

**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)**

**2016 - 2018**

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

*Prepared by: Yan Tian and Allison Murad  
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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 2016-2018 Michigan BRFSS were combined. The total sample sizes by year were: 12,024 in 2016, 10,889 in 2017, and 10,621 in 2018. Not all questions were included annually in the survey. The table subtitles indicate which years were used for that particular analysis.

For the 2016 through 2018 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.

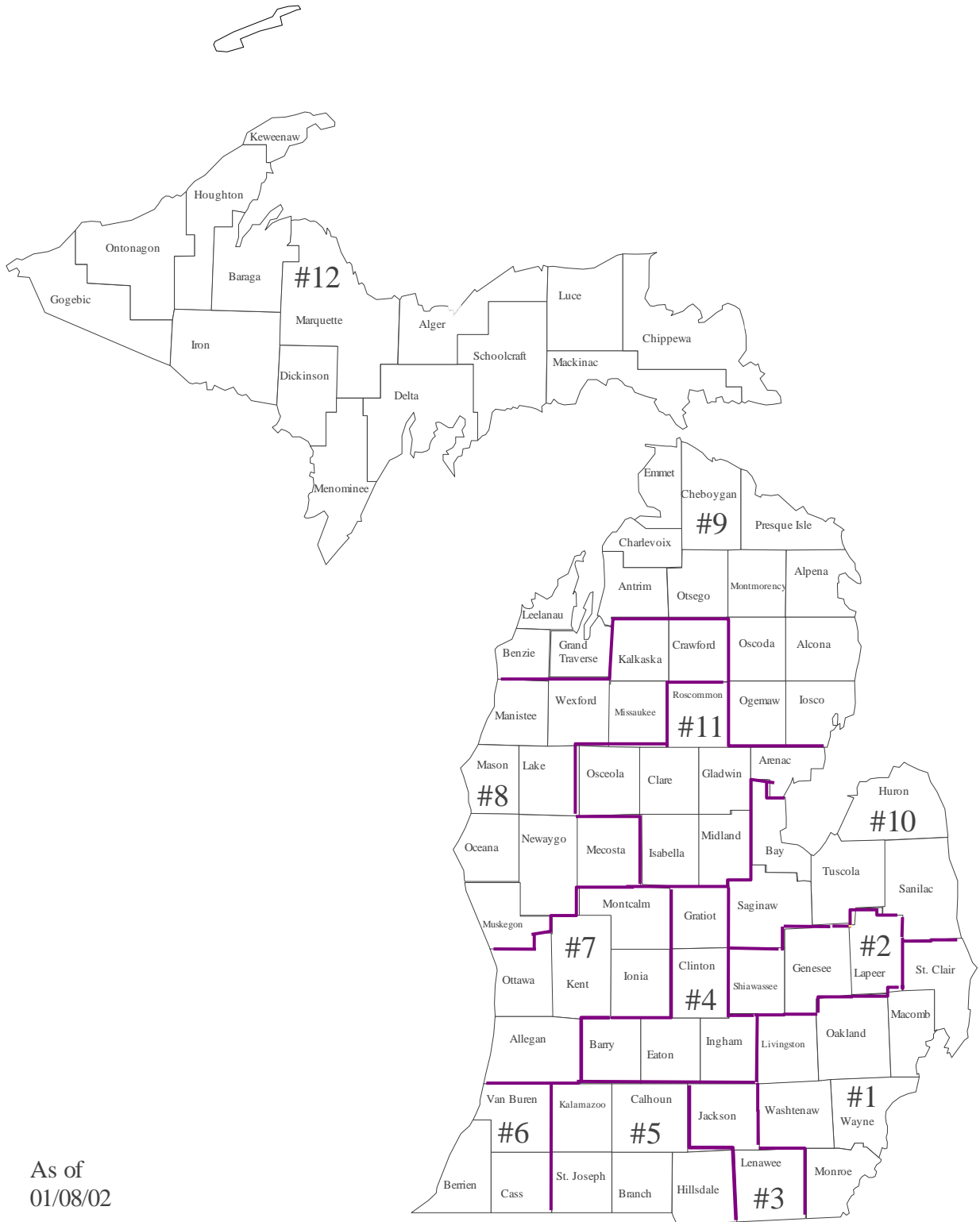
Iterative proportional fitting or raking was the weighting methodology used to make the 2016-2018 Michigan BRFSS data representative of the current Michigan adult population. Estimates based on this methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor 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 Yan Tian at [TianY@michigan.gov](mailto:TianY@michigan.gov).

## Community Health Assessment and Improvement Regions State of Michigan



As of  
01/08/02

### Local Health Departments State of Michigan



2016-2018 Michigan BRFSS Regional & Local Health Department Estimates  
December 2020

<b>Table 1: Health Status Michigan BRFSS, 2016-2018 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>33,173</b>	<b>18.6</b>	<b>(18.1-19.1)</b>
<b>Region 1</b>	13,048	18.6	(17.8-19.5)
Livingston	1,183	12.7	(10.2-15.7)
Macomb	1,966	19.1	(17.1-21.3)
Monroe	390	17.0	(13.2-21.6)
Oakland	3,333	14.0	(12.6-15.5)
St. Clair	430	22.9	(18.7-27.8)
Washtenaw	1,349	12.6	(10.4-15.3)
City of Detroit	1,555	31.4	(28.7-34.3)
Wayne exc. Detroit	2,773	18.7	(17.1-20.5)
<b>Region 2</b>	2,148	22.0	(19.9-24.3)
Genesee	1,568	23.5	(20.9-26.3)
Lapeer	262	19.1	(14.3-25.2)
Shiawassee	298	17.6	(12.8-23.8)
<b>Region 3</b>	1,815	19.7	(17.1-22.5)
Jackson	1,449	18.5	(16.1-21.1)
Lenawee	311	21.7	(16.0-28.7)
<b>Region 4</b>	1,884	16.2	(14.1-18.4)
Barry-Eaton	538	20.9	(16.8-25.8)
Mid-Michigan <sup>b</sup>	555	17.6	(14.1-21.7)
Ingham	971	14.6	(12.0-17.6)
<b>Region 5</b>	1,587	18.4	(16.1-21.0)
Branch-Hillsdale-St. Joseph	458	19.9	(15.8-24.7)
Calhoun	399	19.5	(14.8-25.2)
Kalamazoo	699	17.4	(14.1-21.2)
<b>Region 6</b>	728	19.3	(16.0-23.0)
Van Buren-Cass	308	24.0	(18.7-30.2)
Berrien	382	14.7	(11.3-19.0)
<b>Region 7</b>	3,244	15.0	(13.5-16.6)
Allegan	360	16.6	(12.6-21.4)
Ionia	203	18.1	(12.4-25.8)
Kent	1,690	14.6	(12.6-16.9)
Mid-Michigan <sup>b</sup>	555	17.6	(14.1-21.7)
Ottawa	765	11.3	(8.8-14.3)

2016-2018 Michigan BRFSS Regional & Local Health Department Estimates  
December 2020

<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>33,173</b>	<b>18.6</b>	<b>(18.1-19.1)</b>
<b>Region 8</b>	2,716	22.0	(19.8-24.4)
District #10	1,194	22.4	(19.4-25.7)
Muskegon	1,459	22.0	(19.0-25.4)
<b>Region 9</b>	1,774	18.1	(15.9-20.6)
District #2	237	25.0	(18.5-32.9)
District #4	263	18.4	(13.6-24.5)
Northwest Michigan	535	19.1	(15.2-23.6)
Benzie-Leelanau	239	17.8	(12.2-25.0)
Grand Traverse	457	12.8	(9.3-17.4)
<b>Region 10</b>	1,510	20.0	(17.4-22.8)
Bay	314	19.3	(13.9-26.2)
Huron	131	16.6	(10.6-25.1)
Saginaw	715	21.2	(17.2-25.8)
Sanilac	162	19.7	(13.7-27.3)
Tuscola	168	20.5	(14.4-28.2)
<b>Region 11</b>	1,031	21.0	(17.8-24.6)
Central Michigan	585	25.1	(20.8-30.0)
Midland	274	16.3	(10.9-23.6)
<b>Region 12</b>	1,061	20.3	(17.4-23.5)
Luce-Mackinac-Alger-Schoolcraft	134	26.4	(17.7-37.4)
Western Upper Peninsula	236	15.7	(10.8-22.2)
Delta-Menominee	209	24.1	(17.7-31.9)
Chippewa	130	23.8	(16.2-33.5)
Dickinson-Iron	120	22.1	(13.4-34.2)
Marquette	210	17.9	(11.8-26.3)

<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, 2016-2018 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>32,719</b>	<b>9.7</b>	<b>(9.3-10.2)</b>
<b>Region 1</b>	12,879	9.8	(9.2-10.5)
Livingston	1,167	7.3	(5.6-9.5)
Macomb	1,946	10.2	(8.7-12.0)
Monroe	387	11.3	(8.1-15.6)
Oakland	3,290	8.4	(7.2-9.7)
St. Clair	423	12.7	(9.4-16.8)
Washtenaw	1,330	6.6	(5.0-8.7)
City of Detroit	1,525	13.7	(11.7-16.0)
Wayne exc. Detroit	2,742	9.6	(8.3-11.0)
<b>Region 2</b>	2,111	11.0	(9.5-12.8)
Genesee	1,537	11.1	(9.3-13.2)
Lapeer	258	11.6	(7.8-16.8)
Shiawassee	296	9.8	(6.1-15.4)
<b>Region 3</b>	1,785	8.7	(7.1-10.5)
Jackson	1,429	8.7	(7.1-10.6)
Lenawee	302	9.3	(6.1-14.1)
<b>Region 4</b>	1,859	9.0	(7.5-10.7)
Barry-Eaton	531	8.4	(5.9-11.7)
Mid-Michigan <sup>b</sup>	549	10.1	(7.3-13.9)
Ingham	957	8.6	(6.7-11.1)
<b>Region 5</b>	1,567	9.7	(7.9-11.8)
Branch-Hillsdale-St. Joseph	454	10.2	(7.0-14.6)
Calhoun	394	11.0	(7.1-16.6)
Kalamazoo	689	8.6	(6.5-11.4)
<b>Region 6</b>	715	10.7	(8.1-14.1)
Van Buren-Cass	301	11.3	(7.7-16.1)
Berrien	376	9.6	(6.3-14.5)
<b>Region 7</b>	3,208	9.0	(7.8-10.3)
Allegan	351	13.2	(9.2-18.4)
Ionia	201	7.9	(4.6-13.3)
Kent	1,672	8.9	(7.4-10.8)
Mid-Michigan <sup>b</sup>	549	10.1	(7.3-13.9)
Ottawa	760	7.7	(5.6-10.5)



2016-2018 Michigan BRFSS Regional & Local Health Department Estimates  
December 2020

<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>32,719</b>	<b>9.7</b>	<b>(9.3-10.2)</b>
<b>Region 8</b>	2,675	11.7	(10.1-13.6)
District #10	1,179	12.8	(10.4-15.7)
Muskegon	1,435	11.1	(9.2-13.4)
<b>Region 9</b>	1,759	8.2	(6.8-9.8)
District #2	233	6.6	(3.7-11.4)
District #4	261	10.5	(7.0-15.4)
Northwest Michigan	528	10.6	(7.9-14.1)
Benzie-Leelanau	238	7.7	(4.5-13.0)
Grand Traverse	456	5.8	(3.8-8.8)
<b>Region 10</b>	1,485	9.3	(7.6-11.4)
Bay	309	7.4	(4.8-11.4)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	703	10.9	(8.0-14.7)
Sanilac	159	12.2	(7.6-19.2)
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	1,016	9.6	(7.5-12.2)
Central Michigan	575	12.4	(9.2-16.4)
Midland	269	6.4	(3.7-10.7)
<b>Region 12</b>	1,054	11.7	(9.3-14.4)
Luce-Mackinac-Alger-Schoolcraft	132	14.9	(8.1-25.8)
Western Upper Peninsula	236	8.4	(4.6-14.6)
Delta-Menominee	210	12.6	(7.9-19.5)
Chippewa	130	15.1	(8.8-24.7)
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	209	13.5	(8.3-21.2)

<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.

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

<b>Table 3: Poor Mental Health on at Least 14 Days in the Past Month Michigan BRFSS, 2016-2018 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>32,812</b>	<b>9.3</b>	<b>(8.9-9.8)</b>
<b>Region 1</b>	12,929	9.4	(8.8-10.1)
Livingston	1,167	8.5	(6.5-11.0)
Macomb	1,953	9.2	(7.7-10.9)
Monroe	388	10.8	(7.4-15.5)
Oakland	3,305	7.6	(6.4-8.9)
St. Clair	427	9.1	(6.6-12.4)
Washtenaw	1,340	11.6	(9.3-14.4)
City of Detroit	1,536	11.8	(9.9-13.9)
Wayne exc. Detroit	2,745	9.8	(8.4-11.3)
<b>Region 2</b>	2,125	9.9	(8.4-11.7)
Genesee	1,547	10.1	(8.3-12.2)
Lapeer	261	9.4	(5.9-14.7)
Shiawassee	297	8.7	(4.9-14.9)
<b>Region 3</b>	1,794	9.0	(7.3-11.1)
Jackson	1,433	9.7	(7.8-11.9)
Lenawee	306	8.0	(4.8-13.1)
<b>Region 4</b>	1,858	9.1	(7.6-10.9)
Barry-Eaton	529	7.8	(5.4-11.1)
Mid-Michigan <sup>b</sup>	549	7.7	(5.3-11.0)
Ingham	959	10.4	(8.2-13.2)
<b>Region 5</b>	1,566	10.6	(8.7-12.9)
Branch-Hillsdale-St. Joseph	451	10.0	(6.7-14.9)
Calhoun	395	9.0	(6.0-13.4)
Kalamazoo	690	12.0	(9.1-15.7)
<b>Region 6</b>	716	11.0	(8.3-14.4)
Van Buren-Cass	300	7.8	(4.9-12.1)
Berrien	378	11.8	(8.1-16.7)
<b>Region 7</b>	3,206	8.4	(7.3-9.7)
Allegan	353	10.8	(7.3-15.5)
Ionia	201	11.8	(7.3-18.7)
Kent	1,670	7.6	(6.2-9.3)
Mid-Michigan <sup>b</sup>	549	7.7	(5.3-11.0)
Ottawa	758	9.2	(6.5-12.8)

2016-2018 Michigan BRFSS Regional & Local Health Department Estimates  
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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>32,812</b>	<b>9.3</b>	<b>(8.9-9.8)</b>
<b>Region 8</b>	2,688	10.2	(8.7-12.0)
District #10	1,185	9.5	(7.5-12.0)
Muskegon	1,441	11.7	(9.4-14.4)
<b>Region 9</b>	1,753	7.5	(6.1-9.2)
District #2	236	9.2	(5.5-14.9)
District #4	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Northwest Michigan	527	7.4	(5.0-10.8)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	452	9.0	(6.2-12.9)
<b>Region 10</b>	1,493	9.8	(7.7-12.4)
Bay	307	12.8	(7.7-20.4)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	707	9.7	(6.9-13.6)
Sanilac	162	10.0	(5.7-16.9)
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	1,021	9.2	(7.0-12.1)
Central Michigan	578	9.9	(7.0-13.8)
Midland	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 12</b>	1,050	8.3	(6.3-10.9)
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	209	9.9	(5.9-16.2)
Chippewa	127	15.7	(8.6-27.0)
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>

<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, 2016-2018 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>32,932</b>	<b>10.4</b>	<b>(9.9-10.8)</b>
<b>Region 1</b>	12,972	10.5	(9.8-11.2)
Livingston	1,174	7.1	(5.4-9.4)
Macomb	1,950	11.6	(9.9-13.5)
Monroe	386	10.9	(7.5-15.6)
Oakland	3,326	8.4	(7.2-9.7)
St. Clair	432	12.4	(9.2-16.4)
Washtenaw	1,339	7.0	(5.3-9.3)
City of Detroit	1,538	16.7	(14.5-19.1)
Wayne exc. Detroit	2,758	10.0	(8.7-11.4)
<b>Region 2</b>	2,129	11.6	(10.0-13.4)
Genesee	1,548	12.0	(10.1-14.2)
Lapeer	261	8.9	(5.6-13.9)
Shiawassee	300	11.9	(7.9-17.6)
<b>Region 3</b>	1,799	10.3	(8.5-12.5)
Jackson	1,440	9.5	(7.8-11.5)
Lenawee	304	12.7	(8.6-18.3)
<b>Region 4</b>	1,864	9.1	(7.7-10.9)
Barry-Eaton	535	9.5	(6.7-13.2)
Mid-Michigan <sup>b</sup>	547	8.4	(6.0-11.6)
Ingham	960	9.5	(7.5-11.9)
<b>Region 5</b>	1,572	9.7	(8.0-11.7)
Branch-Hillsdale-St. Joseph	453	11.8	(8.5-16.2)
Calhoun	394	12.0	(8.4-16.9)
Kalamazoo	694	7.2	(5.2-9.9)
<b>Region 6</b>	723	11.1	(8.6-14.2)
Van Buren-Cass	305	11.9	(8.2-16.9)
Berrien	380	11.3	(7.9-16.0)
<b>Region 7</b>	3,221	8.6	(7.4-10.0)
Allegan	357	12.4	(8.8-17.2)
Ionia	202	7.5	(4.3-12.7)
Kent	1,684	8.3	(6.7-10.1)
Mid-Michigan <sup>b</sup>	547	8.4	(6.0-11.6)
Ottawa	754	8.1	(5.7-11.5)

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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>32,932</b>	<b>10.4</b>	<b>(9.9-10.8)</b>
<b>Region 8</b>	2,696	10.9	(9.4-12.6)
District #10	1,185	11.4	(9.2-13.9)
Muskegon	1,449	11.1	(9.3-13.3)
<b>Region 9</b>	1,767	9.8	(8.1-11.8)
District #2	236	11.6	(7.1-18.4)
District #4	263	12.3	(8.2-18.0)
Northwest Michigan	530	9.8	(7.1-13.4)
Benzie-Leelanau	239	13.7	(8.8-20.7)
Grand Traverse	456	5.4	(3.5-8.2)
<b>Region 10</b>	1,499	10.8	(8.9-13.1)
Bay	311	14.7	(9.9-21.4)
Huron	131	9.4	(5.5-15.7)
Saginaw	709	9.1	(6.8-12.1)
Sanilac	162	11.4	(6.8-18.5)
Tuscola	166	8.5	(4.7-15.0)
<b>Region 11</b>	1,026	10.3	(8.3-12.8)
Central Michigan	581	12.2	(9.3-15.7)
Midland	273	9.2	(5.8-14.2)
<b>Region 12</b>	1,050	14.0	(11.4-17.2)
Luce-Mackinac-Alger-Schoolcraft	132	12.4	(7.4-20.1)
Western Upper Peninsula	233	14.0	(8.1-23.1)
Delta-Menominee	207	14.3	(9.4-21.2)
Chippewa	130	18.5	(11.4-28.8)
Dickinson-Iron	116	21.0	(12.2-33.8)
Marquette	210	9.8	(5.7-16.3)

<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.

