

# OAKLAND COUNTY



COMMUNITY HEALTH PROFILE

# Acknowledgements



Department of Health & Human Services

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# Beaumont Hospitals®

## LOGOS



L. BROOKS PATTERSON, OAKLAND COUNTY EXECUTIVE

Kathleen Forzley, R.S., M.P.A., Manager  
HEALTH DIVISION

Department of Health & Human Services

Dear Community Member,

On behalf of Oakland County Health Division, I am pleased to provide you with Oakland County's second Community Health Profile detailing health information regarding Oakland County citizens. The profile is intended to inform the community about health trends and ways to improve health status.

Oakland County Health Division leads the effort to make this Community Health Profile a reality. This was strengthened by participation from five local hospitals. William Beaumont Hospital, St. John Health System, Huron Valley Sinai Hospital, St. Joseph Mercy Oakland and Henry Ford Health System supported the data gathering that served as the foundation for this report.

As a community, our efforts collectively can make an impact on health status in Oakland County. I hope you find this information useful for your own health and for any health improvement endeavors that you pursue. Consider the information in this Community Health Profile to improve programs that focus on tackling troublesome health trends or expanding positive trends contained in this report. In the future, visit the Oakland County Health Division website at [www.oakgov.com/health](http://www.oakgov.com/health) for a PDF copy of the Oakland County Community Health Profile.

Sincerely,

A handwritten signature in black ink, appearing to read "L. Brooks Patterson", written in a cursive style.

L. Brooks Patterson  
Oakland County Executive

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# Introduction

On behalf of Oakland County Health Division (OCHD) and our partners, we are pleased to present the 2008 Community Health Profile report.

This report is a compilation of data gathered from adults, ages 18 and older, residing in Oakland County. Random telephone dialing techniques were used to collect information on health risk behaviors from 1,282 households. Information was collected regarding health issues and trends present in our community including:

- access to health care
- weight, exercise and nutrition
- infant care and infant mortality
- heart disease and stroke
- chronic disease including asthma, cancer and diabetes
- health risk behaviors such as alcohol and tobacco use
- incidence of sexually transmitted disease

Data is provided for the State, County and identified regions (see page 3) when possible. Each section includes educational information and data about the topic.

Comparisons of data collected in 1996 and 2002 highlight improvements, changes and trends in health risk behaviors.

Our findings most certainly have strengthened our resolve to maintain the diligence and dedication we have to improve the health and safety of Oakland County residents.

Your review of this report is encouraged and welcomed. It is our hope that planning and implementing programs/services, educating the community and promoting health will be the end result.

# Oakland County Profile

Located in Southeast Michigan, Oakland County is bordered by Wayne County (Detroit) to the south, Lapeer and Genesee County (Flint) to the north, Macomb County on the east and Livingston County on the west.

Oakland County is the second-most populated county in Michigan with 1,207,600 residents estimated by the U.S. Census Bureau. By 2035, it is projected that Oakland County will be home to 1,315,061 residents.

Oakland is the wealthiest county in the state with a current estimated per capita income of \$52,274. It is also one of the highest educated counties in the state, with 41.4 % of residents having a bachelor's degree or higher.

The county encompasses a land area of 908 square miles that includes a blend of urban, suburban and rural settings. Notably, Oakland County has 1,468 natural lakes (35 square miles) – more than any other county in the state. In addition, the headwaters of five major rivers (Clinton, Huron, Rouge, Shiawassee and Flint) are located here.

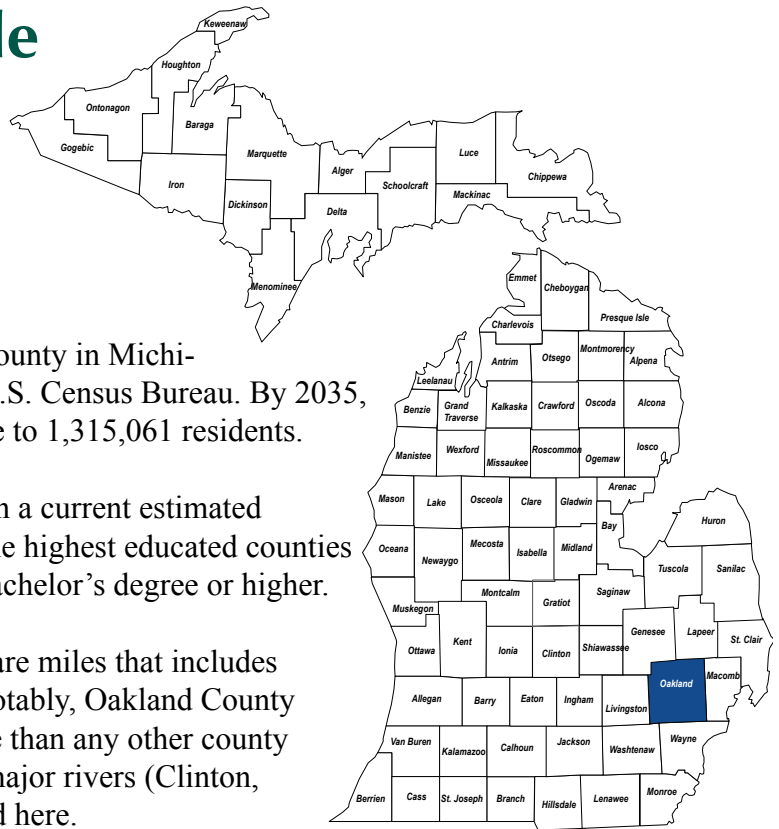
Land use in Oakland County is 42.3% residential, 13.9% recreational and conservation, 6.3% commercial/industrial, and 6% water with the remaining 31.5% either agricultural, reserved for public use and transportation infrastructure, or vacant.

The county also is home to 89,000 acres of parkland. In addition to local parks, there are 13 county parks, eight state parks/recreation areas and three Metroparks in Oakland County. The county has more than 60 public golf courses, totaling almost 900 holes, as well as 26 private golf courses.

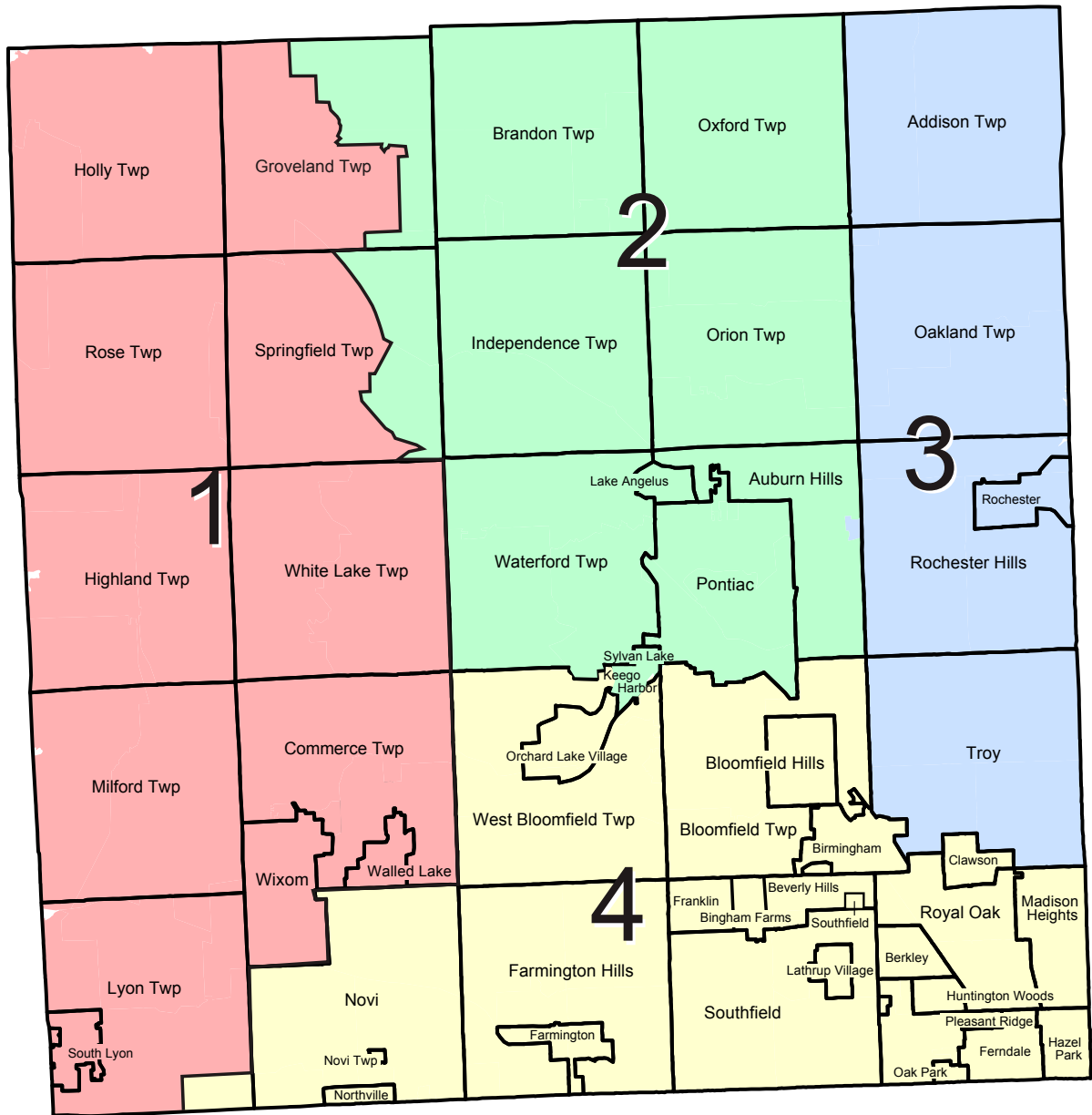
Oakland County is a leader in economic development. It is the home to nearly 42,000 business establishments and government agencies that together employ more than 720,000 people. Over 60% of Fortune 500 and 50% of Global Fortune 500 companies have at least one business location in Oakland County. In 2007, 12.6% of people employed in Michigan worked in Oakland County.

Fourteen of Michigan's 44 institutions of higher learning (with enrollment exceeding 60,000 in 2006) are housed in Oakland County. The county has 28 public school districts, 15 public school academies and more than 100 private schools. In 2006, Public K-12 enrollment exceeded 202,000 children and adolescents.

The county is served by 16 hospitals - 13 are acute care facilities (3,750 beds) and three are behavioral health facilities (440 beds). Oakland County is home to 40 nursing homes (4,950 beds).



