

# Community Health Indicators in the North Central Council Region

---

March 2008

***Prepared for***  
North Central Council of the  
Michigan Health and Hospital Association  
Petoskey, Michigan

***Prepared by***  
Public Sector Consultants Inc  
Lansing, Michigan  
[www.pscinc.com](http://www.pscinc.com)



# Introduction

---

The North Central Council of the Michigan Health and Hospital Association (NCCMHA) covers a 21-county region in the northern lower peninsula of the state. In 1995 and again in 2000, the council commissioned a comprehensive survey of the region's adult residents to assess the overall health status of the region and identify priorities for action and intervention. Using data from the 2006 Michigan Behavioral Risk Factor Survey (BRFS), this report updates several health indicators measured in the 1995 and/or 2000 assessments with additional trend information, and provides baseline data for others. Members of the Let's Get Moving Northern Michigan Committee selected the indicators for inclusion in this report based on their broad implications for the health of the community.

This report compares 2006 Michigan BRFS estimates of health indicators in the North Central Council region to regional estimates from the 1995 and 2000 surveys and to 2006 estimates for the entire state and the United States, where available. Some questions asked in the 1995 NCC community health assessment survey were not asked in 2000, and vice versa. In these cases, chart comparisons are made only among available data. If a similar, yet different, question was asked, those findings are noted in the text.

More than 6,000 adults were surveyed for each of the community health assessments conducted by the North Central Council in 1995 and 2000. The number of adults in the North Central Council region who responded to the Michigan BRFS was considerably smaller—only 420. While this provides a large enough sample size to generalize to the entire population of the region, it creates a wide confidence interval. The confidence intervals in this report represent a confidence level of 95 percent; that is, we are 95 percent confident that the true estimate lies between the upper and lower bounds of the interval. The charts use I-bars to show where the upper and lower bounds of the confidence intervals fall for the 1995, 2000, and 2006 North Central Council estimates and the 2006 Michigan estimates to enable more accurate trend analysis and comparison among estimates for the region, state, and country. National data is reported as a median rather than a mean, so a confidence interval does not exist.

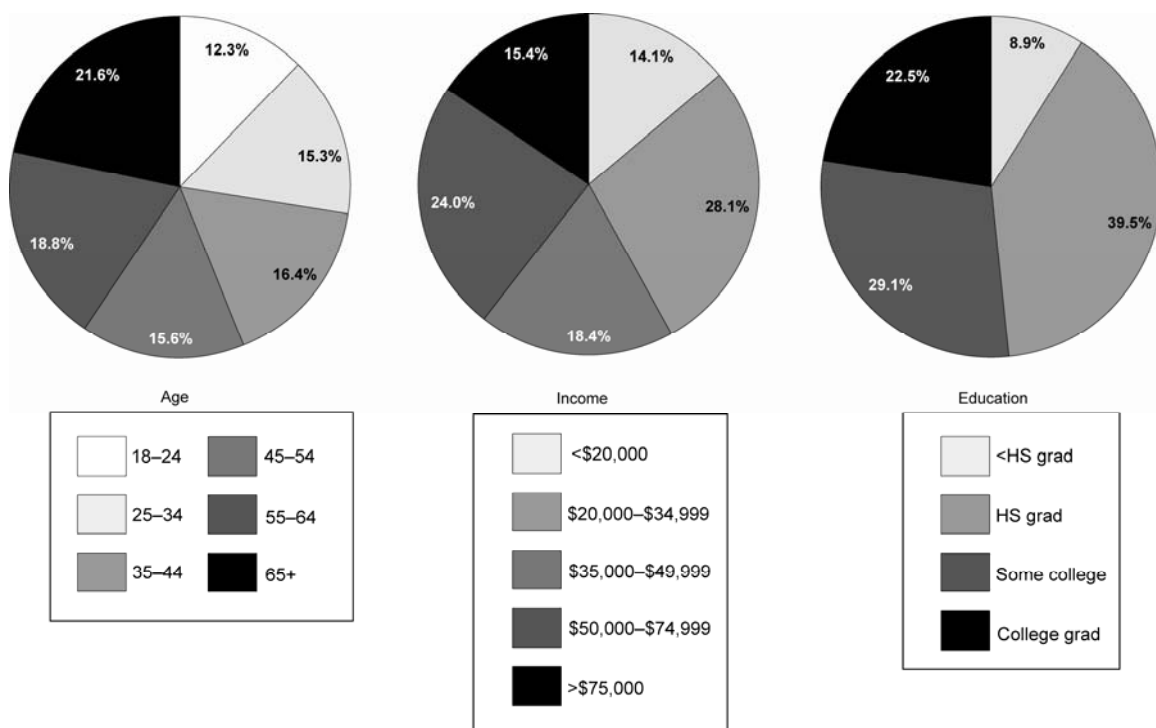
# Indicators

## DEMOGRAPHICS OF SURVEY RESPONDENTS

Approximately 53 percent of adults in the region who responded to the Michigan BRFs are female and 47 percent are male. Respondents are predominantly white (approximately 95 percent). The age of respondents in the North Central Council region is fairly evenly distributed, with approximately 30 percent aged 18–34, 30 percent aged 35–54, another 30 percent aged 55–74, and about 10 percent aged 75 and older. Approximately two-fifths of respondents in the region live in households with annual incomes less than \$35,000. Another two-fifths live in households with incomes between \$35,000 and \$75,000. About 15 percent of respondents in the region have household incomes of \$75,000 or more. More than half of the respondents have either some college education (approximately 29 percent) or have graduated from college (about 23 percent). Approximately 9 percent have less than a 12<sup>th</sup> grade education.

### EXHIBIT 1

Age, Income, and Education of Respondents to the Michigan BRFs in the North Central Council Region, 2006



SOURCE: 2006 Michigan Behavioral Risk Factor Survey, MDCH.

## HEALTH-RELATED QUALITY OF LIFE

Quality of life and sense of well-being are affected by individual perceptions of physical and mental health status. And health status is, in turn, affected by social, economic, health care, and natural environments.

