

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

**Michigan Behavioral Risk Factor Survey  
2005 - 2007 Combined**

Selected Tables

Chronic Disease Epidemiology Section  
Bureau of Epidemiology  
Michigan Department of Community Health

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Finalized September 17, 2008*

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## **Introduction**

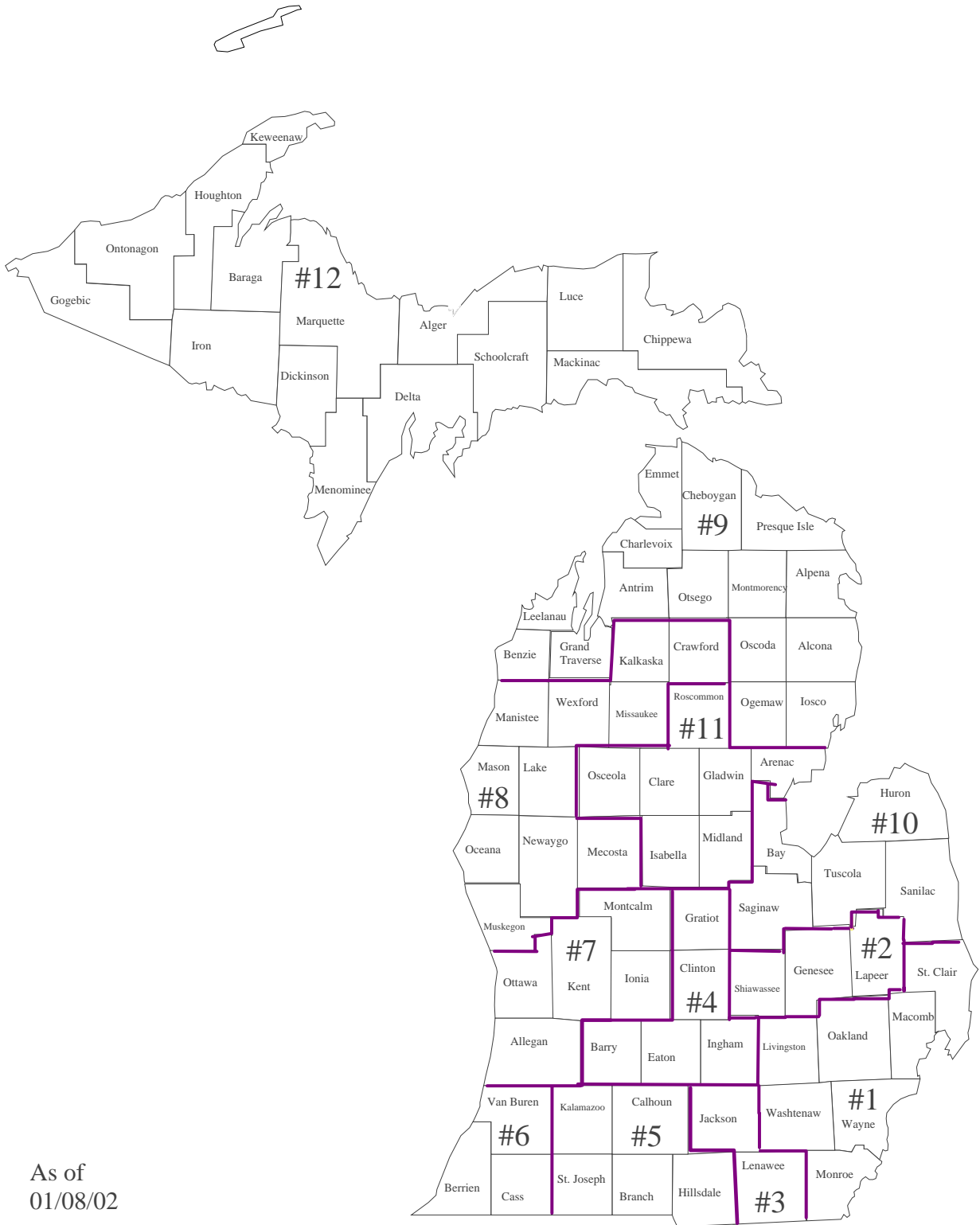
The Michigan Behavioral Risk Factor Survey (BRFS) is a statewide, random-digit dialed telephone survey of adult residents aged 18 years and older. State-specific, population-based prevalence estimates (and 95% confidence intervals) of health risk behaviors, preventive health practices, and chronic conditions are calculated using annual data sets (see Annual Tables at <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 2005 - 2007 Michigan BRFSS were combined. The total sample sizes by year were: 7,505 in 2007, 5,662 in 2006, and 12,136 in 2005. Not all questions were included annually in the survey. The table subtitles indicate which years were used for that particular analysis.

Estimates have been weighted to adjust for the probabilities of selection and the distribution of Michigan adults by age, sex, and race-ethnicity at the state level. Final annual analysis weights were used; no additional weighting factors have been computed for the regional or local health department level. These analyses were performed in SUDAAN, a statistical computing program that was designed for complex sample surveys. Estimates are reported for geographic subgroups with a sample size of at least 50 respondents.

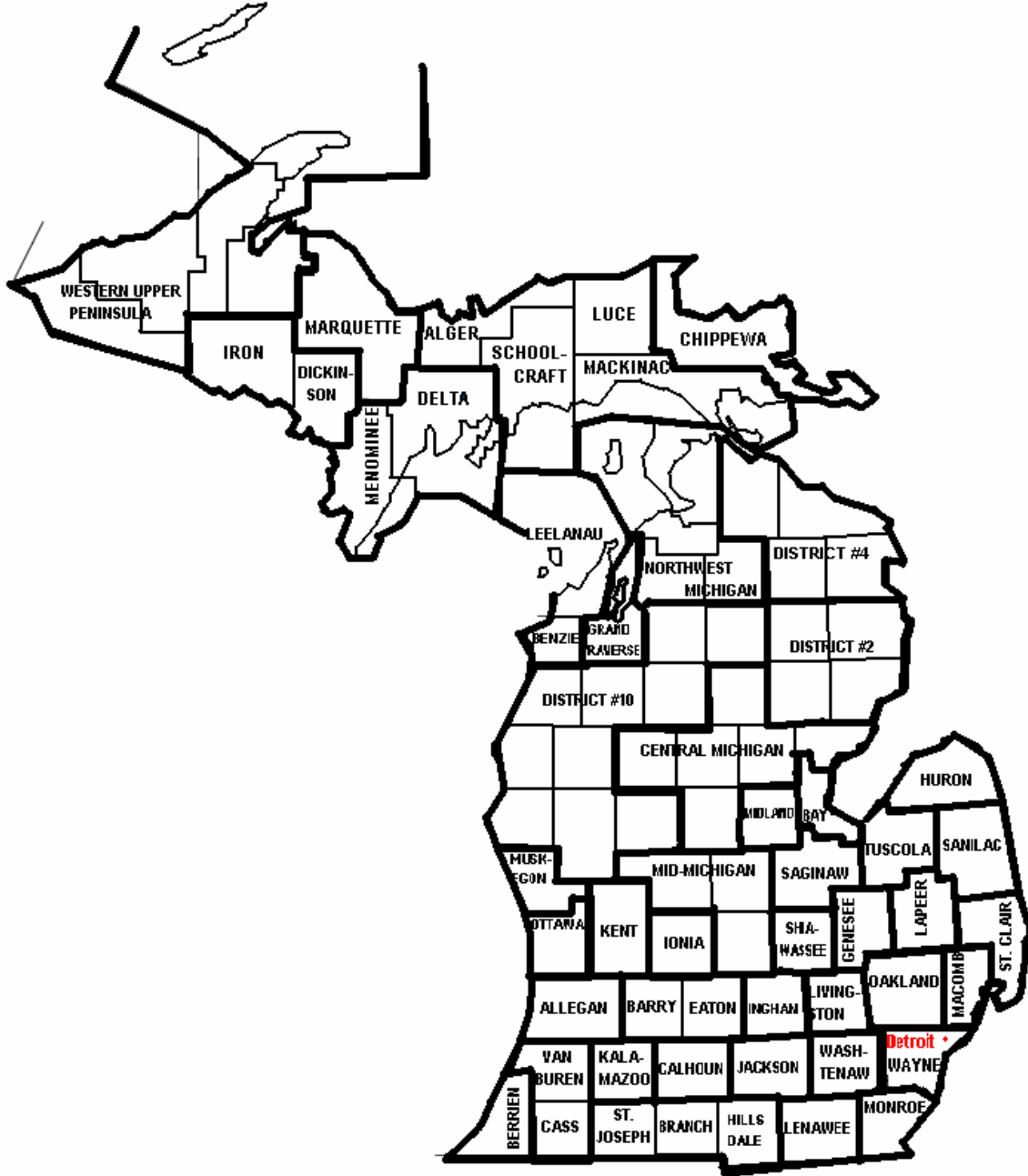
If you have any questions about these data, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, [FussmanC@michigan.gov](mailto:FussmanC@michigan.gov).

## Community Health Assessment and Improvement Regions State of Michigan



As of  
01/08/02

### Local Health Departments State of Michigan



2005 - 2007 Michigan BRFSS Regional & Local Health Department Estimates  
September 17, 2008

<b>Table 1: Health Status Michigan BRFSS, 2005-2007 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>	25,234	15.1	(14.5-15.6)
<b>Region 1</b>	10,472	15.3	(14.5-16.1)
Livingston	397	8.1	(5.7-11.5)
Macomb	1,572	14.9	(13.0-17.1)
Monroe	361	16.3	(12.3-21.3)
Oakland	2,724	12.0	(10.6-13.6)
St. Clair	422	17.3	(13.4-22.0)
Washtenaw	817	9.9	(7.4-13.0)
City of Detroit	1,829	24.2	(21.7-26.8)
Wayne exc. Detroit	2,315	15.2	(13.6-17.0)
<b>Region 2</b>	1,519	16.4	(14.4-18.6)
Genesee	1,090	17.0	(14.6-19.6)
Lapeer	225	14.0	(9.6-19.8)
Shiawassee	204	16.2	(11.4-22.6)
<b>Region 3</b>	722	13.7	(11.1-16.8)
Jackson	447	15.7	(12.3-19.9)
Lenawee	275	10.3	(6.9-15.2)
<b>Region 4</b>	1,587	13.5	(11.8-15.5)
Barry-Eaton	503	14.1	(11.1-17.8)
Mid-Michigan <sup>b</sup>	565	14.5	(11.7-17.9)
Ingham	744	13.3	(10.8-16.3)
<b>Region 5</b>	1,401	16.1	(13.9-18.6)
Branch-Hillsdale-St. Joseph	377	20.4	(15.9-25.8)
Calhoun	380	16.5	(12.7-21.0)
Kalamazoo	644	13.3	(10.3-17.2)
<b>Region 6</b>	871	18.2	(15.4-21.5)
Van Buren-Cass	354	17.3	(13.1-22.5)
Berrien	517	18.9	(15.2-23.3)
<b>Region 7</b>	2,757	11.7	(10.2-13.3)
Allegan	277	15.8	(9.2-25.9)
Ionia	174	15.1	(10.1-21.8)
Kent	1,398	10.4	(8.7-12.4)
Mid-Michigan <sup>b</sup>	565	14.5	(11.7-17.9)
Ottawa	683	10.4	(7.9-13.4)

2005 - 2007 Michigan BRFSS Regional & Local Health Department Estimates  
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<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>	25,234	15.1	(14.5-15.6)
<b>Region 8</b>	1,326	17.8	(15.6-20.3)
District #10	832	18.0	(15.2-21.2)
Muskegon	494	17.6	(14.1-21.6)
<b>Region 9</b>	1,383	14.8	(12.8-17.1)
District #2	255	19.5	(14.5-25.7)
District #4	330	18.6	(14.0-24.2)
Northwest Michigan	409	13.1	(9.9-17.2)
Benzie-Leelanau	132	9.7	(5.2-17.5)
Grand Traverse	257	11.2	(7.7-16.1)
<b>Region 10</b>	1,263	15.2	(13.1-17.6)
Bay	285	16.1	(11.6-21.8)
Huron	101	15.1	(9.1-24.0)
Saginaw	601	14.7	(11.8-18.1)
Sanilac	131	16.3	(10.4-24.8)
Tuscola	145	14.5	(9.4-21.7)
<b>Region 11</b>	853	15.9	(13.2-18.9)
Central Michigan	582	17.9	(14.5-22.0)
Midland	271	11.7	(8.2-16.4)
<b>Region 12</b>	1,080	16.0	(13.7-18.7)
Luce-Mackinac-Alger-Schoolcraft	148	17.5	(11.6-25.5)
Western Upper Peninsula	228	19.7	(14.2-26.8)
Delta-Menominee	235	13.0	(9.2-18.0)
Chippewa	108	15.7	(9.7-24.4)
Dickinson-Iron	161	19.0	(12.9-27.2)
Marquette	200	12.2	(8.3-17.5)

<sup>a</sup> The proportion 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, 2005-2007 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>	24,760	11.1	(10.6-11.5)
<b>Region 1</b>	10,284	11.1	(10.4-11.8)
Livingston	392	7.3	(5.0-10.5)
Macomb	1,547	10.6	(9.1-12.4)
Monroe	355	13.0	(9.5-17.4)
Oakland	2,671	9.9	(8.6-11.5)
St. Clair	406	12.9	(9.7-16.8)
Washtenaw	812	8.4	(6.5-10.9)
City of Detroit	1,779	14.1	(12.3-16.2)
Wayne exc. Detroit	2,288	11.5	(10.1-13.1)
<b>Region 2</b>	1,485	11.9	(10.2-13.8)
Genesee	1,063	12.3	(10.3-14.6)
Lapeer	224	12.5	(8.4-18.1)
Shiawassee	198	9.3	(5.8-14.5)
<b>Region 3</b>	708	13.0	(10.4-16.0)
Jackson	438	14.4	(11.2-18.5)
Lenawee	270	10.5	(6.9-15.7)
<b>Region 4</b>	1,562	9.8	(8.2-11.6)
Barry-Eaton	493	8.1	(5.8-11.1)
Mid-Michigan <sup>b</sup>	554	9.6	(7.0-13.0)
Ingham	735	10.3	(8.1-13.0)
<b>Region 5</b>	1,374	11.6	(9.7-13.7)
Branch-Hillsdale-St. Joseph	373	13.1	(9.5-17.9)
Calhoun	369	13.0	(9.4-17.7)
Kalamazoo	632	9.8	(7.4-12.8)
<b>Region 6</b>	849	9.7	(7.6-12.2)
Van Buren-Cass	346	10.2	(6.9-14.8)
Berrien	503	9.3	(6.9-12.3)
<b>Region 7</b>	2,712	9.2	(8.0-10.6)
Allegan	270	11.4	(7.6-16.9)
Ionia	171	6.9	(3.8-12.1)
Kent	1,378	10.3	(8.4-12.6)
Mid-Michigan <sup>b</sup>	554	9.6	(7.0-13.0)
Ottawa	673	7.1	(5.4-9.3)



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<b>Table 2 Cont'd</b>			
<b>Geographic Area</b>	<b>Poor Physical Health<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	24,760	11.1	(10.6-11.5)
<b>Region 8</b>	1,295	14.2	(12.1-16.6)
District #10	813	14.0	(11.3-17.2)
Muskegon	482	14.5	(11.4-18.1)
<b>Region 9</b>	1,363	12.6	(10.7-14.7)
District #2	251	13.5	(9.8-18.3)
District #4	323	15.3	(11.0-21.0)
Northwest Michigan	404	13.6	(10.3-17.8)
Benzie-Leelanau	128	13.4	(7.4-22.9)
Grand Traverse	257	6.6	(4.3-10.0)
<b>Region 10</b>	1,227	10.8	(9.1-12.8)
Bay	280	11.0	(7.5-15.9)
Huron	98	8.2	(3.9-16.3)
Saginaw	583	12.5	(9.9-15.7)
Sanilac	126	8.2	(4.8-13.7)
Tuscola	140	8.0	(4.7-13.3)
<b>Region 11</b>	841	10.6	(8.6-13.0)
Central Michigan	573	13.1	(10.3-16.5)
Midland	268	5.6	(3.6-8.6)
<b>Region 12</b>	1,060	11.5	(9.5-13.7)
Luce-Mackinac-Alger-Schoolcraft	146	8.1	(4.6-13.8)
Western Upper Peninsula	225	14.8	(10.2-21.0)
Delta-Menominee	229	11.6	(7.9-16.9)
Chippewa	106	7.9	(4.2-14.4)
Dickinson-Iron	156	13.2	(8.1-20.8)
Marquette	198	10.7	(7.1-15.8)

<sup>a</sup> The proportion who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes physical illness and injury.  
<sup>b</sup> The Mid-Michigan District Health Department consists of Clinton, Gratiot, and Montcalm. Clinton and Gratiot are Region 4 counties, while Montcalm is a Region 7 county. All three counties were included in the Mid-Michigan estimate, but only the respective counties were included in the regional estimates.