# Oakland County Community Health Survey Regions and Communities



Region Key	
1	3
2	4

Prepared by:  
**CPH**  
 Center for Population Health  
 Southeastern Michigan Health Association

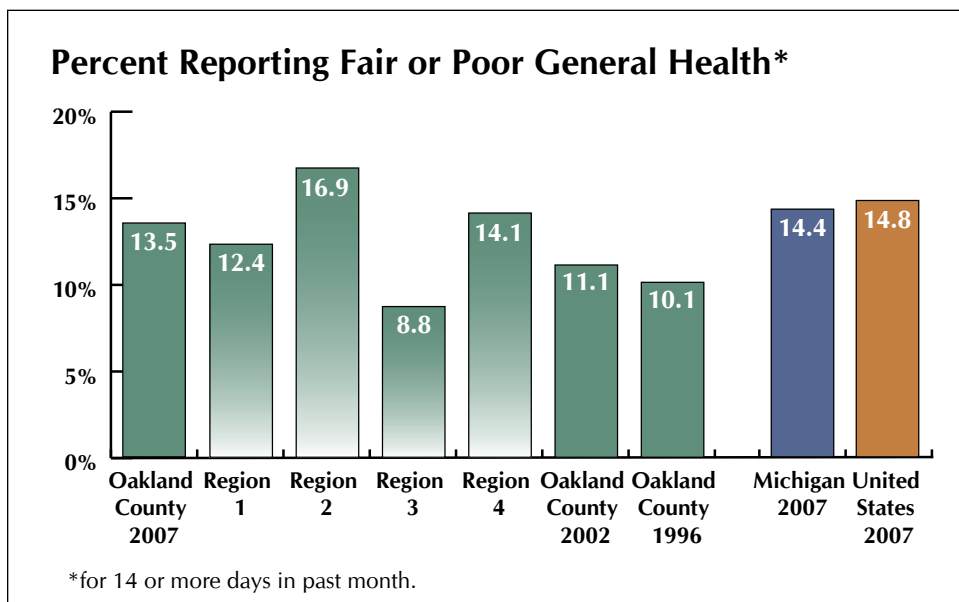
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# General Health Status

General health is determined by many things: safe communities, safe living and work environments, education and income, genetics, proper nutrition and exercise, support from families and friends, stress management, behaviors such as smoking and drinking and access to disease prevention and treatment services.

During 2007, 13.5% of Oakland County residents reported that they perceived their health as fair or poor for 14 or more days in the month before the survey. This was an increase in perceived fair or poor health status from 2002 and 1996. However, the countywide rate for 2007, while slightly better than Michigan at 14.4% and the United States at 14.8%, was not statistically significant.

Within the county, there was a significant variation in perceived fair or poor health status, ranging from a low of 8.8% of the residents in Region 3 to a high of 16.9% reported for Region 2.



Residents of Oakland County age 65-74 and 75 and older were more likely to report fair or poor health (26.2% and 26.9% respectively). Women in Oakland County report a higher level of perceived fair or poor health at 16.3% than the perception reported by men at 11.6%.

When asked how often a resident had experienced poor physical health, 10.1% of the respondents said they experienced 14 or more poor physical health days in the past month. Women reported a higher rate at 11.6% than did men at 8.5%.



## Physical and Mental Health Comparison

Place	Year	Percent With 14 or More Days of Poor or Fair Physical Health*	Percent With 14 or More Days of Poor Mental Health*	Percent With Disability
<b>Oakland County</b>	<b>2007</b>	<b>13.5</b>	<b>9.5</b>	<b>19.2</b>
Region 1	2007	12.4	12.2	24.3
Region 2	2007	16.9	9.3	18.3
Region 3	2007	8.8	5.2	16.6
Region 4	2007	14.1	10.2	18.7
<b>Oakland County</b>	<b>2002</b>	<b>11.1</b>		
<b>Oakland County</b>	<b>1996</b>	<b>10.1</b>		
Michigan	2007	14.4		21.0
United States	2007	14.8		18.9

\*in past 30 days

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

### Fast Fact:



Life satisfaction affects both physical and mental well being. Oakland County residents reported being very satisfied or satisfied with their lives 92% of the time. White residents report a higher rate, 92.8%, than Black residents at 81.1%. Income is strongly associated with life satisfaction. Oakland County residents in the lowest income bracket reported being very or somewhat satisfied with their lives 68.1% of the time, compared to 98.5% of Oakland County residents in the highest income bracket.

When asked how often a resident had experienced poor mental health, 9.5% of the respondents said they experienced 14 or more poor mental health days in the past month. Women reported a significantly higher rate at 12.9% than did men at 5.9%.

Stress and anxiety can have a major impact on one's physical and mental wellbeing. During 2007, 11.9% of the respondents reported ever being diagnosed with an anxiety or stress disorder by a doctor or other health care professional.

Females reported a significantly higher diagnosis rate for stress and anxiety at 16.7% than men at 6.7%. Females are also more likely to seek professional health care than men, which could account for this difference.

Lack of education and income are also strongly associated with stress and anxiety. Of the survey respondents, 33.2% of those with less than high school attainment and 25.3% of those with incomes <\$20,000 per year reported a lifetime diagnosis for these issues.

Depression and depressive disorders have a significant impact upon families and communities. Current therapeutic treatments have made depression a manageable condition with the potential for improved quality of life.

During 2007, 16.6% of survey respondents reported being diagnosed with depression or depressive disorders during their lifetime by a doctor or health care provider. Again, females, at a rate of 22.6%, were significantly higher than males at 10.1%.

As with stress and anxiety, females seek help for depression at higher rates than males. Lack of education and income are strongly associated with higher rates of depression diagnosis; 40.4% of those surveyed report less than high school completion and 34.8% of those have incomes <\$20,000 per year.

Finally, physical and/or mental disabilities were reported by 19.2% of the respondents during 2007. Females reported a higher rate at 21.4% than did males at 16.8%. The countywide rate (19.2%) was lower than the 2006 statewide rate of 23.9%.



## Adult Immunizations

According to the Centers for Disease Control and Prevention, approximately 50,000 adults die each year from vaccine preventable diseases in the U.S. About 36,000 persons age 65+ die from complications associated with influenza, followed by more than 5,000 deaths of persons age 65+ due to pneumonia.

During 2007, 77.7% of respondents age 65+ reported receiving a flu vaccination during the past year. This was higher than the statewide level (71.8%) for 2006. Of the respondents age 65+, 72.4% reported ever receiving the pneumococcal vaccine, which was higher than the statewide level.

### Adult Immunization Comparison

Place	Year	Percent Ever Had a Pneumococcal Shot	Percent Ever Had a Pneumococcal Shot (age 65+)	Percent Had a Flu Shot Within Past 12 Months (age 65+)
<b>Oakland County</b>	<b>2007</b>	<b>20.7</b>	<b>72.4</b>	<b>77.7</b>
Region 1	2007	19.0	61.4	69.8
Region 2	2007	20.1	60.6	72.9
Region 3	2007	19.4	80.6	84.6
Region 4	2007	22.1	75.0	78.6
<b>Oakland County</b>	<b>2002</b>	<b>20.5</b>		<b>71.5</b>
<b>Oakland County</b>	<b>1996</b>	<b>17.3</b>		<b>75.6*</b>
Michigan	2007		63.5	70.9
United States	2007		67.3	72.0

\*all ages.

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

# Access to Care

Health insurance coverage is linked to improved health status. Persons without health insurance often delay seeking preventative and curative health services. Over one-half of the uninsured report not having a regular source of care. Persons without insurance are four times more likely to forego care than those with insurance.

Delaying care often leads to more serious conditions, some requiring hospitalization. The uninsured often present at emergency rooms for treatment of conditions that could have been treated in a primary care setting. Lack of access to primary care often creates an expensive episode of care that begins in an emergency room. These costs for care of the uninsured are subsequently passed along to all other payers.



During 2007, 89.9% of Oakland County residents surveyed reported having some form of health insurance. Therefore, 10.1%, or approximately 121,800 residents, reported no health insurance at the time of the survey. The rate of uninsured in Oakland County was less than the statewide rate of 14.5% and the nation at 16.6% during 2007.

The percent of Oakland County respondents reporting health insurance in 2007 (89.9%) was less than reported during 2002 (93.5%) but not statistically significant.

## Access to Care Comparison

Place	Year	Percent That Have Health Insurance	Percent That Cost Prevented Needed Doctor Visit	Percent Have Usual Source For Health Care
<b>Oakland County</b>	<b>2007</b>	<b>89.9</b>	<b>11.9</b>	<b>87.2</b>
Region 1	2007	87.2	12.2	88.9
Region 2	2007	87.0	12.1	81.8
Region 3	2007	90.6	8.9	85.6
Region 4	2007	92.2	12.7	89.7
<b>Oakland County</b>	<b>2002</b>	<b>93.5</b>	<b>6.6</b>	<b>87.1</b>
<b>Oakland County</b>	<b>1996</b>	<b>93.1</b>	<b>6.8</b>	<b>89.4</b>
Michigan	2007	85.5	11.9	85.0
United States	2007	83.4	n/a	n/a

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

Adults younger than age 65, with household incomes below \$20,000, were most likely to be uninsured (25.8%). Persons earning incomes of \$75,000 or more reported the highest levels of health insurance coverage at 98.1%.

During 2007, 87.2% of Oakland County residents surveyed reported having one or more personal doctors or health care providers.

- Males were significantly less likely to have identified a doctor (82.3%) than females (91.8%).
- Adults age 25-34 were less likely to have a health care provider than adults age 35+.

During 2007, 65% of Oakland County residents surveyed noted that they had seen a physician for a routine checkup within the past year.

Hospital discharge data from 2006 shows that Medicare paid for nearly one-half (45.3%) of all hospital use, followed by commercial HMOs/PPOs (29.9%), Medicaid (10.2%) and Traditional Blue Cross (8.7%).

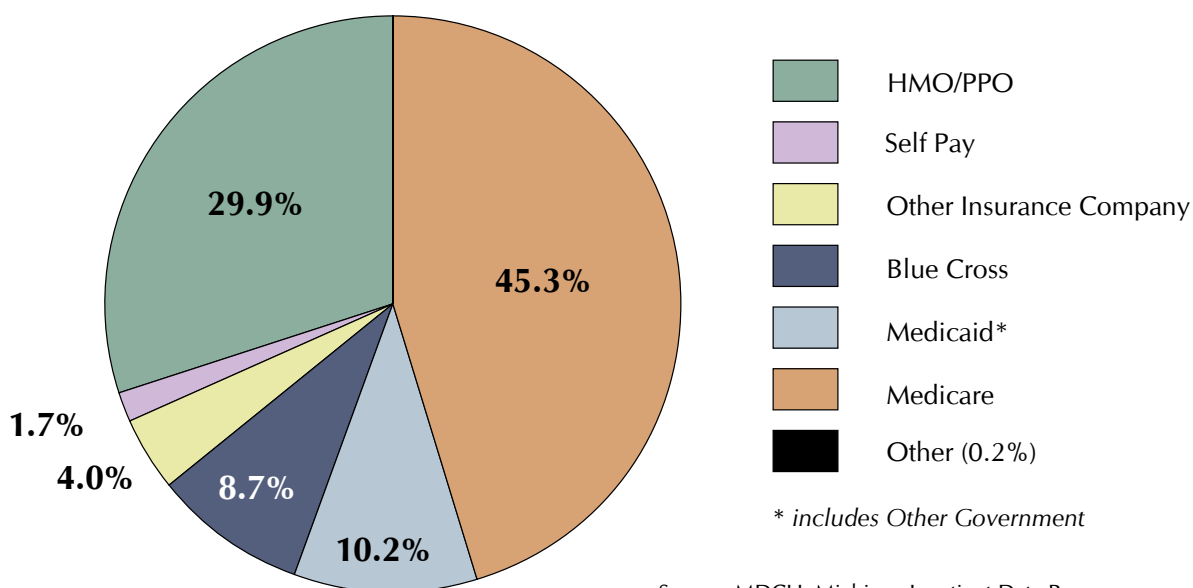
### Fast Fact:



*During 2007, 11.9% of the Oakland County residents surveyed reported that costs prevented them from seeing a doctor during the previous year.*

*Cost was more likely to be a barrier to care if you were younger and less educated.*

