Estimates for Selected Risk Factors and Health Indicators by Emergency Preparedness Region

State of Michigan

Michigan Behavioral Risk Factor Surveillance System (Michigan BRFSS)

2013

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

2013 Michigan BRFS Estimates by Emergency Preparedness Region October 2, 2014

Table of Contents

Introduction	3
Map of Emergency Preparedness Regions	4
Health Status Tables	
Table 1: General Health Status	5
Table 2: Health Status on at Least 14 Days in the Past Month	6
Table 3: Mean Number of Days of Poor Physical Health, Poor Mental Health, and	
Activity Limitations	
Table 4: Disability	
Table 5: Weight Status	
Table 6: Health Care Access	10
Risk Behaviors Tables	
Table 7: No Leisure-Time Physical Activity	
Table 8: Aerobic Physical Activity and Muscle Strengthening	
Table 9: Adequate Physical Activity	
Table 10: Fruit and Vegetable Consumption	14
Table 11: Cigarette Smoking	15
Table 12: Current Smokers Who Attempted to Quit	
Table 13: Smokeless Tobacco	17
Table 14: Alcohol Consumption	18
Table 15: Mean Number of Binge Drinking Occassions During the Past Month Among Binge Drinkers	19
Table 16: Seatbelt Use	20
Table 17: Hypertension Awareness and Medication Use	21
Clinical Preventative Practices	
Table 18: Cholesterol Screening and Awareness	22
Table 19: No Routine Checkup in Past Year	23
Table 20: Colorectal Cancer Screening (Blood Stool Test) Among Adults 50 Years and Older	24
Table 21: Colorectal Cancer Screening (Sigmoidoscopy/Colonoscopy) Among Adults 50 Years and Older	25
Table 22: Immunizations Among Adults Aged 65 Years and Older	2 <u>6</u>
Table 23: HIV Testing Among Adults Aged 18 - 64 Years	27
Chronic Conditions	
Table 24: Asthma Among Adults	28
Table 25: Asthma Among Children	29
Table 26: Chronic Obstructive Pulmonary Disease (COPD)	30
Table 27: Arthritis	31
Table 28: Cardiovascular Disease	32
Table 29: Cancer	33
Table 30: Diabetes	34
Table 31: Kidney Disease	35
Table 32: Depression	36

2013 Michigan BRFS Estimates by Emergency Preparedness Region October 2, 2014

Introduction

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

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

For the 2013 Michigan BRFS, the sample of land line telephone numbers that were utilized for data collection was selected using a list-assisted, random-digit-dialed methodology with a disproportionate stratification based on phone bank density, and whether or not the phone numbers were directory listed. In addition, census tracts with a high population density of African Americans were oversampled within the land line portion of the survey. The sample of cell phone numbers used within the 2013 Michigan BRFS data collection process was randomly selected from dedicated cellular telephone banks sorted on the basis of area code and exchange within the State of Michigan.

Iterative proportional fitting or raking was the weighting methodology used to make the 2013 Michigan BRFS data representative of the current Michigan adult population. Estimates based on this methodology were weighted to adjust for the probabilities of selection and a raking adjustment factor that adjusted for the distribution of Michigan adults by telephone source (land line vs. cell phone), detailed race/ethnicity, education level, marital status, age by gender, gender by race/ethnicity, age by race/ethnicity, and renter/owner status. No additional weighting factors were computed at the regional level, thus the weights used might not always provide accurate regional estimates, particularly when regional demographic distributions vary greatly from that of the state.

In 2013, Michigan BRFS data from the 2013 survey year were analyzed by Michigan Emergency Preparedness (EP) region. A map identifying each of Michigan's eight emergency preparedness regions is included on the following page. Population-based prevalence estimates and asymmetric confidence intervals were calculated for indicators of health status, health risk behaviors, clinical preventive practices, and chronic conditions among the adult population in Michigan. All analyses were performed in SAS-Callable SUDAAN®, a statistical computing that is designed for complex sample surveys.

In an effort to provide the most reliable information possible, prevalence estimates are suppressed if they are based on a denominator of less than 50 respondents or have a relative standard error of greater than 30%.

Due to the BRFSS methodology changes that took place in 2011, the estimates provided within the following tables should only be compared to Michigan BRFSS estimates from 2011-2012 and not to Michigan BRFSS estimates from years prior to 2011.

If you have any questions regarding any of the estimates within the following tables, please contact Chris Fussman at MDCH, by phone, (517) 335-8144, or by email, MIBRFSS@michigan.gov.



Table 1: Health Status by EP Region 2013 Michigan BRFS					
		ral Health, or Poor ^a			
	%	95% Confidence Interval			
Michigan Total	17.7	(16.8-18.7)			
EP Region					
Region 1	15.6	(13.4-18.1)			
Region 2N	15.3	(13.3-17.5)			
Region 2S	23.0	(20.6-25.6)			
Region 3	16.8	(14.3-19.7)			
Region 5	18.1	(15.6-21.0)			
Region 6	16.9	(14.6-19.5)			
Region 7	14.8	(12.4-17.6)			
Region 8	16.7	(14.0-19.9)			

