

**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)**

**2014 - 2016**

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

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## **Introduction**

The Michigan Behavioral Risk Factor Survey (MiBRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older that is conducted through a collaborative effort among the Population Health Surveillance Branch (PHSB) of the Centers for Disease Control and Prevention (CDC), the Michigan State University Institute for Public Policy and Social Research (IPPSR), and the Michigan Department of Health and Human Services. Michigan BRFSS data contribute to the national [Behavioral Risk Factor Surveillance System](#) that is managed by the PHSB at the CDC.

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 BRFSS data combined across years.

For this report, data from the 2014-2016 Michigan BRFSS were combined. The total sample sizes by year were: 12,024 in 2016, 8,935 in 2015, and 8,466 in 2014. Not all questions were included annually in the survey. The table subtitles indicate which years were used for that particular analysis.

For the 2014 through 2016 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.

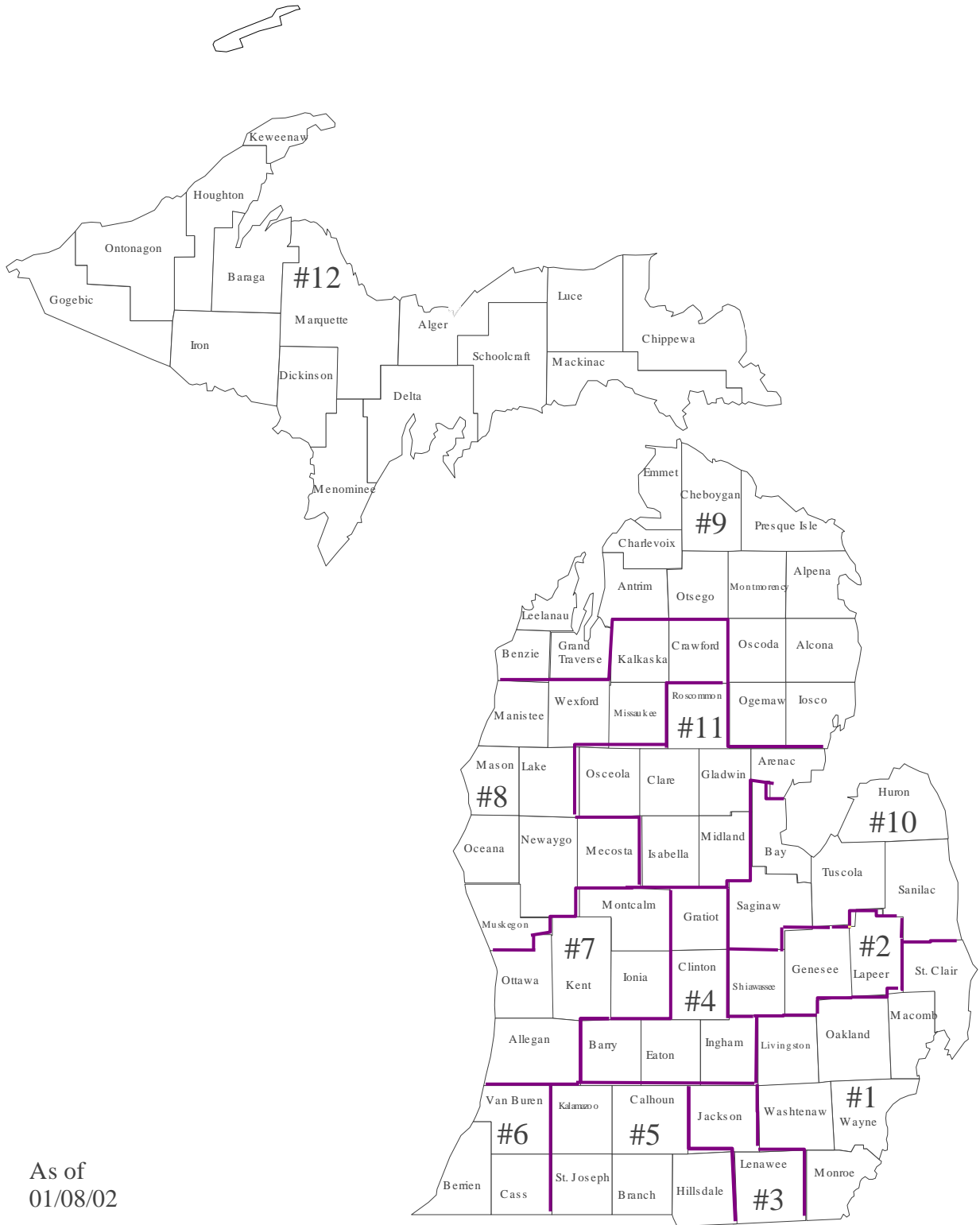
Iterative proportional fitting or raking was the weighting methodology used to make the 2014-2016 Michigan BRFSS data representative of the current Michigan adult population. Estimates based on this methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor that adjusted for the distribution of Michigan adults by telephone source (land line vs. cell phone), detailed race/ethnicity, education level, marital status, age by gender, gender by race/ethnicity, age by race/ethnicity, and renter/owner status. No additional weighting factors were computed at the regional 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.

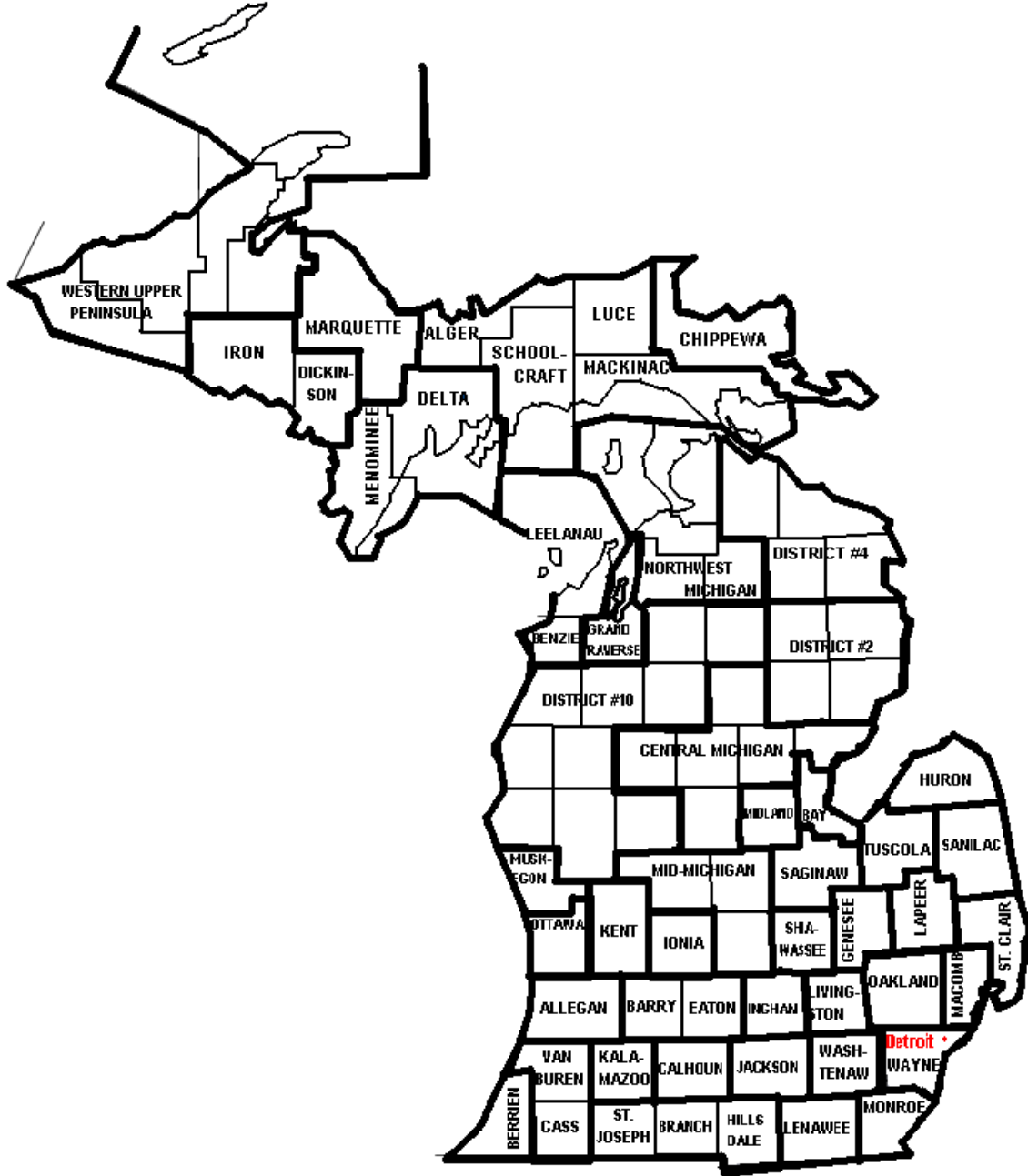
If you have any questions regarding any of the estimates within the following tables, please contact Allison Murad at [murada@michigan.gov](mailto:murada@michigan.gov).

## Community Health Assessment and Improvement Regions State of Michigan



As of  
 01/08/02

### Local Health Departments State of Michigan



<b>Table 1: Health Status Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>General Health, Fair or Poor<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,376</b>	<b>17.5</b>	<b>(16.9-18.1)</b>
<b>Region 1</b>	12,085	17.5	(16.7-18.4)
Livingston	486	8.2	(5.9-11.4)
Macomb	2,034	19.2	(17.1-21.4)
Monroe	357	18.5	(13.7-24.4)
Oakland	3,329	13.8	(12.3-15.3)
St. Clair	403	16.3	(12.5-20.9)
Washtenaw	989	11.8	(9.4-14.6)
City of Detroit	1,449	27.5	(24.7-30.5)
Wayne exc. Detroit	2,818	18.2	(16.5-20.0)
<b>Region 2</b>	1,773	21.0	(18.7-23.4)
Genesee	1,280	22.5	(19.7-25.5)
Lapeer	241	15.6	(11.0-21.6)
Shiawassee	239	20.4	(14.7-27.7)
<b>Region 3</b>	1,127	20.2	(16.8-24.0)
Jackson	817	18.7	(14.8-23.4)
Lenawee	289	22.4	(16.5-29.6)
<b>Region 4</b>	1,754	15.0	(13.1-17.2)
Barry-Eaton	530	18.2	(14.5-22.7)
Mid-Michigan <sup>b</sup>	539	16.9	(13.3-21.2)
Ingham	861	13.6	(11.1-16.6)
<b>Region 5</b>	1,499	18.4	(16.2-20.9)
Branch-Hillsdale-St. Joseph	414	20.8	(16.4-25.9)
Calhoun	372	19.1	(14.7-24.4)
Kalamazoo	692	17.0	(13.9-20.6)
<b>Region 6</b>	731	20.0	(16.6-23.9)
Van Buren-Cass	303	26.2	(20.3-33.0)
Berrien	415	16.0	(12.2-20.6)
<b>Region 7</b>	3,121	14.0	(12.5-15.8)
Allegan	322	16.3	(11.6-22.4)
Ionia	267	17.5	(11.1-26.5)
Kent	55	13.7	(11.5-16.2)
Mid-Michigan <sup>b</sup>	539	16.9	(13.3-21.2)
Ottawa	745	10.8	(8.4-13.7)

2014-2016 Michigan BRFSS Regional & Local Health Department Estimates  
December 12, 2017

<b>Table 1 Cont'd</b>			
<b>Geographic Area</b>	<b>General Health, Fair or Poor<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,376</b>	<b>17.5</b>	<b>(16.9-18.1)</b>
<b>Region 8</b>	1,545	17.0	(14.8-19.4)
District #10	1,036	16.3	(13.6-19.4)
Muskegon	802	18.5	(14.9-22.8)
<b>Region 9</b>	1,364	21.7	(19.0-24.7)
District #2	226	29.8	(22.5-38.3)
District #4	259	28.1	(22.0-35.0)
Northwest Michigan	388	19.4	(14.7-25.1)
Benzie-Leelanau	167	18.4	(11.9-27.3)
Grand Traverse	317	10.5	(7.4-14.8)
<b>Region 10</b>	1,489	16.6	(14.2-19.2)
Bay	313	14.7	(10.9-19.7)
Huron	115	14.5	(9.2-22.0)
Saginaw	715	18.0	(14.0-22.8)
Sanilac	136	14.8	(9.4-22.5)
Tuscola	186	17.3	(12.0-24.4)
<b>Region 11</b>	913	19.5	(16.5-23.0)
Central Michigan	573	21.5	(17.7-25.8)
Midland	283	18.0	(12.7-24.9)
<b>Region 12</b>	1,125	17.4	(14.7-20.3)
Luce-Mackinac-Alger-Schoolcraft	153	19.8	(12.9-29.1)
Western Upper Peninsula	234	13.1	(9.0-18.6)
Delta-Menominee	214	22.5	(15.8-30.8)
Chippewa	132	22.7	(15.1-32.6)
Dickinson-Iron	140	17.0	(10.3-26.6)
Marquette	230	15.1	(10.1-22.1)

<sup>a</sup> The proportion of adults who reported that their health, in general, was either fair or poor.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 2: Poor Physical Health on at Least 14 Days in the Past Month Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Poor Physical Health<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,169</b>	<b>16.3</b>	<b>(15.8-16.9)</b>
<b>Region 1</b>	11,991	16.1	(15.4-17.0)
Livingston	483	18.7	(14.5-23.9)
Macomb	2,016	16.4	(14.6-18.4)
Monroe	352	23.6	(17.9-30.4)
Oakland	3,308	13.6	(12.2-15.0)
St. Clair	400	13.6	(10.3-17.6)
Washtenaw	985	16.5	(13.8-19.7)
City of Detroit	1,430	18.5	(16.2-21.0)
Wayne exc. Detroit	2,799	16.9	(15.3-18.6)
<b>Region 2</b>	1,765	18.8	(16.6-21.2)
Genesee	1,272	19.1	(16.5-22.1)
Lapeer	239	15.5	(11.0-21.4)
Shiawassee	241	21.3	(15.7-28.2)
<b>Region 3</b>	1,121	16.0	(13.2-19.4)
Jackson	812	16.8	(13.0-21.5)
Lenawee	288	14.4	(10.4-19.7)
<b>Region 4</b>	1,737	15.9	(13.9-18.0)
Barry-Eaton	525	14.8	(11.5-18.7)
Mid-Michigan <sup>b</sup>	536	15.9	(12.4-20.1)
Ingham	852	16.5	(13.7-19.7)
<b>Region 5</b>	1,481	17.6	(15.3-20.1)
Branch-Hillsdale-St. Joseph	409	17.7	(13.2-23.2)
Calhoun	366	18.7	(14.3-24.1)
Kalamazoo	685	16.3	(13.4-19.8)
<b>Region 6</b>	727	18.6	(15.4-22.4)
Van Buren-Cass	301	18.6	(13.7-24.7)
Berrien	413	19.0	(14.8-24.1)
<b>Region 7</b>	3,103	14.8	(13.4-16.4)
Allegan	320	14.2	(10.3-19.2)
Ionia	184	11.1	(7.0-17.3)
Kent	1,626	16.2	(14.1-18.5)
Mid-Michigan <sup>b</sup>	536	15.9	(12.4-20.1)
Ottawa	739	12.3	(10.0-15.2)



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<b>Table 2 Cont'd</b>			
<b>Geographic Area</b>	<b>Poor Physical Health<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,169</b>	<b>16.3</b>	<b>(15.8-16.9)</b>
<b>Region 8</b>	1,876	17.6	(15.4-19.9)
District #10	1,030	17.4	(14.7-20.5)
Muskegon	801	18.9	(15.3-23.0)
<b>Region 9</b>	1,356	15.9	(13.7-18.3)
District #2	227	15.6	(11.0-21.8)
District #4	256	20.3	(14.9-26.9)
Northwest Michigan	384	15.0	(11.2-19.7)
Benzie-Leelanau	166	12.9	(8.1-20.1)
Grand Traverse	316	14.7	(11.0-19.6)
<b>Region 10</b>	1,475	15.7	(13.4-18.4)
Bay	311	14.1	(10.2-19.2)
Huron	113	16.5	(10.8-24.4)
Saginaw	709	15.7	(11.9-20.5)
Sanilac	132	13.6	(7.4-23.5)
Tuscola	186	19.3	(13.7-26.5)
<b>Region 11</b>	908	17.9	(14.9-21.4)
Central Michigan	567	18.2	(14.4-22.7)
Midland	284	17.5	(12.5-24.0)
<b>Region 12</b>	1,120	16.2	(13.7-19.2)
Luce-Mackinac-Alger-Schoolcraft	153	11.4	(7.2-17.6)
Western Upper Peninsula	231	11.9	(7.7-17.9)
Delta-Menominee	214	24.3	(17.0-33.3)
Chippewa	132	17.2	(10.7-26.5)
Dickinson-Iron	139	15.0	(9.6-22.7)
Marquette	229	18.2	(12.5-25.8)

<sup>a</sup> 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 3: Poor Mental Health on at Least 14 Days in the Past Month Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Poor Mental Health<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,194</b>	<b>16.2</b>	<b>(15.6-16.8)</b>
<b>Region 1</b>	11,997	16.9	(16.0-17.8)
Livingston	484	17.5	(13.0-23.2)
Macomb	2,018	15.6	(13.8-17.7)
Monroe	353	20.7	(15.1-27.6)
Oakland	3,309	15.8	(14.3-17.5)
St. Clair	401	16.2	(12.2-21.2)
Washtenaw	982	19.2	(16.3-22.5)
City of Detroit	1,434	18.8	(16.5-21.4)
Wayne exc. Detroit	2,798	16.8	(15.1-18.7)
<b>Region 2</b>	1,767	16.2	(14.2-18.4)
Genesee	1,275	16.7	(14.3-19.5)
Lapeer	238	14.4	(10.0-20.3)
Shiawassee	241	14.9	(10.5-20.8)
<b>Region 3</b>	1,123	15.9	(12.7-19.8)
Jackson	813	18.1	(13.9-23.3)
Lenawee	289	12.4	(7.8-19.1)
<b>Region 4</b>	1,745	16.4	(14.3-18.8)
Barry-Eaton	524	16.1	(12.4-20.7)
Mid-Michigan <sup>b</sup>	536	12.7	(9.2-17.2)
Ingham	861	18.2	(15.2-21.7)
<b>Region 5</b>	1,484	15.6	(13.5-18.1)
Branch-Hillsdale-St. Joseph	411	11.5	(8.3-15.7)
Calhoun	369	18.2	(13.6-23.9)
Kalamazoo	683	16.2	(13.1-19.8)
<b>Region 6</b>	723	15.3	(12.3-18.9)
Van Buren-Cass	299	17.2	(12.4-23.4)
Berrien	411	14.4	(10.8-19.0)
<b>Region 7</b>	3,105	16.4	(14.7-18.3)
Allegan	321	17.1	(12.6-22.7)
Ionia	184	3.3	(1.8-6.0)
Kent	1,625	0.9	(0.4-2.3)
Mid-Michigan <sup>b</sup>	536	12.7	(9.2-17.2)
Ottawa	741	17.1	(13.7-21.3)