<b>Table 3: Poor Mental Health on at Least 14 Days in the Past Month Michigan BRFSS, 2005-2007 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>	24,909	10.9	(10.4-11.4)
<b>Region 1</b>	10,339	11.2	(10.4-12.0)
Livingston	394	9.1	(5.8-14.0)
Macomb	1,555	11.6	(9.9-13.7)
Monroe	354	14.8	(10.5-20.4)
Oakland	2,699	10.1	(8.7-11.8)
St. Clair	412	11.0	(8.1-14.8)
Washtenaw	811	7.8	(5.8-10.3)
City of Detroit	1,796	12.9	(11.0-15.0)
Wayne exc. Detroit	2,283	12.0	(10.3-13.8)
<b>Region 2</b>	1,504	10.4	(8.6-12.4)
Genesee	1,081	10.0	(8.1-12.3)
Lapeer	222	9.3	(6.0-14.2)
Shiawassee	201	13.1	(7.8-21.1)
<b>Region 3</b>	710	11.3	(8.8-14.5)
Jackson	440	11.8	(8.7-15.9)
Lenawee	270	10.5	(6.7-13.0)
<b>Region 4</b>	1,564	10.7	(8.9-12.7)
Barry-Eaton	497	9.4	(6.7-16.2)
Mid-Michigan <sup>b</sup>	557	10.8	(7.9-14.6)
Ingham	731	11.0	(8.6-13.9)
<b>Region 5</b>	1,385	12.6	(10.6-14.9)
Branch-Hillsdale-St. Joseph	374	13.1	(9.4-17.9)
Calhoun	374	17.6	(13.1-23.3)
Kalamazoo	637	9.4	(7.1-12.2)
<b>Region 6</b>	858	8.9	(7.0-11.3)
Van Buren-Cass	350	7.9	(5.4-11.4)
Berrien	508	9.7	(7.1-13.2)
<b>Region 7</b>	2,728	9.8	(8.4-11.3)
Allegan	273	9.9	(6.5-14.9)
Ionia	172	13.5	(8.3-21.1)
Kent	1,383	10.2	(8.3-12.6)
Mid-Michigan <sup>b</sup>	557	10.8	(7.9-14.6)
Ottawa	679	8.0	(5.8-10.9)

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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>	24,909	10.9	(10.4-11.4)
<b>Region 8</b>	1,305	12.4	(10.3-14.8)
District #10	821	10.4	(8.2-13.1)
Muskegon	484	15.6	(11.7-20.5)
<b>Region 9</b>	1,366	10.1	(8.3-12.1)
District #2	253	11.7	(7.8-17.0)
District #4	323	10.3	(7.0-15.0)
Northwest Michigan	404	9.8	(7.0-13.7)
Benzie-Leelanau	131	12.3	(6.9-21.1)
Grand Traverse	255	7.4	(4.2-12.5)
<b>Region 10</b>	1,250	11.8	(9.7-14.4)
Bay	281	12.1	(7.4-19.3)
Huron	98	7.6	(3.6-15.1)
Saginaw	595	14.4	(11.2-18.4)
Sanilac	130	10.2	(6.3-16.3)
Tuscola	146	5.3	(2.7-10.0)
<b>Region 11</b>	841	11.2	(8.6-14.5)
Central Michigan	578	11.4	(8.6-15.1)
Midland	263	10.7	(6.2-18.1)
<b>Region 12</b>	1,059	8.5	(6.7-10.7)
Luce-Mackinac-Alger-Schoolcraft	147	9.4	(5.4-15.9)
Western Upper Peninsula	224	9.1	(5.5-14.8)
Delta-Menominee	231	10.1	(6.1-16.4)
Chippewa	103	9.9	(4.9-19.1)
Dickinson-Iron	158	5.9	(3.1-11.0)
Marquette	196	6.2	(3.5-11.0)

<sup>a</sup> The proportion 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.

<b>Table 4: Activity Limitation on at Least 14 Days in the Past Month Michigan BRFSS, 2005-2007 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>	25,029	7.1	(6.8-7.5)
<b>Region 1</b>	10,386	7.1	(6.5-7.7)
Livingston	394	4.0	(2.4-6.4)
Macomb	1,566	6.1	(5.0-7.5)
Monroe	357	8.8	(6.0-12.9)
Oakland	2,708	5.8	(4.8-7.1)
St. Clair	416	7.7	(5.3-11.2)
Washtenaw	811	5.1	(3.6-7.2)
City of Detroit	1,806	10.8	(9.1-12.8)
Wayne exc. Detroit	2,292	7.4	(6.2-8.8)
<b>Region 2</b>	1,504	8.0	(6.6-9.7)
Genesee	1,082	8.0	(6.4-9.9)
Lapeer	222	7.8	(4.9-12.3)
Shiawassee	200	8.5	(4.6-15.1)
<b>Region 3</b>	711	6.5	(4.7-8.8)
Jackson	442	7.9	(5.4-11.3)
Lenawee	269	4.1	(2.4-6.9)
<b>Region 4</b>	1,570	6.3	(5.0-7.9)
Barry-Eaton	498	5.8	(3.6-9.0)
Mid-Michigan <sup>b</sup>	558	6.5	(4.2-9.9)
Ingham	736	6.4	(4.8-8.5)
<b>Region 5</b>	1,391	6.8	(5.5-8.5)
Branch-Hillsdale-St. Joseph	375	7.4	(4.8-11.4)
Calhoun	375	7.6	(5.2-11.0)
Kalamazoo	641	6.0	(4.3-8.5)
<b>Region 6</b>	866	5.9	(4.5-7.7)
Van Buren-Cass	354	4.8	(3.0-7.5)
Berrien	512	6.7	(4.8-9.3)
<b>Region 7</b>	2,741	6.1	(5.1-7.4)
Allegan	276	6.5	(3.8-10.7)
Ionia	173	8.3	(4.6-14.6)
Kent	1,389	7.0	(5.4-8.9)
Mid-Michigan <sup>b</sup>	558	6.5	(4.2-9.9)
Ottawa	681	3.7	(2.5-5.6)

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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>	25,029	7.1	(6.8-7.5)
<b>Region 8</b>	1,313	9.2	(7.6-11.1)
District #10	824	8.8	(6.8-11.3)
Muskegon	489	9.8	(7.3-13.0)
<b>Region 9</b>	1,377	8.2	(6.7-10.2)
District #2	251	10.5	(7.0-15.4)
District #4	327	9.9	(6.4-15.2)
Northwest Michigan	408	7.6	(5.1-11.2)
Benzie-Leelanau	132	10.1	(5.4-18.2)
Grand Traverse	259	4.2	(2.3-7.7)
<b>Region 10</b>	1,248	7.4	(6.0-9.2)
Bay	283	7.3	(4.6-11.3)
Huron	99	7.0	(3.2-14.9)
Saginaw	590	7.8	(5.7-10.5)
Sanilac	131	7.8	(3.9-14.8)
Tuscola	145	6.1	(3.2-11.4)
<b>Region 11</b>	853	8.7	(6.5-11.5)
Central Michigan	583	10.1	(7.5-13.5)
Midland	270	5.9	(2.8-12.2)
<b>Region 12</b>	1,069	6.6	(5.2-8.5)
Luce-Mackinac-Alger-Schoolcraft	148	6.7	(3.3-13.2)
Western Upper Peninsula	224	7.9	(4.4-13.6)
Delta-Menominee	234	7.8	(4.8-12.5)
Chippewa	107	4.3	(2.1-8.7)
Dickinson-Iron	158	5.3	(2.8-9.7)
Marquette	198	6.1	(3.4-10.7)

<sup>a</sup> The proportion 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: Life Satisfaction Michigan BRFSS, 2005-2007 Combined</b>			
<b>Geographic Area</b>	<b>Dissatisfied or Very Dissatisfied<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	24,643	6.2	(5.9-6.6)
<b>Region 1</b>	10,081	7.1	(6.5-7.8)
Livingston	390	3.5	(2.0-6.1)
Macomb	1,534	6.8	(5.3-8.6)
Monroe	354	5.7	(3.6-9.0)
Oakland	2,660	5.1	(4.2-6.2)
St. Clair	410	10.0	(6.9-14.2)
Washtenaw	801	4.4	(3.1-6.3)
City of Detroit	1,752	12.7	(10.7-15.0)
Wayne exc. Detroit	2,253	6.8	(5.6-8.2)
<b>Region 2</b>	1,488	6.0	(4.6-7.6)
Genesee	1,066	7.0	(5.3-9.1)
Lapeer	223	3.6	(1.5-8.2)
Shiawassee	199	3.5	(1.5-8.0)
<b>Region 3</b>	708	5.4	(3.8-7.7)
Jackson	438	6.9	(4.6-10.3)
Lenawee	270	3.0	(1.6-5.6)
<b>Region 4</b>	1,554	6.0	(4.6-7.7)
Barry-Eaton	495	6.2	(3.8-9.8)
Mid-Michigan <sup>b</sup>	558	4.6	(3.0-7.0)
Ingham	722	6.6	(4.6-9.3)
<b>Region 5</b>	1,374	7.2	(5.6-9.3)
Branch-Hillsdale-St. Joseph	372	6.1	(3.4-10.6)
Calhoun	368	9.1	(5.9-13.9)
Kalamazoo	634	6.7	(4.5-9.7)
<b>Region 6</b>	851	5.9	(4.1-8.3)
Van Buren-Cass	348	3.6	(1.9-7.0)
Berrien	503	7.5	(5.0-11.3)
<b>Region 7</b>	2,701	4.6	(3.7-5.7)
Allegan	274	4.5	(2.4-8.3)
Ionia	168	4.6	(2.0-10.0)
Kent	1,368	4.8	(3.5-6.6)
Mid-Michigan <sup>b</sup>	558	4.6	(3.0-7.0)
Ottawa	670	4.0	(2.6-6.2)

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<b>Table 5 Cont'd</b>			
<b>Geographic Area</b>	<b>Dissatisfied or Very Dissatisfied<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	24,643	6.2	(5.9-6.6)
<b>Region 8</b>	1,294	7.0	(5.4-9.1)
District #10	811	5.2	(3.7-7.2)
Muskegon	483	10.1	(6.9-14.5)
<b>Region 9</b>	1,360	4.9	(3.8-6.4)
District #2	255	6.9	(4.2-11.0)
District #4	321	5.1	(2.9-8.8)
Northwest Michigan	404	4.6	(2.6-8.0)
Benzie-Leelanau	127	5.6	(2.8-10.9)
Grand Traverse	253	3.0	(1.4-6.1)
<b>Region 10</b>	1,229	5.5	(4.1-7.4)
Bay	276	6.3	(3.3-11.8)
Huron	99	1.1	(0.3-4.6)
Saginaw	582	6.1	(4.1-9.0)
Sanilac	128	3.4	(1.4-7.8)
Tuscola	144	6.2	(2.7-13.6)
<b>Region 11</b>	844	5.1	(3.6-7.1)
Central Michigan	576	5.9	(3.9-8.7)
Midland	268	3.6	(2.0-6.4)
<b>Region 12</b>	1,059	5.3	(3.8-7.3)
Luce-Mackinac-Alger-Schoolcraft	143	6.5	(3.2-12.5)
Western Upper Peninsula	220	4.5	(2.5-7.8)
Delta-Menominee	233	7.0	(3.4-14.1)
Chippewa	105	6.2	(1.9-18.0)
Dickinson-Iron	161	4.5	(2.1-9.6)
Marquette	197	3.4	(1.8-6.6)

<sup>a</sup> The proportion who reported either "Dissatisfied" or "Very Dissatisfied" to the following question: "In general, how satisfied are you with your life?"

<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 6: Social and Emotional Support Michigan BRFS, 2005-2007 Combined</b>			
<b>Geographic Area</b>	<b>Rarely or Never Receive Needed Social and Emotional Support<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	24,378	6.9	(6.6-7.4)
<b>Region 1</b>	10,061	7.3	(6.7-7.9)
Livingston	391	4.5	(2.8-7.3)
Macomb	1,514	7.1	(5.6-9.0)
Monroe	347	5.7	(3.3-9.7)
Oakland	2,643	5.8	(4.7-7.0)
St. Clair	405	10.9	(7.8-15.1)
Washtenaw	792	5.1	(3.5-7.4)
City of Detroit	1,726	11.7	(9.9-13.9)
Wayne exc. Detroit	2,217	6.6	(5.5-8.0)
<b>Region 2</b>	1,466	7.1	(5.7-8.8)
Genesee	1,055	7.9	(6.2-10.2)
Lapeer	219	5.7	(3.1-10.0)
Shiawassee	192	4.5	(2.4-8.1)
<b>Region 3</b>	703	5.4	(3.8-7.6)
Jackson	436	5.4	(3.4-8.5)
Lenawee	267	5.4	(3.2-9.0)
<b>Region 4</b>	1,549	6.5	(5.2-8.2)
Barry-Eaton	494	6.2	(4.2-9.0)
Mid-Michigan <sup>b</sup>	555	7.0	(4.9-10.0)
Ingham	721	6.9	(4.9-9.7)
<b>Region 5</b>	1,363	7.5	(6.0-9.4)
Branch-Hillsdale-St. Joseph	367	8.4	(5.4-12.7)
Calhoun	362	8.0	(5.0-12.4)
Kalamazoo	634	6.7	(4.9-9.1)
<b>Region 6</b>	841	9.9	(7.5-13.1)
Van Buren-Cass	344	7.5	(4.4-12.3)
Berrien	497	11.8	(8.3-16.3)
<b>Region 7</b>	2,695	5.5	(4.5-6.7)
Allegan	272	4.6	(2.5-8.3)
Ionia	168	5.3	(3.0-9.1)
Kent	1,366	5.3	(3.9-7.1)
Mid-Michigan <sup>b</sup>	555	7.0	(4.9-10.0)
Ottawa	668	5.3	(3.6-7.9)



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<b>Table 6 Cont'd</b>			
<b>Geographic Area</b>	<b>Rarely or Never Receive the Social and Emotional Support that is Needed<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	24,378	6.9	(6.6-7.4)
<b>Region 8</b>	1,274	7.4	(5.9-9.2)
District #10	802	7.3	(5.7-9.4)
Muskegon	472	7.4	(4.8-11.3)
<b>Region 9</b>	1,345	6.6	(5.2-8.2)
District #2	251	4.7	(2.8-7.9)
District #4	314	7.6	(4.9-11.6)
Northwest Michigan	397	7.3	(4.7-11.3)
Benzie-Leelanau	128	8.3	(4.5-14.9)
Grand Traverse	255	5.1	(3.0-8.6)
<b>Region 10</b>	1,207	7.8	(6.1-9.9)
Bay	274	7.8	(4.3-13.7)
Huron	94	4.5	(1.8-10.7)
Saginaw	571	7.7	(5.4-10.9)
Sanilac	125	7.3	(3.3-15.3)
Tuscola	143	10.6	(6.2-17.6)
<b>Region 11</b>	830	6.6	(4.9-8.8)
Central Michigan	566	7.7	(5.5-10.7)
Midland	264	4.4	(2.4-8.1)
<b>Region 12</b>	1,044	5.4	(4.0-7.2)
Luce-Mackinac-Alger-Schoolcraft	141	6.9	(3.3-14.0)
Western Upper Peninsula	221	7.9	(4.2-14.2)
Delta-Menominee	228	6.0	(3.5-10.4)
Chippewa	104	1.2	(0.4-3.8)
Dickinson-Iron	154	3.6	(1.8-7.1)
Marquette	196	4.3	(2.0-8.7)

<sup>a</sup> The proportion who reported either "Rarely" or "Never" to the following question: "How often do you get the social and emotional support you need?"