Perceived physical and mental health affects the ability to engage in daily activities, such as self-care, work, or recreation. People who feel good about their physical and mental health are likely to be actively involved in their family and community, while poor physical or mental health may be severe enough to restrict normal activity.

### **General Health Status**

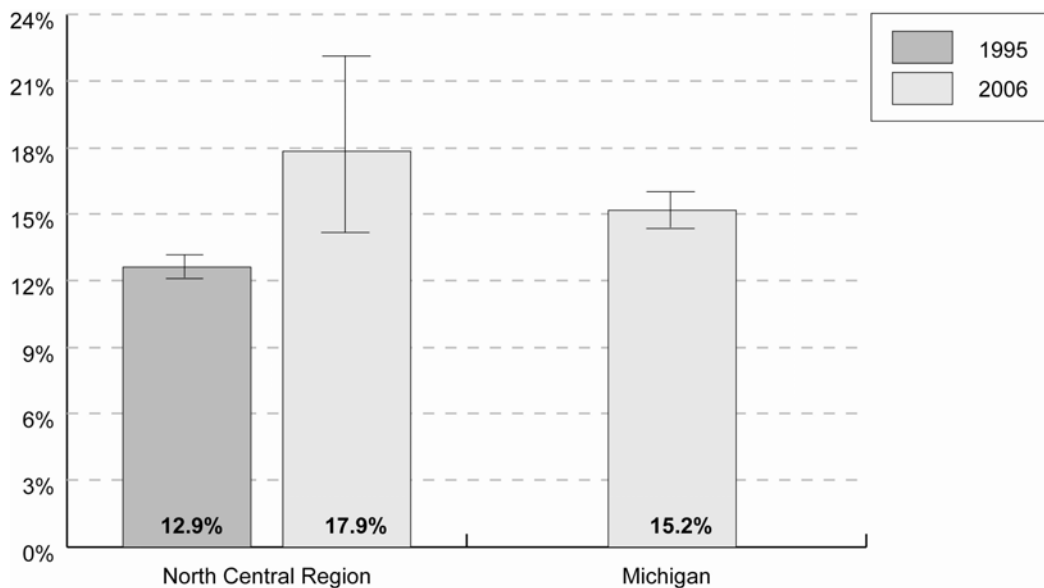
Nearly 18 percent of adults in the North Central Council region who responded to the 2006 Michigan BRFS rated their general health status as either fair or poor. About 15 percent of adults in the entire state rated their general health status as either fair or poor. In 1995, 12.9 percent of adults in the North Central Council region reported that their general health status was either fair or poor.

In the 2000 NCC community health assessment, respondents were not asked about their general health status, but instead were asked to rate their overall physical health and to rate their overall mental health. Fifteen percent of respondents rated their overall physical health as either fair or poor; 10 percent of respondents rated their overall mental health as either fair or poor.

---

**EXHIBIT 2**  
Percentage of Adults Who Report Fair or Poor General Health Status

---



SOURCES: 1995 *Northern Michigan Community Health Assessment Survey*, NCCMHA; 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---

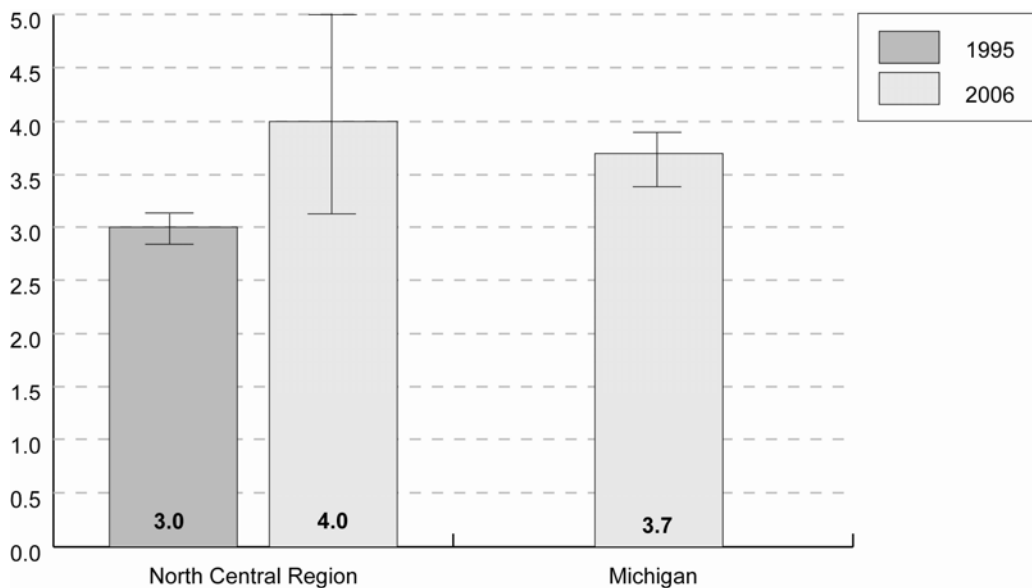
### **Poor Physical Health Days**

On average, adults in the North Central Council region who responded to the 2006 Michigan BRFSS reported that on four days of the past month, their physical health, including illness and injury, was not good. This is similar to the average number of days on which adults in the entire state rated their overall physical health as not good (3.7 days). The same question was asked of respondents to the 1995 NCC community health assessment, where respondents reported, on average, that their physical health was not good on three days of the past month. This question was not asked in the 2000 NCC community health assessment.

---

**EXHIBIT 3**  
Mean Number of Poor Physical Health Days in the Past Month

---



SOURCES: 1995 Northern Michigan Community Health Assessment Survey, NCCMHA; 2006 Michigan Behavioral Risk Factor Survey, MDCH.

