Estimates for Chronic Health Conditions, Risk Factors, Health Indicators, and Preventive Health Practices by Race/Ethnicity

State of Michigan

Behavioral Risk Factor Survey
2007-2009

Chronic Disease Epidemiology Section
Division of Genomics, Perinatal Health, and Chronic Disease Epidemiology
Bureau of Epidemiology
Michigan Department of Community Health

Prepared by: Chris Fussman
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Introduction

The Michigan Behavioral Risk Factor Survey (BRFS) is an annual, statewide telephone survey of Michigan adults aged 18 years and older that is conducted through a collaborative effort among the Behavioral Surveillance Branch (BSB) of the Centers for Disease Control and Prevention, 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 BSB.

For the 2007 through 2009 Michigan Behavioral Risk Factor Surveys, data were collected quarterly by IPPSR. For each year, the sample of telephone numbers that were utilized for data collection was selected using a list-assisted, random-digit-dialed methodology with a disproportionate stratification based on phone bank density, and whether or not the phone numbers were directory listed. The total sample size for the combined 2007-2009 MiBRFS dataset was equal to 26,211 completed interviews. The 2007-2009 combined dataset included 19,728 White, Non-Hispanics; 4,259 Black, Non-Hispanics; 200 Asian or Other Pacific Islander, Non-Hispanics; 191 American Indian/Alaska Native, Non-Hispanics; 632 Other/Multi-racial, Non-Hispanics, 244 Arab, Non-Hispanics; and 484 Hispanics. Those who reported multiple races were asked a follow-up question concerning which race best represents their true race; this was not included in the analysis. Those with unknown race/ethnicity were excluded from this analysis.

When making direct comparisons between different racial/ethnic groups, it is important to first look at the age distribution of each group to see if the groups are comparable. When looking at the seven Michigan racial/ethnic groups referred to in this report, several age differences exist. The follow list summarizes these age distribution differences:

- Whites and Blacks have similar age distributions
- Asians were much younger with the majority being 44 years of age or younger
- American Indians were also younger are more comparable to that of Asians
- The other/multi-racial group had a similar age distribution to that of Whites and Blacks
- Arabs were much younger with the majority being 34 year of age or younger
- Hispanics were also younger and more comparable to that of Asians

Due to the age distributions of these seven racial/ethnic groups being very different it was essential to calculate age-adjusted prevalence estimates based on the direct method using the 2000 U.S. Census.[1] The use of age-adjusted estimates allows for the direct comparison of prevalence estimates between different racial/ethnic groups.

Both crude and age-adjusted population-based prevalence estimates and confidence intervals were calculated for health indicators, health risk behaviors, preventive health practices, and chronic conditions among the overall adult population in Michigan, as well as for seven Michigan racial/ethnic categories. All estimates were weighted to adjust for the probabilities of selection and a post-stratification weighting factor that adjusted for the distribution of Michigan adults by age, sex, and race/ethnicity at the state level. All analyses were performed using SAS-Callable SUDAAN, a statistical computing program designed for complex sample surveys. Crude and age-adjusted prevalence estimates and asymmetric 95% confidence intervals are presented.

[1] Klein RJ, Schoenborn CA. Age Adjustment Using the 2000 Projected U.S. Population. *Healthy People 2010 Stat Notes.* 2001:1-10.

If you have any questions regarding these estimates, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, MIBRFSS@michigan.gov.

Key Points

*All significant comparisons (i.e., non-overlapping 95% confidence intervals) mentioned below are based on age-adjusted estimates only.

Chronic Health Conditions:
- o Black, non-Hispanics reported higher prevalence rates of diabetes, asthma (lifetime and current), stroke, and disability when compared to White, non-Hispanics.
- o American Indian/Alaskan Native, non-Hispanics reported higher prevalence rates of diabetes, lifetime asthma, heart attack, coronary heart disease, stroke, disability, and arthritis when compared to White, non-Hispanics.
- o Hispanics reported higher prevalence rates of diabetes and lower prevalence rates of arthritis when compared to White, non-Hispanics.
- o Other/Multi-racial, non-Hispanics reported higher prevalence rates of diabetes, asthma (lifetime and current), heart attack, coronary heart disease, stroke, disability, and arthritis when compared to White, non-Hispanics.

Health Risk Behaviors:
- o Black, non-Hispanics reported higher prevalence rates of obesity, no leisure-time physical activity, inadequate physical activity, and high blood pressure and lower prevalence rates of heavy and binge drinking when compared to White, non-Hispanics.
- o Asian, non-Hispanics reported higher prevalence rates of inadequate physical activity and lower prevalence rates of obesity, current smoking and binge drinking when compared to White, non-Hispanics.
- o American Indian/Alaskan Native, non-Hispanics reported higher prevalence rates of current smoking when compared to White, non-Hispanics.
- o Other/Multi-racial, non-Hispanics reported higher prevalence rates of obesity and current smoking when compared to White, non-Hispanics.