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<b>Table 3 Cont'd</b>			
<b>Geographic Area</b>	<b>Poor Mental Health<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,194</b>	<b>16.2</b>	<b>(15.6-16.8)</b>
<b>Region 8</b>	1,877	16.0	(13.7-18.7)
District #10	1,033	16.1	(13.0-19.6)
Muskegon	799	16.6	(12.7-21.4)
<b>Region 9</b>	1,353	14.0	(12.0-16.4)
District #2	224	14.2	(9.8-20.1)
District #4	254	17.0	(12.1-23.4)
Northwest Michigan	389	13.1	(9.7-17.4)
Benzie-Leelanau	167	8.0	(4.4-14.1)
Grand Traverse	312	16.3	(12.0-21.9)
<b>Region 10</b>	1,480	16.2	(13.6-19.1)
Bay	311	14.8	(10.2-20.9)
Huron	113	9.5	(5.4-16.3)
Saginaw	712	19.7	(15.2-25.1)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	184	17.3	(11.9-24.5)
<b>Region 11</b>	908	13.2	(10.8-16.0)
Central Michigan	568	12.0	(9.2-15.6)
Midland	283	15.7	(11.2-21.6)
<b>Region 12</b>	1,122	15.8	(13.2-18.9)
Luce-Mackinac-Alger-Schoolcraft	153	17.0	(9.8-27.7)
Western Upper Peninsula	234	13.1	(8.4-19.8)
Delta-Menominee	214	14.0	(9.1-21.0)
Chippewa	131	11.9	(7.1-19.3)
Dickinson-Iron	139	14.3	(8.8-22.5)
Marquette	229	20.4	(13.5-29.5)

<sup>a</sup> 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

<b>Table 4: Activity Limitation on at Least 14 Days in the Past Month Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Activity Limitation<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,159</b>	<b>9.2</b>	<b>(8.7-9.6)</b>
<b>Region 1</b>	12,001	9.0	(8.4-9.7)
Livingston	484	6.4	(4.3-9.2)
Macomb	2,012	9.5	(8.1-11.2)
Monroe	352	12.5	(7.7-19.7)
Oakland	3,314	7.5	(6.4-8.8)
St. Clair	403	10.0	(7.2-13.6)
Washtenaw	985	6.1	(4.5-8.2)
City of Detroit	1,436	13.5	(11.5-15.8)
Wayne exc. Detroit	2,799	8.7	(7.5-10.1)
<b>Region 2</b>	1,764	11.9	(10.1-14.0)
Genesee	1,269	12.8	(10.6-15.4)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	242	15.6	(10.7-22.2)
<b>Region 3</b>	1,112	9.1	(6.9-12.0)
Jackson	807	10.2	(7.1-14.3)
Lenawee	284	7.8	(4.9-12.2)
<b>Region 4</b>	1,733	7.0	(5.6-8.7)
Barry-Eaton	525	6.4	(4.4-9.2)
Mid-Michigan <sup>b</sup>	529	7.4	(4.6-11.9)
Ingham	853	7.9	(5.8-10.5)
<b>Region 5</b>	1,487	9.1	(7.5-11.1)
Branch-Hillsdale-St. Joseph	411	12.0	(8.7-16.3)
Calhoun	368	10.9	(7.5-15.6)
Kalamazoo	687	6.6	(4.8-9.0)
<b>Region 6</b>	726	10.8	(8.4-13.9)
Van Buren-Cass	299	13.5	(9.5-18.8)
Berrien	414	9.2	(6.2-13.4)
<b>Region 7</b>	3,096	7.7	(6.5-9.1)
Allegan	319	8.4	(5.6-12.2)
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,625	8.1	(6.4-10.3)
Mid-Michigan <sup>b</sup>	529	7.4	(4.6-11.9)
Ottawa	736	6.2	(4.3-8.7)

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<b>Table 4 Cont'd</b>			
<b>Geographic Area</b>	<b>Activity Limitation<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,159</b>	<b>9.2</b>	<b>(8.7-9.6)</b>
<b>Region 8</b>	1,875	9.9	(8.3-11.8)
District #10	109	10.7	(8.5-13.4)
Muskegon	88	9.1	(6.8-12.0)
<b>Region 9</b>	1,358	9.9	(8.1-12.0)
District #2	226	12.4	(8.0-18.5)
District #4	255	13.5	(8.9-19.8)
Northwest Michigan	386	7.4	(4.9-11.1)
Benzie-Leelanau	167	11.5	(6.9-18.7)
Grand Traverse	317	6.1	(3.7-10.1)
<b>Region 10</b>	1,481	9.9	(8.0-12.3)
Bay	311	14.7	(9.7-21.8)
Huron	114	8.0	(4.5-13.9)
Saginaw	712	6.6	(4.8-9.1)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	184	11.3	(6.9-17.9)
<b>Region 11</b>	909	10.1	(7.9-12.9)
Central Michigan	570	10.7	(7.9-14.3)
Midland	283	11.0	(6.9-17.1)
<b>Region 12</b>	1,116	9.6	(7.7-12.0)
Luce-Mackinac-Alger-Schoolcraft	152	10.0	(6.0-16.2)
Western Upper Peninsula	232	100.0	
Delta-Menominee	212	92.8	(88.0-95.7)
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	138	11.7	(6.4-20.3)
Marquette	228	9.4	(5.7-15.2)

<sup>a</sup> 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

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<b>Table 5: Disability Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Disability<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>28,501</b>	<b>25.6</b>	<b>(25.0-26.2)</b>
<b>Region 1</b>	11,812	25.5	(24.6-26.5)
Livingston	477	17.8	(13.8-22.8)
Macomb	1,989	25.1	(22.9-27.5)
Monroe	346	33.1	(26.8-40.0)
Oakland	3,283	22.1	(20.4-24.0)
St. Clair	396	28.4	(23.5-33.9)
Washtenaw	974	23.6	(20.5-27.0)
City of Detroit	1,407	30.8	(27.9-33.9)
Wayne exc. Detroit	2,768	27.5	(25.5-29.5)
<b>Region 2</b>	1,730	27.8	(25.3-30.5)
Genesee	1,253	30.0	(26.9-33.2)
Lapeer	236	19.3	(14.3-25.5)
Shiawassee	235	27.4	(21.2-34.5)
<b>Region 3</b>	1,092	25.9	(22.3-29.9)
Jackson	803	27.5	(22.8-32.9)
Lenawee	286	23.7	(18.4-30.0)
<b>Region 4</b>	1,702	23.3	(20.9-25.9)
Barry-Eaton	517	24.5	(20.2-29.3)
Mid-Michigan <sup>b</sup>	529	25.9	(21.2-31.2)
Ingham	844	22.3	(19.1-25.9)
<b>Region 5</b>	1,463	25.1	(22.6-27.7)
Branch-Hillsdale-St. Joseph	406	25.3	(20.6-30.6)
Calhoun	368	29.8	(24.5-35.8)
Kalamazoo	682	22.2	(19.0-25.9)
<b>Region 6</b>	710	24.8	(21.2-28.7)
Van Buren-Cass	294	27.8	(22.2-34.3)
Berrien	405	23.0	(18.5-28.2)
<b>Region 7</b>	3,052	22.4	(20.6-24.3)
Allegan	314	20.4	(16.0-25.7)
Ionia	185	20.1	(14.5-27.2)
Kent	1,610	22.1	(19.7-24.8)
Mid-Michigan <sup>b</sup>	529	25.9	(21.2-31.2)
Ottawa	729	22.4	(18.9-26.3)

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<b>Table 5 Cont'd</b>			
<b>Geographic Area</b>	<b>Disability<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>28,501</b>	<b>25.6</b>	<b>(25.0-26.2)</b>
<b>Region 8</b>	1,856	27.8	(25.2-30.6)
District #10	1,023	27.8	(24.5-31.4)
Muskegon	795	28.9	(24.6-33.7)
<b>Region 9</b>	1,342	28.9	(25.9-32.0)
District #2	222	34.6	(27.2-42.9)
District #4	255	35.1	(28.5-42.3)
Northwest Michigan	383	24.7	(19.9-30.1)
Benzie-Leelanau	165	25.0	(17.3-34.7)
Grand Traverse	312	22.8	(17.6-28.9)
<b>Region 10</b>	1,461	27.7	(24.7-30.9)
Bay	310	31.0	(24.7-38.2)
Huron	114	21.3	(14.8-29.8)
Saginaw	705	26.8	(22.2-32.0)
Sanilac	135	28.6	(19.9-39.2)
Tuscola	181	27.3	(20.3-35.5)
<b>Region 11</b>	859	28.3	(24.8-32.2)
Central Michigan	557	31.0	(26.5-36.0)
Midland	275	25.0	(19.1-32.0)
<b>Region 12</b>	1,085	28.7	(25.4-32.3)
Luce-Mackinac-Alger-Schoolcraft	152	32.7	(24.1-42.7)
Western Upper Peninsula	230	23.9	(17.4-31.8)
Delta-Menominee	211	30.3	(23.2-38.6)
Chippewa	130	29.5	(20.8-40.0)
Dickinson-Iron	135	26.4	(18.2-36.8)
Marquette	227	30.6	(23.3-39.0)

<sup>a</sup> The proportion of adults 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

**Table 6: Weight Status**  
**Michigan BRFSS, 2014-2016 Combined**

Geographic Area	Sample Size	Obese <sup>a</sup>		Overweight <sup>b</sup>		Healthy Weight <sup>c</sup>	
		N	%	95% Confidence Interval	%	95% Confidence Interval	%
<b>Michigan Total</b>	<b>27,483</b>	<b>31.4</b>	<b>(30.7-32.1)</b>	<b>35.0</b>	<b>(34.3-35.7)</b>	<b>31.9</b>	<b>(31.2-32.6)</b>
<b>Region 1</b>	11,337	31.7	(31.0-32.4)	35.1	(34.3-35.8)	31.6	(30.8-32.3)
Livingston	456	23.3	(18.9-28.3)	37.8	(32.1-43.8)	38.6	(32.8-44.8)
Macomb	1,918	32.2	(29.6-34.9)	34.5	(31.9-37.2)	31.0	(28.4-33.6)
Monroe	334	39.2	(32.7-46.1)	37.7	(31.3-44.6)	22.5	(17.3-28.6)
Oakland	3,140	26.1	(24.2-28.1)	37.1	(35.0-39.2)	35.5	(33.4-37.6)
St. Clair	378	31.8	(26.3-37.9)	37.9	(31.7-44.4)	29.7	(24.2-35.9)
Washtenaw	942	24.6	(21.2-28.3)	36.3	(32.5-40.3)	37.6	(33.8-41.5)
City of Detroit	1,350	37.2	(33.9-40.5)	33.2	(30.1-36.5)	27.5	(24.4-30.8)
Wayne exc. Detroit	2,638	31.5	(29.4-33.7)	33.6	(31.4-35.9)	32.7	(30.4-35.1)
<b>Region 2</b>	1,675	33.4	(30.6-36.2)	36.0	(33.1-38.9)	29.1	(26.5-31.9)
Genesee	1,202	32.7	(29.5-36.1)	36.2	(32.8-39.8)	29.4	(26.3-32.7)
Lapeer	231	31.8	(25.2-39.3)	33.1	(26.4-40.5)	32.9	(25.7-40.9)
Shiawassee	230	38.8	(31.5-46.6)	36.2	(28.9-44.2)	24.4	(18.2-31.8)
<b>Region 3</b>	1,068	36.7	(32.6-41.1)	32.5	(28.4-36.9)	29.1	(25.0-33.5)
Jackson	775	37.1	(31.9-42.5)	30.0	(25.4-35.0)	31.1	(25.8-37.0)
Lenawee	272	35.1	(28.2-42.8)	36.8	(29.3-45.0)	26.7	(20.5-33.9)
<b>Region 4</b>	1,646	33.5	(30.6-36.4)	33.4	(30.5-36.3)	32.0	(29.1-35.0)
Barry-Eaton	501	37.9	(32.7-43.5)	33.5	(28.6-38.9)	28.1	(23.1-33.6)
Mid-Michigan <sup>d</sup>	498	33.8	(28.6-39.3)	35.2	(29.9-40.8)	30.1	(24.5-36.3)
Ingham	812	29.9	(26.0-34.0)	32.5	(28.5-36.7)	35.8	(31.6-40.1)
<b>Region 5</b>	1,409	35.2	(32.2-38.3)	33.6	(30.6-36.7)	29.5	(26.5-32.6)
Branch-Hillsdale-St. Joseph	389	36.5	(30.6-42.8)	37.7	(31.6-44.2)	24.9	(20.1-30.3)
Calhoun	349	35.7	(29.7-42.2)	29.5	(24.2-35.4)	37.7	(31.6-44.2)
Kalamazoo	650	34.6	(30.4-39.1)	33.2	(29.0-37.7)	36.5	(30.6-42.8)
<b>Region 6</b>	691	36.2	(31.9-40.8)	33.5	(29.3-38.0)	29.3	(25.3-33.7)
Van Buren-Cass	286	34.9	(28.3-42.0)	34.6	(28.2-41.7)	29.3	(22.9-36.7)
Berrien	393	37.7	(32.0-43.8)	32.6	(27.1-38.6)	29.0	(24.1-34.5)
<b>Region 7</b>	2,937	28.4	(26.4-30.5)	36.0	(33.8-38.3)	33.6	(31.4-35.9)
Allegan	296	29.9	(23.8-36.9)	38.6	(32.0-45.7)	28.4	(22.8-34.8)
Ionia	175	40.8	(32.4-49.9)	30.8	(23.4-39.2)	28.4	(20.9-37.4)
Kent	1,542	28.1	(25.4-31.0)	36.1	(33.1-39.2)	33.8	(30.7-37.0)
Mid-Michigan <sup>d</sup>	498	33.8	(28.6-39.3)	35.2	(29.9-40.8)	30.1	(24.5-36.3)
Ottawa	704	25.4	(21.7-29.5)	37.0	(32.6-41.7)	36.0	(31.6-40.7)



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**Table 6 Cont'd**

Geographic Area	Sample Size	Obese <sup>a</sup>		Overweight <sup>b</sup>		Healthy Weight <sup>c</sup>	
		N	%	95% Confidence Interval	%	95% Confidence Interval	%
<b>Michigan Total</b>	<b>27,483</b>	<b>31.4</b>	<b>(30.7-32.1)</b>	<b>35.0</b>	<b>(34.3-35.7)</b>	<b>31.9</b>	<b>(31.2-32.6)</b>
<b>Region 8</b>	1,760	30.3	(27.5-33.2)	36.4	(33.3-39.5)	32.4	(29.2-35.7)
District #10	978	30.2	(26.7-33.9)	38.6	(34.6-42.7)	30.6	(26.8-34.8)
Muskegon	740	32.1	(27.5-37.1)	32.7	(28.0-37.9)	33.2	(27.9-39.0)
<b>Region 9</b>	1,299	31.8	(28.7-35.0)	37.7	(34.3-41.2)	29.8	(26.7-33.0)
District #2	219	36.8	(29.2-45.0)	33.4	(25.3-42.5)	29.5	(22.3-38.1)
District #4	243	35.2	(28.4-42.7)	38.3	(31.3-45.8)	24.8	(19.1-31.6)
Northwest Michigan	370	29.3	(23.9-35.3)	38.5	(32.4-44.9)	31.1	(25.5-37.4)
Benzie-Leelanau	159	31.8	(23.5-41.4)	36.7	(28.3-45.9)	31.6	(23.1-41.5)
Grand Traverse	302	24.6	(19.4-30.6)	40.9	(34.0-48.3)	34.3	(27.9-41.4)
<b>Region 10</b>	1,402	37.5	(34.1-41.1)	35.7	(32.4-39.1)	25.0	(22.0-28.2)
Bay	299	35.1	(28.4-42.6)	36.4	(29.5-44.0)	25.2	(19.3-32.2)
Huron	111	32.1	(23.3-42.4)	40.4	(30.5-51.2)	26.7	(17.6-38.5)
Saginaw	669	40.5	(35.1-46.1)	32.3	(27.5-37.5)	25.4	(20.9-30.5)
Sanilac	126	35.0	(24.8-46.8)	38.0	(28.4-48.5)	26.6	(18.3-37.0)
Tuscola	175	37.0	(28.6-46.1)	40.4	(31.7-49.9)	21.3	(14.5-30.0)
<b>Region 11</b>	864	35.8	(31.9-39.8)	31.8	(28.0-35.8)	29.8	(26.0-34.0)
Central Michigan	547	39.5	(34.6-44.7)	31.2	(26.6-36.2)	27.3	(22.6-32.5)
Midland	269	29.2	(23.2-36.0)	33.1	(26.3-40.8)	36.4	(29.2-44.2)
<b>Region 12</b>	1,041	30.9	(27.3-34.7)	32.2	(28.7-35.9)	35.3	(31.5-39.3)
Luce-Mackinac-Alger-Schoolcraft	142	27.9	(19.2-38.7)	34.4	(24.9-45.4)	33.9	(24.9-44.3)
Western Upper Peninsula	216	28.8	(21.9-36.8)	32.8	(25.7-40.8)	38.2	(30.1-47.0)
Delta-Menominee	191	29.2	(22.1-37.6)	32.4	(24.6-41.4)	35.5	(27.6-44.3)
Chippewa	122	37.7	(27.3-49.4)	31.3	(21.7-42.9)	30.0	(18.0-45.5)
Dickinson-Iron	128	22.7	(15.0-32.9)	34.0	(25.0-44.3)	42.5	(32.0-53.7)
Marquette	220	40.3	(31.1-50.2)	31.7	(24.5-39.9)	27.0	(20.0-35.3)

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.

<sup>a</sup> The proportion of adults whose BMI was greater than or equal to 30.0.

<sup>b</sup> The proportion of adults whose BMI was greater than or equal to 25.0, but less than 30.0.

<sup>c</sup> The proportion of adults whose BMI was greater than or equal to 18.5, but less than 25.0.