---

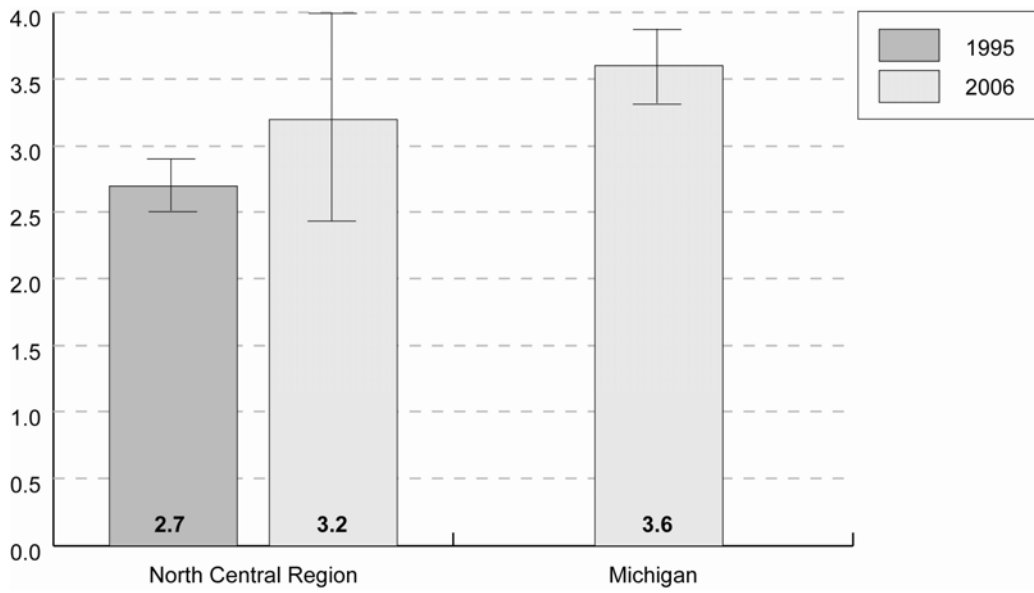
### **Poor Mental Health Days**

On average, adults in the North Central Council region who responded to the 2006 Michigan BRFSS reported that on 3.2 days of the past month their mental health, including stress, depression, and problems with emotions, was not good. This is similar to the average number of days on which adults in the entire state said their mental health was not good (3.6 days). The same question was asked of respondents to the 1995 NCC community health assessment, where respondents reported, on average, that their mental health was not good on 2.7 days of the past month. This question was not asked in the 2000 NCC community health assessment.

---

**EXHIBIT 4**  
Mean Number of Poor Mental Health Days in the Past Month

---



SOURCES: 1995 *Northern Michigan Community Health Assessment Survey*, NCCMHA; 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---

## DIABETES

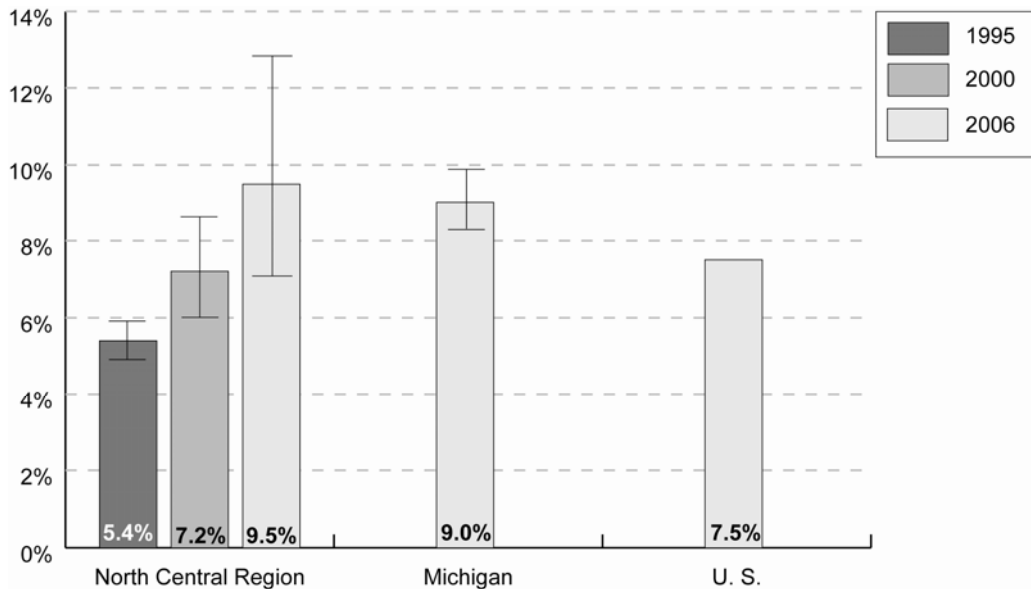
There are two major types of diabetes: type 1, occurring mainly in children and adolescents 18 years and younger, in which the body does not produce insulin and thus insulin administration is required to sustain life; and type 2, occurring usually in adults over 30 years of age, in which the body's tissues become unable to use its own limited amount of insulin effectively. Over the past decade, diabetes has remained the seventh leading cause of death in the United States, mainly from diabetes-associated cardiovascular disease. Diabetes is also the leading cause of non-traumatic amputations, blindness among working-aged adults, and end-stage renal disease. The occurrence of diabetes, especially type 2 diabetes, as well as associated complications, is increasing in the United States. Several factors account for this chronic disease epidemic, including behavioral elements (improper nutrition, decreased physical activity, and obesity) and demographic changes (an aging population and increased growth of at-risk populations).

According to the 2006 Michigan Behavioral Risk Factor Survey, approximately 9.5 percent of adults in the North Central Council region report ever having been told by a doctor that they have diabetes. A similar percentage of adults in Michigan report ever having been told they have diabetes (9.0 percent), while a smaller percentage of adults in the United States report the same thing (7.5 percent). The percentage of adults with diabetes in the North Central Council region has been increasing since 1995, when 5.4 percent of adults reported having ever been told they had diabetes.

---

**EXHIBIT 5**  
Percentage of Adults with Diabetes

---



SOURCES: 1995 and 2000 *Northern Michigan Community Health Assessment Survey*, NCCMHA; 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---

## ASTHMA

Asthma is a chronic respiratory disease that often requires limits to be placed on activity; it may require hospitalization, and can even cause death. Asthma attacks can be triggered by a variety of factors, such as cold air, allergens, irritants, and respiratory viral infections. Allergies, a family history of asthma or allergy, low birth weight, and exposure to tobacco smoke are just a few potential risk factors that are associated with the development of asthma.