Health Indicators:
- o Black, non-Hispanics reported higher prevalence rates of poor general health, poor physical health, activity limitations, no health care coverage, no personal health care provider, cost prevented care, special equipment use, inadequate social/emotional support, and dissatisfaction with life when compared to White, non-Hispanics.
- o Asian, non-Hispanics reported lower prevalence rates of poor general health, poor physical health, no health care coverage, activity limitations, and special equipment use, and higher prevalence rates for rarely getting the emotional/social support they need when compared to White, non-Hispanics.
- o Arab, non-Hispanics reported higher prevalence rates of cost prevented care when compared to White, non-Hispanics.
- o Hispanics reported higher prevalence rates or poor general health, no personal health care provider, cost prevented care, and rarely getting the emotional support they need when compared to White, non-Hispanics.

Preventive Health Practices:
- o Black, non-Hispanics reported a lower prevalence of not having a routine checkup in the past year when compared to White, non-Hispanics.
- o Black, non-Hispanics and Hispanics reported higher HIV testing prevalence rates when compare to White, non-Hispanics.
- o Asian, non-Hispanics reported lower HIV testing prevalence rate when compared to White, non-Hispanics.

Table 1: Prevalence Estimates among the Overall Michigan Population (N = 25,738)
Michigan BRFS (2007-2009 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes[1]	9.1 (8.7-9.5)	8.6 (8.3-9.0)
Ever Told Have Asthma[2]	15.3 (14.6-15.9)	15.3 (14.7-16.0)
Still Have Asthma[3]	9.8 (9.3-10.3)	9.8 (9.3-10.3)
Ever Told Heart Attack[4]	4.5 (4.3-4.8)	4.4 (4.1-4.6)
Ever Told Angina or Coronary Heart Disease[5]	4.6 (4.4-4.9)	4.4 (4.2-4.7)
Ever Told Stroke[6]	2.8 (2.6-3.0)	2.6 (2.4-2.9)
Disability[7]	23.0 (22.4-23.7)	22.3 (21.7-23.0)
Ever Told Arthritis[8]	31.3 (30.4-32.2)	29.8 (29.1-30.6)
Health Risk Behaviors		
Obese[9]	29.9 (29.1-30.7)	29.8 (29.0-30.6)
No Leisure-Time Physical Activity[10]	23.5 (22.8-24.2)	23.2 (22.5-23.9)
Inadequate Physical Activity[11]	49.1 (48.2-50.0)	49.0 (48.0-50.0)
Inadequate Fruit and Vegetable Consumption[12]	78.3 (77.5-79.0)	78.4 (77.6-79.1)
Current Smoker[13]	20.3 (19.6-21.1)	20.6 (19.9-21.4)
Heavy Drinking[14]	5.6 (5.2-6.0)	5.6 (5.2-6.1)
Binge Drinking[15]	17.7 (17.0-18.4)	18.3 (17.6-19.0)
Ever Told High Blood Pressure[16]	29.6 (28.7-30.5)	28.4 (27.6-29.3)
Health Indicators		
General Health, Fair or Poor[17]	14.6 (14.1-15.2)	14.2 (13.7-14.8)
Poor Physical Health on at least 14 Days in the Past Month[18]	10.8 (10.3-11.3)	10.6 (10.1-11.1)
Poor Mental Health on at least 14 Days in the Past Month[19]	10.9 (10.4-11.4)	11.0 (10.4-11.5)
Activity Limitation on at least 14 Days in the Past Month[20]	6.9 (6.5-7.3)	6.7 (6.3-7.1)
No Health Care Coverage (Among 18 – 64 year olds)[21]	14.8 (14.0-15.6)	15.2 (14.4-16.0)
No Personal Health Care Provider[22]	13.2 (12.6-13.9)	13.8 (13.1-14.5)
No Health Care Access During Past 12 Months Due to Cost[23]	12.7 (12.1-13.3)	12.9 (12.3-13.5)
Activity Limitation[24]	21.3 (20.6-21.9)	20.6 (20.0-21.3)
Used Special Equipment[25]	7.5 (7.2-7.9)	7.2 (6.9-7.6)
Rarely/Never Received the Social/Emotional Support Needed[26]	7.1 (6.6-7.5)	7.0 (6.5-7.4)
Dissatisfied or Very Dissatisfied with Life[27]	6.5 (6.0-6.9)	6.5 (6.0-6.9)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	31.3 (30.5-32.1)	32.1 (31.3-33.0)
Cholesterol Ever Checked[29]	82.9 (81.8-83.9)	81.7 (80.7-82.6)
Ever Told High Cholesterol[30]	39.4 (38.4-40.4)	34.7 (33.6-35.7)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	38.1 (37.1-39.1)	39.8 (38.8-40.8)

- Table excludes those with unknown race/ethnicity.
* Age-adjusted by direct method using the 2000 U.S. Census.