<sup>d</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 7: No Health Care Coverage Among Those Aged 18-64 Years Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>No Health Care Coverage<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>19,318</b>	<b>11.5</b>	<b>(10.9-12.2)</b>
<b>Region 1</b>	8,007	11.3	(10.4-12.3)
Livingston	335	7.1	(4.4-11.4)
Macomb	1,311	10.8	(8.7-13.2)
Monroe	234	8.3	(4.0-16.4)
Oakland	2,169	9.2	(7.6-11.0)
St. Clair	262	11.0	(6.9-16.9)
Washtenaw	687	8.9	(6.3-12.5)
City of Detroit	1,015	17.2	(14.5-20.4)
Wayne exc. Detroit	1,816	12.7	(10.8-14.9)
<b>Region 2</b>	1,188	11.8	(9.5-14.5)
Genesee	839	12.2	(9.5-15.5)
Lapeer	168	12.1	(7.0-19.9)
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	712	8.4	(5.7-12.1)
Jackson	505	9.0	(6.0-13.1)
Lenawee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 4</b>	1,044	11.1	(8.8-13.9)
Barry-Eaton	317	12.2	(7.9-18.5)
Mid-Michigan <sup>b</sup>	331	15.5	(9.6-23.9)
Ingham	603	9.8	(7.1-13.5)
<b>Region 5</b>	1,007	9.6	(7.4-12.2)
Branch-Hillsdale-St. Joseph	263	16.4	(11.1-23.5)
Calhoun	244	7.9	(4.8-12.8)
Kalamazoo	484	6.4	(4.2-9.8)
<b>Region 6</b>	465	11.5	(8.1-16.0)
Van Buren-Cass	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Berrien	264	15.0	(10.1-21.8)
<b>Region 7</b>	2,173	10.9	(9.1-13.0)
Allegan	229	15.0	(9.3-23.3)
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,152	10.7	(8.5-13.4)
Mid-Michigan <sup>b</sup>	331	15.5	(9.6-23.9)
Ottawa	502	8.7	(6.1-12.4)

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<b>Table 7 Cont'd</b>			
<b>Geographic Area</b>	<b>No Health Care Coverage<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>19,318</b>	<b>11.5</b>	<b>(10.9-12.2)</b>
<b>Region 8</b>	1,209	12.9	(10.4-15.9)
District #10	645	13.7	(10.4-17.7)
Muskegon	525	12.7	(8.8-18.0)
<b>Region 9</b>	846	13.1	(10.4-16.3)
District #2	138	16.4	(9.7-26.4)
District #4	171	14.4	(9.2-21.7)
Northwest Michigan	233	11.8	(7.8-17.4)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	203	12.1	(6.6-21.1)
<b>Region 10</b>	947	13.7	(10.9-17.1)
Bay	195	14.0	(8.9-21.2)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	447	13.4	(9.1-19.3)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	128	12.3	(6.7-21.5)
<b>Region 11</b>	570	11.7	(8.5-15.8)
Central Michigan	308	11.6	(7.8-16.8)
Midland	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 12</b>	728	10.8	(8.1-14.2)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	143	19.4	(11.8-30.1)
Delta-Menominee	145	11.3	(6.1-19.8)
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>

<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.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 8: Health Care Access Michigan BRFSS, 2014-2016 Combined</b>						
<b>Geographic Area</b>	<b>No Personal Health Care Provider<sup>a</sup></b>			<b>No Health Care Access During Past 12 Months Due to Cost<sup>b</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,255</b>	<b>15.2</b>	<b>(14.6-15.8)</b>	<b>29,351</b>	<b>13.3</b>	<b>(12.8-13.9)</b>
<b>Region 1</b>	12,039	14.8	(13.9-15.7)	12,071	13.8	(13.0-14.7)
Livingston	482	14.9	(11.0-19.9)	486	11.1	(7.4-16.4)
Macomb	2,028	12.7	(10.8-14.8)	2,031	13.3	(11.5-15.4)
Monroe	355	11.1	(7.0-17.3)	356	18.4	(12.7-25.8)
Oakland	3,317	12.9	(11.5-14.6)	3,331	11.3	(9.9-12.9)
St. Clair	404	13.1	(9.1-18.5)	404	14.5	(10.7-19.3)
Washtenaw	986	15.6	(12.6-19.1)	986	11.1	(8.6-14.1)
City of Detroit	1,443	23.0	(20.1-26.2)	1,443	21.3	(18.5-24.4)
Wayne exc. Detroit	2,805	12.8	(11.1-14.7)	2,814	12.9	(11.3-14.7)
<b>Region 2</b>	1,773	17.0	(14.7-19.7)	1,778	13.7	(11.6-16.1)
Genesee	1,280	17.1	(14.2-20.3)	1,283	13.5	(11.1-16.3)
Lapeer	240	17.9	(12.8-24.4)	241	17.2	(11.5-25.0)
Shiawassee	240	15.1	(9.6-23.1)	241	11.4	(6.8-18.5)
<b>Region 3</b>	1,120	13.7	(10.7-17.4)	1,125	12.2	(9.4-15.6)
Jackson	811	13.0	(9.1-18.2)	817	11.9	(8.6-16.0)
Lenawee	288	13.2	(8.9-19.1)	287	12.4	(7.8-19.0)
<b>Region 4</b>	1,745	15.7	(13.4-18.3)	1,753	12.1	(10.2-14.3)
Barry-Eaton	527	15.0	(11.1-20.1)	529	13.7	(10.1-18.2)
Mid-Michigan <sup>c</sup>	538	8.9	(5.9-13.4)	538	13.4	(9.6-18.4)
Ingham	856	19.0	(15.6-23.0)	862	11.4	(9.0-14.3)
<b>Region 5</b>	1,484	17.4	(14.8-20.3)	1,496	12.1	(10.2-14.4)
Branch-Hillsdale-St. Joseph	412	14.8	(10.5-20.5)	414	12.4	(8.9-17.2)
Calhoun	369	20.0	(14.7-26.7)	371	11.2	(7.9-15.6)
Kalamazoo	683	17.0	(13.4-21.2)	690	12.3	(9.5-15.7)
<b>Region 6</b>	727	18.9	(15.4-23.0)	732	15.0	(11.9-18.9)
Van Buren-Cass	301	16.4	(11.5-22.8)	302	15.1	(10.3-21.6)
Berrien	413	20.2	(15.6-25.9)	417	15.3	(11.3-20.4)

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Table 8 Cont'd						
Geographic Area	No Personal Health Care Provider <sup>a</sup>			No Health Care Access During Past 12 Months Due to Cost <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	<b>29,255</b>	<b>15.2</b>	<b>(14.6-15.8)</b>	<b>29,351</b>	<b>13.3</b>	<b>(12.8-13.9)</b>
<b>Region 7</b>	3,115	12.2	(10.6-14.0)	3,120	13.1	(11.5-14.8)
Allegan	321	14.7	(9.7-21.6)	321	12.7	(8.9-17.8)
Ionia	185	12.0	(6.8-20.4)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Kent	1,631	88.0	(79.6-93.2)	1,635	14.0	(11.9-16.5)
Mid-Michigan <sup>c</sup>	538	8.9	(5.9-13.4)	538	13.4	(9.6-18.4)
Ottawa	744	9.2	(6.7-12.6)	744	10.8	(8.1-14.3)
<b>Region 8</b>	1,880	15.5	(13.1-18.2)	1,883	14.0	(11.7-16.6)
District #10	1,033	17.0	(13.8-20.7)	1,035	15.0	(11.9-18.6)
Muskegon	802	10.8	(7.6-15.0)	803	13.2	(10.0-17.3)
<b>Region 9</b>	1,363	14.1	(11.8-16.8)	1,362	12.3	(10.2-14.7)
District #2	226	14.5	(9.6-21.4)	226	10.8	(6.7-17.1)
District #4	257	19.5	(14.0-26.5)	259	19.5	(14.3-26.0)
Northwest Michigan	389	11.6	(8.1-16.2)	388	12.9	(9.1-18.0)
Benzie-Leelanau	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	166	9.8	(5.6-16.4)
Grand Traverse	318	14.3	(9.5-20.9)	316	7.1	(4.4-11.2)
<b>Region 10</b>	1,477	14.2	(11.8-17.0)	1,486	12.0	(9.9-14.5)
Bay	308	9.7	(6.1-14.9)	312	8.2	(5.3-12.4)
Huron	115	13.6	(7.8-22.4)	115	11.5	(6.6-19.3)
Saginaw	709	16.5	(12.5-21.6)	714	13.0	(9.6-17.3)
Sanilac	135	16.0	(9.4-25.9)	136	18.4	(10.9-29.6)
Tuscola	186	11.3	(6.9-17.9)	185	9.6	(5.7-15.7)
<b>Region 11</b>	910	18.2	(14.9-22.0)	911	17.7	(14.5-21.4)
Central Michigan	570	18.1	(14.1-23.1)	572	19.6	(15.5-24.6)
Midland	283	15.2	(10.1-22.2)	282	12.2	(7.9-18.3)
<b>Region 12</b>	1,120	13.4	(11.0-16.2)	1,124	10.1	(8.0-12.7)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Western Upper Peninsula	232	18.2	(12.9-24.9)	234	13.9	(8.9-20.9)
Delta-Menominee	212	14.9	(9.3-22.8)	213	86.1	(79.1-91.1)
Chippewa	131	12.7	(7.4-21.1)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Dickinson-Iron	140	7.5	(4.2-13.3)	140	8.5	(4.7-14.7)
Marquette	231	8.6	(5.0-14.4)	231	8.3	(4.8-14.1)

<sup>a</sup> The proportion of adults who reported that they did not have anyone that they thought of as their personal doctor or health care provider.  
<sup>b</sup> 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.  
<sup>c</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>d</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 9: No Leisure Time Physical Activity Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>No Leisure Time Physical Activity<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>28,861</b>	<b>24.9</b>	<b>(24.3-25.6)</b>
<b>Region 1</b>	11,839	24.7	(23.7-25.7)
Livingston	482	19.0	(15.1-23.8)
Macomb	1,991	25.2	(22.9-27.6)
Monroe	350	32.0	(25.7-39.1)
Oakland	3,282	21.0	(19.2-22.9)
St. Clair	393	26.9	(22.0-32.3)
Washtenaw	969	16.2	(13.4-19.5)
City of Detroit	1,412	34.7	(31.5-38.0)
Wayne exc. Detroit	2,754	25.1	(23.1-27.2)
<b>Region 2</b>	1,737	30.2	(27.4-33.1)
Genesee	1,252	31.1	(27.8-34.6)
Lapeer	236	25.9	(19.9-33.0)
Shiawassee	236	31.7	(24.7-39.6)
<b>Region 3</b>	1,119	28.0	(24.0-32.3)
Jackson	811	28.8	(23.8-34.4)
Lenawee	288	27.6	(21.3-35.1)
<b>Region 4</b>	1,727	23.9	(21.4-26.6)
Barry-Eaton	522	25.6	(21.1-30.8)
Mid-Michigan <sup>b</sup>	530	22.1	(17.9-27.0)
Ingham	849	24.3	(20.7-28.2)
<b>Region 5</b>	1,464	26.0	(23.2-29.0)
Branch-Hillsdale-St. Joseph	408	34.1	(28.4-40.3)
Calhoun	364	26.9	(21.6-33.1)
Kalamazoo	672	20.8	(17.1-25.0)
<b>Region 6</b>	713	28.1	(24.0-32.6)
Van Buren-Cass	296	32.2	(25.8-39.4)
Berrien	404	25.9	(20.6-31.9)
<b>Region 7</b>	3,071	22.2	(20.3-24.2)
Allegan	315	20.9	(15.6-27.2)
Ionia	181	30.1	(22.6-38.9)
Kent	1,614	22.5	(19.9-25.5)
Mid-Michigan <sup>b</sup>	530	22.1	(17.9-27.0)
Ottawa	733	19.9	(16.6-23.7)

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<b>Table 9 Cont'd</b>			
<b>Geographic Area</b>	<b>No Leisure Time Physical Activity<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>28,861</b>	<b>24.9</b>	<b>(24.3-25.6)</b>
<b>Region 8</b>	1,863	23.9	(21.4-26.7)
District #10	1,020	23.9	(20.7-27.5)
Muskegon	800	25.4	(21.2-30.2)
<b>Region 9</b>	1,349	22.4	(19.7-25.4)
District #2	225	29.7	(22.7-37.8)
District #4	254	23.4	(17.7-30.3)
Northwest Michigan	384	22.6	(17.6-28.5)
Benzie-Leelanau	165	22.9	(16.2-31.4)
Grand Traverse	314	12.1	(8.3-17.2)
<b>Region 10</b>	1,467	27.5	(24.5-30.7)
Bay	306	34.3	(27.7-41.7)
Huron	115	20.8	(14.3-29.4)
Saginaw	709	22.4	(18.4-27.0)
Sanilac	133	28.8	(19.8-39.8)
Tuscola	182	34.7	(26.5-44.0)
<b>Region 11</b>	891	25.7	(22.3-29.5)
Central Michigan	559	29.3	(24.8-34.3)
Midland	277	22.8	(17.1-29.8)
<b>Region 12</b>	1,121	23.0	(19.8-26.6)
Luce-Mackinac-Alger-Schoolcraft	152	28.4	(19.9-38.9)
Western Upper Peninsula	234	18.4	(13.1-25.3)
Delta-Menominee	213	20.5	(14.8-27.6)
Chippewa	130	34.2	(22.6-48.1)
Dickinson-Iron	139	21.8	(14.1-32.3)
Marquette	231	24.6	(16.9-34.3)

<sup>a</sup> 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

**Table 10: Cigarette Smoking**  
**Michigan BRFSS, 2014-2016 Combined**

Geographic Area	Sample Size	Current Smoking <sup>a</sup>		Former Smoking <sup>b</sup>		Never Smoked	
		N	%	95% Confidence Interval	%	95% Confidence Interval	%
<b>Michigan Total</b>	<b>28,551</b>	<b>20.8</b>	<b>(20.1-21.4)</b>	<b>26.2</b>	<b>(25.6-26.9)</b>	<b>53.0</b>	<b>(52.2-53.7)</b>
<b>Region 1</b>	11,745	21.6	(20.6-22.7)	25.7	(24.8-26.6)	52.7	(51.5-53.8)
Livingston	476	18.9	(14.3-24.6)	30.3	(25.5-35.6)	50.8	(44.9-56.7)
Macomb	1,977	23.5	(21.1-26.2)	28.2	(25.9-30.7)	48.3	(45.5-51.0)
Monroe	346	22.2	(16.4-29.4)	29.7	(24.3-35.7)	48.1	(41.4-54.8)
Oakland	3,262	16.9	(15.2-18.8)	26.7	(24.9-28.5)	56.4	(54.3-58.6)
St. Clair	392	25.8	(20.1-32.6)	26.6	(21.7-32.1)	47.6	(41.4-53.9)
Washtenaw	972	11.8	(9.4-14.7)	21.4	(18.5-24.6)	66.8	(63.0-70.3)
City of Detroit	1,395	32.8	(29.6-36.3)	18.1	(15.9-20.6)	49.1	(45.7-52.4)
Wayne exc. Detroit	2,743	21.9	(19.9-24.1)	27.5	(25.5-29.5)	50.6	(48.3-53.0)
<b>Region 2</b>	1,726	23.5	(20.9-26.2)	28.4	(25.9-31.1)	48.1	(45.2-51.1)
Genesee	1,247	23.5	(20.5-26.8)	28.0	(25.1-31.1)	48.4	(45.0-51.9)
Lapeer	233	21.0	(15.3-28.0)	30.7	(23.8-38.5)	48.4	(40.7-56.1)
Shiawassee	234	25.6	(18.7-33.9)	28.2	(22.0-35.3)	46.3	(38.6-54.1)
<b>Region 3</b>	1,099	22.3	(18.6-26.6)	29.5	(25.7-33.6)	48.2	(43.7-52.7)
Jackson	795	26.0	(21.0-31.7)	28.3	(24.0-33.0)	45.7	(40.3-51.3)
Lenawee	284	17.1	(11.8-24.1)	31.7	(24.9-39.3)	51.2	(43.5-58.9)
<b>Region 4</b>	1,711	17.6	(15.3-20.1)	25.6	(23.2-28.2)	56.8	(53.8-59.8)
Barry-Eaton	518	18.6	(14.5-23.6)	28.4	(24.0-33.2)	53.0	(47.5-58.4)
Mid-Michigan <sup>c</sup>	524	17.2	(13.3-22.0)	29.4	(24.8-34.5)	53.4	(47.7-59.0)
Ingham	839	18.1	(15.0-21.7)	22.1	(18.9-25.7)	59.8	(55.5-63.9)
<b>Region 5</b>	1,470	17.3	(15.0-19.9)	27.9	(25.2-30.8)	54.8	(51.6-57.9)
Branch-Hillsdale-St. Joseph	402	21.9	(17.2-27.5)	31.3	(25.9-37.2)	46.7	(40.6-53.0)
Calhoun	370	20.6	(16.0-26.1)	27.8	(22.5-33.8)	51.6	(45.2-58.0)
Kalamazoo	677	12.4	(9.7-15.9)	26.3	(22.6-30.4)	61.2	(56.7-65.6)
<b>Region 6</b>	710	23.2	(19.3-27.7)	25.0	(21.5-28.8)	51.8	(47.3-56.3)
Van Buren-Cass	294	26.4	(20.1-33.9)	24.3	(19.2-30.2)	49.3	(42.2-56.4)
Berrien	403	21.2	(16.4-27.0)	26.1	(21.4-31.4)	52.7	(46.7-58.6)
<b>Region 7</b>	3,045	17.0	(15.2-18.9)	24.2	(22.4-26.0)	58.8	(56.6-61.0)
Allegan	309	20.0	(14.5-26.9)	28.9	(23.3-35.3)	51.1	(44.2-57.9)
Ionia	185	20.2	(13.5-29.2)	26.6	(20.0-34.5)	53.1	(44.4-61.7)
Kent	1,599	16.3	(13.9-19.0)	23.2	(20.8-25.8)	60.5	(57.4-63.5)
Mid-Michigan <sup>c</sup>	524	17.2	(13.3-22.0)	29.4	(24.8-34.5)	53.4	(47.7-59.0)
Ottawa	727	15.1	(11.8-19.2)	23.5	(20.1-27.2)	61.4	(56.9-65.8)