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

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

	Poor Ph	Poor Physical Health ^a		ental Health ^b	Activity Limitation ^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	12.7	(12.0-13.6)	12.0	(11.2-12.8)	8.8	(8.1-9.5)
EP Region						
Region 1	11.8	(10.0-14.0)	10.6	(8.6-12.9)	7.5	(6.0-9.3)
Region 2N	10.4	(8.9-12.2)	9.6	(8.1-11.5)	6.8	(5.5-8.3)
Region 2S	15.9	(13.8-18.3)	15.6	(13.4-18.0)	10.8	(9.0-12.8)
Region 3	14.0	(11.6-16.7)	12.1	(9.9-14.7)	10.0	(7.9-12.6)
Region 5	12.7	(10.6-15.1)	12.3	(10.0-15.0)	9.9	(7.9-12.4)
Region 6	12.3	(10.5-14.4)	12.1	(10.2-14.4)	9.1	(7.4-11.1)
Region 7	11.2	(9.0-13.8)	10.5	(8.4-13.0)	7.2	(5.3-9.6)
Region 8	11.2	(9.2-13.5)	10.5	(8.3-13.1)	8.1	(6.3-10.4)

Among all adults, the proportion who reported 14 or more days of poor physical health, which includes physical illness and injury, during the past 30 days. (N = 12,585)

Among all adults, the proportion who reported 14 or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days. (N = 12,601)

Among all adults, the proportion who reported 14 or more days in the past 30 days in which either poor physical health or poor mental health kept respondents from doing their usual activities, such as self-care, work, and recreation. (N = 12,657)

Table 3: Mean Number of Days of Poor Physical Health, Poor Mental Health, and Activity
Limitations by EP Region
2013 Michigan BRFS

	Poor Phy	Poor Physical Health ^a		Poor Mental Health ^b		Activity Limitation ^c	
	Mean # of days	95% Confidence Interval	Mean # of days	95% Confidence Interval	Mean # of days	95% Confidence Interval	
Michigan Total	4.1	(3.9-4.3)	3.9	(3.7-4.1)	2.7	(2.5-2.9)	
EP Region							
Region 1	3.8	(3.3-4.2)	3.7	(3.1-4.2)	2.3	(1.9-2.8)	
Region 2N	3.5	(3.1-3.9)	3.5	(3.0-3.9)	2.2	(1.8-2.5)	
Region 2S	4.9	(4.3-5.4)	4.8	(4.2-5.3)	3.1	(2.7-3.6)	
Region 3	4.5	(3.8-5.2)	3.9	(3.3-4.5)	3.1	(2.5-3.8)	
Region 5	4.2	(3.6-4.8)	4.0	(3.4-4.6)	3.1	(2.5-3.6)	
Region 6	4.0	(3.5-4.5)	3.9	(3.3-4.4)	2.7	(2.3-3.2)	
Region 7	3.9	(3.3-4.5)	3.3	(2.8-3.9)	2.2	(1.7-2.7)	
Region 8	3.8	(3.3-4.4)	3.5	(2.9-4.0)	2.6	(2.0-3.1)	

^a Among all adults, the mean number of days during the past 30 days in which physical health, including illness and injury, was not good. (N = 12,585)

Among all adults, the mean number of days during the past 30 days in which mental health, including stress, depression, and problems with emotions, was not good. (N = 12,601)

Among all adults, the mean number of days during the past 30 days in which poor physical health or poor mental health kept respondent from doing their usual activities, such as self-care, work, and recreation. (N = 12,657)

Table 4: Disability by EP Region 2013 Michigan BRFS

	2010 Michigan Dixi O							
	Total	Total Disability ^a Any Activity Limitation ^b			Used Special Equipment ^c			
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval		
Michigan Total	25.5	(24.5-26.6)	23.0	(22.0-24.1)	9.6	(9.0-10.3)		
EP Region								
Region 1	23.0	(20.5-25.8)	21.2	(18.7-23.8)	8.5	(7.0-10.2)		
Region 2N	23.9	(21.6-26.4)	21.4	(19.2-23.8)	8.6	(7.2-10.1)		
Region 2S	28.8	(26.2-31.5)	25.9	(23.4-28.6)	12.2	(10.4-14.1)		
Region 3	26.9	(23.9-30.2)	24.5	(21.5-27.6)	10.3	(8.3-12.7)		
Region 5	25.7	(22.9-28.7)	23.4	(20.7-26.4)	9.2	(7.7-11.1)		
Region 6	26.1	(23.6-28.8)	23.8	(21.3-26.5)	9.4	(7.9-11.0)		
Region 7	23.6	(20.5-26.9)	21.2	(18.3-24.4)	8.7	(6.8-11.1)		
Region 8	23.2	(20.5-26.1)	20.7	(18.2-23.5)	7.3	(5.9-9.1)		

^a Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems, or reported that they required use of special equipment (such as a cane, a wheelchair, a special bed, or a special telephone) due to a health problem. (N = 12,556)

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

Among all adults, the proportion who reported that they required use of special equipment (such as a can, a wheelchair, a special bed, or a special telephone) due to a health problem. (N = 12,595)

2013 Michigan BRFS Estimates by Emergency Preparedness Region October 2, 2014

Table 5:	Weight	Status	by El	P Region
	2013 Mi	ichigan E	BRFS	

		20	13 WIIC	iliyali bixi 3				
		Obese ^a		Overweight ^b		Healthy Weight ^c		derweight ^d
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	31.5	(30.4-32.6)	34.7	(33.6-35.9)	32.5	(31.3-33.7)	1.3	(1.0-1.6)
EP Region								
Region 1	31.0	(28.0-34.2)	32.0	(28.9-35.1)	35.1	(31.8-38.5)	2.0	(1.2-3.2)
Region 2N	30.5	(27.8-33.3)	35.2	(32.5-38.0)	33.5	(30.8-36.4)	0.8	(0.5-1.4)
Region 2S	30.9	(28.3-33.6)	34.9	(32.2-37.7)	33.0	(30.3-35.8)	e	e
Region 3	32.7	(29.5-36.1)	36.7	(33.2-40.3)	29.7	(26.6-33.0)	0.9	(0.5-1.6)
Region 5	33.0	(29.6-36.5)	32.2	(29.0-35.6)	33.1	(29.6-36.7)	1.7	(0.9-3.0)
Region 6	32.8	(30.1-35.6)	36.0	(33.3-38.9)	29.9	(27.2-32.7)	e	e
Region 7	32.5	(28.8-36.5)	36.8	(32.9-40.8)	29.3	(25.5-33.3)	1.4	(0.8-2.5)
Region 8	32.9	(29.6-36.3)	34.9	(31.4-38.5)	30.9	(27.4-34.6)	e	e

Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)²]. Weight and height were self-reported. Pregnant women were excluded. (N = 12,177)

^a Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.

^b Among all adults, the proportion of respondents whose BMI was greater than or equal to 25.0, but less than 30.0.

^c Among all adults, the proportion of respondents whose BMI was greater than or equal to 18.5, but less than 25.0.

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

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

Table 6: Health Care Access by EP Region 2013 Michigan BRFS							
No Health Care Coverage ^a (Among 18 - 64 year olds)		No Personal Health Care Provider ^b		No Health Care Access During Past 12 Months Due to Cost ^c			
%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval		
17.4	(16.3-18.6)	17.0	(16.0-18.0)	15.5	(14.5-16.4)		
12.8	(10.4-15.7)	13.9	(11.6-16.5)	13.7	(11.4-16.4)		
16.9	(14.2-20.0)	13.8	(11.8-16.2)	14.2	(12.1-16.6)		
20.0	(17.3-23.1)	20.3	(17.9-22.9)	18.3	(16.0-20.9)		
16.7	(13.6-20.5)	16.5	(13.7-19.6)	14.7	(12.4-17.4)		
16.7	(13.5-20.4)	21.0	(17.9-24.5)	16.9	(14.3-19.9)		
17.0	(14.2-20.3)	14.9	(12.7-17.5)	15.6	(13.3-18.2)		
20.5	(16.9-24.6)	14.6	(11.8-17.9)	15.2	(12.5-18.2)		
	No Health C (Among 18 % 17.4 12.8 16.9 20.0 16.7 16.7 17.0	2013 Michig No Health Care Coverage ^a (Among 18 - 64 year olds) % 95% Confidence Interval 17.4 (16.3-18.6) 12.8 (10.4-15.7) 16.9 (14.2-20.0) 20.0 (17.3-23.1) 16.7 (13.6-20.5) 16.7 (13.5-20.4) 17.0 (14.2-20.3)	2013 Michigan BRFS No Health Care Coverage ^a (Among 18 - 64 year olds) No Persona Promote % 95% Confidence Interval % 17.4 (16.3-18.6) 17.0 12.8 (10.4-15.7) 13.9 16.9 (14.2-20.0) 13.8 20.0 (17.3-23.1) 20.3 16.7 (13.6-20.5) 16.5 16.7 (13.5-20.4) 21.0 17.0 (14.2-20.3) 14.9	No Health Care Coverage	No Health Care Coverage		

Among adults aged 18-64 years, the proportion who reported having no health care coverage, including health insurance, prepaid plans such as HMOs, or government plans, such as Medicare. (N = 8,411)

15.1

(12.5-18.2)

12.4

(10.2-15.0)

(15.7-23.0)

19.1

Region 8

^b Among all adults, the proportion who reported that they did not have anyone that they thought of as their personal doctor or health care provider. (N = 12,705)

^c Among all adults, the proportion who reported that in the past 12 months, they could not see a doctor when they needed to due to the cost. (N = 12,738)

Table 7: No Leisure Time Physical Activity by EP Region 2013 Michigan BRFS						
	No Leisure T	ime Physical Activity ^a				
	%	95% Confidence Interval				
Michigan Total	24.4	(23.4-25.5)				
EP Region						
Region 1	22.2	(19.6-25.0)				
Region 2N	22.3	(20.0-24.9)				
Region 2S	26.8	(24.3-29.5)				
Region 3	25.2	(22.2-28.5)				
Region 5	28.1	(24.9-31.5)				
Region 6	23.2	(20.8-25.8)				
Region 7	24.2	(20.9-27.8)				
Region 8	24.5	(21.6-27.7)				

^a Among all adults, the proportion who reported not participating in any leisure time physical activities or exercises such as running, calisthenics, golf, gardening, or walking during the past month. (N = 12,214)

Table 8: Aerobic Physical Activity and Muscle Strengthening by EP Region 2013 Michigan BRFS

	_	•			
	Physi	ate Aerobic cal Activity inutes / week) ^a	Adequate Muscle Strengthening (≥ 2 days / week) ^b		
	%	95% Confidence Interval	%	95% Confidence Interval	
Michigan Total	53.1	(51.8-54.3)	28.8	(27.7-30.0)	
EP Region					
Region 1	56.2	(52.7-59.5)	29.5	(26.5-32.8)	
Region 2N	53.7	(50.7-56.7)	31.1	(28.3-34.0)	
Region 2S	51.0	(48.0-54.0)	29.5	(26.8-32.3)	
Region 3	53.1	(49.4-56.8)	27.0	(23.9-30.5)	
Region 5	52.6	(48.9-56.3)	27.3	(24.2-30.7)	
Region 6	51.2	(48.2-54.2)	25.7	(23.2-28.3)	
Region 7	57.6	(53.5-61.7)	29.0	(25.3-33.0)	
Region 8	57.1	(53.3-60.8)	27.5	(24.1-31.3)	

