

**Preliminary Crude and Age-Adjusted Estimates for Chronic Health
Conditions, Risk Factors, Health Indicators, and Preventive Health
Practices by Expanded Race/Ethnicity**

State of Michigan

**Michigan Behavioral Risk Factor Survey
2008-2010**

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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 BRFSS data contribute to the national [Behavioral Risk Factor Surveillance System](#) that is managed by BSB.

For the 2008 through 2010 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 2008-2010 MiBRFS dataset was equal to 27,242 completed interviews. The 2008-2010 combined dataset included 20,840 White, Non-Hispanics; 4,567 Black, Non-Hispanics; 219 Asian or Other Pacific Islander, Non-Hispanics; 200 American Indian/Alaska Native, Non-Hispanics; 659 Other/Multi-racial, Non-Hispanics, 248 Arab, Non-Hispanics; and 509 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, Blacks and American Indians have similar age distributions
- Asians were much younger with the majority being 44 years of age or younger
- 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.

Key Points

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

Chronic Health Conditions:

- Black, non-Hispanics reported higher prevalence rates of diabetes, lifetime asthma, stroke, overall cardiovascular disease and disability when compared to White, non-Hispanics.
- Asian or Other Pacific Islander, non-Hispanics reported lower prevalence rates of asthma, disability and arthritis when compared to White, non-Hispanics.
- American Indian/Alaskan Native, non-Hispanics reported higher prevalence rates of diabetes, heart attack, coronary heart disease, stroke and overall cardiovascular disease when compared to White, non-Hispanics.
- Other/Multi-racial, non-Hispanics reported higher prevalence rates for all the chronic health conditions except for arthritis when compared to White, non-Hispanics.
- Hispanics reported a higher prevalence rate of diabetes, and a lower prevalence rate of arthritis when compared to White, non-Hispanics.

Health Risk Behaviors:

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

Health Indicators:

- 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.
- American Indian/Alaskan Native, non-Hispanics reported higher prevalence rates of poor general health, poor physical health, activity limitations, special equipment use and inadequate social/emotional support when compared to White, non-Hispanics.
- Other/Multi-racial, non-Hispanics reported higher prevalence rates for all of the health indicators except for no personal health care provider when compared to White, non-Hispanics.
- Arab, non-Hispanics reported higher prevalence rates of cost prevented care and inadequate social/emotional support when compared to White, non-Hispanics.
- Hispanics reported higher prevalence rates of poor general health, no health care coverage, cost prevented care and inadequate social/emotional support when compared to White, non-Hispanics.

Preventive Health Practices:

- Black, non-Hispanics, Other/Multi-racial, non-Hispanics and Hispanics reported a higher HIV testing prevalence rate when compared to White, non-Hispanics.

