

2011

MICHIGAN  
CRITICAL HEALTH  
INDICATORS

Michigan  
CRITICAL HEALTH  
INDICATORS

- Health Outcomes
- Health-related Behaviors
- Health Systems
- Socioeconomic Factors

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## **Introduction**

### **What is the Critical Health Indicators report?**

The Critical Health Indicators report describes Michigan's health and well-being and establishes a method for monitoring improvement. The report is organized by four categories with 28 related indicators. These indicators directly or indirectly measure the health and health behaviors of Michigan residents. The data reported in this document are based on numbers provided by state and federal sources. Links to state resources have been included to assist the reader interested in more detailed information.

This set of topics and indicators comes in large part from the Institute of Medicine's *State of the USA Health Indicators* report, which was released in 2009. Additional indicators include poverty, unemployment, educational attainment, oral health, veteran healthcare access, low birthweight, teenage birth rate, leading causes of death, and healthcare-associated infections.

The report examines each indicator, providing the most current and recent data when available. Through consideration of current trends, state and local health agencies can plan for the future.

### **What do Critical Health Indicators tell us about Michigan's health?**

A broad look at Michigan's critical health indicators suggests there is significant room for improvement in Michigan's population health. For a large portion of health indicators, Michigan's rates are worse than the national average. While many health outcome measures are trending in the correct direction for Michigan, a greater rate of improvement is needed for Michigan to catch up to the rest of the nation. Impeding Michigan's progress, however, are environmental conditions and chronic disease health characteristics that are trending in the wrong direction.

Factors and indicators which contribute to improved health are moving in the correct direction, including pediatric immunizations, cholesterol screening, the jobless rate, and binge drinking. Almost twice the number of children in Michigan have health insurance coverage as do children nationally. High school and college graduation rates increased. Mortality rates for cancer decreased. The broader indicators of life expectancy and the teenage birth rate also moved in the right direction.

Michigan has faced severe economic challenges, reflected through increased unemployment and poverty rates. The number of adults with health insurance coverage decreased, while unmet medical need increased. Overall healthcare expenditures in Michigan increased. The percentage of the population suffering from chronic conditions such as diabetes and hypertension increased. The numbers of women who have had appropriate, timely screening services for breast and cervical cancer have decreased. The percentage of people who have had an annual checkup has decreased by over three percent.

A few indicators did not change over the previous measurement time frame; these include infant mortality, poor mental health, cardiovascular disease, smoking, colorectal cancer screening, and healthcare access.

### **For more information regarding this report, please contact:**

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## Topic areas and indicators in the 2011 Critical Health Indicators Report

The 2010 Critical Health Indicator report decreased the number of topic areas from eighteen to four: Health Outcomes, Health-Related Behaviors, Health Systems, and the Social & Physical Environment. These remained the same for 2011, with the exception of Social, Economic & Physical Environment, which has changed to Socioeconomic Factors. The 2011 Report has twenty-eight indicators. Michigan Department of Community Health adapted these changes in response to the preliminary report released by the Institute of Medicine in 2009, which discusses the twenty indicators to be used in the State of the USA Report. A few additional indicators are also included, which were chosen through a review of current health priorities in Michigan.

## State of the USA Health Indicators

The Institute of Medicine's *State of the USA Health Indicators* report was developed by a committee of 14 individuals, including physicians, medical school directors, public health school directors, epidemiologists, policy analysts, and health researchers. The committee was charged with developing a set of indicators that would best reflect: 1) the overall health of the nation and the factors that are important in determining the current and future health of the nation and 2) the effectiveness and efficiency of the United States healthcare and public health systems. Also, they were asked to choose indicators that: 1) have quality data available at the national level that can be broken down by subpopulation and geographic region, 2) have reliable data and data sources, 3) are issues relevant to the intended audience, 4) are sensitive to changes in societal domains, and 5) permit cross-country comparisons. The committee reviewed numerous studies and surveys in order to determine which indicators should be used. The committee also reviewed information on the public's perception of issues of importance.

The committee acknowledged that no single measure can capture the health of the nation. Indicators are needed that reflect a broad range of factors such as health, risk for illness, and health system performance. It is intended that official federal statistics will be the initial sources of indicator data. Over time, as new information becomes available and the source of indicator data expands, indicators for the State of the USA Health Indicators Report may change. The framework used by the committee to determine the most important indicators looks at health outcomes and determinants that impact these health outcomes. The topic areas for Socioeconomic Factors, Health-related Behaviors, and Health Systems all play a part in Health Outcomes. Once the framework was developed, each committee member presented his/her top twenty potential indicators, resulting in over two hundred indicators to be categorized and reviewed. During the vetting process, the committee eliminated or combined similar indicators, looked at available data sources, and tried to balance indicators in health versus healthcare categories.

## State of the USA Health Indicators included in Michigan's Critical Health Indicators Report by Topic Area:

Health Outcomes	Health-Related Behaviors	Health Systems
Life expectancy at birth	Smoking	Healthcare expenditures
Infant mortality	Physical activity	Insurance coverage
Life expectancy at age 65	Excessive drinking	Healthcare access
Injury related mortality	Nutrition	Preventative services
Chronic disease prevalence	Obesity	Childhood immunization
Poor mental health		Preventable hospitalizations

## State of the USA Health Indicators: Other Areas of Consideration

One of the important factors in the State of the USA Health Indicators was the ability or flexibility to be able to look at health disparities, drill down to subpopulations, and compare across geographic regions. It was the recommendation of the committee to look at all twenty indicators by subpopulation, if the data were available. Due to the variation in data availability for the different indicators, the recommendations of subpopulation and/or regional analysis also varied. The committee determined that any indicator that is measured at the individual level can also be analyzed for disparities as long as the data source can be linked to data on race/ethnicity and/or a measure of socioeconomic status. The committee report notes the appropriateness of disparity reporting in each indicator description.

# Introduction

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## 2011 Michigan Critical Health Indicators Trend Direction from Previous Time Period

Right Direction	Wrong Direction
Life Expectancy Teenage Birth Rate Very Low Birth Weight Cancer Mortality Physical Activity (Adult) Binge Drinking* Nutrition Obesity (Adult) Cholesterol Test Pediatric Immunizations Veteran Healthcare Access Jobless Rate Educational Attainment	Injury Mortality Low Birth Weight Diabetes* Hypertension HIV Infection Chlamydia Physical Activity (Child) Mammogram Pap Test* Annual Checkup* Insurance Coverage Adults and Children in Poverty Obesity (Child)
No Change	Not Determined
Infant Mortality Poor Mental Health* Cardiovascular Disease* Cigarette Smoking* Adult Influenza and Pneumonia Immunization* No Access Due to Cost* Preventable Hospitalizations Colorectal Cancer Screening	Leading Causes of Death Asthma Oral Health Healthcare Expenditures Healthcare-Associated Infections Primary Care Workforce

\*Trend direction for these indicators was calculated based on confidence intervals from Michigan Behavioral Risk Factor Survey data. All other trend direction determinations were based on simple numerical change calculations.

# Introduction

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## 2011 Michigan Critical Health Indicators Comparison of Michigan to the United States

Michigan is Better	Michigan is Worse
<p>Injury Mortality</p> <p>Teenage Birth Rate</p> <p>HIV Infection</p> <p>Physical Activity (Adults)</p> <p>Binge Drinking</p> <p>Obesity (Child)</p> <p>Mammogram</p> <p>Cholesterol Test</p> <p>Insurance Coverage</p>	<p>Infant Mortality Rate</p> <p>Life Expectancy</p> <p>Cardiovascular Disease</p> <p>Diabetes</p> <p>Hypertension</p> <p>Chlamydia</p> <p>Cigarette Smoking</p> <p>Physical Activity (Child)</p> <p>Nutrition</p> <p>Veteran Access to Healthcare</p> <p>Jobless Rate</p> <p>Pap Test</p> <p>Adults and Children in Poverty</p>
<b>Michigan is the Same as United States</b>	
<p>Adult Influenza Immunization</p>	
<b>Not Determined</b>	
<p>Poor Mental Health</p> <p>Leading Causes of Death</p> <p>Low Birth Weight/Very Low Birth Weight</p> <p>Asthma</p> <p>Cancer Mortality</p> <p>Obesity (Adult)</p> <p>Healthcare-Associated Infections</p> <p>Educational Attainment</p>	<p>Colorectal Cancer Screening</p> <p>Annual Checkup</p> <p>Oral Health</p> <p>Pediatric Immunizations</p> <p>No Healthcare Access Due to Cost</p> <p>Healthcare Expenditures</p> <p>Primary Care Workforce</p> <p>Preventable Hospital Stays</p>

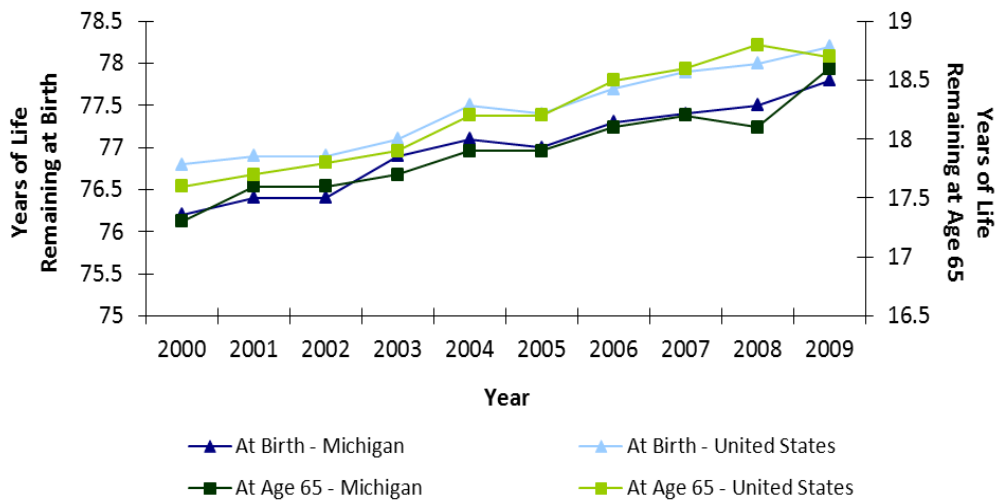
# Life Expectancy at Birth and at Age 65

**Indicator Definition:** Life Expectancy at Birth is the number of years that a newborn is expected to live if current mortality rates continue to apply. Life Expectancy at Age 65 is the number of years of life remaining to a person at age 65 if current mortality rates continue to apply.

**Indicator Overview:**

- Life Expectancy at Birth is a standard for comparing populations both within countries and internationally. It reflects the overall mortality pattern of a population across all age groups and is often used as an overall measure of the state of a population's general health. Life Expectancy at Birth is also commonly used to identify disparities among populations.
- Life Expectancy at Age 65 is a measure used as a general indicator of the overall health of those over 65, as well as the quality of, and access to, healthcare services among the elderly. It is also an indicator used to examine inequalities across populations and for international comparisons.

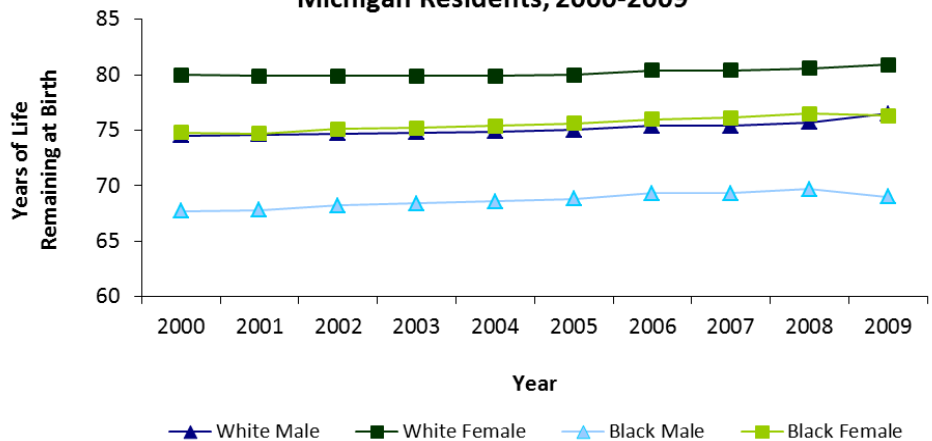
**Life Expectancy at Birth and at Age 65, Michigan and United States, 2000-2009**



← **Trends:** Life expectancy at birth and life expectancy at age 65 are both generally trending upward. In 2000, life expectancy at birth for Michigan and the United States was at 76.2 and 76.8 years, respectively, increasing to 77.8 and 78.2 years by 2009. Similarly, the life expectancy at age 65 increased from 17.3 to 18.6 years in Michigan and 17.6 years to 18.7 years for the US. Michigan residents continue to have a slightly lower life expectancy than the United States population as a whole, both at birth and at age 65.

→ **Health Disparities:** Gender and racial disparities continue to exist in life expectancy. White women in Michigan have the longest life expectancy. Black women and white men have a life expectancy of about four years less than white women, while black men have a shorter life expectancy than white women by more than 10 years.

**Life Expectancy at Birth by Race and Sex, Michigan Residents, 2000-2009**



**Links to Other Sources of Information:**

FastStats Life Expectancy in U.S., CDC: <http://www.cdc.gov/nchs/fastats/lifexpec.htm>  
 Life Expectancy at birth by sex and race in Michigan, MDCH: <http://www.mdch.state.mi.us/pha/osr/deaths/lifexrctrend.asp>

**Links to Related Public Health Programs:**

MDCH: Physical Health & Prevention Programs: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955---,00.html)  
 CDC: Chronic Disease Prevention & Health Promotion: <http://www.cdc.gov/chronicdisease/index.htm>

# Health Outcomes - 2

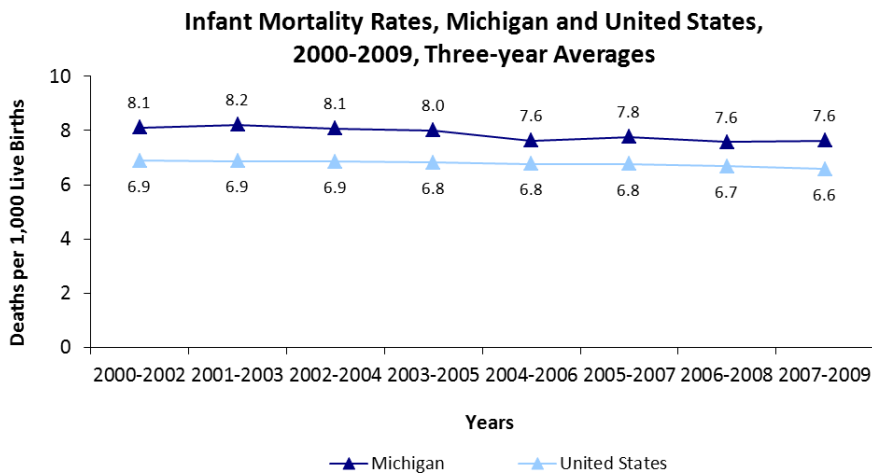
## Infant Mortality Rate

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**Indicator Definition:** Deaths of infants aged less than 1 year per 1,000 live births.

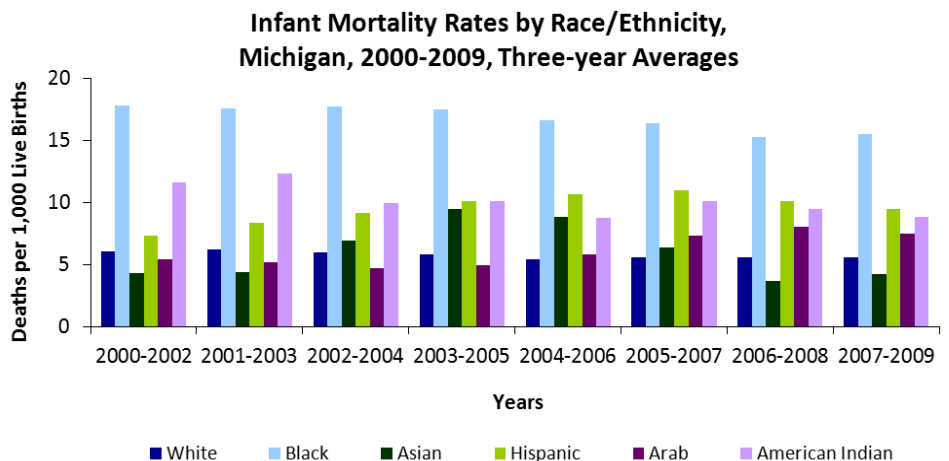
**Indicator Overview:**

- The infant mortality rate is a leading indicator used to compare populations both within and across countries.
- Infant mortality is used as an indicator of the level of child health and overall development and is often used to identify disparities among populations within a specific country.



**←Trends:** Michigan’s infant mortality rate (IMR) for the three-year period 2007-2009 was 7.6 deaths per 1,000 live births. While this IMR is the same as the previous three-year period, 2009 saw the lowest annual number of infant deaths since MDCH started keeping records. During the past 10 years, Michigan’s infant mortality rate has fluctuated, with a decline below 8.0 per 1,000 for the first time in 2004. In 2006, Michigan reached its lowest IMR in the last decade at 7.4; 2008 saw the same rate. Michigan has a consistently higher IMR than the United States for the given years (2000-2009).

**→Health Disparities:** Historically, the Black IMR is more than two-and-a-half times that of the White IMR. For the time period of 2007-2009, the Michigan IMR for Black infants was 15.4 per 1,000 live births, while for White infants it was 5.5 per 1,000. In 2009, IMRs were nearly double for unmarried mothers in Michigan; 10.5 per 1000 live births for unmarried mothers compared to 5.4 per 1,000 live births for married mothers. Babies born to mothers with inadequate prenatal care had an IMR of 17.2 in 2009, over three times greater than the rate of 5.7 for infants born to mothers with adequate prenatal care.



**Links to Other Sources of Information:**

Infant Mortality Rates in Michigan, MDCH: [http://www.michigan.gov/mdch/0,1607,7-132-2944\\_4669\\_4694---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2944_4669_4694---,00.html)

Infant Mortality Rates in US, CDC: [http://www.cdc.gov/nchs/fastats/infant\\_health.htm](http://www.cdc.gov/nchs/fastats/infant_health.htm)

**Links to Related Public Health Programs:**

Infant Mental Health, MDCH: [http://www.michigan.gov/mdch/0,1607,7-132-2941\\_4868\\_7145-14659--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2941_4868_7145-14659--,00.html)

Maternal Infant Health Program (MIHP), MDCH: [http://www.michigan.gov/mdch/0,1607,7-132-2942\\_4911\\_34593-106183--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2942_4911_34593-106183--,00.html)

WIC, MDCH: [http://mi.gov/mdch/0,1607,7-132-2942\\_4910---,00.html](http://mi.gov/mdch/0,1607,7-132-2942_4910---,00.html)



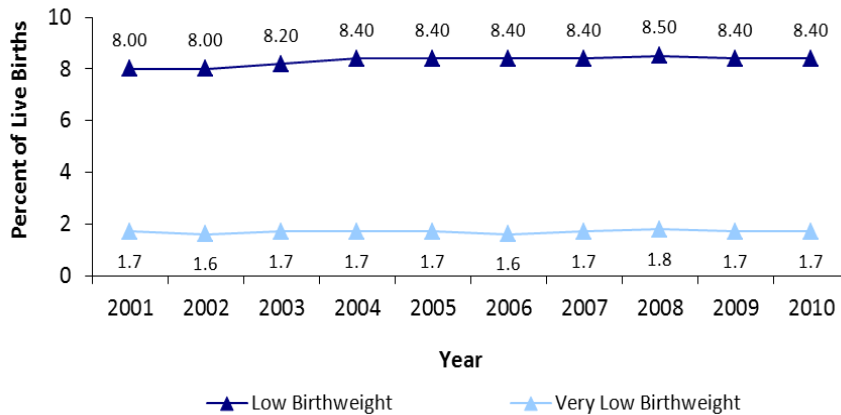
# Low Birthweight/Very Low Birthweight

**Indicator Definition:** Percentage of Michigan infants born with low birthweight (under 2,500 grams or approximately 5.5 pounds) or very low birthweight (under 1,500 grams or approximately 3.25 pounds).