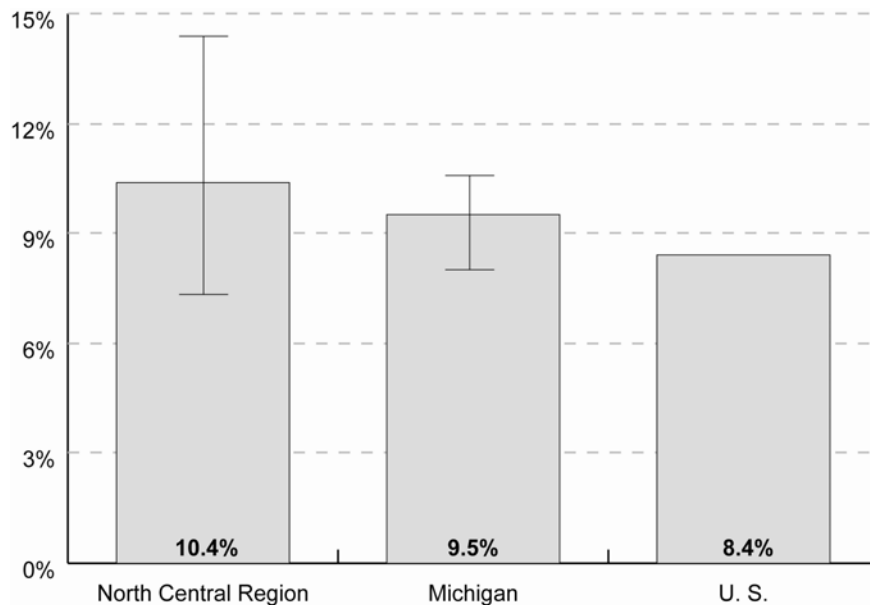
Effective management of asthma—controlling exposure to factors that trigger asthma episodes, adequately managing asthma with medicine, monitoring the disease by using objective measures of lung function, and educating asthma patients to become partners in their own care—is necessary to interrupt the progression of the disease and improve the quality of life for individuals with asthma.

According to the 2006 Michigan BRFSS, 10.4 percent of adults in the North Central Council region reported currently having asthma. While this is higher than the percentage of adults with asthma in both the state (9.5 percent) and the U.S. (8.4 percent), the difference is not significant because the percentages for each fall within the margin of error for the region.

---

**EXHIBIT 6**  
Percentage of Adults with Asthma, 2006

---



SOURCE: 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---

## CORONARY HEART DISEASE

Coronary heart disease (CHD), which can lead to heart attack, is the most common form of heart disease in the United States. Heart disease is the leading cause of death in the United States and is a leading cause of disability. Nearly 30 percent of all deaths in the United States each year can be attributed to heart disease. CHD occurs when the coronary arteries that supply blood to the heart narrow and become hardened due to the buildup of plaque. Plaque in the arteries is a mixture of fatty substances, including cholesterol and other lipids. Angina, the most common symptom of CHD, is chest pain or discomfort that occurs when the heart is not getting enough blood.

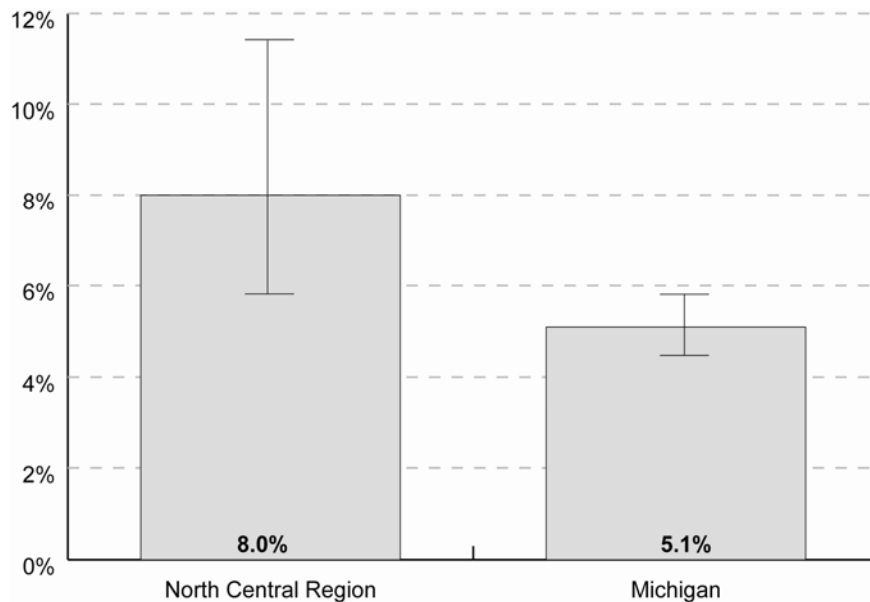
In 2006, 8 percent of adults in the North Central Council region report having ever been told by a doctor that they have angina or coronary heart disease. This is higher than the percentage of adults in the state who have been told they have angina or CHD (5.1 percent).