If you have any questions regarding these estimates, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, MIBRFSS@michigan.gov.

Table 2: Prevalence Estimates among White, Non-Hispanics in Michigan (N = 19,728) Michigan BRFS (2007-2009 Combined) % (95% Confidence Interval)		
Chronic Health Conditions	**Crude**	**Age-Adjusted***
Ever Told Diabetes[1]	8.2 (7.9-8.7)	7.4 (7.1-7.8)
Ever Told Have Asthma[2]	14.4 (13.7-15.1)	14.7 (14.0-15.4)
Still Have Asthma[3]	9.2 (8.7-9.8)	9.3 (8.8-9.9)
Ever Told Heart Attack[4]	4.6 (4.3-4.9)	4.1 (3.9-4.4)
Ever Told Angina or Coronary Heart Disease[5]	4.9 (4.6-5.2)	4.3 (4.1-4.6)
Ever Told Stroke[6]	2.5 (2.3-2.8)	2.3 (2.1-2.5)
Disability[7]	23.2 (22.4-23.9)	21.9 (21.2-22.7)
Ever Told Arthritis[8]	32.7 (31.7-33.7)	30.0 (29.1-30.9)
Health Risk Behaviors		
Obese[9]	28.3 (27.5-29.2)	28.1 (27.2-29.0)
No Leisure-Time Physical Activity[10]	22.0 (21.3-22.7)	21.3 (20.6-22.1)
Inadequate Physical Activity[11]	48.1 (47.1-49.1)	47.8 (46.7-48.8)
Inadequate Fruit and Vegetable Consumption[12]	78.5 (77.7-79.2)	78.9 (78.0-79.7)
Current Smoker[13]	19.9 (19.1-20.7)	20.6 (19.8-21.5)
Heavy Drinking[14]	5.9 (5.5-6.4)	6.0 (5.6-6.6)
Binge Drinking[15]	18.7 (17.9-19.5)	19.9 (19.0-20.8)
Ever Told High Blood Pressure[16]	29.2 (28.3-30.2)	27.0 (26.1-27.9)
Health Indicators		
General Health, Fair or Poor[17]	13.2 (12.6-13.8)	12.5 (12.0-13.1)
Poor Physical Health on at least 14 Days in the Past Month[18]	10.5 (10.0-11.0)	10.0 (9.5-10.6)
Poor Mental Health on at least 14 Days in the Past Month[19]	10.4 (9.9-11.0)	10.7 (10.0-11.3)
Activity Limitation on at least 14 Days in the Past Month[20]	6.4 (6.0-6.8)	6.1 (5.7-6.5)
No Health Care Coverage (Among 18 – 64 year olds)[21]	13.5 (12.7-14.3)	14.2 (13.3-15.1)
No Personal Health Care Provider[22]	11.9 (11.3-12.6)	12.9 (12.2-13.7)
No Health Care Access During Past 12 Months Due to Cost[23]	10.8 (10.2-11.4)	11.3 (10.6-11.9)
Activity Limitation[24]	21.5 (20.8-22.2)	20.3 (19.6-21.1)
Used Special Equipment[25]	7.2 (6.8-7.6)	6.6 (6.2-7.0)
Rarely/Never Received the Social/Emotional Support Needed[26]	5.9 (5.6-6.4)	5.8 (5.3-6.2)
Dissatisfied or Very Dissatisfied with Life[27]	5.6 (5.2-6.1)	5.7 (5.2-6.2)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	32.4 (31.5-33.3)	34.0 (33.0-34.9)
Cholesterol Ever Checked[29]	83.3 (82.2-84.4)	80.9 (79.9-82.0)
Ever Told High Cholesterol[30]	40.6 (39.5-41.7)	34.8 (33.6-36.1)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	33.2 (32.2-34.3)	35.2 (34.2-36.3)
- Table excludes those with unknown race/ethnicity. * Age-adjusted by direct method using the 2000 U.S. Census.		

If you have any questions regarding these estimates, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, MIBRFSS@michigan.gov.