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Table 10 Cont'd							
Geographic Area	Sample Size	Current Smoking <sup>a</sup>		Former Smoking <sup>b</sup>		Never Smoked	
		N	%	95% Confidence Interval	%	95% Confidence Interval	%
<b>Michigan Total</b>	<b>28,551</b>	<b>20.8</b>	<b>(20.1-21.4)</b>	<b>26.2</b>	<b>(25.6-26.9)</b>	<b>53.0</b>	<b>(52.2-53.7)</b>
<b>Region 8</b>	1,849	23.3	(20.7-26.3)	27.4	(24.9-30.1)	49.2	(46.1-52.4)
District #10	1,017	25.0	(21.5-28.9)	28.5	(25.2-32.0)	46.5	(42.5-50.6)
Muskegon	787	21.5	(17.4-26.3)	27.0	(22.9-31.5)	51.5	(46.3-56.7)
<b>Region 9</b>	1,337	18.3	(15.8-21.2)	32.2	(29.0-35.5)	49.5	(46.1-52.9)
District #2	223	23.0	(16.4-31.1)	32.8	(25.0-41.7)	44.2	(36.0-52.9)
District #4	248	22.4	(16.9-29.1)	32.2	(25.6-39.6)	45.4	(38.1-52.8)
Northwest Michigan	384	16.4	(12.4-21.5)	33.4	(27.7-39.5)	50.2	(44.0-56.5)
Benzie-Leelanau	162	11.8	(6.9-19.5)	31.6	(24.0-40.3)	56.6	(47.4-65.3)
Grand Traverse	313	16.1	(11.1-22.6)	31.5	(25.5-38.2)	52.4	(45.4-59.3)
<b>Region 10</b>	1,458	22.4	(19.3-25.8)	27.5	(24.8-30.5)	50.1	(46.6-53.6)
Bay	307	23.4	(17.1-31.0)	27.8	(22.2-34.1)	48.9	(41.5-56.2)
Huron	112	17.0	(10.5-26.2)	29.8	(21.3-40.0)	53.2	(42.7-63.4)
Saginaw	702	20.7	(16.0-26.2)	27.9	(23.7-32.6)	51.4	(46.0-56.9)
Sanilac	132	26.5	(17.6-37.9)	25.6	(17.7-35.4)	47.9	(37.6-58.4)
Tuscola	181	26.7	(18.6-36.7)	26.4	(19.6-34.5)	46.9	(38.0-56.0)
<b>Region 11</b>	883	23.6	(20.0-27.6)	26.4	(23.1-30.0)	50.0	(45.9-54.2)
Central Michigan	554	29.4	(24.6-34.7)	27.7	(23.4-32.4)	42.9	(37.9-48.2)
Midland	274	12.9	(8.3-19.4)	28.0	(22.1-34.7)	59.2	(51.7-66.3)
<b>Region 12</b>	1,101	20.4	(17.5-23.7)	29.3	(26.1-32.8)	50.2	(46.4-54.1)
Luce-Mackinac-Alger-Schoolcraft	150	23.9	(15.5-35.0)	36.9	(29.4-45.0)	50.1	(42.0-58.2)
Western Upper Peninsula	229	13.0	(8.3-19.8)	32.2	(24.8-40.7)	43.9	(35.5-52.8)
Delta-Menominee	208	23.8	(17.1-32.2)	24.7	(16.8-34.7)	54.5	(42.7-65.8)
Chippewa	128	20.8	(13.4-30.8)	24.8	(17.4-34.2)	42.6	(32.9-53.0)
Dickinson-Iron	137	32.5	(22.8-44.1)	26.1	(19.1-34.4)	56.3	(47.4-64.9)
Marquette	228	17.6	(12.1-25.0)	36.9	(29.4-45.0)	50.1	(42.0-58.2)

<sup>a</sup> 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.

<sup>b</sup> 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.

<sup>c</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

**Table 11: Alcohol Consumption  
Michigan BRFSS, 2014-2016 Combined**

Geographic Area	Sample Size	Any Alcohol in Past Month <sup>a</sup>		Heavy Drinking <sup>b</sup>		Binge Drinking <sup>c</sup>	
		N	%	95% Confidence Interval	%	95% Confidence Interval	%
<b>Michigan Total</b>	<b>28,361</b>	<b>57.0</b>	<b>(56.3-57.8)</b>	<b>6.7</b>	<b>(6.4-7.1)</b>	<b>18.8</b>	<b>(18.2-19.5)</b>
<b>Region 1</b>	11,652	59.7	(58.6-60.8)	6.5	(5.9-7.1)	19.1	(18.1-20.0)
Livingston	474	69.5	(63.8-74.6)	10.3	(7.2-14.5)	24.2	(19.4-29.8)
Macomb	1,958	58.0	(55.2-60.7)	7.1	(5.8-8.8)	20.0	(17.7-22.4)
Monroe	343	60.4	(53.7-66.6)	7.6	(4.8-11.8)	25.9	(19.7-33.4)
Oakland	3,246	63.0	(60.9-65.1)	5.6	(4.7-6.7)	17.8	(16.1-19.6)
St. Clair	388	58.4	(52.1-64.4)	9.2	(5.5-15.2)	17.0	(12.2-23.2)
Washtenaw	955	66.2	(62.3-69.9)	5.8	(4.2-8.0)	20.2	(17.1-23.8)
City of Detroit	1,383	52.7	(49.3-56.0)	5.6	(4.1-7.6)	17.1	(14.6-20.0)
Wayne exc. Detroit	2,725	57.6	(55.2-59.9)	6.4	(5.3-7.7)	18.6	(16.6-20.6)
<b>Region 2</b>	1,711	51.6	(48.6-54.5)	4.3	(3.3-5.7)	16.8	(14.6-19.3)
Genesee	1,235	49.7	(46.2-53.2)	4.7	(3.4-6.5)	15.5	(13.0-18.3)
Lapeer	232	57.3	(49.6-64.7)	-- <sup>e</sup>	-- <sup>e</sup>	22.8	(16.1-31.1)
Shiawassee	232	53.3	(45.5-61.0)	-- <sup>e</sup>	-- <sup>e</sup>	16.7	(11.4-23.7)
<b>Region 3</b>	1,091	55.1	(50.6-59.5)	6.9	(4.8-9.8)	20.7	(17.1-24.8)
Jackson	787	55.0	(49.4-60.5)	6.4	(3.9-10.2)	22.2	(17.7-27.6)
Lenawee	284	55.1	(47.4-62.6)	8.0	(4.7-13.4)	18.8	(13.3-25.8)
<b>Region 4</b>	1,699	58.3	(55.3-61.3)	6.7	(5.2-8.4)	19.1	(16.7-21.8)
Barry-Eaton	510	58.2	(52.6-63.6)	5.3	(3.1-9.0)	15.2	(11.3-20.0)
Mid-Michigan <sup>d</sup>	525	53.0	(47.2-58.7)	6.0	(3.8-9.4)	16.7	(13.0-21.2)
Ingham	835	60.2	(55.8-64.4)	7.8	(5.8-10.5)	21.9	(18.3-25.8)
<b>Region 5</b>	1,460	52.4	(49.2-55.6)	6.2	(4.8-7.9)	16.7	(14.4-19.3)
Branch-Hillsdale-St. Joseph	403	43.4	(37.4-49.5)	4.1	(2.5-6.6)	13.4	(9.8-18.0)
Calhoun	365	48.2	(41.8-54.7)	6.4	(3.9-10.1)	13.2	(9.4-18.1)
Kalamazoo	671	59.8	(55.1-64.3)	6.9	(4.9-9.7)	19.8	(16.1-24.0)
<b>Region 6</b>	709	53.0	(48.4-57.5)	9.6	(7.1-13.0)	18.9	(15.4-23.0)
Van Buren-Cass	296	48.5	(41.4-55.6)	10.5	(6.5-16.4)	17.4	(12.4-24.0)
Berrien	400	55.1	(49.1-61.0)	8.8	(5.8-13.2)	19.8	(15.3-25.3)
<b>Region 7</b>	3,036	58.9	(56.7-61.2)	6.9	(5.8-8.2)	18.7	(16.9-20.7)
Allegan	306	56.6	(49.5-63.4)	7.2	(4.0-12.6)	17.7	(12.8-23.8)
Ionia	184	57.7	(49.0-65.9)	-- <sup>e</sup>	-- <sup>e</sup>	12.6	(7.9-19.7)
Kent	1,594	59.7	(56.5-62.8)	7.4	(5.9-9.2)	21.0	(18.3-23.9)
Mid-Michigan <sup>d</sup>	525	53.0	(47.2-58.7)	6.0	(3.8-9.4)	16.7	(13.0-21.2)
Ottawa	727	60.3	(55.8-64.7)	5.7	(3.7-8.6)	15.6	(12.4-19.4)

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Table 11 Cont'd							
Geographic Area	Sample Size	Any Alcohol in Past Month <sup>a</sup>		Heavy Drinking <sup>b</sup>		Binge Drinking <sup>c</sup>	
	N	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
<b>Michigan Total</b>	<b>28,361</b>	<b>57.0</b>	<b>(56.3-57.8)</b>	<b>6.7</b>	<b>(6.4-7.1)</b>	<b>18.8</b>	<b>(18.2-19.5)</b>
<b>Region 8</b>	1,833	51.9	(48.7-55.1)	8.2	(6.6-10.1)	17.7	(15.3-20.3)
District #10	1,007	50.1	(46.0-54.2)	8.8	(6.7-11.6)	16.7	(13.8-20.0)
Muskegon	781	53.6	(48.3-58.8)	7.6	(5.4-10.7)	18.4	(14.4-23.1)
<b>Region 9</b>	1,337	54.8	(51.3-58.1)	8.2	(6.6-10.1)	19.3	(16.6-22.2)
District #2	221	44.6	(36.1-53.4)	-- <sup>e</sup>	-- <sup>e</sup>	14.8	(9.5-22.2)
District #4	251	52.8	(45.5-59.9)	7.0	(4.2-11.3)	24.8	(18.7-32.1)
Northwest Michigan	383	54.7	(48.3-60.9)	8.8	(6.1-12.4)	16.8	(12.6-22.1)
Benzie-Leelanau	162	57.2	(47.4-66.5)	11.0	(6.6-17.8)	15.4	(9.8-23.2)
Grand Traverse	313	65.2	(58.4-71.5)	10.0	(6.6-14.8)	22.5	(16.8-29.6)
<b>Region 10</b>	1,450	53.6	(50.1-57.1)	7.5	(5.9-9.4)	21.8	(18.7-25.3)
Bay	308	53.0	(45.5-60.4)	8.4	(5.5-12.8)	20.8	(15.2-27.8)
Huron	113	54.0	(43.2-64.4)	-- <sup>e</sup>	-- <sup>e</sup>	18.2	(11.6-27.3)
Saginaw	696	55.6	(50.1-60.9)	6.4	(4.3-9.4)	21.1	(16.2-27.1)
Sanilac	132	47.8	(37.4-58.3)	-- <sup>e</sup>	-- <sup>e</sup>	27.0	(18.2-38.1)
Tuscola	177	53.3	(44.0-62.3)	-- <sup>e</sup>	-- <sup>e</sup>	26.2	(18.0-36.4)
<b>Region 11</b>	880	54.1	(49.9-58.3)	9.4	(7.0-12.3)	19.1	(15.9-22.8)
Central Michigan	554	51.0	(45.8-56.3)	10.5	(7.4-14.6)	19.4	(15.3-24.2)
Midland	273	55.7	(48.0-63.0)	8.7	(5.0-14.5)	14.9	(10.2-21.2)
<b>Region 12</b>	1,097	53.7	(49.8-57.6)	5.9	(4.4-7.9)	17.1	(14.4-20.2)
Luce-Mackinac-Alger-Schoolcraft	149	56.6	(45.8-66.9)	-- <sup>e</sup>	-- <sup>e</sup>	21.8	(13.4-33.5)
Western Upper Peninsula	228	47.2	(39.2-55.2)	-- <sup>e</sup>	-- <sup>e</sup>	10.3	(6.7-15.6)
Delta-Menominee	208	60.3	(51.2-68.8)	-- <sup>e</sup>	-- <sup>e</sup>	17.6	(11.8-25.4)
Chippewa	129	47.6	(36.1-59.4)	-- <sup>e</sup>	-- <sup>e</sup>	17.7	(11.1-26.9)
Dickinson-Iron	134	50.3	(39.8-60.8)	-- <sup>e</sup>	-- <sup>e</sup>	12.3	(7.2-20.2)
Marquette	228	59.1	(49.4-68.1)	9.0	(5.4-14.6)	23.3	(16.7-31.5)

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

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

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

<sup>d</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

<b>Table 12: Seatbelt Use Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Always Uses a Seatbelt<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>28,030</b>	<b>88.9</b>	<b>(88.4-89.4)</b>
<b>Region 1</b>	11,488	89.8	(89.0-90.6)
Livingston	473	90.4	(85.7-93.7)
Macomb	1,929	89.0	(86.9-90.9)
Monroe	338	88.4	(82.5-92.5)
Oakland	3,210	92.0	(90.6-93.1)
St. Clair	381	90.7	(86.0-93.9)
Washtenaw	952	88.3	(84.9-91.1)
City of Detroit	1,342	85.9	(83.2-88.2)
Wayne exc. Detroit	2,685	90.7	(89.0-92.2)
<b>Region 2</b>	1,688	87.8	(85.5-89.7)
Genesee	1,214	88.3	(85.6-90.5)
Lapeer	231	90.4	(84.5-94.2)
Shiawassee	231	83.0	(75.2-88.7)
<b>Region 3</b>	1,081	89.1	(85.5-91.8)
Jackson	780	87.8	(82.7-91.5)
Lenawee	282	91.5	(85.9-95.0)
<b>Region 4</b>	1,684	90.4	(88.2-92.2)
Barry-Eaton	512	90.0	(85.3-93.3)
Mid-Michigan <sup>b</sup>	519	86.5	(82.0-90.0)
Ingham	822	91.9	(88.9-94.1)
<b>Region 5</b>	1,432	88.8	(86.5-90.6)
Branch-Hillsdale-St. Joseph	394	88.3	(83.8-91.7)
Calhoun	361	88.9	(83.9-92.5)
Kalamazoo	656	88.7	(85.3-91.4)
<b>Region 6</b>	695	87.7	(84.1-90.5)
Van Buren-Cass	288	83.7	(76.8-88.8)
Berrien	394	90.4	(86.5-93.3)
<b>Region 7</b>	2,997	88.9	(87.2-90.3)
Allegan	306	91.5	(87.1-94.5)
Ionia	180	90.3	(83.7-94.4)
Kent	1,574	88.5	(86.1-90.6)
Mid-Michigan <sup>b</sup>	519	86.5	(82.0-90.0)
Ottawa	715	89.6	(86.1-92.2)

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<b>Table 12 Cont'd</b>			
<b>Geographic Area</b>	<b>Always Uses a Seatbelt<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>28,030</b>	<b>88.9</b>	<b>(88.4-89.4)</b>
<b>Region 8</b>	1,822	87.4	(85.0-89.4)
District #10	1,000	87.4	(84.4-89.9)
Muskegon	779	87.4	(83.0-90.7)
<b>Region 9</b>	1,325	88.0	(85.0-90.4)
District #2	218	84.5	(75.0-90.8)
District #4	251	84.9	(78.0-89.8)
Northwest Michigan	378	89.3	(83.4-93.3)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	310	90.4	(84.7-94.1)
<b>Region 10</b>	1,436	86.9	(83.7-89.5)
Bay	300	88.4	(81.4-93.0)
Huron	113	84.4	(75.6-90.4)
Saginaw	696	88.9	(83.3-92.7)
Sanilac	129	81.0	(70.1-88.5)
Tuscola	176	83.2	(73.0-90.1)
<b>Region 11</b>	877	88.6	(85.4-91.2)
Central Michigan	552	87.1	(82.6-90.5)
Midland	270	92.9	(87.5-96.0)
<b>Region 12</b>	1,094	86.5	(83.7-88.9)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	226	84.9	(78.0-90.0)
Delta-Menominee	195	86.4	(79.2-91.4)
Chippewa	31	78.5	(67.3-86.6)
Dickinson-Iron	207	83.5	(75.0-89.5)
Marquette	184	91.2	(85.5-94.8)

<sup>a</sup> The proportion of adults who reported always using a seatbelt when driving or riding in a car.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 13: No Routine Checkup in Past Year Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Had No Routine Checkup in Past Year<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,101</b>	<b>27.7</b>	<b>(27.0-28.4)</b>
<b>Region 1</b>	11,984	26.6	(25.6-27.7)
Livingston	478	23.9	(19.3-29.2)
Macomb	2,017	26.8	(24.3-29.4)
Monroe	354	26.3	(20.5-33.2)
Oakland	3,308	27.2	(25.2-29.2)
St. Clair	401	31.1	(25.4-37.4)
Washtenaw	979	27.9	(24.5-31.5)
City of Detroit	1,437	24.3	(21.4-27.5)
Wayne exc. Detroit	2,798	26.0	(23.9-28.2)
<b>Region 2</b>	1,765	27.6	(25.0-30.4)
Genesee	1,275	26.1	(23.1-29.3)
Lapeer	238	32.7	(25.9-40.4)
Shiawassee	239	28.5	(21.6-36.5)
<b>Region 3</b>	1,113	30.3	(26.2-34.7)
Jackson	809	25.9	(21.4-31.0)
Lenawee	283	37.3	(29.8-45.5)
<b>Region 4</b>	1,733	27.4	(24.8-30.3)
Barry-Eaton	523	28.7	(23.8-34.3)
Mid-Michigan <sup>b</sup>	534	27.3	(22.0-33.4)
Ingham	850	28.3	(24.6-32.4)
<b>Region 5</b>	1,478	28.9	(26.0-31.9)
Branch-Hillsdale-St. Joseph	408	29.4	(24.0-35.4)
Calhoun	366	32.4	(26.4-39.1)
Kalamazoo	683	26.3	(22.4-30.7)
<b>Region 6</b>	725	29.8	(25.6-34.3)
Van Buren-Cass	301	30.7	(24.4-37.8)
Berrien	412	28.4	(23.1-34.5)
<b>Region 7</b>	3,089	28.9	(26.7-31.1)
Allegan	318	32.3	(26.1-39.3)
Ionia	184	28.6	(21.2-37.3)
Kent	1,617	28.2	(25.3-31.3)
Mid-Michigan <sup>b</sup>	534	27.3	(22.0-33.4)
Ottawa	738	26.5	(22.5-30.8)