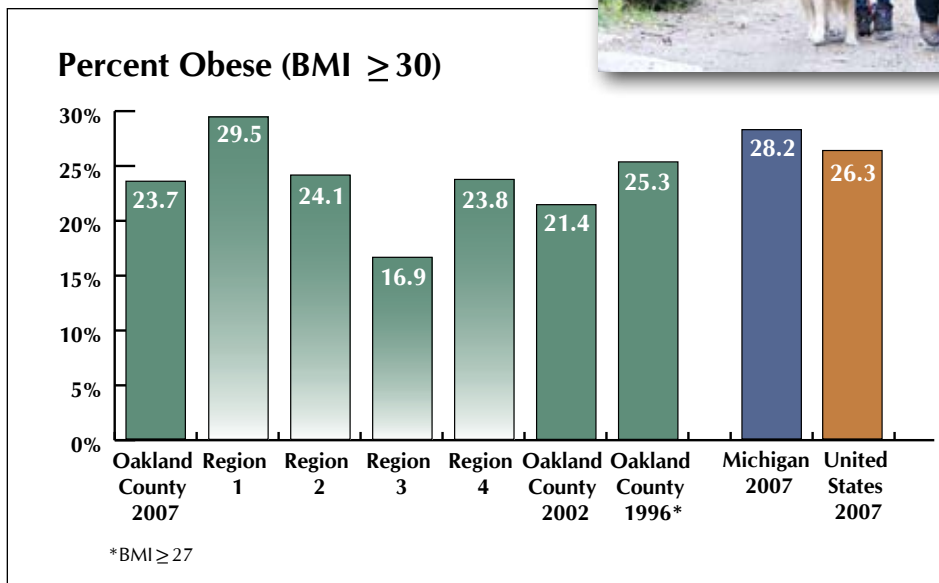
### Hospital Discharges by Payor Oakland County Residents, 2006



Source: MDCH, Michigan Inpatient Data Base

# Weight, Exercise and Nutrition

Oakland County residents are getting heavier. During 2002, 21.4% of residents reported a combination of height and weight that determined that they were obese. During 2007, 23.7% of residents were determined to be obese. This was a lower rate of obesity than the state rate at 28.2% and the national rate at 26.3%. Males recorded a significantly higher rate of obesity at 27.8% than females at 19.7%. Within the County, obesity ranged from a low of 16.9%, reported in Region 3, to a high of 29.5% in Region 1.



*A majority of survey participants, 52.9%, said they have a goal of losing weight.*

## Body Mass Index (BMI) Measures

- BMI less than 20 = Underweight
- BMI between 20 - 25 = Healthy Range
- BMI over 25 = Overweight
- BMI over 27 = Significantly Overweight
- BMI over 30 = Obese

Note: Since BMI calculations use total body weight and not estimates of lean muscle mass and fat, it cannot distinguish between the overweight and the more muscular. It does not apply to those under 18, bodybuilders, pregnant or nursing women.

During 2007, nearly 80% of survey respondents reported participating in physical activities outside of work. Oakland County residents are aware of the benefits of exercise for ensuring good health. While nearly 69% of respondents reported sitting or standing at work, nearly 64% of respondents believed that they should engage in moderate or vigorous physical activities four or more days per week.

Engaging in moderate exercise was reported by 85.0% of respondents, while 51.3% reported engaging in vigorous exercise. Moderate exercise was identified as brisk walking, bicycling, vacuuming, gardening or anything else that caused an increase in breathing and heart rate.

## Weight, Exercise and Nutrition Comparison

	Year	Percent Having a Goal of Decreasing Weight	Percent Who Eat Five or More Fruits/Vegetables Daily	30+ Minutes of Moderate or 20+ Minutes of Vigorous Physical Activity*	Percent Who Participated in No Leisure Time Physical Activity**
<b>Oakland County</b>	<b>2007</b>	<b>52.9</b>	<b>23.8</b>	<b>43.0</b>	<b>20.6</b>
Region 1	2007	55.7	20.3	41.4	21.7
Region 2	2007	56.0	20.5	43.9	27.0
Region 3	2007	49.0	26.6	49.3	14.9
Region 4	2007	52.0	25.5	40.9	19.4
<b>Oakland County</b>	<b>2002</b>	<b>n/a</b>	<b>10.2</b>		<b>33.8</b>
<b>Oakland County</b>	<b>1996</b>	<b>n/a</b>	<b>12.8</b>		<b>n/a</b>
Michigan	2007		21.3	50.7	20.8
United States	2007		24.4	49.5	22.6

\*moderate physical activity at least five times per week, vigorous at least three times per week \*\*in past month

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

### Fast Fact:



Overall, 43.0% of Oakland County residents reported participating in moderate physical activity 30 minutes or more, five or more days a week and/or vigorous physical activity 20 minutes or more, three or more days per week.

Nearly 56% of respondents reported engaging in moderate exercise five or more days per week. Over one-third of these respondents engage in moderate exercise for one hour or more per session.

Vigorous exercise is defined as running, aerobics, heavy yard work or anything else that caused large increases in breathing or heart rate. One-third of those engaged in vigorous exercise did so four or more days per week.

Persons who engaged in vigorous exercise were nearly equal between those who recorded 30-60 minutes (41.4%) and those who reported over 60 minutes (42.6%) of exercise per session.

Professional health advice was reportedly provided to 43.9% of survey respondents. Nearly three-quarters (72.4%) of those advised to exercise received that advice from a doctor.

The three main reasons reported for advice were:

- general good health – 40.4%
- specific diseases such as diabetes or high cholesterol – 24.8%
- weight loss or weight management – 23.8%

A majority of Oakland County residents (54.7%) are aware of the Dietary Guidelines for Americans – the Food Pyramid. Yet, only 30.4% of respondents believe that consuming five or more servings of fruits and/or vegetables per day is good for health. Even fewer residents (23.8%) report eating five or more servings of fruits or vegetables per day.

A greater proportion of female residents (28.8%) compared to males (18.5%) are likely to eat five or more servings of fruits or vegetables per day.

Low income (<\$20,000 per year) and educational attainment of less than high school are associated with consuming levels lower than the recommended five or more servings of fruits and vegetables per day.



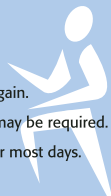
GRAINS Make half your grains whole	VEGETABLES Vary your veggies	FRUITS Focus on fruits	MILK Get your calcium-rich foods	MEAT & BEANS Go lean with protein
<p>Eat at least 3 oz. of whole-grain cereals, breads, crackers, rice, or pasta every day</p> <p>1 oz. is about 1 slice of bread, about 1 cup of breakfast cereal, or 1/2 cup of cooked rice, cereal, or pasta</p>	<p>Eat more dark-green veggies like broccoli, spinach, and other dark leafy greens</p> <p>Eat more orange vegetables like carrots and sweetpotatoes</p> <p>Eat more dry beans and peas like pinto beans, kidney beans, and lentils</p>	<p>Eat a variety of fruit</p> <p>Choose fresh, frozen, canned, or dried fruit</p> <p>Go easy on fruit juices</p>	<p>Go low-fat or fat-free when you choose milk, yogurt, and other milk products</p> <p>If you don't or can't consume milk, choose lactose-free products or other calcium sources such as fortified foods and beverages</p>	<p>Choose low-fat or lean meats and poultry</p> <p>Bake it, broil it, or grill it</p> <p>Vary your protein routine – choose more fish, beans, peas, nuts, and seeds</p>

For a 2,000-calorie diet, you need the amounts below from each food group. To find the amounts that are right for you, go to [MyPyramid.gov](http://MyPyramid.gov).

Eat 6 oz. every day	Eat 2 1/2 cups every day	Eat 2 cups every day	Get 3 cups every day; for kids aged 2 to 8, it's 2	Eat 5 1/2 oz. every day
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#### Find your balance between food and physical activity

- Be sure to stay within your daily calorie needs.
- Be physically active for at least 30 minutes most days of the week.
- About 60 minutes a day of physical activity may be needed to prevent weight gain.
- For sustaining weight loss, at least 60 to 90 minutes a day of physical activity may be required.
- Children and teenagers should be physically active for 60 minutes every day, or most days.



#### Know the limits on fats, sugars, and salt (sodium)

- Make most of your fat sources from fish, nuts, and vegetable oils.
- Limit solid fats like butter, margarine, shortening, and lard, as well as foods that contain these.
- Check the Nutrition Facts label to keep saturated fats, *trans* fats, and sodium low.
- Choose food and beverages low in added sugars. Added sugars contribute calories with few, if any, nutrients.



U.S. Department of Agriculture  
Center for Nutrition Policy and Promotion  
April 2005  
CNPP-15



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# Prenatal Care and Infant Mortality

## Infant Deaths, Live Births and Infant Death Rates, Oakland County and Michigan, 1990-2006

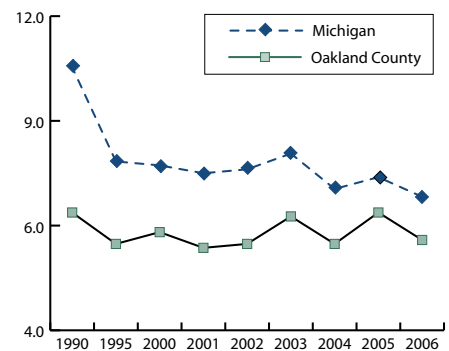
Year	Oakland County			Michigan		
	Infant Deaths	Live Births	Death Rate	Infant Deaths	Live Births	Death Rate
1990	119	17,008	7.0	1,638	153,080	10.7
1995	100	16,196	6.2	1,110	134,169	8.3
2000	106	16,253	6.5	1,112	136,048	8.2
2001	96	15,867	6.1	1,066	133,247	8.0
2002	95	15,267	6.2	1,054	129,518	8.1
2003	106	15,394	6.9	1,112	130,850	8.5
2004	95	15,277	6.2	984	129,710	7.6
2005	103	14,623	7.0	1,013	127,518	7.9
2006	91	14,387	6.3	940	127,537	7.4

Note: Rates are per 1,000 live births.

Source: MDCH

*The infant mortality rate remains lower in Oakland County than for the state.*

Comparison of Infant Death Rates per 100,000 Residents



### Fast Fact:



*Many risk factors for infant mortality and low birth weight can be prevented with high-quality prenatal care. Prenatal medical visits help ensure that mothers and their newborns will get off to the the best possible start and that health problems will be treated before they become serious.*

Infant mortality is a good indicator of the overall health of a community since factors such as poverty, emotional and physical health of the mother, access to health care, involvement of the father, and the support and safety of the community all play a role.

National studies suggest that the mortality rate for children born into poverty is 50% higher than for children born into families with incomes above the poverty line.

Along with medical attention, mothers-to-be who receive prenatal care learn about the benefits of good nutrition, the importance of taking folic acid (a B vitamin that helps prevent birth defects of the spine, skull and brain), and the risks of smoking and using alcohol or drugs while pregnant.

During 2006 in Oakland County, 91 infants died before age one, a rate of 6.3 per 1,000 live births, compared to a rate of 7.4 for the State of Michigan.



Infants born at a low birth weight (2.2-5.5 lbs) and extremely low birth weight (less than 2.2 lbs) are more vulnerable to, and at greater risk for, disease or development delays.

In Oakland County in 2006, 86.8% of women were classified as having adequate prenatal care according to the Kessner Index. There are racial and ethnic differences recorded for pregnant women in Oakland County receiving adequate prenatal care with Whites reporting 89.2%, Arab ancestry 88.1%, Hispanic ancestry 78.2% and Blacks 73.6%.

### The Kessner Index

The Kessner Index is a classification of prenatal care based on the month of pregnancy in which prenatal care begins, the number of prenatal visits, and the length of the pregnancy (i.e., for shorter pregnancies, fewer prenatal visits constitute adequate care).