<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 7: Disability Michigan BRFSS, 2005-2007 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>	25,036	22.4	(21.8-23.0)
<b>Region 1</b>	10,378	21.4	(20.5-22.4)
Livingston	393	23.6	(18.8-29.2)
Macomb	1,555	20.2	(18.0-22.5)
Monroe	354	24.2	(19.4-29.7)
Oakland	2,713	20.2	(18.4-22.1)
St. Clair	422	23.8	(19.3-28.9)
Washtenaw	812	18.0	(15.2-21.1)
City of Detroit	1,812	25.4	(22.9-28.0)
Wayne exc. Detroit	2,288	20.9	(19.0-22.9)
<b>Region 2</b>	1,509	25.8	(23.3-28.5)
Genesee	1,086	25.5	(22.6-28.6)
Lapeer	223	26.0	(20.0-33.1)
Shiawassee	200	27.1	(20.1-35.5)
<b>Region 3</b>	715	21.7	(18.6-25.2)
Jackson	442	22.1	(18.2-26.6)
Lenawee	273	21.0	(16.1-27.0)
<b>Region 4</b>	1,571	20.7	(18.5-23.1)
Barry-Eaton	498	20.6	(16.7-25.0)
Mid-Michigan <sup>b</sup>	557	21.9	(17.9-26.5)
Ingham	738	20.5	(17.5-23.9)
<b>Region 5</b>	1,387	24.9	(22.4-27.7)
Branch-Hillsdale-St. Joseph	373	26.6	(21.5-32.3)
Calhoun	377	26.9	(21.9-32.6)
Kalamazoo	637	22.8	(19.3-26.7)
<b>Region 6</b>	864	19.8	(17.0-22.9)
Van Buren-Cass	355	20.3	(16.0-25.4)
Berrien	509	19.4	(15.9-23.5)
<b>Region 7</b>	2,740	19.8	(18.1-21.6)
Allegan	274	20.6	(15.5-26.9)
Ionia	173	18.4	(13.4-24.8)
Kent	1,392	19.5	(17.1-22.3)
Mid-Michigan <sup>b</sup>	557	21.9	(17.9-26.5)
Ottawa	679	19.3	(16.2-22.8)

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<b>Table 7 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>	25,036	22.4	(21.8-23.0)
<b>Region 8</b>	1,318	28.5	(25.6-31.5)
District #10	829	28.9	(25.3-32.9)
Muskegon	489	27.7	(23.2-32.6)
<b>Region 9</b>	1,381	25.0	(22.4-27.8)
District #2	256	29.4	(23.0-36.7)
District #4	329	27.0	(21.9-32.8)
Northwest Michigan	407	24.6	(20.0-29.7)
Benzie-Leelanau	130	26.8	(18.6-37.1)
Grand Traverse	259	18.3	(13.6-24.1)
<b>Region 10</b>	1,250	21.7	(19.2-24.4)
Bay	284	20.2	(15.6-25.7)
Huron	101	19.0	(12.0-28.6)
Saginaw	590	21.9	(18.3-25.9)
Sanilac	129	27.1	(18.4-37.9)
Tuscola	146	21.3	(15.3-28.9)
<b>Region 11</b>	853	24.5	(21.4-27.9)
Central Michigan	582	27.8	(23.7-32.2)
Midland	271	17.9	(13.8-23.0)
<b>Region 12</b>	1,070	25.1	(22.2-28.3)
Luce-Mackinac-Alger-Schoolcraft	146	26.2	(18.1-36.5)
Western Upper Peninsula	226	25.2	(19.4-32.0)
Delta-Menominee	232	23.6	(18.1-30.1)
Chippewa	106	24.9	(16.2-36.2)
Dickinson-Iron	162	32.8	(25.0-41.6)
Marquette	198	20.0	(14.6-26.8)

<sup>a</sup> The proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported that they required use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem.

<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 8: Weight Status Michigan BRFSS, 2005-2007 Combined							
Geographic Area	Sample Size	Obese <sup>a</sup>		Overweight <sup>b</sup>		Not Overweight or Obese <sup>c</sup>	
		N	%	95% Confidence Interval	%	95% Confidence Interval	%
<b>Michigan Total</b>	24,109	27.6	(26.9-28.3)	36.3	(35.6-37.1)	36.1	(35.3-36.9)
<b>Region 1</b>	9,989	27.1	(26.0-28.2)	35.5	(34.3-36.7)	37.4	(36.2-38.6)
Livingston	381	23.0	(18.5-28.2)	37.9	(32.4-43.8)	39.2	(33.4-45.2)
Macomb	1,499	25.9	(23.2-28.7)	38.1	(35.1-41.2)	36.0	(32.9-39.2)
Monroe	345	26.5	(21.4-32.3)	38.7	(32.6-45.1)	34.8	(28.7-41.5)
Oakland	2,606	21.6	(19.7-23.7)	37.2	(34.9-39.6)	41.2	(38.8-43.6)
St. Clair	400	30.5	(25.4-36.2)	34.8	(29.4-40.7)	34.6	(28.8-41.0)
Washtenaw	791	23.6	(19.9-27.7)	35.1	(31.2-39.3)	41.3	(37.2-45.5)
City of Detroit	1,734	38.1	(35.0-41.3)	31.0	(28.1-33.9)	30.9	(28.0-34.0)
Wayne exc. Detroit	2,205	27.7	(25.4-30.1)	34.6	(32.1-37.1)	37.8	(35.2-40.4)
<b>Region 2</b>	1,446	28.2	(25.5-31.1)	34.4	(31.5-37.5)	37.3	(34.1-40.6)
Genesee	1,032	27.6	(24.5-31.0)	35.1	(31.6-38.8)	37.3	(33.5-41.2)
Lapeer	216	33.5	(26.2-41.7)	33.2	(26.3-40.9)	33.3	(26.2-41.3)
Shiawassee	198	25.9	(19.2-33.8)	32.4	(24.9-41.0)	41.7	(33.2-50.7)
<b>Region 3</b>	683	28.5	(24.7-32.6)	40.7	(36.4-45.1)	30.8	(26.9-35.1)
Jackson	419	27.7	(22.9-33.1)	40.5	(35.2-46.1)	31.8	(26.7-37.3)
Lenawee	264	29.7	(23.8-36.4)	41.0	(34.1-48.2)	29.3	(23.3-36.1)
<b>Region 4</b>	1,517	29.2	(26.2-32.3)	36.1	(33.0-39.2)	34.8	(31.7-37.9)
Barry-Eaton	477	29.0	(24.1-34.4)	36.2	(31.0-41.7)	34.9	(29.6-40.4)
Mid-Michigan <sup>d</sup>	542	31.5	(26.8-36.6)	33.6	(28.7-38.8)	34.9	(30.1-40.1)
Ingham	715	27.8	(23.4-32.6)	38.5	(33.9-43.3)	33.8	(29.4-38.4)
<b>Region 5</b>	1,335	26.8	(24.0-29.7)	36.4	(33.3-39.6)	36.8	(33.7-40.1)
Branch-Hillsdale-St. Joseph	355	29.2	(24.0-35.1)	34.7	(29.0-40.9)	36.1	(29.9-42.7)
Calhoun	362	26.9	(21.7-32.7)	37.2	(31.3-43.5)	35.9	(30.1-42.1)
Kalamazoo	618	25.3	(21.3-29.7)	36.9	(32.4-41.7)	37.8	(33.2-42.6)
<b>Region 6</b>	842	25.3	(22.0-29.0)	41.3	(37.0-45.7)	33.4	(29.4-37.7)
Van Buren-Cass	345	24.1	(19.1-29.9)	36.0	(29.5-43.0)	39.9	(33.2-47.0)
Berrien	497	26.2	(21.9-31.0)	45.1	(39.7-50.7)	28.7	(24.0-33.9)
<b>Region 7</b>	2,627	26.0	(23.9-28.3)	36.6	(34.3-39.0)	37.4	(35.0-39.8)
Allegan	266	28.6	(20.7-38.1)	35.3	(28.0-43.3)	36.1	(28.8-44.1)
Ionia	166	28.9	(21.6-37.6)	35.4	(27.5-44.2)	35.6	(27.4-44.8)
Kent	1,324	25.1	(22.2-28.2)	36.3	(33.0-39.7)	38.6	(35.3-42.1)
Mid-Michigan <sup>d</sup>	542	31.5	(26.8-36.6)	33.6	(28.7-38.8)	34.9	(30.1-40.1)
Ottawa	654	25.1	(21.2-29.4)	37.6	(33.1-42.3)	37.3	(32.8-42.1)

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<b>Table 8 Cont'd</b>							
Geographic Area	Sample Size	Obese <sup>a</sup>		Overweight <sup>b</sup>		Not Overweight or Obese <sup>c</sup>	
		N	%	95% Confidence Interval	%	95% Confidence Interval	%
<b>Michigan Total</b>	24,109	27.6	(26.9-28.3)	36.3	(35.6-37.1)	36.1	(35.3-36.9)
<b>Region 8</b>	1,282	27.6	(24.9-30.6)	37.2	(33.9-40.6)	35.2	(32.0-38.5)
District #10	812	26.8	(23.5-30.3)	36.4	(32.4-40.6)	36.9	(32.9-41.1)
Muskegon	470	29.1	(24.4-34.4)	38.6	(33.1-44.3)	32.3	(27.2-37.9)
<b>Region 9</b>	1,334	27.1	(24.4-30.1)	38.5	(35.4-41.7)	34.4	(31.3-37.6)
District #2	250	35.0	(28.1-42.7)	33.4	(26.8-40.8)	31.6	(24.6-39.5)
District #4	319	23.2	(18.2-29.1)	40.3	(34.1-46.8)	36.5	(30.4-43.2)
Northwest Michigan	390	25.7	(21.1-31.0)	43.2	(37.3-49.3)	31.1	(26.0-36.6)
Benzie-Leelanau	127	31.5	(22.8-41.8)	32.9	(24.1-43.2)	35.5	(26.0-46.4)
Grand Traverse	248	23.9	(17.9-31.1)	37.0	(29.9-44.7)	39.1	(31.7-47.1)
<b>Region 10</b>	1,208	32.8	(29.7-36.2)	35.1	(31.8-38.5)	32.1	(28.7-35.6)
Bay	273	27.7	(22.0-34.1)	36.5	(29.7-44.0)	35.8	(28.5-43.8)
Huron	98	30.3	(20.6-42.1)	39.0	(28.2-51.1)	30.7	(19.7-44.3)
Saginaw	573	33.8	(29.2-38.9)	35.3	(30.6-40.3)	30.9	(26.2-36.0)
Sanilac	122	39.1	(29.2-50.0)	29.3	(20.8-39.6)	31.5	(22.6-42.1)
Tuscola	142	36.3	(27.1-46.7)	33.2	(24.6-43.0)	30.5	(22.1-40.4)
<b>Region 11</b>	810	26.2	(22.8-29.8)	37.7	(33.6-42.0)	36.1	(31.9-40.6)
Central Michigan	553	27.0	(22.9-31.5)	38.7	(33.7-43.9)	34.3	(29.2-39.9)
Midland	257	24.5	(19.0-31.0)	35.7	(28.8-43.2)	39.8	(32.7-47.3)
<b>Region 12</b>	1,036	30.4	(27.1-34.0)	37.3	(33.8-41.0)	32.3	(28.8-36.0)
Luce-Mackinac-Alger-Schoolcraft	141	28.0	(19.9-37.7)	35.5	(26.7-45.4)	36.5	(26.7-47.7)
Western Upper Peninsula	218	33.1	(26.2-40.8)	34.2	(27.1-42.1)	32.7	(25.4-40.9)
Delta-Menominee	229	26.1	(19.5-34.0)	38.6	(30.7-47.2)	35.3	(27.7-43.6)
Chippewa	104	36.1	(25.2-48.7)	25.5	(16.8-36.9)	38.3	(26.9-51.2)
Dickinson-Iron	154	33.7	(25.2-43.4)	36.7	(28.1-46.2)	29.6	(21.6-39.2)
Marquette	190	28.3	(21.4-36.4)	48.4	(40.2-56.7)	23.2	(17.4-30.3)

Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)<sup>2</sup>]. Weight and height were self-reported. Pregnant women were excluded.

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

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

<sup>c</sup> The proportion of respondents whose BMI was 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 9: No Health Care Coverage Among Those Aged 18-64 Years Michigan BRFSS, 2005-2007 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>	18,397	14.5	(13.8-15.2)
<b>Region 1</b>	7,683	13.1	(12.1-14.1)
Livingston	311	12.8	(8.6-18.8)
Macomb	1,118	14.1	(11.6-17.0)
Monroe	273	10.7	(7.1-15.9)
Oakland	1,988	8.8	(7.2-10.7)
St. Clair	326	17.4	(12.5-23.7)
Washtenaw	640	5.8	(3.9-8.5)
City of Detroit	1,320	24.3	(21.2-27.7)
Wayne exc. Detroit	1,689	11.3	(9.4-13.6)
<b>Region 2</b>	1,115	14.4	(11.7-17.6)
Genesee	797	14.6	(11.4-18.5)
Lapeer	169	16.2	(9.9-25.5)
Shiawassee	149	11.9	(6.6-20.7)
<b>Region 3</b>	520	15.0	(11.3-19.7)
Jackson	331	15.2	(10.6-21.5)
Lenawee	189	14.6	(9.2-22.5)
<b>Region 4</b>	1,196	12.6	(10.2-15.5)
Barry-Eaton	368	14.6	(10.4-20.2)
Mid-Michigan <sup>b</sup>	420	8.8	(6.1-12.6)
Ingham	568	13.3	(9.8-17.8)
<b>Region 5</b>	1,003	15.2	(12.5-18.4)
Branch-Hillsdale-St. Joseph	263	17.5	(12.3-24.3)
Calhoun	264	20.0	(14.2-27.4)
Kalamazoo	476	11.2	(8.0-15.3)
<b>Region 6</b>	654	16.5	(12.9-20.8)
Van Buren-Cass	261	14.5	(9.6-21.4)
Berrien	393	17.9	(13.2-23.8)
<b>Region 7</b>	2,090	12.1	(10.4-14.1)
Allegan	198	18.0	(11.7-26.5)
Ionia	128	11.5	(5.8-21.4)
Kent	1,070	11.3	(9.0-14.1)
Mid-Michigan <sup>b</sup>	420	8.8	(6.1-12.6)
Ottawa	534	12.4	(9.1-16.6)

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<b>Table 9 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>	18,397	14.5	(13.8-15.2)
<b>Region 8</b>	932	20.2	(16.9-24.1)
District #10	580	20.8	(16.6-25.6)
Muskegon	352	19.4	(14.1-26.1)
<b>Region 9</b>	947	20.8	(17.6-24.4)
District #2	171	24.8	(17.6-33.9)
District #4	214	17.9	(12.2-25.4)
Northwest Michigan	284	21.2	(15.8-28.0)
Benzie-Leelanau	92	20.3	(11.4-33.6)
Grand Traverse	186	19.8	(12.9-29.2)
<b>Region 10</b>	897	15.2	(12.2-18.7)
Bay	201	20.2	(13.3-29.5)
Huron	60	20.1	(9.8-36.9)
Saginaw	431	14.3	(10.4-19.4)
Sanilac	95	10.5	(5.6-18.8)
Tuscola	110	9.4	(4.6-18.4)
<b>Region 11</b>	616	17.9	(14.1-22.4)
Central Michigan	406	20.7	(15.8-26.7)
Midland	210	12.6	(7.6-20.3)
<b>Region 12</b>	744	18.7	(15.1-22.9)
Luce-Mackinac-Alger-Schoolcraft	115	18.0	(10.9-28.2)
Western Upper Peninsula	167	20.9	(14.0-30.0)
Delta-Menominee	159	21.4	(13.0-33.1)
Chippewa	71	23.0	(11.4-41.0)
Dickinson-Iron	100	9.4	(4.3-19.5)
Marquette	132	17.6	(11.4-26.2)

<sup>a</sup> Among those 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.