<b>Table 5: Disability Michigan BRFSS, 2016-2018 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>31,590</b>	<b>27.1</b>	<b>(26.5-27.8)</b>
<b>Region 1</b>	12,645	26.8	(25.9-27.8)
Livingston	1,156	20.5	(17.4-24.1)
Macomb	1,905	29.4	(27.0-31.9)
Monroe	377	28.6	(23.7-34.1)
Oakland	3,252	21.6	(20.0-23.3)
St. Clair	423	32.7	(27.8-38.1)
Washtenaw	1,318	22.8	(20.0-25.8)
City of Detroit	1,491	33.9	(31.1-36.8)
Wayne exc. Detroit	2,713	28.4	(26.4-30.5)
<b>Region 2</b>	2,072	29.2	(26.9-31.6)
Genesee	1,521	29.9	(27.2-32.8)
Lapeer	260	30.3	(24.4-37.0)
Shiawassee	291	25.0	(19.4-31.6)
<b>Region 3</b>	1,721	27.2	(24.4-30.1)
Jackson	1,414	27.4	(24.6-30.3)
Lenawee	307	26.9	(21.4-33.3)
<b>Region 4</b>	1,816	24.0	(21.7-26.5)
Barry-Eaton	520	26.6	(22.2-31.5)
Mid-Michigan <sup>b</sup>	542	23.3	(19.5-27.6)
Ingham	948	23.7	(20.6-27.2)
<b>Region 5</b>	1,510	28.8	(26.1-31.7)
Branch-Hillsdale-St. Joseph	439	27.4	(22.5-32.8)
Calhoun	393	31.2	(25.9-37.1)
Kalamazoo	678	28.3	(24.4-32.6)
<b>Region 6</b>	656	31.1	(27.1-35.5)
Van Buren-Cass	288	32.4	(26.6-38.6)
Berrien	368	30.3	(24.8-36.4)
<b>Region 7</b>	3,129	22.1	(20.4-23.8)
Allegan	351	26.8	(21.9-32.4)
Ionia	197	22.7	(16.8-30.0)
Kent	1,638	21.0	(18.8-23.3)
Mid-Michigan <sup>b</sup>	542	23.3	(19.5-27.6)
Ottawa	749	21.0	(17.7-24.7)

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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>31,590</b>	<b>27.1</b>	<b>(26.5-27.8)</b>
<b>Region 8</b>	2,593	31.3	(28.9-33.7)
District #10	1,174	31.9	(28.6-35.4)
Muskegon	1,419	30.1	(27.2-33.3)
<b>Region 9</b>	1,698	27.7	(25.0-30.6)
District #2	232	34.6	(27.4-42.6)
District #4	261	29.4	(23.1-36.6)
Northwest Michigan	521	25.3	(21.1-30.1)
Benzie-Leelanau	236	27.7	(20.7-36.0)
Grand Traverse	448	23.5	(18.5-29.4)
<b>Region 10</b>	1,451	29.2	(26.0-32.6)
Bay	309	33.5	(26.0-41.8)
Huron	128	26.2	(18.6-35.4)
Saginaw	694	26.9	(22.5-31.8)
Sanilac	157	30.4	(22.9-39.2)
Tuscola	163	29.4	(22.0-38.1)
<b>Region 11</b>	836	31.7	(28.0-35.8)
Central Michigan	570	34.4	(29.6-39.5)
Midland	266	25.0	(19.5-31.4)
<b>Region 12</b>	1,019	31.7	(28.2-35.5)
Luce-Mackinac-Alger-Schoolcraft	133	44.7	(34.2-55.7)
Western Upper Peninsula	232	24.7	(17.7-33.5)
Delta-Menominee	203	33.8	(26.4-42.1)
Chippewa	128	34.8	(25.4-45.6)
Dickinson-Iron	117	23.5	(15.2-34.5)
Marquette	206	32.5	(25.0-41.1)

<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.

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<b>Table 6: Weight Status</b>							
<b>Michigan BRFSS, 2016-2018 Combined</b>							
<b>Geographic Area</b>	<b>Sample Size</b>	<b>Obese<sup>a</sup></b>		<b>Overweight<sup>b</sup></b>		<b>Healthy Weight<sup>c</sup></b>	
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	<b>30,848</b>	<b>32.6</b>	<b>(31.9-33.3)</b>	<b>34.8</b>	<b>(34.1-35.5)</b>	<b>30.8</b>	<b>(30.1-31.5)</b>
<b>Region 1</b>	12,178	31.0	(30.0-32.0)	35.6	(34.5-36.6)	31.6	(30.5-32.6)
Livingston	1,115	27.9	(24.2-32.0)	38.1	(33.9-42.6)	33.2	(28.9-37.8)
Macomb	1,825	31.1	(28.6-33.7)	36.3	(33.7-39.1)	30.7	(28.2-33.4)
Monroe	356	40.8	(34.8-47.1)	33.7	(28.2-39.7)	24.9	(19.9-30.6)
Oakland	3,099	25.2	(23.3-27.1)	38.1	(36.0-40.2)	34.8	(32.8-36.9)
St. Clair	410	34.2	(29.1-39.7)	36.9	(31.7-42.5)	27.9	(22.7-33.7)
Washtenaw	1,289	26.4	(23.5-29.6)	32.6	(29.4-36.0)	38.8	(35.3-42.4)
City of Detroit	1,438	39.2	(36.2-42.3)	30.7	(27.9-33.7)	28.2	(25.4-31.1)
Wayne exc. Detroit	2,586	33.2	(31.1-35.5)	35.7	(33.5-37.9)	28.9	(26.8-31.2)
<b>Region 2</b>	1,989	35.5	(33.0-38.1)	34.8	(32.3-37.5)	28.1	(25.8-30.5)
Genesee	1,438	35.2	(32.2-38.3)	34.3	(31.3-37.4)	28.7	(25.9-31.6)
Lapeer	253	32.1	(26.0-38.9)	34.5	(28.1-41.5)	32.0	(25.9-38.9)
Shiawassee	279	40.2	(33.4-47.5)	36.7	(30.1-43.8)	22.0	(16.7-28.4)
<b>Region 3</b>	1,681	35.3	(32.2-38.4)	36.2	(33.0-39.6)	27.1	(24.2-30.1)
Jackson	1,342	34.3	(31.2-37.5)	35.2	(32.0-38.6)	29.2	(26.2-32.5)
Lenawee	288	37.0	(30.4-44.1)	38.8	(31.8-46.4)	22.8	(17.3-29.3)
<b>Region 4</b>	1,766	32.9	(30.2-35.7)	32.9	(30.2-35.8)	32.7	(29.9-35.5)
Barry-Eaton	501	31.3	(26.5-36.5)	40.0	(34.7-45.6)	27.9	(23.3-33.1)
Mid-Michigan <sup>d</sup>	517	40.5	(35.4-45.8)	26.5	(22.4-31.2)	30.8	(25.9-36.2)
Ingham	916	31.0	(27.4-35.0)	30.6	(27.0-34.6)	36.3	(32.4-40.4)
<b>Region 5</b>	1,489	34.8	(31.8-37.9)	34.2	(31.4-37.2)	29.1	(26.2-32.1)
Branch-Hillsdale-St. Joseph	427	37.6	(31.9-43.7)	34.1	(28.7-40.0)	27.5	(22.2-33.4)
Calhoun	372	38.1	(32.0-44.6)	35.7	(30.2-41.7)	24.7	(19.5-30.8)
Kalamazoo	659	31.5	(27.3-35.9)	33.8	(29.6-38.3)	31.9	(27.6-36.5)
<b>Region 6</b>	678	35.5	(31.2-40.1)	30.0	(25.9-34.4)	32.5	(28.4-36.9)
Van Buren-Cass	279	36.6	(30.3-43.4)	29.9	(24.1-36.5)	32.5	(26.3-39.4)
Berrien	362	35.3	(29.4-41.7)	30.3	(24.5-36.7)	31.5	(26.0-37.6)
<b>Region 7</b>	3,015	30.6	(28.6-32.6)	34.7	(32.7-36.8)	33.1	(31.0-35.3)
Allegan	332	31.2	(25.4-37.6)	35.9	(29.9-42.3)	31.3	(25.7-37.5)
Ionia	186	38.9	(31.0-47.4)	30.8	(23.5-39.2)	30.3	(23.0-38.9)
Kent	1,568	31.1	(28.3-34.0)	34.4	(31.5-37.3)	33.1	(30.3-36.1)
Mid-Michigan <sup>d</sup>	517	40.5	(35.4-45.8)	26.5	(22.4-31.2)	30.8	(25.9-36.2)
Ottawa	717	24.5	(20.9-28.6)	38.0	(33.6-42.6)	35.6	(31.2-40.3)



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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	%	95% Confidence Interval
<b>Michigan Total</b>	<b>30,848</b>	<b>32.6</b>	<b>(31.9-33.3)</b>	<b>34.8</b>	<b>(34.1-35.5)</b>	<b>30.8</b>	<b>(30.1-31.5)</b>
<b>Region 8</b>	2,539	34.7	(32.2-37.3)	34.9	(32.4-37.5)	28.9	(26.5-31.5)
District #10	1,130	36.0	(32.5-39.7)	35.4	(31.9-39.0)	27.2	(24.0-30.6)
Muskegon	1,349	34.6	(31.2-38.1)	34.5	(31.2-37.9)	29.5	(26.2-33.0)
<b>Region 9</b>	1,675	31.6	(28.9-34.4)	36.5	(33.6-39.4)	30.1	(27.4-33.0)
District #2	227	38.4	(30.9-46.4)	29.8	(23.3-37.2)	30.4	(23.4-38.4)
District #4	247	33.9	(27.2-41.3)	35.8	(28.7-43.6)	29.1	(22.6-36.7)
Northwest Michigan	505	29.1	(24.6-34.0)	39.9	(34.7-45.3)	28.0	(23.5-32.9)
Benzie-Leelanau	225	35.0	(27.5-43.3)	35.0	(27.9-42.9)	27.5	(20.6-35.6)
Grand Traverse	430	27.4	(22.5-32.9)	39.3	(33.5-45.4)	32.9	(27.2-39.0)
<b>Region 10</b>	1,408	38.5	(35.2-41.9)	33.8	(30.6-37.1)	26.1	(23.3-29.2)
Bay	294	36.0	(29.1-43.5)	33.0	(26.1-40.7)	29.3	(23.1-36.5)
Huron	122	39.6	(30.5-49.6)	36.8	(27.7-47.0)	21.9	(14.6-31.5)
Saginaw	665	42.2	(37.1-47.4)	31.7	(27.2-36.6)	24.6	(20.5-29.3)
Sanilac	148	35.3	(26.9-44.7)	35.8	(26.8-46.0)	26.8	(19.5-35.5)
Tuscola	162	33.2	(25.3-42.3)	40.8	(32.5-49.7)	24.5	(17.1-33.8)
<b>Region 11</b>	970	39.5	(35.6-43.6)	31.1	(27.6-34.9)	27.9	(24.3-31.9)
Central Michigan	557	43.3	(38.1-48.7)	30.2	(25.7-35.2)	24.7	(20.1-30.0)
Midland	259	37.5	(30.7-44.9)	29.3	(23.2-36.2)	31.5	(24.8-39.1)
<b>Region 12</b>	978	35.2	(31.4-39.1)	34.3	(30.6-38.2)	28.0	(24.6-31.7)
Luce-Mackinac-Alger-Schoolcraft	123	39.6	(29.0-51.3)	26.2	(18.0-36.4)	29.3	(19.4-41.8)
Western Upper Peninsula	220	30.1	(23.0-38.3)	41.5	(33.3-50.3)	25.4	(18.7-33.3)
Delta-Menominee	193	38.7	(30.4-47.8)	35.2	(27.3-44.0)	25.5	(19.1-33.1)
Chippewa	119	49.4	(38.1-60.6)	27.0	(18.5-37.6)	23.7	(15.4-34.6)
Dickinson-Iron	107	25.0	(16.0-36.9)	39.5	(27.9-52.4)	30.4	(20.2-42.9)
Marquette	194	34.5	(26.6-43.4)	34.4	(26.8-42.8)	28.7	(21.4-37.2)

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, 2016-2018 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>21,775</b>	<b>9.6</b>	<b>(9.0-10.1)</b>
<b>Region 1</b>	8,665	8.5	(7.7-9.3)
Livingston	753	6.1	(4.1-9.0)
Macomb	1,277	8.0	(6.3-10.2)
Monroe	266	5.4	(3.0-9.5)
Oakland	2,194	6.2	(5.1-7.7)
St. Clair	295	8.2	(4.8-13.7)
Washtenaw	872	8.5	(6.2-11.4)
City of Detroit	1,119	14.7	(12.3-17.4)
Wayne exc. Detroit	1,839	8.4	(6.9-10.3)
<b>Region 2</b>	1,427	10.1	(8.2-12.4)
Genesee	1,036	10.5	(8.2-13.4)
Lapeer	174	11.1	(6.4-18.5)
Shiawassee	203	7.8	(4.5-13.2)
<b>Region 3</b>	1,146	11.5	(8.9-14.6)
Jackson	903	10.4	(8.1-13.4)
Lenawee	201	12.7	(7.6-20.5)
<b>Region 4</b>	1,251	9.9	(7.9-12.3)
Barry-Eaton	345	12.4	(8.3-18.2)
Mid-Michigan <sup>b</sup>	344	8.8	(5.7-13.5)
Ingham	683	8.1	(5.8-11.1)
<b>Region 5</b>	1,050	10.3	(8.1-13.1)
Branch-Hillsdale-St. Joseph	291	15.8	(10.7-22.7)
Calhoun	257	7.8	(4.6-13.1)
Kalamazoo	476	8.7	(6.0-12.5)
<b>Region 6</b>	464	11.3	(8.1-15.7)
Van Buren-Cass	191	8.7	(5.0-14.8)
Berrien	240	13.6	(8.7-20.6)
<b>Region 7</b>	2,246	8.7	(7.3-10.4)
Allegan	249	9.3	(5.7-14.9)
Ionia	141	10.8	(6.1-18.4)
Kent	1,169	8.9	(6.9-11.3)
Mid-Michigan <sup>b</sup>	344	8.8	(5.7-13.5)
Ottawa	529	8.3	(5.7-12.0)