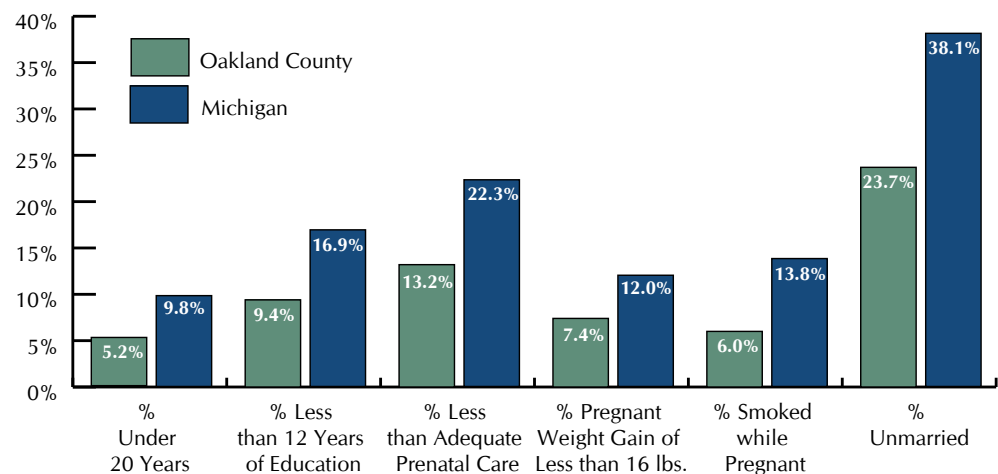
### Low Birth Weight Births, Oakland County and Michigan, 1990-2006

Year	Oakland County		Michigan	
	Number	Rate	Number	Rate
1990	1,000	5.9	11,608	7.6
1995	1,107	6.8	10,356	7.7
2000	1,130	7.0	10,706	7.9
2001	1,140	7.2	10,714	8.0
2002	1,147	7.5	10,403	8.0
2003	1,206	7.8	10,778	8.2
2004	1,231	8.1	10,867	8.4
2005	1,128	7.7	10,665	8.4
2006	1,178	8.2	10,720	8.4

Note: Low birth weight is less than 2,500 grams (5.5 lbs). Percent is percent of all births.

Source: MDCH

### Maternal Characteristics, Oakland County and Michigan, 2006



Source: MDCH

# Heart Disease and Stroke

Cardiovascular diseases, primarily heart attacks and strokes, are the leading causes of death for men and women of all racial, ethnic and economic groups in the nation, state and Oakland County.

Heart attacks and strokes occur when the blood flow in the heart or brain is blocked by a blood clot or narrowing of the arteries from plaque, the build up of fat, high cholesterol, calcium and other substances found in the blood.

Weight, nutrition, exercise and genetics all play a role in whether an individual will experience the conditions that lead to plaque build up and the resulting heart attack or stroke. Another factor is monitoring associated conditions such as high blood cholesterol and high blood pressure.

During 2007, Oakland County respondents reported that 4.2% were told they had a heart attack, 5.6% were told they had angina and/or coronary artery disease (heart disease) and 2.1% reported being told they had a stroke.

The Oakland County heart attack rate is consistent with the national and statewide experience. The only statistically significant difference was age. Persons age 65-74 (12.6%) and 75+ (13.7%) reported the highest rate. However, the rate for age 75+ (13.7%) was significantly lower than the 2006 statewide rate for 75+ of 18.3%.



## Heart Disease and Stroke Comparison

Place	Year	Percent Ever Told Had a Heart Attack	Percent Ever Told Had Angina or Coronary Artery Disease	Percent Ever Told Had a Stroke
<b>Oakland County</b>	<b>2007</b>	<b>4.2</b>	<b>5.6</b>	<b>2.1</b>
Region 1	2007	4.0	5.2	2.6
Region 2	2007	3.8	3.6	1.5
Region 3	2007	3.1	4.0	3.1
Region 4	2007	4.9	7.2	1.8
<b>Oakland County</b>	<b>2002</b>	<b>3.4</b>	<b>5.1</b>	<b>1.9</b>
<b>Oakland County</b>	<b>1996</b>			
Michigan	2007	4.9	4.9	2.8
United States	2007	4.2	4.1	2.6

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

## Fast Fact:



Coronary Artery Disease (CAD) is the narrowing or blocking of the coronary arteries that supply oxygen rich blood to the heart.

Angina is the chest pain that occurs when not enough oxygen rich blood is flowing to the heart. It is also sometimes characterized by a feeling of choking, suffocation, or crushing heaviness.

During 2007, 5.6% of Oakland County respondents acknowledged being told they had Coronary Artery Disease (CAD) or angina. With increasing age more CAD was reported. 2.4% of 35 – 44 year olds compared to 8.4% of 55 – 64 year olds, 11.8% of 65 – 74 year olds and 17.0% of those age +75 reported having CAD.

Income was associated with high rates of CAD. Persons reporting annual incomes of <\$20,000 recorded 17.3% CAD or angina, while those with incomes of \$75,000 + reported 3.0%.

There were no significant differences in the rate of CAD or angina by gender, race or region. However, Region 4 recorded 7.2%, which was twice the rate of Region 2.

Heart disease is the leading cause of death for Oakland County residents. Since 1990, between 2,500-2,800 Oakland County residents died from heart disease each year. During that period, the number of deaths have decreased slightly, while the death rate attributed to heart disease has decreased significantly from 324 per 100,000 in 1990 to 213 per 100,000 in 2006.

### Heart Disease Related Deaths and Death Rates, Oakland County and Michigan, 1990-2006

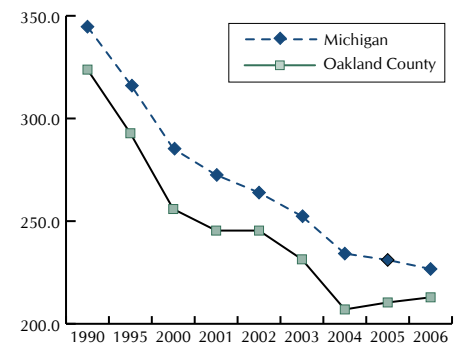
Year	Oakland County		Michigan	
	Number	Rate	Number	Rate
1990	2,778	323.8	27,527	344.7
1995	2,872	292.8	28,007	316.7
2000	2,796	255.9	27,474	285.3
2001	2,741	245.4	26,766	272.5
2002	2,794	245.4	26,447	263.9
2003	2,712	231.4	25,845	252.4
2004	2,532	207.0	24,804	234.2
2005	2,659	210.4	25,098	231.1
2006	2,624	212.9	24,223	226.7

\*rates per 100,000 residents

Source: MDCH

Since 1990, the death rates for heart disease in Oakland County were slightly lower than the state-wide rate.

Comparison of Heart Disease Death Rates per 100,000 Residents



Source: MDCH

## Stroke Related Deaths and Death Rates, Oakland County and Michigan, 1990-2006

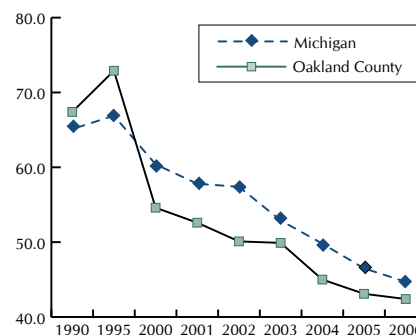
Year	Oakland County		Michigan	
	Number	Rate	Number	Rate
1990	564	67.4	5,090	65.1
1995	698	72.9	5,857	66.9
2000	595	54.6	5,789	60.4
2001	586	52.6	5,666	57.8
2002	571	50.1	5,740	57.4
2003	580	49.9	5,412	52.9
2004	546	45.0	5,282	49.8
2005	537	43.1	5,049	46.5
2006	515	42.4	4,746	44.7

\*rates per 100,000 residents

Source: MDCH

Death rates for stroke in Oakland County were higher than the state in 1990 and 1995, but have been lower since 2000.

Comparison of Stroke Death Rates per 100,000 Residents



Source: MDCH



Stroke is the third leading cause of death in the nation, state and Oakland County. A stroke, or “brain attack,” occurs when a blood clot blocks an artery or a blood vessel breaks interrupting blood flow to the brain.

In Oakland County, 2.1% of adults have been told they had a stroke. This rate is similar to the nation and the state. Age is a significant predictor for stroke, with 10.7% of age group 65-74 reporting stroke and 6.5% of age group 75+.

Stroke claimed the lives of 515 Oakland County residents in 2006. The death rate from stroke for Oakland County residents decreased significantly between 1995 (72.9 per 100,000) and 2006 (42.4 per 100,000).

# Cholesterol and Blood Pressure

## Cholesterol and Blood Pressure Comparison

	Year	Percent Ever Told Blood Pressure Was High	Percent with High Blood Pressure Currently Taking Medicine	Percent Ever Had Cholesterol Checked	Percent Ever Told Cholesterol Was High
<b>Oakland County</b>	<b>2007</b>	<b>23.6</b>	<b>84.5</b>	<b>81.0</b>	<b>42.3</b>
Region 1	2007	20.6	81.9	77.3	38.5
Region 2	2007	19.9	80.6	71.0	37.3
Region 3	2007	18.8	85.5	82.4	37.0
Region 4	2007	28.2	86.2	86.5	47.2
<b>Oakland County</b>	<b>2002</b>	<b>26.1</b>		<b>84.6</b>	<b>39.4</b>
<b>Oakland County</b>	<b>1996</b>	<b>23.8</b>		<b>84.9</b>	<b>25.3*</b>
Michigan	2007	28.6		82.3	39.9
United States	2007	27.8		78.7	37.6

\*significantly lower than Oakland County 2002.

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

Screening for high cholesterol and high blood pressure is a powerful tool in the fight against heart attack, heart disease and stroke. During 2007, 23.6% of Oakland County residents surveyed reported being told they had high blood pressure and 84.5% of them were taking related prescribed medications.

Over one-half of persons age 64-74 (56.4%) and 75+ (54.8%) reported having high blood pressure. Interestingly, one-quarter of persons age 45-54 (24.8%) also reported having high blood pressure.

College graduates have statistically lower rates of high blood pressure at 16.6% than did those with lower levels of educational attainment (29.7% for those with less than high school and 28.8% for high school graduates/GED).

Households with incomes of <\$20,000 had a statistically higher rate of high blood pressure at 34.5%. This rate was more than double the rate for households with incomes of \$75,000+ (16.5%).

### Blood Pressure Levels in Adults

(in mmHG, or millimeters of mercury)

**Systolic BP\***                      **Diastolic BP\*\***

**Normal:**  
less than 120    and    less than 80

**Prehypertension:**  
120-139            or    80-89

### High Blood Pressure:

**Stage 1 Hypertension:**  
140-159            or    90-99

**Stage 2 Hypertension:**  
160 or higher or    100 or higher

\* top number                      \*\* bottom number

Source: <http://nhlbi.nih.gov>

## Deciphering Cholesterol Numbers

Total cholesterol numbers over 240 mg/dL are considered high. Numbers between 200 and 239 mg/dL are borderline high, and numbers under 200 are desirable. If your number is over 240 mg/dL, your risk for heart disease and stroke is higher.