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<b>Table 13 Cont'd</b>			
<b>Geographic Area</b>	<b>Had No Routine Checkup in Past Year<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,101</b>	<b>27.7</b>	<b>(27.0-28.4)</b>
<b>Region 8</b>	1,869	29.4	(26.5-32.5)
District #10	1,027	32.2	(28.3-36.3)
Muskegon	797	24.2	(19.9-29.1)
<b>Region 9</b>	1,358	27.1	(24.1-30.2)
District #2	226	24.5	(18.1-32.3)
District #4	258	32.2	(25.7-39.5)
Northwest Michigan	383	26.7	(21.2-33.0)
Benzie-Leelanau	166	22.1	(14.8-31.7)
Grand Traverse	318	27.7	(21.6-34.7)
<b>Region 10</b>	1,470	26.2	(23.4-29.4)
Bay	308	21.4	(16.3-27.6)
Huron	115	33.2	(24.0-43.9)
Saginaw	705	23.2	(18.9-28.1)
Sanilac	136	34.7	(25.3-45.5)
Tuscola	182	31.7	(23.9-40.6)
<b>Region 11</b>	906	31.3	(27.4-35.4)
Central Michigan	567	30.5	(25.7-35.8)
Midland	283	29.3	(22.8-36.9)
<b>Region 12</b>	1,116	28.7	(25.4-32.4)
Luce-Mackinac-Alger-Schoolcraft	150	26.0	(17.4-37.0)
Western Upper Peninsula	234	34.6	(27.2-42.8)
Delta-Menominee	209	25.6	(19.0-33.6)
Chippewa	132	23.4	(15.3-34.0)
Dickinson-Iron	139	35.7	(26.1-46.6)
Marquette	231	22.2	(15.8-30.4)

<sup>a</sup> The proportion of adults who reported that they did not have a routine checkup in the past year.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 14: Breast Cancer Screening Among Women 40 Years and Older Michigan BRFSS, 2014 and 2016 Combined</b>			
<b>Geographic Area</b>	<b>Had Mammogram in Past Two Years<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>8,272</b>	<b>74.9</b>	<b>(73.8-76.1)</b>
<b>Region 1</b>	3,573	73.7	(71.7-75.5)
Livingston	147	70.2	(59.7-78.9)
Macomb	627	72.0	(67.3-76.3)
Monroe	107	75.8	(65.3-84.0)
Oakland	979	73.9	(70.2-77.3)
St. Clair	137	77.1	(68.1-84.2)
Washtenaw	295	82.5	(76.2-87.3)
City of Detroit	440	73.4	(67.3-78.8)
Wayne exc. Detroit	803	71.9	(67.8-75.6)
<b>Region 2</b>	528	77.5	(72.7-81.7)
Genesee	375	79.8	(74.4-84.4)
Lapeer	81	72.5	(59.2-82.8)
Shiawassee	70	74.8	(59.1-85.9)
<b>Region 3</b>	371	78.2	(71.6-83.5)
Jackson	285	81.9	(75.0-87.2)
Lenawee	81	73.3	(59.7-83.5)
<b>Region 4</b>	512	79.5	(75.0-83.4)
Barry-Eaton	165	82.1	(74.1-88.1)
Mid-Michigan <sup>b</sup>	170	73.1	(64.2-80.4)
Ingham	237	78.4	(71.7-83.9)
<b>Region 5</b>	432	77.8	(72.9-82.0)
Branch-Hillsdale-St. Joseph	126	81.1	(72.2-87.7)
Calhoun	119	79.9	(70.4-86.9)
Kalamazoo	184	74.6	(66.5-81.3)
<b>Region 6</b>	221	68.4	(60.7-75.2)
Van Buren-Cass	93	67.5	(55.9-77.3)
Berrien	128	69.0	(58.6-77.8)
<b>Region 7</b>	852	77.1	(73.6-80.4)
Allegan	83	69.8	(57.6-79.7)
Ionia	59	79.0	(65.8-88.1)
Kent	450	78.6	(73.6-82.9)
Mid-Michigan <sup>b</sup>	170	73.1	(64.2-80.4)
Ottawa	196	80.9	(74.0-86.3)



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<b>Table 14 Cont'd</b>			
<b>Geographic Area</b>	<b>Mammogram in the Past Two Years<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>8,272</b>	<b>74.9</b>	<b>(73.8-76.1)</b>
<b>Region 8</b>	629	74.6	(69.6-79.0)
District #10	337	72.8	(66.4-78.4)
Muskegon	291	79.4	(71.7-85.4)
<b>Region 9</b>	420	75.3	(70.1-80.0)
District #2	76	74.6	(62.6-83.8)
District #4	69	76.2	(63.3-85.6)
Northwest Michigan	114	70.1	(58.6-79.5)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	109	78.8	(69.1-86.0)
<b>Region 10</b>	483	77.1	(71.9-81.5)
Bay	97	78.2	(67.2-86.3)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	254	81.2	(73.6-86.9)
Sanilac	40	55.6	(37.6-72.2)
Tuscola	57	74.1	(58.8-85.2)
<b>Region 11</b>	265	70.7	(63.8-76.8)
Central Michigan	183	67.0	(58.3-74.7)
Midland	77	78.0	(65.6-86.9)
<b>Region 12</b>	353	74.9	(68.7-80.2)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	57	64.3	(47.3-78.4)
Delta-Menominee	72	75.3	(62.9-84.5)
Chippewa	39	69.9	(49.8-84.4)
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	82	77.9	(65.1-86.9)

<sup>a</sup> Among women aged 40 years and older, the proportion who reported having a mammogram in the past two years.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 15: Cervical Cancer Screening Among Women 18 Years and Older Michigan BRFSS, 2014 and 2016 Combined</b>			
<b>Geographic Area</b>	<b>Had Appropriately Timed Pap Test<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>7,598</b>	<b>73.7</b>	<b>(72.3-75.1)</b>
<b>Region 1</b>	3,227	73.7	(71.6-75.7)
Livingston	153	68.2	(55.3-78.8)
Macomb	533	69.7	(64.5-74.4)
Monroe	88	69.9	(57.3-80.0)
Oakland	904	78.3	(74.7-81.6)
St. Clair	106	72.5	(60.5-81.9)
Washtenaw	283	74.9	(67.4-81.2)
City of Detroit	401	75.0	(69.1-80.1)
Wayne exc. Detroit	705	72.1	(67.5-76.2)
<b>Region 2</b>	441	77.3	(72.2-81.8)
Genesee	319	77.8	(71.7-82.9)
Lapeer	62	70.8	(55.5-82.6)
Shiawassee	--c	--c	--c
<b>Region 3</b>	289	78.6	(69.8-85.4)
Jackson	222	75.7	(64.0-84.6)
Lenawee	--c	--c	--c
<b>Region 4</b>	481	73.9	(68.4-78.8)
Barry-Eaton	127	76.0	(65.1-84.3)
Mid-Michigan <sup>b</sup>	138	75.3	(63.8-84.1)
Ingham	257	70.4	(62.2-77.4)
<b>Region 5</b>	369	74.8	(68.8-79.9)
Branch-Hillsdale-St. Joseph	97	69.2	(57.2-79.1)
Calhoun	93	75.7	(62.7-85.2)
Kalamazoo	174	76.4	(67.4-83.5)
<b>Region 6</b>	156	67.3	(58.3-75.1)
Van Buren-Cass	67	65.7	(51.5-77.6)
Berrien	97	68.4	(56.5-78.4)
<b>Region 7</b>	760	76.8	(72.5-80.7)
Allegan	81	78.0	(63.0-88.0)
Ionia	--c	--c	--c
Kent	386	77.6	(71.9-82.4)
Mid-Michigan <sup>b</sup>	138	75.3	(63.8-84.1)
Ottawa	191	76.9	(66.7-84.7)

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<b>Table 15 Cont'd</b>			
<b>Geographic Area</b>	<b>Had Appropriately Timed Pap Test<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>7,598</b>	<b>73.7</b>	<b>(72.3-75.1)</b>
<b>Region 8</b>	505	72.1	(65.4-77.9)
District #10	261	70.2	(61.1-77.8)
Muskegon	243	75.8	(65.9-83.5)
<b>Region 9</b>	347	70.4	(63.4-76.5)
District #2	59	65.2	(46.3-80.3)
District #4	54	70.6	(55.1-82.4)
Northwest Michigan	97	66.8	(54.5-77.2)
Benzie-Leelanau	--c	--c	--c
Grand Traverse	100	74.5	(60.8-84.7)
<b>Region 10</b>	390	75.5	(67.8-81.8)
Bay	81	68.1	(50.4-81.8)
Huron	--c	--c	--c
Saginaw	204	78.5	(65.5-87.5)
Sanilac	--c	--c	--c
Tuscola	--c	--c	--c
<b>Region 11</b>	222	75.4	(66.9-82.3)
Central Michigan	139	72.9	(63.0-81.0)
Midland	--c	--c	--c
<b>Region 12</b>	291	66.9	(58.9-74.0)
Luce-Mackinac-Alger-Schoolcraft	--c	--c	--c
Western Upper Peninsula	56	62.6	(43.6-78.4)
Delta-Menominee	56	62.4	(42.2-79.1)
Chippewa	--c	--c	--c
Dickinson-Iron	--c	--c	--c
Marquette	61	30.0	(16.5-48.1)

<sup>a</sup> Among women aged 18 years and older, the proportion who reported having a Pap test within the previous three years.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 16: Prostate Cancer Screening Among Men 50 Years and Older Michigan BRFSS, 2014 and 2016 Combined</b>			
<b>Geographic Area</b>	<b>Had PSA Test in Past Year<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>5,107</b>	<b>43.4</b>	<b>(41.8-45.1)</b>
<b>Region 1</b>	2,022	44.6	(42.0-47.2)
Livingston	90	35.5	(25.5-47.1)
Macomb	338	51.2	(44.8-57.5)
Monroe	65	55.6	(41.5-68.9)
Oakland	586	48.4	(43.6-53.3)
St. Clair	61	35.5	(23.5-49.5)
Washtenaw	172	35.3	(27.4-44.1)
City of Detroit	191	34.2	(26.8-42.5)
Wayne exc. Detroit	493	43.9	(38.8-49.2)
<b>Region 2</b>	305	44.5	(38.1-51.1)
Genesee	232	47.2	(39.8-54.8)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	238	42.9	(33.5-52.9)
Jackson	188	43.5	(32.2-55.5)
Lenawee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 4</b>	267	38.6	(32.1-45.6)
Barry-Eaton	92	38.6	(27.9-50.6)
Mid-Michigan <sup>b</sup>	90	39.9	(29.3-51.6)
Ingham	107	36.3	(26.4-47.5)
<b>Region 5</b>	250	38.6	(31.7-46.0)
Branch-Hillsdale-St. Joseph	78	42.5	(29.7-56.5)
Calhoun	60	28.8	(17.3-43.7)
Kalamazoo	109	40.9	(31.1-51.5)
<b>Region 6</b>	128	41.8	(31.4-52.9)
Van Buren-Cass	62	39.4	(24.8-56.1)
Berrien	66	44.4	(30.7-58.9)
<b>Region 7</b>	487	45.6	(40.3-50.9)
Allegan	51	49.2	(34.0-64.6)
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	254	46.9	(39.7-54.3)
Mid-Michigan <sup>b</sup>	90	39.9	(29.3-51.6)
Ottawa	121	44.9	(34.0-56.2)

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<b>Table 16 Cont'd</b>			
<b>Geographic Area</b>	<b>Had PSA Test in Past Year<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>5,107</b>	<b>43.4</b>	<b>(41.8-45.1)</b>
<b>Region 8</b>	397	38.2	(32.6-44.1)
District #10	222	38.0	(31.0-45.6)
Muskegon	174	38.0	(29.2-47.5)
<b>Region 9</b>	280	45.3	(38.3-52.5)
District #2	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
District #4	51	39.5	(24.8-56.4)
Northwest Michigan	87	49.9	(37.7-62.1)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	52	54.8	(38.5-70.2)
<b>Region 10</b>	291	49.8	(42.8-56.8)
Bay	58	59.8	(45.0-73.0)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	147	46.0	(35.9-56.5)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	173	33.3	(26.1-41.4)
Central Michigan	106	35.8	(26.5-46.3)
Midland	64	28.1	(17.9-41.3)
<b>Region 12</b>	220	41.6	(34.0-49.6)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	54	36.0	(22.4-52.2)
Delta-Menominee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>

<sup>a</sup> Among men aged 50 years and older, the proportion who reported having a Prostate-Specific Antigen (PSA) test within the past year.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

<b>Table 17: Colorectal Cancer Screening Among Adults 50 Years and Older Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Appropriate Colorectal Cancer Screening<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>17,511</b>	<b>71.0</b>	<b>(70.2-71.9)</b>
<b>Region 1</b>	7,176	70.9	(69.5-72.2)
Livingston	319	74.3	(67.8-79.9)
Macomb	904	73.3	(70.2-76.1)
Monroe	163	73.3	(65.5-79.9)
Oakland	2,046	70.4	(67.7-72.9)
St. Clair	241	74.1	(67.3-79.9)
Washtenaw	577	76.7	(72.2-80.6)
City of Detroit	780	65.6	(61.2-69.8)
Wayne exc. Detroit	1,699	69.5	(66.7-72.2)
<b>Region 2</b>	1,052	71.8	(68.4-74.9)
Genesee	768	70.7	(66.7-74.5)
Lapeer	141	72.3	(63.6-79.7)
Shiawassee	140	76.0	(67.2-83.0)
<b>Region 3</b>	702	70.1	(65.0-74.8)
Jackson	517	71.2	(64.7-76.8)
Lenawee	177	68.0	(59.0-75.9)
<b>Region 4</b>	1,013	73.0	(69.3-76.3)
Barry-Eaton	353	73.2	(67.1-78.5)
Mid-Michigan <sup>b</sup>	327	72.5	(66.4-77.9)
Ingham	436	72.7	(66.6-78.0)
<b>Region 5</b>	904	72.3	(68.6-75.7)
Branch-Hillsdale-St. Joseph	264	65.7	(58.3-72.4)
Calhoun	237	74.3	(67.5-80.2)
Kalamazoo	398	75.8	(70.3-80.6)
<b>Region 6</b>	461	62.0	(56.3-67.4)
Van Buren-Cass	199	66.4	(57.2-74.4)
Berrien	262	58.6	(51.3-65.5)
<b>Region 7</b>	1,756	74.8	(72.2-77.2)
Allegan	169	65.0	(56.0-73.0)
Ionia	108	73.9	(63.2-82.3)
Kent	947	74.1	(70.6-77.3)
Mid-Michigan <sup>b</sup>	327	72.5	(66.4-77.9)
Ottawa	417	82.2	(77.0-86.3)

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<b>Table 17 Cont'd</b>			
<b>Geographic Area</b>	<b>Appropriate Colorectal Cancer Screening<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>17,511</b>	<b>71.0</b>	<b>(70.2-71.9)</b>
<b>Region 8</b>	1,170	70.8	(67.2-74.2)
District #10	674	70.0	(65.5-74.1)
Muskegon	494	72.7	(66.6-78.1)
<b>Region 9</b>	931	67.2	(63.3-71.0)
District #2	160	61.7	(52.0-70.6)
District #4	160	65.7	(56.2-74.0)
Northwest Michigan	275	66.8	(59.1-73.7)
Benzie-Leelanau	125	74.9	(64.3-83.2)
Grand Traverse	209	71.7	(63.5-78.7)
<b>Region 10</b>	941	72.9	(69.2-76.4)
Bay	193	68.8	(60.3-76.2)
Huron	78	71.2	(58.7-81.1)
Saginaw	467	77.8	(72.0-82.6)
Sanilac	78	74.2	(62.4-83.3)
Tuscola	124	66.0	(55.6-75.0)
<b>Region 11</b>	560	68.5	(63.4-73.2)
Central Michigan	374	67.8	(61.5-73.5)
Midland	180	70.6	(61.3-78.4)
<b>Region 12</b>	695	72.2	(67.9-76.2)
Luce-Mackinac-Alger-Schoolcraft	111	67.9	(56.0-77.8)
Western Upper Peninsula	144	68.4	(58.2-77.0)
Delta-Menominee	127	74.9	(65.2-82.6)
Chippewa	83	67.7	(53.8-79.1)
Dickinson-Iron	86	71.9	(58.8-82.1)
Marquette	142	82.3	(74.1-88.3)

<sup>a</sup> Among adults aged 50 years and older, the proportion who had either a fecal occult blood test within the past year, a sigmoidoscopy within the past five years, or a colonoscopy within the past ten years.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 18: Health Care Access Michigan BRFSS, 2014 and 2016 Combined</b>						
<b>Geographic Area</b>	<b>No Dental Visit in Past Year<sup>a</sup></b>			<b>6+ Teeth Missing<sup>b</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>20,300</b>	<b>30.7</b>	<b>(29.8-31.5)</b>	<b>20,032</b>	<b>15.7</b>	<b>(15.1-16.4)</b>
<b>Region 1</b>	8,228	29.4	(28.2-30.7)	8,116	15.0	(14.0-15.9)
Livingston	328	17.0	(12.6-22.7)	322	10.9	(7.6-15.6)
Macomb	1,379	27.7	(24.9-30.8)	1,358	14.4	(12.3-16.8)
Monroe	243	26.3	(19.9-33.9)	239	16.9	(11.9-23.4)
Oakland	2,270	23.6	(21.4-26.0)	2,233	12.5	(10.9-14.4)
St. Clair	274	33.5	(26.7-41.1)	271	16.5	(11.7-22.7)
Washtenaw	669	19.6	(15.9-23.9)	662	9.2	(6.9-12.2)
City of Detroit	980	49.6	(45.6-53.6)	975	25.0	(22.0-28.3)
Wayne exc. Detroit	1,897	29.6	(27.0-32.3)	1,872	10.9	(7.6-15.6)
<b>Region 2</b>	1,214	30.8	(27.5-34.2)	1,192	18.2	(15.7-21.0)
Genesee	885	32.4	(28.6-36.5)	870	17.7	(14.9-21.0)
Lapeer	160	26.0	(17.7-36.3)	156	16.6	(11.0-24.3)
Shiawassee	162	27.5	(20.0-36.6)	159	22.7	(15.5-32.1)
<b>Region 3</b>	882	38.7	(33.4-44.3)	870	14.4	(11.6-17.7)
Jackson	680	36.9	(30.7-43.6)	670	13.9	(10.8-17.7)
Lenawee	184	43.5	(33.9-53.7)	182	14.9	(9.9-21.7)
<b>Region 4</b>	1,193	24.5	(21.4-28.0)	1,178	14.4	(12.2-16.8)
Barry-Eaton	359	26.6	(20.9-33.1)	357	18.4	(14.2-23.4)
Mid-Michigan <sup>c</sup>	364	24.6	(19.0-31.2)	356	15.1	(11.3-19.7)
Ingham	583	24.9	(20.5-29.8)	576	11.8	(9.1-15.3)
<b>Region 5</b>	992	33.3	(29.7-37.1)	980	17.1	(14.5-20.0)
Branch-Hillsdale-St. Joseph	278	39.4	(32.1-47.2)	273	22.9	(17.2-29.8)
Calhoun	251	32.8	(25.8-40.7)	247	22.3	(17.0-28.8)
Kalamazoo	449	29.3	(24.3-34.8)	446	11.1	(8.3-14.8)
<b>Region 6</b>	475	30.4	(25.4-36.0)	467	22.7	(18.2-27.8)
Van Buren-Cass	208	28.7	(21.5-37.3)	206	22.2	(15.6-30.5)
Berrien	265	31.9	(25.3-39.3)	259	23.2	(17.6-30.0)