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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>21,775</b>	<b>9.6</b>	<b>(9.0-10.1)</b>
<b>Region 8</b>	1,734	11.4	(9.5-13.7)
District #10	734	13.3	(10.4-16.8)
Muskegon	952	9.1	(7.0-11.8)
<b>Region 9</b>	1,073	10.2	(8.2-12.7)
District #2	148	15.0	(8.9-24.0)
District #4	159	9.2	(5.2-16.0)
Northwest Michigan	307	10.0	(6.7-14.8)
Benzie-Leelanau	121	10.3	(5.8-17.5)
Grand Traverse	295	7.5	(4.7-11.8)
<b>Region 10</b>	965	10.8	(8.5-13.6)
Bay	204	8.3	(4.9-13.9)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	453	10.1	(6.7-14.8)
Sanilac	112	20.4	(12.1-32.3)
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	673	10.5	(7.3-14.8)
Central Michigan	352	12.1	(7.5-19.0)
Midland	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 12</b>	680	10.2	(7.4-13.8)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	144	13.8	(7.7-23.3)
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 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, 2016-2018 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>33,027</b>	<b>14.9</b>	<b>(14.4-15.5)</b>	<b>33,158</b>	<b>12.0</b>	<b>(11.5-12.5)</b>
<b>Region 1</b>	13,008	14.2	(13.4-15.0)	13,042	12.9	(12.2-13.7)
Livingston	1,178	12.3	(9.6-15.7)	1,183	8.9	(6.6-11.9)
Macomb	1,957	13.5	(11.6-15.7)	1,964	13.6	(11.8-15.7)
Monroe	388	12.8	(8.7-18.4)	390	8.3	(5.8-11.8)
Oakland	3,327	13.0	(11.5-14.7)	3,333	10.5	(9.2-11.9)
St. Clair	432	7.9	(5.0-12.1)	433	11.8	(8.7-15.7)
Washtenaw	1,345	15.4	(12.8-18.4)	1,348	10.7	(8.6-13.4)
City of Detroit	1,546	20.6	(18.1-23.3)	1,550	20.6	(18.2-23.3)
Wayne exc. Detroit	2,767	12.9	(11.3-14.6)	2,772	12.8	(11.2-14.5)
<b>Region 2</b>	2,143	14.4	(12.5-16.6)	2,152	12.2	(10.5-14.1)
Genesee	1,564	13.7	(11.5-16.2)	1,570	12.0	(10.1-14.3)
Lapeer	262	17.6	(12.5-24.4)	263	13.5	(9.3-19.2)
Shiawassee	297	14.3	(9.2-21.5)	299	12.1	(8.3-17.2)
<b>Region 3</b>	1,801	16.9	(14.3-19.9)	1,816	12.4	(10.3-14.9)
Jackson	1,439	14.8	(12.3-17.8)	1,451	11.1	(9.1-13.5)
Lenawee	308	17.4	(12.3-23.9)	310	13.8	(9.4-19.7)
<b>Region 4</b>	1,870	15.9	(13.8-18.4)	1,881	10.3	(8.7-12.2)
Barry-Eaton	535	16.7	(12.6-21.8)	537	8.1	(5.8-11.4)
Mid-Michigan <sup>c</sup>	551	10.0	(7.2-13.8)	555	8.9	(6.5-12.1)
Ingham	963	18.1	(15.0-21.6)	970	13.0	(10.4-16.0)
<b>Region 5</b>	1,579	17.6	(15.3-20.2)	1,583	11.3	(9.5-13.4)
Branch-Hillsdale-St. Joseph	459	17.7	(13.4-23.1)	457	12.1	(8.9-16.3)
Calhoun	396	16.5	(12.4-21.7)	396	8.9	(6.1-12.8)
Kalamazoo	693	17.0	(13.6-21.0)	699	12.4	(9.6-16.0)
<b>Region 6</b>	721	20.3	(16.6-24.7)	725	12.9	(10.1-16.2)
Van Buren-Cass	304	14.9	(10.4-20.8)	306	13.3	(9.4-18.6)
Berrien	379	23.5	(17.9-30.2)	381	12.5	(8.8-17.5)

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<b>Table 8 Cont'd</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>33,027</b>	<b>14.9</b>	<b>(14.4-15.5)</b>	<b>33,158</b>	<b>12.0</b>	<b>(11.5-12.5)</b>
<b>Region 7</b>	3,231	11.2	(9.9-12.8)	3,242	10.8	(9.5-12.2)
Allegan	358	11.3	(7.7-16.4)	359	12.2	(8.3-17.5)
Ionia	199	9.5	(5.3-16.5)	203	8.6	(4.8-14.9)
Kent	1,685	12.8	(10.8-15.1)	1,688	11.2	(9.4-13.3)
Mid-Michigan <sup>c</sup>	551	10.0	(7.2-13.8)	555	8.9	(6.5-12.1)
Ottawa	764	7.0	(4.9-9.8)	765	9.1	(6.9-11.9)
<b>Region 8</b>	2,707	14.1	(12.1-16.3)	2,714	12.6	(10.9-14.4)
District #10	1,191	14.9	(12.3-18.0)	1,193	13.4	(11.0-16.2)
Muskegon	1,454	10.8	(8.6-13.5)	1,459	11.7	(9.6-14.2)
<b>Region 9</b>	1,770	16.2	(14.0-18.5)	1,774	10.4	(8.7-12.4)
District #2	237	19.6	(14.0-26.6)	236	9.9	(5.6-16.8)
District #4	264	17.1	(12.1-23.4)	265	9.1	(5.9-13.7)
Northwest Michigan	534	14.7	(11.1-19.2)	534	11.9	(8.7-16.1)
Benzie-Leelanau	236	13.9	(8.9-21.0)	239	13.0	(8.5-19.2)
Grand Traverse	456	12.6	(9.2-17.0)	457	9.1	(6.3-12.9)
<b>Region 10</b>	1,494	14.2	(11.7-17.0)	1,511	11.0	(9.1-13.2)
Bay	308	12.8	(7.6-20.9)	315	8.3	(5.1-13.2)
Huron	131	19.1	(12.5-28.1)	131	14.5	(9.1-22.3)
Saginaw	706	12.7	(9.3-17.0)	716	11.8	(8.7-15.8)
Sanilac	161	16.5	(10.8-24.6)	162	13.2	(8.5-19.9)
Tuscola	168	13.3	(8.3-20.6)	167	7.1	(3.8-12.8)
<b>Region 11</b>	1,029	16.3	(13.1-20.1)	1,031	10.0	(7.9-12.6)
Central Michigan	584	14.6	(10.5-19.8)	586	10.1	(7.6-13.2)
Midland	272	9.2	(5.9-14.2)	272	7.1	(4.4-11.3)
<b>Region 12</b>	1,055	13.9	(11.3-16.9)	1,062	11.1	(8.8-13.9)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	134	14.3	(7.7-25.0)
Western Upper Peninsula	233	21.1	(15.1-28.7)	235	9.4	(5.8-14.9)
Delta-Menominee	208	14.7	(9.4-22.2)	209	11.3	(7.0-17.8)
Chippewa	129	12.1	(6.8-20.9)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Dickinson-Iron	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Marquette	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	212	10.4	(5.9-17.7)

<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, 2016-2018 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>32,616</b>	<b>24.9</b>	<b>(24.3-25.6)</b>
<b>Region 1</b>	12,800	24.8	(23.8-25.7)
Livingston	1,163	18.9	(16.0-22.2)
Macomb	1,929	25.1	(22.9-27.5)
Monroe	380	25.7	(20.7-31.5)
Oakland	3,271	20.9	(19.2-22.7)
St. Clair	429	30.0	(25.0-35.6)
Washtenaw	1,332	18.0	(15.3-21.1)
City of Detroit	1,496	35.8	(32.9-38.8)
Wayne exc. Detroit	2,732	25.4	(23.5-27.4)
<b>Region 2</b>	2,119	28.0	(25.7-30.5)
Genesee	1,544	28.2	(25.5-31.1)
Lapeer	260	24.5	(18.8-31.2)
Shiawassee	296	30.7	(24.5-37.6)
<b>Region 3</b>	1,788	28.4	(25.4-31.6)
Jackson	1,429	28.2	(25.2-31.4)
Lenawee	304	30.9	(24.4-38.2)
<b>Region 4</b>	1,856	23.1	(20.7-25.7)
Barry-Eaton	527	24.4	(20.0-29.4)
Mid-Michigan <sup>b</sup>	552	25.2	(21.0-29.9)
Ingham	956	22.5	(19.1-26.2)
<b>Region 5</b>	1,560	25.2	(22.6-28.0)
Branch-Hillsdale-St. Joseph	453	26.0	(21.3-31.4)
Calhoun	393	31.6	(25.9-37.8)
Kalamazoo	685	21.3	(17.9-25.2)
<b>Region 6</b>	713	24.9	(21.3-28.9)
Van Buren-Cass	300	31.5	(25.5-38.1)
Berrien	376	20.6	(16.3-25.7)
<b>Region 7</b>	3,194	21.8	(20.1-23.7)
Allegan	353	21.6	(16.9-27.1)
Ionia	201	31.4	(24.2-39.6)
Kent	1,660	21.4	(18.9-24.0)
Mid-Michigan <sup>b</sup>	552	25.2	(21.0-29.9)
Ottawa	755	18.9	(15.7-22.7)

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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>32,616</b>	<b>24.9</b>	<b>(24.3-25.6)</b>
<b>Region 8</b>	2,678	27.1	(24.8-29.5)
District #10	1,183	28.7	(25.6-32.1)
Muskegon	1,433	24.6	(21.9-27.5)
<b>Region 9</b>	1,756	25.7	(23.0-28.5)
District #2	234	35.9	(28.7-43.9)
District #4	257	28.1	(21.6-35.7)
Northwest Michigan	529	23.7	(19.3-28.7)
Benzie-Leelanau	237	26.4	(19.5-34.7)
Grand Traverse	456	17.8	(13.9-22.5)
<b>Region 10</b>	1,482	26.9	(24.1-29.9)
Bay	310	24.7	(19.2-31.2)
Huron	130	26.0	(18.6-35.2)
Saginaw	701	26.5	(22.2-31.3)
Sanilac	158	29.9	(22.3-38.7)
Tuscola	166	30.4	(22.7-39.2)
<b>Region 11</b>	1,010	25.3	(21.9-29.1)
Central Michigan	575	28.2	(23.6-33.3)
Midland	268	23.4	(17.7-30.2)
<b>Region 12</b>	1,055	24.2	(21.1-27.6)
Luce-Mackinac-Alger-Schoolcraft	133	28.6	(19.6-39.7)
Western Upper Peninsula	237	19.6	(14.3-26.3)
Delta-Menominee	207	32.9	(25.0-41.9)
Chippewa	129	32.2	(23.4-42.4)
Dickinson-Iron	119	20.0	(12.6-30.3)
Marquette	208	18.6	(13.2-25.7)

<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, 2016-2018 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>32,120</b>	<b>19.6</b>	<b>(19.0-20.2)</b>	<b>26.3</b>	<b>(25.7-26.9)</b>	<b>54.1</b>	<b>(53.4-54.8)</b>
<b>Region 1</b>	12,630	19.4	(18.5-20.3)	25.5	(24.6-26.5)	55.1	(54.0-56.2)
Livingston	1,147	15.4	(12.5-18.9)	36.5	(32.3-40.9)	48.1	(43.7-52.6)
Macomb	1,903	23.2	(20.9-25.7)	25.5	(23.4-27.9)	51.2	(48.5-53.9)
Monroe	373	18.5	(14.1-23.8)	27.1	(22.2-32.7)	54.4	(48.3-60.4)
Oakland	3,234	14.8	(13.2-16.5)	27.2	(25.3-29.1)	58.0	(55.9-60.1)
St. Clair	420	25.3	(20.5-30.7)	31.2	(26.3-36.6)	43.5	(38.2-49.0)
Washtenaw	1,319	10.8	(8.6-13.5)	21.0	(18.5-23.7)	68.2	(64.9-71.4)
City of Detroit	1,475	28.2	(25.4-31.1)	16.5	(14.4-18.8)	55.3	(52.2-58.4)
Wayne exc. Detroit	2,695	19.5	(17.7-21.5)	27.9	(25.9-29.9)	52.6	(50.3-54.9)
<b>Region 2</b>	2,079	23.4	(21.1-25.9)	29.3	(27.0-31.6)	47.3	(44.7-49.9)
Genesee	1,512	24.2	(21.5-27.2)	27.9	(25.3-30.7)	47.9	(44.8-51.0)
Lapeer	259	19.8	(14.5-26.3)	36.3	(29.9-43.2)	43.9	(37.2-50.9)
Shiawassee	290	23.2	(17.6-30.1)	29.1	(23.3-35.7)	47.6	(40.7-54.7)
<b>Region 3</b>	1,761	22.0	(19.1-25.2)	27.5	(24.8-30.4)	50.5	(47.2-53.8)
Jackson	1,402	22.4	(19.6-25.4)	27.9	(25.1-30.9)	49.7	(46.4-53.1)
Lenawee	305	23.4	(17.1-31.2)	29.3	(23.4-35.9)	47.3	(40.3-54.5)
<b>Region 4</b>	1,828	17.6	(15.4-20.1)	24.1	(21.9-26.6)	58.3	(55.4-61.1)
Barry-Eaton	523	19.5	(15.6-24.2)	23.7	(19.5-28.3)	56.8	(51.4-62.0)
Mid-Michigan <sup>c</sup>	540	20.1	(15.9-25.0)	29.2	(24.9-34.0)	50.7	(45.5-55.9)
Ingham	941	17.2	(14.1-20.7)	23.2	(20.2-26.6)	59.6	(55.6-63.5)
<b>Region 5</b>	1,542	20.9	(18.4-23.6)	27.2	(24.6-30.0)	51.9	(48.8-55.0)
Branch-Hillsdale-St. Joseph	443	27.6	(22.5-33.3)	28.7	(23.9-34.1)	43.7	(37.9-49.7)
Calhoun	394	20.1	(15.5-25.7)	32.2	(26.6-38.3)	47.7	(41.6-53.9)
Kalamazoo	674	17.3	(13.9-21.2)	23.3	(19.9-27.1)	59.4	(54.9-63.8)
<b>Region 6</b>	701	19.7	(16.2-23.8)	24.9	(21.5-28.7)	55.4	(50.8-59.8)
Van Buren-Cass	298	18.0	(13.2-23.9)	32.0	(26.2-38.4)	50.0	(43.4-56.6)
Berrien	365	20.5	(15.7-26.4)	20.5	(16.3-25.5)	58.9	(52.6-65.0)
<b>Region 7</b>	3,141	16.5	(14.8-18.3)	26.5	(24.6-28.3)	57.1	(54.9-59.2)
Allegan	346	17.5	(13.3-22.7)	27.9	(22.6-34.0)	54.6	(48.2-60.8)
Ionia	197	22.5	(16.0-30.6)	23.6	(17.6-30.9)	53.9	(45.6-62.0)
Kent	1,634	15.2	(13.0-17.6)	25.3	(22.8-27.9)	59.5	(56.6-62.5)
Mid-Michigan <sup>c</sup>	540	20.1	(15.9-25.0)	29.2	(24.9-34.0)	50.7	(45.5-55.9)
Ottawa	744	15.0	(11.6-19.2)	27.6	(23.9-31.7)	57.4	(52.8-61.9)



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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>32,120</b>	<b>19.6</b>	<b>(19.0-20.2)</b>	<b>26.3</b>	<b>(25.7-26.9)</b>	<b>54.1</b>	<b>(53.4-54.8)</b>
<b>Region 8</b>	2,638	23.0	(20.8-25.4)	29.5	(27.2-31.9)	47.5	(44.8-50.1)
District #10	1,169	24.1	(21.1-27.5)	31.8	(28.6-35.3)	44.0	(40.4-47.7)
Muskegon	1,408	23.7	(20.5-27.2)	26.9	(24.2-29.9)	49.4	(45.9-52.9)
<b>Region 9</b>	1,734	20.9	(18.5-23.5)	30.3	(27.7-33.0)	48.8	(45.9-51.8)
District #2	233	26.9	(20.0-35.1)	29.0	(22.6-36.3)	44.1	(36.7-51.9)
District #4	253	23.2	(17.5-30.2)	36.8	(29.4-44.8)	40.0	(33.0-47.5)
Northwest Michigan	520	19.4	(15.5-24.1)	30.5	(26.0-35.3)	50.1	(44.8-55.4)
Benzie-Leelanau	235	15.2	(10.4-21.5)	29.8	(23.2-37.4)	55.0	(47.0-62.8)
Grand Traverse	450	19.7	(15.3-25.0)	28.6	(23.8-33.9)	51.7	(45.8-57.6)
<b>Region 10</b>	1,464	19.8	(17.1-22.8)	27.2	(24.5-30.2)	53.0	(49.6-56.3)
Bay	308	19.4	(13.8-26.6)	28.2	(22.5-34.6)	52.4	(44.8-59.9)
Huron	128	14.4	(8.7-22.8)	33.9	(25.2-43.9)	51.7	(41.9-61.3)
Saginaw	690	21.2	(17.1-26.0)	27.0	(22.7-31.7)	51.8	(46.6-56.9)
Sanilac	156	22.8	(16.0-31.4)	20.2	(14.3-27.7)	57.0	(47.7-65.9)
Tuscola	163	16.0	(10.6-23.5)	30.4	(23.1-38.9)	53.6	(44.6-62.3)
<b>Region 11</b>	1,000	20.6	(17.4-24.3)	27.7	(24.4-31.3)	51.6	(47.6-55.7)
Central Michigan	571	23.1	(18.9-27.9)	31.2	(26.6-36.2)	45.8	(40.5-51.1)
Midland	263	14.7	(9.3-22.5)	28.3	(22.4-35.0)	57.0	(49.4-64.2)
<b>Region 12</b>	1,036	20.6	(17.6-23.9)	29.9	(26.6-33.5)	49.5	(45.6-53.4)
Luce-Mackinac-Alger-Schoolcraft	130	18.7	(11.1-29.7)	32.7	(23.3-43.9)	48.5	(37.6-59.7)
Western Upper Peninsula	231	21.7	(15.5-29.6)	24.0	(18.1-31.0)	54.3	(46.0-62.4)
Delta-Menominee	205	20.5	(14.9-27.6)	36.9	(29.0-45.5)	42.6	(34.3-51.2)
Chippewa	126	23.7	(15.5-34.4)	29.4	(21.0-39.6)	46.9	(36.1-58.0)
Dickinson-Iron	117	28.1	(18.5-40.4)	31.5	(21.2-43.9)	40.4	(29.6-52.3)
Marquette	206	15.6	(10.4-22.8)	31.7	(24.2-40.2)	52.7	(44.2-61.0)