**Indicator Overview:**

- Low birthweight is a major cause of neonatal mortality (death before 28 days of age).
- Very low birthweight infants are at a significantly increased risk of severe health problems, including physical, visual, cognitive, and developmental difficulties.

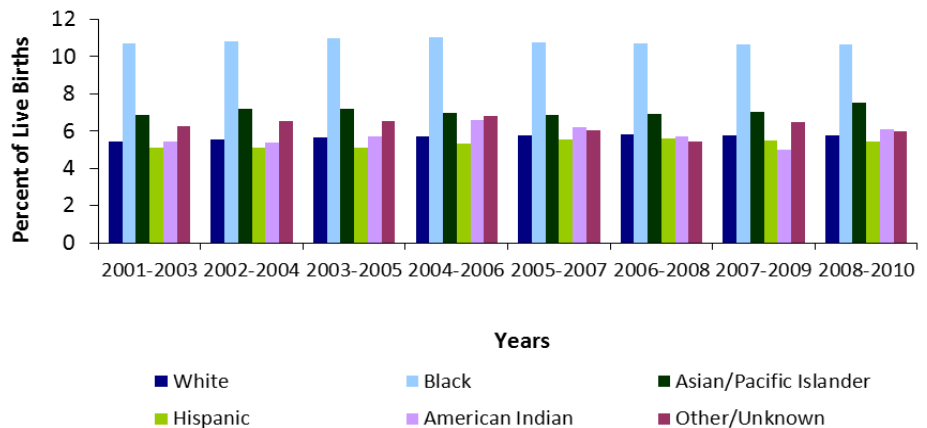
**Low and Very Low Birthweight, Michigan, 2001-2010**



**←Trends:** The percentage of Michigan infants classified as low birthweight (LBW) – under 2,500 grams, or approximately 5.5 pounds – has remained fairly steady, rising just under .5 percent since 2001. The percentage of infants classified as very low birthweight (VLBW) – under 1,500 grams, or approximately 3.25 pounds – has remained stagnant.

**→Health Disparities:** The percentage of Black infants classified as moderately LBW is nearly double that of White infants (10.64 percent versus 5.75 percent), a trend that is echoed nationally. Moderate LBW in Hispanic infants for the three-year period 2008-2010 was at a lower percentage than White infants, at 5.43 percent, while Asian/Pacific Islander moderately LBW infants accounted for 7.54 percent of births.

**Moderately Low Birthweight in Michigan (1500-2400 grams), By Race and Ethnicity, 2001-2010, Three-year Averages**



**Links to Other Sources of Information:**

Birthweight and Gestation, CDC: <http://www.cdc.gov/nchs/fastats/birthwt.htm>  
 Michigan Natality, MDCH: <http://www.mdch.state.mi.us/pha/osr/index.asp?id=2>

**Links to Related Public Health Programs:**

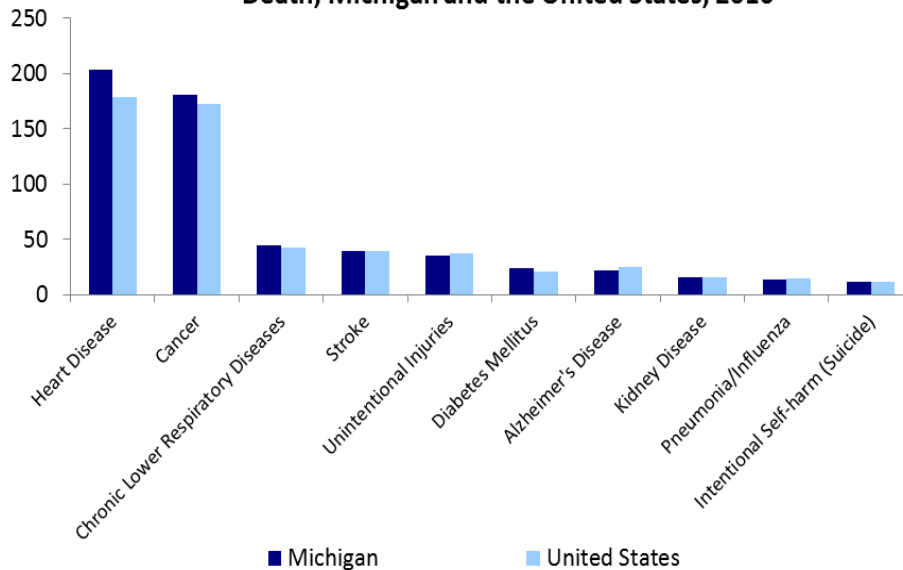
Infant Mental Health, MDCH: [http://www.michigan.gov/mdch/0,1607,7-132-2941\\_4868\\_7145-14659--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2941_4868_7145-14659--,00.html)  
 Maternal Infant Health Program (MIHP), MDCH: [http://www.michigan.gov/mdch/0,1607,7-132-2942\\_4911\\_34593-106183--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2942_4911_34593-106183--,00.html)  
 WIC, MDCH: [http://mi.gov/mdch/0,1607,7-132-2942\\_4910--,00.html](http://mi.gov/mdch/0,1607,7-132-2942_4910--,00.html)

**Indicator Definition:** Age-adjusted death rate per 100,000 population.

**Indicator Overview:**

- Mortality data provide a snapshot of health conditions in the United States, leading to identification of public health priorities and opportunities for outreach.

**Age-Adjusted Death Rates for the Ten Leading Causes of Death, Michigan and the United States, 2010**

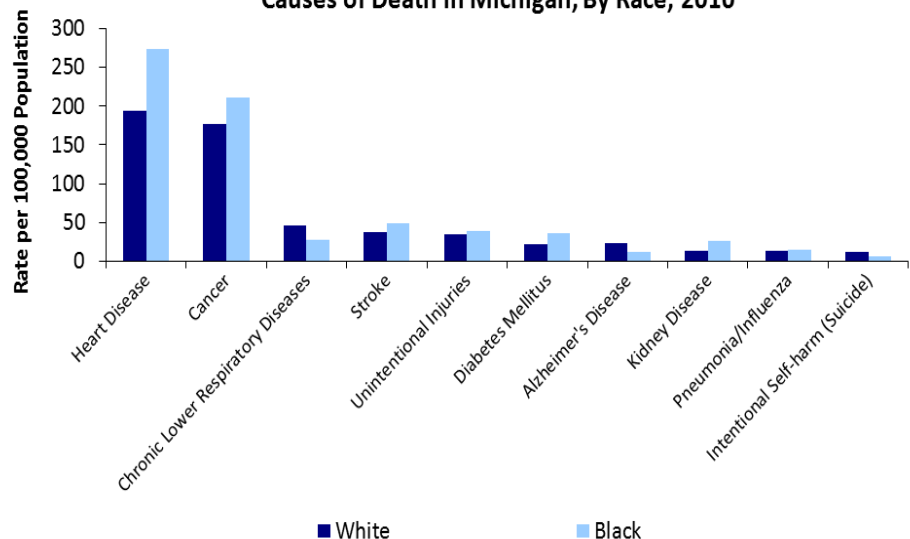


←**Trends:** Heart disease and cancer remain the leading causes of death in both Michigan and the United States. Michigan has higher death rates for both heart disease and cancer, as well as for chronic lower respiratory diseases; stroke; and diabetes. The difference in death rates between Michigan and the United States is most evident in heart disease, with a rate of 25.1 more deaths per 100,000 in Michigan than in the United States. Michigan and United States rates are exactly the same for kidney disease, at 15.3 deaths per 100,000.

\*2010 data for the United States are preliminary.

→**Health Disparities:** Overall, death rates for Black individuals are higher than White individuals. White deaths exceed Black deaths only in chronic lower respiratory diseases, Alzheimer's Disease, and suicide. The difference in death rates between Black and White individuals is most evident in heart disease, with a rate of 80.7 more deaths per 100,000 for Black individuals. Death rates are most similar with regard to pneumonia/influenza, with a difference of 1.6 more deaths per 100,000 population for Black individuals.

**Age-Adjusted Death Rates for the Ten Leading Causes of Death in Michigan, By Race, 2010**



**Links to Other Sources of Information:**

Mortality Data, National Vital Statistics System, CDC: <http://www.cdc.gov/nchs/deaths.htm>

Mortality Trends, MDCH: <http://www.mdch.state.mi.us/pha/osr/Index.asp?Id=4>

**Links to Related Public Health Programs:**

MDCH: Physical Health & Prevention Programs: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955---,00.html)

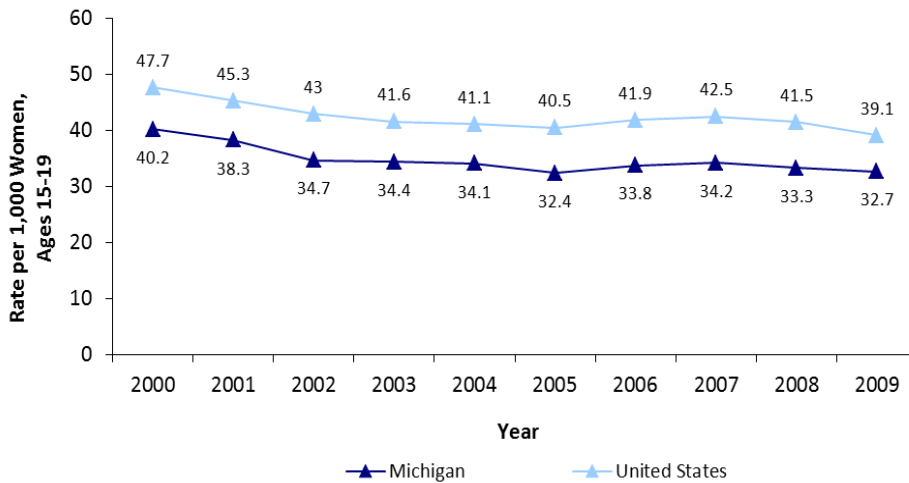
CDC: Chronic Disease Prevention & Health Promotion: <http://www.cdc.gov/chronicdisease/index.htm>

**Indicator Definition:** Live births per 1,000 women, ages 15-19.

**Indicator Overview:**

- Nearly two-thirds of births to women younger than age 18 are the result of unintended pregnancy.
- The children of teenage mothers are less likely to graduate from high school, more likely to suffer health problems, and more likely to encounter problems with the law.
- Only about 50 percent of teenage mothers earn a high school diploma by age 22, in contrast with nearly 90 percent of their peers who had not given birth during their teenage years.

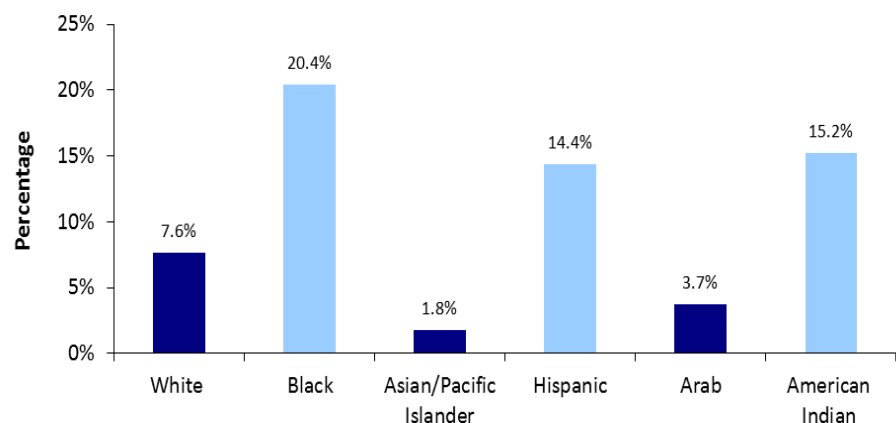
**Teenage Birth Rate, Ages 15-19,  
Michigan and United States, 2000-2009**



←**Trends:** Michigan's teenage birth rate for ages 15-19 is on an overall decline from 2000 to 2009, falling to 32.7 from 40.2 births per 1,000 women. The teenage birth rate in Michigan has been consistently lower than that of the United States as a whole since the year 2000.

→**Health Disparities:** Asian/Pacific Islander and Arab teenagers had the lowest birth rates, while American Indian teenagers had double the birth rate of White teenagers, and Hispanic teenagers nearly so. The birth rate for Black teenagers was over 2.5 times greater than that of White teenagers. According to a 2007 MDCH white paper, among White females ages 15-17, the five counties with the highest pregnancy rates were rural: Newaygo, Clare, Missaukee, Branch, and Gladwin. Among Black females ages 15-17, the five counties with the highest pregnancy rates during the same time period were those with sizeable urban centers: Jackson, Kalamazoo, Genesee, Muskegon, and Berrien.

**Percent of Live Births, Ages 15-19,  
By Race and Ethnicity of Mother, Michigan Residents, 2009**



**Links to Other Sources of Information:**

Michigan Pregnancy Risk Assessment Monitoring (PRAMS): <http://www.michigan.gov/prams>  
National Campaign to Prevent Teen and Unplanned Pregnancy: <http://www.thenationalcampaign.org>

**Links to Related Public Health Programs:**

Michigan's Family Planning Program: <http://www.michigan.gov/familyplanning>  
Michigan Teen Pregnancy Prevention Initiative: <http://www.michigan.gov/tppi>

# Health Outcomes - 6 Injury Mortality

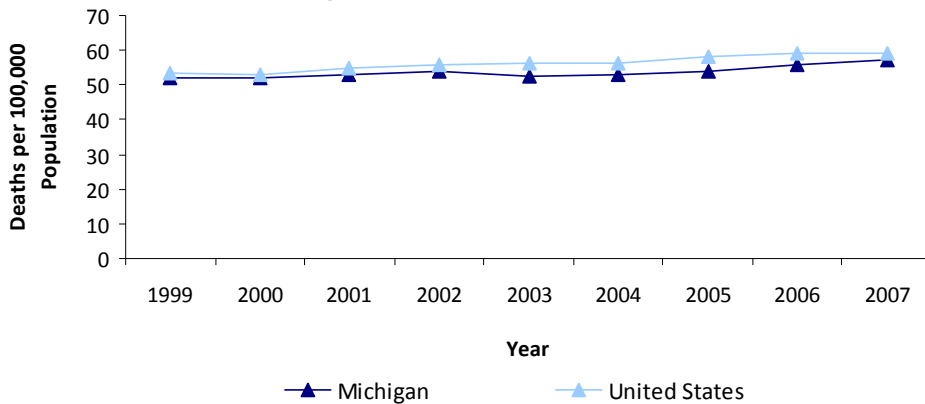
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**Indicator Definition:** Age-adjusted mortality rates (deaths per 100,000 population) due to injuries (age-adjusted to Year 2000 Standard Population).

**Indicator Overview:**

- Injuries are a major cause of death and disability in the United States and worldwide.
- Injury death and disability create a large economic burden. The estimated cost of injuries – including medical care and lost productivity – was \$406 billion in 2005.
- Like diseases, injuries and violence are preventable – they do not occur at random. The same scientific methods used to prevent disease are also successfully applied to prevent injuries and violence.

**Age-Adjusted Injury Death Rate,  
Michigan and United States, 1999-2007**

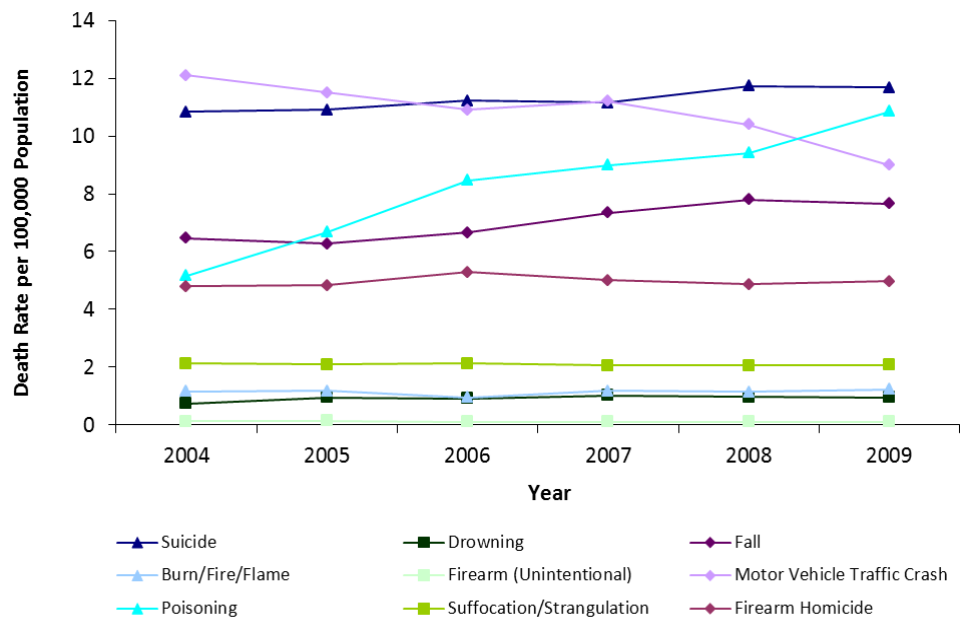


← **Trends:** Compared to the United States, Michigan had lower age-adjusted death rates from 1999 through 2007. In the last five years of this period there was a greater difference between United States and Michigan rates. This stemmed from Michigan seeing a decrease in age-adjusted rate between 2002 and 2003 while the United States rate continued to rise. As of 2007 Michigan's age-adjusted death rate for injuries was 57.03 while the national rate was 59.14.

→ **Additional Information:**

Pictured at right are the leading causes of injury death for Michigan residents among all ages and both sexes. In 2009, suicide was the number one cause of injury death. Rates for poisonings have increased from 5.2 to 10.9 deaths per 100,000 from 2004 to 2009, moving up from the fourth leading cause of injury death to the second. Motor vehicle traffic crash death rates have decreased from 12.1 to 9.0 from 2004 to 2009. Traffic crashes are now the third leading cause of injury death after being first in 2004.

**Injury Mortality in Michigan, By Cause, Crude Rates, 2004-2009**



**Links to Other Sources of Information:**

Fatal Injury Data, CDC: <http://www.cdc.gov/injury/wisqars/fatal.html>  
 Leading Causes of Fatal Injuries, MDCH: <http://www.mdch.state.mi.us/pha/osr/index.asp?Id=29>

**Links to Related Public Health Programs:**

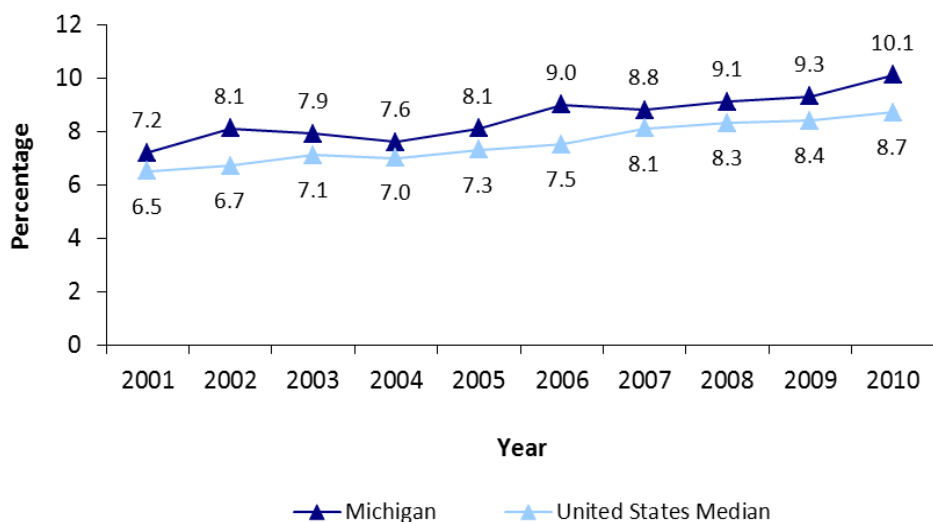
Injury and Violence Prevention, MDCH: <http://www.michigan.gov/injuryprevention>  
 National Center for Injury Prevention and Control, CDC: <http://www.cdc.gov/injury/index.html>

**Indicator Definition:** Percentage of adults affected by chronic diseases (diabetes, cardiovascular disease, asthma, and hypertension). Deaths per 100,000 population (cancer).