### Measuring the “Good” Cholesterol

*High-density lipoprotein (HDL) numbers measure the “good” cholesterol in your bloodstream. HDLs carry cholesterol in the blood from other parts of the body back to the liver, which leads to its removal from the body. This helps keep cholesterol from building up on the walls of the arteries. If your HDL cholesterol numbers are below 40 mg/dL, you are at a substantially higher risk for heart disease. The higher your HDL, the better your heart health. Numbers over 60 mg/dL are considered protective against heart disease. The average number for men is about 45 mg/dL; for women, it is about 55 mg/dL.*

Source: <http://cholesterol.emedtv.com>

### Assessing the “Bad” Cholesterol

*Low-density lipoprotein (LDL) numbers measure the “bad” cholesterol in the blood. LDLs carry most of the cholesterol in the blood, and this cholesterol is the main source of damaging buildup and blockage in the arteries. The more LDL cholesterol you have in your blood, the greater your risk of heart disease. Your “healthy” bad cholesterol number will depend on how many other heart disease risk factors you have. If you have heart disease or are at high risk for developing it, your ideal LDL cholesterol level may be below 100 mg/dL. If you have no risk factors for heart disease, your ideal LDL level may be below 160 mg/dL.*

Cholesterol screening is another important preventive step to identifying persons at higher risk for heart attack and stroke.

Eight out of ten respondents (81%) reported having their cholesterol checked, while 42.3% reported having been told their cholesterol was high. Persons age 55-64 (59%) and 65-74 (57%) reported the greatest proportion of high cholesterol.

College graduates (33.4%) reported a statistically significant lower level of high cholesterol than persons with less than a high school education (63.2%).

Persons with higher educational attainment generally have higher incomes. They recognize the importance of good nutrition and exercise and have the income necessary to support healthy behaviors and choices. This in turn influences health indicators such as cholesterol and blood pressure levels.

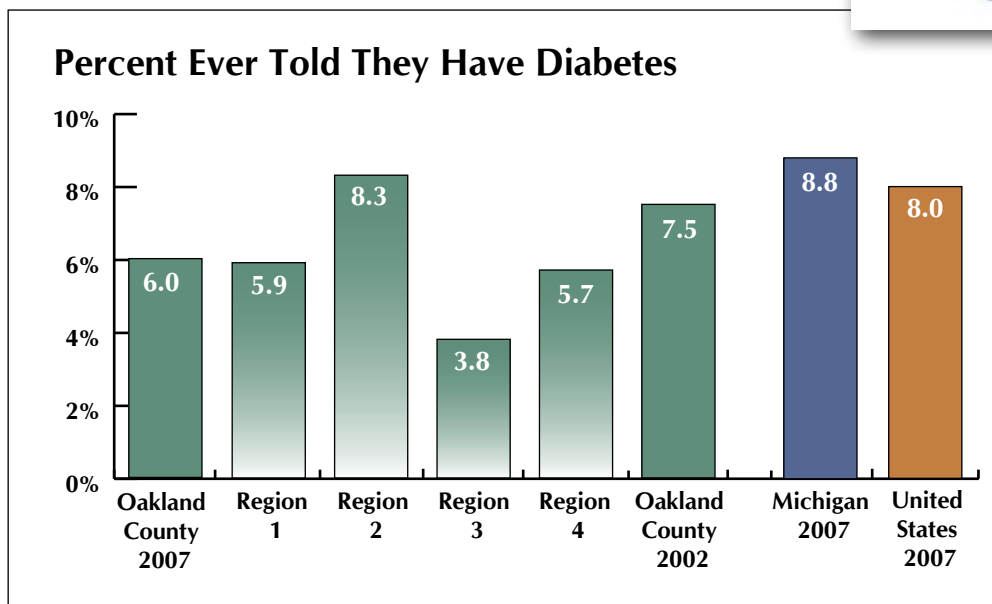


# Diabetes

Diabetes mellitus is one of the top public health problems in the United States. Diabetes occurs when the body fails to process sugar correctly. People with this chronic disease have elevated blood glucose. There are two types of diabetes: Type I, which occurs mainly in children and teens and requires insulin injections and Type II, which usually occurs in adults over age 45 and results in the body's inability to produce enough insulin or to use it effectively. Type II diabetes accounts for 90 to 95% of all diabetes cases.

Diabetes is the sixth leading cause of death in the nation, state and Oakland County.

Diabetes can have a debilitating impact on a person's life if not controlled. Diabetes is often a co-morbid condition impacting a person's ability to control other diseases such as heart disease, high blood pressure, high cholesterol and even asthma and arthritis.



In 2007, 6.0% of Oakland County residents reported being currently diagnosed with diabetes. The reported Oakland County rate was statistically lower than the 2006 statewide rate of nearly 9.0%.

Age is a significant factor for reporting a diagnosis of diabetes. Nearly 30% of respondents age 65+ reported a diabetes diagnosis.

## Diabetes Related Deaths and Death Rates, Oakland County and Michigan, 1990-2006

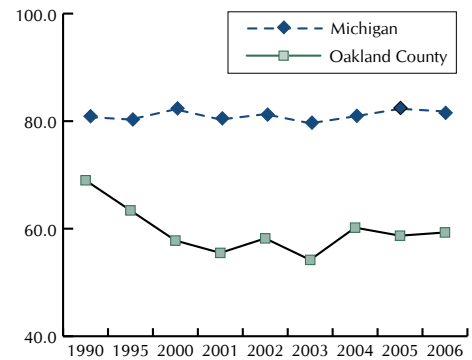
Year	Oakland County		Michigan	
	Number	Rate	Number	Rate
1990	620	69.0	6,685	80.8
1995	641	63.4	7,268	80.3
2000	640	57.8	7,973	82.2
2001	627	55.5	7,909	80.3
2002	663	58.2	8,134	81.3
2003	638	54.2	8,103	79.6
2004	728	60.2	8,416	80.9
2005	730	58.7	8,749	82.3
2006	730	59.3	8,635	81.8

\*rates per 100,000 residents

Source: MDCH

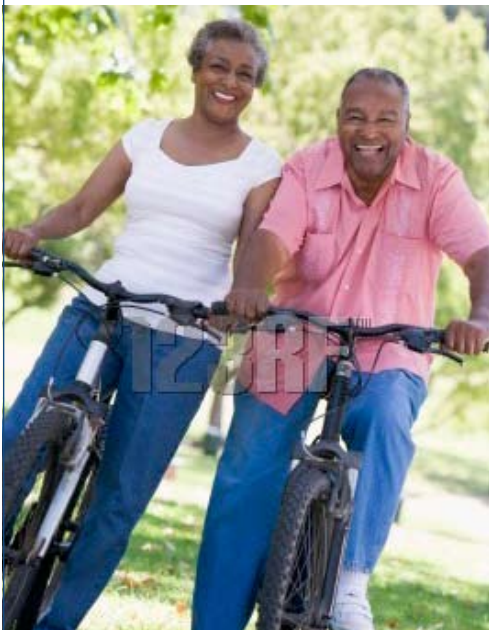
Since 1990, the death rate from diabetes in Oakland County has been significantly lower than the state-wide rate.

Comparison of Diabetes Related Death Rates per 100,000 Residents



Source: MDCH

### Fast Fact:



The risk of developing Type II diabetes can be reduced by remaining physically active, maintaining proper nutrition, maintaining proper cholesterol levels and avoiding excess weight gain.

Among races in Oakland County, the reported rates of diabetes are not statistically significant. However, Whites in Oakland County reported a rate of 5.6% which was significantly lower than Whites statewide at 8.3%.

Education was predictive of diabetes among Oakland County residents. College graduates had the lowest rate of diabetes (3.5%) compared to some college (9.0%) and high school/GED (7.8%).

There were no other significant differences in gender, income or region, with the exception of Region 2 where an 8.3% diabetes diagnosis rate was reported.

Diabetes is the 6<sup>th</sup> leading cause of death in Oakland County. Since 1990, diabetes related deaths have increased from 620 residents to 730 residents annually. During the same period, the death rate attributable to diabetes decreased from 69 to 59 per 100,000 deaths. The rate decrease was due to an increase in the County's population.



# Cancer – Women’s Health

Cancers are the second leading cause of death in the nation, state and Oakland County. Most cancers are treatable and early detection is key for treatment and survival. Breast cancer is the most frequently diagnosed cancer in women and the second leading cause of death among women.

Many deaths from breast and cervical cancer could be avoided by increasing cancer-screening rates among women at risk. Clinical breast exams are an effective screening tool for identifying changes in breast tissue but mammography is the best method to detect breast cancer in its earliest, most treatable stage.

Female residents age 40+ in Oakland County reported a significantly higher rate of mammography (74.9%) than statewide (57.2%). Variations noted by age, income, race, education and region were not significant.

During the period between 2000 and 2004, cases of breast cancer reported for female residents of Oakland County decreased from 1,044 to 929 per year. During 2004, 160 women died from invasive breast cancer.

The incidence of breast cancer reported in Oakland County since 1985 peaked in 2000 at 16 per 10,000 female residents



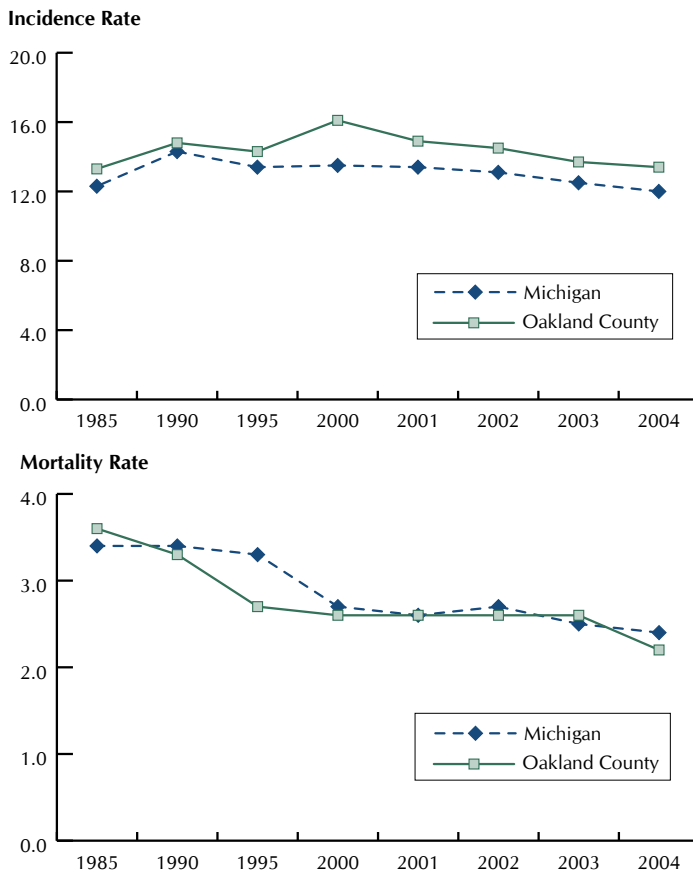
## Breast Cancer Screening Comparison

Place	Year	Percent Ever Had a Mammogram (all ages)	Clinical Breast Exam and Mammogram in Past Year (Women age 40+)	Percent Ever Had a Clinical Breast Exam
<b>Oakland County</b>	<b>2007</b>	<b>71.5</b>	<b>74.9</b>	<b>94.2</b>
Region 1	2007	62.8	82.3	91.7
Region 2	2007	59.6	73.7	93.1
Region 3	2007	75.0	77.0	88.8
Region 4	2007	78.5	72.4	97.2
<b>Oakland County</b>	<b>2002</b>	<b>66.4</b>		<b>93.6</b>
<b>Oakland County</b>	<b>1996</b>			<b>89.5*</b>
Michigan	2007		57.2**	
United States	2007			

\*significantly lower than Oakland County 2002, \*\*2006 BRFS

Sources: MI and US data: Centers for Disease Control and Prevention, BRFS.