Table 3: Prevalence Estimates among Black, Non-Hispanics in Michigan (N = 4,259) Michigan BRFS (2007-2009 Combined) % (95% Confidence Interval)		
Chronic Health Conditions	**Crude**	**Age-Adjusted***
Ever Told Diabetes[1]	13.3 (12.0-14.7)	14.3 (13.1-15.6)
Ever Told Have Asthma[2]	17.8 (15.8-19.9)	17.4 (15.6-19.5)
Still Have Asthma[3]	11.8 (10.2-13.6)	11.6 (10.0-13.4)
Ever Told Heart Attack[4]	4.1 (3.5-4.9)	4.6 (3.9-5.4)
Ever Told Angina or Coronary Heart Disease[5]	3.8 (3.2-4.6)	4.3 (3.7-5.0)
Ever Told Stroke[6]	4.4 (3.7-5.2)	4.8 (4.1-5.6)
Disability[7]	23.7 (21.8-25.7)	24.7 (22.9-26.5)
Ever Told Arthritis[8]	28.6 (26.3-31.1)	30.4 (28.5-32.5)
Health Risk Behaviors		
Obese[9]	39.8 (37.3-42.4)	39.7 (37.3-42.2)
No Leisure-Time Physical Activity[10]	30.2 (28.0-32.5)	30.8 (28.6-33.0)
Inadequate Physical Activity[11]	55.8 (52.9-58.6)	56.8 (54.0-59.5)
Inadequate Fruit and Vegetable Consumption[12]	78.6 (76.3-80.6)	78.4 (76.3-80.5)
Current Smoker[13]	21.0 (19.0-23.0)	20.7 (18.9-22.8)
Heavy Drinking[14]	3.0 (2.3-4.1)	3.0 (2.3-4.0)
Binge Drinking[15]	11.9 (10.2-13.9)	11.6 (10.0-13.5)
Ever Told High Blood Pressure[16]	37.0 (34.2-39.9)	38.9 (36.4-41.5)
Health Indicators		
General Health, Fair or Poor[17]	21.6 (19.8-23.6)	22.3 (20.6-24.2)
Poor Physical Health on at least 14 Days in the Past Month[18]	12.0 (10.7-13.4)	12.4 (11.1-13.8)
Poor Mental Health on at least 14 Days in the Past Month[19]	12.8 (11.2-14.5)	12.7 (11.2-14.4)
Activity Limitation on at least 14 Days in the Past Month[20]	9.2 (8.0-10.5)	9.4 (8.2-10.7)
No Health Care Coverage (Among 18 – 64 year olds)[21]	20.4 (18.1-23.0)	20.4 (18.1-22.9)
No Personal Health Care Provider[22]	17.4 (15.5-19.6)	16.8 (15.0-18.8)
No Health Care Access During Past 12 Months Due to Cost[23]	18.6 (16.6-20.8)	18.1 (16.2-20.2)
Activity Limitation[24]	21.5 (19.7-23.4)	22.1 (20.3-23.9)
Used Special Equipment[25]	10.2 (9.1-11.4)	11.1 (10.1-12.2)
Rarely/Never Received the Social/Emotional Support Needed[26]	10.6 (9.3-12.1)	10.7 (9.4-12.2)
Dissatisfied or Very Dissatisfied with Life[27]	10.5 (9.1-12.1)	10.3 (8.9-11.8)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	22.1 (19.9-24.4)	21.5 (19.5-23.8)
Cholesterol Ever Checked[29]	82.6 (79.6-85.3)	83.1 (80.4-85.4)
Ever Told High Cholesterol[30]	34.0 (31.1-37.0)	32.9 (30.1-35.8)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	63.2 (60.3-66.0)	63.4 (60.7-66.1)
- Table excludes those with unknown race/ethnicity. * Age-adjusted by direct method using the 2000 U.S. Census.		

If you have any questions regarding these estimates, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, MIBRFSS@michigan.gov.