<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, 2016-2018 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>31,866</b>	<b>56.9</b>	<b>(56.2-57.6)</b>	<b>6.7</b>	<b>(6.3-7.0)</b>	<b>18.5</b>	<b>(17.9-19.0)</b>
<b>Region 1</b>	12,504	59.0	(57.9-60.1)	6.4	(5.8-7.0)	18.8	(17.9-19.8)
Livingston	1,139	67.4	(63.1-71.4)	10.6	(7.9-14.0)	23.0	(19.1-27.3)
Macomb	1,886	57.9	(55.2-60.6)	7.0	(5.6-8.6)	19.6	(17.4-21.9)
Monroe	371	56.5	(50.3-62.5)	8.5	(5.6-12.8)	18.1	(13.9-23.2)
Oakland	3,211	64.3	(62.2-66.3)	6.1	(5.2-7.2)	19.2	(17.5-21.1)
St. Clair	415	53.9	(48.3-59.4)	7.8	(5.1-11.6)	18.5	(14.4-23.3)
Washtenaw	1,306	64.2	(60.7-67.6)	6.6	(5.1-8.5)	20.0	(17.2-23.1)
City of Detroit	1,455	49.5	(46.3-52.6)	5.0	(3.7-6.6)	17.2	(14.9-19.7)
Wayne exc. Detroit	2,658	57.0	(54.7-59.2)	5.7	(4.7-7.0)	17.4	(15.6-19.3)
<b>Region 2</b>	2,055	52.1	(49.4-54.7)	4.9	(3.9-6.2)	16.4	(14.4-18.5)
Genesee	1,495	49.0	(45.9-52.1)	5.4	(4.1-7.1)	15.0	(12.8-17.4)
Lapeer	257	60.2	(53.2-66.7)	-- <sup>e</sup>	-- <sup>e</sup>	19.7	(14.4-26.3)
Shiawassee	285	58.3	(51.1-65.1)	-- <sup>e</sup>	-- <sup>e</sup>	20.0	(14.5-26.8)
<b>Region 3</b>	1,745	56.0	(52.7-59.2)	5.9	(4.4-7.9)	17.3	(14.9-20.1)
Jackson	1,388	52.1	(48.7-55.4)	4.6	(3.5-6.0)	16.8	(14.4-19.5)
Lenawee	303	61.2	(54.2-67.8)	7.4	(4.5-12.1)	17.7	(12.8-24.1)
<b>Region 4</b>	1,819	55.0	(52.1-57.9)	7.3	(5.9-8.9)	17.9	(15.7-20.3)
Barry-Eaton	516	50.8	(45.4-56.2)	6.3	(4.3-9.2)	12.8	(9.6-16.8)
Mid-Michigan <sup>d</sup>	541	55.7	(50.5-60.8)	8.0	(5.4-11.6)	19.6	(15.5-24.5)
Ingham	937	58.0	(53.9-62.1)	7.6	(5.8-10.0)	20.5	(17.3-24.1)
<b>Region 5</b>	1,533	53.2	(50.1-56.3)	6.4	(5.0-8.2)	18.1	(15.7-20.6)
Branch-Hillsdale-St. Joseph	441	46.0	(40.2-51.9)	5.9	(3.6-9.5)	15.5	(11.6-20.4)
Calhoun	390	42.4	(36.5-48.5)	-- <sup>e</sup>	-- <sup>e</sup>	11.8	(8.4-16.3)
Kalamazoo	671	63.8	(59.2-68.1)	7.2	(5.2-9.8)	22.3	(18.6-26.5)
<b>Region 6</b>	704	52.3	(47.7-56.8)	5.6	(3.9-8.0)	15.2	(12.1-18.9)
Van Buren-Cass	299	50.5	(43.9-57.1)	6.6	(4.0-10.6)	13.8	(9.7-19.2)
Berrien	367	52.8	(46.3-59.3)	4.9	(2.8-8.4)	15.9	(11.5-21.5)
<b>Region 7</b>	3,123	60.9	(58.7-63.0)	7.4	(6.4-8.6)	18.9	(17.2-20.7)
Allegan	342	57.5	(51.2-63.6)	8.8	(5.6-13.5)	15.3	(11.2-20.6)
Ionia	197	55.7	(47.4-63.7)	-- <sup>e</sup>	-- <sup>e</sup>	18.0	(11.9-26.3)
Kent	1,624	61.2	(58.2-64.2)	6.9	(5.6-8.4)	19.6	(17.3-22.1)
Mid-Michigan <sup>d</sup>	541	55.7	(50.5-60.8)	8.0	(5.4-11.6)	19.6	(15.5-24.5)
Ottawa	741	64.4	(59.9-68.6)	8.6	(6.4-11.6)	18.8	(15.3-22.9)

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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	%
<b>Michigan Total</b>	<b>31,866</b>	<b>56.9</b>	<b>(56.2-57.6)</b>	<b>6.7</b>	<b>(6.3-7.0)</b>	<b>18.5</b>	<b>(17.9-19.0)</b>
<b>Region 8</b>	2,616	50.7	(48.1-53.4)	6.3	(5.2-7.6)	17.4	(15.3-19.7)
District #10	1,155	48.5	(44.8-52.2)	6.7	(5.2-8.5)	17.0	(14.2-20.1)
Muskegon	1,399	54.8	(51.3-58.3)	6.5	(4.8-8.6)	19.4	(16.2-23.0)
<b>Region 9</b>	1,733	56.5	(53.5-59.4)	9.1	(7.5-11.0)	18.1	(15.8-20.5)
District #2	231	52.8	(44.9-60.6)	9.9	(5.8-16.3)	18.3	(12.9-25.2)
District #4	255	51.3	(43.8-58.7)	6.1	(3.8-9.8)	17.1	(12.3-23.3)
Northwest Michigan	521	55.9	(50.6-61.0)	9.1	(6.3-12.8)	18.2	(14.1-23.2)
Benzie-Leelanau	235	56.5	(48.3-64.4)	8.7	(5.3-14.2)	15.4	(10.5-21.9)
Grand Traverse	448	62.6	(56.6-68.3)	11.4	(8.2-15.6)	18.5	(14.1-23.8)
<b>Region 10</b>	1,455	55.4	(51.9-58.8)	7.4	(5.8-9.3)	21.3	(18.6-24.3)
Bay	309	57.5	(49.5-65.1)	7.3	(4.6-11.4)	23.5	(17.4-31.0)
Huron	127	59.6	(49.7-68.7)	-- <sup>e</sup>	-- <sup>e</sup>	18.3	(11.9-27.0)
Saginaw	686	55.5	(50.3-60.5)	7.3	(5.0-10.5)	20.7	(16.7-25.4)
Sanilac	153	53.5	(43.9-62.9)	-- <sup>e</sup>	-- <sup>e</sup>	22.8	(15.7-32.0)
Tuscola	160	48.5	(39.6-57.6)	-- <sup>e</sup>	-- <sup>e</sup>	19.3	(13.2-27.3)
<b>Region 11</b>	995	55.1	(51.0-59.1)	8.1	(6.2-10.6)	19.9	(16.8-23.4)
Central Michigan	569	49.9	(44.5-55.2)	8.3	(5.8-11.8)	18.1	(14.5-22.3)
Midland	263	60.1	(52.9-67.0)	7.3	(4.3-12.2)	18.8	(12.7-26.9)
<b>Region 12</b>	1,031	55.5	(51.6-59.4)	8.1	(6.1-10.6)	18.7	(15.7-22.2)
Luce-Mackinac-Alger-Schoolcraft	129	49.9	(38.8-61.0)	-- <sup>e</sup>	-- <sup>e</sup>	14.5	(8.6-23.4)
Western Upper Peninsula	229	58.1	(49.8-66.0)	-- <sup>e</sup>	-- <sup>e</sup>	20.1	(13.0-29.8)
Delta-Menominee	204	62.7	(54.2-70.5)	-- <sup>e</sup>	-- <sup>e</sup>	14.7	(9.6-22.0)
Chippewa	126	46.4	(35.8-57.2)	-- <sup>e</sup>	-- <sup>e</sup>	15.8	(9.2-25.9)
Dickinson-Iron	116	48.6	(36.9-60.5)	-- <sup>e</sup>	-- <sup>e</sup>	20.0	(11.8-31.7)
Marquette	206	59.9	(51.2-67.9)	-- <sup>e</sup>	-- <sup>e</sup>	25.2	(18.5-33.4)

<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%.

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<b>Table 12: Seatbelt Use Michigan BRFSS, 2016-2018 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>31,639</b>	<b>89.1</b>	<b>(88.6-89.6)</b>
<b>Region 1</b>	12,385	90.4	(89.6-91.0)
Livingston	1,138	90.1	(86.5-92.8)
Macomb	1,867	90.4	(88.5-92.0)
Monroe	363	91.3	(87.1-94.3)
Oakland	3,179	92.1	(90.8-93.3)
St. Clair	414	91.4	(87.5-94.2)
Washtenaw	1,302	89.5	(86.7-91.8)
City of Detroit	1,413	85.7	(83.3-87.8)
Wayne exc. Detroit	2,647	91.2	(89.7-92.5)
<b>Region 2</b>	2,051	87.4	(85.5-89.1)
Genesee	1,489	87.8	(85.5-89.8)
Lapeer	257	91.2	(86.1-94.5)
Shiawassee	287	82.3	(76.2-87.0)
<b>Region 3</b>	1,732	89.3	(86.8-91.4)
Jackson	1,378	89.9	(87.3-92.0)
Lenawee	300	88.3	(82.5-92.4)
<b>Region 4</b>	1,808	89.6	(87.5-91.4)
Barry-Eaton	515	88.3	(83.6-91.8)
Mid-Michigan <sup>b</sup>	541	89.5	(85.4-92.6)
Ingham	926	90.4	(87.7-92.5)
<b>Region 5</b>	1,526	89.9	(87.7-91.7)
Branch-Hillsdale-St. Joseph	439	89.9	(84.9-93.4)
Calhoun	389	90.2	(85.9-93.3)
Kalamazoo	668	89.6	(86.2-92.3)
<b>Region 6</b>	698	85.5	(81.4-88.8)
Van Buren-Cass	292	85.5	(79.3-90.1)
Berrien	370	86.4	(80.5-90.7)
<b>Region 7</b>	3,116	88.6	(87.0-90.0)
Allegan	344	90.0	(84.9-93.5)
Ionia	196	87.8	(79.7-92.9)
Kent	1,625	87.9	(85.6-89.9)
Mid-Michigan <sup>b</sup>	541	89.5	(85.4-92.6)
Ottawa	733	89.8	(86.3-92.4)

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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>31,639</b>	<b>89.1</b>	<b>(88.6-89.6)</b>
<b>Region 8</b>	2,600	88.0	(86.1-89.7)
District #10	1,152	87.3	(84.5-89.6)
Muskegon	1,387	89.0	(86.3-91.3)
<b>Region 9</b>	1,714	88.0	(85.7-90.0)
District #2	229	82.8	(75.3-88.4)
District #4	248	86.9	(80.3-91.5)
Northwest Michigan	516	88.0	(83.7-91.4)
Benzie-Leelanau	233	90.7	(85.2-94.3)
Grand Traverse	446	91.5	(87.0-94.5)
<b>Region 10</b>	1,443	87.1	(84.6-89.3)
Bay	300	89.6	(83.4-93.7)
Huron	128	84.2	(75.7-90.1)
Saginaw	684	86.6	(82.4-89.9)
Sanilac	152	83.6	(74.7-89.7)
Tuscola	162	90.1	(83.8-94.1)
<b>Region 11</b>	986	87.9	(84.8-90.4)
Central Michigan	563	87.5	(83.5-90.6)
Midland	264	92.5	(87.4-95.6)
<b>Region 12</b>	1,026	86.0	(82.6-88.8)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	228	83.3	(73.9-89.8)
Delta-Menominee	201	85.2	(76.8-90.9)
Chippewa	127	85.8	(76.6-91.8)
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	205	88.5	(81.4-93.1)

<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, 2016-2018 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>32,258</b>	<b>24.6</b>	<b>(24.0-25.3)</b>
<b>Region 1</b>	12,942	24.0	(23.0-24.9)
Livingston	1,170	20.8	(17.4-24.7)
Macomb	1,943	26.4	(23.9-28.9)
Monroe	386	23.3	(18.5-28.8)
Oakland	3,306	25.2	(23.3-27.1)
St. Clair	430	23.4	(18.8-28.8)
Washtenaw	1,345	27.9	(24.8-31.2)
City of Detroit	1,541	20.3	(17.8-23.0)
Wayne exc. Detroit	2,756	21.8	(20.0-23.8)
<b>Region 2</b>	2,133	21.7	(19.5-24.0)
Genesee	1,559	21.4	(18.8-24.1)
Lapeer	257	23.8	(18.2-30.4)
Shiawassee	297	21.7	(16.4-28.1)
<b>Region 3</b>	1,801	27.7	(24.6-31.0)
Jackson	1,440	26.3	(23.4-29.4)
Lenawee	306	28.5	(21.9-36.3)
<b>Region 4</b>	1,857	25.2	(22.8-27.9)
Barry-Eaton	531	25.2	(20.7-30.4)
Mid-Michigan <sup>b</sup>	552	21.8	(17.7-26.5)
Ingham	955	26.6	(23.2-30.4)
<b>Region 5</b>	1,572	26.5	(23.9-29.4)
Branch-Hillsdale-St. Joseph	455	28.3	(23.2-34.0)
Calhoun	397	27.2	(21.9-33.2)
Kalamazoo	689	25.0	(21.1-29.2)
<b>Region 6</b>	720	24.1	(20.5-28.2)
Van Buren-Cass	305	23.2	(18.1-29.1)
Berrien	377	24.1	(19.1-29.9)
<b>Region 7</b>	3,223	23.9	(22.1-25.8)
Allegan	356	23.3	(18.5-29.0)
Ionia	202	27.1	(20.1-35.4)
Kent	1,679	24.6	(22.1-27.3)
Mid-Michigan <sup>b</sup>	552	21.8	(17.7-26.5)
Ottawa	759	22.0	(18.6-25.7)

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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>32,258</b>	<b>24.6</b>	<b>(24.0-25.3)</b>
<b>Region 8</b>	2,688	24.2	(22.0-26.5)
District #10	1,180	27.3	(24.1-30.7)
Muskegon	1,447	19.8	(17.3-22.6)
<b>Region 9</b>	1,757	25.1	(22.5-27.8)
District #2	234	29.0	(22.0-37.1)
District #4	262	25.2	(19.1-32.4)
Northwest Michigan	528	23.2	(19.0-28.0)
Benzie-Leelanau	235	26.7	(19.9-34.9)
Grand Traverse	457	20.2	(16.0-25.3)
<b>Region 10</b>	1,495	25.5	(22.6-28.7)
Bay	314	22.2	(16.1-29.7)
Huron	130	31.6	(23.2-41.3)
Saginaw	704	25.2	(20.9-30.1)
Sanilac	162	31.1	(22.8-41.0)
Tuscola	165	23.1	(16.4-31.5)
<b>Region 11</b>	1,020	27.8	(24.1-31.8)
Central Michigan	579	25.1	(20.3-30.4)
Midland	271	24.2	(17.8-31.9)
<b>Region 12</b>	1,050	28.3	(24.8-32.0)
Luce-Mackinac-Alger-Schoolcraft	132	23.2	(14.8-34.5)
Western Upper Peninsula	235	28.6	(21.5-36.8)
Delta-Menominee	204	28.0	(20.4-36.9)
Chippewa	129	28.6	(19.3-40.2)
Dickinson-Iron	118	28.3	(18.3-41.2)
Marquette	211	27.0	(20.1-35.2)