^a Among all adults, the proportion who reported that they do either moderate physical activities for at least 150 minutes per week, vigorous physical activities for at least 75 minutes per week, or an equivalent combination of moderate and vigorous physical activities. (N = 11,826)

^b Among all adults, the proportion who reported that they do muscle strengthening activities on two or more days per week. (N = 12,068)

Table 9: Adequate Physical Activity by EP Region 2013 Michigan BRFS					
	Adequate	Physical Activity ^a			
	%	95% Confidence Interval			
Michigan Total	19.5	(18.6-20.5)			
EP Region					
Region 1	20.1	(17.5-22.9)			
Region 2N	20.4	(18.1-23.0)			
Region 2S	20.5	(18.1-23.1)			
Region 3	18.6	(15.9-21.6)			
Region 5	19.3	(16.6-22.4)			
Region 6	16.9	(14.8-19.2)			
Region 7	21.2	(17.8-25.1)			
Region 8	20.0	(16.9-23.5)			

^a Among all adults, the proportion who reported that they do either moderate physical activities for at least 150 minutes per week, vigorous physical activities for at least 75 minutes per week, or an equivalent combination of moderate and vigorous physical activities <u>and</u> also participate in muscle strengthening activities on two or more days per week. (N = 11,732)

Table 10: Fruit and Vegetable Consumption by EP Region 2013 Michigan BRFS							
		Fruits (< 1 time / day) ^a		Vegetables (< 1 time / day) ^b		Fruits and Vegetables (≥ 5 times / day) ^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	
Michigan Total	37.7	(36.5-38.9)	24.8	(23.6-25.9)	15.3	(14.5-16.2)	
EP Region							
Region 1	41.7	(38.3-45.2)	25.8	(22.8-29.0)	13.0	(11.0-15.4)	
Region 2N	34.7	(32.0-37.6)	22.2	(19.8-24.9)	16.9	(14.9-19.2)	
Region 2S	37.5	(34.6-40.4)	26.9	(24.2-29.7)	16.6	(14.6-18.7)	
Region 3	38.2	(34.7-41.9)	25.7	(22.5-29.2)	13.5	(11.4-16.0)	
Region 5	41.3	(37.7-45.0)	25.3	(22.0-28.9)	16.2	(13.5-19.2)	
Region 6	39.8	(36.9-42.7)	27.3	(24.5-30.3)	13.2	(11.5-15.1)	
Region 7	33.0	(29.1-37.1)	16.8	(13.9-20.2)	16.7	(13.7-20.3)	

Among all adults, the proportion whose total reported consumption of fruits (including juice) was less than one time per day (N = 12,270)

(32.6-39.7)

36.1

Region 8

22.0

(19.0-25.2)

13.1

(11.0-15.6)

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

Table 11: Cigarette Smoking by EP Region 2013 Michigan BRFS

2010 Milotingati Divi O							
	Curren	Current Smoking ^a Former		r Smoking ^b	Neve	Never Smoked	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval	
Michigan Total	21.4	(20.3-22.5)	27.0	(26.0-28.0)	51.6	(50.4-52.8)	
EP Region							
Region 1	20.3	(17.6-23.3)	25.9	(23.3-28.8)	53.8	(50.4-57.1)	
Region 2N	20.2	(17.7-22.9)	29.1	(26.6-31.7)	50.7	(47.8-53.6)	
Region 2S	22.4	(19.9-25.2)	24.5	(22.3-26.9)	53.0	(50.1-55.9)	
Region 3	24.7	(21.6-28.1)	24.4	(21.7-27.4)	50.9	(47.3-54.5)	
Region 5	21.7	(18.8-24.8)	28.0	(25.0-31.1)	50.4	(46.8-54.0)	
Region 6	20.9	(18.4-23.7)	27.5	(25.1-30.0)	51.6	(48.6-54.5)	
Region 7	22.3	(19.1-25.8)	32.9	(29.3-36.7)	44.8	(40.8-49.0)	
Region 8	19.8	(17.1-22.9)	32.6	(29.4-36.1)	47.5	(43.9-51.2)	

^a Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days. (N = 12,519)

Among all adults, the proportion who reported that they had ever smoked at least 100 cigarettes (5 packs) in their life, but they do not smoke cigarettes now. (N = 12,519)

Table 12: Current Smokers Who Attempted to Quit by EP Region 2013 Michigan BRFS

	Tried to Quit Longe	Tried to Quit Smoking One Day or Longer in Past Year ^a		
	%	95% Confidence Interval		
Michigan Total	62.7 (59			
EP Region				
Region 1	61.8	(53.9-69.1)		
Region 2N	67.3	(60.1-73.7)		
Region 2S	64.7	(57.9-70.9)		
Region 3	56.2	(48.3-63.7)		
Region 5	65.9	(57.5-73.3)		
Region 6	62.5	(55.5-69.1)		
Region 7	53.7	(45.0-62.1)		
Region 8	52.3	(44.1-60.3)		

Among current smokers, the proportion who reported that during the past 12 months, they had tried to quit smoking for one day or longer. (N = 2,146)

Table 13: Smokeless Tobacco Use by EP Region 2013 Michigan BRFS				
		nt Smokeless bacco Use ^a		
	%	95% Confidence Interval		
Michigan Total	4.0	(3.5-4.5)		
EP Region				
Region 1	4.7	(3.3-6.8)		
Region 2N	3.3	(2.3-4.7)		
Region 2S	2.7	(1.8-4.1)		
Region 3	4.7	(3.4-6.4)		
Region 5	5.8	(4.2-8.0)		
Region 6	3.8	(2.7-5.1)		
Region 7	4.2	(3.0-6.1)		
Region 8	6.3	(4.7-8.4)		