**Breast Cancer Related Incidence and Mortality Death Rates per 10,000 Female Residents, Oakland County and Michigan, 1985-2004**



Source: MDCH

and decreased through 2004 reaching a rate of 14 per 10,000 female residents. Between 1985 and 1995 there was a significant decrease in the breast cancer mortality rate. Since 1995, the breast cancer mortality rate has remained stable, ranging between 22-28 per 10,000 female residents.

Declines in breast cancer related mortality may result from earlier, more definitive diagnosis, treatment and increased survival rates.

Gynecologic cancers are diagnosed in female reproductive organs including the uterus, cervix, ovaries, fallopian tubes, vulva and vagina. Cervical cancer screening using PAP tests detect not only cancers but also other pre-cancerous conditions.

Nearly all of the female respondents (96.4%) reported having a PAP test during their lives and 85.4% reported having a PAP test within the last three years.

Women in households with incomes <\$20,000 reported significantly lower PAP tests (62.9%) than women in other income ranges.

### Cervical Cancer Screening Comparison

Place	Year	Percent Ever Had a Pap Test	Percent Had a Pap Test Within Past Three Years
<b>Oakland County</b>	<b>2007</b>	<b>96.4</b>	<b>85.4</b>
Region 1	2007	97.3	85.6
Region 2	2007	94.5	82.7
Region 3	2007	91.7	82.6
Region 4	2007	98.5	87.4
<b>Oakland County</b>	<b>2002</b>	<b>95.8</b>	<b>87.8</b>
<b>Oakland County</b>	<b>1996</b>	<b>95.2</b>	<b>88.8</b>
Michigan	2006		85.8
United States	2006		84.0

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

# Colorectal Cancer

Colorectal cancers are the second leading cause of cancer related deaths in the United States and the third most common cancer diagnosed in men and women. The risk of developing colorectal cancer increases with age, with more than 90% of cases occurring in persons age 50+.

Reducing deaths from colorectal cancer depends on detecting and removing pre-cancerous polyps as well as detecting and treating cancer in its early stages. Procedures used for screening include sigmoidoscopy, with fecal occult blood tests (FOBT), and colonoscopy.

In Oakland County, 54.2% of persons age 50+ reported they had a sigmoidoscopy or colonoscopy within the last five years. The rate of these procedures in persons age 60-69 (65.8%) and age 70+ (65.0%) are significantly higher than those persons age 50-59 (39.9%).

During 2004, there were 557 colorectal cancers diagnosed for Oakland County residents, while 189 deaths attributed to colorectal cancer were reported. The death rate for colorectal cancers has been declining since 1995, from 55 per 100,000 to 45 per 100,000 in 2004.

## Fast Fact:



*There is evidence that early detection and removal of pre-cancerous polyps can reduce colorectal cancer deaths by as much as 20% in people aged 45 - 80.*

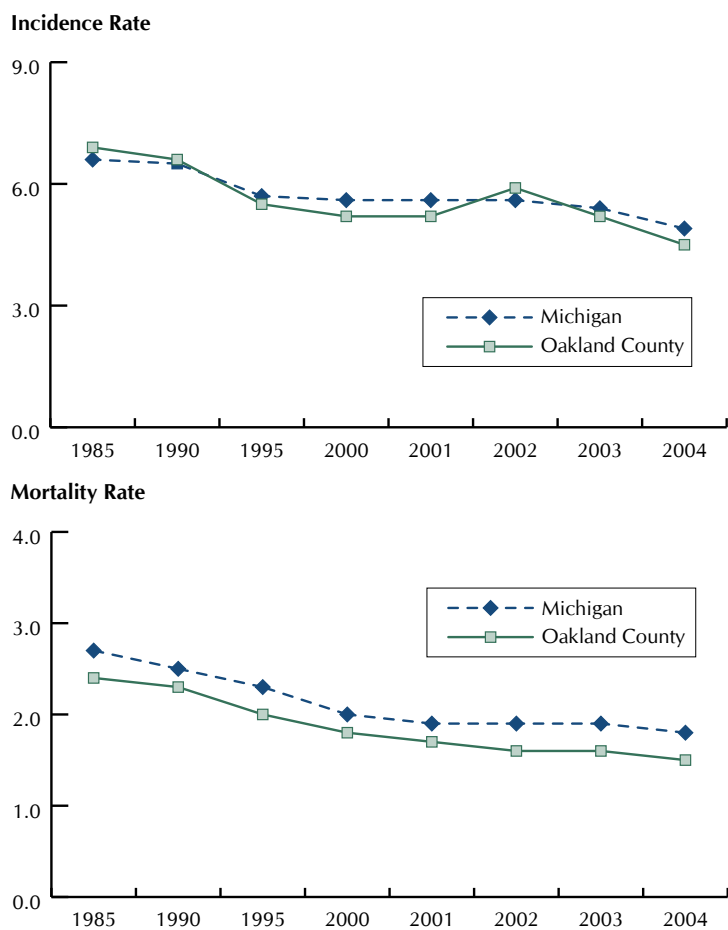
## Colorectal Cancer Screening Comparison

Place	Year	Percent Had a Blood Stool Test in Past Two Years (age 50+)	DRE Exam in Past Year (Men age 50+)	Sigmoidoscopy or Colonoscopy in Past Five Years (age 50+)
<b>Oakland County</b>	<b>2007</b>	<b>21.6</b>	<b>62.1</b>	<b>54.2</b>
Region 1	2007	20.4	62.8	59.4
Region 2	2007	21.3	63.7	49.5
Region 3	2007	24.8	54.0	64.5
Region 4	2007	19.9	64.6	50.7
<b>Oakland County</b>	<b>2002</b>	<b>29.8*</b>		
<b>Oakland County</b>	<b>1996</b>	<b>35.8*</b>		
Michigan	2007	27.3	54.9**	55.9**
United States	2007	24.2		

\*Past two years, age 40+, \*\*2006 BRFSS

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

**Colorectal Cancer Related Incidence and Mortality Death Rates per 10,000 Residents, Oakland County and Michigan, 1985-2004**



Source: MDCH

## Colorectal Cancer Screening

Colorectal cancer screening, sigmoidoscopy or colonoscopy, is a very important tool for detecting cancers. A sigmoidoscopy, together with a fecal occult blood test (FOBT), is a very effective screening tool. A sigmoidoscopy is similar but not the same as a colonoscopy. A sigmoidoscopy examines only the lower part of the colon, while a colonoscopy examines both the upper and lower parts.

While sigmoidoscopies are less invasive and expensive to perform, colonoscopies can detect abnormalities throughout the colon. A colonoscopy is generally recommended when at least one of the following has occurred: a change in bowel habits, blood in the stool, persistent abdominal pain, or the patient is aged 50 or older.

Colonoscopies are one of the best tools healthcare professionals have to detect colon cancer as well as diagnose other gastrointestinal issues.

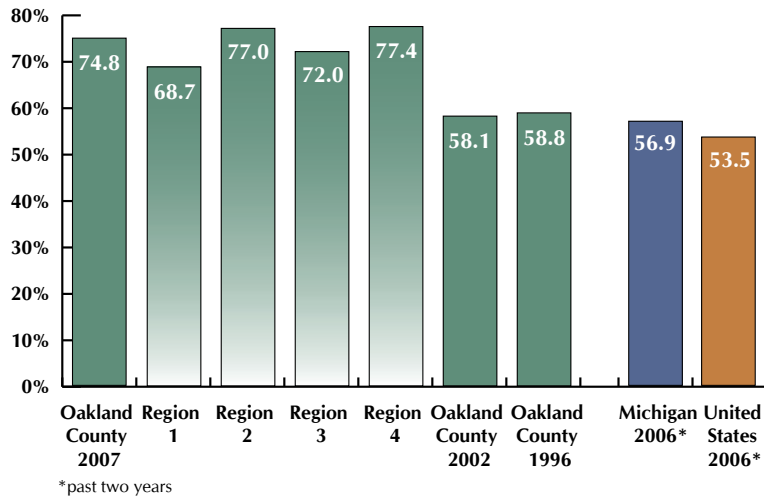
## Prostate Cancer



Prostate cancer (a cancer in the prostate gland of the male reproductive system) is the most common cancer among men in the United States, Michigan and Oakland County. The causes of prostate cancer are not well known, although age is the primary risk factor along with diet, weight, genetics and heredity.

More than 75% of the cases are diagnosed in men aged 65 and older. African-American men have higher incidence and mortality rates from this disease than do Caucasian men. Additionally, prostate cancer appears to run in families.

### Percent Ever Had a PSA Test (Men age 40 +)



### The PSA Blood Test

Prostate-specific antigen (PSA) is a protein produced by the prostate and released in very small amounts into the bloodstream. When there's a problem with the prostate, such as when prostate cancer develops and grows, more and more PSA is released until it reaches a level where it can be easily detected in the blood. To perform a PSA test, a small amount of blood is drawn from the arm, and the level of PSA is measured. However, PSA can also be elevated if other prostate problems are present, such as Benign Prostatic Hypertrophy (BPH) or prostatitis, and some men with prostate cancer have "low" levels of PSA. This is why both the PSA and Digital Rectal Exam (DRE) are used to detect the presence of disease.

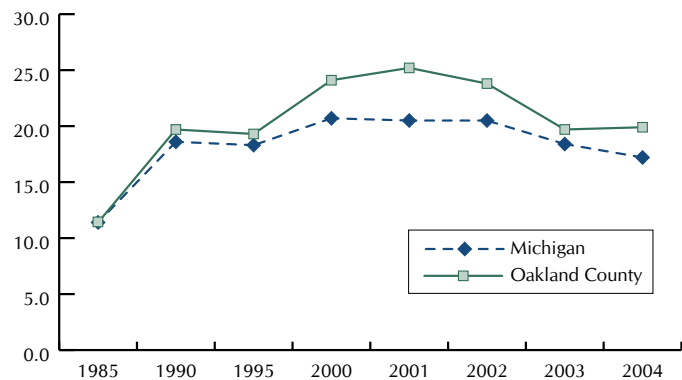
Nearly three out of four men age 40+ residing in Oakland County and participating in the survey reported having at least one PSA screening test for prostate cancer. This is significantly higher than the rate of 58.1% reported in the previous Oakland survey, but is consistent with increased awareness and access to testing by the residents and their primary care physicians.

The rate of PSA testing reported ranged from a low of 68.7% in Region 1 to a high of over 77% in Regions 2 and 4. The rate of PSA testing in Oakland County of 74.8% is significantly higher than the state at 56.9% and the nation at 53.5%.

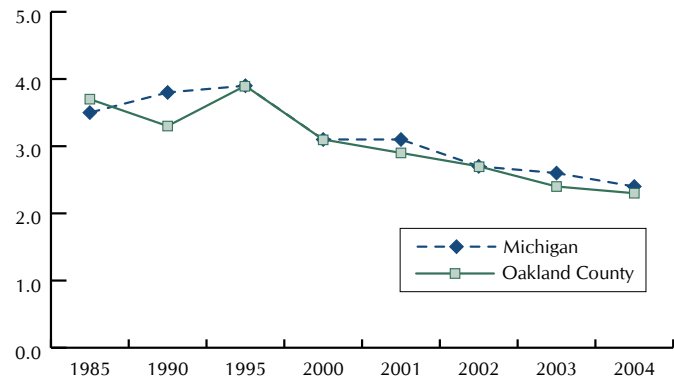
During 2006, 106 males residing in Oakland County died from prostate cancer. Over the past 20 years, the rate of prostate cancer among men in Oakland County was slightly higher than the state (some of the difference may be due to higher levels of testing and diagnosis), while the mortality rate was very similar to the statewide experience.

