-22.1)	4.7	(3.1-7.0)
Southeast	18.7	(16.6-21.1)	6.9	(5.3-8.8)
<sup>a</sup> Among adults aged 45 years and older, the proportion who reported to have unintentionally come to rest on the ground or another lower level during the past 12 months. (N = 7,705) <sup>b</sup> Among adults aged 45 years and older, the proportion who reported to have been injured due to a fall during the past 12 months. (N = 7,698)				