**Table 10: Health Care Access  
Michigan BRFSS, 2005-2007 Combined**

Geographic Area	No Personal Health Care Provider <sup>a</sup>			No Health Care Access During Past 12 Months Due to Cost <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	25,253	14.5	(13.9-15.1)	25,248	12.2	(11.7-12.8)
<b>Region 1</b>	10,482	15.0	(14.0-16.0)	10,476	11.9	(11.1-12.8)
Livingston	396	15.7	(11.6-21.1)	397	10.2	(6.6-15.4)
Macomb	1,573	14.2	(11.9-16.8)	1,575	11.3	(9.4-13.5)
Monroe	360	12.0	(8.2-17.3)	360	11.4	(7.9-10.8)
Oakland	2,729	12.8	(11.1-14.7)	2,727	9.3	(7.9-10.8)
St. Clair	422	20.1	(15.1-26.3)	422	14.2	(10.5-19.1)
Washtenaw	817	13.8	(10.7-17.5)	818	8.8	(6.6-11.6)
City of Detroit	1,831	22.3	(19.6-25.3)	1,823	20.0	(17.5-22.8)
Wayne exc. Detroit	2,320	12.6	(10.7-14.7)	2,318	10.7	(9.2-12.5)
<b>Region 2</b>	1,525	13.1	(10.8-15.8)	1,524	13.5	(11.4-16.0)
Genesee	1,097	14.7	(11.8-18.1)	1,096	14.2	(11.6-17.2)
Lapeer	224	11.7	(7.2-18.4)	225	12.0	(7.8-18.0)
Shiawassee	204	6.5	(3.3-12.6)	203	11.7	(6.6-19.9)
<b>Region 3</b>	721	11.3	(8.4-15.0)	722	9.4	(7.1-12.4)
Jackson	447	13.8	(9.7-19.1)	447	9.7	(6.8-13.6)
Lenawee	274	7.2	(4.4-11.5)	275	9.0	(5.5-14.2)
<b>Region 4</b>	1,587	14.8	(12.2-17.8)	1,587	10.9	(9.0-13.2)
Barry-Eaton	503	10.5	(7.3-14.7)	501	12.3	(9.1-16.4)
Mid-Michigan <sup>c</sup>	563	9.6	(6.8-13.3)	554	8.8	(6.2-12.4)
Ingham	745	20.5	(16.0-25.7)	746	11.3	(8.5-14.8)
<b>Region 5</b>	1,400	17.4	(14.8-20.4)	1,398	14.4	(12.1-17.1)
Branch-Hillsdale-St. Joseph	377	18.5	(13.5-24.8)	377	14.7	(10.6-20.1)
Calhoun	379	16.5	(11.9-22.5)	379	18.1	(13.3-24.1)
Kalamazoo	644	17.4	(13.8-21.6)	642	12.1	(9.1-15.9)
<b>Region 6</b>	870	17.9	(14.8-21.6)	873	14.4	(11.6-17.7)
Van Buren-Cass	354	17.9	(13.0-24.1)	356	13.5	(9.6-18.7)
Berrien	516	18.0	(14.2-22.6)	517	15.0	(11.3-19.6)



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<b>Table 10 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>	25,253	14.5	(13.9-15.1)	25,248	12.2	(11.7-12.8)
<b>Region 7</b>	2,752	11.4	(9.8-13.3)	2,755	10.3	(8.8-12.0)
Allegan	276	10.6	(6.7-16.2)	276	10.0	(6.3-15.5)
Ionia	174	13.6	(8.0-22.3)	174	9.5	(5.5-16.0)
Kent	1396	12.1	(9.7-14.9)	1,398	10.8	(8.6-13.5)
Mid-Michigan <sup>c</sup>	563	9.6	(6.8-13.3)	564	8.8	(6.2-12.4)
Ottawa	682	9.9	(7.1-13.7)	683	9.6	(7.0-13.1)
<b>Region 8</b>	1,329	11.2	(9.1-13.7)	1,326	13.5	(11.2-16.1)
District #10	834	12.0	(9.4-15.2)	833	13.7	(10.8-17.1)
Muskegon	495	9.9	(6.8-14.2)	493	13.2	(9.7-17.7)
<b>Region 9</b>	1,386	15.5	(13.1-18.2)	1,386	14.1	(11.9-16.7)
District #2	256	14.4	(9.5-21.3)	257	16.9	(11.6-23.8)
District #4	330	16.0	(11.7-21.6)	329	14.2	(10.1-19.6)
Northwest Michigan	410	15.4	(11.1-20.9)	409	13.7	(10.0-18.4)
Benzie-Leelanau	131	11.5	(5.8-21.4)	132	15.7	(8.9-26.2)
Grand Traverse	259	18.0	(12.7-24.7)	259	11.3	(7.1-17.4)
<b>Region 10</b>	1,264	11.2	(8.8-14.1)	1,261	12.7	(10.5-15.2)
Bay	285	19.2	(12.8-27.8)	285	11.3	(7.2-17.3)
Huron	101	7.6	(3.3-16.6)	100	9.4	(4.7-18.0)
Saginaw	602	8.8	(6.1-12.5)	600	13.4	(10.2-17.3)
Sanilac	131	10.3	(5.6-18.3)	130	16.8	(10.2-26.4)
Tuscola	145	6.6	(3.1-13.4)	146	12.0	(6.8-20.1)
<b>Region 11</b>	855	20.3	(16.5-24.7)	857	14.6	(11.7-18.1)
Central Michigan	585	22.9	(18.0-28.6)	586	14.9	(11.4-19.2)
Midland	270	15.0	(9.8-22.2)	271	14.1	(9.2-21.0)
<b>Region 12</b>	1,082	17.2	(14.2-20.7)	1,083	12.0	(9.6-14.9)
Luce-Mackinac-Alger-Schoolcraft	148	17.4	(10.3-27.9)	146	13.8	(8.5-21.7)
Western Upper Peninsula	229	23.0	(16.4-31.2)	229	13.4	(9.1-19.3)
Delta-Menominee	236	16.5	(10.7-24.7)	237	14.5	(8.4-23.9)
Chippewa	108	23.3	(13.0-38.2)	108	10.3	(4.9-20.3)
Dickinson-Iron	161	11.0	(5.7-20.1)	162	7.7	(3.7-15.3)
Marquette	200	12.4	(7.4-20.0)	201	10.3	(6.3-16.5)

<sup>a</sup> The proportion 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 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.

<b>Table 11: No Leisure-Time Physical Activity Michigan BRFSS, 2005-2007 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>	25,282	22.1	(21.5-22.8)
<b>Region 1</b>	10,493	22.2	(21.3-23.2)
Livingston	397	14.5	(11.1-18.7)
Macomb	1,575	22.3	(20.0-24.8)
Monroe	360	22.9	(18.5-28.0)
Oakland	2,731	17.3	(15.6-19.1)
St. Clair	421	19.9	(15.8-24.7)
Washtenaw	818	17.0	(13.9-20.6)
City of Detroit	1,834	33.0	(30.1-36.0)
Wayne exc. Detroit	2,321	23.7	(21.6-25.9)
<b>Region 2</b>	1,523	23.3	(20.8-25.9)
Genesee	1,094	25.5	(22.5-28.8)
Lapeer	225	19.9	(14.6-26.6)
Shiawassee	204	15.5	(10.9-21.6)
<b>Region 3</b>	722	23.1	(19.9-26.7)
Jackson	448	22.6	(18.5-27.4)
Lenawee	274	23.9	(18.9-29.8)
<b>Region 4</b>	1,589	20.5	(18.1-23.0)
Barry-Eaton	502	20.2	(16.0-25.0)
Mid-Michigan <sup>b</sup>	565	22.1	(18.4-26.2)
Ingham	747	20.6	(17.2-24.5)
<b>Region 5</b>	1,402	20.8	(18.5-23.5)
Branch-Hillsdale-St. Joseph	377	23.7	(19.1-29.0)
Calhoun	380	21.5	(17.2-26.6)
Kalamazoo	645	18.8	(15.4-22.7)
<b>Region 6</b>	873	24.0	(20.6-27.6)
Van Buren-Cass	356	27.0	(21.6-33.1)
Berrien	517	21.7	(17.7-26.4)
<b>Region 7</b>	2,758	19.0	(17.2-21.0)
Allegan	277	23.2	(15.9-32.7)
Ionia	174	19.9	(14.0-27.6)
Kent	1,398	17.6	(15.2-20.4)
Mid-Michigan <sup>b</sup>	565	22.1	(18.4-26.2)
Ottawa	684	18.3	(15.2-21.9)

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<b>Table 11 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>	25,282	22.1	(21.5-22.8)
<b>Region 8</b>	1,329	25.5	(22.6-28.7)
District #10	834	23.5	(20.1-27.4)
Muskegon	495	28.8	(23.8-34.3)
<b>Region 9</b>	1,388	22.9	(20.2-25.8)
District #2	257	28.5	(22.3-35.8)
District #4	330	25.5	(20.4-31.4)
Northwest Michigan	410	25.2	(19.8-31.4)
Benzie-Leelanau	132	21.9	(14.6-31.5)
Grand Traverse	259	11.3	(7.9-15.9)
<b>Region 10</b>	1,262	24.3	(21.6-27.3)
Bay	284	22.5	(17.0-29.3)
Huron	101	13.9	(8.6-21.5)
Saginaw	601	28.0	(23.8-32.5)
Sanilac	131	20.4	(14.0-28.8)
Tuscola	145	24.0	(17.0-32.8)
<b>Region 11</b>	859	23.4	(20.2-26.9)
Central Michigan	587	26.5	(22.5-31.0)
Midland	272	17.2	(12.7-22.8)
<b>Region 12</b>	1,084	21.4	(18.6-24.5)
Luce-Mackinac-Alger-Schoolcraft	148	17.5	(11.8-25.2)
Western Upper Peninsula	229	19.1	(14.1-25.3)
Delta-Menominee	237	23.5	(17.5-30.7)
Chippewa	107	24.5	(14.5-38.3)
Dickinson-Iron	162	24.1	(17.0-32.9)
Marquette	201	20.7	(15.1-27.6)

<sup>a</sup> The proportion who reported not participating in any leisure-time physical activities or exercises such as running, calisthenics, golf, gardening, or walking during the past month.

<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 12: Inadequate Physical Activity Michigan BRFS, 2005 and 2007 Combined</b>			
<b>Geographic Area</b>	<b>Inadequate Physical Activity<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	18,345	50.1	(49.2-51.0)
<b>Region 1</b>	7,682	50.6	(49.2-52.1)
Livingston	291	42.8	(36.5-49.5)
Macomb	1,133	51.7	(48.0-55.3)
Monroe	249	47.3	(40.0-54.7)
Oakland	2,022	50.4	(47.6-53.2)
St. Clair	295	45.3	(38.5-52.4)
Washtenaw	605	45.8	(41.0-50.8)
City of Detroit	1,405	56.7	(53.1-60.3)
Wayne exc. Detroit	1,661	50.4	(47.3-53.5)
<b>Region 2</b>	1,118	50.5	(46.8-54.2)
Genesee	801	53.2	(48.8-57.6)
Lapeer	165	54.2	(45.0-63.1)
Shiawassee	152	34.1	(25.5-43.7)
<b>Region 3</b>	535	49.9	(44.9-54.8)
Jackson	337	51.8	(45.7-58.0)
Lenawee	198	46.5	(38.5-54.7)
<b>Region 4</b>	1,149	47.3	(43.6-51.0)
Barry-Eaton	361	43.4	(37.2-49.8)
Mid-Michigan <sup>b</sup>	424	51.0	(45.0-57.0)
Ingham	537	49.7	(44.0-55.3)
<b>Region 5</b>	1,026	52.0	(48.2-55.7)
Branch-Hillsdale-St. Joseph	282	51.5	(44.5-58.6)
Calhoun	278	51.8	(44.7-58.9)
Kalamazoo	466	52.3	(46.7-57.8)
<b>Region 6</b>	606	52.8	(47.6-57.9)
Van Buren-Cass	239	61.3	(53.0-69.0)
Berrien	367	46.7	(40.4-53.1)
<b>Region 7</b>	1,993	49.7	(46.9-52.5)
Allegan	194	42.8	(34.7-51.4)
Ionia	121	54.0	(43.9-63.7)
Kent	1,000	47.6	(43.6-51.7)
Mid-Michigan <sup>b</sup>	424	51.0	(45.0-57.0)
Ottawa	505	53.4	(47.9-58.8)

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<b>Table 12 Cont'd</b>			
<b>Geographic Area</b>	<b>Inadequate Physical Activity<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	18,345	50.1	(49.2-51.0)
<b>Region 8</b>	936	48.8	(44.8-52.8)
District #10	575	47.6	(42.6-52.6)
Muskegon	361	50.8	(44.2-57.3)
<b>Region 9</b>	994	47.6	(43.7-51.5)
District #2	185	49.8	(40.9-58.6)
District #4	236	50.2	(42.7-57.7)
Northwest Michigan	303	51.7	(44.4-58.8)
Benzie-Leelanau	90	35.6	(24.5-48.4)
Grand Traverse	180	41.9	(33.1-51.3)
<b>Region 10</b>	933	53.4	(49.3-57.4)
Bay	198	54.9	(45.9-63.5)
Huron	70	41.3	(28.0-56.1)
Saginaw	454	55.9	(50.1-61.7)
Sanilac	100	47.2	(35.4-59.4)
Tuscola	111	53.4	(42.2-64.2)
<b>Region 11</b>	611	49.9	(44.9-55.0)
Central Michigan	412	51.0	(44.7-57.2)
Midland	199	47.9	(39.5-56.4)
<b>Region 12</b>	762	46.7	(42.3-51.1)
Luce-Mackinac-Alger-Schoolcraft	104	31.0	(22.0-41.8)
Western Upper Peninsula	163	45.0	(36.1-54.2)
Delta-Menominee	165	54.8	(44.9-64.3)
Chippewa	79	45.5	(31.7-60.1)
Dickinson-Iron	108	55.8	(44.3-66.7)
Marquette	143	44.4	(35.2-54.0)

<sup>a</sup> The proportion who reported that they do not usually do moderate physical activities for a total of at least 30 minutes on five or more days per week or vigorous physical activities for a total of at least 20 minutes on three or more days per week while not at work.

<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 13: Inadequate Fruit and Vegetable Consumption Michigan BRFS, 2005 and 2007 Combined</b>			
<b>Geographic Area</b>	<b>Inadequate Fruit and Vegetable Consumption<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,379	77.8	(77.0-78.5)
<b>Region 1</b>	8,092	76.7	(75.6-77.8)
Livingston	303	74.7	(68.5-80.0)
Macomb	1,178	79.0	(76.0-81.7)
Monroe	264	76.8	(69.6-82.7)
Oakland	2,116	75.4	(73.0-77.6)
St. Clair	323	79.8	(74.1-84.5)
Washtenaw	633	72.7	(68.6-76.5)
City of Detroit	1,495	77.2	(74.2-79.9)
Wayne exc. Detroit	1,758	77.7	(75.2-79.9)
<b>Region 2</b>	1,174	81.3	(78.6-83.7)
Genesee	842	82.1	(78.9-85.0)
Lapeer	171	80.1	(72.6-86.0)
Shiawassee	161	78.5	(70.4-84.8)
<b>Region 3</b>	562	78.3	(74.0-82.0)
Jackson	353	78.6	(73.2-83.2)
Lenawee	209	77.8	(70.4-83.7)
<b>Region 4</b>	1,215	76.4	(73.0-79.5)
Barry-Eaton	390	78.0	(72.6-82.7)
Mid-Michigan <sup>b</sup>	452	83.4	(79.4-86.7)
Ingham	559	71.3	(65.5-76.4)
<b>Region 5</b>	1,078	79.2	(76.2-81.9)
Branch-Hillsdale-St. Joseph	297	81.9	(76.5-86.3)
Calhoun	293	78.1	(72.0-83.3)
Kalamazoo	488	78.3	(73.6-82.3)
<b>Region 6</b>	652	80.2	(75.8-83.9)
Van Buren-Cass	261	82.0	(74.2-87.8)
Berrien	391	78.9	(73.5-83.4)

<b>Table 13 Cont'd</b>			
<b>Geographic Area</b>	<b>Inadequate Fruit and Vegetable Consumption<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,379	77.8	(77.0-78.5)
<b>Region 7</b>	2,095	78.7	(76.4-80.8)
Allegan	205	78.5	(70.9-84.5)
Ionia	133	77.0	(67.8-84.2)
Kent	1,048	77.0	(73.4-80.2)
Mid-Michigan <sup>b</sup>	452	83.4	(79.4-86.7)
Ottawa	523	82.1	(78.1-85.5)
<b>Region 8</b>	993	80.4	(77.3-83.2)
District #10	613	77.8	(73.6-81.5)
Muskegon	380	84.6	(79.9-88.3)
<b>Region 9</b>	1,074	77.1	(74.0-79.9)
District #2	198	83.8	(77.0-88.8)
District #4	259	75.8	(68.6-81.8)
Northwest Michigan	328	76.2	(70.5-81.0)
Benzie-Leelanau	99	66.6	(54.4-77.0)
Grand Traverse	190	78.7	(71.3-84.6)
<b>Region 10</b>	980	78.5	(75.0-81.5)
Bay	209	76.4	(68.1-83.1)
Huron	76	75.2	(62.2-84.9)
Saginaw	478	80.4	(75.6-84.4)
Sanilac	104	77.3	(65.2-86.1)
Tuscola	113	77.9	(67.0-86.0)
<b>Region 11</b>	647	76.7	(72.4-80.6)
Central Michigan	439	79.7	(74.8-83.9)
Midland	208	70.8	(62.3-78.1)
<b>Region 12</b>	817	76.3	(72.4-79.9)
Luce-Mackinac-Alger-Schoolcraft	112	71.5	(58.2-81.9)
Western Upper Peninsula	177	76.7	(68.1-83.5)
Delta-Menominee	172	79.7	(70.8-86.4)
Chippewa	86	83.7	(68.8-92.3)
Dickinson-Iron	118	68.8	(58.0-77.9)
Marquette	152	76.7	(68.3-83.4)

<sup>a</sup> The proportion whose total reported consumption of fruits (including juice) and vegetables was less than five times per day.