Prostate Cancer Related Incidence and Mortality Death Rates per 10,000 Male Residents, Oakland County and Michigan, 1985-2004

#### Incidence Rate



#### Mortality Rate

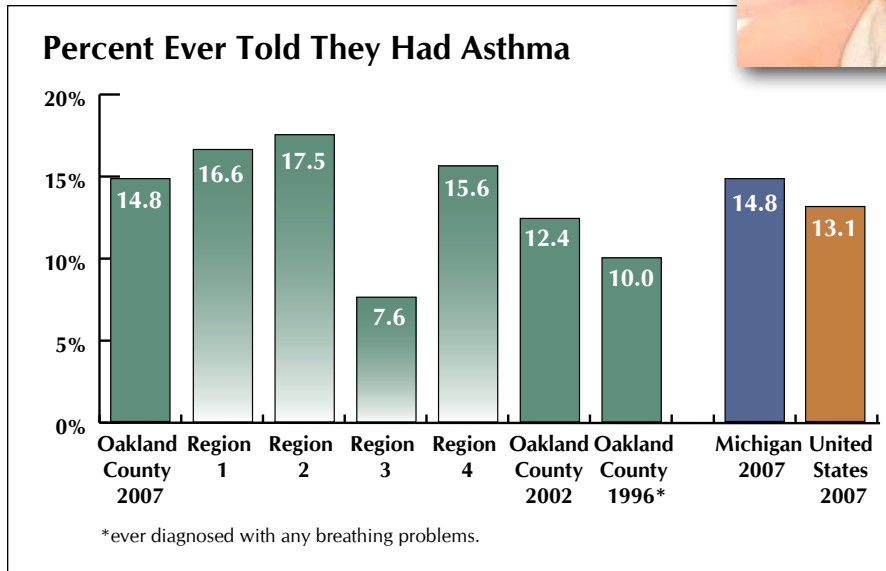


Source: MDCH

# Asthma

Asthma has been reported as increasing across communities in our region. During 2007, 14.8% of the survey respondents reported ever being told they had asthma, with 9.2% reporting still having asthma.

More females (13.1%) reported currently having asthma than males (5.0%). Adults in Region 3 (2.9%) had a significantly lower rate of asthma than the residents of Region 1 (11.3%) and Region 4 (11.9%).



College graduates (6.0%) reported a rate five times lower than high school graduates (31.8%), while persons in households with incomes of \$75,000 + (6.0%) reported a rate three times lower than households <\$20,000 (18.8%).

## Asthma Comparison

Place	Year	Percent Ever Told Had Asthma	Percent Still Had Asthma
<b>Oakland County</b>	<b>2007</b>	<b>14.8</b>	<b>9.2</b>
Region 1	2007	16.6	11.3
Region 2	2007	17.5	6.7
Region 3	2007	7.6	2.9
Region 4	2007	15.6	11.9
<b>Oakland County</b>	<b>2002</b>	<b>12.4</b>	
<b>Oakland County</b>	<b>1996</b>	<b>10.0</b>	
Michigan	2007	14.8	9.5
United States	2007	13.1	8.4

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

# Sexually Transmitted Diseases

Sexually transmitted diseases (STDs) are caused by pathogens (viruses, bacteria, parasites or fungi) that are spread from one person to another, mainly through sexual contact. According to the Centers for Disease Control and Prevention, there are more than 25 different diseases that are spread through sexual contact. Most STDs affect both men and women, but in many cases the health effects can be more serious for women. If a pregnant woman contracts an STD, it can cause serious health problems for the baby.

During the past decade, syphilis cases reported in Oakland County peaked at 56 in 2001. Reported cases have decreased each year since, reaching 29 cases in 2007 and a rate of 2.4 per 100,000 residents, less than one-half the statewide rate (5.0%) for the same year.

Gonorrhea cases have remained stable in Oakland County over the past decade, with a low of 881 cases in 2002 and a high of 1,180 cases in 2004. There were 997 cases reported in 2007, a rate of 82 per 100,000 residents, which is less than one-half the statewide rate for the same year.

Chlamydia cases steadily increased in Michigan and Oakland County over the past decade. The increase is due to

## Fast Fact:



*Women are at higher risk than men for most STDs. All individuals who are sexually active should be aware of safe-sex methods and receive regular health screenings.*

## Sexually Transmitted Diseases Oakland County and Michigan, 1998-2007

	Oakland County						Michigan					
	Syphilis		Gonorrhea		Chlamydia		Syphilis		Gonorrhea		Chlamydia	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1998	34	2.9	929	78.6	1,399	118.3	691	7.0	16,319	165.7	22,001	223.4
1999	39	3.3	895	75.3	1,615	135.9	774	7.8	15,907	160.7	23,107	233.5
2000	47	3.9	1,040	86.9	1,737	145.2	990	9.9	18,182	182.6	26,237	263.5
2001	56	4.7	892	74.2	2,144	178.4	1,149	11.5	17,121	171.1	31,090	310.7
2002	52	4.3	881	73.3	2,793	232.2	1,175	11.7	14,770	147.0	32,272	321.1
2003	43	3.6	888	73.5	3,291	272.5	855	8.5	13,965	138.5	32,590	323.3
2004	40	3.3	1,180	97.3	4,155	342.4	817	8.1	17,376	171.8	41,247	407.9
2005	30	2.5	948	78.1	2,644	217.7	488	4.8	17,684	174.7	38,729	382.7
2006	31	2.6	1,024	84.3	2,980	245.4	397	3.9	16,591	164.3	38,142	377.8
2007	29	2.4	997	82.1	3,373	277.8	506	5.0	17,327	171.6	41,291	409.0

Note: Rates are per 100,000 population.

Source: MDCH

several factors, including increased awareness, improved reporting, increased levels of testing and improved testing technology. While the number of reported chlamydia cases have more than doubled in Oakland County over the past decade, the rate in Oakland County (277.8 per 100,000) is nearly one-third less than the statewide rate (409.0).

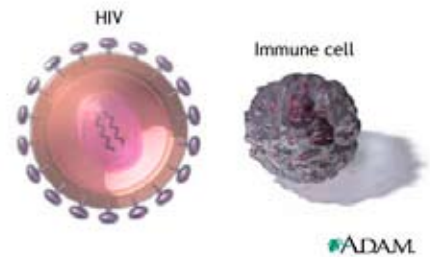
HIV (Human Immunodeficiency Virus) can be passed from one person to another. HIV is found in the blood and the sexual fluids of an infected person and in the breast milk of an infected woman. HIV transmission occurs when a sufficient quantity of these fluids enter another person's bloodstream, mucous membrane or open cut.

There are several ways a person can become infected with HIV:

- Unprotected sexual intercourse with an infected person;
- Contact with an infected person's blood or sexual fluids;
- From mother to child during birth or breast feeding;
- Use of infected blood products; and
- Injecting drugs from an HIV contaminated syringe.

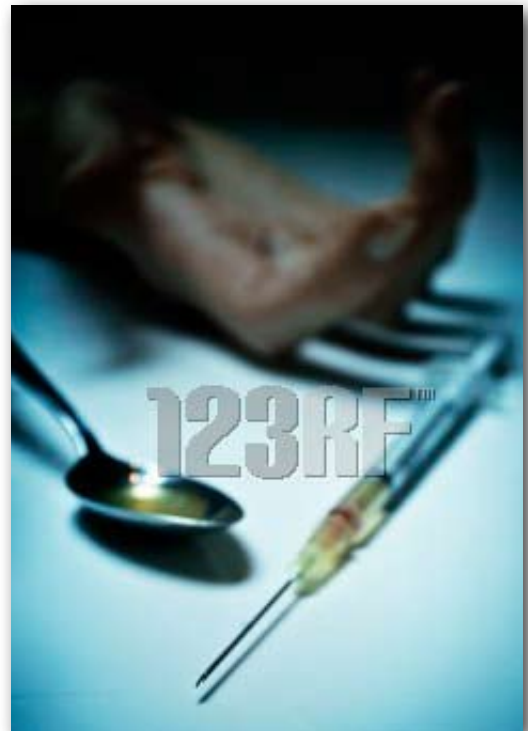
Persons who have been infected with HIV are likely to become ill with one of a number of particularly severe illnesses. It is at this point in the stages of HIV infection that they are said to have AIDS – when they first become seriously ill or when the number of immune system cells left in their body drops below a particular point. AIDS is an extremely serious condition and at this stage the body has very little defense against any type of infection.

## Fast Fact:



*AIDS (Acquired Immune Deficiency Syndrome) is a medical condition people develop because the Human Immunodeficiency Virus (HIV) has damaged their natural defenses (immune system) against disease. HIV, like other viruses, infects the cells that make up the human body and replicates within those cells. A virus can also damage human cells, which is one of the things that can make a person ill. Someone who is diagnosed as infected with HIV is said to be "HIV positive."*

*Illustration source: MedlinePlus, [www.nlm.nih.gov](http://www.nlm.nih.gov)*





Without treatment, HIV infection usually progresses to AIDS in an average of ten years. This average, though, is based on a person having a reasonable diet, exercise and access to appropriate health treatments.

During the past 25 years, 2,262 Oakland County residents have been diagnosed with HIV, and 1,513 residents have been diagnosed with AIDS. During that period, 767 people have died as a result of HIV/AIDS. Currently, there are 1,495 county residents that have HIV, 708 residents are HIV positive without the AIDS diagnosis, while 787 residents have been diagnosed with AIDS.



*The peak years for Oakland County residents, those in which 100+ cases of HIV were diagnosed, were 1989-1994, 2003, 2005 and 2006.*

### New Diagnoses, Deaths, and Prevalence of HIV/AIDS in Oakland County by Year

Year	HIV/AIDS			AIDS		
	New HIV Diagnosis	Deaths	Prevalence	New AIDS Diagnosis	Deaths	Prevalence
1983	3	1	2	2	1	1
1984	10	1	11	8	1	8
1985	51	8	54	11	8	11
1986	51	11	94	17	11	17
1987	83	23	154	43	23	37
1988	98	22	230	53	22	68
1989	122	45	307	61	45	84
1990	145	39	413	79	37	126
1991	139	54	498	93	51	168
1992	129	63	564	109	61	216
1993	101	73	592	106	69	253
1994	102	84	610	93	83	263
1995	97	77	630	93	74	282
1996	99	51	678	76	45	313
1997	87	31	734	59	28	344
1998	64	19	779	41	16	369
1999	60	26	813	38	23	384
2000	86	25	874	54	25	413
2001	75	23	926	52	20	445
2002	80	9	997	49	8	486
2003	105	19	1,083	69	18	537
2004	96	11	1,168	54	9	582
2005	114	21	1,261	77	18	641
2006	115	11	1,365	79	11	709
2007	91	17	1,439	60	16	753
2008*	59	3	1,495	37	3	787
<b>TOTAL</b>	<b>2,262</b>	<b>767</b>		<b>1,513</b>	<b>726</b>	

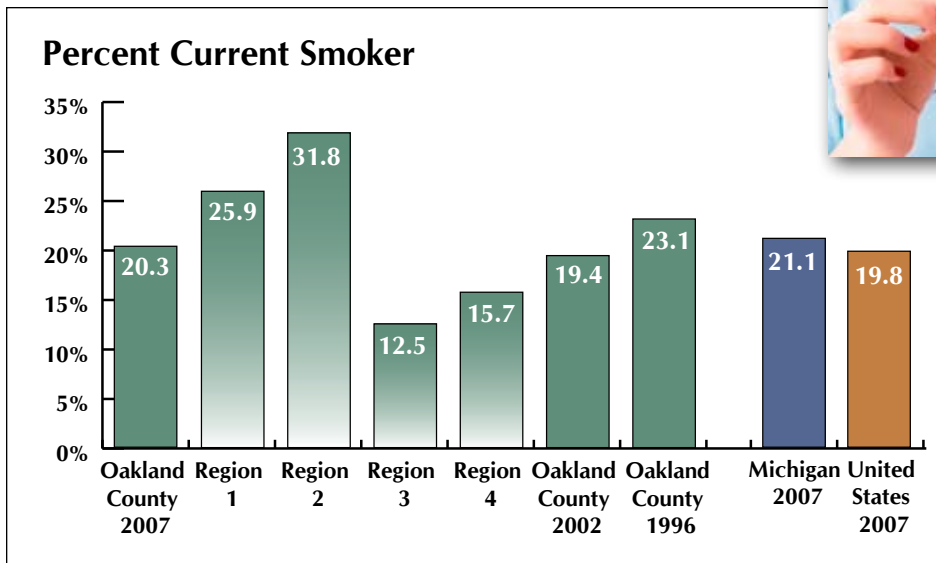
\*The current reported prevalence of HIV/AIDS in Oakland County is 1,495. The prevalence of AIDS, which is a subset of HIV/AIDS prevalence, is 787.