<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 BRFS, 2016 and 2018 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>8,816</b>	<b>73.7</b>	<b>(72.4-74.8)</b>
<b>Region 1</b>	3,437	73.4	(71.5-75.3)
Livingston	276	73.7	(65.5-80.5)
Macomb	543	72.1	(67.0-76.7)
Monroe	106	72.0	(60.0-81.5)
Oakland	904	77.1	(73.6-80.2)
St. Clair	145	71.1	(61.7-78.9)
Washtenaw	356	77.8	(71.6-83.0)
City of Detroit	390	71.8	(65.7-77.3)
Wayne exc. Detroit	703	70.2	(65.9-74.2)
<b>Region 2</b>	589	78.5	(74.2-82.3)
Genesee	421	79.7	(74.6-83.9)
Lapeer	82	66.7	(53.4-77.7)
Shiawassee	81	88.6	(77.6-94.6)
<b>Region 3</b>	490	71.7	(65.7-77.0)
Jackson	393	75.4	(69.4-80.6)
Lenawee	84	67.2	(53.9-78.2)
<b>Region 4</b>	500	75.0	(70.2-79.3)
Barry-Eaton	159	74.6	(65.9-81.8)
Mid-Michigan <sup>b</sup>	157	76.5	(67.9-83.4)
Ingham	243	74.8	(67.6-80.9)
<b>Region 5</b>	424	72.8	(67.3-77.6)
Branch-Hillsdale-St. Joseph	116	68.0	(56.8-77.5)
Calhoun	130	74.4	(64.7-82.1)
Kalamazoo	173	75.2	(66.5-82.2)
<b>Region 6</b>	180	70.3	(62.0-77.3)
Van Buren-Cass	82	67.3	(54.6-78.0)
Berrien	93	73.8	(62.6-82.6)
<b>Region 7</b>	819	75.6	(71.8-79.0)
Allegan	87	72.0	(60.1-81.4)
Ionia	58	77.6	(64.3-87.0)
Kent	418	74.3	(68.8-79.2)
Mid-Michigan <sup>b</sup>	157	76.5	(67.9-83.4)
Ottawa	191	80.1	(72.8-85.9)



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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>8,816</b>	<b>73.7</b>	<b>(72.4-74.8)</b>
<b>Region 8</b>	787	72.6	(68.2-76.6)
District #10	355	70.7	(64.6-76.2)
Muskegon	424	76.2	(70.6-81.0)
<b>Region 9</b>	473	72.9	(67.7-77.6)
District #2	71	64.6	(51.3-76.1)
District #4	63	74.7	(60.3-85.2)
Northwest Michigan	130	71.5	(61.3-79.9)
Benzie-Leelanau	69	76.7	(62.8-86.6)
Grand Traverse	136	77.7	(67.8-85.2)
<b>Region 10</b>	459	73.6	(67.6-78.8)
Bay	97	75.5	(64.4-84.1)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	235	77.4	(68.3-84.4)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	253	71.4	(64.2-77.6)
Central Michigan	157	70.4	(61.2-78.3)
Midland	70	75.8	(62.2-85.6)
<b>Region 12</b>	318	69.8	(62.3-76.4)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	51	58.8	(41.6-74.1)
Delta-Menominee	75	62.1	(47.4-74.8)
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	66	76.8	(62.1-87.0)

<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 BRFS, 2016 and 2018 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>5,808</b>	<b>82.5</b>	<b>(81.2-83.7)</b>
<b>Region 1</b>	2,365	83.5	(81.6-85.3)
Livingston	196	82.1	(72.4-88.9)
Macomb	350	83.7	(78.3-88.0)
Monroe	64	74.7	(59.4-85.6)
Oakland	637	88.4	(84.8-91.2)
St. Clair	95	81.5	(72.0-88.3)
Washtenaw	240	79.8	(72.2-85.7)
City of Detroit	315	83.9	(78.7-88.1)
Wayne exc. Detroit	458	80.1	(75.2-84.2)
<b>Region 2</b>	401	82.9	(78.2-86.8)
Genesee	289	80.8	(74.9-85.7)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	281	82.0	(75.1-87.3)
Jackson	217	85.4	(79.2-89.9)
Lenawee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 4</b>	341	83.5	(78.2-87.8)
Barry-Eaton	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Mid-Michigan <sup>b</sup>	88	81.7	(71.2-89.0)
Ingham	194	80.6	(72.8-86.7)
<b>Region 5</b>	269	84.9	(79.2-89.2)
Branch-Hillsdale-St. Joseph	71	88.7	(80.6-93.7)
Calhoun	71	79.1	(64.4-88.8)
Kalamazoo	121	85.2	(76.6-91.0)
<b>Region 6</b>	101	76.9	(65.5-85.4)
Van Buren-Cass	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Berrien	50	74.8	(57.3-86.8)
<b>Region 7</b>	575	82.5	(78.3-86.0)
Allegan	57	77.9	(63.4-87.7)
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	310	82.2	(76.3-86.9)
Mid-Michigan <sup>b</sup>	88	81.7	(71.2-89.0)
Ottawa	125	86.0	(75.5-92.4)

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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>5,808</b>	<b>82.5</b>	<b>(81.2-83.7)</b>
<b>Region 8</b>	461	79.0	(73.2-83.9)
District #10	210	73.7	(65.2-80.8)
Muskegon	240	88.1	(82.0-92.3)
<b>Region 9</b>	286	78.8	(72.3-84.0)
District #2	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
District #4	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Northwest Michigan	81	75.5	(61.9-85.3)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	95	79.1	(66.2-88.0)
<b>Region 10</b>	270	82.9	(75.8-88.3)
Bay	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	143	86.8	(77.0-92.8)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	177	82.7	(74.6-88.6)
Central Michigan	92	81.9	(71.1-89.3)
Midland	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 12</b>	192	78.8	(70.5-85.3)
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 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 18: Prostate Cancer Screening Among Men 50 Years and Older Michigan BRFS, 2016 and 2018 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>5,426</b>	<b>37.3</b>	<b>(35.7-38.9)</b>
<b>Region 1</b>	2,039	38.8	(36.2-41.3)
Livingston	201	34.0	(25.8-43.2)
Macomb	306	38.8	(32.9-45.1)
Monroe	60	52.2	(38.3-65.9)
Oakland	527	45.1	(40.1-50.1)
St. Clair	64	39.5	(26.9-53.6)
Washtenaw	216	40.8	(33.2-48.8)
City of Detroit	190	29.9	(23.1-37.8)
Wayne exc. Detroit	467	35.2	(30.3-40.5)
<b>Region 2</b>	365	35.1	(29.6-40.9)
Genesee	267	37.3	(30.9-44.2)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	323	30.3	(23.9-37.5)
Jackson	258	28.0	(21.4-35.8)
Lenawee	58	32.5	(20.4-47.5)
<b>Region 4</b>	256	34.9	(28.2-42.2)
Barry-Eaton	89	34.2	(23.9-46.2)
Mid-Michigan <sup>b</sup>	82	38.4	(27.5-50.6)
Ingham	105	32.1	(21.5-44.9)
<b>Region 5</b>	252	32.6	(26.1-39.9)
Branch-Hillsdale-St. Joseph	88	37.8	(26.1-51.1)
Calhoun	57	23.0	(13.0-37.5)
Kalamazoo	102	32.6	(23.4-43.4)
<b>Region 6</b>	124	41.0	(31.5-51.2)
Van Buren-Cass	53	49.4	(34.0-64.9)
Berrien	71	34.3	(23.6-46.8)
<b>Region 7</b>	484	38.0	(33.1-43.2)
Allegan	58	40.4	(26.7-55.7)
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	242	35.3	(28.7-42.6)
Mid-Michigan <sup>b</sup>	82	38.4	(27.5-50.6)
Ottawa	114	42.6	(32.6-53.3)

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<b>Table 18 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>5,426</b>	<b>37.3</b>	<b>(35.7-38.9)</b>
<b>Region 8</b>	495	33.7	(28.6-39.3)
District #10	241	34.0	(27.1-41.6)
Muskegon	246	34.2	(27.4-41.6)
<b>Region 9</b>	338	39.8	(33.3-46.6)
District #2	50	23.5	(13.2-38.2)
District #4	54	45.0	(29.3-61.7)
Northwest Michigan	114	42.9	(31.9-54.6)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	71	44.8	(31.3-59.0)
<b>Region 10</b>	287	41.8	(34.7-49.3)
Bay	56	40.2	(26.1-56.1)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	145	37.1	(26.4-49.3)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	181	31.9	(24.4-40.5)
Central Michigan	107	36.9	(26.4-48.8)
Midland	57	27.9	(17.4-41.6)
<b>Region 12</b>	221	32.7	(25.9-40.4)
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 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, 2016-2018 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>7,032</b>	69.7	(68.3-71.0)
<b>Region 1</b>	2,619	70.0	(67.7-72.1)
Livingston	119	67.9	(57.4-76.9)
Macomb	447	70.6	(65.3-75.3)
Monroe	80	66.4	(53.3-77.3)
Oakland	709	71.2	(66.8-75.2)
St. Clair	97	73.5	(62.1-82.4)
Washtenaw	233	76.5	(69.1-82.5)
City of Detroit	285	62.3	(55.0-69.0)
Wayne exc. Detroit	638	70.7	(66.1-74.9)
<b>Region 2</b>	422	68.3	(63.0-73.1)
Genesee	310	67.3	(61.1-73.0)
Lapeer	53	62.8	(47.7-75.8)
Shiawassee	56	77.4	(63.5-87.0)
<b>Region 3</b>	421	70.0	(63.3-75.9)
Jackson	340	69.1	(61.7-75.6)
Lenawee	73	69.8	(55.7-80.9)
<b>Region 4</b>	378	69.3	(63.6-74.6)
Barry-Eaton	131	64.6	(54.5-73.6)
Mid-Michigan <sup>b</sup>	130	68.8	(59.0-77.2)
Ingham	153	73.6	(64.3-81.2)
<b>Region 5</b>	324	70.6	(64.4-76.1)
Branch-Hillsdale-St. Joseph	98	65.3	(53.1-75.8)
Calhoun	86	71.7	(59.9-81.2)
Kalamazoo	135	73.4	(63.5-81.4)
<b>Region 6</b>	159	64.5	(55.5-72.6)
Van Buren-Cass	71	73.5	(60.7-83.3)
Berrien	88	57.6	(45.4-69.0)
<b>Region 7</b>	631	73.5	(69.2-77.5)
Allegan	59	66.2	(50.4-79.0)
Ionia	54	75.7	(60.7-86.2)
Kent	321	72.8	(66.5-78.3)
Mid-Michigan <sup>b</sup>	130	68.8	(59.0-77.2)
Ottawa	149	80.1	(71.1-86.9)

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Table 17 Cont'd			
Geographic Area	Appropriate Colorectal Cancer Screening <sup>a</sup>		
	N	%	95% Confidence Interval
<b>Michigan Total</b>	<b>7,032</b>	69.7	(68.3-71.0)
<b>Region 8</b>	605	69.2	(64.1-73.9)
District #10	286	66.1	(59.0-72.5)
Muskegon	317	75.8	(69.5-81.1)
<b>Region 9</b>	396	63.1	(56.7-69.1)
District #2	70	58.2	(44.4-70.8)
District #4	51	65.6	(47.2-80.2)
Northwest Michigan	120	65.7	(54.4-75.5)
Benzie-Leelanau	54	57.7	(41.1-72.7)
Grand Traverse	99	68.9	(55.3-79.8)
<b>Region 10</b>	457	72.4	(67.0-77.2)
Bay	83	67.6	(55.0-78.2)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	276	75.3	(68.4-81.1)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	210	66.9	(58.9-74.0)
Central Michigan	131	64.8	(54.8-73.7)
Midland	73	72.2	(57.9-83.1)
<b>Region 12</b>	329	71.3	(65.2-76.7)
Luce-Mackinac-Alger-Schoolcraft	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Western Upper Peninsula	57	68.4	(53.3-80.4)
Delta-Menominee	72	78.2	(65.4-87.2)
Chippewa	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	67	82.6	(70.1-90.6)

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

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<b>Table 18: Oral Health Michigan BRFSS, 2016 and 2018 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>11,886</b>	<b>29.9</b>	<b>(28.8-31.0)</b>	<b>11,759</b>	<b>16.0</b>	<b>(15.2-16.8)</b>
<b>Region 1</b>	4,401	28.0	(26.3-29.7)	4,347	15.2	(14.0-16.5)
Livingston	173	19.8	(13.5-28.0)	169	11.6	(7.3-17.8)
Macomb	741	30.8	(26.7-35.2)	729	13.2	(10.8-16.1)
Monroe	137	27.7	(19.9-37.0)	134	17.6	(11.3-26.5)
Oakland	1,194	20.2	(17.4-23.2)	1,179	13.2	(11.1-15.7)
St. Clair	163	29.8	(22.5-38.3)	163	21.1	(15.1-28.8)
Washtenaw	385	18.9	(14.3-24.5)	382	9.6	(6.8-13.4)
City of Detroit	555	44.0	(39.0-49.1)	553	24.1	(20.2-28.4)
Wayne exc. Detroit	1,034	29.5	(26.1-33.1)	1,018	15.5	(13.0-18.3)
<b>Region 2</b>	729	34.1	(30.0-38.4)	715	17.4	(14.3-20.9)
Genesee	530	35.6	(30.7-40.8)	519	16.9	(13.7-20.7)
Lapeer	85	25.8	(16.4-38.1)	85	17.1	(9.6-28.6)
Shiawassee	107	34.2	(24.1-46.0)	104	20.2	(11.6-32.8)
<b>Region 3</b>	681	34.9	(29.6-40.6)	673	18.8	(15.1-23.2)
Jackson	546	33.6	(28.4-39.3)	539	16.9	(13.3-21.4)
Lenawee	117	40.0	(28.6-52.6)	116	22.1	(14.5-32.3)
<b>Region 4</b>	710	23.8	(20.0-28.0)	703	13.1	(10.6-16.1)
Barry-Eaton	215	25.0	(18.0-33.7)	213	15.1	(10.4-21.2)
Mid-Michigan <sup>c</sup>	206	22.7	(16.7-30.0)	205	16.8	(12.0-23.0)
Ingham	348	26.7	(21.4-32.8)	346	10.7	(7.6-14.8)
<b>Region 5</b>	552	33.1	(28.4-38.1)	551	18.6	(15.0-22.9)
Branch-Hillsdale-St. Joseph	156	38.0	(28.7-48.4)	157	25.6	(17.8-35.2)
Calhoun	137	33.4	(24.5-43.6)	135	23.2	(15.8-32.8)
Kalamazoo	245	28.7	(22.2-36.2)	245	12.8	(8.6-18.7)
<b>Region 6</b>	251	30.6	(24.1-38.0)	249	20.8	(15.7-27.1)
Van Buren-Cass	104	28.6	(19.1-40.3)	106	14.7	(8.7-23.8)
Berrien	145	32.1	(23.6-42.0)	141	25.7	(18.3-34.7)



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Table 18 Cont'd

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>11,886</b>	<b>29.9</b>	<b>(28.8-31.0)</b>	<b>11,759</b>	<b>16.0</b>	<b>(15.2-16.8)</b>
<b>Region 7</b>	1,143	26.5	(23.4-29.9)	1,139	11.7	(9.6-14.1)
Allegan	127	30.2	(21.4-40.8)	126	12.8	(7.6-20.8)
Ionia	79	20.7	(12.2-33.0)	79	19.5	(11.5-31.2)
Kent	559	25.6	(21.2-30.4)	556	10.6	(7.8-14.4)
Mid-Michigan <sup>c</sup>	206	22.7	(16.7-30.0)	205	16.8	(12.0-23.0)
Ottawa	289	25.6	(19.7-32.4)	288	10.2	(6.7-15.3)
<b>Region 8</b>	990	34.6	(30.8-38.6)	978	23.3	(20.1-26.8)
District #10	462	36.0	(30.8-41.6)	457	25.4	(20.9-30.4)
Muskegon	521	31.2	(26.5-36.3)	514	20.0	(16.2-24.4)
<b>Region 9</b>	582	33.4	(28.5-38.7)	576	22.3	(18.1-27.2)
District #2	91	46.3	(33.6-59.5)	87	34.8	(22.9-48.9)
District #4	83	39.8	(27.7-53.2)	84	23.0	(14.2-35.0)
Northwest Michigan	172	25.4	(18.2-34.3)	174	19.5	(13.3-27.7)
Benzie-Leelanau	78	34.1	(22.0-48.7)	76	22.5	(13.3-35.5)
Grand Traverse	156	23.3	(15.8-33.0)	153	11.1	(6.6-18.0)
<b>Region 10</b>	716	35.5	(30.8-40.4)	709	15.6	(12.8-19.0)
Bay	138	31.5	(22.2-42.6)	136	12.2	(7.6-19.0)
Huron	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Saginaw	405	36.3	(29.8-43.4)	403	14.0	(10.5-18.4)
Sanilac	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Tuscola	69	34.5	(22.4-49.1)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
<b>Region 11</b>	339	31.5	(25.5-38.1)	340	20.8	(16.2-26.1)
Central Michigan	202	30.4	(23.7-38.2)	202	27.7	(21.3-35.2)
Midland	110	30.4	(21.1-41.7)	110	15.2	(9.1-24.2)
<b>Region 12</b>	543	30.3	(25.7-35.3)	533	17.6	(14.4-21.5)
Luce-Mackinac-Alger-Schoolcraft	63	22.7	(12.8-36.8)	62	28.7	(17.4-43.5)
Western Upper Peninsula	105	30.5	(20.8-42.2)	104	15.4	(9.7-23.6)
Delta-Menominee	115	35.3	(25.1-47.1)	114	18.6	(11.4-29.0)
Chippewa	56	44.0	(29.1-60.0)	56	21.6	(12.2-35.5)
Dickinson-Iron	73	25.8	(16.0-38.8)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Marquette	109	24.3	(16.0-35.1)	105	22.6	(14.8-32.8)

<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 adult s 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.