<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 14: Cigarette Smoking  
Michigan BRFSS, 2005-2007 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>	25,200	21.7	(21.1-22.4)	25.7	(25.1-26.3)	52.6	(51.8-53.4)
<b>Region 1</b>	10,452	20.8	(19.8-21.9)	25.1	(24.1-26.1)	54.1	(52.9-55.3)
Livingston	397	18.0	(13.7-23.3)	29.3	(24.4-34.6)	52.7	(46.9-58.5)
Macomb	1,569	22.4	(20.0-25.1)	26.3	(23.9-28.9)	51.2	(48.1-54.3)
Monroe	360	25.0	(19.8-31.0)	29.8	(24.6-35.6)	45.3	(39.0-51.7)
Oakland	2,720	17.6	(15.6-19.7)	27.7	(25.8-29.7)	54.7	(52.3-57.0)
St. Clair	422	26.8	(21.7-32.5)	26.1	(21.6-31.1)	47.1	(41.2-53.1)
Washtenaw	816	11.2	(8.7-14.4)	21.5	(18.6-24.7)	67.2	(63.3-70.9)
City of Detroit	1,826	25.4	(22.7-28.3)	17.9	(15.9-20.2)	56.6	(53.5-59.7)
Wayne exc. Detroit	2,307	22.3	(20.1-24.6)	26.0	(24.0-28.2)	51.7	(49.1-54.3)
<b>Region 2</b>	1,523	23.4	(20.8-26.2)	24.8	(22.4-27.4)	51.8	(48.6-54.9)
Genesee	1,095	24.6	(21.5-28.1)	22.2	(19.5-25.1)	53.2	(49.4-56.9)
Lapeer	225	15.4	(10.7-21.7)	34.8	(28.1-42.2)	49.7	(42.0-57.5)
Shiawassee	203	25.4	(18.4-33.9)	27.7	(21.0-35.5)	47.0	(38.5-55.7)
<b>Region 3</b>	722	21.1	(17.6-25.0)	25.2	(21.8-29.0)	53.7	(49.3-57.9)
Jackson	448	21.3	(17.0-26.3)	25.9	(21.6-30.6)	52.9	(47.4-58.3)
Lenawee	274	20.8	(15.3-27.7)	24.2	(18.7-30.7)	55.0	(47.9-61.9)
<b>Region 4</b>	1,583	21.0	(18.3-24.0)	24.2	(21.9-26.8)	54.8	(51.6-58.0)
Barry-Eaton	501	22.8	(18.2-28.0)	27.6	(23.2-32.4)	49.7	(44.2-55.2)
Mid-Michigan <sup>c</sup>	561	19.7	(16.1-23.9)	23.6	(19.9-27.8)	56.7	(51.6-61.6)
Ingham	744	20.1	(16.0-24.9)	22.9	(19.6-26.5)	57.0	(52.2-61.7)
<b>Region 5</b>	1,396	21.6	(19.0-24.4)	25.5	(23.0-28.2)	52.9	(49.7-56.1)
Branch-Hillsdale-St. Joseph	377	25.4	(20.0-31.6)	28.0	(23.0-33.6)	46.6	(40.5-52.8)
Calhoun	375	22.9	(18.2-28.5)	23.7	(19.0-29.1)	53.3	(47.1-59.4)
Kalamazoo	644	18.5	(15.1-22.5)	25.1	(21.5-29.2)	56.3	(51.7-60.9)
<b>Region 6</b>	869	21.9	(18.4-25.9)	25.7	(22.5-29.2)	52.4	(48.1-56.6)
Van Buren-Cass	356	24.6	(19.0-31.2)	23.8	(19.2-29.1)	51.6	(44.8-58.4)
Berrien	513	20.0	(15.6-25.1)	27.1	(22.8-31.9)	53.0	(47.5-58.3)
<b>Region 7</b>	2,751	19.6	(17.7-21.6)	26.5	(24.5-28.6)	53.9	(51.5-56.3)
Allegan	276	23.6	(17.8-30.6)	31.0	(23.2-40.0)	45.4	(37.5-53.6)
Ionia	174	22.2	(15.6-30.6)	28.8	(21.8-37.0)	49.0	(40.4-57.7)
Kent	1,395	20.5	(17.7-23.6)	25.3	(22.7-28.1)	54.2	(50.8-57.6)
Mid-Michigan <sup>c</sup>	561	19.7	(16.1-23.9)	23.6	(19.9-27.8)	56.7	(51.6-61.6)
Ottawa	683	15.6	(12.6-19.3)	26.9	(23.1-30.9)	57.5	(52.9-62.0)



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Table 14 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>	25,200	21.7	(21.1-22.4)	25.7	(25.1-26.3)	52.6	(51.8-53.4)
<b>Region 8</b>	1,325	26.1	(23.1-29.4)	25.2	(22.7-27.9)	48.7	(45.3-52.0)
District #10	833	23.9	(20.3-27.9)	26.2	(23.0-29.7)	49.9	(45.7-54.0)
Muskegon	492	29.7	(24.5-35.5)	23.6	(19.6-28.1)	46.7	(41.1-52.4)
<b>Region 9</b>	1,381	23.6	(20.8-26.7)	30.0	(27.3-32.9)	46.3	(43.1-49.7)
District #2	256	27.8	(20.8-36.0)	33.1	(26.8-40.1)	39.1	(32.1-46.6)
District #4	329	28.8	(23.1-35.3)	28.0	(22.8-33.9)	43.2	(37.0-49.6)
Northwest Michigan	408	20.8	(16.3-26.1)	28.4	(23.6-33.7)	50.8	(44.7-56.9)
Benzie-Leelanau	130	13.9	(7.8-23.4)	33.9	(25.1-44.1)	52.2	(41.8-62.4)
Grand Traverse	258	23.0	(17.0-30.3)	30.0	(23.8-37.0)	47.1	(39.2-55.1)
<b>Region 10</b>	1,261	21.9	(19.0-25.0)	26.2	(23.5-29.1)	51.9	(48.5-55.4)
Bay	285	26.1	(19.8-33.6)	26.2	(20.9-32.4)	47.6	(40.3-55.1)
Huron	100	19.1	(10.2-32.8)	24.0	(16.1-34.2)	56.9	(44.6-68.4)
Saginaw	600	19.6	(15.9-24.0)	26.8	(22.8-31.3)	53.6	(48.6-58.5)
Sanilac	131	28.6	(20.0-39.2)	27.2	(19.3-36.9)	44.2	(34.2-54.6)
Tuscola	145	18.1	(11.4-27.4)	24.3	(17.2-33.3)	57.6	(47.7-67.0)
<b>Region 11</b>	856	26.4	(22.4-30.9)	25.9	(22.7-29.3)	47.7	(43.6-51.9)
Central Michigan	585	29.5	(24.5-35.1)	27.9	(23.9-32.2)	42.6	(37.7-47.7)
Midland	271	20.2	(14.2-27.8)	21.8	(17.0-27.5)	58.0	(50.7-65.0)
<b>Region 12</b>	1,081	24.8	(21.5-28.4)	28.2	(25.3-31.4)	46.9	(43.3-50.7)
Luce-Mackinac-Alger-Schoolcraft	148	30.0	(21.0-40.8)	26.0	(18.9-34.6)	44.0	(34.4-54.2)
Western Upper Peninsula	229	19.9	(14.2-27.1)	35.7	(28.8-43.2)	44.5	(36.7-52.5)
Delta-Menominee	237	23.3	(16.3-32.2)	21.6	(16.3-28.1)	55.1	(46.7-63.1)
Chippewa	105	37.0	(25.4-50.4)	25.0	(16.7-35.7)	38.0	(27.2-50.2)
Dickinson-Iron	161	24.9	(17.2-34.6)	28.4	(21.3-36.8)	46.7	(37.6-56.1)
Marquette	201	21.3	(15.5-28.5)	31.0	(24.3-38.7)	47.7	(39.7-55.7)

<sup>a</sup> The proportion 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 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 15: Alcohol Consumption  
Michigan BRFSS, 2005-2007 Combined**

Geographic Area	Heavy Drinking <sup>a</sup>			Binge Drinking <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	24,720	5.6	(5.2-6.0)	24,904	17.4	(16.7-18.0)
<b>Region 1</b>	10,237	5.5	(4.9-6.1)	10,323	16.7	(15.7-17.7)
Livingston	388	10.0	(6.6-14.9)	389	22.6	(17.7-28.5)
Macomb	1,539	6.1	(4.6-7.9)	1,548	17.3	(14.9-20.0)
Monroe	353	3.9	(2.3-6.5)	356	20.2	(15.0-26.7)
Oakland	2,668	5.6	(4.4-7.0)	2,698	16.7	(14.7-18.9)
St. Clair	415	9.0	(5.7-13.8)	419	22.0	(17.1-27.8)
Washtenaw	796	4.2	(3.0-6.0)	803	13.1	(10.2-16.7)
City of Detroit	1,779	3.3	(2.3-4.6)	1,791	12.2	(10.1-14.5)
Wayne exc. Detroit	2,270	5.7	(4.5-7.2)	2,290	18.2	(16.1-20.5)
<b>Region 2</b>	1,484	4.2	(3.1-5.6)	1,503	16.1	(13.7-18.9)
Genesee	1,067	4.4	(3.1-6.2)	1,078	14.7	(12.1-17.9)
Lapeer	219	4.2	(1.8-9.3)	222	15.7	(10.0-23.7)
Shiawassee	198	2.9	(1.1-7.2)	203	23.4	(16.4-32.2)
<b>Region 3</b>	713	5.4	(3.7-7.9)	713	18.3	(14.7-22.6)
Jackson	440	4.1	(2.5-6.8)	440	17.2	(13.0-22.5)
Lenawee	273	7.5	(4.2-13.1)	273	20.2	(14.2-27.9)
<b>Region 4</b>	1,552	5.8	(4.4-7.7)	1,559	18.1	(15.4-21.2)
Barry-Eaton	487	5.2	(3.1-8.6)	492	17.3	(12.9-22.7)
Mid-Michigan <sup>c</sup>	558	5.5	(3.1-9.3)	559	19.8	(15.5-24.9)
Ingham	730	7.1	(4.7-10.5)	732	17.8	(13.8-22.8)
<b>Region 5</b>	1,374	6.7	(5.1-8.7)	1,390	16.3	(13.9-19.1)
Branch-Hillsdale-St. Joseph	370	8.1	(4.8-13.3)	373	15.8	(11.3-21.5)
Calhoun	374	4.9	(2.8-8.5)	378	11.7	(7.9-17.0)
Kalamazoo	630	6.9	(4.7-10.0)	639	19.5	(15.7-23.9)
<b>Region 6</b>	848	5.3	(3.9-7.2)	856	16.5	(13.4-20.1)
Van Buren-Cass	348	6.4	(4.1-9.9)	353	16.3	(11.5-22.5)
Berrien	500	4.5	(2.9-7.0)	503	16.7	(12.9-21.3)
<b>Region 7</b>	2,716	5.4	(4.3-6.7)	2,728	17.1	(15.2-19.2)
Allegan	272	5.4	(2.9-9.7)	273	19.3	(13.8-26.4)
Ionia	168	4.5	(1.9-10.0)	172	16.5	(10.7-24.4)
Kent	1,380	5.3	(3.9-7.2)	1,383	17.8	(15.1-20.8)
Mid-Michigan <sup>c</sup>	558	5.5	(3.1-9.3)	559	19.8	(15.5-24.9)
Ottawa	673	5.0	(3.1-8.1)	676	14.1	(10.9-18.1)

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<b>Table 15 Cont'd</b>						
<b>Geographic Area</b>	<b>Heavy Drinking<sup>a</sup></b>			<b>Binge Drinking<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>	24,720	5.6	(5.2-6.0)	24,904	17.4	(16.7-18.0)
<b>Region 8</b>	1,301	5.8	(4.4-7.8)	1,312	18.8	(16.1-21.9)
District #10	818	5.9	(4.0-8.6)	826	17.6	(14.4-21.3)
Muskegon	483	5.7	(3.6-8.8)	486	20.8	(16.1-26.5)
<b>Region 9</b>	1,366	6.7	(5.3-8.4)	1,368	16.8	(14.4-19.6)
District #2	255	3.6	(1.9-6.8)	255	16.6	(11.1-24.1)
District #4	322	8.1	(5.3-12.2)	322	22.1	(16.6-28.7)
Northwest Michigan	404	7.4	(4.7-11.4)	407	18.6	(14.3-23.9)
Benzie-Leelanau	129	6.5	(2.6-15.0)	127	12.8	(7.0-22.2)
Grand Traverse	256	7.0	(4.2-11.3)	257	10.2	(6.5-15.7)
<b>Region 10</b>	1,227	5.8	(4.3-7.9)	1,243	19.6	(16.8-22.8)
Bay	277	8.4	(4.8-14.5)	279	25.6	(19.1-33.3)
Huron	97	5.2	(2.1-12.4)	100	14.2	(8.0-23.8)
Saginaw	583	4.7	(2.9-7.6)	587	16.3	(12.7-20.9)
Sanilac	128	4.5	(2.0-9.9)	131	21.3	(13.2-32.4)
Tuscola	142	6.7	(3.1-13.9)	146	22.2	(14.5-32.4)
<b>Region 11</b>	814	4.2	(2.6-6.6)	846	16.6	(13.3-20.5)
Central Michigan	578	4.9	(2.7-8.4)	576	15.7	(12.0-20.2)
Midland	266	2.7	(1.2-6.0)	270	18.5	(12.7-26.2)
<b>Region 12</b>	1,058	8.2	(6.2-10.9)	1,063	24.7	(21.3-28.4)
Luce-Mackinac-Alger-Schoolcraft	146	9.5	(3.8-21.9)	147	25.2	(16.5-36.4)
Western Upper Peninsula	221	10.4	(5.8-17.9)	225	32.0	(24.5-40.6)
Delta-Menominee	233	6.9	(3.8-12.4)	235	21.8	(15.4-29.9)
Chippewa	102	8.7	(3.4-20.3)	101	30.7	(19.7-44.4)
Dickinson-Iron	160	7.7	(4.2-13.6)	159	21.5	(14.0-31.4)
Marquette	196	6.5	(3.2-12.9)	196	18.2	(12.4-25.9)

<sup>a</sup> The proportion who reported consuming on average more than two alcoholic beverages per day for men or more than one alcoholic beverage per day for women.

<sup>b</sup> The proportion who reported consuming five or more drinks per occasion at least once in the previous month.

<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.

<b>Table 16: No Routine Checkup in Past Year Michigan BRFSS, 2005-2007 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>	24,994	30.2	(29.5-31.0)
<b>Region 1</b>	10,381	29.1	(27.9-30.3)
Livingston	391	37.1	(31.5-43.2)
Macomb	1,559	30.8	(27.9-33.9)
Monroe	354	31.6	(25.8-37.9)
Oakland	2,708	28.3	(26.2-30.6)
St. Clair	419	38.6	(32.7-44.8)
Washtenaw	812	33.1	(29.1-37.4)
City of Detroit	1,811	22.4	(19.8-25.2)
Wayne exc. Detroit	2,293	29.0	(26.7-31.5)
<b>Region 2</b>	1,514	29.4	(26.5-32.6)
Genesee	1,088	28.9	(25.4-32.7)
Lapeer	223	32.1	(25.1-40.0)
Shiawassee	203	29.5	(22.1-38.1)
<b>Region 3</b>	709	30.4	(26.4-34.8)
Jackson	438	29.8	(24.8-35.3)
Lenawee	271	31.6	(25.2-38.8)
<b>Region 4</b>	1,563	33.0	(29.9-36.2)
Barry-Eaton	492	34.3	(29.0-40.0)
Mid-Michigan <sup>b</sup>	557	31.5	(26.7-36.6)
Ingham	736	33.3	(28.6-38.2)
<b>Region 5</b>	1,391	31.2	(28.1-34.4)
Branch-Hillsdale-St. Joseph	371	32.9	(27.1-39.3)
Calhoun	378	31.2	(25.4-37.6)
Kalamazoo	642	30.2	(25.9-34.9)
<b>Region 6</b>	860	32.5	(28.5-36.8)
Van Buren-Cass	350	38.8	(32.2-45.9)
Berrien	510	27.8	(23.1-33.1)
<b>Region 7</b>	2,725	31.1	(28.8-33.4)
Allegan	273	33.5	(26.4-41.5)
Ionia	172	35.3	(27.2-44.5)
Kent	1,382	28.5	(25.4-31.8)
Mid-Michigan <sup>b</sup>	557	31.5	(26.7-36.6)
Ottawa	676	33.9	(29.4-38.7)

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<b>Table 16 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>	24,994	30.2	(29.5-31.0)
<b>Region 8</b>	1,316	29.8	(26.7-33.2)
District #10	826	31.6	(27.7-35.7)
Muskegon	490	27.0	(21.9-32.9)
<b>Region 9</b>	1,380	29.6	(26.6-32.8)
District #2	256	32.5	(25.7-40.0)
District #4	329	29.4	(23.8-35.8)
Northwest Michigan	407	26.6	(21.4-32.6)
Benzie-Leelanau	131	30.2	(21.5-40.6)
Grand Traverse	257	31.5	(24.2-39.9)
<b>Region 10</b>	1,249	28.9	(25.7-32.3)
Bay	280	24.6	(18.4-32.2)
Huron	99	32.2	(21.7-44.8)
Saginaw	594	28.5	(24.0-33.5)
Sanilac	131	32.6	(23.9-42.7)
Tuscola	145	33.7	(24.8-43.9)
<b>Region 11</b>	838	36.0	(31.9-40.3)
Central Michigan	569	36.0	(31.0-41.3)
Midland	269	36.0	(29.1-43.5)
<b>Region 12</b>	1,068	31.6	(28.1-35.3)
Luce-Mackinac-Alger-Schoolcraft	146	29.2	(20.9-39.2)
Western Upper Peninsula	224	37.3	(29.9-45.4)
Delta-Menominee	234	32.4	(24.5-41.5)
Chippewa	107	32.5	(22.1-45.1)
Dickinson-Iron	158	27.0	(19.5-36.2)
Marquette	199	28.6	(21.6-36.9)