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Geographic Area	No Dental Visit in Past Year <sup>a</sup>			6+ Teeth Missing <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	<b>20,300</b>	<b>30.7</b>	<b>(29.8-31.5)</b>	<b>20,032</b>	<b>15.7</b>	<b>(15.1-16.4)</b>
<b>Region 7</b>	2,080	28.0	(25.5-30.7)	2,058	11.1	(9.6-12.8)
Allegan	217	38.5	(30.5-47.2)	214	11.3	(7.5-16.7)
Ionia	125	27.7	(19.2-38.2)	125	16.3	(10.6-24.1)
Kent	1,078	27.9	(24.4-31.6)	1,064	10.3	(8.3-12.7)
Mid-Michigan <sup>c</sup>	364	24.6	(19.0-31.2)	356	15.1	(11.3-19.7)
Ottawa	517	22.4	(18.1-27.4)	515	10.7	(7.6-14.9)
<b>Region 8</b>	1,410	36.4	(32.9-40.1)	1,394	22.6	(19.9-25.6)
District #10	738	36.9	(32.5-41.7)	731	24.4	(20.9-28.4)
Muskegon	665	35.2	(29.8-40.9)	656	19.5	(15.5-24.2)
<b>Region 9</b>	948	30.8	(27.1-34.8)	937	20.4	(17.4-23.8)
District #2	160	35.8	(26.6-46.3)	155	30.4	(21.9-40.6)
District #4	172	39.5	(31.0-48.7)	171	20.9	(14.8-28.7)
Northwest Michigan	269	26.1	(20.0-33.3)	271	20.3	(15.0-26.8)
Benzie-Leelanau	116	32.5	(22.2-44.8)	113	21.4	(13.7-31.9)
Grand Traverse	229	21.1	(14.8-29.0)	225	8.1	(5.1-12.5)
<b>Region 10</b>	1,076	33.9	(29.9-38.2)	1,062	15.4	(12.9-18.4)
Bay	220	32.9	(25.3-41.5)	216	11.4	(7.4-17.2)
Huron	78	40.4	(28.9-53.1)	78	20.6	(13.0-31.1)
Saginaw	547	32.4	(26.1-39.4)	542	16.5	(12.5-21.5)
Sanilac	90	36.9	(25.1-50.5)	88	20.2	(11.6-32.8)
Tuscola	133	35.6	(25.5-47.2)	130	13.2	(8.3-20.4)
<b>Region 11</b>	594	37.0	(32.0-42.2)	589	21.3	(17.6-25.6)
Central Michigan	382	38.2	(32.1-44.8)	378	25.9	(20.9-31.6)
Midland	185	34.1	(25.7-43.6)	183	15.5	(10.3-22.8)
<b>Region 12</b>	811	31.1	(27.2-35.5)	796	18.3	(15.5-21.6)
Luce-Mackinac-Alger-Schoolcraft	93	35.4	(22.8-50.3)	92	29.1	(18.6-42.6)
Western Upper Peninsula	168	31.9	(23.8-41.2)	166	14.9	(10.3-21.0)
Delta-Menominee	160	32.5	(23.7-42.8)	158	16.5	(10.8-24.4)
Chippewa	87	35.9	(25.2-48.4)	87	19.0	(11.6-29.6)
Dickinson-Iron	105	32.6	(21.6-45.8)	101	17.5	(10.8-27.1)
Marquette	176	23.8	(16.6-33.0)	170	21.9	(15.1-30.5)

<sup>a</sup> The proportion of adults who reported that they had not visited a dentist or dental clinic for any reason in the past year

<sup>b</sup> The proportion of adults 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.

<sup>c</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

**Table 19: Immunizations Among Adults Aged 65 Years and Older  
Michigan BRFSS, 2014-2016 Combined**

Geographic Area	Had Flu Vaccine in Past Year <sup>a</sup>			Ever Had Pneumonia Vaccine <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	<b>9,292</b>	<b>57.1</b>	<b>(55.9-58.4)</b>	<b>9,045</b>	<b>71.3</b>	<b>(70.1-72.5)</b>
<b>Region 1</b>	3,755	56.4	(54.5-58.4)	3,635	69.3	(67.3-71.1)
Livingston	140	59.3	(49.8-68.2)	138	76.1	(67.4-83.1)
Macomb	673	54.8	(50.3-59.2)	657	73.3	(68.9-77.2)
Monroe	113	61.2	(50.3-71.0)	112	65.1	(54.1-74.6)
Oakland	1,082	57.8	(54.1-61.3)	1,045	70.1	(66.6-73.5)
St. Clair	135	47.2	(37.8-56.7)	128	74.7	(65.3-82.2)
Washtenaw	292	61.3	(53.5-68.5)	283	76.9	(69.4-83.1)
City of Detroit	384	43.9	(37.5-50.5)	361	53.0	(46.4-59.6)
Wayne exc. Detroit	906	61.8	(57.9-65.7)	882	69.8	(65.9-73.5)
<b>Region 2</b>	536	55.1	(50.1-60.0)	523	69.7	(65.0-74.1)
Genesee	400	54.0	(48.3-59.6)	389	69.5	(64.0-74.5)
Lapeer	67	52.0	(38.8-65.0)	67	59.5	(45.9-71.8)
Shiawassee	67	62.8	(48.5-75.1)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
<b>Region 3</b>	394	56.5	(49.3-63.4)	384	79.5	(73.5-84.4)
Jackson	295	56.0	(46.9-64.8)	287	77.2	(69.3-83.5)
Lenawee	93	54.6	(42.8-65.9)	91	83.1	(72.4-90.2)
<b>Region 4</b>	578	57.7	(52.7-62.5)	562	69.1	(64.2-73.7)
Barry-Eaton	199	61.5	(53.1-69.2)	195	74.3	(66.1-81.0)
Mid-Michigan <sup>c</sup>	197	56.8	(48.4-64.9)	192	70.6	(62.5-77.7)
Ingham	239	55.6	(47.9-63.1)	231	65.2	(57.1-72.5)
<b>Region 5</b>	464	59.3	(53.8-64.5)	457	78.0	(73.1-82.1)
Branch-Hillsdale-St. Joseph	142	55.6	(45.6-65.1)	139	72.0	(62.1-80.1)
Calhoun	123	65.3	(54.8-74.5)	122	85.3	(76.2-91.2)
Kalamazoo	195	57.1	(48.8-65.0)	192	77.2	(69.7-83.3)
<b>Region 6</b>	243	53.4	(45.7-61.0)	238	69.5	(61.4-76.5)
Van Buren-Cass	106	54.1	(42.3-65.5)	103	69.7	(57.3-79.7)
Berrien	136	52.7	(42.6-62.5)	134	69.2	(58.1-78.4)

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Table 19 Cont'd						
Geographic Area	Had Flu Vaccine in Past Year <sup>a</sup>			Ever Had Pneumonia Vaccine <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	<b>9,292</b>	<b>57.1</b>	<b>(55.9-58.4)</b>	<b>9,045</b>	<b>71.3</b>	<b>(70.1-72.5)</b>
<b>Region 7</b>	883	60.8	(56.9-64.5)	857	79.8	(76.5-82.8)
Allegan	86	72.4	(60.5-81.9)	85	84.8	(73.7-91.7)
Ionia	56	60.4	(44.8-74.2)	53	85.5	(74.4-92.3)
Kent	452	61.3	(55.8-66.5)	437	79.7	(74.8-83.9)
Mid-Michigan <sup>c</sup>	197	56.8	(48.4-64.9)	192	70.6	(62.5-77.7)
Ottawa	222	56.4	(48.7-63.8)	216	78.3	(71.3-84.0)
<b>Region 8</b>	641	58.4	(53.5-63.2)	632	72.5	(67.7-76.8)
District #10	369	58.3	(52.2-64.3)	364	69.7	(63.5-75.2)
Muskegon	267	57.3	(49.1-65.2)	263	78.6	(71.3-84.5)
<b>Region 9</b>	490	57.7	(52.1-63.1)	477	74.5	(69.0-79.3)
District #2	81	40.5	(28.8-53.4)	78	74.6	(62.5-83.9)
District #4	82	62.1	(48.4-74.1)	80	70.7	(56.5-81.7)
Northwest Michigan	150	63.1	(53.6-71.7)	146	74.2	(64.9-81.7)
Benzie-Leelanau	70	61.3	(44.1-76.2)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Grand Traverse	107	61.6	(49.1-72.7)	104	78.2	(66.4-86.7)
<b>Region 10</b>	512	54.6	(49.0-60.0)	501	66.0	(60.5-71.1)
Bay	115	52.8	(41.9-63.5)	114	69.2	(58.2-78.3)
Huron	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Saginaw	252	54.0	(45.5-62.2)	245	63.6	(54.7-71.7)
Sanilac	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Tuscola	53	60.6	(45.2-74.1)	50	69.1	(53.3-81.5)
<b>Region 11</b>	322	52.2	(45.6-58.7)	318	70.5	(64.3-76.1)
Central Michigan	220	49.8	(41.8-57.8)	217	69.7	(62.1-76.3)
Midland	98	59.9	(48.2-70.6)	98	76.1	(65.0-84.6)
<b>Region 12</b>	376	62.7	(56.8-68.2)	367	70.7	(64.9-75.9)
Luce-Mackinac-Alger-Schoolcraft	59	47.6	(33.1-62.5)	57	51.1	(35.9-66.1)
Western Upper Peninsula	86	60.7	(48.4-71.9)	84	73.1	(61.2-82.4)
Delta-Menominee	64	72.2	(58.4-82.7)	61	67.4	(52.4-79.5)
Chippewa	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Dickinson-Iron	53	52.2	(36.4-67.6)	52	69.6	(52.6-82.6)
Marquette	74	78.5	(67.3-86.7)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>

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

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

<sup>c</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

<b>Table 20: HIV Testing Among Adults Aged 18-64 Years Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Had an HIV Test<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>17,737</b>	<b>41.0</b>	<b>(40.1-41.9)</b>
<b>Region 1</b>	7,304	45.1	(43.7-46.5)
Livingston	317	33.0	(26.9-39.7)
Macomb	1,190	39.9	(36.6-43.3)
Monroe	215	34.1	(26.2-43.1)
Oakland	2,000	43.8	(41.1-46.5)
St. Clair	234	35.6	(28.6-43.3)
Washtenaw	633	44.1	(39.4-48.8)
City of Detroit	907	68.3	(64.5-71.8)
Wayne exc. Detroit	1,668	42.1	(39.2-45.0)
<b>Region 2</b>	1,096	42.6	(39.1-46.3)
Genesee	773	43.5	(39.2-47.8)
Lapeer	160	34.8	(26.3-44.4)
Shiawassee	153	47.0	(37.4-56.7)
<b>Region 3</b>	653	37.8	(32.7-43.2)
Jackson	456	37.0	(30.6-43.8)
Lenawee	184	39.9	(31.4-49.2)
<b>Region 4</b>	1,048	38.3	(34.7-41.9)
Barry-Eaton	293	39.0	(32.3-46.0)
Mid-Michigan <sup>b</sup>	308	28.5	(22.8-35.1)
Ingham	557	39.6	(34.7-44.7)
<b>Region 5</b>	923	40.6	(36.8-44.6)
Branch-Hillsdale-St. Joseph	243	31.6	(25.1-38.8)
Calhoun	226	50.7	(42.6-58.8)
Kalamazoo	437	40.8	(35.5-46.5)
<b>Region 6</b>	440	32.1	(27.2-37.4)
Van Buren-Cass	178	27.3	(20.2-35.7)
Berrien	250	35.3	(28.7-42.5)
<b>Region 7</b>	2,019	36.9	(34.3-39.5)
Allegan	209	37.5	(30.0-45.6)
Ionia	113	37.5	(27.5-48.7)
Kent	1,075	39.1	(35.5-42.8)
Mid-Michigan <sup>b</sup>	308	28.5	(22.8-35.1)
Ottawa	470	33.1	(28.1-38.4)

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<b>Table 20 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Had an HIV Test<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>17,737</b>	<b>41.0</b>	<b>(40.1-41.9)</b>
<b>Region 8</b>	1,125	40.4	(36.5-44.4)
District #10	600	36.7	(31.8-42.0)
Muskegon	488	45.9	(39.6-52.4)
<b>Region 9</b>	790	35.5	(31.4-39.8)
District #2	133	32.2	(22.4-43.8)
District #4	158	30.0	(22.6-38.7)
Northwest Michigan	214	36.2	(28.9-44.2)
Benzie-Leelanau	86	39.8	(28.4-52.5)
Grand Traverse	192	40.3	(32.1-49.0)
<b>Region 10</b>	888	32.9	(28.9-37.2)
Bay	180	32.0	(24.0-41.1)
Huron	69	26.9	(17.1-39.8)
Saginaw	424	37.5	(31.0-44.4)
Sanilac	79	29.0	(17.9-43.4)
Tuscola	116	26.3	(17.4-37.6)
<b>Region 11</b>	511	37.1	(32.1-42.4)
Central Michigan	300	36.6	(30.2-43.4)
Midland	163	29.1	(21.5-38.0)
<b>Region 12</b>	688	33.9	(29.6-38.5)
Luce-Mackinac-Alger-Schoolcraft	83	33.5	(22.0-47.2)
Western Upper Peninsula	134	28.0	(19.9-37.8)
Delta-Menominee	137	35.7	(26.2-46.6)
Chippewa	85	41.0	(27.8-55.6)
Dickinson-Iron	81	33.0	(21.9-46.5)
Marquette	148	36.2	(26.5-47.2)

Note: "Don't know" was considered a valid response.

<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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 21: Asthma Michigan BRFSS, 2014-2016 Combined</b>						
<b>Geographic Area</b>	<b>Ever Told Have Asthma<sup>a</sup></b>			<b>Still Have Asthma<sup>b</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,316</b>	<b>15.8</b>	<b>(15.2-16.3)</b>	<b>29,179</b>	<b>10.7</b>	<b>(10.2-11.2)</b>
<b>Region 1</b>	12,054	16.1	(15.3-17.0)	12,001	10.7	(10.0-11.5)
Livingston	483	11.1	(8.1-15.2)	483	7.3	(4.8-10.9)
Macomb	2,029	15.4	(13.4-17.6)	2,019	10.2	(8.6-12.0)
Monroe	357	15.2	(10.5-21.5)	355	9.1	(6.2-13.2)
Oakland	3,323	15.0	(13.5-16.6)	3,306	9.9	(8.7-11.3)
St. Clair	402	14.3	(10.7-18.8)	401	9.9	(7.0-14.0)
Washtenaw	988	18.4	(15.5-21.8)	980	11.6	(9.3-14.5)
City of Detroit	1,444	20.9	(18.3-23.8)	1,437	14.7	(12.4-17.3)
Wayne exc. Detroit	2,809	15.3	(13.6-17.0)	2,801	7.3	(4.8-10.9)
<b>Region 2</b>	1,774	16.0	(14.1-18.2)	1,767	12.0	(10.3-14.0)
Genesee	1,280	15.9	(13.5-18.6)	1,275	12.7	(10.6-15.2)
Lapeer	239	16.1	(11.6-22.0)	238	10.5	(6.9-15.6)
Shiawassee	242	17.4	(12.4-23.7)	241	10.5	(6.7-16.0)
<b>Region 3</b>	1,127	20.3	(16.8-24.4)	1,116	11.6	(9.1-14.7)
Jackson	819	21.8	(17.2-27.2)	809	13.5	(10.3-17.6)
Lenawee	287	17.7	(12.4-24.6)	286	8.8	(5.2-14.5)
<b>Region 4</b>	1,750	15.5	(13.4-17.8)	1,741	10.6	(8.9-12.6)
Barry-Eaton	530	13.6	(10.4-17.6)	528	9.6	(6.9-13.2)
Mid-Michigan <sup>c</sup>	538	13.1	(9.8-17.2)	537	8.0	(5.7-11.0)
Ingham	858	17.6	(14.6-21.2)	852	12.4	(9.8-15.6)
<b>Region 5</b>	1,490	15.9	(13.7-18.3)	1,483	11.9	(10.0-14.1)
Branch-Hillsdale-St. Joseph	412	12.8	(9.5-17.1)	410	9.6	(6.7-13.5)
Calhoun	369	16.7	(12.5-22.0)	367	12.7	(9.1-17.6)
Kalamazoo	688	17.4	(14.1-21.3)	685	13.3	(10.4-16.8)
<b>Region 6</b>	732	16.3	(13.2-20.0)	732	12.3	(9.5-15.6)
Van Buren-Cass	303	16.2	(11.4-22.6)	303	12.8	(8.6-18.6)
Berrien	416	16.7	(12.8-21.6)	416	12.0	(8.6-16.5)
<b>Region 7</b>	3,116	14.3	(12.8-15.9)	3,107	8.8	(7.7-10.1)
Allegan	322	17.0	(12.4-22.9)	320	8.7	(5.7-13.2)
Ionia	185	12.5	(7.6-19.9)	185	5.4	(3.1-9.3)
Kent	1,633	14.0	(12.1-16.3)	1,627	9.3	(7.7-11.1)
Mid-Michigan <sup>c</sup>	538	13.1	(9.8-17.2)	537	8.0	(5.7-11.0)
Ottawa	742	13.5	(10.7-16.9)	741	7.9	(5.9-10.5)

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Table 21 Cont'd

Geographic Area	Ever Told Have Asthma <sup>a</sup>			Still Have Asthma <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	<b>29,316</b>	<b>15.8</b>	<b>(15.2-16.3)</b>	<b>29,179</b>	<b>10.7</b>	<b>(10.2-11.2)</b>
<b>Region 8</b>	1,881	17.1	(14.6-19.8)	1,873	13.1	(10.9-15.7)
District #10	1,032	16.4	(13.3-20.0)	1,027	13.3	(10.4-16.9)
Muskegon	804	18.1	(14.3-22.7)	802	13.3	(9.9-17.6)
<b>Region 9</b>	1,360	14.8	(12.4-17.6)	1,352	10.9	(8.8-13.5)
District #2	227	21.2	(14.2-30.3)	223	15.9	(9.7-25.1)
District #4	258	15.5	(11.1-21.4)	257	12.2	(8.4-17.4)
Northwest Michigan	385	12.8	(9.3-17.2)	384	8.9	(6.2-12.6)
Benzie-Leelanau	166	9.8	(5.3-17.2)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Grand Traverse	317	13.5	(9.2-19.6)	316	9.8	(6.0-15.8)
<b>Region 10</b>	1,483	12.5	(10.6-14.7)	1,475	8.3	(6.8-10.1)
Bay	311	13.7	(9.8-18.9)	310	9.6	(6.3-14.3)
Huron	115	12.9	(7.7-20.8)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Saginaw	712	11.3	(8.6-14.7)	707	7.0	(5.2-9.5)
Sanilac	136	11.5	(6.8-18.9)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Tuscola	186	12.7	(7.9-19.8)	186	10.2	(6.0-16.9)
<b>Region 11</b>	914	16.5	(13.6-19.8)	909	10.8	(8.5-13.7)
Central Michigan	573	16.1	(12.7-20.2)	570	10.4	(7.7-13.9)
Midland	284	15.5	(10.5-22.2)	283	10.7	(6.9-16.2)
<b>Region 12</b>	1,125	16.5	(13.7-19.7)	1,117	11.2	(9.1-13.8)
Luce-Mackinac-Alger-Schoolcraft	152	12.7	(7.2-21.4)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Western Upper Peninsula	235	15.4	(10.1-22.7)	234	10.9	(6.6-17.5)
Delta-Menominee	213	18.9	(12.1-28.3)	212	12.3	(7.4-20.0)
Chippewa	131	17.1	(10.8-26.0)	130	9.0	(4.9-16.0)
Dickinson-Iron	140	13.3	(8.4-20.6)	137	11.7	(7.0-18.9)
Marquette	232	20.9	(14.1-29.8)	231	12.4	(8.0-18.7)

<sup>a</sup> The proportion of adults who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma.