Table 4: Prevalence Estimates among Asian or Other Pacific Islander, Non-Hispanics in Michigan (N = 200) Michigan BRFS (2007-2009 Combined) % (95% Confidence Interval)		
Chronic Health Conditions	**Crude**	**Age-Adjusted***
Ever Told Diabetes[1]	6.4 (3.8-10.6)	11.5 (7.4-17.3)
Ever Told Have Asthma[2]	6.6 (3.3-12.7)	6.5 (3.6-11.7)
Still Have Asthma[3]	3.5 (1.4-8.6)	3.8 (1.7-8.4)
Ever Told Heart Attack[4]	1.7 (0.6-4.7)	3.1 (1.3-7.2)
Ever Told Angina or Coronary Heart Disease[5]	1.1 (0.4-3.0)	2.3 (0.8-6.7)
Ever Told Stroke[6]	0.0 (---)	0.0 (---)
Disability[7]	5.9 (3.2-10.6)	7.4 (4.3-12.7)
Ever Told Arthritis[8]	8.6 (5.2-14.0)	17.0 (11.6-24.4)
Health Risk Behaviors		
Obese[9]	6.4 (3.3-11.8)	5.8 (3.1-10.6)
No Leisure-Time Physical Activity[10]	27.7 (20.5-36.2)	24.7 (18.6-32.1)
Inadequate Physical Activity[11]	61.0 (51.7-69.5)	62.0 (53.4-69.9)
Inadequate Fruit and Vegetable Consumption[12]	71.5 (63.0-78.7)	71.2 (62.5-78.5)
Current Smoker[13]	8.3 (4.2-15.8)	7.5 (3.9-13.7)
Heavy Drinking[14]	3.4 (1.1-9.8)	3.3 (1.3-8.5)
Binge Drinking[15]	7.1 (3.5-13.8)	7.0 (3.6-13.0)
Ever Told High Blood Pressure[16]	14.3 (9.3-21.3)	22.1 (15.8-30.0)
Health Indicators		
General Health, Fair or Poor[17]	4.5 (2.4-8.0)	5.8 (3.3-9.9)
Poor Physical Health on at least 14 Days in the Past Month[18]	2.9 (1.3-6.4)	2.6 (1.2-5.4)
Poor Mental Health on at least 14 Days in the Past Month[19]	6.3 (2.9-13.1)	6.0 (3.0-11.5)
Activity Limitation on at least 14 Days in the Past Month[20]	3.7 (1.4-9.3)	3.1 (1.2-7.6)
No Health Care Coverage (Among 18 – 64 year olds)[21]	7.3 (3.7-13.8)	7.2 (3.8-13.2)
No Personal Health Care Provider[22]	15.4 (10.0-22.9)	15.5 (10.3-22.6)
No Health Care Access During Past 12 Months Due to Cost[23]	15.4 (9.8-23.3)	13.5 (8.9-20.1)
Activity Limitation[24]	5.3 (2.8-9.8)	6.8 (3.8-11.8)
Used Special Equipment[25]	1.1 (0.3-4.4)	1.0 (0.2-4.1)
Rarely/Never Received the Social/Emotional Support Needed[26]	13.1 (8.4-19.9)	15.1 (10.1-21.9)
Dissatisfied or Very Dissatisfied with Life[27]	2.4 (0.9-6.2)	2.2 (0.9-5.2)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	42.0 (33.7-50.8)	36.8 (29.8-44.5)
Cholesterol Ever Checked[29]	76.4 (65.4-84.8)	77.9 (71.9-82.9)
Ever Told High Cholesterol[30]	36.3 (27.0-46.7)	34.3 (26.4-43.2)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	23.5 (16.8-31.8)	21.8 (15.6-29.6)
- Table excludes those with unknown race/ethnicity. * Age-adjusted by direct method using the 2000 U.S. Census.		

If you have any questions regarding these estimates, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, MIBRFSS@michigan.gov.

Table 5: Prevalence Estimates among American Indian / Alaskan Native, Non-Hispanics in Michigan (N = 191)
Michigan BRFS (2007-2009 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes[1]	15.7 (10.9-22.2)	14.9 (10.8-20.3)
Ever Told Have Asthma[2]	25.2 (16.9-35.9)	23.7 (16.6-32.8)
Still Have Asthma[3]	14.7 (9.0-22.9)	13.2 (8.5-20.2)
Ever Told Heart Attack[4]	11.6 (7.5-17.5)	11.5 (7.6-17.2)
Ever Told Angina or Coronary Heart Disease[5]	7.9 (4.9-12.5)	7.8 (5.0-11.9)
Ever Told Stroke[6]	8.9 (5.3-14.4)	8.7 (5.4-13.9)
Disability[7]	30.1 (21.9-39.8)	30.4 (23.1-38.9)
Ever Told Arthritis[8]	42.5 (31.5-54.3)	42.2 (32.4-52.6)
Health Risk Behaviors		
Obese[9]	38.3 (29.1-48.4)	37.1 (28.7-46.3)
No Leisure-Time Physical Activity[10]	32.7 (24.2-42.4)	32.6 (24.6-41.8)
Inadequate Physical Activity[11]	49.8 (39.5-60.5)	48.3 (38.5-58.2)
Inadequate Fruit and Vegetable Consumption[12]	73.6 (63.2-81.9)	72.4 (61.9-80.8)
Current Smoker[13]	36.9 (27.9-46.9)	36.3 (27.9-45.6)
Heavy Drinking[14]	8.4 (3.6-18.3)	7.0 (3.1-14.9)
Binge Drinking[15]	19.3 (12.2-29.0)	18.3 (12.0-27.1)
Ever Told High Blood Pressure[16]	29.3 (20.4-40.2)	26.5 (19.2-35.5)
Health Indicators		
General Health, Fair or Poor[17]	32.5 (24.2-42.1)	31.1 (23.8-39.3)
Poor Physical Health on at least 14 Days in the Past Month[18]	23.1 (15.5-33.0)	23.1 (16.3-31.6)
Poor Mental Health on at least 14 Days in the Past Month[19]	15.6 (9.4-24.5)	14.0 (8.9-21.4)
Activity Limitation on at least 14 Days in the Past Month[20]	11.5 (7.3-17.8)	12.0 (7.6-18.3)
No Health Care Coverage (Among 18 – 64 year olds)[21]	21.3 (13.4-32.0)	19.8 (13.1-28.9)
No Personal Health Care Provider[22]	20.3 (12.5-31.1)	20.8 (13.2-31.3)
No Health Care Access During Past 12 Months Due to Cost[23]	22.5 (16.0-30.5)	22.8 (16.6-30.4)
Activity Limitation[24]	29.2 (21.1-39.0)	29.8 (22.5-38.3)
Used Special Equipment[25]	12.6 (8.3-18.7)	13.4 (9.2-19.2)
Rarely/Never Received the Social/Emotional Support Needed[26]	11.2 (6.6-18.4)	12.2 (7.4-19.5)
Dissatisfied or Very Dissatisfied with Life[27]	6.2 (3.3-11.3)	6.9 (3.8-12.1)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	29.0 (20.2-39.8)	27.8 (20.5-36.5)
Cholesterol Ever Checked[29]	82.9 (71.7-90.2)	82.3 (71.0-89.8)
Ever Told High Cholesterol[30]	50.5 (37.3-63.5)	45.3 (33.5-57.7)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	50.4 (39.5-61.3)	50.6 (40.2-61.0)