Preliminary 2008-2010 Michigan BRFSS Results by Race/Ethnicity
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Table 1: Prevalence Estimates among the Overall Michigan Population (N = 27,242)		
Michigan BRFSS (2008-2010 Combined)		
% (95% Confidence Interval)		
Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	9.5 (9.1-9.9)	8.8 (8.5-9.2)
Ever Told Have Asthma ²	15.6 (15.0-16.2)	15.7 (15.0-16.3)
Still Have Asthma ³	10.1 (9.6-10.6)	10.1 (9.5-10.6)
Ever Told Heart Attack ⁴	4.6 (4.3-4.9)	4.3 (4.0-4.5)
Ever Told Angina or Coronary Heart Disease ⁵	4.8 (4.5-5.1)	4.5 (4.2-4.7)
Ever Told Stroke ⁶	2.8 (2.6-3.0)	2.7 (2.5-2.9)
Ever Told Any Cardiovascular Disease ⁷	8.9 (8.6-9.3)	8.4 (8.1-8.7)
Disability ⁸	23.7 (23.0-24.3)	22.7 (22.1-23.4)
Ever Told Arthritis ⁹	31.5 (30.5-32.5)	29.5 (28.7-30.4)
Health Risk Behaviors		
Obese ¹⁰	30.9 (30.1-31.6)	30.7 (28.8-31.5)
No Leisure-Time Physical Activity ¹¹	24.3 (23.6-25.0)	23.9 (23.2-24.7)
Current Smoker ¹²	19.7 (19.0-20.4)	20.1 (19.4-20.8)
Heavy Drinking ¹³	5.4 (5.0-5.8)	5.4 (5.0-5.9)
Binge Drinking ¹⁴	16.6 (15.9-17.3)	17.3 (16.6-18.0)
Health Indicators		
General Health, Fair or Poor ¹⁵	14.6 (14.1-15.2)	14.1 (13.5-14.6)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	10.8 (10.3-11.3)	10.4 (9.9-10.9)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	10.8 (10.3-11.4)	10.9 (10.4-11.5)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	7.0 (6.6-7.4)	6.8 (6.4-7.2)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	15.4 (14.7-16.2)	16.0 (15.2-16.9)
No Personal Health Care Provider ²⁰	12.5 (11.9-13.2)	13.2 (12.5-13.9)
No Health Care Access During Past 12 Months Due to Cost ²¹	13.4 (12.8-14.0)	13.7 (13.0-14.3)
Activity Limitation ²²	21.8 (21.2-22.5)	20.9 (20.3-21.6)
Used Special Equipment ²³	7.9 (7.5-8.2)	7.4 (7.1-7.8)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	7.1 (6.7-7.6)	6.9 (6.5-7.4)
Dissatisfied or Very Dissatisfied with Life ²⁵	6.3 (5.9-6.8)	6.4 (5.9-6.9)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	32.3 (31.5-33.1)	33.3 (32.5-34.2)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	38.0 (37.1-39.0)	39.8 (38.8-40.8)
- Table excludes those with unknown race/ethnicity.		
* Age-adjusted by direct method using the 2000 U.S. Census.		

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Table 2: Prevalence Estimates among White, Non-Hispanics in Michigan (N = 20,840)		
Michigan BRFSS (2008-2010 Combined)		
% (95% Confidence Interval)		
Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	8.6 (8.2-9.0)	7.6 (7.2-8.0)
Ever Told Have Asthma ²	14.7 (14.1-15.4)	15.1 (14.3-15.8)
Still Have Asthma ³	9.6 (9.1-10.2)	9.8 (9.2-10.4)
Ever Told Heart Attack ⁴	4.6 (4.4-4.9)	4.1 (3.8-4.3)
Ever Told Angina or Coronary Heart Disease ⁵	4.9 (4.6-5.2)	4.3 (4.1-4.6)
Ever Told Stroke ⁶	2.6 (2.4-2.9)	2.4 (2.2-2.6)
Ever Told Any Cardiovascular Disease ⁷	8.9 (8.5-9.3)	7.9 (7.5-8.2)
Disability ⁸	23.8 (23.1-24.6)	22.4 (21.7-23.2)
Ever Told Arthritis ⁹	33.2 (32.2-34.3)	29.9 (29.0-30.9)
Health Risk Behaviors		
Obese ¹⁰	29.1 (28.3-30.0)	28.8 (27.9-29.6)
No Leisure-Time Physical Activity ¹¹	23.1 (22.4-23.9)	22.4 (21.6-23.2)
Current Smoker ¹²	18.9 (18.2-19.7)	19.8 (18.9-20.6)
Heavy Drinking ¹³	5.7 (5.2-6.1)	5.8 (5.3-6.3)
Binge Drinking ¹⁴	17.7 (16.9-18.5)	18.9 (18.0-19.8)
Health Indicators		
General Health, Fair or Poor ¹⁵	13.0 (12.4-13.5)	12.2 (11.6-12.8)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	10.4 (9.9-10.9)	9.9 (9.4-10.4)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	10.4 (9.8-10.9)	10.6 (10.0-11.3)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	6.2 (5.9-6.7)	5.9 (5.5-6.3)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	13.6 (12.8-14.4)	14.4 (13.5-15.3)
No Personal Health Care Provider ²⁰	11.1 (10.4-11.7)	12.2 (11.4-12.9)
No Health Care Access During Past 12 Months Due to Cost ²¹	11.3 (10.7-11.9)	11.8 (11.1-12.5)
Activity Limitation ²²	22.1 (21.4-22.8)	20.8 (20.1-21.5)
Used Special Equipment ²³	7.4 (7.0-7.8)	6.7 (6.4-7.1)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	5.7 (5.4-6.1)	5.5 (5.1-5.9)
Dissatisfied or Very Dissatisfied with Life ²⁵	5.4 (5.0-5.8)	5.5 (5.0-6.0)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	33.2 (32.3-34.1)	35.0 (34.1-36.0)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	33.2 (32.2-34.2)	35.2 (34.1-36.3)
- Table excludes those with unknown race/ethnicity.		
* Age-adjusted by direct method using the 2000 U.S. Census.		