<sup>b</sup> Among all adults, the proportion who reported that they still had asthma.

<sup>c</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

<b>Table 22: Chronic Obstructive Pulmonary Disease (COPD) Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told COPD, Emphysema or Chronic Bronchitis<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,273</b>	<b>8.5</b>	<b>(8.1-8.9)</b>
<b>Region 1</b>	12,029	8.7	(8.1-9.3)
Livingston	482	5.7	(3.9-8.2)
Macomb	2,026	9.7	(8.3-11.4)
Monroe	354	15.4	(11.0-21.1)
Oakland	3,311	6.7	(5.7-7.8)
St. Clair	403	7.8	(5.3-11.3)
Washtenaw	983	5.5	(4.0-7.4)
City of Detroit	1,445	12.3	(10.4-14.6)
Wayne exc. Detroit	2,807	8.9	(7.7-10.3)
<b>Region 2</b>	1,563	11.2	(9.5-13.2)
Genesee	1,279	12.0	(9.9-14.4)
Lapeer	241	8.3	(5.3-12.7)
Shiawassee	242	10.0	(6.7-14.8)
<b>Region 3</b>	1,124	9.6	(7.4-12.3)
Jackson	815	10.4	(7.9-13.7)
Lenawee	288	8.0	(4.6-13.7)
<b>Region 4</b>	1,745	7.1	(5.8-8.7)
Barry-Eaton	528	7.9	(5.7-10.8)
Mid-Michigan <sup>b</sup>	538	10.3	(7.2-14.4)
Ingham	855	6.2	(4.6-8.3)
<b>Region 5</b>	1,490	7.6	(6.2-9.2)
Branch-Hillsdale-St. Joseph	413	7.9	(5.6-11.0)
Calhoun	368	9.7	(6.8-13.5)
Kalamazoo	688	6.3	(4.5-8.7)
<b>Region 6</b>	732	8.0	(5.8-10.9)
Van Buren-Cass	302	9.7	(6.0-15.3)
Berrien	417	7.0	(4.6-10.3)
<b>Region 7</b>	3,113	6.5	(5.6-7.6)
Allegan	320	8.0	(5.3-11.8)
Ionia	183	4.1	(2.2-7.6)
Kent	1,633	5.5	(4.4-6.9)
Mid-Michigan <sup>b</sup>	538	10.3	(7.2-14.4)
Ottawa	743	6.6	(4.6-9.5)



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<b>Table 22 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told COPD, Emphysema or Chronic Bronchitis<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,273</b>	<b>8.5</b>	<b>(8.1-8.9)</b>
<b>Region 8</b>	1,881	8.3	(6.9-10.0)
District #10	1,033	9.1	(7.2-11.4)
Muskegon	803	7.6	(5.7-10.1)
<b>Region 9</b>	1,361	11.1	(9.0-13.7)
District #2	225	20.1	(13.2-29.4)
District #4	256	11.9	(8.1-17.0)
Northwest Michigan	389	8.3	(5.5-12.3)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	317	7.4	(4.9-11.0)
<b>Region 10</b>	1,317	9.1	(7.5-11.2)
Bay	312	6.5	(4.2-10.0)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	711	10.9	(8.1-14.4)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	184	11.5	(6.4-19.8)
<b>Region 11</b>	912	8.5	(6.7-10.8)
Central Michigan	572	9.8	(7.5-12.7)
Midland	283	8.4	(4.8-14.2)
<b>Region 12</b>	1,124	7.8	(6.1-9.9)
Luce-Mackinac-Alger-Schoolcraft	151	8.3	(4.9-13.6)
Western Upper Peninsula	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Delta-Menominee	214	10.4	(6.1-17.1)
Chippewa	132	12.9	(7.7-20.6)
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	231	8.9	(5.5-14.3)

<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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

<b>Table 23: Arthritis Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Arthritis<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,258</b>	<b>31.1</b>	<b>(30.7-31.9)</b>
<b>Region 1</b>	12,023	30.4	(29.4-31.4)
Livingston	484	29.8	(25.2-34.9)
Macomb	2,022	32.7	(30.3-35.3)
Monroe	357	38.0	(32.0-44.4)
Oakland	3,301	28.5	(26.7-30.4)
St. Clair	403	32.0	(27.0-37.5)
Washtenaw	986	22.8	(20.0-26.0)
City of Detroit	1,447	31.0	(28.3-33.9)
Wayne exc. Detroit	2,806	33.0	(30.9-35.1)
<b>Region 2</b>	1,771	35.9	(33.2-38.6)
Genesee	1,279	36.9	(33.8-40.2)
Lapeer	239	33.9	(27.5-41.1)
Shiawassee	240	34.0	(27.4-41.3)
<b>Region 3</b>	1,123	34.3	(30.4-38.5)
Jackson	815	32.0	(27.4-37.0)
Lenawee	287	39.0	(32.1-46.4)
<b>Region 4</b>	1,749	29.5	(27.0-32.0)
Barry-Eaton	527	33.3	(28.7-38.1)
Mid-Michigan <sup>b</sup>	539	34.0	(29.2-39.1)
Ingham	859	26.6	(23.3-30.3)
<b>Region 5</b>	1,496	31.5	(28.8-34.3)
Branch-Hillsdale-St. Joseph	413	33.3	(28.0-39.0)
Calhoun	372	32.8	(27.4-38.6)
Kalamazoo	690	30.3	(26.6-34.4)
<b>Region 6</b>	729	32.1	(28.3-36.2)
Van Buren-Cass	301	30.6	(24.9-37.0)
Berrien	415	34.8	(29.6-40.3)
<b>Region 7</b>	3,114	27.8	(26.0-29.7)
Allegan	322	25.0	(20.2-30.6)
Ionia	185	27.9	(21.3-35.5)
Kent	1,632	26.8	(24.4-29.4)
Mid-Michigan <sup>b</sup>	539	34.0	(29.2-39.1)
Ottawa	741	29.3	(25.4-33.5)

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<b>Table 23 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Arthritis<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,258</b>	<b>31.1</b>	<b>(30.7-31.9)</b>
<b>Region 8</b>	1,877	35.2	(32.5-38.1)
District #10	1,032	35.3	(31.8-39.0)
Muskegon	801	38.2	(33.5-43.1)
<b>Region 9</b>	1,360	37.4	(34.3-40.6)
District #2	226	41.0	(33.2-49.4)
District #4	257	39.5	(32.8-46.7)
Northwest Michigan	385	34.8	(29.2-40.7)
Benzie-Leelanau	167	42.8	(33.7-52.3)
Grand Traverse	318	32.2	(26.5-38.5)
<b>Region 10</b>	1,480	33.4	(30.4-36.6)
Bay	310	32.3	(26.3-39.1)
Huron	115	37.1	(27.9-47.3)
Saginaw	712	32.8	(28.1-37.9)
Sanilac	133	29.7	(21.9-38.9)
Tuscola	186	36.5	(28.9-44.8)
<b>Region 11</b>	911	34.7	(31.1-38.5)
Central Michigan	571	40.0	(35.2-45.0)
Midland	283	30.6	(24.7-37.3)
<b>Region 12</b>	1,114	34.3	(30.9-37.8)
Luce-Mackinac-Alger-Schoolcraft	149	33.0	(24.2-43.0)
Western Upper Peninsula	234	32.4	(25.5-40.3)
Delta-Menominee	210	41.5	(33.3-50.1)
Chippewa	131	37.6	(27.6-48.9)
Dickinson-Iron	139	33.0	(24.3-43.1)
Marquette	229	34.2	(26.8-42.4)

<sup>a</sup> 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates

<b>Table 24: Heart Attack Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Heart Attack<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,271</b>	<b>4.9</b>	<b>(4.7-5.2)</b>
<b>Region 1</b>	12,033	4.5	(4.1-5.0)
Livingston	486	3.0	(1.8-4.8)
Macomb	2,029	4.8	(3.9-5.9)
Monroe	354	7.7	(4.7-12.1)
Oakland	3,316	3.3	(2.7-4.1)
St. Clair	402	5.7	(3.6-8.8)
Washtenaw	982	2.9	(2.0-4.4)
City of Detroit	1,434	5.5	(4.3-6.9)
Wayne exc. Detroit	2,811	3.0	(1.8-4.8)
<b>Region 2</b>	1,770	6.4	(5.2-7.8)
Genesee	1,278	6.6	(5.2-8.3)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	240	8.6	(5.3-13.8)
<b>Region 3</b>	1,127	6.1	(4.6-8.0)
Jackson	817	6.3	(4.5-8.8)
Lenawee	289	5.8	(3.6-9.3)
<b>Region 4</b>	1,738	3.8	(3.0-4.9)
Barry-Eaton	526	4.5	(2.9-7.0)
Mid-Michigan <sup>b</sup>	535	5.1	(3.4-7.6)
Ingham	851	2.9	(2.0-4.1)
<b>Region 5</b>	1,494	4.5	(3.5-5.7)
Branch-Hillsdale-St. Joseph	413	3.2	(1.9-5.4)
Calhoun	371	7.2	(4.8-10.8)
Kalamazoo	689	3.6	(2.4-5.2)
<b>Region 6</b>	732	6.2	(4.4-8.6)
Van Buren-Cass	302	6.8	(4.1-11.0)
Berrien	417	6.0	(3.8-9.2)
<b>Region 7</b>	3,114	3.9	(3.2-4.7)
Allegan	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,630	3.4	(2.5-4.6)
Mid-Michigan <sup>b</sup>	535	5.1	(3.4-7.6)
Ottawa	745	4.4	(3.0-6.2)

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<b>Table 24 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Heart Attack<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,271</b>	<b>4.9</b>	<b>(4.7-5.2)</b>
<b>Region 8</b>	1,881	5.1	(4.1-6.3)
District #10	1,033	6.3	(4.9-8.1)
Muskegon	803	3.2	(2.1-4.9)
<b>Region 9</b>	1,361	7.1	(5.5-9.0)
District #2	226	9.7	(5.7-15.9)
District #4	259	7.6	(4.7-12.1)
Northwest Michigan	386	4.9	(2.9-8.3)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	317	4.3	(2.5-7.5)
<b>Region 10</b>	1,485	5.6	(4.4-7.1)
Bay	313	5.2	(3.1-8.5)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	712	5.2	(3.5-7.6)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	185	6.0	(3.3-10.7)
<b>Region 11</b>	910	8.5	(6.5-10.9)
Central Michigan	570	9.7	(7.1-13.1)
Midland	284	8.5	(5.1-13.9)
<b>Region 12</b>	1,123	5.6	(4.2-7.3)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	234	6.7	(3.9-11.1)
Delta-Menominee	214	7.9	(4.3-14.0)
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	231	5.9	(3.3-10.4)

<sup>a</sup> Among all adults, the proportion who had ever been told by a doctor that they had a heart attack or myocardial infarction.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 25: Angina or Coronary Heart Disease Michigan BRFS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Angina or Coronary Heart Disease<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,211</b>	<b>5.0</b>	<b>(4.8-5.3)</b>
<b>Region 1</b>	12,013	4.8	(4.4-5.2)
Livingston	480	2.7	(1.6-4.6)
Macomb	2,021	5.4	(4.4-6.6)
Monroe	355	7.1	(4.5-11.2)
Oakland	3,311	4.5	(3.8-5.4)
St. Clair	403	8.0	(5.3-11.8)
Washtenaw	981	3.5	(2.4-5.0)
City of Detroit	1,441	4.6	(3.5-5.8)
Wayne exc. Detroit	2,803	4.9	(4.1-5.7)
<b>Region 2</b>	1,772	5.0	(4.1-6.1)
Genesee	1,277	4.7	(3.7-6.0)
Lapeer	240	4.4	(2.5-7.7)
Shiawassee	242	7.2	(4.2-11.9)
<b>Region 3</b>	1,123	5.7	(4.2-7.6)
Jackson	817	6.7	(4.7-9.7)
Lenawee	285	4.0	(2.3-6.9)
<b>Region 4</b>	1,742	4.2	(3.3-5.3)
Barry-Eaton	527	3.7	(2.2-6.0)
Mid-Michigan <sup>b</sup>	533	5.9	(4.0-8.6)
Ingham	855	3.5	(2.6-4.9)
<b>Region 5</b>	1,488	5.1	(4.1-6.4)
Branch-Hillsdale-St. Joseph	410	5.3	(3.5-8.0)
Calhoun	371	6.7	(4.3-10.1)
Kalamazoo	686	4.1	(2.9-5.8)
<b>Region 6</b>	728	6.2	(4.5-8.6)
Van Buren-Cass	300	6.7	(4.1-10.9)
Berrien	415	6.1	(3.9-9.3)
<b>Region 7</b>	3,099	4.1	(3.4-4.9)
Allegan	319	4.4	(2.6-7.4)
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,623	3.7	(2.8-4.8)
Mid-Michigan <sup>b</sup>	533	5.9	(4.0-8.6)
Ottawa	742	4.9	(3.3-7.3)

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<b>Table 25 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Angina or Coronary Heart Disease<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,211</b>	<b>5.0</b>	<b>(4.8-5.3)</b>
<b>Region 8</b>	1,877	5.0	(4.0-6.1)
District #10	1,032	5.7	(4.4-7.4)
Muskegon	800	3.8	(2.6-5.7)
<b>Region 9</b>	1,361	7.4	(5.8-9.3)
District #2	226	10.1	(6.3-15.8)
District #4	257	10.3	(6.7-15.5)
Northwest Michigan	387	4.6	(2.8-7.5)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 10</b>	1,476	4.9	(3.9-6.2)
Bay	310	5.0	(3.1-8.0)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	709	4.3	(2.9-6.4)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	185	7.0	(4.1-11.7)
<b>Region 11</b>	907	9.5	(7.3-12.3)
Central Michigan	568	11.1	(8.1-15.0)
Midland	282	8.2	(4.8-13.5)
<b>Region 12</b>	1,118	5.9	(4.6-7.5)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	231	6.4	(4.0-10.3)
Delta-Menominee	213	7.5	(4.5-12.3)
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>

<sup>a</sup> Among all adults, the proportion who had ever been told by a doctor that they had angina or coronary heart disease.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 26: Stroke</b>			
<b>Michigan BRFS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Stroke<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,335</b>	<b>3.4</b>	<b>(3.1-3.6)</b>
<b>Region 1</b>	12,063	3.6	(3.2-4.0)
Livingston	484	2.5	(1.4-4.3)
Macomb	2,028	3.6	(2.8-4.6)
Monroe	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Oakland	3,321	2.8	(2.2-3.6)
St. Clair	404	5.4	(3.4-8.4)
Washtenaw	989	1.7	(1.1-2.8)
City of Detroit	1,448	6.0	(4.7-7.5)
Wayne exc. Detroit	2,814	3.6	(2.9-4.4)
<b>Region 2</b>	1,778	3.9	(3.0-5.1)
Genesee	1,284	4.1	(2.9-5.7)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	1,123	3.0	(1.9-4.6)
Jackson	814	4.1	(2.4-6.9)
Lenawee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 4</b>	1,748	2.6	(1.9-3.5)
Barry-Eaton	527	3.7	(2.2-6.2)
Mid-Michigan <sup>b</sup>	538	3.1	(2.0-4.8)
Ingham	859	1.8	(1.1-2.9)
<b>Region 5</b>	1,496	2.9	(2.1-4.0)
Branch-Hillsdale-St. Joseph	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Calhoun	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kalamazoo	691	2.7	(1.7-4.3)
<b>Region 6</b>	733	5.0	(3.3-7.3)
Van Buren-Cass	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Berrien	417	4.3	(2.7-6.9)
<b>Region 7</b>	3,118	2.1	(1.6-2.8)
Allegan	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,634	2.0	(1.4-2.9)
Mid-Michigan <sup>b</sup>	538	3.1	(2.0-4.8)
Ottawa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>