- Table excludes those with unknown race/ethnicity.
* Age-adjusted by direct method using the 2000 U.S. Census.

If you have any questions regarding these estimates, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, MIBRFSS@michigan.gov.

Table 6: Prevalence Estimates among Other/Multi-Racial, Non-Hispanics in Michigan (N = 632)
Michigan BRFS (2007-2009 Combined)
% (95% Confidence Interval)

Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes[1]	14.1 (11.2-17.7)	15.0 (12.2-18.4)
Ever Told Have Asthma[2]	27.7 (22.8-33.1)	27.0 (22.3-32.1)
Still Have Asthma[3]	18.5 (14.6-23.2)	17.5 (13.8-22.0)
Ever Told Heart Attack[4]	6.4 (4.7-8.8)	6.9 (5.3-9.1)
Ever Told Angina or Coronary Heart Disease[5]	6.6 (5.0-8.6)	7.2 (5.6-9.3)
Ever Told Stroke[6]	3.7 (5.3-14.4)	4.1 (2.8-6.1)
Disability[7]	33.9 (29.2-38.9)	34.2 (29.9-38.7)
Ever Told Arthritis[8]	34.7 (28.5-41.3)	37.9 (32.7-43.3)
Health Risk Behaviors		
Obese[9]	33.8 (29.0-38.9)	35.9 (31.2-40.9)
No Leisure-Time Physical Activity[10]	23.2 (19.2-27.7)	23.2 (19.4-27.5)
Inadequate Physical Activity[11]	45.7 (39.5-52.1)	46.4 (40.7-52.2)
Inadequate Fruit and Vegetable Consumption[12]	76.2 (71.2-80.6)	76.5 (71.7-80.6)
Current Smoker[13]	26.1 (21.8-31.0)	26.8 (22.4-31.8)
Heavy Drinking[14]	5.8 (3.4-9.8)	6.1 (3.6-10.2)
Binge Drinking[15]	16.7 (12.8-21.5)	16.8 (13.1-21.4)
Ever Told High Blood Pressure[16]	32.0 (26.1-38.6)	33.1 (27.2-39.6)
Health Indicators		
General Health, Fair or Poor[17]	22.2 (18.3-26.7)	22.0 (18.2-26.4)
Poor Physical Health on at least 14 Days in the Past Month[18]	17.0 (13.7-21.0)	17.3 (13.8-21.3)
Poor Mental Health on at least 14 Days in the Past Month[19]	15.8 (12.5-19.9)	16.1 (12.6-20.3)
Activity Limitation on at least 14 Days in the Past Month[20]	11.3 (8.7-14.7)	11.9 (9.0-15.5)
No Health Care Coverage (Among 18 – 64 year olds)[21]	18.8 (14.2-24.6)	17.8 (13.4-23.2)
No Personal Health Care Provider[22]	18.5 (13.6-24.7)	19.3 (14.5-25.3)
No Health Care Access During Past 12 Months Due to Cost[23]	23.2 (18.6-28.5)	22.7 (18.2-27.9)
Activity Limitation[24]	31.0 (26.6-35.9)	31.3 (27.3-35.7)
Used Special Equipment[25]	12.3 (9.7-15.6)	12.2 (9.7-15.2)
Rarely/Never Received the Social/Emotional Support Needed[26]	9.4 (6.8-12.9)	9.4 (6.8-12.9)
Dissatisfied or Very Dissatisfied with Life[27]	13.2 (9.6-17.8)	13.2 (9.6-17.8)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	33.8 (28.5-39.4)	34.4 (29.4-39.8)
Cholesterol Ever Checked[29]	85.3 (76.0-91.4)	85.3 (77.7-90.7)
Ever Told High Cholesterol[30]	40.5 (34.1-47.4)	38.5 (32.4-45.0)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	47.3 (40.7-53.9)	50.1 (43.8-56.4)

- Table excludes those with unknown race/ethnicity.
* Age-adjusted by direct method using the 2000 U.S. Census.