---

### EXHIBIT 7

Percentage of Adults with Angina or Coronary Heart Disease, 2006

---



SOURCE: 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

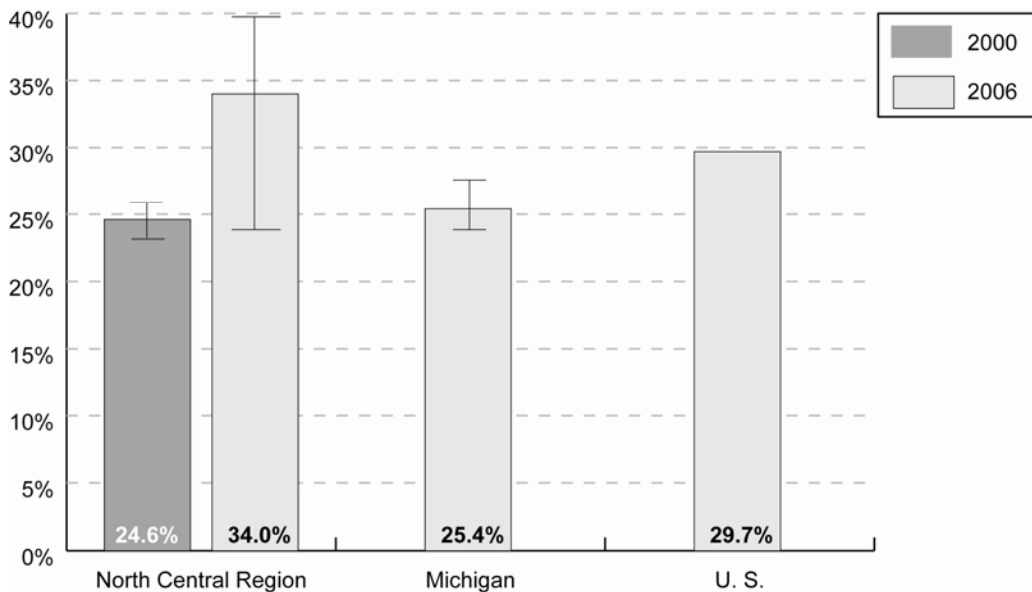
---

## ORAL HEALTH

Good oral health includes a mouth free from tooth decay and gum disease as well as chronic oral pain, oral cancer, and other conditions affecting the mouth and throat. Good oral health supports basic life functions including chewing, swallowing, and speaking. Poor oral health can lead to inadequate nutrition and, when tooth decay is obvious, can affect an individual's ability to obtain employment. Recent evidence has illustrated the importance of oral health to the health of the rest of the body, suggesting that gum disease can increase the risk of heart disease and put pregnant women at greater risk for premature delivery. Routine visits to the dentist can help detect changes in the mouth that are often the first signs of problems elsewhere in the body, such as infectious diseases, immune disorders, nutritional deficiencies, and cancer.

Data from the 2006 Michigan BRFSS tell us that approximately one-third (34 percent) of adults in the North Central Council region did not visit the dentist in the past year. This is higher than the percentage of adults in either Michigan or the U.S. who did not visit the dentist in the past year (25.4 percent and 29.7 percent, respectively); however, the percentages for each fall within the margin of error for the region. In 2000, only about one-quarter of adults in the North Central Council region reported not visiting the dentist in the past year. The 1995 NCC community health assessment did not ask respondents about dental visits.

**EXHIBIT 8**  
Percentage of Adults without a Dental Visit in the Past Year



SOURCES: 2000 *Northern Michigan Community Health Assessment Survey*, NCCMHA; 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

## COLORECTAL CANCER SCREENING

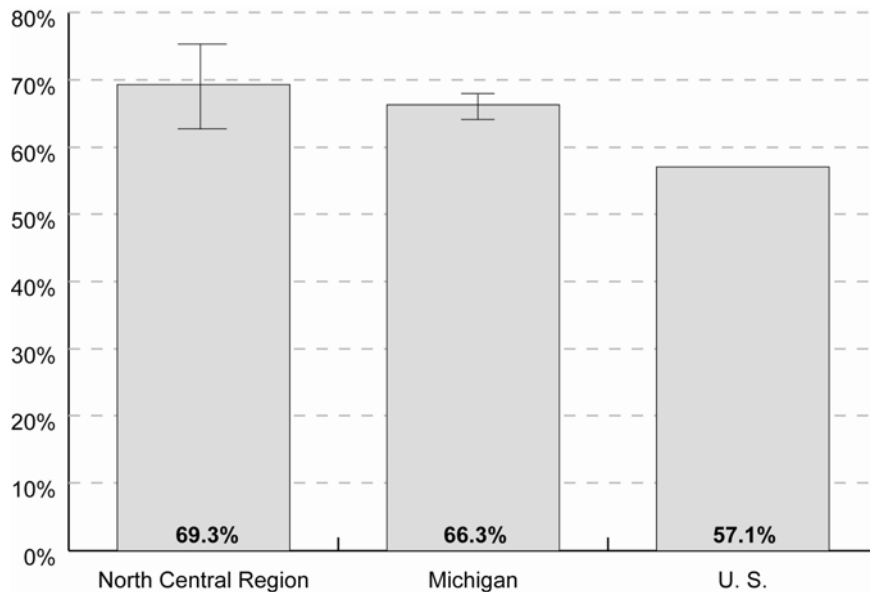
Colorectal cancer is cancer that develops in the colon or the rectum, and is most prevalent among older adults. Not including skin cancers, colorectal cancer is the third most common cancer diagnosed in adults in the United States. Colorectal cancer, which most often develops from pre-cancerous polyps that form in the colon or rectum, generally develops slowly, over a period of several years. People with colon cancer experience few, if any, symptoms before the cancer reaches an advanced stage. Screening for colorectal cancer increases the chance that a pre-cancerous polyp will be detected and removed before cancer develops or that cancer will be found at an early stage, when treatment works best.

According to the 2006 Michigan Behavioral Risk Factor Survey, nearly 70 percent of adults in the North Central Council region have ever had a sigmoidoscopy or colonoscopy. This is similar to the percentage of adults in the state (66.3 percent) and significantly higher than the percentage of adults in the U.S. (57.1 percent) who report having ever had either of these screening tests.

---

**EXHIBIT 9**  
Percentage of Adults over Age 50 Who Have Ever Had a  
Sigmoidoscopy or Colonoscopy, 2006

---



SOURCE: 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---

## CIGARETTE USE

The harmful effects of tobacco smoke have been well documented, yet tobacco use remains the leading preventable cause of disease and death in the United States. Smoking contributes to the development of many kinds of chronic conditions, including cancers, respiratory diseases, and cardiovascular diseases.

Smoking during pregnancy has negative effects on infant birth weight and increases the chances of premature rupture of the membranes, placenta previa, and preterm delivery. The risk for infant mortality, particularly sudden infant death syndrome (SIDS), also increases for infants whose mothers smoked during pregnancy.