^a Among all adults, the proportion who reported that they currently use chewing tobacco, snuff or snus, either every day or on some days. (N = 12,545)

Table 14: Alcohol Consumption by EP Region 2013 Michigan BRFS

2010 Mildingan Dixi O						
		Any Alcohol in Past Month ^a		Heavy Drinking ^b		Drinking ^c
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	56.6	(55.3-57.8)	6.2	(5.7-6.9)	18.9	(17.9-19.9)
EP Region						
Region 1	59.9	(56.5-63.1)	5.8	(4.4-7.5)	21.1	(18.3-24.1)
Region 2N	59.6	(56.6-62.4)	6.7	(5.3-8.4)	19.8	(17.5-22.2)
Region 2S	55.9	(53.1-58.8)	5.1	(4.0-6.4)	18.2	(16.1-20.6)
Region 3	51.2	(47.6-54.8)	6.1	(4.6-7.9)	16.4	(13.8-19.2)
Region 5	47.8	(44.2-51.4)	6.6	(5.0-8.6)	15.8	(13.3-18.7)
Region 6	58.6	(55.6-61.6)	6.8	(5.4-8.4)	19.1	(16.9-21.5)
Region 7	59.2	(55.2-63.1)	8.3	(6.4-10.8)	19.2	(16.1-22.7)
Region 8	59.3	(55.6-62.9)	9.6	(7.5-12.1)	22.4	(19.3-25.8)

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

18

Among all adults, the proportion who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the previous month. (N = 12,346)

Among all adults, the proportion who reported consuming five or more drinks per occasion (for men) or 4 or more drinks per occasion (for women) at least once in the previous month. (N = 12,368)

Table 15: Mean Number of Binge Drinking Occasions during the Past Month among Binge Drinkers by EP Region 2013 Michigan BRFS

	gg			
		Number of Binge Drinking Occasions ^a		
	Mean	95% Confidence Interval		
Michigan Total	4.4	(4.1-4.8)		
EP Region				
Region 1	4.1	(3.3-4.8)		
Region 2N	4.6	(3.6-5.5)		
Region 2S	4.8	(3.9-5.7)		
Region 3	4.0	(3.2-4.9)		
Region 5	5.1	(3.8-6.4)		
Region 6	4.1	(3.5-4.7)		
Region 7	3.9	(3.0-4.8)		
Region 8	5.2	(4.0-6.3)		

^a Among adults who binge drank in the past month, the mean number of times during which five or more alcoholic beverages (for men) or four or more (for women) were consumed during the past month. (N = 1,930)

Table 16: Seatbelt Use by EP Region 2013 Michigan BRFS				
	Always L	Jses a Seatbelt ^a		
	%	95% Confidence Interval		
Michigan Total	89.6	(88.8-90.4)		
EP Region				
Region 1	89.4	(86.8-91.5)		
Region 2N	90.0	(87.7-91.9)		
Region 2S	90.4	(88.4-92.0)		
Region 3	90.0	(87.7-91.9)		
Region 5	89.7	(87.2-91.8)		
Region 6	88.8	(86.7-90.6)		
Region 7	89.1	(86.3-91.4)		
Region 8	84.0	(80.5-87.0)		

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

Table 17: Hypertension Awareness and Medication Use by EP Region 2013 Michigan BRFS

		,		
	Ever	Told HBP ^a	Taking BF	P Medication ^b
	%	95% Confidence Interval	fidence % Confidenc	
Michigan Total	34.6	(33.5-35.7)	75.7	(73.8-77.5)
EP Region				
Region 1	31.6	(28.8-34.6)	79.1	(74.2-83.2)
Region 2N	34.2	(31.6-36.8)	79.1	(74.5-83.0)
Region 2S	37.1	(34.4-39.8)	74.4	(70.0-78.5)
Region 3	37.5	(34.1-41.0)	74.6	(68.4-79.9)
Region 5	31.5	(28.5-34.6)	78.2	(72.7-82.8)
Region 6	35.9	(33.3-38.6)	71.1	(66.5-75.4)
Region 7	36.3	(32.6-40.1)	75.0	(69.2-79.9)
Region 8	36.2	(33.0-39.5)	79.8	(74.9-84.0)

^a Among all adults, the proportion who reported that they were ever told by a doctor that they had high blood pressure (HBP). Women who had HBP only during pregnancy and adults who were borderline hypertensive were considered to not have been diagnosed. (N = 12,728)

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

Table 18: Cholesterol Screening and Awareness by EP Region 2013 Michigan BRFS

2010 Mildingan Bitt 0						
		sterol Ever ecked ^a			ve Ever Told High Cholesterol ^c	
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	83.2	(82.1-84.2)	79.4	(78.3-80.5)	40.6	(39.4-41.8)
EP Region						
Region 1	84.8	(82.0-87.3)	80.8	(77.8-83.5)	39.8	(36.5-43.3)
Region 2N	84.7	(81.9-87.0)	81.3	(78.5-83.8)	39.9	(37.1-42.8)
Region 2S	83.1	(80.5-85.5)	79.0	(76.3-81.5)	40.2	(37.3-43.1)
Region 3	84.0	(80.7-86.8)	80.2	(76.8-83.2)	40.5	(37.0-44.2)
Region 5	80.3	(76.7-83.4)	75.4	(71.8-78.7)	42.6	(39.0-46.3)
Region 6	82.4	(79.6-84.8)	78.8	(76.0-81.4)	41.5	(38.6-44.5)
Region 7	85.1	(81.1-88.4)	81.7	(77.6-85.2)	43.9	(39.8-48.0)
Region 8	82.9	(79.3-85.9)	78.9	(75.2-82.1)	43.2	(39.5-47.0)