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<b>Table 26 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Stroke<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,335</b>	<b>3.4</b>	<b>(3.1-3.6)</b>
<b>Region 8</b>	1,884	3.3	(2.4-4.4)
District #10	1,038	3.5	(2.4-5.0)
Muskegon	801	3.1	(1.9-5.1)
<b>Region 9</b>	1,367	3.9	(2.8-5.5)
District #2	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
District #4	259	2.4	(1.4-4.2)
Northwest Michigan	389	4.4	(2.4-7.9)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 10</b>	1,485	3.1	(2.3-4.3)
Bay	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	713	3.7	(2.2-6.0)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	910	3.9	(2.6-5.8)
Central Michigan	571	4.9	(3.1-7.8)
Midland	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 12</b>	1,122	3.7	(2.6-5.3)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Delta-Menominee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>

<sup>a</sup> Among all adults, the proportion who had ever been told by a doctor that they had a stroke.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 27: Cardiovascular Disease Michigan BRFS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Any Cardiovascular Disease<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,155</b>	<b>9.7</b>	<b>(9.3-10.1)</b>
<b>Region 1</b>	11,988	9.4	(8.9-10.0)
Livingston	481	6.0	(4.3-8.4)
Macomb	2,017	9.3	(8.1-10.8)
Monroe	354	13.9	(10.1-19.0)
Oakland	3,302	8.3	(7.3-9.4)
St. Clair	401	12.3	(9.0-16.6)
Washtenaw	978	6.6	(5.0-8.5)
City of Detroit	1,434	11.4	(9.7-13.4)
Wayne exc. Detroit	2,803	10.2	(9.0-11.4)
<b>Region 2</b>	1,766	11.5	(9.9-13.3)
Genesee	1,274	11.8	(9.9-13.9)
Lapeer	238	8.5	(5.5-13.1)
Shiawassee	241	13.8	(9.6-19.4)
<b>Region 3</b>	1,122	10.3	(8.3-12.7)
Jackson	814	11.8	(9.1-15.2)
Lenawee	287	8.4	(5.7-12.2)
<b>Region 4</b>	1,730	7.9	(6.6-9.4)
Barry-Eaton	523	8.8	(6.3-12.0)
Mid-Michigan <sup>b</sup>	534	10.8	(8.1-14.1)
Ingham	847	6.3	(4.9-8.1)
<b>Region 5</b>	1,489	9.1	(7.6-10.7)
Branch-Hillsdale-St. Joseph	411	8.1	(5.8-11.1)
Calhoun	369	13.0	(9.6-17.5)
Kalamazoo	688	7.5	(5.7-9.7)
<b>Region 6</b>	730	12.3	(9.7-15.4)
Van Buren-Cass	302	12.5	(8.6-17.8)
Berrien	415	12.5	(9.2-16.8)
<b>Region 7</b>	3,100	7.5	(6.6-8.6)
Allegan	320	7.6	(5.0-11.5)
Ionia	184	8.0	(4.9-12.9)
Kent	1,622	7.0	(5.8-8.4)
Mid-Michigan <sup>b</sup>	534	10.8	(8.1-14.1)
Ottawa	742	8.0	(5.9-10.7)

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<b>Table 27 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Any Cardiovascular Disease<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,155</b>	<b>9.7</b>	<b>(9.3-10.1)</b>
<b>Region 8</b>	1,875	10.0	(8.5-11.7)
District #10	1,030	11.8	(9.8-14.2)
Muskegon	800	7.2	(5.3-9.8)
<b>Region 9</b>	1,358	12.2	(10.2-14.5)
District #2	225	15.9	(11.0-22.5)
District #4	258	12.2	(8.4-17.4)
Northwest Michigan	385	11.3	(8.0-15.8)
Benzie-Leelanau	166	16.8	(10.2-26.4)
Grand Traverse	317	6.7	(4.4-10.1)
<b>Region 10</b>	1,477	10.1	(8.5-11.9)
Bay	311	9.7	(6.8-13.6)
Huron	114	13.5	(8.2-21.5)
Saginaw	708	9.5	(7.2-12.4)
Sanilac	135	11.7	(7.3-18.4)
Tuscola	185	10.7	(7.0-16.1)
<b>Region 11</b>	904	14.7	(12.1-17.9)
Central Michigan	566	17.7	(14.0-22.0)
Midland	281	12.2	(8.1-17.9)
<b>Region 12</b>	1,116	10.5	(8.6-12.7)
Luce-Mackinac-Alger-Schoolcraft	151	6.8	(4.0-11.5)
Western Upper Peninsula	231	12.6	(8.5-18.3)
Delta-Menominee	212	14.6	(9.6-21.6)
Chippewa	131	10.8	(5.9-18.9)
Dickinson-Iron	139	10.0	(5.8-16.9)
Marquette	230	8.4	(5.3-13.2)

<sup>a</sup> 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 28: Cancer Michigan BRFS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Cancer<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,312</b>	<b>12.3</b>	<b>(11.9-12.7)</b>
<b>Region 1</b>	12,057	11.6	(11.0-12.2)
Livingston	484	11.8	(9.3-15.0)
Macomb	2,031	11.1	(9.8-12.6)
Monroe	357	16.3	(11.8-21.9)
Oakland	3,317	13.1	(11.9-14.3)
St. Clair	403	12.8	(9.8-16.5)
Washtenaw	987	10.2	(8.5-12.2)
City of Detroit	1,445	6.9	(5.7-8.3)
Wayne exc. Detroit	2,814	13.5	(12.2-15.0)
<b>Region 2</b>	1,778	12.4	(10.8-14.2)
Genesee	1,283	12.7	(10.9-14.8)
Lapeer	240	10.5	(6.9-15.5)
Shiawassee	242	13.3	(9.2-18.7)
<b>Region 3</b>	1,125	13.0	(10.7-15.7)
Jackson	816	12.9	(10.2-16.3)
Lenawee	288	13.3	(9.5-18.2)
<b>Region 4</b>	1,744	11.8	(10.2-13.5)
Barry-Eaton	525	13.1	(10.4-16.5)
Mid-Michigan <sup>b</sup>	537	14.8	(11.6-18.8)
Ingham	858	8.9	(7.1-11.0)
<b>Region 5</b>	1,497	14.4	(12.6-16.4)
Branch-Hillsdale-St. Joseph	413	13.9	(10.7-17.7)
Calhoun	371	17.6	(13.7-22.5)
Kalamazoo	692	13.1	(10.6-15.9)
<b>Region 6</b>	730	13.6	(10.9-16.7)
Van Buren-Cass	303	12.6	(8.7-17.9)
Berrien	414	14.9	(11.4-19.2)
<b>Region 7</b>	3,109	12.9	(11.6-14.3)
Allegan	321	15.6	(11.7-20.5)
Ionia	185	15.0	(9.6-22.8)
Kent	1,629	12.6	(10.9-14.7)
Mid-Michigan <sup>b</sup>	537	14.8	(11.6-18.8)
Ottawa	741	12.6	(10.2-15.3)

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<b>Table 28 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Cancer<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,312</b>	<b>12.3</b>	<b>(11.9-12.7)</b>
<b>Region 8</b>	1,884	13.8	(12.1-15.7)
District #10	1,036	14.4	(12.2-16.9)
Muskegon	803	13.2	(10.6-16.4)
<b>Region 9</b>	1,361	13.9	(12.0-16.1)
District #2	225	15.4	(10.5-21.9)
District #4	257	12.4	(8.8-17.2)
Northwest Michigan	389	15.1	(11.7-19.3)
Benzie-Leelanau	166	15.7	(10.7-22.3)
Grand Traverse	317	12.1	(8.6-16.8)
<b>Region 10</b>	1,484	12.3	(10.5-14.3)
Bay	311	12.1	(8.8-16.5)
Huron	115	14.0	(8.0-23.4)
Saginaw	714	13.2	(10.5-16.5)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	186	14.6	(10.2-20.5)
<b>Region 11</b>	910	13.1	(11.0-15.5)
Central Michigan	571	13.2	(10.6-16.3)
Midland	282	16.3	(12.0-21.8)
<b>Region 12</b>	1,125	12.6	(10.6-14.8)
Luce-Mackinac-Alger-Schoolcraft	152	12.1	(7.6-18.6)
Western Upper Peninsula	235	15.6	(11.1-21.5)
Delta-Menominee	214	11.6	(7.4-17.8)
Chippewa	131	10.4	(6.0-17.5)
Dickinson-Iron	140	10.9	(6.4-17.7)
Marquette	231	14.7	(10.6-20.2)

<sup>a</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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

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

<b>Table 29: Diabetes</b>			
<b>Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Diabetes<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,371</b>	<b>10.8</b>	<b>(10.4-11.2)</b>
<b>Region 1</b>	12,081	10.5	(9.9-11.2)
Livingston	484	6.9	(4.8-9.9)
Macomb	2,034	10.6	(9.2-12.1)
Monroe	357	11.9	(8.4-16.6)
Oakland	3,328	9.2	(8.1-10.4)
St. Clair	403	13.2	(9.5-17.9)
Washtenaw	988	8.5	(6.8-10.8)
City of Detroit	1,450	13.1	(11.2-15.2)
Wayne exc. Detroit	2,818	11.3	(10.0-12.7)
<b>Region 2</b>	1,778	12.9	(11.2-14.8)
Genesee	1,283	12.7	(10.7-14.9)
Lapeer	240	11.0	(7.3-16.2)
Shiawassee	242	16.4	(11.5-22.8)
<b>Region 3</b>	1,128	13.1	(10.5-16.2)
Jackson	819	12.5	(9.6-16.1)
Lenawee	289	14.5	(9.9-20.9)
<b>Region 4</b>	1,753	9.9	(8.4-11.5)
Barry-Eaton	530	11.8	(8.9-15.4)
Mid-Michigan <sup>b</sup>	538	13.8	(10.7-17.6)
Ingham	861	7.6	(5.9-9.6)
<b>Region 5</b>	1,499	11.0	(9.3-12.8)
Branch-Hillsdale-St. Joseph	414	13.6	(10.1-18.2)
Calhoun	372	11.3	(8.3-15.1)
Kalamazoo	692	9.3	(7.3-11.8)
<b>Region 6</b>	731	12.1	(9.7-14.9)
Van Buren-Cass	302	13.2	(9.6-17.9)
Berrien	416	11.7	(8.6-15.7)
<b>Region 7</b>	3,120	9.5	(8.4-10.7)
Allegan	322	8.0	(5.4-11.7)
Ionia	185	11.6	(7.8-17.0)
Kent	1,637	9.7	(8.2-11.6)
Mid-Michigan <sup>b</sup>	538	13.8	(10.7-17.6)
Ottawa	742	7.6	(5.8-10.0)

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<b>Table 29 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Diabetes<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,371</b>	<b>10.8</b>	<b>(10.4-11.2)</b>
<b>Region 8</b>	1,885	10.0	(8.5-11.6)
District #10	1,037	9.5	(7.7-11.8)
Muskegon	803	11.6	(9.2-14.6)
<b>Region 9</b>	1,364	14.1	(11.9-16.6)
District #2	225	17.1	(11.7-24.2)
District #4	259	17.5	(12.8-23.4)
Northwest Michigan	389	12.3	(8.5-17.4)
Benzie-Leelanau	167	16.8	(10.9-25.2)
Grand Traverse	317	7.7	(5.3-11.2)
<b>Region 10</b>	1,485	10.1	(8.5-11.9)
Bay	313	10.2	(6.9-14.6)
Huron	115	9.1	(5.2-15.6)
Saginaw	713	10.4	(8.1-13.2)
Sanilac	134	9.2	(5.5-14.8)
Tuscola	186	10.7	(6.8-16.4)
<b>Region 11</b>	914	12.1	(9.9-14.7)
Central Michigan	573	14.2	(11.2-17.9)
Midland	284	10.9	(7.5-15.6)
<b>Region 12</b>	1,124	12.2	(10.1-14.7)
Luce-Mackinac-Alger-Schoolcraft	152	13.2	(8.0-20.9)
Western Upper Peninsula	234	11.2	(7.2-17.2)
Delta-Menominee	213	16.5	(11.0-24.0)
Chippewa	132	14.0	(8.3-22.5)
Dickinson-Iron	140	11.3	(6.3-19.2)
Marquette	231	9.6	(6.2-14.6)

<sup>a</sup> 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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 30: Kidney Disease Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Kidney Disease<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,308</b>	<b>3.5</b>	<b>(3.2-3.7)</b>
<b>Region 1</b>	12,049	3.5	(3.1-3.8)
Livingston	484	2.5	(1.4-4.2)
Macomb	2,028	3.2	(2.4-4.3)
Monroe	355	4.4	(2.7-7.1)
Oakland	3,323	3.2	(2.6-4.0)
St. Clair	404	3.7	(2.1-6.2)
Washtenaw	981	3.3	(2.3-4.9)
City of Detroit	1,443	4.2	(3.2-5.6)
Wayne exc. Detroit	2,812	3.7	(3.0-4.6)
<b>Region 2</b>	1,773	3.6	(2.8-4.8)
Genesee	1,279	4.0	(2.9-5.4)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	1,124	3.9	(2.6-5.9)
Jackson	814	4.0	(2.3-7.0)
Lenawee	289	4.0	(2.3-7.1)
<b>Region 4</b>	1,748	3.1	(2.3-4.2)
Barry-Eaton	527	2.8	(1.8-4.4)
Mid-Michigan <sup>b</sup>	538	3.0	(1.6-5.5)
Ingham	859	3.1	(2.0-4.7)
<b>Region 5</b>	1,496	3.9	(3.0-5.1)
Branch-Hillsdale-St. Joseph	412	4.5	(2.9-6.9)
Calhoun	372	4.7	(2.9-7.6)
Kalamazoo	691	3.3	(2.1-5.0)
<b>Region 6</b>	730	4.2	(2.7-6.5)
Van Buren-Cass	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Berrien	415	5.1	(3.1-8.3)
<b>Region 7</b>	3,118	3.1	(2.4-4.1)
Allegan	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,634	3.8	(2.6-5.4)
Mid-Michigan <sup>b</sup>	538	3.0	(1.6-5.5)
Ottawa	745	2.6	(1.7-3.9)



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<b>Table 30 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Kidney Disease<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,308</b>	<b>3.5</b>	<b>(3.2-3.7)</b>
<b>Region 8</b>	1,879	4.1	(3.1-5.4)
District #10	1,032	3.9	(2.6-5.7)
Muskegon	803	4.4	(2.9-6.6)
<b>Region 9</b>	1,364	4.7	(3.4-6.4)
District #2	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
District #4	259	5.7	(3.2-10.1)
Northwest Michigan	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 10</b>	1,485	2.7	(2.0-3.7)
Bay	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	715	2.5	(1.6-3.9)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	911	3.3	(2.3-4.6)
Central Michigan	571	3.7	(2.4-5.6)
Midland	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 12</b>	1,122	4.2	(3.0-5.8)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Delta-Menominee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>

<sup>a</sup> Among all adults, the proportion who reported ever being told by a doctor that they had kidney disease.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.  
<sup>c</sup> Suppressed due to a denominator < 50 and/or a relative standard error > 30%.

<b>Table 31: Depression</b>			
<b>Michigan BRFSS, 2014-2016 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told Depression<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,289</b>	<b>20.7</b>	<b>(20.1-21.3)</b>
<b>Region 1</b>	12,038	20.2	(19.3-21.1)
Livingston	485	25.1	(19.7-31.3)
Macomb	2,024	19.5	(17.4-21.8)
Monroe	354	24.5	(18.6-31.4)
Oakland	3,318	18.2	(16.5-20.0)
St. Clair	404	19.0	(14.9-24.0)
Washtenaw	985	23.5	(20.2-27.1)
City of Detroit	1,444	21.1	(18.6-23.9)
Wayne exc. Detroit	2,806	20.2	(18.4-22.2)
<b>Region 2</b>	1,776	19.2	(17.1-21.6)
Genesee	1,281	21.0	(18.4-24.0)
Lapeer	241	11.8	(8.0-17.0)
Shiawassee	241	19.0	(13.8-25.7)
<b>Region 3</b>	1,120	21.3	(17.9-25.1)
Jackson	813	22.0	(17.8-26.9)
Lenawee	287	20.8	(15.5-27.4)
<b>Region 4</b>	1,744	20.9	(18.5-23.5)
Barry-Eaton	526	19.6	(15.6-24.5)
Mid-Michigan <sup>b</sup>	538	18.7	(14.5-23.7)
Ingham	855	21.7	(18.4-25.5)
<b>Region 5</b>	1,496	21.3	(18.9-23.9)
Branch-Hillsdale-St. Joseph	414	20.0	(15.7-25.2)
Calhoun	372	26.5	(21.2-32.4)
Kalamazoo	690	19.4	(16.2-23.0)
<b>Region 6</b>	731	22.1	(18.5-26.2)
Van Buren-Cass	301	25.8	(19.7-32.9)
Berrien	417	19.5	(15.4-24.5)
<b>Region 7</b>	3,112	22.0	(20.2-24.0)
Allegan	319	21.1	(16.3-26.9)
Ionia	186	23.7	(17.1-32.0)
Kent	1,630	22.4	(19.9-25.2)
Mid-Michigan <sup>b</sup>	538	18.7	(14.5-23.7)
Ottawa	744	23.0	(19.3-27.2)

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<b>Table 31 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told Depression<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>29,289</b>	<b>20.7</b>	<b>(20.1-21.3)</b>
<b>Region 8</b>	1,881	23.4	(20.9-26.1)
District #10	1,036	23.1	(19.9-26.6)
Muskegon	800	24.9	(21.0-29.4)
<b>Region 9</b>	1,356	20.3	(17.8-23.0)
District #2	225	20.7	(15.1-27.7)
District #4	255	24.0	(18.2-30.9)
Northwest Michigan	387	19.6	(15.3-24.8)
Benzie-Leelanau	166	17.6	(11.7-25.5)
Grand Traverse	316	19.5	(14.8-25.1)
<b>Region 10</b>	1,487	22.8	(19.8-26.1)
Bay	312	28.7	(22.0-36.4)
Huron	115	12.8	(7.9-20.3)
Saginaw	715	22.4	(17.8-27.7)
Sanilac	135	16.9	(10.3-26.6)
Tuscola	186	23.3	(16.4-32.1)
<b>Region 11</b>	914	21.2	(18.1-24.8)
Central Michigan	573	22.6	(18.6-27.1)
Midland	284	21.7	(15.8-29.0)
<b>Region 12</b>	1,125	23.9	(20.7-27.4)
Luce-Mackinac-Alger-Schoolcraft	152	21.8	(14.4-31.7)
Western Upper Peninsula	234	24.9	(18.2-33.2)
Delta-Menominee	214	29.5	(21.9-38.4)
Chippewa	132	12.7	(7.8-19.9)
Dickinson-Iron	139	30.2	(21.3-41.0)
Marquette	232	23.8	(16.8-32.5)

<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.

<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.