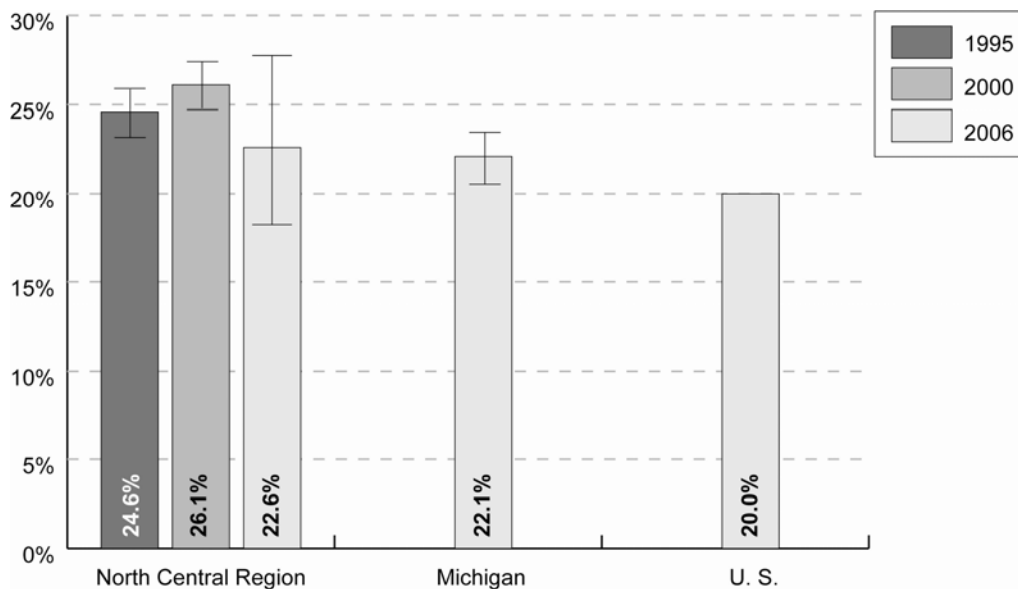
Secondhand smoke is a mixture of the smoke given off by the burning end of a cigarette, pipe, or cigar and the smoke exhaled by smokers. Over the past two decades, evidence has shown that people suffer many of the diseases of active smoking when they breathe secondhand smoke.

According to the 2006 Michigan BRFSS, 22.6 percent of adults in the North Central Council region are current smokers. A similar percentage of adults in the state are current smokers (22.1 percent). The region and state rates are slightly higher than the percentage of current smokers in the U.S. (20 percent), although that falls within the margin of error for the region. The percentage of smokers in the region appears to be lower than it was in 1995 and 2000, although those rates also fall within the margin of error for the region in 2006.

---

**EXHIBIT 10**  
Percentage of Adults Who Are Current Smokers

---



SOURCES: 1995 and 2000 *Northern Michigan Community Health Assessment Survey*, NCCMHA; 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---

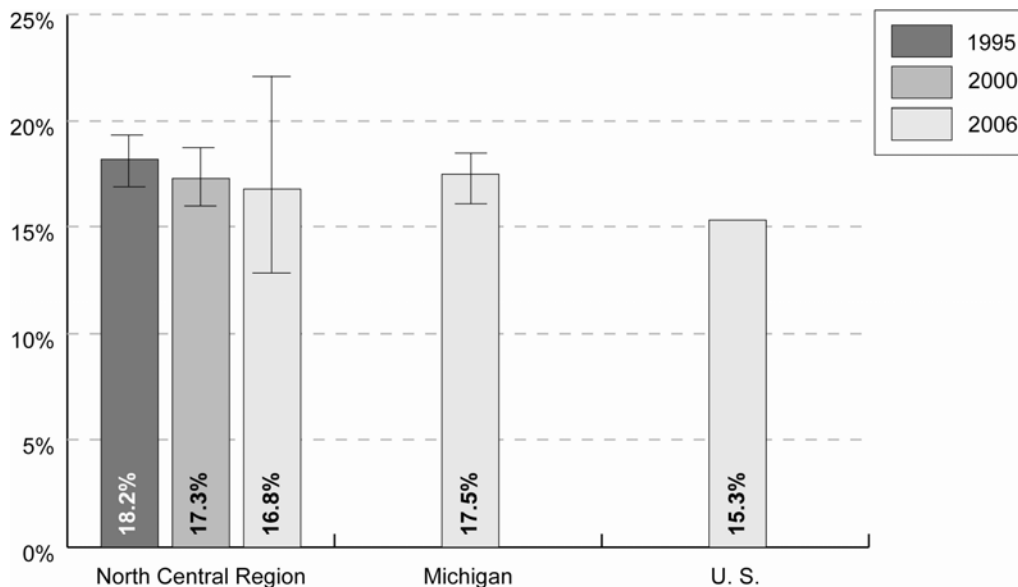
## ALCOHOL CONSUMPTION

Alcohol abuse is linked with serious health conditions such as cirrhosis of the liver, high blood pressure, stroke, and some types of cancer, as well as injuries and deaths from traffic crashes, falls, fires, and drowning. It is also a factor in homicide, suicide, domestic violence, and child abuse.

Binge drinking is defined as women having four or more drinks of alcohol and men having five or more drinks of alcohol on a single occasion. Binge drinking results in high blood alcohol levels, which can cause blackouts and even death. Binge drinking also increases the likelihood of other risky behaviors, such as unsafe sex, driving under the influence, and use of illicit drugs. Long-term heavy drinking increases risk for high blood pressure, heart rhythm irregularities, stroke, cirrhosis and other liver disorders, and certain forms of cancer.

Nearly 17 percent of adults in the North Central Council region report binge drinking in the past 30 days. This is similar to both the state and national rates of binge drinking among adults (17.5 percent and 15.3 percent, respectively).