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Table 3: Prevalence Estimates among Black, Non-Hispanics in Michigan (N = 4,567)		
Michigan BRFSS (2008-2010 Combined)		
% (95% Confidence Interval)		
Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	13.6 (12.3-15.0)	14.3 (13.1-15.7)
Ever Told Have Asthma ²	18.1 (16.2-20.2)	17.8 (15.9-19.9)
Still Have Asthma ³	11.2 (9.7-13.0)	11.1 (9.5-12.8)
Ever Told Heart Attack ⁴	4.2 (3.6-5.0)	4.5 (3.9-5.3)
Ever Told Angina or Coronary Heart Disease ⁵	3.9 (3.3-4.6)	4.3 (3.7-4.9)
Ever Told Stroke ⁶	4.0 (3.3-4.7)	4.2 (3.6-4.9)
Ever Told Any Cardiovascular Disease ⁷	9.1 (8.1-10.2)	9.8 (8.8-10.8)
Disability ⁸	24.6 (22.7-26.7)	25.2 (23.3-27.2)
Ever Told Arthritis ⁹	28.5 (25.9-31.3)	30.0 (27.8-32.4)
Health Risk Behaviors		
Obese ¹⁰	42.1 (39.5-44.7)	41.9 (39.4-44.4)
No Leisure-Time Physical Activity ¹¹	30.4 (28.2-32.7)	31.0 (28.8-33.2)
Current Smoker ¹²	21.2 (19.3-23.3)	20.8 (18.9-22.9)
Heavy Drinking ¹³	2.9 (2.1-3.9)	2.8 (2.1-3.9)
Binge Drinking ¹⁴	10.6 (9.0-12.5)	10.4 (8.8-12.2)
Health Indicators		
General Health, Fair or Poor ¹⁵	22.1 (20.2-24.1)	22.6 (20.8-24.6)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	11.9 (10.5-13.4)	12.1 (10.8-13.6)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	12.3 (10.8-14.1)	12.3 (10.7-14.0)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	10.1 (8.7-11.6)	10.1 (8.8-11.6)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	21.4 (18.9-24.1)	21.6 (19.2-24.3)
No Personal Health Care Provider ²⁰	17.9 (15.8-20.2)	17.5 (15.5-19.7)
No Health Care Access During Past 12 Months Due to Cost ²¹	19.9 (17.8-22.2)	19.4 (17.4-21.6)
Activity Limitation ²²	22.2 (20.3-24.2)	22.3 (20.5-24.3)
Used Special Equipment ²³	11.1 (9.9-12.3)	11.9 (10.7-13.1)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	11.0 (9.6-12.6)	11.1 (9.7-12.6)
Dissatisfied or Very Dissatisfied with Life ²⁵	10.1 (8.6-11.8)	9.8 (8.3-11.4)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	24.8 (22.5-27.3)	24.3 (22.1-26.7)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	63.6 (60.6-66.4)	64.1 (61.3-66.9)
- Table excludes those with unknown race/ethnicity.		
* Age-adjusted by direct method using the 2000 U.S. Census.		