**Indicator Overview:**

- Chronic diseases account for 70 percent of all deaths in the United States each year and are a leading cause of disability. About 25 million people, nearly 1 in 10 Americans, suffer major limitations in daily living due to chronic disease.

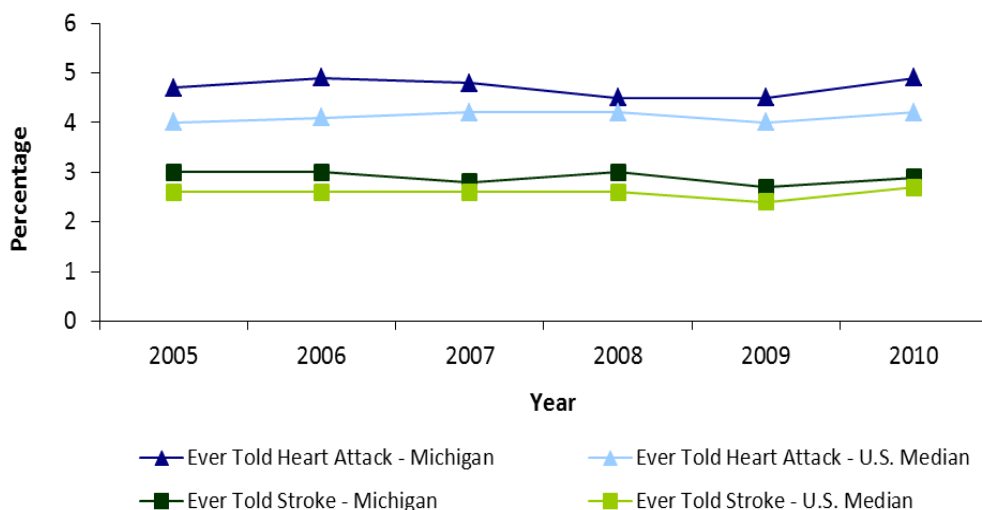
**Adult Diabetes Prevalence, Michigan and the United States, 2001-2010**



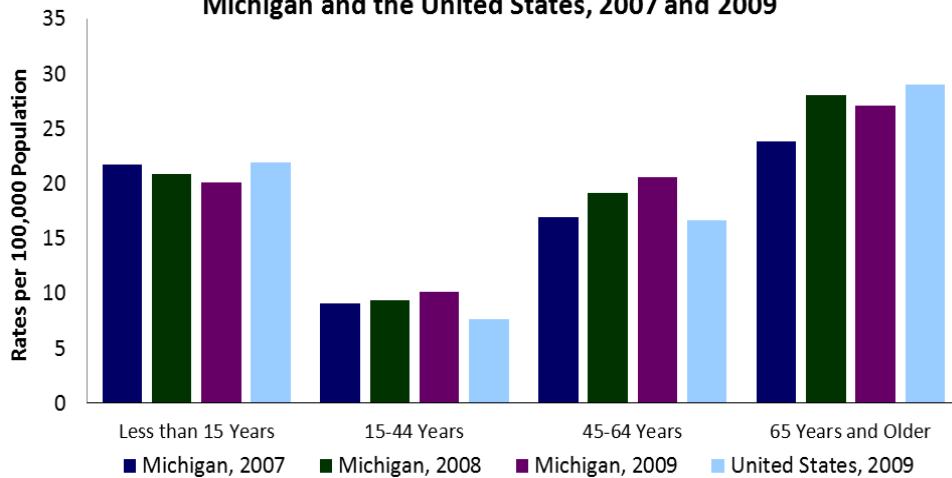
← **Trends:** The prevalence of diabetes in Michigan and the United States has been steadily increasing over the past 10 years. In each of the past 10 years, the prevalence of diabetes in Michigan has been greater than that of the nation as a whole. In 2010, 10.1 percent of Michigan adults reported ever being told by a doctor that they had diabetes, compared to 8.7 percent of United States adults. Additionally, Black individuals in Michigan had a higher diabetes burden in 2010 (15.9%) compared to White, non-Hispanics (9.2%).

→ **Trends:** The prevalence of heart attack and stroke in the United States has remained relatively stable over the past several years. Michigan adults have reported a slightly higher prevalence of heart attack when compared to the nation as a whole in the last six years, while the prevalence of stroke among Michigan adults follows similar trends as the national prevalence.

**Adult Cardiovascular Disease Prevalence, Michigan and the United States, 2005-2010**



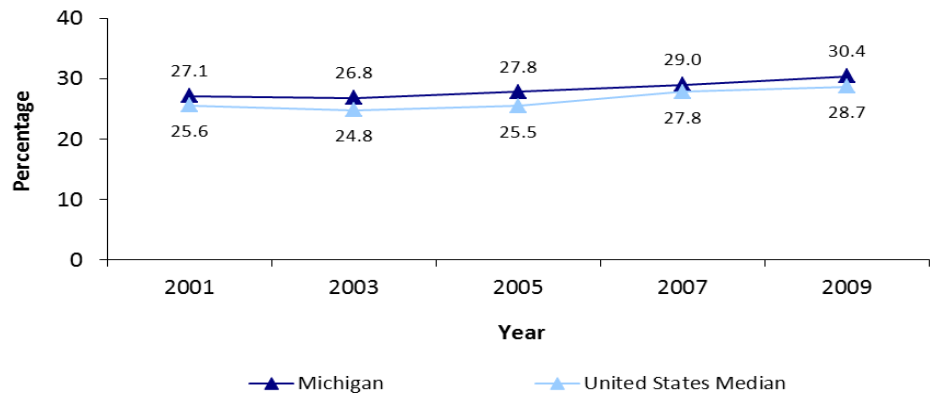
### Asthma Hospitalization Rates for Children and Adults, Michigan and the United States, 2007 and 2009



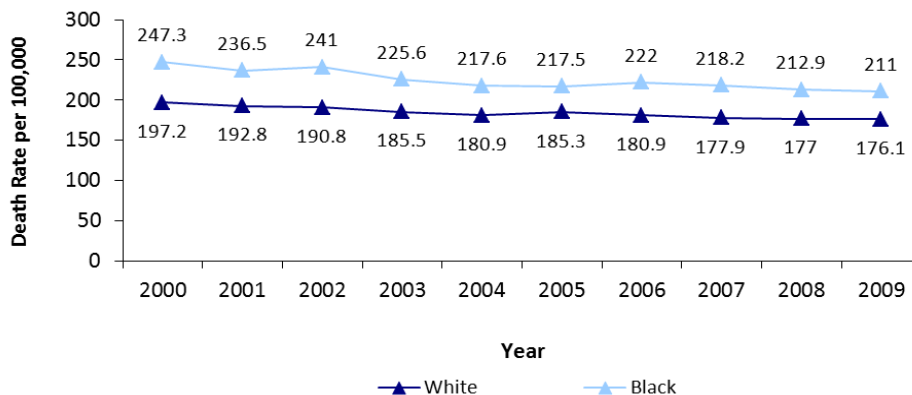
← **Trends:** Asthma hospitalization rates are highest among adults more than 65 years old than any other age group. The Michigan hospitalization rate has increased in that age group from 2007 to 2009 but remains below the 2009 United States rate. Michigan hospitalization rates for year 2009 in age groups 15-44 and 45-64 years are above the 2009 U.S. rate.

→ **Trends:** The prevalence of high blood pressure in Michigan closely parallels national prevalence. Each has increased slightly since 2001. Among Michigan adults aware of their hypertension in 2009, 79.5 percent were controlling it with medication, a rise from 69 percent in 2001.

### Prevalence of High Blood Pressure among Adults, Michigan and the United States, 2001-2009



### Cancer Mortality in Michigan, By Race, 2000-2009



← **Trends:** The mortality rate of cancer has been declining in Michigan overall. Since 2000, the mortality rate has dropped from 202.3 per 100,000 people to just over 180 per 100,000. The death rate for Black individuals in Michigan, however, still remains much higher than that of White individuals. The gap has lessened somewhat in more recent years, but a disparity still exists.

#### Links to Other Sources of Information:

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
 Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>  
 Michigan Public Health Institute and Michigan Department of Community Health. The Cancer Burden in Michigan: Selected Statistics 1993-2011. <http://www.michigancancer.org/PDFs/MCCReports/CancerBurden-Sept2011/AllSections.pdf>  
 Michigan-MDCH Incidence data: <http://www.mdch.state.mi.us/pha/osr/Cancer/stateinc.asp?CDxID=IncTrendsTotal>

#### Links to Related Public Health Programs:

MDCH: Physical Health & Prevention Programs: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955---,00.html)  
 CDC: Chronic Disease Prevention & Health Promotion: <http://www.cdc.gov/chronicdisease/index.htm>

# Health Outcomes - 8

## Poor Mental Health

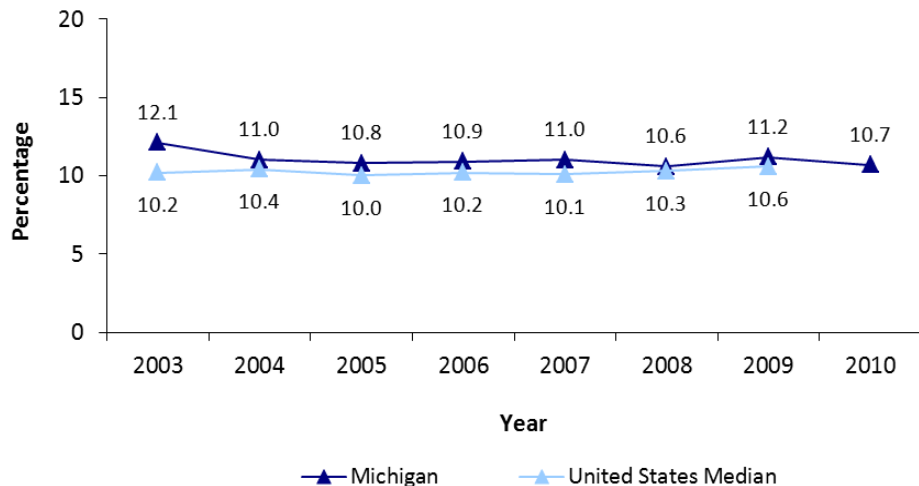
**MICHIGAN 2011  
CRITICAL  
HEALTH  
INDICATORS**

**Indicator Definition:** Percentage of adults reporting  $\geq 14$  days of poor mental health within the past 30 days.

**Indicator Overview:**

- Poor mental health is an important individual and population health issue.
- Depressive disorders, if untreated, become chronic and are expected, by the year 2020, to be exceeded only by heart disease in contributing to the global burden of diseases.

**Adults Reporting Poor Mental Health on At Least 14 of the Past 30 Days, Michigan and the United States, 2003-2010**

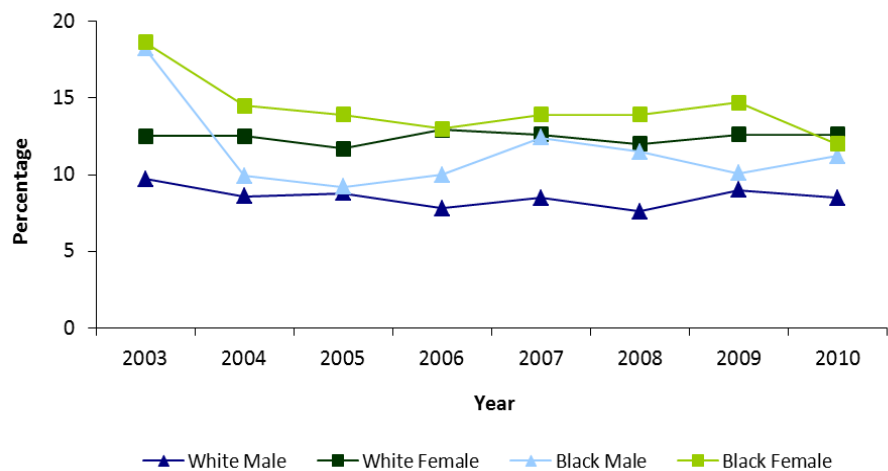


← **Trends:** The overall percentage of adults with poor mental health was slightly lower in 2010 than in 2009. In 2010, the prevalence of poor mental health was highest among 18-24 year olds, while in 2009 poor mental health was most prevalent within the 25-34 year old age category. For the most part, the prevalence of poor mental health decreased with increasing age of the population.

\*2010 rate for United States not available.

→ **Health Disparities:** Overall, females reported slightly higher rates of poor mental health when compared to males. Black females reported a higher rate of poor mental health than White females in 2009, while the pattern was reversed in 2010. White males have consistently had the lowest rate of poor mental health since 2003.

**Michigan Adults Reporting Poor Mental Health on At Least 14 of the Past 30 Days by Race and Gender, 2003-2010**



**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
 Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>

**Links to Related Public Health Programs:**

MDCH Mental Health Programs & Practices for Adults: [http://www.michigan.gov/mdch/0,1607,7-132-2941\\_4868\\_38495---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2941_4868_38495---,00.html)  
 A Resource Guide for Families dealing with Mental Illness: [http://www.michigan.gov/documents/MDCH-MentalIllness-10AUG04\\_102671\\_7.pdf](http://www.michigan.gov/documents/MDCH-MentalIllness-10AUG04_102671_7.pdf)

# Health Outcomes - 9

## Communicable Disease

**MICHIGAN 2011**  
**CRITICAL**  
**HEALTH**  
**INDICATORS**

**Indicator Definition:** Annual rate of new HIV infections and Chlamydia. Incidence of Chlamydia by age group.

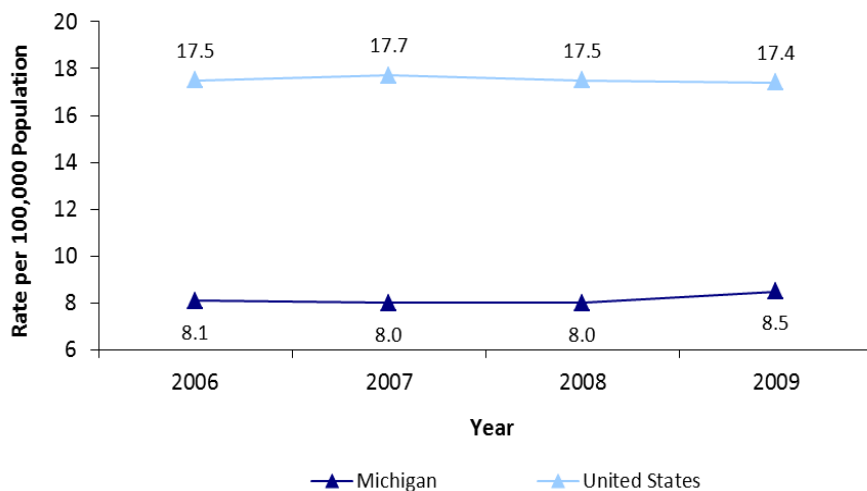
**Indicator Overview:**

- Infectious diseases are spread throughout populations as a result of contact with the infectious agent, for example, through blood exposure or unprotected sex. A subset of these cannot be prevented by vaccination. Rates of these types of diseases reflect a population's knowledge and hygiene practices.

### HIV/AIDS

Two strains of HIV infect humans: HIV-1 and HIV-2. HIV-1 is more virulent and more easily transmitted; it is the source of the majority of HIV infections throughout the world. HIV-2 is less easily transmitted and is largely confined to Africa. As of January 2012, MDCH phased out use of the term 'AIDS' to comply with CDC recommendations. All cases of HIV infection are now characterized by stage, with stage 3 being AIDS-defining. The risk group with the highest prevalence of new cases remains men who have sex with men (MSM).

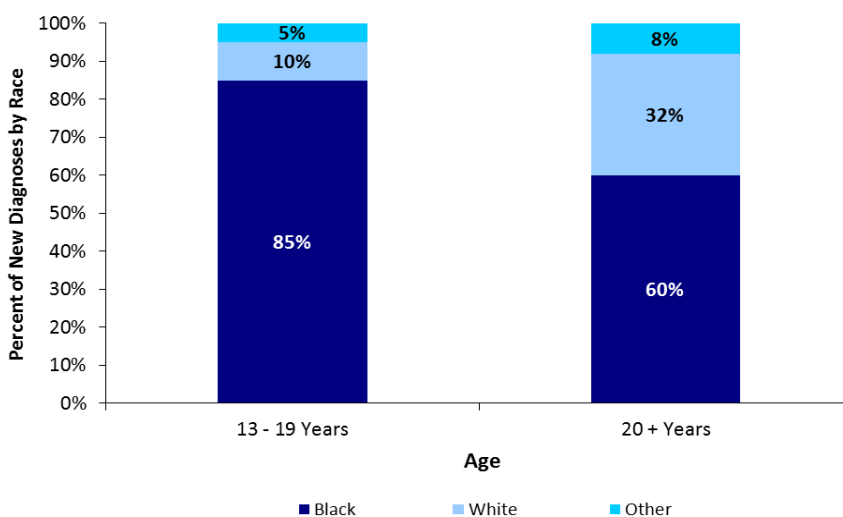
**HIV Diagnosis Rates in Michigan and the United States, 2006-2009**



← **Trends:** These numbers include persons diagnosed at all stages of HIV infection. Between 2006 and 2009, the rate of new HIV diagnoses in Michigan rose slightly (8.1 per 100,000 in 2006 and 8.5 per 100,000 in 2009), but this change was not significant. Overall, the diagnosis rate has remained stable. The national rate of new HIV diagnoses also remained stable, from 17.5 in 2006 to 17.4 in 2009. Michigan is considered to be a state of moderate morbidity for HIV and has remained consistently lower than the rate in the United States over the past decade.

→ **Health Disparities:** HIV diagnoses among 13-19 year olds in Michigan continue to increase. Of all Michigan teens diagnosed between 2005 and 2009, 85 percent are Black compared to 60 percent of persons diagnosed at older ages. Furthermore, teens are more likely to be Black MSM compared to adults 20 years and older (60% vs. 24%). This continues to underscore a need for prevention campaigns tailored to young Black MSM, as the differences in new diagnoses seen over the last several years in this young group will likely widen the already large racial gap among persons living with HIV.

**New HIV Diagnoses in Michigan by Race and Age, 2005-2009**

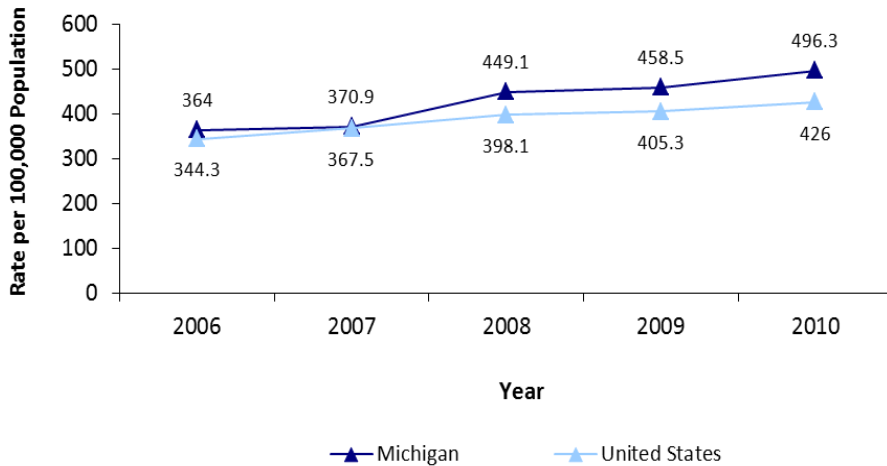




# Chlamydia

Chlamydia is one of the most common reportable diseases in Michigan. In 2009, Michigan screened at-risk individuals for chlamydia. The overall positivity for chlamydia was 10.1 percent. Positivity was highest at teen health clinics, school-based clinics, and adult correctional and juvenile detention facilities. Chlamydia infection disproportionately impacts young adults, females, and communities of color. In women, untreated chlamydia infections can spread into the uterus or fallopian tubes and cause pelvic inflammatory disease (PID). PID can cause permanent damage to the fallopian tubes, uterus, and surrounding tissues. The damage can lead to chronic pelvic pain, infertility, and ectopic pregnancy. These complications are the reason chlamydia screening resources are highly targeted to women.