**EXHIBIT 11**  
Percentage of Adults Who Report Binge Drinking in the Past 30 Days



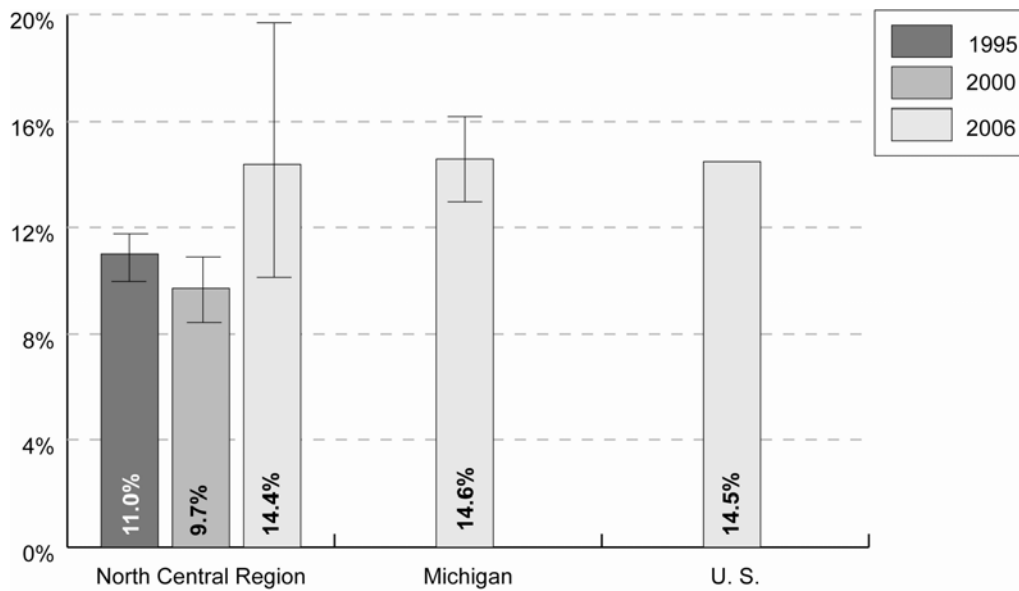
SOURCES: 1995 and 2000 *Northern Michigan Community Health Assessment Survey, NCCMHA*; 2006 *Michigan Behavioral Risk Factor Survey, MDCH*.

## ACCESS TO HEALTH CARE

People who do not have health care coverage are less likely to access health care services, including preventive care, and are more likely to delay getting needed medical attention. Behavioral Risk Factor Survey data for Michigan show that people who do not have health care coverage are more likely to have other health risk factors, such as current cigarette smoking and lack of physical activity.

According to the 2006 Michigan Behavioral Risk Factor Survey, approximately 14 percent of adults aged 18 to 64 in the North Central Council region do not have health insurance. Similar percentages of adults are uninsured in the state and the nation. The percentage of people who are uninsured appears to have increased significantly since 2000. Caution must be used, however, in interpreting the difference because the 1995 and 2000 percentages for the region include adults aged 65 and over, the vast majority of whom have coverage through Medicare.

**EXHIBIT 12**  
Percentage of Adults without Health Insurance



SOURCES: 1995 and 2000 Northern Michigan Community Health Assessment Survey, NCCMHA; 2006 Michigan Behavioral Risk Factor Survey, MDCH.

NOTE: The 2006 percentages for the North Central Region and for Michigan are based on the population aged 18 to 64. All other percentages are based on the entire adult population.

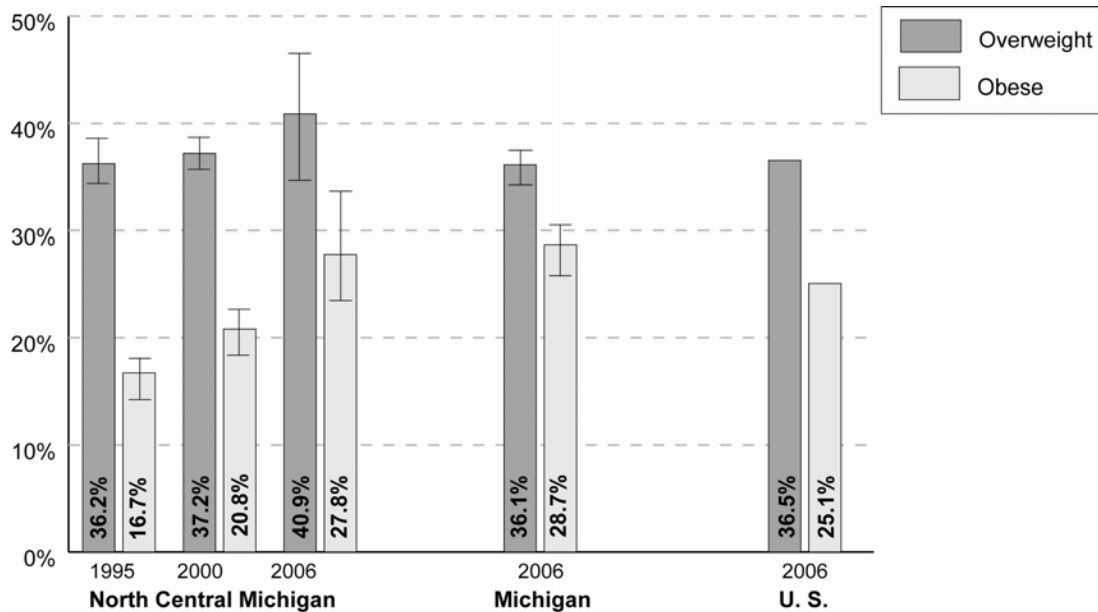
## WEIGHT STATUS

Overweight is defined as having a body mass index (BMI) between 25.0 and 29.9. An obese weight status is a BMI greater than or equal to 30.0. The body mass index is defined as weight in kilograms divided by height in meters squared. This is calculated for the self-reported height and weight measurements of adults responding to the Behavioral Risk Factor Survey.

Overweight and obesity are major contributors to many preventable causes of death. On average, higher body weights are associated with higher death rates. Overweight and obesity substantially raise the risk of illness from high blood pressure; high cholesterol; Type 2 diabetes; heart disease and stroke; gallbladder disease; arthritis; sleep disturbances and problems breathing; and endometrial, breast, prostate, and colon cancers.