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

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

Among adults who ever had their blood cholesterol checked, the proportion who reported that a doctor, nurse, or other health professional had told them that their cholesterol was high. (N = 11,093)

Table 19: No Routine Checkup in Past Year by EP Region 2013 Michigan BRFS				
	Had No Rou	Had No Routine Checkup in Past Year ^a		
	%	95% Confidence Interval		
Michigan Total	30.1	(29.0-31.3)		
EP Region				
Region 1	30.6	(27.5-33.8)		
Region 2N	29.0	(26.4-31.8)		
Region 2S	27.9	(25.4-30.6)		
Region 3	30.4	(27.1-34.0)		
Region 5	33.1	(29.7-36.7)		
Region 6	31.3	(28.7-34.1)		
Region 7	29.7	(26.0-33.7)		
Region 8	31.0	(27.7-34.6)		

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

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

		Ever Had Blood Stool Test ^a		l Stool Test wo Years ^b
	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	35.8	(34.4-37.1)	13.3	(12.3-14.3)
EP Region				
Region 1	41.2	(37.3-45.2)	16.2	(13.5-19.3)
Region 2N	32.0	(28.9-35.2)	11.9	(9.9-14.3)
Region 2S	33.2	(30.0-36.5)	12.4	(10.2-15.0)
Region 3	39.8	(35.6-44.1)	17.1	(14.1-20.7)
Region 5	36.9	(33.1-40.8)	13.5	(11.0-16.5)
Region 6	36.4	(33.2-39.8)	11.6	(9.6-14.0)
Region 7	37.5	(33.1-42.1)	12.4	(9.7-15.7)
Region 8	37.1	(33.3-41.0)	10.9	(8.7-13.7)

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

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

Table 21: Colorectal Cancer Screening (Sigmoidoscopy/Colonoscopy) Among Adults Aged 50 Years and Older by EP Region

2013 Michigan BRFS Had a Sigmoidoscopy in Had a Sigmoidoscopy or Ever Had a Past 5 Years or Colonoscopy in Past 5 Years^b Sigmoidoscopy or Colonoscopy in Past 10 Colonoscopy **Years**^c 95% 95% 95% % Confidence % Confidence % Confidence Interval Interval Interval Michigan Total 74.0 (72.6-75.4)56.4 (54.9-57.8)68.7 (67.3-70.1)**EP Region** Region 1 73.0 (69.0-76.8)56.4 (52.2-60.4)67.3 (63.1-71.3)Region 2N 76.6 (73.3-79.7)59.4 (55.8-62.9)70.9 (67.4-74.2)Region 2S 71.5 (67.9-74.9)55.0 (51.3-58.6)66.7 (63.0-70.1)Region 3 76.5 (72.3-80.2)58.3 (53.9-62.6)71.8 (67.5-75.8)Region 5 73.2 (69.2-76.9)(63.0-71.0)54.6 (50.5-58.7)67.2 Region 6 73.2 (69.8-76.4)53.3 (49.7-56.9)67.7 (64.2-71.1)Region 7 72.8 (68.4-76.8)56.6 (51.8-61.2)68.9 (64.4-73.2)Region 8 75.1 69.9 (71.4-78.5)56.4 (52.4-60.4)(66.1-73.5)

^a Among adults aged 50 years and older, the proportion who reported ever having a sigmoidoscopy or colonoscopy. (N = 7,807) ^b Among adults aged 50 years and older, the proportion who reported having a sigmoidoscopy or colonoscopy in the past five years. (N = 7,726)

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

Table 22: Immunizations among Adults Aged 65 Years and Older by EP Region 2013 Michigan BRFS

20 10 mongan 514 0					
		lu Vaccine ast Year ^a		er Had nia Vaccine ^b	
	%	95% Confidence Interval	%	95% Confidence Interval	
Michigan Total	56.8	(54.8-58.9)	68.6	(66.5-70.5)	
EP Region					
Region 1	67.7	(62.3-72.7)	74.1	(69.0-78.7)	
Region 2N	56.7	(51.7-61.5)	68.3	(63.4-72.7)	
Region 2S	51.7	(46.5-56.8)	61.0	(55.6-66.2)	
Region 3	56.4	(50.3-62.3)	67.6	(61.4-73.3)	
Region 5	57.9	(52.3-63.4)	70.5	(64.9-75.6)	
Region 6	56.9	(52.0-61.7)	73.9	(69.3-78.1)	
Region 7	57.4	(50.4-64.1)	68.9	(62.0-75.1)	
Region 8	58.4	(52.6-63.9)	73.9	(68.6-78.7)	

Among adults aged 65 years and older, the proportion who reported that they had a flu vaccine, either by an injection in the arm or sprayed in the nose during the past 12 months. (N = 4,022)

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

Table 23: HIV Testing among Adults Aged 18 - 64 Years by EP Region 2013 Michigan BRFS					
Ever Had an HIV Test ^a					
% 95% Confidence Interval					