<sup>a</sup> The proportion 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 17: HIV Testing Among Adults Aged 18-64 Years Michigan BRFSS, 2005-2007 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>	17,686	38.6	(37.7-39.5)
<b>Region 1</b>	7,366	42.4	(41.0-43.9)
Livingston	302	35.8	(29.7-42.4)
Macomb	1,071	33.6	(30.2-37.1)
Monroe	263	37.8	(31.0-45.2)
Oakland	1,915	41.5	(38.8-44.4)
St. Clair	310	35.9	(29.8-42.5)
Washtenaw	614	37.6	(33.1-42.3)
City of Detroit	1,255	61.8	(58.2-65.3)
Wayne exc. Detroit	1,622	40.3	(37.3-43.3)
<b>Region 2</b>	1,071	38.5	(34.9-42.2)
Genesee	768	39.0	(34.7-43.4)
Lapeer	161	29.5	(22.2-38.1)
Shiawassee	142	45.3	(35.4-55.6)
<b>Region 3</b>	502	36.0	(31.2-41.1)
Jackson	321	35.2	(29.5-41.5)
Lenawee	181	37.3	(29.3-46.1)
<b>Region 4</b>	1,146	41.0	(37.4-44.7)
Barry-Eaton	352	39.0	(32.8-45.6)
Mid-Michigan <sup>b</sup>	398	30.5	(25.2-36.3)
Ingham	546	46.8	(41.3-52.3)
<b>Region 5</b>	972	37.6	(34.0-41.3)
Branch-Hillsdale-St. Joseph	258	31.4	(25.2-38.4)
Calhoun	251	41.3	(34.0-49.0)
Kalamazoo	463	38.9	(33.7-44.3)
<b>Region 6</b>	629	34.5	(29.9-39.4)
Van Buren-Cass	251	30.5	(23.4-38.6)
Berrien	378	37.4	(31.5-43.6)
<b>Region 7</b>	2,026	35.1	(32.5-37.8)
Allegan	196	40.1	(30.6-50.5)
Ionia	121	29.1	(21.0-38.7)
Kent	1,040	36.9	(33.3-40.8)
Mid-Michigan <sup>b</sup>	398	30.5	(25.2-36.3)
Ottawa	519	32.0	(27.3-37.0)

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<b>Table 17 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>	17,686	38.6	(37.7-39.5)
<b>Region 8</b>	880	34.8	(31.0-38.7)
District #10	551	32.9	(28.3-37.8)
Muskegon	329	37.7	(31.4-44.4)
<b>Region 9</b>	916	35.4	(31.6-39.4)
District #2	163	29.3	(21.2-38.9)
District #4	207	36.7	(29.3-44.7)
Northwest Michigan	278	40.2	(33.0-47.9)
Benzie-Leelanau	89	36.1	(25.6-48.1)
Grand Traverse	179	31.9	(24.2-40.7)
<b>Region 10</b>	866	31.4	(27.7-35.3)
Bay	196	27.1	(20.2-35.3)
Huron	60	24.5	(13.5-40.3)
Saginaw	413	33.9	(28.5-39.7)
Sanilac	92	32.0	(21.6-44.7)
Tuscola	105	34.1	(24.3-45.6)
<b>Region 11</b>	595	30.3	(26.0-35.1)
Central Michigan	390	31.7	(26.2-37.7)
Midland	205	27.9	(21.2-35.7)
<b>Region 12</b>	717	37.1	(32.8-41.7)
Luce-Mackinac-Alger-Schoolcraft	110	49.0	(37.6-60.5)
Western Upper Peninsula	160	27.5	(20.0-36.5)
Delta-Menominee	157	36.1	(27.1-46.3)
Chippewa	66	42.8	(28.6-58.2)
Dickinson-Iron	97	36.0	(25.4-48.2)
Marquette	127	37.9	(28.6-48.1)

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

<sup>a</sup> Among those 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.

**Table 18: Immunizations Among Adults Aged 65 Years and Older  
Michigan BRFSS, 2005-2007 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>	6,662	69.3	(68.0-70.5)	6,470	65.7	(64.4-67.0)
<b>Region 1</b>	2,687	65.7	(63.6-67.8)	2,595	63.3	(61.2-65.4)
Livingston	79	69.8	(57.7-79.7)	77	63.4	(51.0-74.3)
Macomb	444	69.8	(65.0-74.3)	427	66.2	(60.9-71.2)
Monroe	85	64.9	(53.1-75.1)	86	67.0	(55.3-76.9)
Oakland	709	69.1	(65.3-72.7)	683	63.8	(59.7-67.7)
St. Clair	94	63.9	(53.2-73.4)	91	61.4	(50.3-71.4)
Washtenaw	170	79.2	(71.8-85.0)	165	71.1	(62.8-78.2)
City of Detroit	484	48.5	(42.6-54.3)	462	50.0	(44.1-55.9)
Wayne exc. Detroit	609	67.2	(62.9-71.3)	591	68.7	(64.4-72.8)
<b>Region 2</b>	396	65.9	(60.6-70.9)	382	65.6	(60.2-70.7)
Genesee	287	67.8	(61.4-73.6)	280	65.5	(59.0-71.4)
Lapeer	55	59.4	(45.2-72.2)	51	71.0	(56.4-82.2)
Shiawassee	54	62.9	(48.4-75.3)	51	61.2	(46.0-74.5)
<b>Region 3</b>	198	76.0	(69.0-81.9)	194	69.0	(61.5-75.5)
Jackson	114	76.5	(67.2-83.8)	110	70.7	(60.9-78.8)
Lenawee	84	75.4	(63.8-84.2)	84	66.6	(54.7-76.7)
<b>Region 4</b>	385	76.2	(71.1-80.6)	372	70.6	(65.3-75.5)
Barry-Eaton	131	74.8	(65.4-82.3)	126	78.3	(69.7-85.0)
Mid-Michigan <sup>c</sup>	141	74.2	(65.5-81.3)	139	60.9	(51.4-69.6)
Ingham	175	79.0	(71.8-84.8)	168	67.9	(59.7-75.2)
<b>Region 5</b>	388	69.6	(64.3-74.4)	380	68.6	(63.2-73.5)
Branch-Hillsdale-St. Joseph	113	64.7	(54.5-73.6)	111	68.0	(58.2-76.5)
Calhoun	111	72.8	(63.0-80.8)	109	70.5	(60.6-78.8)
Kalamazoo	164	70.6	(62.2-77.9)	160	67.7	(58.7-75.4)
<b>Region 6</b>	212	65.1	(57.6-71.9)	207	62.5	(54.9-69.5)
Van Buren-Cass	90	63.0	(51.2-73.7)	91	56.5	(44.9-67.4)
Berrien	122	66.8	(57.0-75.3)	116	67.6	(57.6-76.2)



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<b>Table 18 Cont'd</b>						
<b>Geographic Area</b>	<b>Had Flu Vaccine in Past Year<sup>a</sup></b>			<b>Ever Had Pneumonia Vaccine<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>	6,662	69.3	(68.0-70.5)	6,470	65.7	(64.4-67.0)
<b>Region 7</b>	653	73.7	(70.0-77.1)	639	69.8	(65.8-73.5)
Allegan	78	80.6	(69.3-88.4)	75	64.8	(52.3-75.5)
Ionia	44	-- <sup>d</sup>	-- <sup>d</sup>	44	-- <sup>d</sup>	-- <sup>d</sup>
Kent	322	72.9	(67.5-77.7)	314	74.5	(68.9-79.3)
Mid-Michigan <sup>c</sup>	141	74.2	(65.5-81.3)	139	60.9	(51.4-69.6)
Ottawa	147	73.4	(65.2-80.2)	145	69.5	(60.9-77.0)
<b>Region 8</b>	389	76.2	(71.2-80.7)	374	66.4	(60.9-71.5)
District #10	249	76.0	(69.9-81.2)	243	65.6	(58.8-71.8)
Muskegon	140	76.6	(67.0-84.2)	131	68.1	(58.5-76.4)
<b>Region 9</b>	430	71.1	(66.2-75.4)	417	65.8	(60.7-70.6)
District #2	85	69.4	(57.7-79.1)	83	66.4	(54.4-76.7)
District #4	110	69.1	(58.8-77.7)	108	63.1	(52.3-72.7)
Northwest Michigan	124	76.8	(68.2-83.6)	119	66.8	(57.1-75.2)
Benzie-Leelanau	40	-- <sup>d</sup>	-- <sup>d</sup>	37	-- <sup>d</sup>	-- <sup>d</sup>
Grand Traverse	71	71.5	(59.5-81.0)	70	65.3	(53.2-75.8)
<b>Region 10</b>	355	68.9	(63.4-74.0)	353	64.7	(59.0-70.0)
Bay	80	76.1	(63.8-85.1)	81	69.0	(57.3-78.8)
Huron	38	-- <sup>d</sup>	-- <sup>d</sup>	38	-- <sup>d</sup>	-- <sup>d</sup>
Saginaw	166	66.6	(58.0-74.3)	164	65.5	(56.7-73.4)
Sanilac	35	-- <sup>d</sup>	-- <sup>d</sup>	35	-- <sup>d</sup>	-- <sup>d</sup>
Tuscola	36	-- <sup>d</sup>	-- <sup>d</sup>	35	-- <sup>d</sup>	-- <sup>d</sup>
<b>Region 11</b>	236	74.6	(68.3-80.1)	229	66.9	(60.2-73.0)
Central Michigan	175	75.5	(68.1-81.6)	171	66.7	(58.8-73.7)
Midland	61	72.2	(59.0-82.4)	58	67.5	(53.8-78.7)
<b>Region 12</b>	333	68.1	(62.4-73.2)	328	65.5	(59.8-70.9)
Luce-Mackinac-Alger-Schoolcraft	32	-- <sup>d</sup>	-- <sup>d</sup>	30	-- <sup>d</sup>	-- <sup>d</sup>
Western Upper Peninsula	61	71.8	(58.1-82.4)	61	79.4	(66.8-88.1)
Delta-Menominee	75	56.7	(44.2-68.3)	75	62.0	(49.7-73.0)
Chippewa	37	-- <sup>d</sup>	-- <sup>d</sup>	36	-- <sup>d</sup>	-- <sup>d</sup>
Dickinson-Iron	61	65.8	(51.8-77.4)	60	70.1	(55.8-81.4)
Marquette	67	77.3	(65.6-85.9)	66	54.2	(41.2-66.6)

<sup>a</sup> Among those 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 those 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> Sample size was too small (< 50) to compute a prevalence in this subgroup, but respondents from this local health department were included in the regional prevalence estimate.

**Table 19: Cholesterol Screening and Awareness  
Michigan BRFSS, 2005 and 2007 Combined**

Geographic Area	Cholesterol Ever Checked <sup>a</sup>			Told High Cholesterol <sup>b</sup>		
	N	%	95% Confidence Interval	N	%	95% Confidence Interval
<b>Michigan Total</b>	19,325	81.0	(80.2-81.9)	16,915	39.3	(38.4-40.2)
<b>Region 1</b>	8,102	83.3	(82.0-84.5)	7,206	39.2	(37.8-40.6)
Livingston	304	86.1	(79.2-90.9)	279	44.5	(38.1-51.1)
Macomb	1,168	83.9	(80.4-86.9)	1,049	40.8	(37.3-44.4)
Monroe	261	83.9	(77.2-89.0)	225	41.4	(33.9-49.3)
Oakland	2,111	85.9	(83.3-88.1)	1,925	41.4	(38.7-44.2)
St. Clair	323	75.7	(68.2-81.8)	270	41.3	(34.5-48.3)
Washtenaw	632	81.6	(76.4-85.9)	557	30.0	(25.9-34.5)
City of Detroit	1,511	81.9	(78.6-84.7)	1,324	37.0	(33.6-40.6)
Wayne exc. Detroit	1,765	82.5	(79.6-85.0)	1,556	38.4	(35.5-41.4)
<b>Region 2</b>	1,176	82.6	(79.1-85.7)	1,032	41.0	(37.5-44.6)
Genesee	846	80.9	(76.4-84.7)	737	41.4	(37.2-45.7)
Lapeer	172	86.2	(78.0-91.7)	155	41.1	(32.3-50.5)
Shiawassee	158	87.4	(78.0-93.1)	140	39.3	(30.3-49.1)
<b>Region 3</b>	555	84.3	(79.7-88.0)	491	39.3	(34.5-44.2)
Jackson	346	86.2	(80.4-90.5)	311	37.1	(31.4-43.2)
Lenawee	209	81.0	(72.8-87.2)	180	43.2	(35.2-51.5)
<b>Region 4</b>	1,200	78.3	(74.2-81.9)	1,040	38.8	(35.4-42.3)
Barry-Eaton	389	76.7	(69.7-82.4)	334	39.9	(33.9-46.1)
Mid-Michigan <sup>c</sup>	444	79.2	(72.6-84.6)	388	39.0	(33.6-44.7)
Ingham	554	77.6	(71.1-83.1)	478	39.3	(34.2-44.7)
<b>Region 5</b>	1,076	81.9	(78.5-84.8)	935	37.9	(34.3-41.6)
Branch-Hillsdale-St. Joseph	297	78.2	(71.0-84.1)	254	46.5	(39.2-53.9)
Calhoun	297	82.7	(76.5-87.5)	254	35.3	(29.0-42.1)
Kalamazoo	482	83.5	(78.3-87.7)	427	34.7	(29.6-42.1)
<b>Region 6</b>	655	75.7	(70.6-80.1)	551	38.2	(33.2-43.4)
Van Buren-Cass	261	78.4	(70.2-84.9)	224	41.3	(33.0-50.1)
Berrien	394	73.7	(67.0-79.4)	327	35.8	(30.0-42.0)
<b>Region 7</b>	2,062	78.5	(75.6-81.1)	1,785	36.3	(33.7-39.1)
Allegan	204	69.8	(57.2-80.1)	170	30.0	(23.0-37.9)
Ionia	127	76.6	(65.9-84.8)	105	38.2	(28.6-48.9)
Kent	1,030	80.6	(76.7-84.1)	905	37.7	(33.7-41.8)
Mid-Michigan <sup>c</sup>	444	79.2	(72.6-84.6)	388	39.0	(33.6-44.7)
Ottawa	514	79.2	(73.7-83.8)	445	32.8	(28.1-37.8)

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<b>Table 19 Cont'd</b>						
<b>Geographic Area</b>	<b>Cholesterol Ever Checked<sup>a</sup></b>			<b>Told High Cholesterol<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>	19,325	81.0	(80.2-81.9)	16,915	39.3	(38.4-40.2)
<b>Region 8</b>	984	76.0	(71.7-79.9)	835	39.4	(35.6-43.3)
District #10	608	76.6	(71.1-81.4)	521	42.6	(37.8-47.4)
Muskegon	376	75.0	(67.8-81.1)	314	34.2	(28.4-40.5)
<b>Region 9</b>	1,064	82.3	(78.8-85.4)	923	43.7	(39.8-47.7)
District #2	194	79.5	(69.9-86.7)	163	56.7	(47.3-65.6)
District #4	254	85.0	(78.6-89.7)	220	43.2	(35.7-51.1)
Northwest Michigan	328	82.7	(76.0-87.8)	288	43.2	(36.2-50.5)
Benzie-Leelanau	100	80.2	(66.3-89.3)	89	41.4	(30.5-53.2)
Grand Traverse	188	82.7	(73.9-89.0)	163	33.5	(25.4-42.8)
<b>Region 10</b>	985	79.3	(75.2-82.8)	855	39.2	(35.3-43.2)
Bay	210	71.9	(62.2-79.9)	176	47.3	(38.4-56.4)
Huron	73	78.5	(60.8-89.6)	63	28.3	(17.8-41.7)
Saginaw	484	82.8	(77.1-87.4)	426	40.2	(34.6-45.9)
Sanilac	106	85.3	(72.5-92.7)	95	29.3	(19.9-40.9)
Tuscola	112	75.1	(62.6-84.4)	95	36.7	(25.9-48.9)
<b>Region 11</b>	644	73.6	(68.0-78.5)	546	41.2	(36.5-46.0)
Central Michigan	438	72.3	(65.3-78.3)	366	46.3	(40.3-52.4)
Midland	206	76.2	(66.3-84.0)	180	31.8	(24.9-39.5)
<b>Region 12</b>	822	80.8	(76.3-84.6)	716	41.8	(37.7-46.1)
Luce-Mackinac-Alger-Schoolcraft	114	85.6	(73.0-92.9)	102	41.3	(30.7-52.8)
Western Upper Peninsula	178	76.4	(66.0-84.3)	152	39.1	(30.9-47.9)
Delta-Menominee	175	75.9	(64.0-84.7)	150	38.8	(30.4-48.0)
Chippewa	84	80.2	(64.1-90.2)	72	44.1	(30.5-58.6)
Dickinson-Iron	117	87.0	(74.0-94.0)	107	43.5	(33.0-54.6)
Marquette	154	84.0	(75.5-89.9)	133	45.9	(36.2-55.8)

<sup>a</sup> Among all respondents, the proportion who reported ever having had their blood cholesterol checked.