**Rate of Reported Chlamydia Cases, Michigan and United States, 2006-2010**

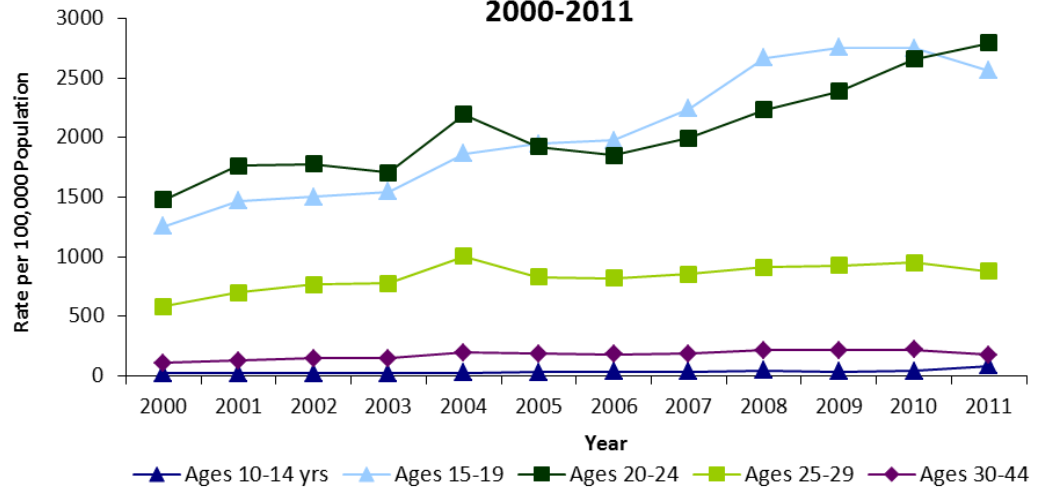


← **Trends:** Michigan's chlamydia rate has increased over time due to increases in screening and improved testing technology. The number continued to rise in 2010, placing the rate at 496.3 per 100,000 population. Assuming a population of 10 million individuals, this means that over 49,000 individuals in Michigan have been reported as having chlamydia. The rate dramatically increases when considering unreported cases.

→ **Health Disparities:** From 2000 – 2011, individuals aged 20-24 reported the highest rates of chlamydia in the state. The rate intersected nearly perfectly with that of 15-19 year olds in 2005 and 2010, with higher rates reported for 20-24 year olds in 2011. Individuals aged 10-14 consistently report the lowest rates of chlamydia, while ages 30-44 follow closely behind.

\*2011 data are preliminary.

**Michigan Chlamydia Incidence Rates by Age Group, 2000-2011**



**Links to Other Sources of Information**

Annual Report on STDs and Fact Sheets on Disease: <http://www.cdc.gov/std/stats/-CDC>  
 Sexually Transmitted Diseases then STD statistics for annual Michigan STD statistics by age, sex, and county: <http://www.michigan.gov/hivstd>

**Links to Related Public Health Programs:**

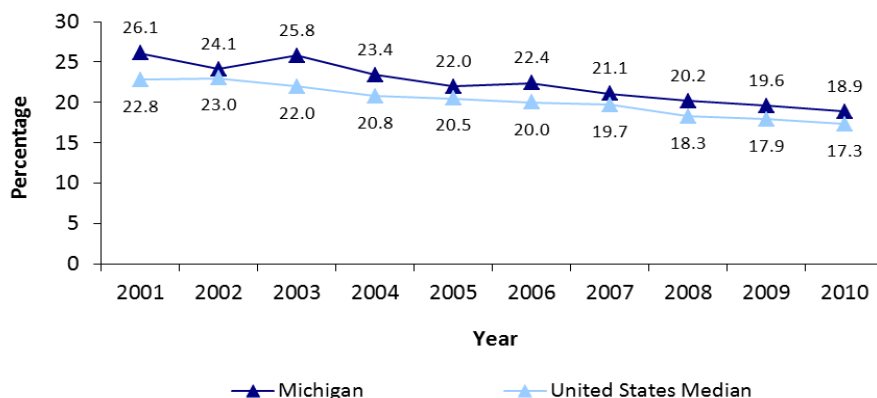
MDCH: HIV/STD/Hepatitis in Michigan: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955\\_2982---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_2982---,00.html)  
 CDC: STD Prevention: <http://www.cdc.gov/std/>

**Indicator Definition:** Percentage of adults who have smoked  $\geq 100$  cigarettes in their lifetime and who currently smoke some days or every day.

**Indicator Overview:**

- Smoking is a leading cause of death and disability in the United States and is an important modifiable risk factor.
- Smoking contributes to the development of many kinds of chronic conditions, including cancers, respiratory diseases, and cardiovascular diseases, and “remains the leading preventable cause of premature death in the United States.” It has been estimated that smoking costs the United States \$193 billion in annual health-related economic losses and 5.1 million years of potential life lost each year.
- Smoking is also associated with cardiovascular disease. Risk of stroke doubles for those who smoke as compared to those who do not.

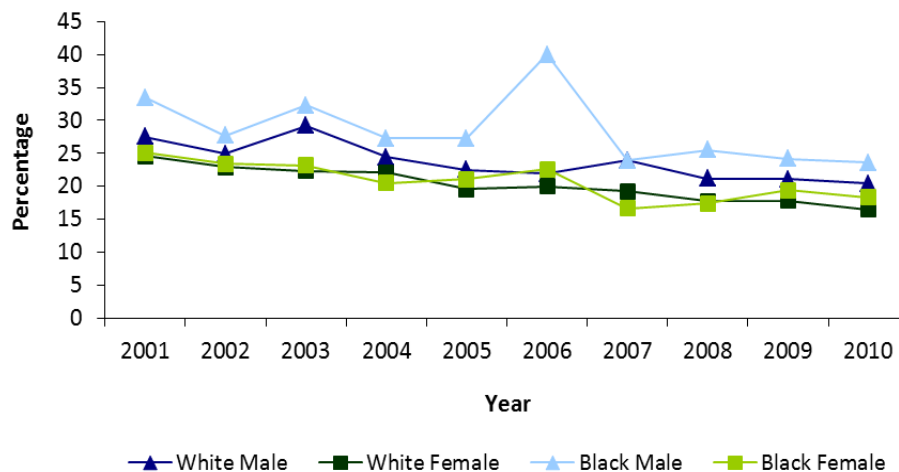
**Adult Cigarette Smoking Prevalence, Michigan and the United States, 2001-2010**



← **Trends:** The percentage of smokers in Michigan decreased between 2001 and 2010 from 26.1 percent to 18.9 percent, for a net decrease of over seven percent. Current smoking rates for the United States follow a similar trend to that of Michigan, though Michigan’s rates are slightly higher. Beginning in 2009, fewer than 1 in 5 adults within Michigan and the United States reported being current smokers.

→ **Health Disparities:** Gender and racial disparities in the prevalence of current smoking among Michigan adults have diminished over the past decade. In 2010, 23.6 percent of Black males reported current smoking, followed by White males at 20.4 percent, Black females at 18.3 percent, and White females at 16.5 percent.

**Michigan Adult Cigarette Smoking Prevalence, By Race and Gender, 2001-2010**



**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>

**Links to Related Public Health Programs:**

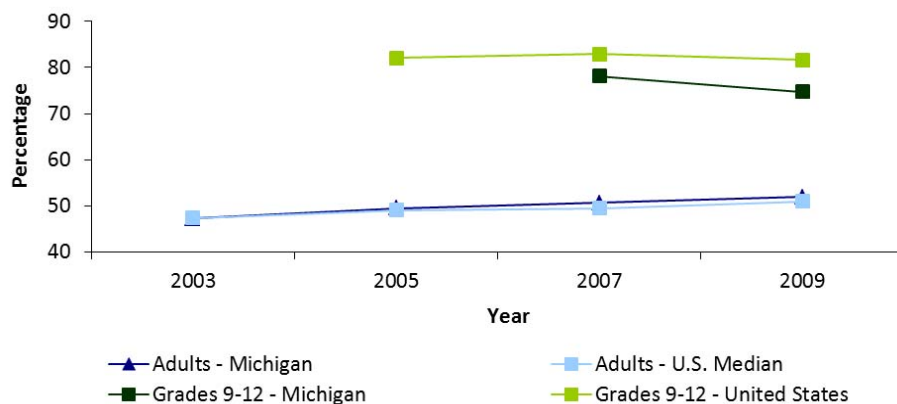
MDCH: Tobacco Control Program: <http://www.michigan.gov/tobacco>  
CDC: Smoking & Tobacco Use: <http://www.cdc.gov/tobacco/>

**Indicator Definition:** Percentage of adults and children (grades 9-12) meeting the current recommendation for physical activity.

**Indicator Overview:**

- Moderate to higher levels of regular physical activity lowers mortality rates for both older and younger adults.
- Regular physical activity is associated with decreased risk of developing conditions such as diabetes, colon cancer, and high blood pressure.
- Regular physical activity reduces feelings of depression and anxiety; helps control weight; helps build and maintain healthy bones, muscles, and joints; helps older adults become stronger and better able to move about; and promotes psychological well-being.

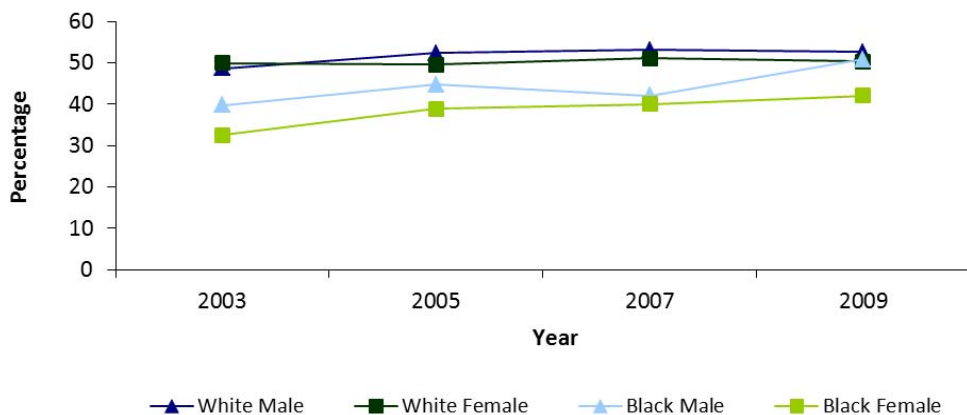
**Sufficient Physical Activity Among Adults and Children Grades 9-12, Michigan and the United States, 2003-2009**



← **Trends:** Since 2003, the prevalence of adequate physical activity among adults in the United States has increased from 47.3 percent to 52 percent in 2009. Michigan adults follow a similar trend, increasing from 47.4 percent in 2003 to 51 percent in 2009. In contrast, sufficient physical activity has dropped slightly among United States adolescents, grades 9-12, from 82.1 to 81.6 percent. Michigan data for grades 9-12, only available for 2007 and 2009, reflect a more drastic drop, from 78.1 to 74.7 percent.

→ **Health Disparities:** Gender and racial disparities in the prevalence of adequate physical activity have diminished slightly over the past several years, particularly among Black males. Black females continue to report a significantly lower prevalence of adequate physical activity when compared to the three other gender-race groups. In 2009, 52.6 percent of White males reported adequate physical activity, followed by Black males at 50.8 percent, White females at 50.3 percent, and Black females at 42.1 percent.

**Sufficient Physical Activity Among Michigan Adults, By Race and Gender, 2003-2009**



**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
 Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>  
 Youth Risk Behavior Surveillance System, CDC: <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>

**Links to Related Public Health Programs:**

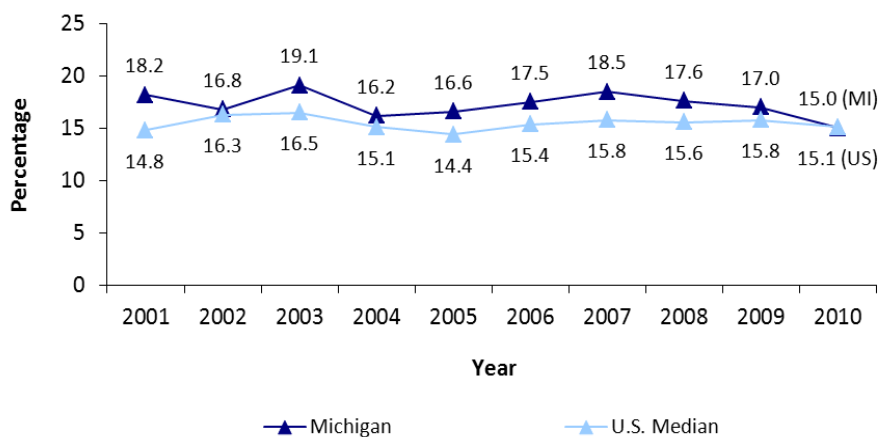
Michigan Nutrition, Physical Activity & Obesity Program: <http://www.michigan.gov/preventobesity>  
 Michigan Complete Streets: <http://michigancompletestreets.com/>  
 Safe Routes to School: <http://www.saferoutesmichigan.org/>  
 Healthy Communities: <http://www.michigan.gov/healthycommunities>

**Indicator Definition:** Percentage of adults consuming four (women), five (men), or more drinks on at least one occasion in the past month.

**Indicator Overview:**

- In 2005, more than 1.6 million hospitalizations and over 4 million emergency room visits nationally were for alcohol related conditions.
- Approximately 79,000 people die each year in the United States as a result of excessive alcohol use, making its use the third leading behavior related cause of death for the nation.
- Excessive alcohol consumption has both immediate consequences - such as miscarriage, stillbirth, birth defects, unintentional injuries, and violence - and long-term consequences, such as neurological problems; cardiovascular problems; social problems; and cirrhosis.

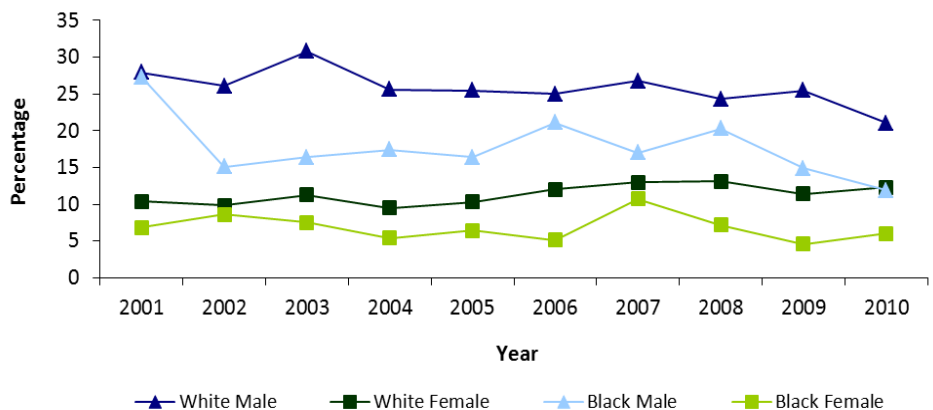
**Adults Reporting Binge Drinking in Past Month, Michigan and the United States, 2001-2010**



← **Trends:** When compared with the national median, Michigan consistently had a slightly higher prevalence of binge drinking, until 2010, when the two estimates were very similar. The prevalence of binge drinking has remained relatively stable over the past decade in Michigan and the United States. In 2010, 15.0 percent of Michigan adults reported binge drinking within the past month, compared to 15.1 percent of United States adults.

→ **Health Disparities:** In Michigan, White males have consistently reported higher prevalence rates of binge drinking when compared to Black males, White females, and Black females. The prevalence of binge drinking among Black males has decreased significantly over the past decade, but the prevalence of binge drinking among White males remains high. Both White and Black females have consistently reported lower rates of binge drinking.

**Michigan Adults Reporting Binge Drinking in Past Month, By Race and Gender, 2001-2010**



**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>

**Links to Related Public Health Programs:**

MDCH: Substance Abuse Prevention: [http://www.michigan.gov/mdch/0,1607,7-132-2941\\_4871\\_29888---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2941_4871_29888---,00.html)

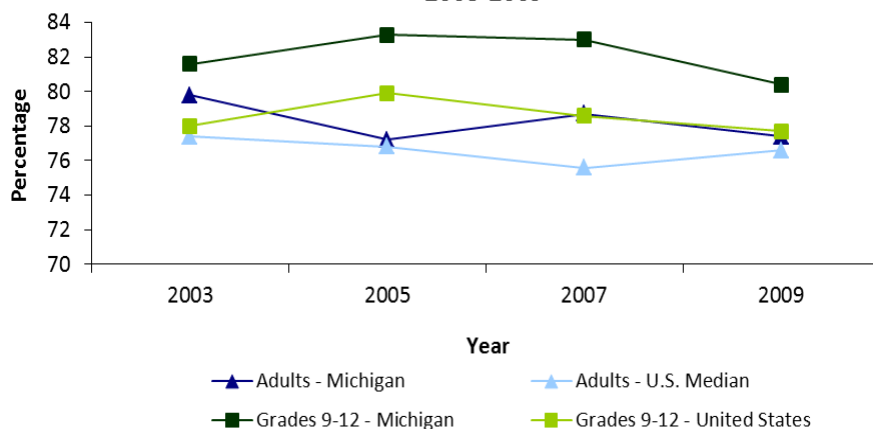
# Nutrition

**Indicator Definition:** Percentage of adults and children (grades 9-12) who report inadequate fruit and vegetable intake, based on current recommendations.

**Indicator Overview:**

- Good nutrition is necessary for a healthy, long life. Dietary factors are associated with cardiovascular disease, stroke, cancer and diabetes, which are estimated to cost society billions of dollars each year in healthcare and lost productivity. Good nutrition is especially important in early childhood development.

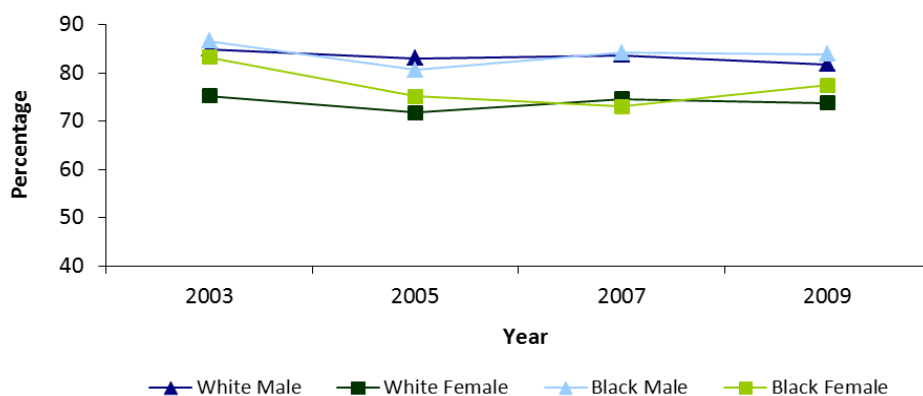
**Inadequate Fruit/Vegetable Consumption Among Adults and Children Grades 9-12, Michigan and the United States, 2003-2009**



← **Trends:** The percentage of adults who report inadequate fruit and vegetable consumption has remained relatively stable over the past ten years for both Michigan and the United States. In 2009, Michigan adults reported a slightly higher prevalence of inadequate fruit and vegetable consumption (77.4%) when compared to the nation as a whole (76.6%). The percentage of children grades 9-12 reporting inadequate fruit and vegetable consumption is consistently higher in Michigan. In 2009, 80.4 percent of Michigan adolescents reported inadequate consumption, while 77.7 percent of adolescents in the United States reported the same.