	%	95% Confidence Interval		
Michigan Total	41.2	(39.8-42.7)		
EP Region				
Region 1	39.5	(35.7-43.5)		
Region 2N	40.2	(36.8-43.7)		
Region 2S	50.1	(46.6-53.5)		
Region 3	40.0	(35.6-44.5)		
Region 5	41.0	(36.7-45.4)		
Region 6	37.4	(34.1-40.9)		
Region 7	33.2	(28.7-38.0)		
Region 8	30.7	(26.7-35.0)		

^a Among adults aged 18 - 64 years, the proportion who reported that they ever had been tested for HIV, apart from tests that were part of a blood donation. Don't know was considered a valid response to this question. (N = 7,771)

Table 24: Asthma among Adults by EP Region 2013 Michigan BRFS				
	Lifetime Asthma Prevalence ^a 95% Confidence Interval		Current Asthma Prevalence ^b	
			%	95% Confidence Interval
Michigan Total	16.6	(15.7-17.5)	11.5	(10.7-12.3)
EP Region				
Region 1	17.4	(14.9-20.2)	11.1	(9.1-13.5)
Region 2N	18.3	(16.1-20.8)	13.3	(11.4-15.5)
Region 2S	18.5	(16.4-20.9)	13.2	(11.4-15.4)
Region 3	14.7	(12.4-17.3)	10.5	(8.6-12.9)
Region 5	15.3	(12.8-18.1)	9.3	(7.4-11.5)
Region 6	14.7	(12.7-16.9)	10.3	(8.7-12.2)
Region 7	12.7	(9.9-16.2)	7.9	(6.1-10.3)
Region 8	17.3	(14.5-20.4)	11.1	(9.0-13.6)

Among all adults, the proportion who reported that they were ever told by a doctor, nurse, or other health care professional that they had asthma. (N = 12,697)

Table 25: Asthma among Children by EP Region 2013 Michigan BRFS				
		Lifetime Asthma Prevalence ^a		urrent Prevalence ^b
	95% Confidence Interval		%	95% Confidence Interval
Michigan Total	15.2	(13.6-17.0)	10.9	(9.5-12.5)
EP Region				
Region 1	16.9	(12.3-22.8)	12.8	(8.6-18.5)
Region 2N	13.3	(9.9-17.7)	10.0	(7.1-14.0)
Region 2S	13.8	(10.6-17.8)	11.4	(8.5-15.3)
Region 3	13.9	(9.7-19.5)	10.1	(6.6-15.3)
Region 5	16.0	(11.1-22.7)	11.3	(7.0-17.7)
Region 6	18.6	(14.8-23.1)	12.4	(9.3-16.4)
Region 7	13.5	(9.0-19.8)	7.1	(4.1-12.1)
				1

Estimated proportion of Michigan children aged 0-17 years who were ever told by a doctor, nurse or other health professional that they had asthma, using proxy information from the adult respondent. (N = 2,724).

(8.1-18.6)

8.3

(4.8-14.2)

12.4

Region 8

Estimated proportion of Michigan children aged 0-17 years who still have asthma, using proxy information from the adult respondent. (N = 2,517)

Table 26: Chronic Obstructive Pulmonary Disease (COPD)				
by EP Region				
2013 Michigan BRFS				

	Ever Told COPD, Emphysema or Chronic Bronchitis ^a		
	%	95% Confidence Interval	
Michigan Total	8.8	(8.1-9.5)	
EP Region			
Region 1	8.7	(7.0-10.7)	
Region 2N	8.6	(7.1-10.4)	
Region 2S	10.2	(8.6-12.1)	
Region 3	9.7	(7.8-11.9)	
Region 5	8.8	(7.1-10.8)	
Region 6	7.6	(6.2-9.2)	
Region 7	8.6	(6.7-11.0)	
Region 8	6.8	(5.4-8.5)	

^a Among all adults, the proportion who reported ever being told by a doctor that they had chronic obstructive pulmonary disease (COPD), emphysema or chronic bronchitis. (N = 12,690)

Table 27: Arthritis among Children by EP Region 2013 Michigan BRFS					
	Ever To	Ever Told Arthritis ^a 95% Confidence Interval		Usual Activities Now Limited ^b	
	%			95% Confidence Interval	
Michigan Total	31.3	(30.3-32.4)	48.8	(46.8-50.7)	
EP Region					
Region 1	31.8	(28.9-34.8)	46.9	(41.5-52.4)	
Region 2N	27.5	(25.3-29.9)	47.7	(42.9-52.5)	
Region 2S	30.9	(28.5-33.4)	50.1	(45.4-54.8)	
Region 3	38.1	(34.8-41.5)	49.8	(44.3-55.3)	
Region 5	32.5	(29.5-35.6)	50.0	(44.7-55.4)	
Region 6	30.9	(28.4-33.5)	50.8	(45.8-55.7)	
Region 7	36.6	(32.9-40.6)	45.8	(39.4-52.4)	
Region 8	37.6	(34.2-41.2)	43.7	(38.2-49.4)	

^a Among all adults, the proportion who reported ever being told by a doctor that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. (N = 12,674)

Among adults who reported ever being told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia, the proportion who reported that their usual activities are now limited by their arthritis or joint symptoms. (N = 4,770)