Table 7: Prevalence Estimates among Arab, Non-Hispanics in Michigan (N = 244) Michigan BRFS (2007-2009 Combined) % (95% Confidence Interval)		
Chronic Health Conditions	**Crude**	**Age-Adjusted***
Ever Told Diabetes[1]	4.2 (2.5-6.7)	6.3 (4.0-9.7)
Ever Told Have Asthma[2]	12.8 (8.6-18.6)	13.4 (9.4-18.7)
Still Have Asthma[3]	6.1 (3.5-10.2)	6.9 (4.3-10.9)
Ever Told Heart Attack[4]	2.8 (1.4-5.7)	4.6 (2.5-8.5)
Ever Told Angina or Coronary Heart Disease[5]	2.1 (1.0-4.2)	3.8 (2.1-7.0)
Ever Told Stroke[6]	0.6 (0.1-2.3)	1.1 (0.3-4.2)
Disability[7]	11.9 (8.3-16.9)	16.6 (12.3-21.9)
Ever Told Arthritis[8]	20.4 (13.8-29.0)	29.4 (23.2-36.3)
Health Risk Behaviors		
Obese[9]	23.3 (16.9-31.1)	27.0 (21.1-33.8)
No Leisure-Time Physical Activity[10]	20.1 (14.2-27.7)	21.0 (15.8-27.4)
Inadequate Physical Activity[11]	43.2 (34.1-52.7)	47.9 (40.0-55.8)
Inadequate Fruit and Vegetable Consumption[12]	73.1 (64.1-80.5)	71.8 (63.9-78.5)
Current Smoker[13]	18.3 (12.9-25.5)	18.5 (13.6-24.6)
Heavy Drinking[14]	5.7 (2.4-13.2)	4.3 (1.9-9.6)
Binge Drinking[15]	17.0 (11.2-24.8)	13.7 (9.3-19.8)
Ever Told High Blood Pressure[16]	16.2 (10.9-23.4)	27.0 (20.7-34.4)
Health Indicators		
General Health, Fair or Poor[17]	8.9 (5.9-13.3)	12.8 (9.1-17.7)
Poor Physical Health on at least 14 Days in the Past Month[18]	10.8 (6.2-18.3)	11.3 (7.2-17.2)
Poor Mental Health on at least 14 Days in the Past Month[19]	12.6 (7.6-20.2)	11.8 (7.7-17.7)
Activity Limitation on at least 14 Days in the Past Month[20]	9.3 (5.0-16.5)	10.1 (6.2-16.1)
No Health Care Coverage (Among 18 – 64 year olds)[21]	16.8 (10.8-25.2)	15.6 (10.9-21.8)
No Personal Health Care Provider[22]	18.7 (12.4-27.2)	15.1 (10.1-21.8)
No Health Care Access During Past 12 Months Due to Cost[23]	21.7 (15.8-29.2)	21.7 (16.4-28.0)
Activity Limitation[24]	10.9 (7.5-15.5)	15.6 (11.5-20.8)
Used Special Equipment[25]	2.8 (1.4-5.8)	3.9 (2.1-7.1)
Rarely/Never Received the Social/Emotional Support Needed[26]	9.0 (4.9-15.9)	9.6 (6.2-14.7)
Dissatisfied or Very Dissatisfied with Life[27]	6.7 (3.7-11.7)	6.9 (4.2-11.2)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	32.6 (25.1-41.2)	29.9 (23.9-36.7)
Cholesterol Ever Checked[29]	80.8 (68.9-88.9)	87.4 (79.6-92.5)
Ever Told High Cholesterol[30]	32.7 (24.1-42.6)	39.4 (31.8-47.6)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	33.6 (25.7-42.6)	37.8 (30.2-46.0)
- Table excludes those with unknown race/ethnicity. * Age-adjusted by direct method using the 2000 U.S. Census.		

If you have any questions regarding these estimates, please contact Chris Fussman at MDCH, by phone, 517-335-8144, or by e-mail, MIBRFSS@michigan.gov.