→ **Health Disparities:** In Michigan, White females have consistently reported lower prevalence rates of inadequate fruit and vegetable consumption when compared to White males, Black males, and Black females. Since 2003, the prevalence of inadequate fruit and vegetable consumption among Black females has decreased to a level comparable to that of White females. Both White and Black males continue to report substantially higher levels of inadequate fruit and vegetable consumption.

**Inadequate Fruit/Vegetable Consumption Among Michigan Adults by Race and Gender, 2003-2009**



**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
 Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>  
 Youth Risk Behavior Surveillance System, CDC: <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>

**Links to Related Public Health Programs:**

Building Healthy Communities: <http://www.michigan.gov/healthycommunities>  
 Obesity Prevention: <http://www.michigan.gov/preventobesity>  
 Michigan Food Policy Council: <http://www.michigan.gov/mfpc>  
 Centers for Disease Control and Prevention: <http://www.cdc.gov/nutrition>  
 Healthy Kids, Healthy Michigan: <http://www.americanheart.org/healthykidshealthymichigan>

# Health-Related Behaviors - 5

## Overweight and Obesity - Adults

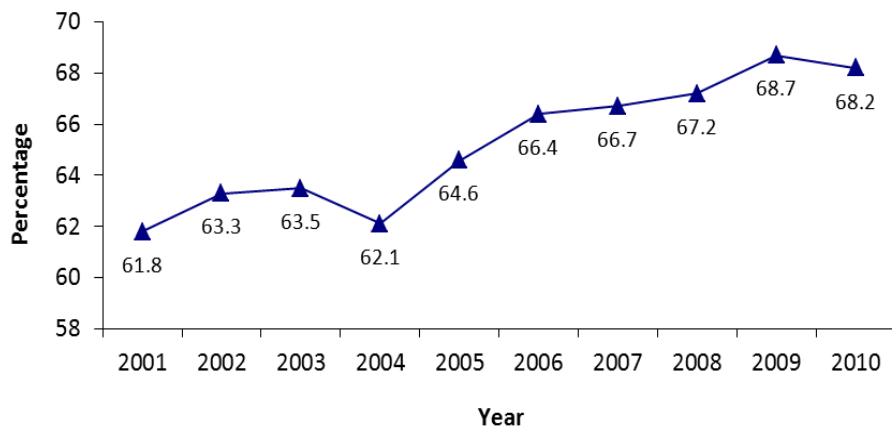
**MICHIGAN 2011**  
**CRITICAL**  
**HEALTH**  
**INDICATORS**

**Indicator Definition:** Percentage of adults ages 20 and older who are overweight or obese based on body mass index.

**Indicator Overview:**

- Obesity is one of today’s most pressing public health issues. The rates of obesity (defined as having a body mass index equal to or greater than 30) have risen dramatically over the past 30 years. Nationwide, obesity prevalence doubled among adults between 1980 and 2004, from 15 percent to 32.2 percent.
- Obesity has been shown to be associated with several poor health outcomes, including: hypertension, osteoarthritis, dyslipidemia, Type 2 Diabetes, coronary heart disease, stroke, gallbladder disease, sleep apnea, respiratory problems, and some cancers (e.g., endometrial, breast, and colon).

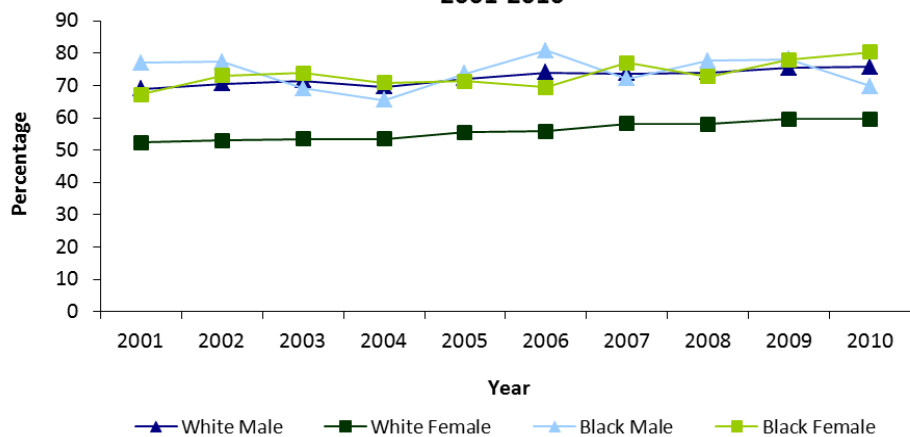
**Prevalence of Overweight and Obesity Among Michigan Adults 20 Years and Older, 2001-2010**



← **Trends:** The prevalence of overweight and obesity has been increasing in Michigan over the past decade. In 2009, Michigan reported the tenth highest overweight and obesity rate in the nation. Though 2010 showed a decrease in overweight and obesity among Michigan adults aged 20 years and older, the percentage remains very high and contributes to Michigan’s higher rates of diabetes and cardiovascular diseases.

→ **Health Disparities:** In Michigan, both White males and Black females have consistently reported higher prevalence rates of overweight and obesity when compared to Black males and White females. White females have reported the lowest overweight and obesity rates over the past decade. Furthermore, Black males reported a lower rate than White males in 2010 for the first time since 2007. In 2010, Black females reported the highest overweight and obesity rate at 80.4 percent.

**Prevalence of Overweight and Obesity Among Michigan Adults 20 Years and Older by Race and Gender, 2001-2010**



**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
 Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>

**Links to Related Public Health Programs:**

MDCH: Nutrition, Physical Activity and Obesity Prevention: <http://www.michigan.gov/preventobesity>  
 CDC: Overweight & Obesity: <http://www.cdc.gov/obesity/index.html>

# Health-Related Behaviors - 6

## Overweight and Obesity - Children

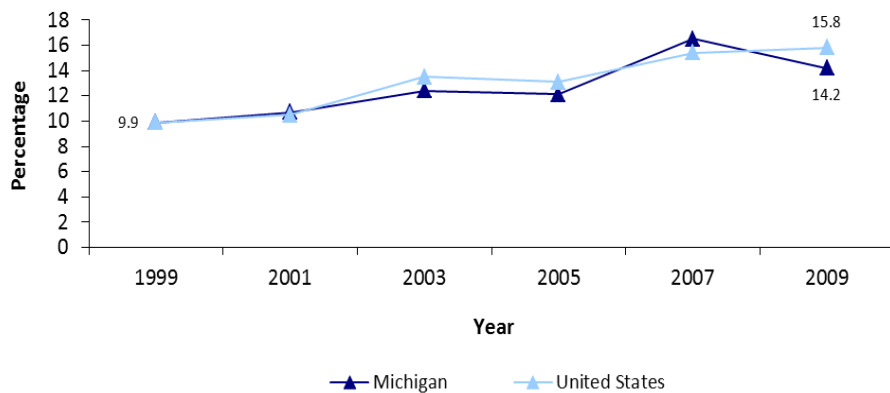
**MICHIGAN 2011**  
**CRITICAL**  
**HEALTH**  
**INDICATORS**

**Indicator Definition:** Percentage of children who are overweight or obese based on body mass index.

**Indicator Overview:**

- The prevalence of obese children has more than tripled over the past 30 years.
- Adolescence is a particularly significant timeframe for weight maintenance, as some studies suggest that as many as 80 percent of individuals who are overweight during adolescence become obese adults.
- Overweight and obesity are associated with a number of potentially serious health conditions in children, such as depression, type 2 diabetes, and sleep apnea.

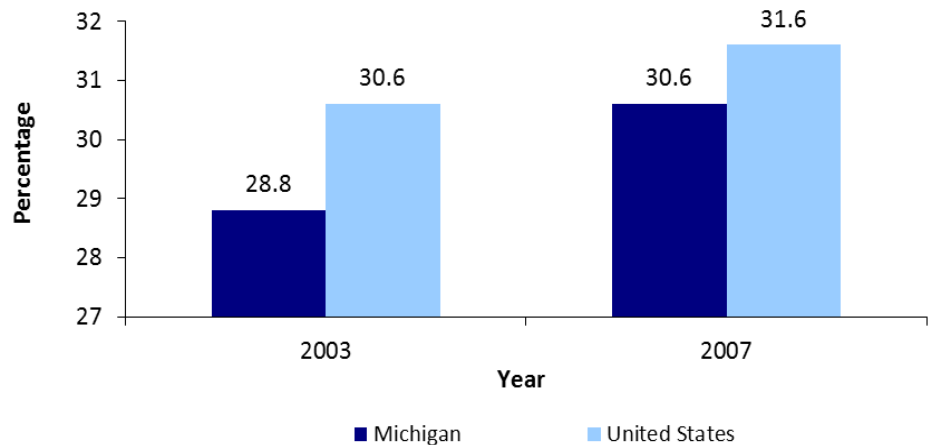
**Prevalence of Overweight Among Children Grades 9-12, Michigan and the United States, 1999-2009**



← **Trends:** The prevalence of self-reported overweight status among adolescents has been increasing in Michigan and the United States over the past decade. The percentage of overweight adolescents in Michigan has remained fairly steady with the percentage of adolescents in the United States, climbing above the national average in 2007 and dropping below the national average in 2009.

→ **Trends:** The rate of overweight or obese children in Michigan has risen almost two percentage points in four years, though it should be noted that the CDC’s definition of overweight versus obese also changed in this timeframe.\* The percentage of overweight or obese children in the United States also slightly increased. Michigan’s rate is only somewhat lower than the national rate of overweight or obese children. Data for 2011 will be collected until March 2012.

**Prevalence of Overweight or Obesity Among Children Ages 10-17, Michigan and the United States, 2003 & 2007**



**Links to Other Sources of Information:**

Youth Risk Behavior Surveillance System, CDC: <http://www.cdc.gov/HealthyYouth/yrbs/index.htm>  
 \*National Survey of Children’s Health, CDC: <http://www.cdc.gov/nchs/slait/nsch.htm>

**Links to Related Public Health Programs:**

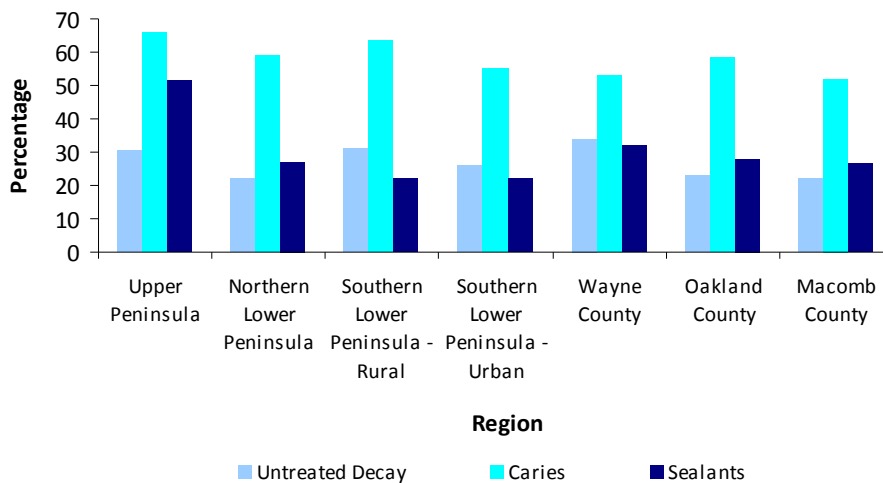
MDCH: Nutrition, Physical Activity and Obesity Prevention: <http://www.michigan.gov/preventobesity>  
 CDC: Overweight & Obesity: <http://www.cdc.gov/obesity/index.html>

**Indicator Definition:** Percentage of third grade children with dental decay, caries, and sealants.

**Indicator Overview:**

- Tooth decay affects children in the United States more than any chronic or infectious disease.
- Tooth decay is preventable in children through a combination of dental sealants and fluoride.
- Untreated tooth decay in children may lead to problems such as eating, speaking, playing and learning due to the pain and infections that can occur.

**Percentage of Michigan Third Grade Children with Dental Decay, Caries, and Sealants, 2009-2010**



← **Trends:** In Michigan, the Upper Peninsula is the region with the highest percentage of children who have received sealants. Wayne County is the region with the highest percentage of children who have untreated decay and second lowest region with percentage of children with caries.

**Links to Other Sources of Information:**

National Oral Health Surveillance System, CDC: <http://www.cdc.gov/nohss/>  
 Michigan Oral Health, MDCH: [http://www.michigan.gov/mdch/0,1607,7-132-2942\\_4911\\_4912\\_6226---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2942_4911_4912_6226---,00.html)

**Links to Related Public Health Programs:**

MDCH: Community Water Fluoridation Program: [http://www.michigan.gov/mdch/0,4612,7-132-2942\\_4911\\_4912\\_6226-112595--,00.html](http://www.michigan.gov/mdch/0,4612,7-132-2942_4911_4912_6226-112595--,00.html)  
 MDCH: SEAL! Michigan Dental Sealant Program: [http://www.michigan.gov/mdch/0,4612,7-132-2942\\_4911\\_4912\\_6226-112595--,00.html](http://www.michigan.gov/mdch/0,4612,7-132-2942_4911_4912_6226-112595--,00.html)  
 CDC: Oral Health: <http://www.cdc.gov/OralHealth/index.htm>

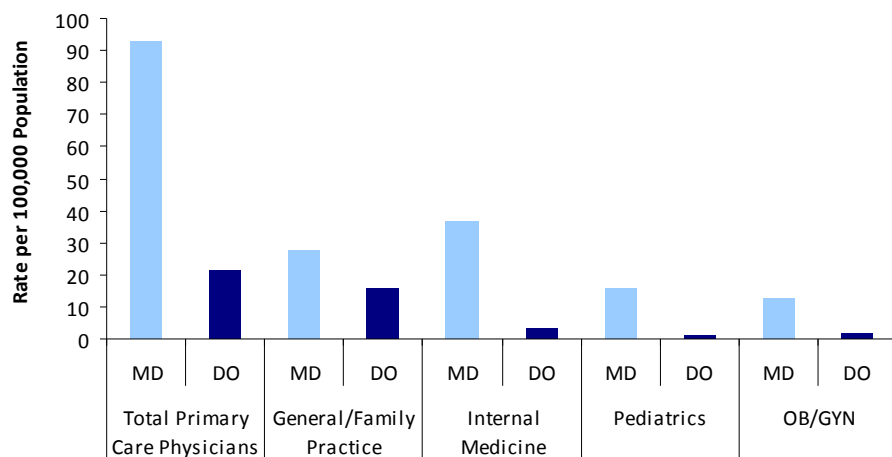


**Indicator Definition:** Rate of primary care physicians per specialty in Michigan.

**Indicator Overview:**

- Michigan and the United States will soon be presented with serious shortages of primary care physicians as an increased number of medical students are choosing non-primary care specialties as opposed to primary care, and existing primary care physicians are leaving the workforce.
- Nearly one in five Americans lacks sufficient access to primary care due to physician shortages.
- Physicians employed by the federal government are not included in the rates presented below. A federal physician is defined as full-time employment by the federal government, including the Army, Navy, Air Force, Veterans Administration, the Public Health Service, and other federally funded agencies.

**Primary Care Physicians (MD - 2008, DO - 2007) and Their Specialities in Michigan**



**←Trends:** There are more MD primary care physicians than DO primary care physicians in Michigan. A higher percentage of MDs are internal medicine subspecialists among all primary care subspecialists. A higher percentage of DOs are General/Family Practice subspecialists among all DO primary care sub-specialists.

**Links to Other Sources of Information:**

Area Resource File: HRSA: <http://www.arf.hrsa.gov/>

**Links to Related Public Health Programs:**

MDCH: Michigan Healthcare Workforce Center:

<http://www.michigan.gov/healthcareworkforcecenter/0,1607,7-231-43178-150217--,00.html>

LARA: Health Careers in Michigan: <http://www.michigan.gov/healthcareers>

## Health Systems - 2 Veteran Access

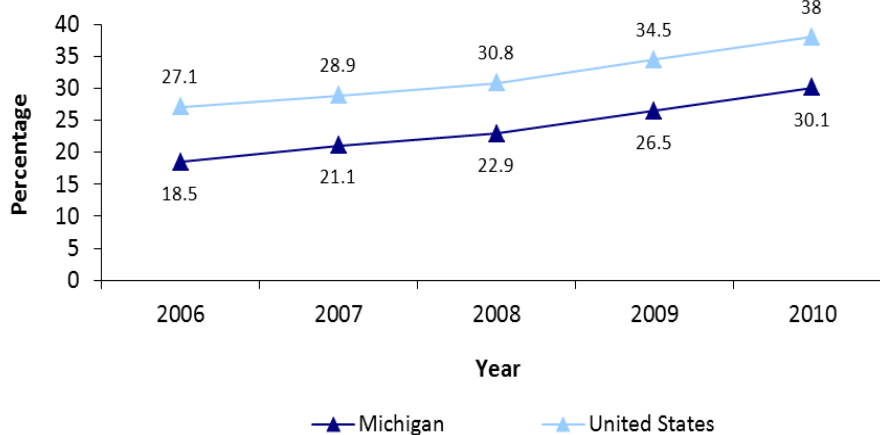
**MICHIGAN 2011  
CRITICAL  
HEALTH  
INDICATORS**

**Indicator Definition:** Percent of veterans who are currently enrolled in Veterans Administration Health Care. Percent of unenrolled veterans who report understanding their entitled Veterans Administration Health Care benefits.

**Indicator Overview:**

- Individuals who served in the active military and were not recipients of a dishonorable discharge may be eligible for healthcare through the United States Veterans Administration.
- Certain categories of individuals – such as former prisoners of war, recipients of a Purple Heart, or catastrophically disabled persons – may be granted enhanced eligibility.
- There are an estimated 704,000 veterans living in Michigan as of September 2010.

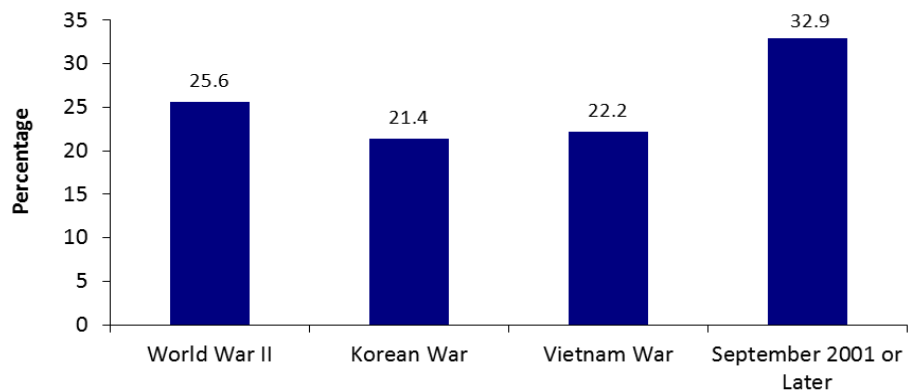
**Percentage of Veterans Enrolled in Veterans Administration Health Care, 2006-2010**



← **Trends:** The pattern of growth in veteran healthcare enrollment in Michigan closely parallels that of the United States, though United States enrollment is consistently higher. Enrollment has grown in Michigan by nearly 12 percentage points from 2006 to 2010.

→ **Health Disparities:** A nationwide survey revealed that older, unenrolled veterans are generally not as likely to understand their entitled Veterans Administration health benefits as those who served in September 2001 or later. Only 21.4 percent of those who served in the Korean War era confirmed understanding of their benefits, while 32.9 percent of those who served on or after September 2001 reported understanding.