**Table 4: Prevalence Estimates among Asian or Other Pacific Islander, Non-Hispanics in Michigan
 (N = 219)
 Michigan BRFSS (2008-2010 Combined)
 % (95% Confidence Interval)**

Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	7.7 (4.5-12.7)	10.7 (7.1-15.7)
Ever Told Have Asthma ²	6.6 (3.6-11.7)	6.1 (3.7-10.1)
Still Have Asthma ³	2.8 (1.2-6.4)	3.1 (1.6-6.2)
Ever Told Heart Attack ⁴	2.7 (1.0-6.8)	3.9 (1.8-8.3)
Ever Told Angina or Coronary Heart Disease ⁵	4.4 (2.0-9.4)	7.4 (3.9-13.6)
Ever Told Stroke ⁶	1.1 (0.2-6.0)	0.8 (0.2-3.7)
Ever Told Any Cardiovascular Disease ⁷	6.2 (3.3-11.5)	9.6 (5.7-15.8)
Disability ⁸	5.4 (2.8-10.0)	6.0 (3.4-10.6)
Ever Told Arthritis ⁹	8.8 (4.8-15.5)	15.5 (9.7-23.8)
Health Risk Behaviors		
Obese ¹⁰	7.0 (3.9-12.4)	6.4 (3.7-10.9)
No Leisure-Time Physical Activity ¹¹	20.1 (14.0-27.9)	18.6 (13.4-25.4)
Current Smoker ¹²	8.9 (4.9-15.8)	7.9 (4.5-13.7)
Heavy Drinking ¹³	3.5 (1.3-9.0)	4.0 (1.6-9.8)
Binge Drinking ¹⁴	7.1 (3.5-14.0)	7.0 (3.8-12.8)
Health Indicators		
General Health, Fair or Poor ¹⁵	5.7 (3.3-9.7)	7.0 (4.4-11.2)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	2.0 (0.8-4.9)	1.9 (0.8-4.4)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	5.2 (2.4-10.6)	4.9 (2.5-9.3)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	3.6 (1.5-8.2)	2.8 (1.3-6.0)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	14.7 (9.3-22.5)	14.7 (9.3-22.5)
No Personal Health Care Provider ²⁰	13.1 (8.2-20.2)	11.7 (7.4-17.9)
No Health Care Access During Past 12 Months Due to Cost ²¹	17.1 (11.3-24.9)	14.7 (9.9-21.3)
Activity Limitation ²²	5.3 (2.8-10.0)	6.0 (3.4-10.6)
Used Special Equipment ²³	0.1 (0.0-0.8)	0.2 (0.0-1.7)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	16.6 (11.3-23.6)	20.5 (15.3-26.9)
Dissatisfied or Very Dissatisfied with Life ²⁵	3.1 (1.3-7.2)	2.5 (1.1-5.5)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	39.8 (31.9-48.3)	36.3 (29.4-43.8)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	26.3 (19.4-34.7)	26.0 (19.3-34.0)
- Table excludes those with unknown race/ethnicity. * Age-adjusted by direct method using the 2000 U.S. Census.		