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Table 8: Prevalence Estimates among Hispanics in Michigan (N = 484) Michigan BRFS (2007-2009 Combined) % (95% Confidence Interval)		
Chronic Health Conditions	**Crude**	**Age-Adjusted***
Ever Told Diabetes[1]	10.1 (7.3-13.7)	13.1 (10.0-17.0)
Ever Told Have Asthma[2]	17.3 (8.6-18.6)	17.5 (13.8-21.9)
Still Have Asthma[3]	11.4 (8.2-15.6)	11.3 (8.4-15.1)
Ever Told Heart Attack[4]	3.0 (1.8-5.0)	5.8 (3.8-8.8)
Ever Told Angina or Coronary Heart Disease[5]	2.7 (1.6-4.6)	5.3 (3.3-8.6)
Ever Told Stroke[6]	1.8 (0.7-4.5)	2.2 (1.1-4.5)
Disability[7]	17.7 (13.8-22.3)	21.4 (17.7-25.7)
Ever Told Arthritis[8]	17.4 (12.9-23.0)	23.5 (19.1-28.6)
Health Risk Behaviors		
Obese[9]	34.6 (27.9-41.9)	34.0 (28.4-40.2)
No Leisure-Time Physical Activity[10]	28.7 (22.6-35.6)	28.4 (23.3-34.1)
Inadequate Physical Activity[11]	47.8 (40.1-55.5)	49.6 (43.1-56.0)
Inadequate Fruit and Vegetable Consumption[12]	79.5 (72.4-85.1)	79.3 (73.7-84.1)
Current Smoker[13]	24.9 (19.4-31.4)	22.4 (18.0-27.5)
Heavy Drinking[14]	7.3 (4.7-11.1)	7.6 (5.1-11.2)
Binge Drinking[15]	21.4 (16.4-27.3)	19.6 (15.5-24.5)
Ever Told High Blood Pressure[16]	21.6 (15.5-29.3)	28.9 (23.2-35.3)
Health Indicators		
General Health, Fair or Poor[17]	16.5 (12.3-21.8)	19.7 (15.7-24.4)
Poor Physical Health on at least 14 Days in the Past Month[18]	9.2 (6.4-13.0)	11.3 (8.5-14.9)
Poor Mental Health on at least 14 Days in the Past Month[19]	10.8 (7.8-14.7)	10.8 (8.1-14.3)
Activity Limitation on at least 14 Days in the Past Month[20]	6.1 (3.9-9.2)	7.2 (4.9-10.5)
No Health Care Coverage (Among 18 – 64 year olds)[21]	19.0 (14.1-25.0)	13.9 (10.3-18.5)
No Personal Health Care Provider[22]	17.4 (12.1-24.4)	18.8 (14.4-24.2)
No Health Care Access During Past 12 Months Due to Cost[23]	16.9 (12.6-22.2)	16.7 (12.9-21.4)
Activity Limitation[24]	16.5 (12.7-21.0)	19.3 (15.6-23.5)
Used Special Equipment[25]	5.6 (3.8-8.3)	7.4 (5.2-10.4)
Rarely/Never Received the Social/Emotional Support Needed[26]	13.8 (8.8-20.8)	13.3 (9.5-18.4)
Dissatisfied or Very Dissatisfied with Life[27]	7.1 (4.6-10.8)	6.6 (4.4-9.7)
Preventive Health Practices		
No Routine Checkup in Past Year[28]	34.5 (28.3-41.2)	31.2 (26.1-36.8)
Cholesterol Ever Checked[29]	75.3 (64.6-83.6)	81.7 (75.8-86.5)
Ever Told High Cholesterol[30]	30.9 (23.5-39.3)	33.2 (27.3-39.6)
Ever Had an HIV Test Among Those Aged 18 – 64 Years[31]	47.4 (40.2-54.8)	45.9 (39.6-52.3)
- Table excludes those with unknown race/ethnicity. * Age-adjusted by direct method using the 2000 U.S. Census.		

Appendix: Definitions

[1] Among all adults, 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.

[2] 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.

[3] Among all adults, the proportion who reported that they still had asthma.

[4] Among all adults, the proportion who had ever been told by a doctor that they had a heart attack or myocardial infarction.

[5] Among all adults, the proportion who had ever been told by a doctor that they had angina or coronary heart disease.

[6] Among all adults, the proportion who had ever been told by a doctor that they had a stroke.

[7] 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.

[8] Among all adults, the proportion who reported ever being told by a health care professional that they had some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. Data for this variable were only collected in 2007 and 2009.

[9] 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. Among all adults, the proportion of respondents whose BMI was greater than or equal to 30.0.

[10] 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.

[11] Among all adults, 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.

[12] Among all adults, the proportion whose total reported consumption of fruits (including juice) and vegetables was less than five times per day.

[13] Among all adults, 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.

[14] Among all adults, 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.

[15] Among all adults, the proportion who reported consuming five or more drinks per occasion at least once in the previous month.

[16] Among all adults, 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. Data for this variable were only collected in 2007 and 2009.

[17] Among all adults, the proportion who reported that their health, in general, was either fair or poor.

[18] 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.

[19] 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.

[20] 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 them from doing their usual activities, such as self-care, work, and recreation.

[21] 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=8,957)

[22] 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.

[23] Among all adults, the proportion who reported that in the past 12 months that there was a time when they could not see a doctor when they needed to due to the cost.

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[24] Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems.

[25] Among all adults, the proportion who 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.

[26] Among all adults, the proportion who reported either "Rarely" or "Never" to the following question: "How often do you get the social and emotional support you need?"

[27] Among all adults, the proportion who reported either "Dissatisfied" or "Very Dissatisfied" to the following question: "In general, how satisfied are you with your life?"

[28] Among all adults, the proportion who reported that they did not have a routine checkup in the past year.

[29] Among all adults, the proportion who reported ever having had their blood cholesterol checked. Data for this variable were only collected in 2007 and 2009.

[30] 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. Data for this variable were only collected in 2007 and 2009.

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

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