**Unenrolled Veterans in the United States Who Understand Their Entitled Veterans Administration Health Care Benefits**



**Links to Other Sources of Information:**

United States Department of Veterans Affairs, National Center for Veterans Analysis and Statistics: <http://www.va.gov/vetdata/>  
Michigan Department of Military and Veterans Affairs: <http://www.michigan.gov/dmva>

**Links to Related Public Health Programs:**

Applying for Veterans Administration healthcare benefits: <http://www.va.gov/healthbenefits/apply/>  
Veterans Administration health facilities in Michigan: <http://www2.va.gov/directory/guide/state.asp?State=MI&dnum=ALL>

# Health Systems - 3 Healthcare Expenditures

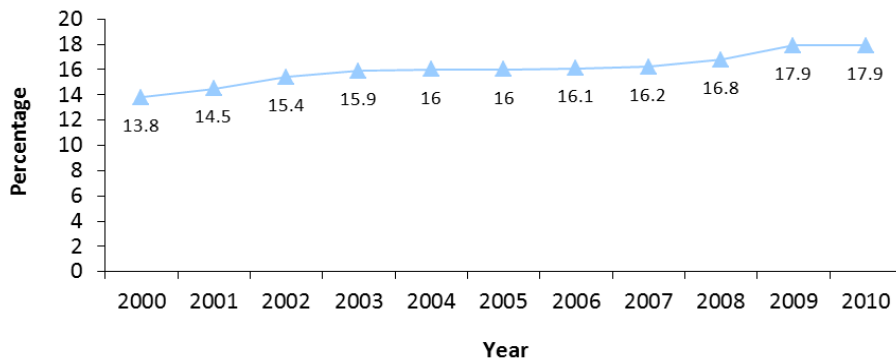
**MICHIGAN 2011  
CRITICAL  
HEALTH  
INDICATORS**

**Indicator Definition:** Per capita healthcare expenditures in the United States. Percent of healthcare expenditures by service category.

**Indicator Overview:**

- Per capita health spending is used to track expenditures over time within the United States and is one of the most widely used comparative indicators with other countries.
- According to the Kaiser Family Foundation State Health Facts profiles, Michigan’s per capita health expenditures in 2009 were \$6,618 per person, which is \$197 (or 3 percent) per person less per capita than the US expenditures.
- The breakout of expenditures by service for 2009 shows that Michigan and the U.S. tend to be within 1-2 percent of each other when comparing each service as a percent of the whole.

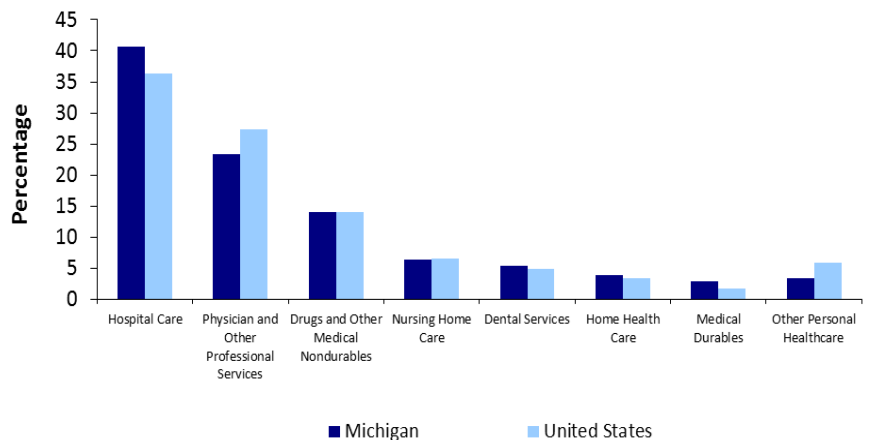
**National Health Expenditures as a Percentage of Gross Domestic Product, United States, 2000-2009**



← **Trends:** Healthcare expenditures have been increasing over time. In the 1960s, the total expenditure only amounted to about 5 percent of the United States Gross Domestic Product (GDP). In 2002, annual healthcare expenditures surpassed 15 percent of the GDP and reached nearly 18 percent in 2009 and 2010.

→ **Expenditures by Service:** Expenditures by Service in Michigan and the United States as a percent of the whole are similar. In 2009, total expenditures for the United States were over two trillion dollars, while expenditures in Michigan surpassed 64 billion. The percentages of expenditures for hospital care, drugs and other medical nondurables, dental care, home healthcare, and medical durables are higher in Michigan than they are in the United States.

**Percent of Healthcare Expenditures by Service, Michigan and the United States, 2009**



**Links to Other Sources of Information:**

Kaiser Foundation Profiles: Michigan – Health Costs & Budgets: <http://www.statehealthfacts.org/profileind.jsp?cat=5&rgn=24&cmprgn=1>

CMS: National Health Expenditures Data:

[http://www.cms.gov/NationalHealthExpendData/05\\_NationalHealthAccountsStateHealthAccountsResidence.asp#TopOfPage](http://www.cms.gov/NationalHealthExpendData/05_NationalHealthAccountsStateHealthAccountsResidence.asp#TopOfPage)

**Links to Related Public Health Programs:**

MDCH: Health Care Coverage: <http://www.michigan.gov/mdch/0,1607,7-132-2943---,00.html>

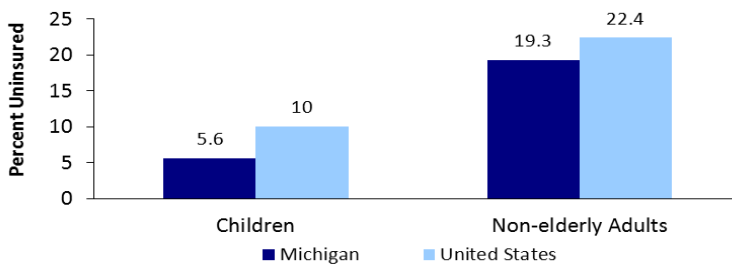
MDCH: Help finding Health Care: [http://www.michigan.gov/mdch/0,1607,7-132-2943\\_52115---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2943_52115---,00.html)

**Indicator Definition:** Percentage of adults without health coverage via insurance or entitlement. Average monthly enrollees in Michigan’s Medicaid program.

**Indicator Overview:**

- Health insurance coverage is an important determinant of access to care. A 2009 Institute of Medicine (IOM) literature review found that access to healthcare services improved for children and they were less likely to experience unmet healthcare needs when they acquired health insurance. The same IOM literature review found that adults without health insurance are less likely to receive effective clinical preventive services, and that among chronically ill adults, those without health insurance were more likely to delay or forgo needed healthcare and medications. In Michigan, efforts to expand healthcare coverage primarily focus on persons aged 64 and younger; those aged 65 and older are typically insured by Medicare.
- Adults ages 18-34 years are almost twice as likely to be uninsured (24.4%) as those ages 35-64 years (13.3%). Among the non-elderly, Hispanics are most likely to be uninsured at 21.9 percent, followed closely by Blacks at 19.7 percent; Whites have an uninsured rate of 12.5 percent. Single residents without kids are most likely to be uninsured at 29.1 percent while individuals from families that include married residents with kids are least likely to be uninsured at 7 percent.

**Uninsured Children and Non-elderly Adults, Michigan and United States, 2009**



← **State-National Comparison:** As indicated on the chart to the left, Michigan children nearly twice as likely to be insured as children in the United States. The percentage of uninsured non-elderly Michigan residents has risen over time. In 2006-2008, 12.7 percent of non-elderly residents were uninsured, while in 2007-2009, 13.9 percent of non-elderly residents were uninsured. This is a greater increase in uninsured percentage than in the United States over the same period.

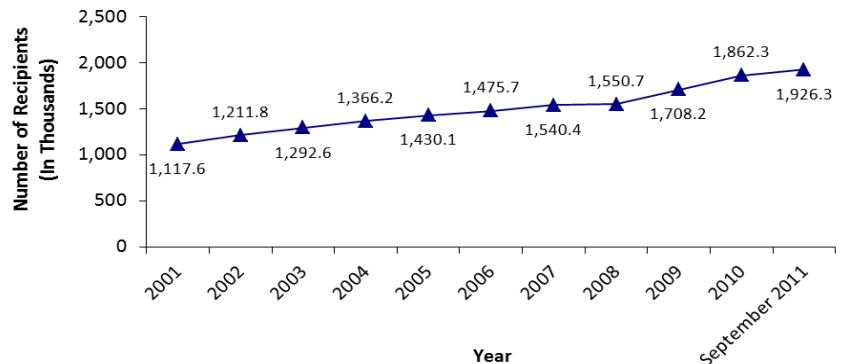
← **Trends:** Although Michigan’s rate of uninsured has increased, the proportion of residents without health insurance coverage in Michigan has been consistently lower than the national average for non-elderly adults since 1987, the first year when comparable data were made available.

**Percent Uninsured Non-elderly Residents**

	2006-2008	2007 – 2009
Michigan	12.7%	13.9%
United States	17.5%	17.8%

→ **Additional Information:** As of September 2011, over 19 percent of Michigan's population (1,926,323 residents) is Medicaid eligible (enrolled in Medicaid). Between 2001 and September 2011, Michigan has seen a 72 percent increase in the number of Medicaid eligibles. The increase in Medicaid enrollment and the increase in uninsured correspond with a decrease in employer-based health insurance coverage. From 2000 to 2009, the percent of the non-elderly population with employer-based health insurance coverage dropped from 76.7 percent to 65.1 percent.

**Average Monthly Number of Medicaid Recipients in Michigan, 2001-September 2011**



**Links to Other Sources of Information:**

MDCH, Uninsured Reports and Briefs: [http://www.michigan.gov/mdch/0,1607,7-132-2944\\_5327-17224--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2944_5327-17224--,00.html)

MDCH, Other Links of Interest on Health Insurance Statistics: [http://www.michigan.gov/mdch/0,1607,7-132-2943\\_37434-128490--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2943_37434-128490--,00.html)

**Links to Related Public Health Programs:**

MDCH, Medicaid Program: [http://www.michigan.gov/mdch/0,1607,7-132-2943\\_4860--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2943_4860--,00.html)

# Health Systems - 5

## Access to Healthcare

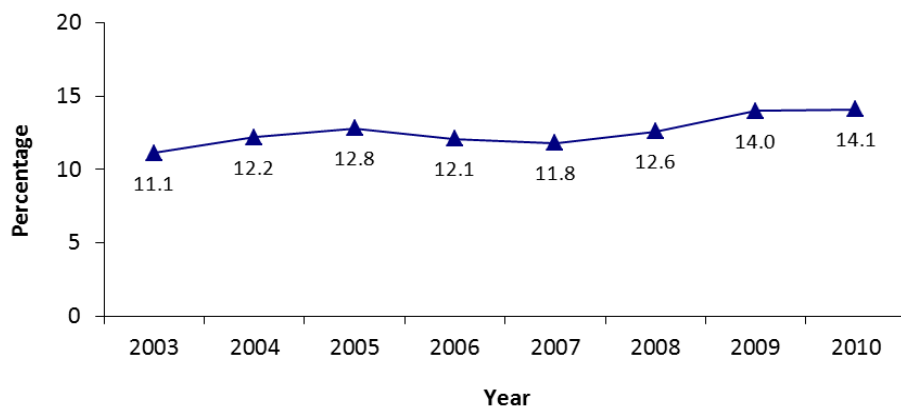
MICHIGAN 2011  
CRITICAL  
HEALTH  
INDICATORS

**Indicator Definition:** Percentage of adults who did not receive or delayed receiving needed medical services due to cost.

**Indicator Overview:**

- Unmet needs is an indicator commonly used to portray problems in access to healthcare services including lack of health insurance and limited availability of providers.
- Unmet needs is also associated with greater emergency room use and disadvantaged individuals delay care for conditions that are associated with longer hospital stays and poorer health outcomes.

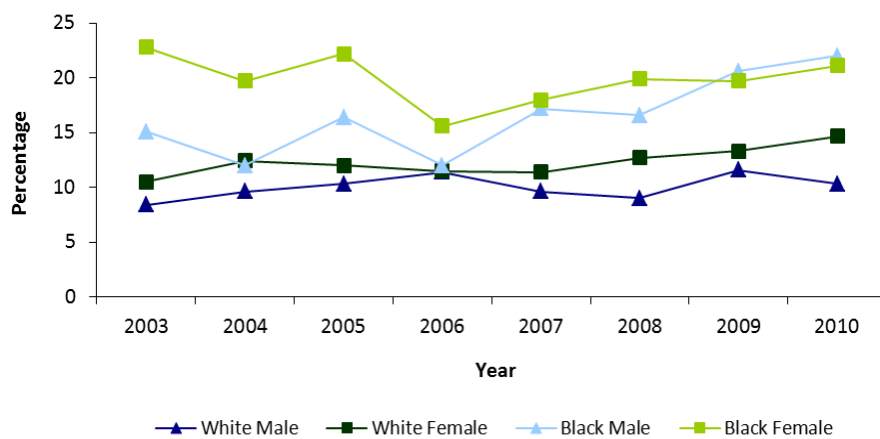
**Percentage of Michigan Adults Who Have Had No Healthcare Access in the Past 12 Months Due to Cost, 2003-2010**



← **Trends:** The percentage of Michigan adults who reported not going to a doctor when they needed to in the past 12 months due to cost has increased significantly over the past eight years. The increase corresponds with a significant percentage of adults reporting no healthcare coverage. As healthcare reform is implemented and more adults have access to insurance, a drop in these numbers may be expected.

→ **Health Disparities:** Black females have consistently reported higher prevalence rates of cost related healthcare access barriers when compared to White males and females. Recently, the prevalence of cost-prevented care among Black males has increased to similar levels of that of Black females. White males and females report similar prevalence rates of cost-related healthcare access barriers, though in 2010 the number of White males who reported no access dropped, while the number of White females reporting the same continued to rise.

**Percentage of Michigan Adults Who Have Had No Healthcare Access in the Past 12 Months Due to Cost, By Race and Gender, 2003-2010**



**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>  
Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>

**Links to Related Public Health Programs:**

MDCH: Help finding Health Care: [http://www.michigan.gov/mdch/0,1607,7-132-2943\\_52115--,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2943_52115--,00.html)

**Indicator Definition:** Percentage of adults who are up-to-date with age-appropriate screening services.

**Indicator Overview:**

- According to the CDC, 7 out of 10 deaths are due to chronic disease; heart disease, cancer, and stroke account for more than 50 percent of all deaths each year. Preventive screenings can help catch chronic diseases at an earlier stage, which increases longevity with the disease and allows the patient to set up a plan with the provider to manage the disease on a long-term basis.

**Links to Other Sources of Information:**

Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>

Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>

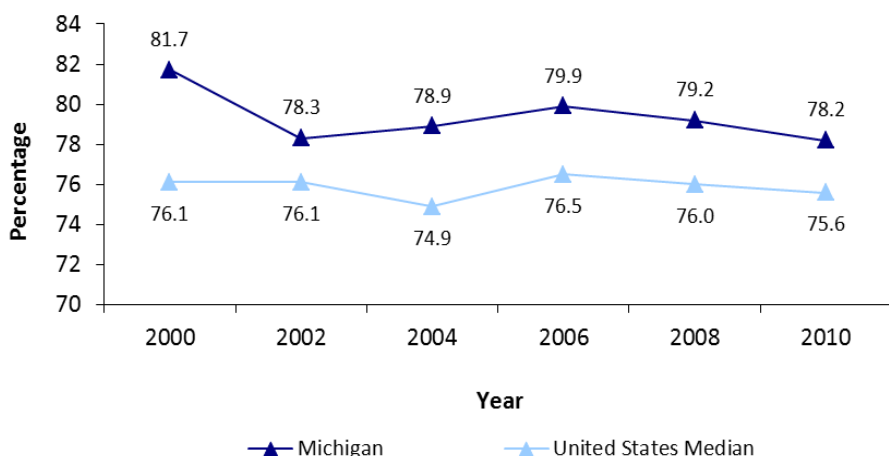
**Links to Related Public Health Programs:**

MDCH: Physical Health & Prevention Programs: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955---,00.html)

CDC: Chronic Disease Prevention & Health Promotion: <http://www.cdc.gov/chronicdisease/index.htm>

**Breast Cancer Screening**

**Had a Mammogram in the Past Two Years Among Women Aged 40 Years and Older, Michigan and the United States, 2000-2010**

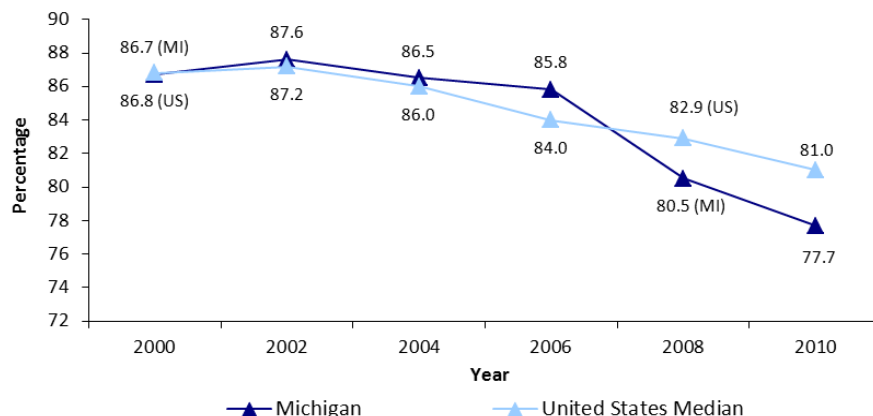


← **Trends:** The percentage of women aged 40 years and older who have had a mammogram in the past two years has decreased slightly over the past decade for both Michigan and the United States. In 2010, Michigan women aged 40 years and older (78.2%) reported a slightly higher rate of mammography within the past two years when compared to the nation as a whole (75.6%).

**Cervical Cancer Screening**

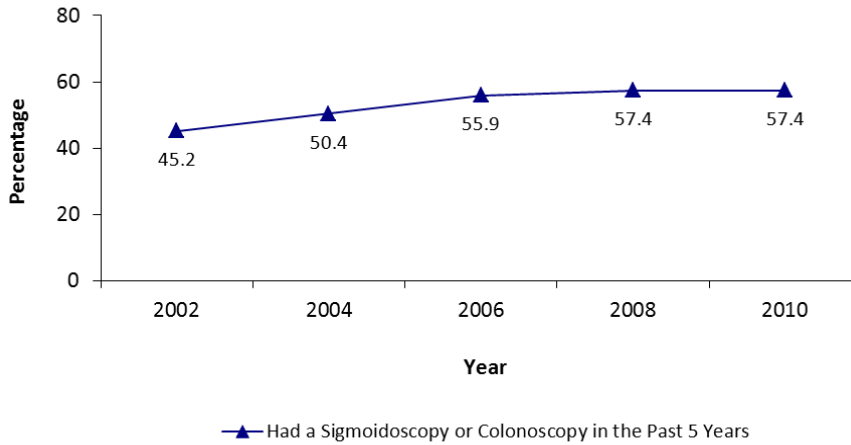
→ **Trends:** The prevalence of pap testing among women aged 18 years and older has declined slightly over the past decade both at the state and national levels. In 2010, the pap testing rate among Michigan women aged 18 years and older (77.7%) was lower than the United States rate (81%) for the second consecutive year.

**Had a Pap Test in the Past Three Years Among Women Aged 18 Years and Older, Michigan and the United States, 2000-2010**



## Colorectal Cancer Screening

**Colorectal Cancer Screening Among Michigan Adults Aged 50 Years and Older, 2002-2010**

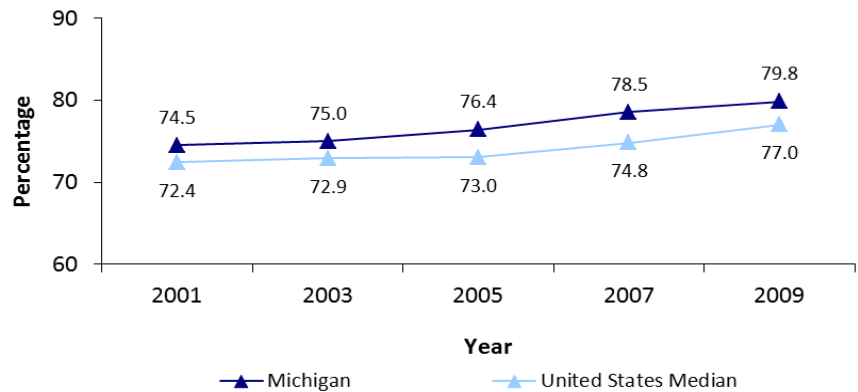


← **Trends:** The utilization of endoscopy-based colorectal cancer screening among Michigan adults aged 50 years and older increased over the past decade. The prevalence of those having a sigmoidoscopy or colonoscopy in the past five years has increased, from 45.2 percent to 57.4 percent, where it has remained for two consecutive years.