Table 5: Prevalence Estimates among American Indian / Alaskan Native, Non-Hispanics in Michigan (N = 200)		
Michigan BRFSS (2008-2010 Combined)		
% (95% Confidence Interval)		
Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	12.4 (8.4-18.0)	13.0 (9.3-17.7)
Ever Told Have Asthma ²	20.6 (13.0-31.0)	18.6 (12.4-27.1)
Still Have Asthma ³	12.6 (7.4-20.5)	11.3 (7.0-17.8)
Ever Told Heart Attack ⁴	8.7 (5.4-13.7)	8.9 (5.9-13.3)
Ever Told Angina or Coronary Heart Disease ⁵	8.2 (5.0-13.2)	8.1 (5.3-12.0)
Ever Told Stroke ⁶	7.1 (4.1-12.0)	7.4 (4.5-12.0)
Ever Told Any Cardiovascular Disease ⁷	16.2 (11.1-23.0)	17.0 (12.8-22.3)
Disability ⁸	25.9 (18.1-35.4)	25.2 (18.5-33.3)
Ever Told Arthritis ⁹	35.7 (23.9-49.5)	32.1 (21.2-45.3)
Health Risk Behaviors		
Obese ¹⁰	40.3 (29.3-52.4)	40.5 (30.4-51.6)
No Leisure-Time Physical Activity ¹¹	28.3 (19.5-39.2)	27.4 (20.2-36.0)
Current Smoker ¹²	33.0 (23.8-43.7)	31.3 (23.2-40.8)
Heavy Drinking ¹³	5.9 (2.1-15.3)	5.0 (1.9-12.6)
Binge Drinking ¹⁴	14.1 (7.8-24.3)	14.0 (7.7-23.9)
Health Indicators		
General Health, Fair or Poor ¹⁵	27.3 (19.1-37.5)	27.0 (20.1-35.3)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	20.5 (13.3-30.1)	20.2 (13.8-28.5)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	12.2 (7.0-20.2)	11.0 (6.6-17.8)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	10.3 (6.5-16.1)	10.7 (6.9-16.3)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	23.1 (13.8-36.2)	23.9 (14.3-37.1)
No Personal Health Care Provider ²⁰	18.1 (10.6-29.1)	16.3 (10.2-25.1)
No Health Care Access During Past 12 Months Due to Cost ²¹	18.5 (12.1-27.3)	18.0 (12.1-26.0)
Activity Limitation ²²	25.1 (17.4-34.7)	24.6 (17.9-32.8)
Used Special Equipment ²³	10.6 (6.9-16.0)	10.8 (7.2-15.9)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	8.7 (5.2-14.1)	10.0 (6.3-15.6)
Dissatisfied or Very Dissatisfied with Life ²⁵	4.3 (2.1-8.9)	4.5 (2.2-9.2)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	31.9 (21.9-44.0)	29.9 (23.4-37.2)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	43.1 (31.9-55.1)	44.9 (33.5-56.8)
- Table excludes those with unknown race/ethnicity.		
* Age-adjusted by direct method using the 2000 U.S. Census.		