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

**Table 19: Immunizations Among Adults Aged 65 Years and Older  
Michigan BRFSS, 2016-2018 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>10,542</b>	<b>56.0</b>	<b>(54.8-57.2)</b>	<b>10,300</b>	<b>73.9</b>	<b>(72.8-75.0)</b>
<b>Region 1</b>	4,020	56.7	(54.7-58.6)	3,908	73.1	(71.2-74.8)
Livingston	402	55.0	(47.9-61.9)	396	76.3	(69.9-81.7)
Macomb	627	57.2	(52.5-61.8)	613	76.5	(72.3-80.3)
Monroe	116	60.3	(49.0-70.6)	116	78.0	(66.4-86.4)
Oakland	1,039	56.5	(52.8-60.1)	1,005	73.0	(69.5-76.3)
St. Clair	128	50.4	(40.3-60.5)	124	80.2	(71.3-86.8)
Washtenaw	457	59.3	(53.6-64.9)	442	77.9	(72.7-82.4)
City of Detroit	377	45.8	(39.6-52.2)	363	57.9	(51.4-64.2)
Wayne exc. Detroit	860	61.6	(57.4-65.6)	835	73.9	(69.8-77.6)
<b>Region 2</b>	672	56.6	(52.2-61.0)	661	68.2	(63.8-72.3)
Genesee	485	57.8	(52.5-62.9)	474	68.5	(63.2-73.3)
Lapeer	87	47.4	(35.9-59.1)	87	53.4	(41.4-65.0)
Shiawassee	94	61.0	(49.2-71.7)	94	82.0	(72.1-89.0)
<b>Region 3</b>	631	54.3	(49.0-59.5)	619	79.6	(75.0-83.5)
Jackson	511	54.4	(49.1-59.6)	500	77.3	(72.4-81.5)
Lenawee	107	50.6	(39.8-61.4)	106	83.1	(73.1-89.9)
<b>Region 4</b>	584	57.9	(53.0-62.7)	569	76.4	(71.9-80.4)
Barry-Eaton	178	47.9	(39.3-56.7)	171	75.1	(67.0-81.8)
Mid-Michigan <sup>c</sup>	200	57.3	(49.2-65.1)	198	79.3	(72.2-84.9)
Ingham	263	64.6	(57.0-71.5)	257	74.7	(67.1-81.0)
<b>Region 5</b>	503	54.7	(49.5-59.8)	493	74.6	(69.5-79.2)
Branch-Hillsdale-St. Joseph	156	48.8	(39.8-57.9)	152	63.2	(53.4-71.9)
Calhoun	134	56.0	(46.1-65.5)	133	77.2	(67.4-84.7)
Kalamazoo	208	59.4	(51.0-67.3)	203	81.7	(73.7-87.7)
<b>Region 6</b>	243	55.6	(48.1-62.9)	241	75.1	(68.4-80.8)
Van Buren-Cass	110	66.3	(54.7-76.2)	108	77.6	(67.4-85.4)
Berrien	129	46.7	(36.8-56.9)	129	74.2	(64.7-81.8)

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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>10,542</b>	<b>56.0</b>	<b>(54.8-57.2)</b>	<b>10,300</b>	<b>73.9</b>	<b>(72.8-75.0)</b>
<b>Region 7</b>	940	54.4	(50.6-58.2)	918	79.9	(76.5-82.8)
Allegan	101	51.8	(40.2-63.3)	100	77.0	(67.0-84.6)
Ionia	59	56.4	(41.5-70.2)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Kent	495	55.8	(50.5-60.9)	485	79.4	(74.4-83.6)
Mid-Michigan <sup>c</sup>	200	57.3	(49.2-65.1)	198	79.3	(72.2-84.9)
Ottawa	219	52.6	(45.1-60.1)	210	83.6	(77.2-88.5)
<b>Region 8</b>	945	58.4	(54.2-62.5)	931	75.6	(71.5-79.3)
District #10	445	58.3	(52.7-63.8)	441	74.9	(69.2-79.8)
Muskegon	485	59.3	(53.7-64.6)	475	77.0	(71.9-81.4)
<b>Region 9</b>	671	57.0	(52.1-61.8)	661	73.1	(68.1-77.5)
District #2	86	52.1	(39.7-64.2)	86	68.0	(55.0-78.6)
District #4	100	53.3	(39.7-66.4)	95	62.4	(47.9-75.0)
Northwest Michigan	214	61.8	(54.0-69.1)	211	73.5	(65.7-80.1)
Benzie-Leelanau	115	58.8	(48.0-68.8)	113	82.6	(72.7-89.4)
Grand Traverse	156	58.3	(48.1-67.8)	156	83.3	(75.1-89.2)
<b>Region 10</b>	511	54.6	(48.7-60.3)	498	71.2	(65.8-76.0)
Bay	108	60.7	(50.1-70.4)	105	77.1	(66.7-85.0)
Huron	56	56.1	(41.1-70.1)	56	67.2	(52.0-79.5)
Saginaw	242	48.1	(38.5-57.9)	237	69.1	(59.7-77.1)
Sanilac	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Tuscola	59	57.4	(42.5-71.1)	55	63.5	(47.4-77.1)
<b>Region 11</b>	338	48.7	(42.0-55.4)	327	75.8	(70.1-80.8)
Central Michigan	221	43.5	(35.6-51.8)	213	75.7	(68.6-81.7)
Midland	96	61.9	(49.8-72.7)	94	75.6	(64.5-84.1)
<b>Region 12</b>	357	54.6	(48.1-61.0)	351	68.4	(61.9-74.2)
Luce-Mackinac-Alger-Schoolcraft	53	63.7	(44.5-79.3)	51	58.0	(39.8-74.3)
Western Upper Peninsula	88	39.0	(28.2-51.0)	87	69.1	(56.6-79.3)
Delta-Menominee	68	53.2	(38.1-67.7)	68	62.9	(47.3-76.2)
Chippewa	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Dickinson-Iron	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Marquette	68	66.3	(50.8-78.8)	66	69.9	(53.6-82.4)

<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, 2016-2018 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>19,823</b>	44.4	(43.5-45.2)
<b>Region 1</b>	7,863	48.7	(47.4-50.0)
Livingston	689	41.6	(36.3-47.1)
Macomb	1,167	45.2	(41.9-48.6)
Monroe	235	35.3	(28.7-42.5)
Oakland	1,998	46.0	(43.4-48.6)
St. Clair	266	45.2	(38.5-52.1)
Washtenaw	813	47.4	(43.1-51.6)
City of Detroit	974	72.9	(69.5-76.0)
Wayne exc. Detroit	1,676	44.2	(41.4-47.0)
<b>Region 2</b>	1,304	46.0	(42.8-49.3)
Genesee	937	48.6	(44.8-52.5)
Lapeer	169	38.6	(30.7-47.2)
Shiawassee	186	41.4	(33.0-50.2)
<b>Region 3</b>	1,035	43.0	(39.0-47.2)
Jackson	812	45.0	(40.9-49.3)
Lenawee	182	39.6	(31.1-48.7)
<b>Region 4</b>	1,161	42.3	(38.8-45.8)
Barry-Eaton	320	47.9	(41.3-54.6)
Mid-Michigan <sup>b</sup>	321	35.9	(29.9-42.3)
Ingham	631	41.5	(36.8-46.3)
<b>Region 5</b>	954	46.1	(42.3-50.0)
Branch-Hillsdale-St. Joseph	264	45.1	(37.8-52.7)
Calhoun	240	48.1	(40.3-55.9)
Kalamazoo	425	45.7	(40.2-51.4)
<b>Region 6</b>	429	37.4	(32.0-43.1)
Van Buren-Cass	171	29.2	(22.2-37.4)
Berrien	227	40.8	(33.2-48.9)
<b>Region 7</b>	2,072	40.1	(37.6-42.7)
Allegan	230	43.2	(35.8-50.9)
Ionia	129	33.9	(25.4-43.7)
Kent	1,079	41.8	(38.3-45.3)
Mid-Michigan <sup>b</sup>	321	35.9	(29.9-42.3)
Ottawa	490	37.1	(32.0-42.6)

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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>19,823</b>	44.4	(43.5-45.2)
<b>Region 8</b>	1,564	41.7	(38.5-45.0)
District #10	669	39.7	(35.1-44.4)
Muskegon	855	46.2	(41.8-50.5)
<b>Region 9</b>	974	39.0	(35.5-42.7)
District #2	136	33.9	(25.4-43.6)
District #4	136	35.3	(26.8-44.9)
Northwest Michigan	275	40.3	(33.7-47.3)
Benzie-Leelanau	113	40.1	(30.1-50.9)
Grand Traverse	275	41.7	(34.7-49.0)
<b>Region 10</b>	889	36.7	(32.8-40.9)
Bay	187	33.5	(25.1-43.1)
Huron	71	28.1	(18.3-40.5)
Saginaw	420	39.3	(33.4-45.6)
Sanilac	101	41.5	(31.0-52.9)
Tuscola	95	34.4	(24.8-45.5)
<b>Region 11</b>	602	35.7	(31.0-40.6)
Central Michigan	315	38.1	(31.7-45.0)
Midland	158	26.2	(19.3-34.4)
<b>Region 12</b>	632	36.4	(31.9-41.2)
Luce-Mackinac-Alger-Schoolcraft	69	41.4	(28.2-56.0)
Western Upper Peninsula	136	29.2	(21.1-38.8)
Delta-Menominee	124	34.9	(25.4-45.6)
Chippewa	83	56.6	(43.2-69.1)
Dickinson-Iron	70	39.2	(25.7-54.6)
Marquette	130	30.2	(21.7-40.3)

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, 2016-2018 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>33,114</b>	<b>16.1</b>	<b>(15.6-16.6)</b>	<b>32,952</b>	<b>11.0</b>	<b>(10.6-11.5)</b>
<b>Region 1</b>	13,020	16.7	(15.9-17.5)	12,959	11.2	(10.5-11.9)
Livingston	1,177	15.3	(12.2-19.0)	1,174	10.3	(7.7-13.6)
Macomb	1,963	16.1	(14.2-18.2)	1,953	10.3	(8.8-12.1)
Monroe	390	15.8	(11.8-20.8)	389	9.7	(6.7-13.9)
Oakland	3,330	14.3	(12.9-15.9)	3,314	9.2	(8.0-10.5)
St. Clair	432	23.5	(18.9-28.8)	427	16.4	(12.4-21.4)
Washtenaw	1,345	16.9	(14.4-19.8)	1,335	10.3	(8.3-12.6)
City of Detroit	1,550	22.0	(19.5-24.6)	1,547	16.4	(14.3-18.9)
Wayne exc. Detroit	2,764	16.3	(14.7-18.0)	2,751	11.1	(9.7-12.6)
<b>Region 2</b>	2,151	16.2	(14.3-18.2)	2,137	11.6	(10.0-13.4)
Genesee	1,568	16.7	(14.5-19.1)	1,559	12.0	(10.1-14.1)
Lapeer	263	14.0	(9.8-19.5)	260	10.6	(6.9-16.0)
Shiawassee	300	16.5	(11.6-22.9)	298	10.8	(6.7-17.0)
<b>Region 3</b>	1,817	19.7	(17.1-22.6)	1,803	13.5	(11.3-16.1)
Jackson	1,451	18.6	(16.1-21.4)	1,440	13.3	(11.2-15.8)
Lenawee	311	22.3	(16.6-29.1)	308	14.6	(9.8-21.2)
<b>Region 4</b>	1,878	15.5	(13.5-17.8)	1,870	10.5	(8.9-12.4)
Barry-Eaton	537	15.5	(12.0-19.7)	535	10.8	(8.0-14.6)
Mid-Michigan <sup>c</sup>	554	13.2	(10.0-17.3)	554	8.7	(6.2-12.2)
Ingham	967	15.9	(13.1-19.0)	961	10.8	(8.6-13.5)
<b>Region 5</b>	1,579	17.6	(15.3-20.0)	1,571	11.6	(9.8-13.7)
Branch-Hillsdale-St. Joseph	455	16.2	(12.3-21.0)	455	11.2	(8.1-15.4)
Calhoun	395	19.1	(14.8-24.2)	391	12.9	(9.4-17.5)
Kalamazoo	698	17.2	(13.9-21.0)	694	11.0	(8.4-14.2)
<b>Region 6</b>	726	14.5	(11.5-18.1)	722	9.4	(7.0-12.5)
Van Buren-Cass	307	11.7	(7.9-17.0)	304	7.1	(4.3-11.4)
Berrien	381	14.3	(10.6-19.2)	381	9.7	(6.7-13.9)
<b>Region 7</b>	3,233	12.7	(11.4-14.2)	3,226	8.5	(7.5-9.7)
Allegan	359	15.4	(11.4-20.6)	358	9.5	(6.5-13.7)
Ionia	203	9.9	(6.2-15.4)	203	7.6	(4.5-12.6)
Kent	1,686	14.0	(12.1-16.0)	1,681	9.3	(7.8-11.0)
Mid-Michigan <sup>c</sup>	554	13.2	(10.0-17.3)	554	8.7	(6.2-12.2)
Ottawa	759	9.5	(7.3-12.2)	758	6.3	(4.7-8.5)

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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>33,114</b>	<b>16.1</b>	<b>(15.6-16.6)</b>	<b>32,952</b>	<b>11.0</b>	<b>(10.6-11.5)</b>
<b>Region 8</b>	2,716	15.6	(13.7-17.7)	2,703	10.8	(9.2-12.6)
District #10	1,192	15.4	(12.9-18.3)	1,185	11.1	(9.0-13.8)
Muskegon	1,461	16.3	(13.8-19.2)	1,455	10.4	(8.5-12.7)
<b>Region 9</b>	1,768	15.2	(13.2-17.4)	1,763	11.5	(9.7-13.5)
District #2	237	19.4	(14.0-26.4)	236	15.8	(10.8-22.6)
District #4	263	12.7	(8.9-17.9)	263	10.3	(6.9-15.1)
Northwest Michigan	534	14.2	(11.1-18.1)	530	11.2	(8.5-14.7)
Benzie-Leelanau	236	12.9	(8.2-19.7)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Grand Traverse	455	15.7	(11.8-20.5)	455	10.8	(7.5-15.2)
<b>Region 10</b>	1,510	16.6	(14.0-19.5)	1,500	12.2	(9.9-15.0)
Bay	314	20.4	(14.0-28.7)	311	15.3	(9.3-24.1)
Huron	131	14.9	(9.3-23.0)	131	11.3	(6.5-18.9)
Saginaw	715	15.8	(12.4-20.0)	712	11.4	(8.4-15.2)
Sanilac	162	17.8	(12.1-25.5)	158	12.6	(7.9-19.6)
Tuscola	168	10.4	(6.1-17.2)	168	9.1	(5.1-15.8)
<b>Region 11</b>	1,034	17.0	(14.1-20.3)	1,031	12.9	(10.3-16.0)
Central Michigan	587	16.4	(12.8-20.9)	584	12.4	(9.0-16.7)
Midland	274	17.5	(12.6-23.8)	274	13.5	(9.4-19.1)
<b>Region 12</b>	1,061	16.8	(13.7-20.3)	1,053	13.3	(10.4-16.8)
Luce-Mackinac-Alger-Schoolcraft	133	14.1	(8.5-22.5)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Western Upper Peninsula	237	16.1	(9.7-25.6)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Delta-Menominee	208	17.0	(10.7-25.7)	208	12.1	(6.7-20.9)
Chippewa	129	14.9	(8.1-25.9)	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>
Dickinson-Iron	120	26.4	(16.4-39.7)	117	22.9	(13.3-36.7)
Marquette	212	16.4	(10.9-23.8)	210	14.5	(9.3-22.0)