2013 Michigan BRFS Estimates by Emergency Preparedness Region October 2. 2014

Table 28: Cardiovascular Disease by EP Region 2013 Michigan BRFS **Had Told Angina Ever Told Any Ever Told Ever Told** or Coronary Heart Disease^b Cardiovascular Heart Attack^a Stroke^c Disease^d 95% 95% 95% 95% Confidence % Confidence % Confidence % % Confidence Interval Interval Interval Interval 5.2 5.2 10.1 **Michigan Total** (4.7-5.7)(4.8-5.7)3.6 (3.2-4.0)(9.4-10.8)**EP Region** 4.3 Region 1 5.0 (3.8-6.6)(3.3-5.6)3.5 (2.5-4.9)9.0 (7.4-11.0)Region 2N 4.8 (3.9-6.0)5.1 (4.1-6.4)4.1 (3.1-5.4)10.3 (8.8-12.0)Region 2S 4.8 (3.8-6.1)5.1 (4.1-6.2)3.9 (3.1-4.9)10.2 (8.8-11.9)Region 3 6.5 (5.0-8.4)6.5 (5.0-8.3)3.9 (2.8-5.4)12.2 (10.2-14.6)Region 5 5.8 (4.5-7.5)6.2 (4.8-8.0)3.2 10.5 (2.3-4.5)(8.7-12.6)Region 6 4.6 (3.6-5.8)4.9 (3.9-6.2)2.9 (2.2-4.0)8.7 (7.3-10.2)Region 7 6.8 (5.1-9.1)5.4 (4.1-7.2)3.5 (2.4-5.2)11.3 (9.1-14.1)Region 8 6.6 (5.1-8.5)7.0 (5.3-9.1)3.6 (2.5-5.3)11.9 (9.9-14.3)

Among all adults, the proportion who had ever been told by a doctor that...

a they had a heart attack or myocardial infarction (N = 12,685);

they had angina or coronary heart disease (N = 12,648);

they had a stroke. (N = 12,725)

they had a heart attack, coronary heart disease or a stroke. (N = 12,634)

Table 29: Cancer by EP Region 2013 Michigan BRFS

2010 Milonigan Dixi O						
	Ever Told			d Any Other of Cancer ^b	Ever To	old Cancer ^c
	%	95% Confidence Interval	%	95% Confidence Interval	%	95% Confidence Interval
Michigan Total	5.4	(5.0-5.8)	7.7	(7.2-8.3)	11.9	(11.2-12.5)
EP Region						
Region 1	5.8	(4.7-7.2)	7.5	(6.1-9.2)	12.5	(10.8-14.6)
Region 2N	6.0	(5.0-7.1)	7.9	(6.7-9.3)	12.4	(11.0-14.1)
Region 2S	4.4	(3.6-5.3)	7.9	(6.6-9.4)	11.1	(9.7-12.7)
Region 3	5.3	(4.3-6.6)	7.8	(6.3-9.7)	11.5	(9.8-13.5)
Region 5	6.3	(5.1-7.7)	7.9	(6.5-9.6)	13.2	(11.4-15.3)
Region 6	5.1	(4.2-6.1)	7.3	(6.1-8.7)	11.3	(9.9-13.0)
Region 7	6.4	(5.0-8.2)	8.6	(6.9-10.8)	13.9	(11.7-16.4)
Region 8	6.1	(4.9-7.7)	8.2	(6.7-10.1)	12.3	(10.4-14.5)

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

Among all adults, the proportion who reported ever being told by a doctor that they had a form of cancer other than skin cancer. (N = 12,734)

Among all adults, the proportion who reported ever being told by a doctor that they had skin cancer or any other type of cancer. (N = 12,712)

Table 30: Diabetes by EP Region 2013 Michigan BRFS			
	Ever Told Diabetes ^a 95% Confidence Interval 10.4 (9.7-11.0)		
Michigan Total			
EP Region			
Region 1	11.1	(9.3-13.2)	
Region 2N	9.4	(8.0-10.9)	
Region 2S	11.1	(9.6-12.7)	
Region 3	12.7	(10.7-15.0)	
Region 5	8.5	(7.0-10.4)	
Region 6	9.8	(8.3-11.5)	
Region 7	11.5	(9.1-14.6)	
Region 8	9.9	(8.3-11.8)	

Among all adults, the proportion who reported that they were ever told by a doctor that they had diabetes. Adults told they have prediabetes and women who had diabetes only during pregnancy were classified as not having been diagnosed. (N = 12,735)

Table 31: Kidney Disease by EP Region 2013 Michigan BRFS				
	Kid	Ever Told Kidney Disease ^a		
	%	95% Confidence Interval		
Michigan Total	3.0	(2.6-3.4)		
EP Region				
Region 1	2.5	(1.7-3.5)		
Region 2N	3.0	(2.1-4.1)		
Region 2S	2.9	(2.1-4.1)		
Region 3	3.4	(2.4-4.7)		
Region 5	3.6	(2.7-4.9)		
Region 6	3.0	(2.3-3.9)		
Region 7	3.6	(2.3-5.7)		
Region 8	2.1	(1.5-3.1)		

^a Among all adults, the proportion who reported ever being told by a doctor that they had kidney disease. (N = 12,697)

Table 32: Depression by EP Region 2013 Michigan BRFS			
	Ever Told Depression ^a		
	95% Confidence Interval		
Michigan Total	21.3 (20.4-22.3)		
EP Region			
Region 1	21.2	(18.5-24.1)	
Region 2N	19.6	(17.4-22.0)	
Region 2S	21.9	(19.6-24.4)	
Region 3	22.0	(19.2-25.1)	
Region 5	23.1	(20.2-26.2)	
Region 6	23.6	(21.2-26.2)	
Region 7	20.3	(17.4-23.6)	
Region 8	21.2	(18.1-24.6)	

^a Among all adults, the proportion who reported ever being told by a doctor that they had a depressive disorder including depression, major depression, dysthymia, or minor depression. (N = 12,704)