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Table 6: Prevalence Estimates among Other/Multi-Racial, Non-Hispanics in Michigan (N = 659)		
Michigan BRFSS (2008-2010 Combined)		
% (95% Confidence Interval)		
Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	14.5 (11.5-18.2)	15.6 (12.6-19.0)
Ever Told Have Asthma ²	30.9 (25.7-36.6)	30.5 (25.5-36.1)
Still Have Asthma ³	21.4 (17.1-26.5)	21.0 (16.9-17.8)
Ever Told Heart Attack ⁴	5.6 (4.0-7.7)	6.0 (4.4-8.1)
Ever Told Angina or Coronary Heart Disease ⁵	5.6 (4.2-7.5)	6.3 (4.8-8.3)
Ever Told Stroke ⁶	4.9 (3.4-7.1)	5.4 (3.7-7.6)
Ever Told Any Cardiovascular Disease ⁷	11.9 (9.5-15.0)	13.0 (10.8-15.7)
Disability ⁸	33.4 (28.6-38.6)	34.3 (29.9-39.0)
Ever Told Arthritis ⁹	33.0 (25.9-41.1)	35.2 (28.3-42.8)
Health Risk Behaviors		
Obese ¹⁰	35.6 (30.4-41.1)	37.2 (32.2-42.6)
No Leisure-Time Physical Activity ¹¹	26.0 (21.7-30.9)	26.1 (22.0-30.7)
Current Smoker ¹²	31.1 (25.9-36.7)	30.5 (25.6-35.9)
Heavy Drinking ¹³	7.4 (4.6-11.6)	7.7 (4.9-12.0)
Binge Drinking ¹⁴	18.6 (14.5-23.6)	18.0 (14.1-22.7)
Health Indicators		
General Health, Fair or Poor ¹⁵	23.3 (19.2-28.0)	23.6 (19.6-28.1)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	16.7 (13.4-20.5)	16.3 (13.2-20.1)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	17.7 (14.0-22.1)	17.5 (13.8-21.8)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	12.2 (9.2-16.0)	12.5 (9.4-16.4)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	20.0 (15.2-25.9)	20.6 (15.7-26.6)
No Personal Health Care Provider ²⁰	17.5 (12.8-23.6)	16.4 (12.2-21.7)
No Health Care Access During Past 12 Months Due to Cost ²¹	24.9 (20.1-30.4)	24.0 (19.4-29.2)
Activity Limitation ²²	29.9 (25.4-34.8)	30.7 (26.5-35.1)
Used Special Equipment ²³	12.1 (9.5-15.4)	12.3 (9.8-15.3)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	9.6 (6.9-13.3)	9.3 (6.7-12.7)
Dissatisfied or Very Dissatisfied with Life ²⁵	14.4 (10.2-20.0)	14.6 (10.4-20.1)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	33.5 (28.0-39.5)	33.8 (28.7-39.3)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	51.9 (45.0-58.8)	53.9 (47.3-60.4)
- 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 = 248)		
Michigan BRFSS (2008-2010 Combined)		
% (95% Confidence Interval)		
Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	8.0 (4.0-15.2)	10.4 (6.6-16.1)
Ever Told Have Asthma ²	14.8 (9.4-22.5)	14.9 (10.3-21.1)
Still Have Asthma ³	6.3 (3.5-11.0)	6.8 (4.2-10.8)
Ever Told Heart Attack ⁴	3.0 (1.6-5.6)	5.8 (3.4-9.7)
Ever Told Angina or Coronary Heart Disease ⁵	2.1 (1.1-4.1)	4.1 (2.3-7.2)
Ever Told Stroke ⁶	0.6 (0.2-2.0)	1.1 (0.3-3.8)
Ever Told Any Cardiovascular Disease ⁷	4.7 (2.8-7.6)	8.9 (6.0-13.0)
Disability ⁸	4.7 (9.6-21.7)	20.3 (15.1-26.8)
Ever Told Arthritis ⁹	16.2 (10.3-24.6)	24.7 (18.7-31.8)
Health Risk Behaviors		
Obese ¹⁰	26.2 (19.0-35.0)	30.9 (24.5-38.1)
No Leisure-Time Physical Activity ¹¹	25.0 (17.9-33.8)	26.9 (20.8-34.0)
Current Smoker ¹²	15.8 (11.0-22.2)	17.8 (13.1-23.7)
Heavy Drinking ¹³	4.9 (2.0-11.4)	4.3 (2.0-9.1)
Binge Drinking ¹⁴	15.2 (10.0-22.5)	13.8 (9.4-19.7)
Health Indicators		
General Health, Fair or Poor ¹⁵	9.2 (6.2-13.4)	13.2 (9.6-18.0)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	14.0 (8.2-22.7)	14.1 (9.5-20.4)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	10.2 (5.8-17.4)	8.9 (5.7-13.8)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	9.9 (5.0-18.9)	10.1 (6.0-16.3)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	21.6 (14.3-31.3)	18.2 (12.8-25.3)
No Personal Health Care Provider ²⁰	15.7 (10.0-24.0)	13.9 (9.4-20.1)
No Health Care Access During Past 12 Months Due to Cost ²¹	26.0 (18.9-34.6)	25.1 (19.5-31.6)
Activity Limitation ²²	13.9 (9.0-20.9)	19.7 (14.5-26.2)
Used Special Equipment ²³	2.6 (1.3-5.2)	4.0 (2.3-6.9)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	12.1 (6.7-21.0)	10.8 (7.1-16.1)
Dissatisfied or Very Dissatisfied with Life ²⁵	9.1 (4.6-17.3)	8.0 (4.9-12.8)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	35.5 (27.2-44.6)	32.0 (25.7-39.0)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	31.6 (23.8-40.6)	35.9 (28.4-44.1)
- Table excludes those with unknown race/ethnicity.		
* Age-adjusted by direct method using the 2000 U.S. Census.		