## Cholesterol Check

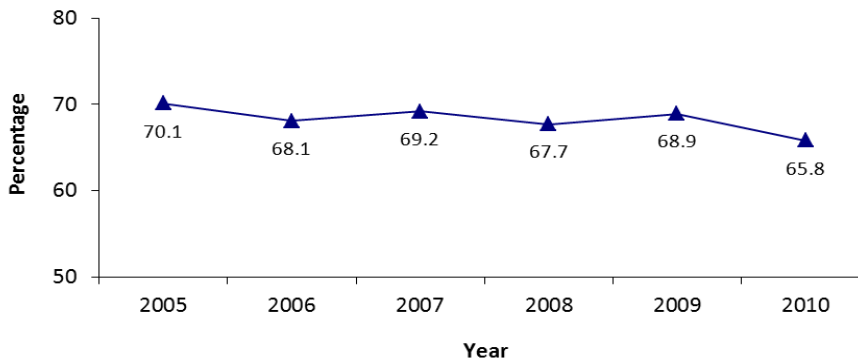
→ **Trends:** The prevalence of having had cholesterol screening within the past five years in Michigan and the United States has steadily increased over the past decade. In 2009, 79.8 percent of Michigan adults reported having had their cholesterol checked within the past five years, compared to 77 percent of United States adults.

**Had Cholesterol Checked Within the Past Five Years, Michigan and the United States, 2001-2009**



## Annual Checkup

**Percentage of Michigan Adults Who Have Had a Routine Checkup Within the Past Year, 2005-2010**



← **Trends:** The percentage of Michigan adults who have had a routine checkup in the past year has dropped nearly 5 percentage points over the past 5 years. This decrease is concurrent with the rise in adults who have not accessed healthcare in the past 12 months due to cost. In 2010, 65.8 percent of adults had a routine checkup in the past year.

# Pediatric and Adult Immunizations

**Indicator Definition:** Percentage of children aged 19–35 months who are up to date with the 4:3:1:3:3:1 series. Percentage of adults who are up-to-date with influenza and pneumococcal vaccinations.

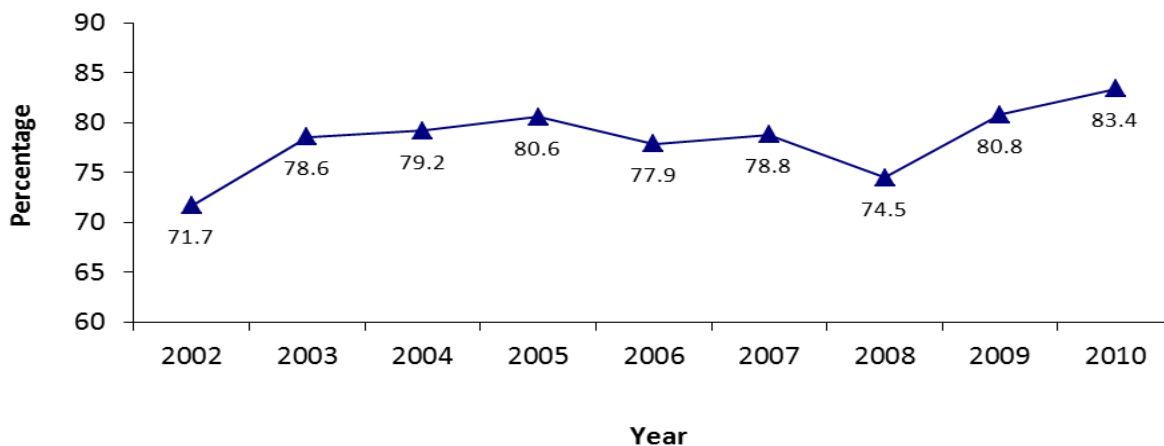
**Indicator Overview:**

- At the beginning of the 20th century, outbreaks of infectious diseases were frequent in the United States. The development of vaccines has resulted in a significant drop in incidence for many of these diseases. Because historically many vaccine-preventable diseases primarily affected young children and infants, many immunizations are given early in life. High rates of immunization are important to protect individuals and prevent outbreaks of disease in communities.
- Vaccination against influenza is another cost- and health-enhancing measure. The CDC notes, “Influenza vaccination is the most effective method for preventing influenza virus infection and its potentially severe complications”. Rates of serious illness and death from the influenza virus infection are highest among children less than 2 years old, people 65 and older and those with serious medical conditions.

## Pediatric Immunizations

- The ultimate goal is to eliminate vaccine-preventable diseases or, at a minimum, reduce the number of serious vaccine-preventable diseases occurring in Michigan. Childhood and adolescent immunizations provide protection against: Diphtheria, Tetanus, Pertussis (whooping cough), Polio, Measles, Mumps, Rubella, *Haemophilus influenzae* type B, Hepatitis B, Varicella (chickenpox), Pneumococcal disease, Hepatitis A, Rotavirus, Human Papillomavirus (HPV), Influenza (flu), and Meningococcal disease. Prior to 1995, immunization levels in Michigan were measured by the percentage of children who, at two years of age, had received 4 doses of a vaccine containing diphtheria, tetanus and pertussis components (DTP or DTaP), three doses of polio vaccine, and one dose of a vaccine containing measles, mumps and rubella components (4:3:1). In 1995, three doses of *Haemophilus influenzae* type B vaccine (Hib) and three doses of Hepatitis B vaccine (Hep B) were added to the list of vaccines used to assess the extent to which Michigan’s children were appropriately immunized (4:3:1:3:3). One dose of varicella vaccine and four doses of pneumococcal conjugate vaccine are the most recent vaccines that have been added to the National Immunization Survey (NIS), creating a current standard of 4:3:1:3:3:1:4. The data below displays the 4:3:1:3:3:1 series as nine years of data exist for the series, as opposed to the 4:3:1:3:3:1:4 series which only has four years of data.

**Percent of Michigan Children Aged 19-35 Months Immunized with the 4:3:1:3:3:1 Series, 2002-2010**



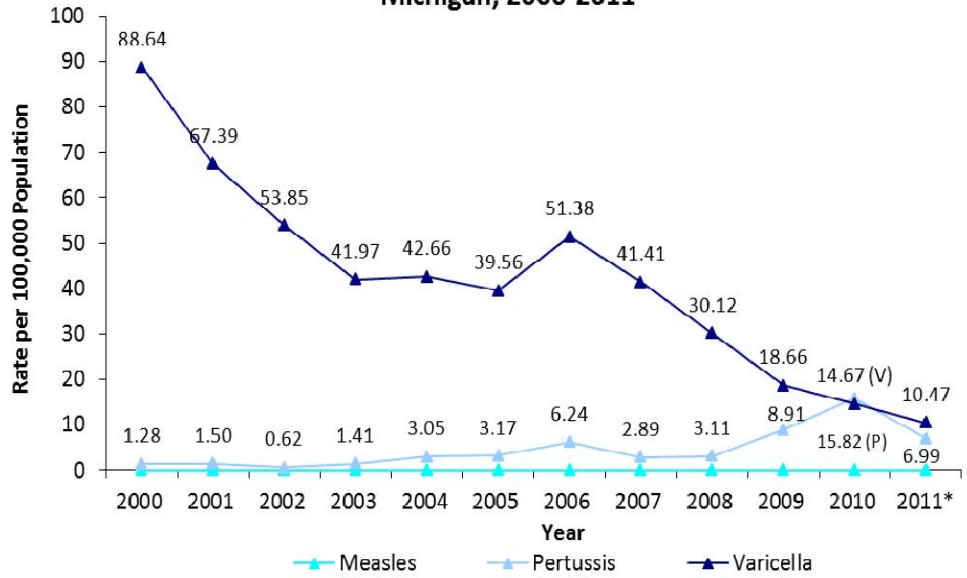
**Trends:** The percent of Michigan children immunized with the 4:3:1:3:3:1 series has increased from 71.7 percent in 2002 to 83.4 percent in 2010. There was a shortage of the Hib vaccination from 2007 to 2009, which likely accounts for the decrease observed in the 4:3:1:3:3:1 series in 2008.



**→ Vaccine-Preventable**

**Diseases:** From 2000 to 2011, the rate of pertussis disease in Michigan increased from 1.28 per 100,000 people (127 cases) to 6.99 per 100,000 people (691 cases). Varicella disease incidence in Michigan dropped from a rate of 88.64 per 100,000 people (8,809 cases) in 2000 to a rate of 10.5 per 100,000 people (1,035 cases) in 2011. In 2011, there were 2 cases of measles in Michigan; however, there were no cases in 2009 or 2010. Nationally, there were 63 cases of measles in 2010.

**Reported Incidence of Pertussis, Varicella, and Measles, Michigan, 2000-2011**

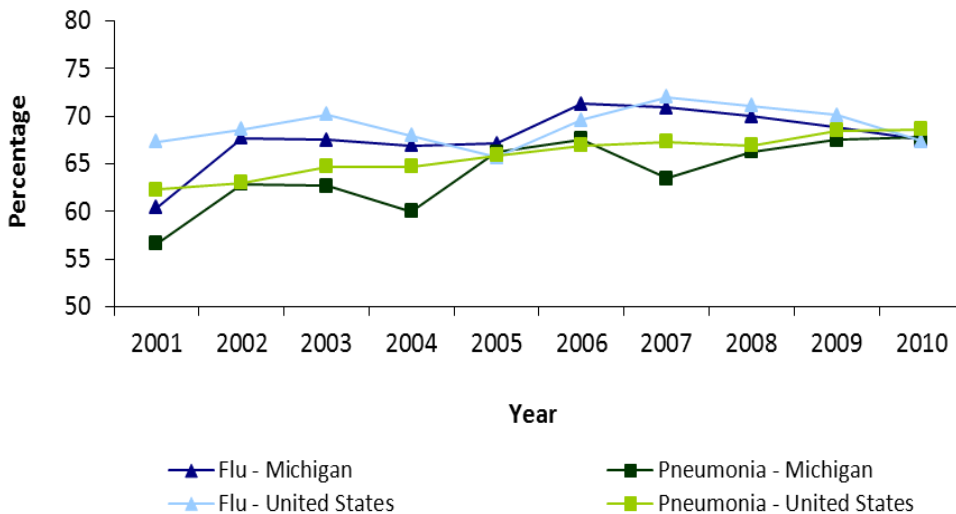


\*Please note: 2011 data are provisional.

**Adult Immunizations**

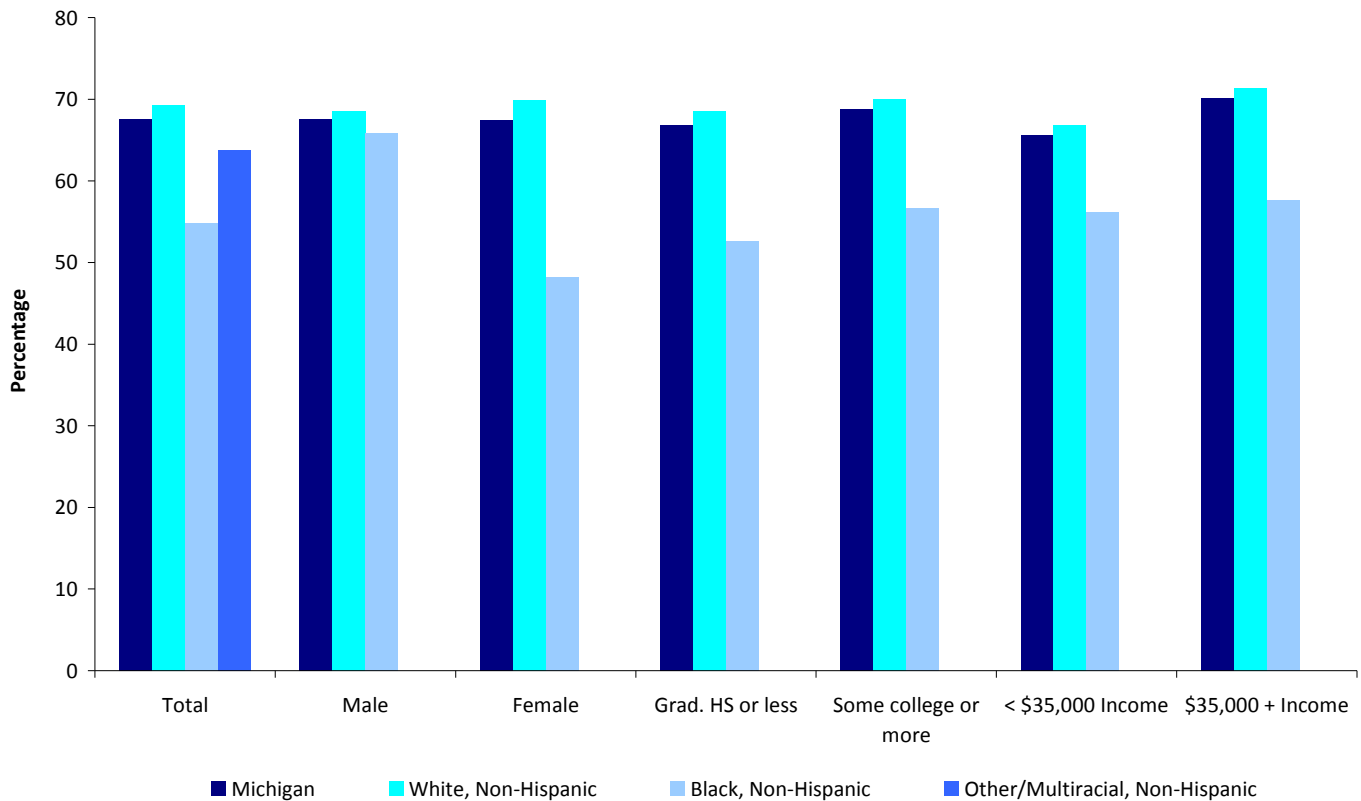
- Vaccination against influenza and pneumonia is a cost- and health-enhancing measure. Influenza vaccine is the single best way to prevent the flu. Rates of serious illness and death from the influenza virus are highest among children less than 2 years old, people 65 years and older, and those with serious medical conditions. Flu seasons are unpredictable and can be severe. Over a period of 30 years, between 1976 and 2006, national estimates of annual flu-associated deaths range from a low of about 3,000 to a high of 49,000 people. Similarly, pneumococcal disease can be fatal. In some cases, it can result in long-term problems, such as brain damage, hearing loss, and limb loss.

**Flu and Pneumonia Vaccination Among Adults Aged 65 and Older, Michigan and the United States, 2001-2010**



**←Trends:** Among adults aged 65 years and older, the percentage receiving a flu vaccination has varied over the past ten years for both Michigan and the nation. In 2010, Michigan adults aged 65 years and older reported the same flu vaccination rate (67.5%) as the nation as a whole. Michigan adults aged 65 years and older reported a slightly lower pneumococcal vaccination rate (67.8%) than the United States (68.8%).

### Had Flu Vaccine in Past Year Among Michigan Adults 65 Years and Older, By Race and Ethnicity, 2010



**Health Disparities:** There are some significant health disparities that exist among adults 65 years and older who have received the flu vaccine in the past year. In 2010, 69.3 percent of white/non-Hispanic MI residents received their flu vaccine, while only 54.8% of black/non-Hispanic and 63.8 percent of other/multiracial/non-Hispanic Michigan residents 65 years and older received their flu vaccine. Further, flu vaccination rates are higher among white/non-Hispanic adults who graduated high school or less (68.5%) than black/non-Hispanic adults (52.6%) of the same educational background.

**Links to Other Sources of Information:**

- Centers for Disease Control and Prevention: <http://www.cdc.gov/vaccines>
- Michigan Behavioral Risk Factor Surveillance System: <http://www.michigan.gov/brfs>
- Behavioral Risk Factor Surveillance System Survey Data, CDC: <http://www.cdc.gov/brfss>
- Michigan Department of Community Health (MDCH), Division of Immunization: <http://www.michigan.gov/immunize>

**Links to Related Public Health Programs:**

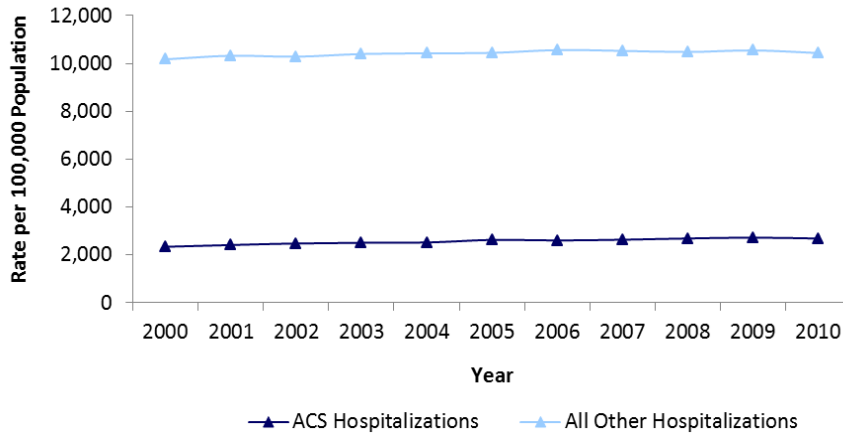
- MDCH Adolescent Immunization Website: <http://www.michigan.gov/teenvaccines>
- MDCH Hepatitis B Website: <http://www.michigan.gov/hepatitisb>
- MDCH Flu Website: <http://www.michigan.gov/flu>
- Michigan Care Improvement Registry (MCIR): <http://www.mcir.org>

**Indicator Definition:** Hospitalization rate for ambulatory-care-sensitive conditions (ACSC).

**Indicator Overview:**

- Ambulatory Care Sensitive (ACS) hospitalizations such as asthma, diabetes, or dehydration are hospitalizations for conditions where timely and effective ambulatory care can decrease hospitalizations by preventing the onset of an illness or condition, controlling an acute episode of an illness, or managing a chronic disease or condition.
- Hospitalization for ACS conditions may indicate problems with access to ambulatory care, primary care resource shortage, poor-quality outpatient management or monitoring, lack of the patient education needed for appropriate self-management, patient preference not to follow treatment recommendations, and/or other factors that create barriers to obtaining timely and effective care.
- According to the CDC, preventable hospitalization from ACS increased from 5.9 percent of all hospitalization in 1980 to 11.5 percent in 1998. Since 1998, the national annual average for ACS hospitalizations remains around twelve percent of all hospitalizations (3.1 million hospitalizations).

**Hospitalization Rates in Michigan, 2000-2010**

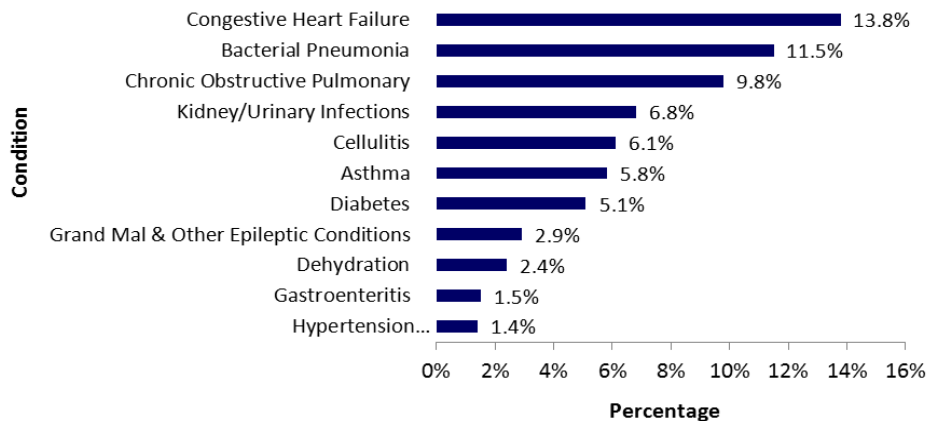


← **Trends:** The percent of Ambulatory Care Sensitive hospitalizations in Michigan has increased by 14.76 percent from 2000 to 2010. ACS hospitalizations as a percentage of total hospitalizations increased by 9.6 percent during the same ten year period.