<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, 2016-2018 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>33,059</b>	<b>8.8</b>	<b>(8.4-9.2)</b>
<b>Region 1</b>	13,004	8.6	(8.0-9.2)
Livingston	1,180	7.1	(5.3-9.3)
Macomb	1,956	9.0	(7.6-10.6)
Monroe	386	9.4	(6.5-13.3)
Oakland	3,324	6.8	(5.8-7.9)
St. Clair	433	10.2	(7.3-14.0)
Washtenaw	1,346	4.5	(3.2-6.1)
City of Detroit	1,547	12.7	(10.9-14.8)
Wayne exc. Detroit	2,764	9.3	(8.1-10.6)
<b>Region 2</b>	2,143	12.1	(10.5-13.9)
Genesee	1,562	12.9	(11.0-15.1)
Lapeer	261	11.1	(7.4-16.4)
Shiawassee	300	9.5	(6.1-14.5)
<b>Region 3</b>	1,807	12.0	(9.8-14.5)
Jackson	1,443	10.1	(8.5-12.1)
Lenawee	309	14.7	(9.7-21.7)
<b>Region 4</b>	1,877	7.5	(6.2-9.1)
Barry-Eaton	536	9.4	(6.8-12.8)
Mid-Michigan <sup>b</sup>	553	9.2	(6.8-12.4)
Ingham	968	6.3	(4.7-8.3)
<b>Region 5</b>	1,579	9.9	(8.2-12.0)
Branch-Hillsdale-St. Joseph	458	10.5	(7.6-14.2)
Calhoun	394	14.2	(10.0-19.7)
Kalamazoo	696	7.4	(5.4-10.2)
<b>Region 6</b>	725	8.3	(6.2-11.0)
Van Buren-Cass	306	9.6	(6.4-14.1)
Berrien	382	8.0	(5.3-12.1)
<b>Region 7</b>	3,236	6.3	(5.5-7.3)
Allegan	357	9.3	(6.6-13.0)
Ionia	202	7.1	(4.2-11.7)
Kent	1,686	5.7	(4.6-7.0)
Mid-Michigan <sup>b</sup>	553	9.2	(6.8-12.4)
Ottawa	765	4.9	(3.4-6.9)



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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>29,994</b>	<b>8.4</b>	<b>(8.0-8.8)</b>
<b>Region 8</b>	2,709	9.7	(8.4-11.3)
District #10	1,188	11.2	(9.2-13.6)
Muskegon	1,458	8.0	(6.6-9.6)
<b>Region 9</b>	1,769	10.5	(8.8-12.5)
District #2	235	15.5	(10.4-22.5)
District #4	263	11.8	(7.7-17.6)
Northwest Michigan	535	9.2	(6.7-12.4)
Benzie-Leelanau	239	9.8	(5.9-15.9)
Grand Traverse	454	8.6	(5.9-12.4)
<b>Region 10</b>	1,499	9.1	(7.5-11.1)
Bay	311	7.9	(5.3-11.7)
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	712	10.1	(7.4-13.4)
Sanilac	162	12.2	(7.5-19.3)
Tuscola	165	8.9	(5.3-14.5)
<b>Region 11</b>	1,032	9.0	(7.0-11.5)
Central Michigan	586	11.9	(8.9-15.7)
Midland	274	5.9	(3.4-9.9)
<b>Region 12</b>	1,056	8.8	(7.1-11.0)
Luce-Mackinac-Alger-Schoolcraft	132	8.3	(4.6-14.3)
Western Upper Peninsula	234	6.2	(3.4-11.0)
Delta-Menominee	210	9.4	(5.8-15.0)
Chippewa	130	8.6	(5.0-14.5)
Dickinson-Iron	118	13.6	(7.8-22.8)
Marquette	210	10.9	(6.8-17.1)

<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%.

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<b>Table 23: Arthritis Michigan BRFSS, 2016-2018 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>33,059</b>	<b>31.5</b>	<b>(30.9-32.1)</b>
<b>Region 1</b>	12,998	30.8	(29.9-31.8)
Livingston	1,181	28.9	(25.3-32.8)
Macomb	1,957	33.2	(30.8-35.7)
Monroe	390	36.4	(31.0-42.1)
Oakland	3,317	27.8	(26.1-29.6)
St. Clair	432	38.0	(33.0-43.4)
Washtenaw	1,343	24.3	(21.8-27.1)
City of Detroit	1,551	33.1	(30.4-36.0)
Wayne exc. Detroit	2,760	32.0	(30.0-34.0)
<b>Region 2</b>	2,140	36.4	(34.0-38.8)
Genesee	1,562	35.9	(33.2-38.8)
Lapeer	261	40.8	(34.3-47.6)
Shiawassee	297	34.7	(28.6-41.4)
<b>Region 3</b>	1,806	33.1	(30.2-36.2)
Jackson	1,444	32.9	(30.0-36.0)
Lenawee	307	36.5	(30.2-43.4)
<b>Region 4</b>	1,876	30.3	(27.9-32.9)
Barry-Eaton	537	33.5	(29.0-38.4)
Mid-Michigan <sup>b</sup>	554	36.1	(31.5-40.9)
Ingham	966	26.1	(22.8-29.6)
<b>Region 5</b>	1,586	32.0	(29.4-34.8)
Branch-Hillsdale-St. Joseph	459	35.8	(30.6-41.4)
Calhoun	399	34.5	(29.1-40.3)
Kalamazoo	697	28.9	(25.2-32.8)
<b>Region 6</b>	723	34.8	(30.8-39.0)
Van Buren-Cass	305	37.8	(31.8-44.2)
Berrien	380	33.2	(27.8-39.1)
<b>Region 7</b>	3,234	26.4	(24.7-28.2)
Allegan	358	27.3	(22.5-32.8)
Ionia	203	31.5	(24.7-39.2)
Kent	1,683	25.4	(23.0-27.9)
Mid-Michigan <sup>b</sup>	554	36.1	(31.5-40.9)
Ottawa	763	25.2	(21.9-28.8)

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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>33,059</b>	<b>31.5</b>	<b>(30.9-32.1)</b>
<b>Region 8</b>	2,710	38.0	(35.6-40.4)
District #10	1,194	40.1	(36.7-43.6)
Muskegon	1,454	37.5	(34.4-40.7)
<b>Region 9</b>	1,769	36.4	(33.7-39.2)
District #2	235	44.5	(37.0-52.3)
District #4	264	41.5	(34.3-49.0)
Northwest Michigan	534	35.2	(30.5-40.1)
Benzie-Leelanau	237	34.7	(27.8-42.3)
Grand Traverse	456	31.7	(26.6-37.2)
<b>Region 10</b>	1,505	33.2	(30.3-36.3)
Bay	313	35.4	(28.8-42.7)
Huron	130	26.8	(19.6-35.4)
Saginaw	714	32.0	(27.5-36.7)
Sanilac	160	37.5	(29.1-46.6)
Tuscola	168	35.6	(28.0-44.0)
<b>Region 11</b>	1,029	32.8	(29.4-36.4)
Central Michigan	584	38.3	(33.6-43.3)
Midland	272	34.0	(27.9-40.8)
<b>Region 12</b>	1,057	35.4	(31.9-39.0)
Luce-Mackinac-Alger-Schoolcraft	132	44.7	(34.0-55.9)
Western Upper Peninsula	236	30.8	(24.1-38.5)
Delta-Menominee	208	37.6	(30.1-45.8)
Chippewa	129	37.8	(28.3-48.3)
Dickinson-Iron	119	34.1	(24.3-45.4)
Marquette	211	37.8	(30.0-46.3)

<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, 2016-2018 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>33,073</b>	<b>5.2</b>	<b>(4.9-5.5)</b>
<b>Region 1</b>	13,013	5.0	(4.6-5.5)
Livingston	1,180	5.0	(3.6-6.8)
Macomb	1,958	6.0	(4.8-7.4)
Monroe	390	6.8	(4.4-10.5)
Oakland	3,328	3.9	(3.2-4.7)
St. Clair	433	6.7	(4.4-10.0)
Washtenaw	1,345	2.8	(2.0-4.0)
City of Detroit	1,542	5.3	(4.2-6.6)
Wayne exc. Detroit	2,768	6.0	(5.1-7.1)
<b>Region 2</b>	2,138	6.0	(5.0-7.2)
Genesee	1,557	5.8	(4.6-7.2)
Lapeer	262	8.2	(5.2-12.9)
Shiawassee	299	5.1	(3.0-8.6)
<b>Region 3</b>	1,817	6.7	(5.4-8.3)
Jackson	1,451	5.8	(4.6-7.2)
Lenawee	311	8.7	(5.7-12.8)
<b>Region 4</b>	1,874	4.0	(3.1-5.0)
Barry-Eaton	537	3.5	(2.2-5.4)
Mid-Michigan <sup>b</sup>	554	7.1	(5.0-10.0)
Ingham	963	3.2	(2.2-4.6)
<b>Region 5</b>	1,580	5.3	(4.1-6.7)
Branch-Hillsdale-St. Joseph	457	7.3	(4.7-11.0)
Calhoun	396	5.5	(3.5-8.4)
Kalamazoo	696	3.9	(2.6-5.7)
<b>Region 6</b>	725	6.1	(4.3-8.7)
Van Buren-Cass	307	8.9	(5.8-13.4)
Berrien	380	4.6	(2.5-8.3)
<b>Region 7</b>	3,234	3.5	(2.8-4.3)
Allegan	359	4.3	(2.4-7.6)
Ionia	201	4.7	(2.6-8.5)
Kent	1,686	3.1	(2.3-4.2)
Mid-Michigan <sup>b</sup>	554	7.1	(5.0-10.0)
Ottawa	762	2.6	(1.7-4.1)

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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>33,073</b>	<b>5.2</b>	<b>(4.9-5.5)</b>
<b>Region 8</b>	2,709	6.0	(4.9-7.2)
District #10	1,188	7.0	(5.4-9.0)
Muskegon	1,458	4.6	(3.5-6.0)
<b>Region 9</b>	1,771	6.5	(5.2-8.1)
District #2	236	8.7	(4.9-14.9)
District #4	265	7.1	(4.5-11.1)
Northwest Michigan	533	7.3	(4.9-10.8)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	456	4.9	(3.1-7.5)
<b>Region 10</b>	1,505	7.3	(5.8-9.1)
Bay	315	6.1	(3.8-9.5)
Huron	131	7.9	(4.5-13.7)
Saginaw	712	8.5	(5.9-12.1)
Sanilac	160	6.5	(3.7-11.4)
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	1,030	6.7	(5.0-8.9)
Central Michigan	585	8.1	(5.6-11.5)
Midland	273	6.4	(3.7-10.7)
<b>Region 12</b>	1,061	6.4	(4.9-8.4)
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 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 BRFSS, 2016-2018 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>32,957</b>	<b>5.1</b>	<b>(4.8-5.4)</b>
<b>Region 1</b>	12,960	4.9	(4.5-5.4)
Livingston	1,174	4.8	(3.4-6.7)
Macomb	1,949	5.3	(4.4-6.5)
Monroe	383	4.6	(2.7-7.7)
Oakland	3,318	4.6	(3.8-5.5)
St. Clair	433	7.3	(5.1-10.4)
Washtenaw	1,338	3.0	(2.2-4.1)
City of Detroit	1,542	5.7	(4.5-7.2)
Wayne exc. Detroit	2,755	5.0	(4.2-5.9)
<b>Region 2</b>	2,139	5.8	(4.9-7.0)
Genesee	1,560	5.8	(4.7-7.2)
Lapeer	261	6.7	(4.2-10.7)
Shiawassee	298	5.3	(3.1-8.8)
<b>Region 3</b>	1,799	5.7	(4.6-7.1)
Jackson	1,438	6.1	(4.9-7.5)
Lenawee	306	5.6	(3.5-9.0)
<b>Region 4</b>	1,873	4.0	(3.2-5.1)
Barry-Eaton	534	2.7	(1.7-4.4)
Mid-Michigan <sup>b</sup>	551	6.3	(4.4-8.8)
Ingham	966	3.8	(2.6-5.4)
<b>Region 5</b>	1,573	5.3	(4.3-6.5)
Branch-Hillsdale-St. Joseph	451	6.7	(4.8-9.3)
Calhoun	396	6.7	(4.5-10.0)
Kalamazoo	695	3.6	(2.4-5.3)
<b>Region 6</b>	720	6.2	(4.6-8.4)
Van Buren-Cass	303	10.0	(6.7-14.8)
Berrien	379	4.0	(2.6-6.1)
<b>Region 7</b>	3,223	3.3	(2.6-4.0)
Allegan	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,677	3.2	(2.3-4.4)
Mid-Michigan <sup>b</sup>	551	6.3	(4.4-8.8)
Ottawa	762	3.1	(2.1-4.4)

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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>32,957</b>	<b>5.1</b>	<b>(4.8-5.4)</b>
<b>Region 8</b>	2,705	4.9	(4.1-5.8)
District #10	1,188	5.2	(4.0-6.6)
Muskegon	1,456	4.9	(3.9-6.2)
<b>Region 9</b>	1,766	7.1	(5.8-8.7)
District #2	234	13.2	(8.7-19.6)
District #4	264	8.5	(5.5-12.9)
Northwest Michigan	532	4.4	(3.1-6.4)
Benzie-Leelanau	238	7.5	(4.4-12.3)
Grand Traverse	455	4.9	(3.2-7.6)
<b>Region 10</b>	1,496	7.0	(5.6-8.8)
Bay	311	5.5	(3.5-8.5)
Huron	129	8.9	(5.1-15.1)
Saginaw	710	7.3	(4.8-10.9)
Sanilac	159	6.7	(3.9-11.5)
Tuscola	167	9.0	(5.4-14.7)
<b>Region 11</b>	1,026	7.9	(6.0-10.4)
Central Michigan	581	9.2	(6.6-12.6)
Midland	272	6.7	(4.0-10.9)
<b>Region 12</b>	1,056	6.5	(4.9-8.5)
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	210	6.7	(3.8-11.5)
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 Michigan BRFSS, 2016-2018 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>33,143</b>	<b>3.5</b>	<b>(3.3-3.8)</b>
<b>Region 1</b>	13,032	3.8	(3.4-4.2)
Livingston	1,181	2.6	(1.7-4.1)
Macomb	1,963	3.9	(3.0-5.1)
Monroe	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Oakland	3,328	2.7	(2.1-3.4)
St. Clair	432	6.1	(4.0-9.3)
Washtenaw	1,348	2.8	(1.8-4.3)
City of Detroit	1,552	6.8	(5.5-8.3)
Wayne exc. Detroit	2,772	3.8	(3.0-4.7)
<b>Region 2</b>	2,149	3.3	(2.5-4.3)
Genesee	1,568	3.4	(2.6-4.6)
Lapeer	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	1,813	4.1	(3.1-5.5)
Jackson	1,447	4.2	(3.2-5.5)
Lenawee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 4</b>	1,883	3.1	(2.3-4.1)
Barry-Eaton	537	2.4	(1.4-4.0)
Mid-Michigan <sup>b</sup>	556	5.1	(3.2-7.9)
Ingham	971	2.4	(1.6-3.7)
<b>Region 5</b>	1,586	3.2	(2.3-4.5)
Branch-Hillsdale-St. Joseph	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Calhoun	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kalamazoo	699	2.9	(1.8-4.7)
<b>Region 6</b>	727	4.1	(2.8-6.1)
Van Buren-Cass	308	4.8	(2.7-8.5)
Berrien	381	3.4	(1.9-6.1)
<b>Region 7</b>	3,238	2.4	(1.9-3.1)
Allegan	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,687	2.6	(1.9-3.6)
Mid-Michigan <sup>b</sup>	556	5.1	(3.2-7.9)
Ottawa	762	2.2	(1.4-3.4)



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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>33,143</b>	<b>3.5</b>	<b>(3.3-3.8)</b>
<b>Region 8</b>	2,717	3.8	(3.0-4.7)
District #10	1,196	4.1	(3.1-5.5)
Muskegon	1,458	3.6	(2.7-4.8)
<b>Region 9</b>	1,777	3.5	(2.6-4.8)
District #2	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
District #4	265	3.5	(1.9-6.1)
Northwest Michigan	536	2.1	(1.1-3.8)
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>	1,505	3.6	(2.5-5.2)
Bay	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	712	5.1	(3.0-8.7)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	1,032	3.8	(2.7-5.3)
Central Michigan	585	4.3	(2.9-6.3)
Midland	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 12</b>	1,063	3.9	(2.8-5.4)
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 BRFSS, 2016-2018 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>32,900</b>	<b>10.0</b>	<b>(9.7-10.4)</b>
<b>Region 1</b>	12,936	10.0	(9.4-10.6)
Livingston	1,177	8.9	(7.0-11.2)
Macomb	1,944	11.0	(9.5-12.7)
Monroe	383	8.9	(6.1-12.7)
Oakland	3,307	8.5	(7.4-9.6)
St. Clair	432	13.2	(10.0-17.2)
Washtenaw	1,338	6.6	(5.1-8.4)
City of Detroit	1,535	12.5	(10.8-14.5)
Wayne exc. Detroit	2,752	10.7	(9.5-12.1)
<b>Region 2</b>	2,131	11.1	(9.7-12.7)
Genesee	1,553	11.1	(9.5-13.0)
Lapeer	261	13.0	(9.0-18.3)
Shiawassee	298	10.0	(6.7-14.5)
<b>Region 3</b>	1,804	11.1	(9.5-13.0)
Jackson	1,439	11.4	(9.8-13.3)
Lenawee	310	12.0	(8.5-16.5)
<b>Region 4</b>	1,868	8.6	(7.2-10.1)
Barry-Eaton	533	6.7	(4.9-9.2)
Mid-Michigan <sup>b</sup>	552	13.6	(10.5-17.4)
Ingham	962	7.6	(6.0-9.7)
<b>Region 5</b>	1,568	10.1	(8.5-11.9)
Branch-Hillsdale-St. Joseph	453	14.0	(10.6-18.3)
Calhoun	393	10.2	(7.3-14.1)
Kalamazoo	691	7.4	(5.6-9.9)
<b>Region 6</b>	721	11.7	(9.2-14.6)
Van Buren-Cass	306	14.9	(11.0-20.0)
Berrien	377	9.8	(6.8-13.9)
<b>Region 7</b>	3,218	7.0	(6.1-8.1)
Allegan	359	7.4	(4.9-11.0)
Ionia	201	6.7	(4.1-10.8)
Kent	1,675	6.7	(5.4-8.3)
Mid-Michigan <sup>b</sup>	552	13.6	(10.5-17.4)
Ottawa	758	6.3	(4.8-8.3)