<sup>b</sup> Among those who ever had their blood cholesterol checked, the proportion who reported that a doctor, nurse, or other health professional had told them that their cholesterol was high.

<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.

<b>Table 20: Cholesterol Screening Michigan BRFSS, 2005 and 2007 Combined</b>			
<b>Geographic Area</b>	<b>Checked Within Past Five Years<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,113	77.2	(76.3-78.1)
<b>Region 1</b>	8,010	79.5	(78.2-80.8)
Livingston	302	82.0	(75.1-87.3)
Macomb	1,153	80.2	(76.7-83.3)
Monroe	260	81.9	(75.0-87.2)
Oakland	2,093	81.9	(79.3-84.3)
St. Clair	318	73.2	(65.7-79.5)
Washtenaw	628	75.7	(70.4-80.3)
City of Detroit	1,491	79.1	(75.8-82.1)
Wayne exc. Detroit	1,738	78.5	(75.5-81.2)
<b>Region 2</b>	1,167	79.2	(75.6-82.4)
Genesee	838	77.7	(73.1-81.6)
Lapeer	172	81.1	(72.9-87.3)
Shiawassee	157	84.9	(75.4-91.2)
<b>Region 3</b>	552	81.0	(76.3-85.0)
Jackson	343	82.5	(76.5-87.3)
Lenawee	209	78.5	(70.2-84.9)
<b>Region 4</b>	1,186	74.7	(70.6-78.4)
Barry-Eaton	383	72.4	(65.5-78.4)
Mid-Michigan <sup>b</sup>	442	76.3	(69.8-81.8)
Ingham	547	74.1	(67.6-79.7)
<b>Region 5</b>	1,059	78.5	(75.0-81.7)
Branch-Hillsdale-St. Joseph	291	74.1	(66.6-80.3)
Calhoun	292	80.6	(74.3-85.6)
Kalamazoo	476	80.0	(74.6-84.5)
<b>Region 6</b>	649	72.4	(67.3-77.0)
Van Buren-Cass	259	75.6	(67.4-82.4)
Berrien	390	70.0	(63.4-75.9)
<b>Region 7</b>	2,041	75.2	(72.3-77.9)
Allegan	201	65.7	(53.7-76.0)
Ionia	125	72.1	(61.3-80.8)
Kent	1,022	78.3	(74.3-81.8)
Mid-Michigan <sup>b</sup>	442	76.3	(69.8-81.8)
Ottawa	507	74.6	(68.8-79.6)

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<b>Table 20 Cont'd</b>			
<b>Geographic Area</b>	<b>Checked Within Past Five Years<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,113	77.2	(76.3-78.1)
<b>Region 8</b>	974	73.4	(69.1-77.3)
District #10	604	73.7	(68.3-78.5)
Muskegon	370	73.0	(65.7-79.2)
<b>Region 9</b>	1,056	77.6	(73.9-80.9)
District #2	192	76.0	(66.4-83.5)
District #4	252	81.7	(75.2-86.8)
Northwest Michigan	326	78.6	(71.8-84.1)
Benzie-Leelanau	100	75.8	(62.1-85.7)
Grand Traverse	186	73.7	(63.3-82.0)
<b>Region 10</b>	971	74.3	(70.1-78.1)
Bay	204	68.9	(59.2-77.1)
Huron	71	74.7	(56.9-86.9)
Saginaw	481	76.6	(70.6-81.6)
Sanilac	105	82.8	(70.3-90.7)
Tuscola	110	68.4	(55.6-79.0)
<b>Region 11</b>	639	69.4	(63.9-74.4)
Central Michigan	434	67.7	(60.9-73.9)
Midland	205	72.6	(62.9-80.5)
<b>Region 12</b>	809	73.8	(69.3-77.9)
Luce-Mackinac-Alger-Schoolcraft	113	79.2	(67.0-87.6)
Western Upper Peninsula	176	65.1	(55.3-73.8)
Delta-Menominee	173	66.7	(55.7-76.2)
Chippewa	83	78.4	(62.6-88.7)
Dickinson-Iron	112	79.0	(66.2-87.8)
Marquette	152	82.0	(73.2-88.4)

<sup>a</sup> Among all respondents, the proportion who reported that they have had their blood cholesterol checked within the past five years.

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

<b>Table 21: Hypertension Awareness Michigan BRFSS, 2005 and 2007 Combined</b>			
<b>Geographic Area</b>	<b>Ever Told High Blood Pressure<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,596	28.3	(27.6-29.0)
<b>Region 1</b>	5,281	28.2	(27.0-29.3)
Livingston	306	23.1	(18.3-28.8)
Macomb	1,191	28.6	(25.8-31.6)
Monroe	267	28.4	(22.7-34.9)
Oakland	2,133	27.3	(25.1-29.6)
St. Clair	323	34.2	(28.2-40.7)
Washtenaw	640	22.2	(18.6-26.2)
City of Detroit	1,531	35.4	(32.3-38.6)
Wayne exc. Detroit	1,786	25.4	(23.1-27.7)
<b>Region 2</b>	1,193	30.6	(27.6-33.8)
Genesee	859	32.8	(29.2-36.7)
Lapeer	172	25.2	(18.3-33.6)
Shiawassee	162	25.2	(18.6-33.3)
<b>Region 3</b>	565	33.2	(29.0-37.7)
Jackson	354	31.7	(26.6-37.3)
Lenawee	211	35.8	(28.8-43.6)
<b>Region 4</b>	1,228	25.0	(22.4-27.8)
Barry-Eaton	392	24.4	(20.1-29.3)
Mid-Michigan <sup>b</sup>	455	28.5	(24.1-33.2)
Ingham	569	23.9	(20.1-28.2)
<b>Region 5</b>	1,087	27.4	(24.5-30.4)
Branch-Hillsdale-St. Joseph	298	28.9	(23.6-34.8)
Calhoun	299	28.7	(23.5-34.6)
Kalamazoo	490	25.7	(21.5-30.4)
<b>Region 6</b>	662	29.5	(25.5-33.9)
Van Buren-Cass	264	30.5	(24.1-37.9)
Berrien	398	28.8	(23.9-34.2)
<b>Region 7</b>	2,111	25.7	(23.5-28.0)
Allegan	207	23.0	(17.1-30.2)
Ionia	134	26.8	(19.4-35.8)
Kent	1,056	27.7	(24.4-31.1)
Mid-Michigan <sup>b</sup>	455	28.5	(24.1-33.2)
Ottawa	526	21.3	(17.5-25.8)

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<b>Table 21 Cont'd</b>			
<b>Geographic Area</b>	<b>Ever Told High Blood Pressure<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,596	28.3	(27.6-29.0)
<b>Region 8</b>	1,005	31.0	(27.7-34.5)
District #10	621	31.3	(27.2-35.6)
Muskegon	384	30.5	(25.0-36.6)
<b>Region 9</b>	1,076	30.0	(26.9-33.2)
District #2	199	36.0	(28.5-44.3)
District #4	259	33.2	(26.9-40.2)
Northwest Michigan	329	27.4	(22.4-33.0)
Benzie-Leelanau	100	27.4	(18.7-38.2)
Grand Traverse	189	25.6	(19.1-33.4)
<b>Region 10</b>	991	28.7	(25.5-32.1)
Bay	209	28.8	(22.3-36.3)
Huron	75	30.3	(20.0-43.0)
Saginaw	488	28.4	(23.9-33.4)
Sanilac	106	24.2	(16.2-34.6)
Tuscola	113	31.9	(22.6-42.9)
<b>Region 11</b>	650	26.9	(23.4-30.9)
Central Michigan	440	28.6	(24.1-33.6)
Midland	210	23.7	(18.2-30.1)
<b>Region 12</b>	826	31.1	(27.6-34.8)
Luce-Mackinac-Alger-Schoolcraft	114	25.1	(17.6-34.6)
Western Upper Peninsula	179	30.6	(23.8-38.3)
Delta-Menominee	173	32.3	(24.6-41.1)
Chippewa	87	25.5	(16.7-37.0)
Dickinson-Iron	119	32.4	(23.6-42.6)
Marquette	154	37.7	(29.3-46.8)

<sup>a</sup> Among all respondents, the proportion who reported that they were ever told by a doctor that they have high blood pressure (HBP). Women who had HBP only during pregnancy and adults who were borderline hypertensive were considered to not have been diagnosed.

<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 22: Diabetes Michigan BRFSS, 2005-2007 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>	25,266	8.5	(8.2-8.9)
<b>Region 1</b>	10,842	8.4	(7.8-9.0)
Livingston	397	5.4	(3.5-8.1)
Macomb	1,573	8.3	(6.9-9.9)
Monroe	360	8.1	(5.7-11.3)
Oakland	2,731	6.5	(5.6-7.6)
St. Clair	422	6.5	(4.6-9.1)
Washtenaw	815	7.2	(5.4-9.7)
City of Detroit	1,830	13.0	(11.2-15.0)
Wayne exc. Detroit	2,318	8.4	(7.3-9.8)
<b>Region 2</b>	1,522	9.3	(7.9-10.9)
Genesee	1,094	9.8	(8.1-11.7)
Lapeer	224	10.7	(7.0-15.9)
Shiawassee	204	5.4	(2.9-10.0)
<b>Region 3</b>	721	7.9	(6.1-10.2)
Jackson	446	6.9	(4.9-9.7)
Lenawee	275	9.7	(6.6-14.0)
<b>Region 4</b>	1,590	8.3	(6.9-9.9)
Barry-Eaton	503	7.1	(5.1-9.8)
Mid-Michigan <sup>b</sup>	565	9.8	(7.2-13.2)
Ingham	747	8.2	(6.4-10.5)
<b>Region 5</b>	1,403	8.0	(6.7-9.6)
Branch-Hillsdale-St. Joseph	378	9.5	(6.9-12.9)
Calhoun	380	9.1	(6.5-12.5)
Kalamazoo	645	6.5	(4.8-8.8)
<b>Region 6</b>	872	7.8	(6.1-10.0)
Van Buren-Cass	356	9.0	(6.2-12.9)
Berrien	516	7.0	(5.0-9.6)
<b>Region 7</b>	2,756	7.8	(6.8-9.0)
Allegan	277	6.8	(4.3-10.7)
Ionia	174	8.7	(5.4-13.8)
Kent	1,397	7.7	(6.3-9.5)
Mid-Michigan <sup>b</sup>	565	9.8	(7.2-13.2)
Ottawa	683	7.6	(5.7-10.1)



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<b>Table 22 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>	25,266	8.5	(8.2-8.9)
<b>Region 8</b>	1,329	8.6	(7.2-10.3)
District #10	834	7.8	(6.2-9.8)
Muskegon	495	9.9	(7.5-13.0)
<b>Region 9</b>	1,388	8.7	(7.2-10.5)
District #2	256	11.5	(8.1-16.2)
District #4	330	7.2	(4.7-10.8)
Northwest Michigan	410	8.7	(6.1-12.4)
Benzie-Leelanau	132	10.2	(6.0-17.0)
Grand Traverse	260	7.2	(4.2-11.9)
<b>Region 10</b>	1,263	11.2	(9.4-13.3)
Bay	285	13.3	(9.7-17.9)
Huron	101	3.4	(1.5-7.5)
Saginaw	601	11.6	(9.0-14.9)
Sanilac	130	8.1	(4.3-15.0)
Tuscola	146	12.9	(7.4-21.6)
<b>Region 11</b>	857	9.2	(7.4-11.4)
Central Michigan	585	9.7	(7.5-12.4)
Midland	272	8.3	(5.5-12.5)
<b>Region 12</b>	1,083	9.7	(8.0-11.8)
Luce-Mackinac-Alger-Schoolcraft	148	11.5	(7.1-18.1)
Western Upper Peninsula	229	10.5	(7.0-15.5)
Delta-Menominee	236	9.7	(6.3-14.7)
Chippewa	108	8.8	(4.9-15.2)
Dickinson-Iron	162	7.1	(4.0-12.4)
Marquette	200	10.2	(6.1-16.6)

<sup>a</sup> The proportion 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.

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<b>Table 23: Heart Attack Michigan BRFSS, 2005-2007 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>	25,148	4.8	(4.5-5.0)
<b>Region 1</b>	10,432	4.4	(4.0-4.8)
Livingston	396	2.8	(1.6-5.1)
Macomb	1,573	4.6	(3.7-5.7)
Monroe	356	4.5	(2.6-7.6)
Oakland	2,718	4.0	(3.3-4.8)
St. Clair	420	4.3	(2.7-6.8)
Washtenaw	814	3.7	(2.6-5.3)
City of Detroit	1,812	5.8	(4.6-7.2)
Wayne exc. Detroit	2,308	4.1	(3.4-5.1)
<b>Region 2</b>	1,515	5.8	(4.7-7.2)
Genesee	1,088	6.1	(4.8-7.9)
Lapeer	225	6.2	(3.7-10.1)
Shiawassee	202	4.0	(2.0-8.1)
<b>Region 3</b>	719	6.9	(5.2-9.0)
Jackson	444	6.5	(4.4-9.4)
Lenawee	275	7.5	(4.9-11.2)
<b>Region 4</b>	1,582	3.9	(3.1-5.0)
Barry-Eaton	502	5.1	(3.5-7.4)
Mid-Michigan <sup>b</sup>	559	4.3	(2.9-6.4)
Ingham	744	3.4	(2.3-4.8)
<b>Region 5</b>	1,391	5.4	(4.3-6.7)
Branch-Hillsdale-St. Joseph	374	6.2	(4.2-8.9)
Calhoun	379	5.5	(3.8-7.9)
Kalamazoo	638	4.9	(3.3-7.1)
<b>Region 6</b>	869	4.2	(3.0-5.9)
Van Buren-Cass	355	4.2	(2.4-7.2)
Berrien	514	4.3	(2.8-6.4)
<b>Region 7</b>	2,744	3.4	(2.8-4.1)
Allegan	276	5.0	(3.2-7.8)
Ionia	173	2.6	(1.1-6.4)
Kent	1,391	3.2	(2.5-4.3)
Mid-Michigan <sup>b</sup>	559	4.3	(2.9-6.4)
Ottawa	681	2.6	(1.6-4.2)

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<b>Table 23 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>	25,148	4.8	(4.5-5.0)
<b>Region 8</b>	1,322	5.2	(4.1-6.6)
District #10	829	5.7	(4.3-7.5)
Muskegon	493	4.4	(2.9-6.6)
<b>Region 9</b>	1,384	6.3	(5.1-7.8)
District #2	256	8.6	(5.6-13.0)
District #4	328	6.1	(4.0-9.2)
Northwest Michigan	410	6.2	(4.2-9.0)
Benzie-Leelanau	131	4.9	(2.2-10.8)
Grand Traverse	259	5.2	(3.0-9.1)
<b>Region 10</b>	1,255	5.5	(4.4-7.0)
Bay	285	4.4	(2.7-7.3)
Huron	98	4.8	(2.1-10.2)
Saginaw	598	6.8	(5.0-9.3)
Sanilac	129	4.0	(1.7-9.3)
Tuscola	145	4.6	(2.3-9.1)
<b>Region 11</b>	855	6.6	(5.1-8.5)
Central Michigan	584	6.9	(5.1-9.2)
Midland	271	6.1	(3.6-10.2)
<b>Region 12</b>	1,080	5.4	(4.1-7.0)
Luce-Mackinac-Alger-Schoolcraft	147	5.2	(2.5-10.4)
Western Upper Peninsula	229	3.7	(1.9-6.9)
Delta-Menominee	235	5.2	(2.7-10.0)
Chippewa	107	3.0	(1.1-7.5)
Dickinson-Iron	162	8.4	(5.1-13.6)
Marquette	200	6.6	(3.4-12.4)

<sup>a</sup> Among all adults, the proportion who had ever been told by a doctor that they had a heart attack or myocardial infarction.