Table 8: Prevalence Estimates among Hispanics in Michigan (N = 509)		
Michigan BRFSS (2008-2010 Combined)		
% (95% Confidence Interval)		
Chronic Health Conditions	Crude	Age-Adjusted*
Ever Told Diabetes ¹	10.1 (7.5-13.6)	13.0 (10.1-16.7)
Ever Told Have Asthma ²	15.6 (11.7-20.2)	15.4 (12.0-19.6)
Still Have Asthma ³	10.4 (7.4-14.4)	10.6 (7.8-14.2)
Ever Told Heart Attack ⁴	3.0 (1.8-4.9)	5.1 (3.3-7.7)
Ever Told Angina or Coronary Heart Disease ⁵	3.9 (2.3-6.5)	6.7 (4.3-10.2)
Ever Told Stroke ⁶	1.3 (0.7-2.4)	2.0 (1.1-3.5)
Ever Told Any Cardiovascular Disease ⁷	6.1 (4.2-9.0)	9.9 (7.2-13.4)
Disability ⁸	16.2 (12.8-20.4)	20.1 (16.5-24.2)
Ever Told Arthritis ⁹	15.9 (11.6-21.4)	21.1 (16.6-26.5)
Health Risk Behaviors		
Obese ¹⁰	34.2 (28.2-40.8)	33.8 (28.6-39.5)
No Leisure-Time Physical Activity ¹¹	26.2 (20.8-32.4)	27.2 (22.5-32.5)
Current Smoker ¹²	24.6 (19.5-30.5)	22.6 (18.4-27.5)
Heavy Drinking ¹³	7.3 (4.7-11.1)	7.4 (5.0-10.9)
Binge Drinking ¹⁴	20.3 (15.8-25.6)	19.1 (15.3-23.6)
Health Indicators		
General Health, Fair or Poor ¹⁵	16.7 (12.9-21.2)	20.0 (16.3-24.4)
Poor Physical Health on at least 14 Days in the Past Month ¹⁶	9.1 (6.5-12.8)	10.6 (7.9-14.0)
Poor Mental Health on at least 14 Days in the Past Month ¹⁷	12.4 (9.1-16.8)	12.0 (9.0-15.8)
Activity Limitation on at least 14 Days in the Past Month ¹⁸	7.5 (5.1-10.9)	8.2 (5.8-11.4)
No Health Care Coverage (Among 18 – 64 year olds) ¹⁹	24.3 (18.8-30.7)	23.7 (18.7-29.5)
No Personal Health Care Provider ²⁰	18.2 (13.1-24.8)	15.2 (11.3-20.0)
No Health Care Access During Past 12 Months Due to Cost ²¹	18.4 (14.2-23.6)	17.7 (13.9-22.1)
Activity Limitation ²²	14.9 (11.6-18.9)	18.0 (14.5-22.0)
Used Special Equipment ²³	6.2 (4.3-8.8)	7.9 (5.8-10.8)
Rarely/Never Received the Social/Emotional Support Needed ²⁴	14.0 (9.2-20.7)	13.8 (10.1-18.6)
Dissatisfied or Very Dissatisfied with Life ²⁵	8.5 (5.6-12.7)	7.6 (5.2-11.1)
Preventive Health Practices		
No Routine Checkup in Past Year ²⁶	35.3 (29.3-41.9)	32.7 (27.6-38.2)
Ever Had an HIV Test Among Those Aged 18 – 64 Years ²⁷	45.3 (38.4-52.4)	44.1 (38.3-50.1)
- 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 Among all adults, the proportion who had ever been told by a doctor that they had a heart attack, coronary heart disease or a stroke.
- ⁸ 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.
- ⁹ 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 2009 and 2010.
- ¹⁰ 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.
- ¹¹ 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.
- ¹² 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.
- ¹³ 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.
- ¹⁴ Among all adults, the proportion who reported consuming five or more drinks per occasion at least once in the previous month.
- ¹⁵ Among all adults, the proportion who reported that their health, in general, was either fair or poor.
- ¹⁶ 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.
- ¹⁷ 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.
- ¹⁸ 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.
- ¹⁹ 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.
- ²⁰ 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.
- ²¹ 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.
- ²² Among all adults, the proportion who reported being limited in any activities because of physical, mental, or emotional problems.
- ²³ 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.
- ²⁴ 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?"
- ²⁵ 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?"

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- ²⁶ Among all adults, the proportion who reported that they did not have a routine checkup in the past year.
- ²⁷ 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. Note: "Don't know" was considered a valid response.