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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>32,900</b>	<b>10.0</b>	<b>(9.7-10.4)</b>
<b>Region 8</b>	2,704	11.0	(9.6-12.5)
District #10	1,185	12.6	(10.6-15.0)
Muskegon	1,457	9.1	(7.6-10.8)
<b>Region 9</b>	1,765	11.8	(10.1-13.7)
District #2	235	17.7	(12.4-24.7)
District #4	265	12.8	(9.2-17.6)
Northwest Michigan	530	10.9	(8.1-14.6)
Benzie-Leelanau	237	11.2	(7.3-16.8)
Grand Traverse	455	8.8	(6.4-12.0)
<b>Region 10</b>	1,494	12.0	(10.1-14.2)
Bay	310	9.4	(6.5-13.3)
Huron	131	17.0	(11.4-24.7)
Saginaw	707	13.0	(9.7-17.1)
Sanilac	159	11.6	(7.6-17.4)
Tuscola	167	11.8	(7.5-18.0)
<b>Region 11</b>	1,025	12.2	(9.9-14.9)
Central Michigan	580	14.4	(11.3-18.2)
Midland	273	10.8	(7.3-15.8)
<b>Region 12</b>	1,055	12.3	(10.1-14.8)
Luce-Mackinac-Alger-Schoolcraft	132	16.1	(10.1-24.6)
Western Upper Peninsula	235	8.6	(5.5-13.3)
Delta-Menominee	207	14.0	(9.3-20.5)
Chippewa	130	15.2	(8.7-25.3)
Dickinson-Iron	118	16.4	(9.4-26.9)
Marquette	211	10.3	(6.4-16.2)

<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 BRFSS, 2016-2018 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>33,119</b>	<b>12.8</b>	<b>(12.4-13.2)</b>
<b>Region 1</b>	13,028	12.4	(11.8-13.0)
Livingston	1,179	13.4	(11.0-16.2)
Macomb	1,959	12.4	(10.9-14.0)
Monroe	390	15.0	(11.6-19.3)
Oakland	3,327	12.9	(11.7-14.1)
St. Clair	432	17.5	(13.9-21.8)
Washtenaw	1,348	11.7	(9.9-13.8)
City of Detroit	1,553	9.4	(7.9-11.2)
Wayne exc. Detroit	2,771	12.9	(11.6-14.3)
<b>Region 2</b>	2,150	12.9	(11.5-14.6)
Genesee	1,570	12.2	(10.5-14.1)
Lapeer	260	17.0	(12.5-22.8)
Shiawassee	300	12.5	(8.9-17.3)
<b>Region 3</b>	1,815	12.9	(11.2-14.8)
Jackson	1,450	14.0	(12.2-16.0)
Lenawee	311	12.3	(8.8-16.9)
<b>Region 4</b>	1,877	11.9	(10.5-13.6)
Barry-Eaton	534	12.1	(9.6-15.2)
Mid-Michigan <sup>b</sup>	554	12.0	(9.4-15.2)
Ingham	970	11.4	(9.3-13.8)
<b>Region 5</b>	1,585	12.1	(10.5-13.9)
Branch-Hillsdale-St. Joseph	458	13.2	(10.2-17.0)
Calhoun	398	14.0	(10.8-18.0)
Kalamazoo	698	9.8	(7.9-12.2)
<b>Region 6</b>	725	13.3	(11.0-16.1)
Van Buren-Cass	306	12.8	(9.2-17.6)
Berrien	381	14.2	(11.1-18.1)
<b>Region 7</b>	3,236	12.3	(11.2-13.5)
Allegan	360	15.4	(11.8-19.8)
Ionia	202	14.4	(10.0-20.3)
Kent	1,686	10.9	(9.5-12.4)
Mid-Michigan <sup>b</sup>	554	12.0	(9.4-15.2)
Ottawa	761	14.5	(12.0-17.3)

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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>33,119</b>	<b>12.8</b>	<b>(12.4-13.2)</b>
<b>Region 8</b>	2,718	16.3	(14.5-18.2)
District #10	1,195	19.3	(16.6-22.2)
Muskegon	1,460	12.1	(10.4-14.0)
<b>Region 9</b>	1,768	16.5	(14.4-18.7)
District #2	236	22.6	(16.8-29.6)
District #4	263	14.5	(9.4-21.8)
Northwest Michigan	533	15.6	(12.6-19.2)
Benzie-Leelanau	238	17.0	(12.2-23.2)
Grand Traverse	455	15.4	(12.2-19.3)
<b>Region 10</b>	1,503	12.4	(10.6-14.4)
Bay	314	11.2	(8.1-15.2)
Huron	130	15.8	(10.0-24.1)
Saginaw	714	11.0	(8.6-14.0)
Sanilac	158	14.1	(8.2-23.2)
Tuscola	167	16.8	(11.9-23.2)
<b>Region 11</b>	1,031	13.0	(10.8-15.6)
Central Michigan	585	15.3	(12.1-19.1)
Midland	273	13.6	(10.1-18.2)
<b>Region 12</b>	1,061	14.7	(12.4-17.4)
Luce-Mackinac-Alger-Schoolcraft	132	22.6	(14.4-33.7)
Western Upper Peninsula	237	12.9	(8.7-18.6)
Delta-Menominee	210	16.6	(11.5-23.3)
Chippewa	129	12.4	(7.1-20.6)
Dickinson-Iron	119	13.3	(7.5-22.4)
Marquette	212	14.8	(10.0-21.5)

<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.

<b>Table 29: Diabetes</b>			
<b>Michigan BRFSS, 2016-2018 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>33,188</b>	<b>11.3</b>	<b>(10.9-11.7)</b>
<b>Region 1</b>	13,053	11.1	(10.5-11.8)
Livingston	1,183	9.0	(6.8-11.9)
Macomb	1,964	11.8	(10.3-13.5)
Monroe	390	10.8	(7.8-14.8)
Oakland	3,337	9.8	(8.7-11.0)
St. Clair	432	9.7	(7.1-13.1)
Washtenaw	1,350	7.9	(6.4-9.6)
City of Detroit	1,554	13.4	(11.6-15.5)
Wayne exc. Detroit	2,774	12.5	(11.2-14.0)
<b>Region 2</b>	2,152	12.1	(10.6-13.8)
Genesee	1,571	13.3	(11.5-15.4)
Lapeer	263	8.7	(5.6-13.4)
Shiawassee	298	9.3	(6.3-13.6)
<b>Region 3</b>	1,816	12.1	(10.2-14.3)
Jackson	1,451	12.0	(10.2-14.1)
Lenawee	311	13.3	(9.3-18.8)
<b>Region 4</b>	1,880	10.3	(8.8-12.0)
Barry-Eaton	537	11.7	(8.7-15.5)
Mid-Michigan <sup>b</sup>	554	13.0	(10.1-16.4)
Ingham	970	8.5	(6.7-10.6)
<b>Region 5</b>	1,587	13.2	(11.3-15.4)
Branch-Hillsdale-St. Joseph	459	14.1	(10.7-18.4)
Calhoun	399	17.1	(12.7-22.6)
Kalamazoo	698	10.8	(8.5-13.6)
<b>Region 6</b>	728	12.1	(9.7-15.0)
Van Buren-Cass	308	16.0	(11.9-21.2)
Berrien	382	9.8	(7.0-13.5)
<b>Region 7</b>	3,244	9.8	(8.7-11.1)
Allegan	359	10.1	(6.8-14.7)
Ionia	202	11.6	(7.7-17.0)
Kent	1,692	9.7	(8.1-11.6)
Mid-Michigan <sup>b</sup>	554	13.0	(10.1-16.4)
Ottawa	764	9.0	(6.9-11.8)

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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>33,188</b>	<b>11.3</b>	<b>(10.9-11.7)</b>
<b>Region 8</b>	2,719	12.7	(11.2-14.4)
District #10	1,196	13.1	(11.0-15.6)
Muskegon	1,460	13.0	(11.1-15.3)
<b>Region 9</b>	1,775	10.8	(9.2-12.6)
District #2	237	15.2	(10.7-21.2)
District #4	265	14.0	(9.7-19.8)
Northwest Michigan	535	8.1	(5.9-11.2)
Benzie-Leelanau	239	14.5	(9.8-21.0)
Grand Traverse	456	7.0	(4.8-10.0)
<b>Region 10</b>	1,511	12.7	(10.7-15.0)
Bay	315	8.8	(5.9-12.9)
Huron	131	15.2	(9.7-23.0)
Saginaw	716	15.0	(11.6-19.2)
Sanilac	161	11.4	(7.0-18.0)
Tuscola	168	11.7	(7.5-17.8)
<b>Region 11</b>	1,034	12.3	(10.0-15.0)
Central Michigan	587	14.6	(11.4-18.6)
Midland	274	12.2	(8.4-17.4)
<b>Region 12</b>	1,061	11.9	(9.8-14.3)
Luce-Mackinac-Alger-Schoolcraft	133	9.4	(5.3-16.0)
Western Upper Peninsula	236	12.1	(8.0-17.9)
Delta-Menominee	209	16.1	(10.9-23.2)
Chippewa	130	13.7	(8.0-22.3)
Dickinson-Iron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Marquette	211	9.9	(6.1-15.7)

<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.

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

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<b>Table 30: Kidney Disease Michigan BRFSS, 2016-2018 Combined</b>			
Geographic Area	Ever Told Kidney Disease <sup>a</sup>		
	N	%	95% Confidence Interval
<b>Michigan Total</b>	<b>33,132</b>	<b>3.6</b>	<b>(3.4-3.9)</b>
<b>Region 1</b>	13,026	3.7	(3.3-4.1)
Livingston	1,181	2.2	(1.3-3.5)
Macomb	1,962	3.4	(2.7-4.4)
Monroe	389	4.5	(2.5-7.7)
Oakland	3,333	3.2	(2.6-3.9)
St. Clair	432	3.4	(2.0-5.6)
Washtenaw	1,346	3.0	(2.0-4.6)
City of Detroit	1,550	5.4	(4.2-7.0)
Wayne exc. Detroit	2,764	3.9	(3.1-4.8)
<b>Region 2</b>	2,150	3.7	(2.9-4.7)
Genesee	1,567	3.5	(2.6-4.6)
Lapeer	263	7.4	(4.3-12.5)
Shiawassee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 3</b>	1,814	3.1	(2.4-4.1)
Jackson	1,448	3.5	(2.6-4.6)
Lenawee	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 4</b>	1,880	2.8	(2.1-3.7)
Barry-Eaton	536	2.4	(1.4-4.1)
Mid-Michigan <sup>b</sup>	555	3.3	(2.0-5.5)
Ingham	970	3.4	(2.4-4.9)
<b>Region 5</b>	1,582	4.8	(3.6-6.5)
Branch-Hillsdale-St. Joseph	457	5.2	(3.2-8.5)
Calhoun	397	6.8	(3.8-11.9)
Kalamazoo	697	3.7	(2.4-5.5)
<b>Region 6</b>	724	3.4	(2.2-5.2)
Van Buren-Cass	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Berrien	379	3.7	(2.0-6.5)
<b>Region 7</b>	3,244	3.1	(2.5-3.8)
Allegan	360	2.1	(1.2-3.8)
Ionia	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Kent	1,691	3.3	(2.5-4.3)
Mid-Michigan <sup>b</sup>	555	3.3	(2.0-5.5)
Ottawa	764	3.1	(2.0-4.7)



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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>33,132</b>	<b>3.6</b>	<b>(3.4-3.9)</b>
<b>Region 8</b>	2,709	4.0	(3.2-5.0)
District #10	1,189	4.2	(3.0-5.8)
Muskegon	1,458	4.0	(3.0-5.4)
<b>Region 9</b>	1,775	3.5	(2.5-4.7)
District #2	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
District #4	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Northwest Michigan	535	2.3	(1.3-4.0)
Benzie-Leelanau	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Grand Traverse	457	4.1	(2.4-6.9)
<b>Region 10</b>	1,507	3.7	(2.6-5.2)
Bay	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Huron	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Saginaw	714	4.4	(2.5-7.6)
Sanilac	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
Tuscola	-- <sup>c</sup>	-- <sup>c</sup>	-- <sup>c</sup>
<b>Region 11</b>	1,031	4.1	(2.9-5.7)
Central Michigan	585	3.9	(2.6-5.8)
Midland	273	6.0	(3.3-10.5)
<b>Region 12</b>	1,061	4.7	(3.5-6.3)
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 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%.

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<b>Table 31: Depression Michigan BRFSS, 2016-2018 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>33,076</b>	<b>22.9</b>	<b>(22.3-23.5)</b>
<b>Region 1</b>	13,005	21.8	(20.9-22.7)
Livingston	1,181	24.0	(20.3-28.1)
Macomb	1,958	22.1	(19.9-24.4)
Monroe	388	25.0	(20.1-30.6)
Oakland	3,322	18.4	(16.8-20.2)
St. Clair	432	24.3	(19.9-29.3)
Washtenaw	1,342	25.5	(22.4-28.8)
City of Detroit	1,549	23.1	(20.6-25.7)
Wayne exc. Detroit	2,764	22.7	(20.9-24.7)
<b>Region 2</b>	2,143	22.1	(20.0-24.3)
Genesee	1,562	23.3	(20.8-26.0)
Lapeer	262	20.0	(15.0-26.1)
Shiawassee	299	18.9	(13.8-25.2)
<b>Region 3</b>	1,809	24.3	(21.6-27.1)
Jackson	1,446	25.8	(23.0-28.8)
Lenawee	308	22.6	(17.3-29.0)
<b>Region 4</b>	1,873	23.4	(21.1-25.9)
Barry-Eaton	535	22.6	(18.4-27.4)
Mid-Michigan <sup>b</sup>	556	21.8	(17.9-26.2)
Ingham	963	24.8	(21.6-28.3)
<b>Region 5</b>	1,583	25.8	(23.2-28.6)
Branch-Hillsdale-St. Joseph	457	22.9	(18.4-28.2)
Calhoun	399	28.4	(22.9-34.6)
Kalamazoo	697	26.8	(23.0-31.0)
<b>Region 6</b>	726	25.0	(21.2-29.2)
Van Buren-Cass	306	26.0	(20.3-32.6)
Berrien	382	23.3	(18.4-29.1)
<b>Region 7</b>	3,236	23.5	(21.8-25.4)
Allegan	357	25.4	(20.5-31.1)
Ionia	203	28.0	(21.3-35.9)
Kent	1,687	22.7	(20.4-25.3)
Mid-Michigan <sup>b</sup>	556	21.8	(17.9-26.2)
Ottawa	762	23.8	(20.0-28.0)

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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>33,076</b>	<b>22.9</b>	<b>(22.3-23.5)</b>
<b>Region 8</b>	2,710	27.4	(25.1-29.8)
District #10	1,194	25.9	(22.8-29.2)
Muskegon	1,453	31.2	(28.0-34.7)
<b>Region 9</b>	1,767	24.4	(21.9-27.0)
District #2	235	24.2	(18.1-31.6)
District #4	261	22.4	(16.7-29.4)
Northwest Michigan	534	26.9	(22.5-31.8)
Benzie-Leelanau	238	22.5	(16.6-29.6)
Grand Traverse	456	24.9	(19.9-30.5)
<b>Region 10</b>	1,507	23.8	(20.9-27.0)
Bay	313	31.1	(23.7-39.7)
Huron	131	14.5	(9.2-22.1)
Saginaw	714	21.2	(17.4-25.5)
Sanilac	161	22.4	(15.7-30.9)
Tuscola	168	26.1	(18.9-34.9)
<b>Region 11</b>	1,032	22.4	(19.4-25.8)
Central Michigan	587	24.2	(20.1-28.8)
Midland	273	19.4	(14.2-25.9)
<b>Region 12</b>	1,059	23.9	(20.8-27.3)
Luce-Mackinac-Alger-Schoolcraft	132	23.1	(14.6-34.4)
Western Upper Peninsula	237	22.9	(17.1-29.8)
Delta-Menominee	207	21.3	(15.3-28.7)
Chippewa	130	26.9	(18.2-38.0)
Dickinson-Iron	119	27.0	(17.3-39.5)
Marquette	212	26.6	(19.7-34.7)

<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.