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

<b>Table 24: Angina or Coronary Heart Disease Michigan BRFSS, 2005-2007 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>	25,027	4.8	(4.5-5.1)
<b>Region 1</b>	10,380	4.7	(4.3-5.2)
Livingston	394	2.9	(1.6-5.2)
Macomb	1,561	5.7	(4.7-6.9)
Monroe	354	5.9	(4.0-8.6)
Oakland	2,705	4.5	(3.8-5.4)
St. Clair	421	5.8	(3.6-9.4)
Washtenaw	808	2.4	(1.6-3.7)
City of Detroit	1,814	5.3	(4.2-6.6)
Wayne exc. Detroit	2,288	4.5	(3.7-5.4)
<b>Region 2</b>	1,509	5.2	(4.2-6.5)
Genesee	1,084	5.3	(4.1-6.8)
Lapeer	223	5.2	(2.8-9.3)
Shiawassee	202	5.0	(2.6-9.2)
<b>Region 3</b>	716	5.8	(4.3-7.9)
Jackson	443	6.4	(4.4-9.3)
Lenawee	273	4.9	(3.0-8.0)
<b>Region 4</b>	1,576	3.6	(2.8-4.6)
Barry-Eaton	501	4.3	(2.8-6.6)
Mid-Michigan <sup>b</sup>	558	3.6	(2.5-5.3)
Ingham	737	3.6	(2.5-5.1)
<b>Region 5</b>	1,380	4.9	(3.8-6.2)
Branch-Hillsdale-St. Joseph	374	6.7	(4.3-10.1)
Calhoun	373	5.6	(3.7-8.4)
Kalamazoo	633	3.3	(2.2-5.1)
<b>Region 6</b>	865	5.6	(4.2-7.4)
Van Buren-Cass	351	6.7	(4.4-10.2)
Berrien	514	4.7	(3.3-6.8)
<b>Region 7</b>	2,733	3.4	(2.8-4.1)
Allegan	272	3.8	(2.3-6.2)
Ionia	172	1.0	(0.3-3.1)
Kent	1,390	3.7	(2.8-4.8)
Mid-Michigan <sup>b</sup>	558	3.6	(2.5-5.3)
Ottawa	679	2.7	(1.8-4.1)

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<b>Table 24 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>	25,027	4.8	(4.5-5.1)
<b>Region 8</b>	1,324	4.7	(3.7-5.9)
District #10	830	5.5	(4.1-7.3)
Muskegon	494	3.4	(2.2-5.2)
<b>Region 9</b>	1,375	5.9	(4.8-7.4)
District #2	253	9.5	(6.4-13.9)
District #4	327	6.2	(3.8-10.0)
Northwest Michigan	405	4.6	(3.0-7.0)
Benzie-Leelanau	132	4.2	(1.9-8.8)
Grand Traverse	258	5.2	(2.9-9.1)
<b>Region 10</b>	1,250	5.9	(4.7-7.3)
Bay	282	6.2	(4.1-9.3)
Huron	99	6.1	(3.0-11.8)
Saginaw	595	5.8	(4.2-8.1)
Sanilac	131	6.5	(2.7-15.2)
Tuscola	143	4.5	(2.0-9.9)
<b>Region 11</b>	848	6.9	(5.4-8.7)
Central Michigan	577	7.3	(5.5-9.6)
Midland	271	6.0	(3.6-9.6)
<b>Region 12</b>	1,071	5.2	(4.1-6.6)
Luce-Mackinac-Alger-Schoolcraft	144	3.8	(1.8-7.8)
Western Upper Peninsula	227	4.7	(2.6-8.1)
Delta-Menominee	234	4.6	(2.6-7.9)
Chippewa	106	3.9	(1.7-8.6)
Dickinson-Iron	162	7.8	(4.7-12.5)
Marquette	198	6.4	(3.9-10.4)

<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.

<b>Table 25: Stroke Michigan BRFSS, 2005-2007 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>	25,197	2.9	(2.7-3.1)
<b>Region 1</b>	10,452	3.0	(2.6-3.4)
Livingston	396	1.5	(0.7-3.2)
Macomb	1,573	3.4	(2.5-4.5)
Monroe	360	3.0	(1.4-6.3)
Oakland	2,724	2.6	(1.9-3.5)
St. Clair	418	2.4	(1.3-4.2)
Washtenaw	814	1.6	(0.9-2.8)
City of Detroit	1,825	5.3	(4.1-6.6)
Wayne exc. Detroit	2,307	2.3	(1.7-3.1)
<b>Region 2</b>	1,520	3.6	(2.7-4.7)
Genesee	1,092	3.3	(2.4-4.6)
Lapeer	224	5.2	(3.1-8.8)
Shiawassee	204	3.2	(1.4-7.2)
<b>Region 3</b>	715	3.5	(2.3-5.4)
Jackson	444	3.4	(2.1-5.4)
Lenawee	271	3.8	(1.7-8.1)
<b>Region 4</b>	1,585	2.3	(1.7-3.2)
Barry-Eaton	503	2.8	(1.6-4.8)
Mid-Michigan <sup>b</sup>	562	1.7	(1.0-2.8)
Ingham	743	2.4	(1.5-3.8)
<b>Region 5</b>	1,396	3.1	(2.3-4.2)
Branch-Hillsdale-St. Joseph	377	4.4	(2.8-6.8)
Calhoun	376	2.9	(1.7-5.0)
Kalamazoo	643	2.6	(1.5-4.4)
<b>Region 6</b>	871	2.9	(2.0-4.2)
Van Buren-Cass	356	3.9	(2.3-6.5)
Berrien	515	2.2	(1.3-3.7)
<b>Region 7</b>	2,749	2.1	(1.6-2.8)
Allegan	275	1.2	(0.5-3.2)
Ionia	174	1.1	(0.3-3.4)
Kent	1,396	2.4	(1.6-3.6)
Mid-Michigan <sup>b</sup>	562	1.7	(1.0-2.8)
Ottawa	681	2.2	(1.4-3.5)

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<b>Table 25 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>	25,197	2.9	(2.7-3.1)
<b>Region 8</b>	1,328	2.9	(2.2-3.9)
District #10	835	3.2	(2.2-4.6)
Muskegon	493	2.4	(1.4-4.1)
<b>Region 9</b>	1,385	3.6	(2.8-4.7)
District #2	258	4.7	(2.7-8.1)
District #4	329	2.5	(1.4-4.5)
Northwest Michigan	410	4.1	(2.5-6.6)
Benzie-Leelanau	132	3.3	(1.4-7.8)
Grand Traverse	258	3.2	(1.7-6.0)
<b>Region 10</b>	1,257	2.7	(2.0-3.7)
Bay	283	1.8	(0.8-3.8)
Huron	101	3.8	(1.6-8.5)
Saginaw	597	3.2	(2.1-4.9)
Sanilac	130	1.4	(0.4-5.3)
Tuscola	146	3.3	(1.5-7.2)
<b>Region 11</b>	857	2.4	(1.6-3.6)
Central Michigan	585	2.8	(1.7-4.0)
Midland	272	1.9	(0.8-4.7)
<b>Region 12</b>	1,082	3.3	(2.5-4.5)
Luce-Mackinac-Alger-Schoolcraft	148	4.7	(2.4-9.3)
Western Upper Peninsula	228	3.5	(1.9-6.2)
Delta-Menominee	237	1.5	(0.6-3.8)
Chippewa	108	3.8	(1.6-8.6)
Dickinson-Iron	161	3.2	(1.4-6.9)
Marquette	200	4.2	(2.2-7.7)

<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.

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<b>Table 26: Asthma Michigan BRFSS, 2005-2007 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>	25,197	14.1	(13.5-14.7)	25,069	9.3	(8.8-9.7)
<b>Region 1</b>	10,452	15.1	(14.2-16.0)	10,403	9.8	(9.0-10.6)
Livingston	396	18.0	(13.9-23.0)	395	9.8	(7.0-13.4)
Macomb	1,571	13.1	(11.1-15.4)	1,562	8.5	(6.9-10.5)
Monroe	357	12.6	(9.0-17.2)	355	7.6	(5.1-11.3)
Oakland	2,720	14.2	(12.5-16.2)	2,707	7.8	(6.6-9.1)
St. Clair	420	15.1	(11.4-19.7)	417	11.8	(8.5-16.3)
Washtenaw	816	15.8	(12.7-19.6)	812	12.3	(9.5-15.9)
City of Detroit	1,826	17.3	(14.9-20.0)	1,818	13.0	(10.9-15.4)
Wayne exc. Detroit	2,310	15.4	(13.5-17.5)	2,301	9.7	(8.2-11.5)
<b>Region 2</b>	1,523	13.4	(11.4-15.7)	1,515	8.8	(7.3-10.7)
Genesee	1,095	13.5	(11.2-16.3)	1,088	9.2	(7.3-11.6)
Lapeer	225	11.5	(7.5-17.2)	224	6.0	(3.4-10.4)
Shiawassee	203	14.9	(9.7-22.2)	203	9.8	(6.1-15.6)
<b>Region 3</b>	719	17.4	(14.4-20.9)	712	12.5	(9.9-15.5)
Jackson	445	18.3	(14.6-22.8)	439	13.7	(10.5-17.6)
Lenawee	274	15.9	(11.2-22.0)	273	10.4	(6.6-16.1)
<b>Region 4</b>	1,582	12.8	(10.9-15.0)	1,576	9.2	(7.6-11.2)
Barry-Eaton	501	12.4	(9.5-16.1)	498	9.4	(6.8-12.7)
Mid-Michigan <sup>c</sup>	564	11.9	(9.0-15.6)	562	8.4	(5.9-11.8)
Ingham	742	13.1	(10.4-16.5)	740	9.1	(6.8-12.1)
<b>Region 5</b>	1,394	15.5	(13.2-18.1)	1,382	10.5	(8.6-12.7)
Branch-Hillsdale-St. Joseph	375	13.2	(9.2-18.6)	373	11.5	(7.7-16.9)
Calhoun	379	18.5	(14.0-24.0)	373	11.5	(8.2-16.0)
Kalamazoo	640	15.1	(11.8-19.0)	636	9.3	(6.9-12.4)
<b>Region 6</b>	868	12.0	(9.4-15.1)	865	7.2	(5.3-9.7)
Van Buren-Cass	355	10.3	(9.9-17.5)	355	8.3	(5.1-13.3)
Berrien	513	10.5	(7.0-15.6)	510	6.3	(4.3-9.2)
<b>Region 7</b>	2,750	12.6	(11.1-14.3)	2,735	7.4	(6.2-8.7)
Allegan	277	10.5	(7.0-15.6)	277	6.0	(3.6-9.8)
Ionia	173	10.0	(5.9-16.6)	172	5.4	(2.6-11.0)
Kent	1,394	14.4	(12.1-17.1)	1,381	8.3	(6.6-10.5)
Mid-Michigan <sup>c</sup>	564	11.9	(9.0-15.6)	562	8.4	(5.9-11.8)
Ottawa	681	10.8	(8.3-13.9)	681	6.6	(4.8-8.9)



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Table 26 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>	25,197	14.1	(13.5-14.7)	25,069	9.3	(8.8-9.7)
<b>Region 8</b>	1,323	11.4	(9.5-13.7)	1,317	7.7	(6.2--9.6)
District #10	832	11.6	(9.2-14.6)	830	8.2	(6.3-10.7)
Muskegon	491	11.2	(8.3-14.8)	487	7.0	(4.9-9.8)
<b>Region 9</b>	1,386	12.9	(10.8-15.3)	1,381	9.0	(7.3-11.0)
District #2	257	14.2	(9.5-20.6)	256	9.9	(6.5-14.8)
District #4	328	14.8	(10.4-20.6)	324	10.2	(6.5-15.5)
Northwest Michigan	409	10.4	(7.5-14.4)	409	8.1	(5.5-11.8)
Benzie-Leelanau	132	11.6	(6.0-21.3)	132	10.1	(4.9-19.6)
Grand Traverse	260	13.8	(9.2-20.2)	260	7.7	(4.6-12.5)
<b>Region 10</b>	1,262	13.7	(11.3-16.4)	1,255	8.8	(7.0-11.0)
Bay	284	17.8	(12.2-25.2)	282	10.2	(6.2-16.4)
Huron	101	6.5	(3.1-13.1)	101	5.5	(2.5-11.6)
Saginaw	601	12.9	(9.9-16.5)	596	7.6	(5.5-10.4)
Sanilac	131	16.4	(9.6-26.7)	131	14.9	(8.3-25.4)
Tuscola	145	10.7	(6.3-17.5)	145	7.8	(4.1-14.3)
<b>Region 11</b>	858	13.4	(10.9-16.4)	855	9.3	(7.2-11.8)
Central Michigan	587	14.5	(11.3-18.3)	585	10.6	(7.9-14.0)
Midland	271	11.3	(7.7-16.3)	270	6.6	(4.1-10.7)
<b>Region 12</b>	1,080	15.1	(12.6-17.9)	1,073	11.1	(9.0-13.6)
Luce-Mackinac-Alger-Schoolcraft	147	20.8	(13.4-30.8)	146	17.6	(10.7-27.5)
Western Upper Peninsula	228	12.7	(8.4-18.7)	227	8.2	(5.0-13.3)
Delta-Menominee	236	14.2	(9.9-20.0)	234	10.7	(6.9-16.1)
Chippewa	107	10.8	(5.4-20.6)	106	9.3	(4.2-19.4)
Dickinson-Iron	162	14.8	(8.6-24.3)	161	10.4	(5.4-19.1)
Marquette	200	17.3	(11.7-24.8)	199	11.7	(7.7-17.5)

<sup>a</sup> The proportion 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 respondents, 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.

<b>Table 27: Arthritis</b>			
<b>Michigan BRFSS, 2005 and 2007 Combined</b>			
<b>Geographic Area</b>		<b>Doctor-Diagnosed Arthritis<sup>a</sup></b>	
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,358	31.2	(30.5-32.0)
<b>Region 1</b>	8,092	29.9	(28.7-31.1)
Livingston	302	27.4	(22.3-33.3)
Macomb	1,174	32.0	(29.1-35.1)
Monroe	264	35.3	(29.0-42.1)
Oakland	2,104	27.6	(25.4-29.9)
St. Clair	324	34.4	(28.5-40.7)
Washtenaw	634	23.0	(19.7-26.7)
City of Detroit	1,510	31.8	(28.8-34.9)
Wayne exc. Detroit	1,759	31.0	(28.5-33.6)
<b>Region 2</b>	1,176	34.7	(31.6-37.9)
Genesee	843	34.0	(30.4-37.8)
Lapeer	171	45.1	(36.4-54.0)
Shiawassee	162	27.6	(20.6-35.9)
<b>Region 3</b>	558	34.1	(29.9-38.6)
Jackson	350	36.3	(30.9-42.0)
Lenawee	208	30.5	(24.3-37.5)
<b>Region 4</b>	1,208	30.1	(27.2-33.1)
Barry-Eaton	386	27.7	(23.1-32.8)
Mid-Michigan <sup>b</sup>	448	37.8	(32.6-43.4)
Ingham	558	28.0	(24.0-32.4)
<b>Region 5</b>	1,082	31.9	(28.9-35.0)
Branch-Hillsdale-St. Joseph	297	35.6	(29.7-42.0)
Calhoun	296	30.6	(25.1-36.7)
Kalamazoo	489	30.4	(26.1-35.1)
<b>Region 6</b>	652	24.8	(21.4-28.5)
Van Buren-Cass	262	26.9	(21.4-33.3)
Berrien	390	23.2	(19.1-27.9)
<b>Region 7</b>	2,093	28.3	(26.2-30.6)
Allegan	204	26.4	(20.5-33.3)
Ionia	133	29.7	(22.0-38.7)
Kent	386	27.2	(24.2-30.3)
Mid-Michigan <sup>b</sup>	448	37.8	(32.6-43.4)
Ottawa	522	28.2	(24.1-32.6)

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<b>Table 27 Cont'd</b>			
<b>Geographic Area</b>	<b>Doctor-Diagnosed Arthritis<sup>a</sup></b>		
	<b>N</b>	<b>%</b>	<b>95% Confidence Interval</b>
<b>Michigan Total</b>	19,358	31.2	(30.5-32.0)
<b>Region 8</b>	993	34.3	(30.9-37.8)
District #10	614	34.2	(30.0-38.6)
Muskegon	379	34.4	(29.0-40.3)
<b>Region 9</b>	1,068	33.9	(30.7-37.3)
District #2	197	36.8	(29.4-44.9)
District #4	256	34.9	(28.5-41.9)
Northwest Michigan	328	37.5	(31.5-43.9)
Benzie-Leelanau	99	24.8	(17.1-34.5)
Grand Traverse	188	28.4	(21.5-36.5)
<b>Region 10</b>	977	36.5	(33.0-40.2)
Bay	207	31.1	(24.4-38.6)
Huron	76	37.8	(26.1-51.2)
Saginaw	477	37.0	(31.8-42.5)
Sanilac	104	41.2	(30.5-52.8)
Tuscola	113	40.1	(30.1-51.0)
<b>Region 11</b>	644	32.2	(28.2-36.5)
Central Michigan	437	35.0	(29.9-40.4)
Midland	207	26.7	(20.6-33.8)
<b>Region 12</b>	815	38.0	(34.1-42.0)
Luce-Mackinac-Alger-Schoolcraft	111	38.8	(29.1-49.5)
Western Upper Peninsula	176	45.3	(36.9-54.0)
Delta-Menominee	172	36.5	(28.1-45.9)
Chippewa	85	22.9	(15.0-33.4)
Dickinson-Iron	118	42.5	(32.4-53.3)
Marquette	153	36.7	(28.5-45.7)

<sup>a</sup> 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.