→ **Additional Information:**

Michigan’s eleven leading causes of preventable hospitalization accounted for 67.2 percent of all ACS hospitalizations. The top leading ACS hospitalization has varied by age and gender. Bacterial pneumonia is the top cause for the age group under 18, whereas congestive heart failure is the top cause for the age group 65 and older.

**Leading Ambulatory Care Sensitive Hospitalizations as a Percent of All ACS Hospitalizations, 2010**



**Links to Other Sources of Information:**

MDCH Ambulatory Care Sensitive Hospitalizations Index: <http://www.mdch.state.mi.us/pha/osr/index.asp?id=15>  
 National Hospital Discharge Survey: <http://www.cdc.gov/nchs/nhds.htm>

**Links to Related Public Health Programs:**

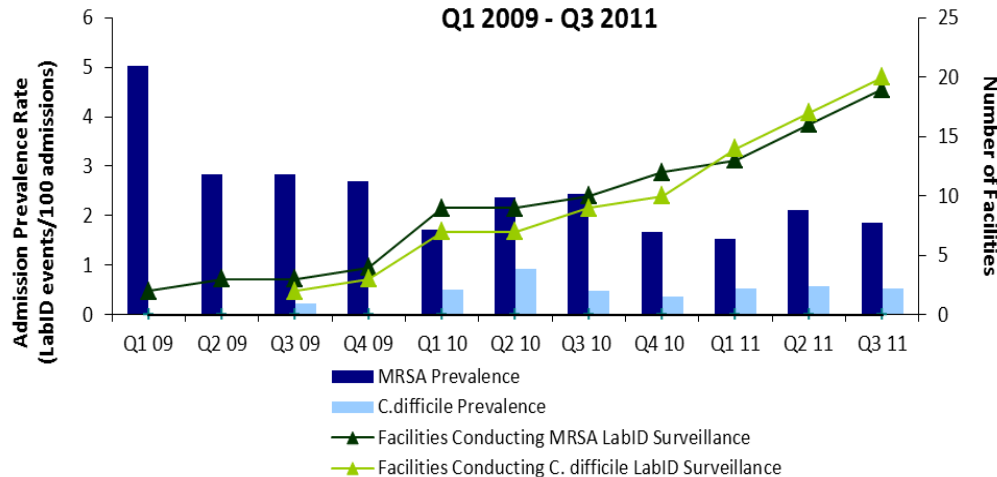
MDCH: Physical Health & Prevention Programs: [http://www.michigan.gov/mdch/0,1607,7-132-2940\\_2955---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2940_2955---,00.html)  
 CDC: Chronic Disease Prevention & Health Promotion: <http://www.cdc.gov/chronicdisease/index.htm>

**Indicator Definition:** The number of positive laboratory tests for MRSA and C. difficile. (The data do not distinguish between infection and situations where an organism is present but not causing illness.)

**Indicator Overview:**

- National estimates indicate that approximately one out of every 20 hospitalized patients will contract a Healthcare-Associated Infection (HAI), an infection acquired during the course of medical treatment for other conditions.
- Methicillin-resistant *Staphylococcus aureus* (MRSA) is a bacterial infection that is resistant to certain types of antibiotics. Skin is the most common site for MRSA infections. Lungs, bloodstream, and joints may also be infected. *Clostridium difficile* (C. difficile) is a bacterial infection that may cause diarrhea, colitis, sepsis, or even death.
- The CDC estimates that HAIs, as of 2007, generate between \$35.7 billion and \$45 billion in medical costs per year.

**Methicillin-resistant Staphylococcus arueus (MRSA) and Clostridium difficile (C. difficile) Laboratory-Identified Admission Prevalence Rate, Q1 2009 - Q3 2011**



← **Trends:** This chart represents data from a sample of Michigan hospitals that voluntarily share data with the MDCH Surveillance for Healthcare-Associated & Resistant Pathogens (SHARP) Unit. Admission prevalence rate is equal to the number of first LabID Events per patient, per month identified ≤ 3 days after admission. The number of facilities conducting surveillance continues to grow. Prevalence of MRSA has decreased overall, while C. difficile prevalence rates have been more stable, showing less improvement.

**Links to Other Sources of Information:**

MDCH Surveillance for Healthcare-Associated & Resistant Pathogens (SHARP) Unit: <http://www.michigan.gov/hai>  
 CDC National Healthcare Safety Network (NHSN): <http://www.cdc.gov/nhsn/>

**Links to Related Public Health Programs:**

Michigan’s HAI Surveillance and Prevention Plan: [http://www.michigan.gov/documents/mdch/MI\\_HAI\\_Plan\\_308688\\_7.pdf](http://www.michigan.gov/documents/mdch/MI_HAI_Plan_308688_7.pdf)  
 Methicillin-Resistant *Staphylococcus aureus* (MRSA) Information: [http://www.michigan.gov/documents/mdch/MRSA\\_general\\_347260\\_7.pdf](http://www.michigan.gov/documents/mdch/MRSA_general_347260_7.pdf)  
 Healthy People Information on HAI: <http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=17>

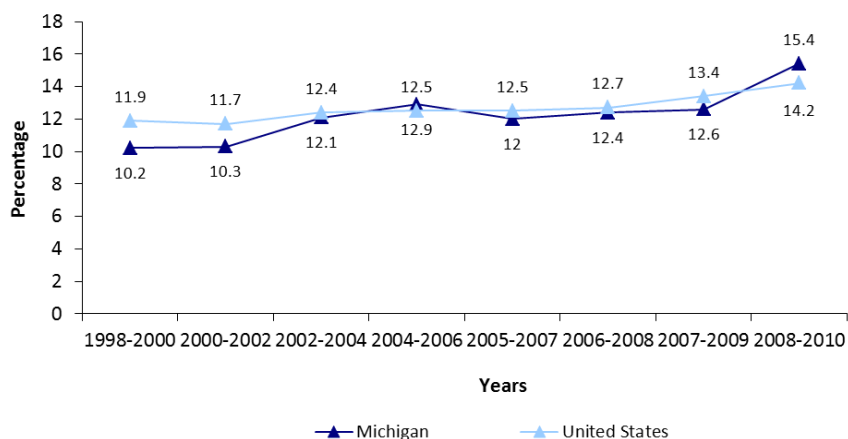
# Adults and Children in Poverty

**Indicator Definition:** Percentage of individuals living below the United States Census Bureau income thresholds for poverty status. For 2010, the poverty threshold for a single individual was an income of \$11,139 and for a family of four the threshold was \$22,314.

**Indicator Overview:**

- Poverty rates are established with the ten-year census, and percentages are then estimated annually based on the American Community Survey and/or the Annual Social and Economic Supplement to the Current Population Survey.
- Beginning with the late 1950s, the poverty rate for all Americans fell from 22.4 percent. These numbers declined steadily, dropping as low as 11.1% in 1973. The poverty rate began to cycle up to as high as 15.2 percent in 1983. The national poverty rate has remained between 11 and 15 percent since 1973.
- Poverty rates can vary greatly across subpopulations.

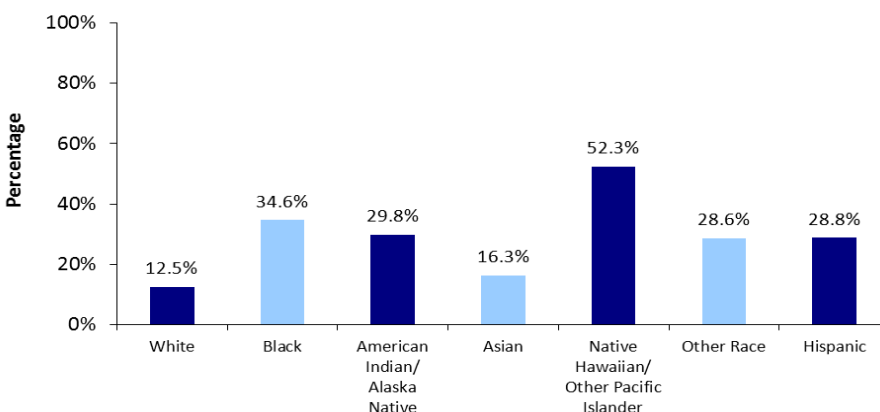
**Poverty in Michigan and the United States, 1998-2010, Three-year Averages**



← **Trends:** Prior to 2000, the poverty level in Michigan was consistently lower than the national average, reaching a low for the past decade of 10.2 percent. Since 2000, the poverty level in Michigan has remained more consistent with the national percentage, and is slightly higher than the national percentage for 2008-2010 at 15.4 percent. According to the National Center for Children in Poverty, in 2009, 44 percent (1,012,918) of children lived in low-income families (below 200% of the federal poverty level) in Michigan, compared to the national rate of 42 percent. Children living below the federal poverty threshold in 2008 was 22 percent compared to the national rate of 21 percent.

→ **Subpopulation Variations:** Among racial and ethnic subgroups, Native Hawaiian/Other Pacific Islander families have the highest poverty rate in Michigan at 52.3 percent, while Black, American Indian/Alaska Native, and Hispanic families are each at approximately 30 percent. The poverty rate for children in families led by single parents (44%) is dramatically higher than the rate in married couple families (11%). Children in families where the most highly educated parent did not finish high school have a poverty rate of 66 percent, while those who completed high school are at a rate of 36 percent.

**Poverty by Race and Ethnicity, Michigan, 2009**



**Links to Other Sources of Information:**

- U.S. DHHS Poverty Guidelines, Research, & Measurement: <http://aspe.hhs.gov/poverty/index.shtml#latest>
- Poverty in Michigan: <http://www.michigan.gov/poverty>
- University of Michigan National Poverty Center: <http://www.npc.umich.edu/poverty/>
- Spotlight on Poverty: <http://spotlightonpoverty.org/>

**Links to Related Public Health Programs:**

- Michigan Medicaid Program: [http://www.michigan.gov/mdch/0,1607,7-132-2943\\_4860---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2943_4860---,00.html)
- MDCH: Help finding Health Care: [http://www.michigan.gov/mdch/0,1607,7-132-2943\\_52115---,00.html](http://www.michigan.gov/mdch/0,1607,7-132-2943_52115---,00.html)

# Socioeconomic Factors - 2

## Educational Attainment

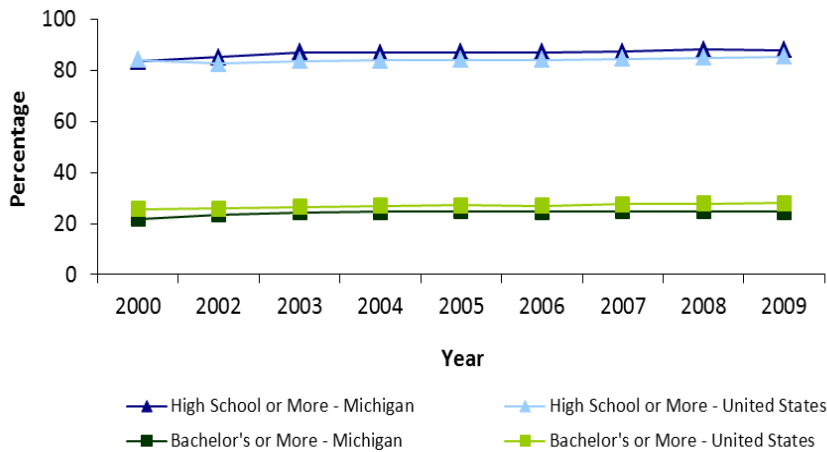
**MICHIGAN 2011**  
**CRITICAL**  
**HEALTH**  
**INDICATORS**

**Indicator Definition:** The educational attainment level for the population aged 25 and older.

**Indicator Overview:**

- The U.S. Census Bureau collects educational attainment information annually through the American Community Survey (ACS) and Current Population Survey (CPS).
- Education level is commonly associated with access to healthcare. Individuals with higher education levels are more likely to have high income jobs and/or employer-based health insurance coverage, and therefore the cost of healthcare is less likely to be a barrier to access.
- Education at a level less than high school completion is commonly associated with individuals in poverty.

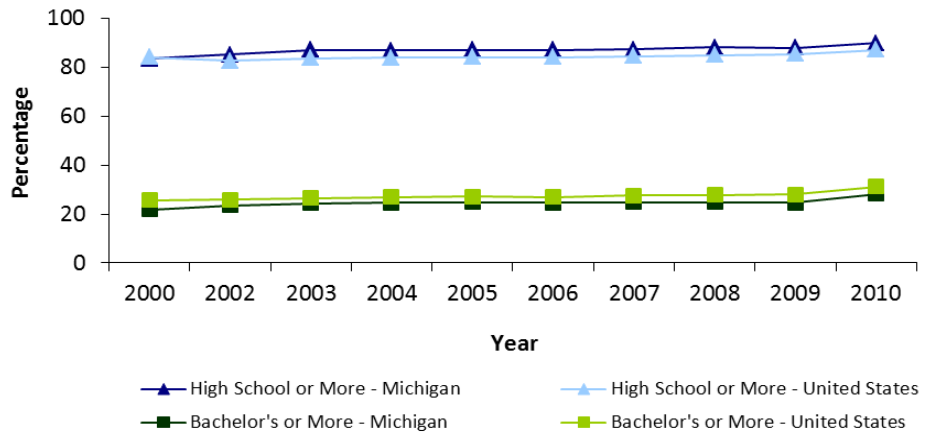
**Educational Attainment, Michigan and United States, 2000-2009**



← **Trends:** Since 2000, the ACS estimates for the percentage of Michigan's population with education level of completion of high school or higher remain above United States estimates. Both the Michigan and United States percentages are over 80 percent and approach 90 percent. While Michigan tends to have a higher percentage of high school graduates than the United States, the state trends for attainment of a Bachelor's degree remain below the national average.

→ **Levels of Attainment:** Educational attainment is tracked on an annual basis with the ACS. The level of educational attainment has increased over time, while the percentage of individuals who do not graduate from high school fluctuates, with an overall decrease of 6.5 percentage points since the year 2000. In 2010, nearly 58 percent of Michigan residents had completed at least some college, and over 28 percent had completed a Bachelor's Degree or higher.

**Educational Attainment, Michigan and United States, 2000-2010**



**Links to Other Sources of Information:**

- U.S. Census Bureau – Educational Attainment: <http://www.census.gov/hhes/socdemo/education/>
- Michigan Center for Educational Performance & Information: <http://www.michigan.gov/cepi>
- National Center for Education Statistics: <http://www.nces.ed.gov/>

**Links to Related Public Health or Similar Programs:**

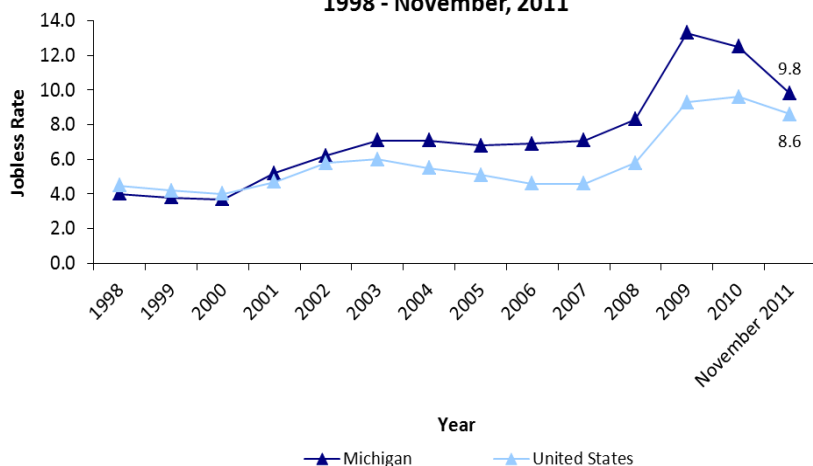
- MDELEG – Adult Education Program: [http://www.michigan.gov/mdcd/0,1607,7-122-1680\\_2798---,00.html](http://www.michigan.gov/mdcd/0,1607,7-122-1680_2798---,00.html)
- MDE – Educational Programs: <http://www.michigan.gov/mde/0,1607,7-140-43092---,00.html>

**Indicator Definition:** The percent of people in the labor force who are unemployed.

**Indicator Overview:**

- Jobless rate, or unemployment rate, is an indicator of the health of the economy, and can be used as a proxy in health status. With a larger percentage of people out of work, fewer may be able to afford access to preventive and maintenance health services and/or prescriptions.
- Higher unemployment rates also mean a larger portion of the labor force may be seeking assistance through Medicaid.
- Unemployment data is collected through Michigan’s Department of Technology, Management and Budget, and housed at the Labor Market Information (LMI) site. Nationally, the United States Department of Labor oversees the data.

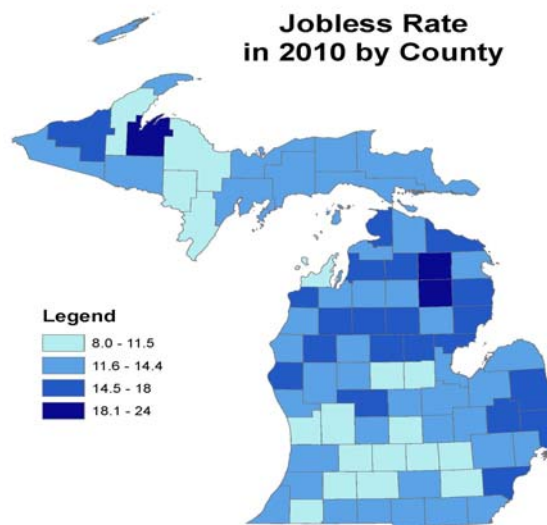
**The Jobless Rate in Michigan and the United States, 1998 - November, 2011**



← **Trends:** Beginning in the mid- to late-1990s, Michigan’s jobless rate was at or below the national jobless rate, approximately 4 percent. Beginning in 2000, the jobless rate at both state and national levels began to increase. With emerging economic issues, Michigan’s jobless rate increased more quickly than the national rate. From 2003 until 2007, the national jobless rate decreased by almost 2 points and leveled off, while Michigan only saw a marginal decrease. By 2009, Michigan’s jobless rate was nearly double the 2007 rate. As of November 2011, the rate has dropped below 10 percent.

→ **County Average:** Between 2007 and 2009, Michigan’s unemployment rate almost doubled from 7.1 to 13.3. In 2010, the state unemployment rate was at 12.5, while county rates ranged from 8.1 to 23.3. In other words, in some counties as few as 1 in 12 people were unemployed and in other counties as many as 1 in 4 were unemployed. The counties with the highest jobless rates included Baraga, Presque Isle, Montmorency, Oscoda, and Alcona. These counties are all rural areas of northern Michigan. Many of the counties with lower jobless rates were located near Michigan’s major universities, including Washtenaw, Ingham, Houghton, Marquette, and Kalamazoo.

**Jobless Rate in 2010 by County**



**Links to Other Sources of Information:**

U.S. Bureau of Labor Statistics: <http://www.bls.gov/bls/unemployment.htm>  
DTMB: Labor Market Information: <http://www.milmi.org/>

**Links to Related Programs:**

Michigan Department of Energy, Labor, and Economic Grow (DELEG) – Labor Market Information site: <http://www.milmi.org/>  
Michigan’s Jobs, Education, and Training (JET) program: <http://www.michigan.gov/dleg/0,1607,7-154-41500---,00.html>

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