According to the 2006 Michigan BRFS, approximately 40.9 percent of northern Michigan adults are overweight and another 27.8 percent are obese. The percentage of overweight adults appears higher in the North Central Council region than in the state (36.1 percent) and the nation (36.5 percent) although it is not statistically different from either. The percentage of obese adults in the region is similar to those in the state (28.7 percent) and the nation (25.1 percent). The percentage of overweight adults in the region in 2006 is not statistically different from the rates of overweight found in 1995 or 2000; however, the increase in the percentage of obese adults since 1995 and 2000 is statistically significant.

**EXHIBIT 13**  
Percentage of Adults Who Are Overweight or Obese



SOURCES: 1995 and 2000 *Northern Michigan Community Health Assessment Survey*, NCCMHA; 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

## PHYSICAL ACTIVITY

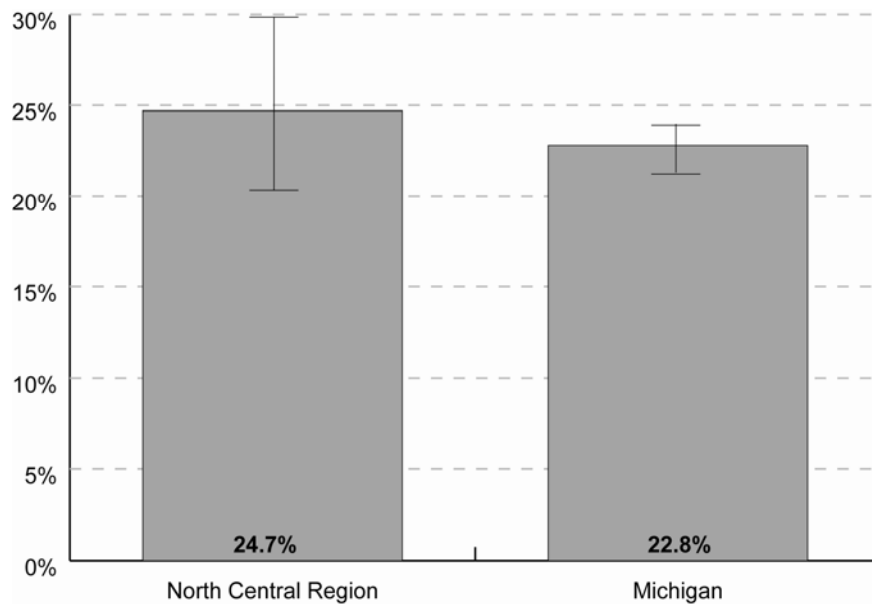
Regular physical activity reduces the risk of dying of coronary heart disease, the nation's leading cause of death, and also decreases the risk for stroke, colon cancer, diabetes, and high blood pressure. Keeping physically active helps control weight; contributes to healthy bones, muscles, and joints; reduces symptoms of anxiety and depression; and is associated with fewer hospitalizations, physician visits, and medications. The U.S. Centers for Disease Control and Prevention recommends that all adults engage in moderate-intensity physical activity, such as brisk walking, for at least 30 minutes on five or more days of the week, or vigorous-intensity physical activity on three or more days of the week for 20 or more minutes.

Data from the 2006 Michigan BRFSS show that approximately one-quarter of adults in the North Central Council region report not getting any leisure-time physical activity in the past month. A similar percentage of adults in the state (22.8 percent) has been sedentary for the past month.

---

**EXHIBIT 14**  
Percentage of Adults Reporting No Leisure-time Physical Activity

---



SOURCE: 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---

## SOCIAL AND EMOTIONAL SUPPORT

The social and emotional support individuals receive from their friends, family, and community has an impact on their overall health and well-being.

According to data from the 2006 Michigan BRFSS, 7.5 percent of adults in the North Central Council region report rarely or never receiving the social and emotional support they need. A similar percentage of adults in Michigan (7.0 percent) report not receiving necessary support.

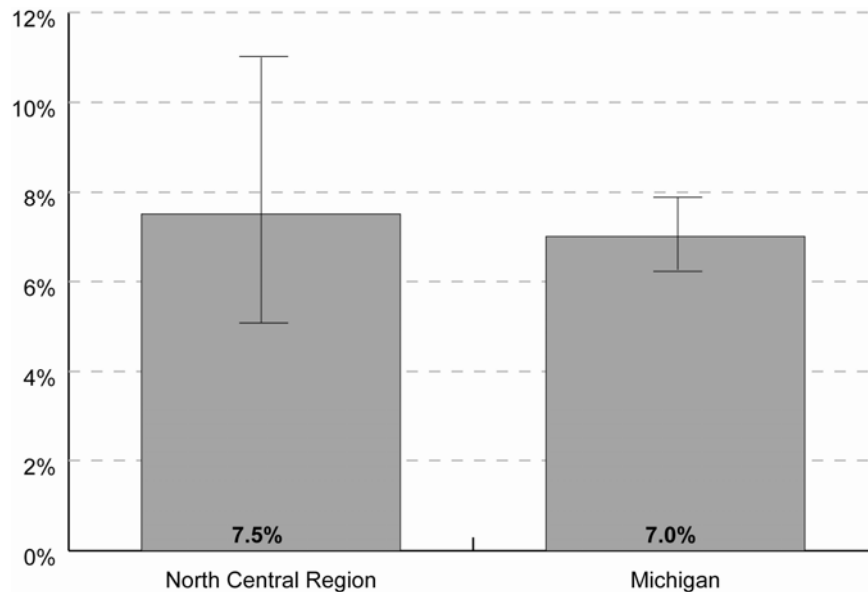
According to the NCCMHA community health assessment survey conducted in 2000, 20 percent of adults in the region either disagreed or strongly disagreed with the statement “I feel connected to my community and supported by it.”

---

### EXHIBIT 15

Percentage of Adults Who Report Rarely or Never Receiving the Social and Emotional Support They Need

---



SOURCES: 2006 *Michigan Behavioral Risk Factor Survey*, MDCH.

---