Source: MDCH, October 2008 Quarterly HIV/AIDS Analysis: Oakland County.

# Tobacco Use

Tobacco use is the cause of a wide range of health conditions and one in five deaths in the United States. While cigarette smoking is the most frequently reported kind of tobacco use, other kinds such as cigars, pipes and chewing tobaccos also contain carcinogens that cause cancer.

Cigarette smoking is the leading cause of preventable illness and premature death in the United States, contributing to 20% of all deaths per year.



During 2007, 20.3% of Oakland County residents surveyed reported that they are currently cigarette smokers, which is slightly lower than the 2006 statewide rate (22.1%). However, Oakland County adults age 54-65 reported significantly lower rates (16.8%) than the same age group statewide (26.3%).

Oakland County residents in households with incomes less than \$20,000 and between \$35,000-\$49,999 recorded the highest smoking rates (42.6% and 31.3% respectively).

Oakland County residents with a college degree recorded the lowest (9.7%) smoking rate among all categories analyzed. While men (21.9%) reported higher rates than women (18.7%), the difference was not statistically significant.

Oakland County residents in Region 3 reported the lowest, current smoking rate (12.5%) among the four regions. However, residents in Region 1 (25.9%) and Region 2 (31.8%) reported statistically significant higher rates than in Region 3.

Smoking has been identified as the leading cause of lung cancer. During the 20 years between 1985 and 2005, the number of Oakland County residents diagnosed with lung cancer increased from 622 cases to 792 cases per year. This rate of diagnosed lung cancer was slightly lower than the statewide rate.

During the same period, the number of residents who died from lung cancer increased from 465 cases in 1985 to 561 cases in 2005. Again, the lung cancer death rate for Oakland County residents is slightly lower than the statewide rate.

While the health consequences of smoking have long been recorded, the effects of environmental tobacco smoke, or second-hand smoke, have become more widely known over the past decade.

## Fast Fact:



*Second-hand smoke exposure causes disease and premature death in children and adults who do not smoke. Secondhand smoke contains hundreds of chemicals known to be toxic or carcinogenic including formaldehyde, benzene, vinyl chloride, arsenic ammonia and hydrogen cyanide.*

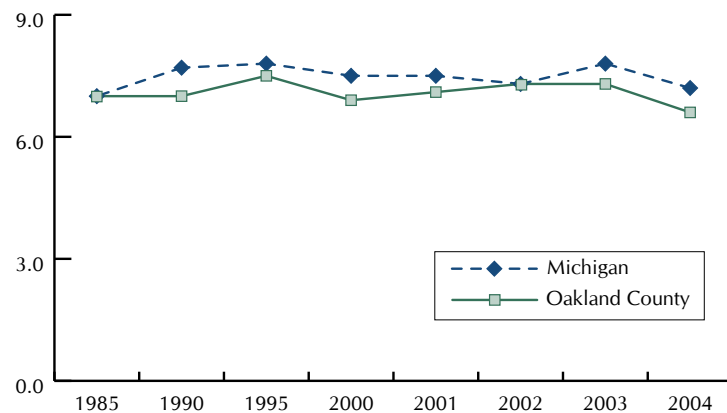
*Second-hand smoke causes almost 50,000 deaths in adult nonsmokers in the United States each year, including approximately 3,400 from lung cancer and 22,700-69,600 from heart disease.*

*Second-hand smoke is responsible for between 150,000 and 300,000 lower respiratory tract infections in infants and children under 18 months of age, resulting in between 7,500 and 15,000 hospitalizations each year and causing 430 sudden infant death syndrome (SIDS) deaths in the United States annually.*

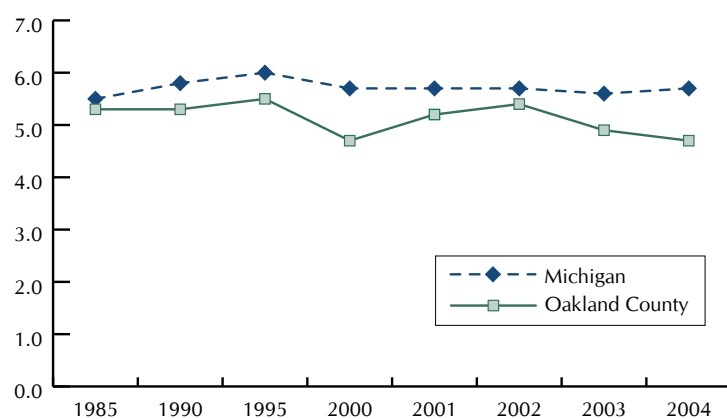
Source: <http://www.lungusa.org>

**Lung Cancer Related Incidence and Mortality Death Rates per 10,000 Residents, Oakland County and Michigan, 1985-2004**

### Incidence Rate

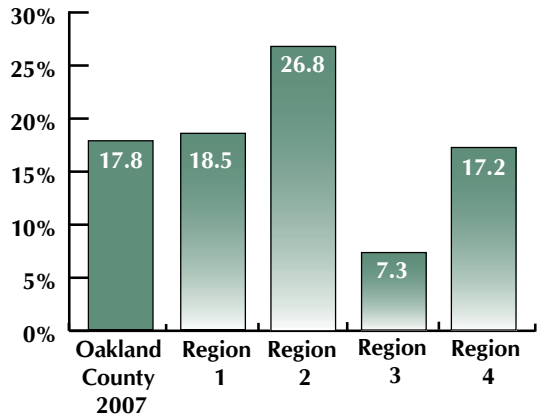


### Mortality Rate



Source: MDCH

### Percent Reporting Tobacco Smoke Inside Home\*



\*past 7 days.

During 2007, 17.8% of Oakland County residents surveyed responded they had been exposed to second-hand smoke in the home during the week prior to the survey.

The rate of exposure to second-hand smoke is associated with annual household income. Of the survey respondents, 52.7% reported exposure in households with incomes under \$20,000 per year, and only 8.4% reported exposure in households reporting incomes over \$75,000 or more per year.

Not surprising, exposure to second-hand smoke is significantly higher in Regions 1 (18.5%) and Region 2 (26.8%) since these regions report the highest smoking rates. The exposure to second-hand smoke in Regions 1 and 2 is statistically significant.

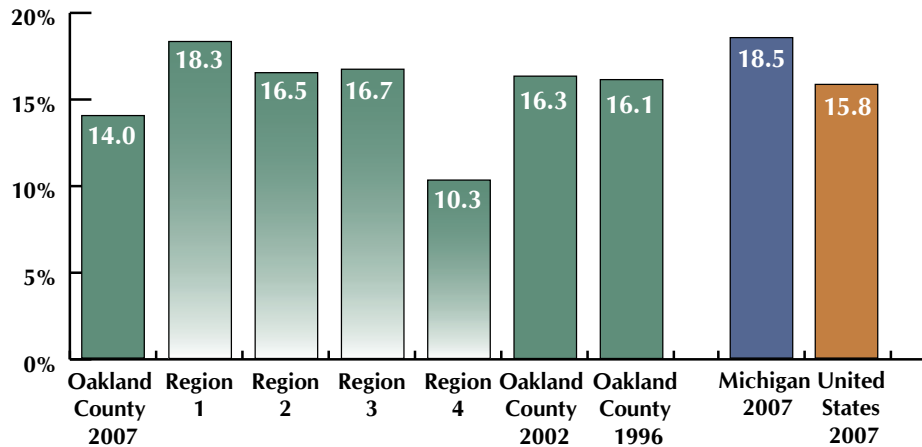
## Alcohol Use

In Oakland County in 2007, 59.3% of survey respondents reported that they had at least one alcoholic drink in the past month, and 14.0% reported having five or more drinks at least once during the past month.

Binge drinking (5 or more drinks on one occasion for men, females having 4 or more drinks on one occasion) is associated with many health problems.



### Percent Reporting Binge Drinking\*



\* in past month

Binge drinking (males having five or more drinks on one occasion, females having four or more drinks on one occasion)

## Alcohol Use Comparison

Place	Year	Percent Had at Least One Drink in Past Month	Percent Who Binge Drank* in Past Month	Percent Drove After Drinking in Past Month
<b>Oakland County</b>	<b>2007</b>	<b>59.3</b>	<b>14.0</b>	<b>2.2</b>
Region 1	2007	59.3	18.3	5.6
Region 2	2007	51.1	16.5	2.3
Region 3	2007	60.2	16.7	0.6
Region 4	2007	62.7	10.3	1.5
<b>Oakland County</b>	<b>2002</b>	<b>63.4</b>	<b>16.3</b>	
<b>Oakland County</b>	<b>1996</b>	<b>64.1</b>	<b>16.1</b>	
Michigan	2007	59.4	18.5	3.1**
United States	2007	54.8	15.8	

\*males having five or more drinks on one occasion, females having four or more drinks on one occasion, \*\*2006 BRFSS

Sources: MI and US data: Centers for Disease Control and Prevention, BRFSS.

During 2007, 14.0% of Oakland County residents reported binge drinking in the past month. Binge drinking was:

- higher among men (18.5%) than women (9.8%);
- highest among those ages 18-24 (33.4%) and lowest among those age 75+ (1.6%);
- higher among Whites (16.9%) than Blacks (1.3%);
- highest among households with incomes of \$35,000-\$49,999 (22.5%), followed by households with incomes of \$50,000-\$74,999 (20%), and lowest in households with incomes of \$35,000 or less (5.3%);
- highest among high school graduates/GED (18.5%) and lowest among those with less than high school attainment (5.3%); and
- highest in Region 1 and lowest in Region 4.

Oakland County residents reported lower levels of binge drinking (14.0%) than the statewide rate (17.5%). In Oakland County, adult binge drinking has decreased over the last decade from 16.1% in 1996 to 14.0% in 2007.

Binge drinking has also decreased for teenagers in grades 8, 10 and 12. The decrease among 8th grade students has been most significant, falling from 18.2% in 1996 to 6.8% in 2005. Binge drinking behaviors initiate in the teen years, peak among 18-24 year olds and decrease from age 25 on.

### Health Problems

The health problems associated with excessive alcohol consumption include but are not limited to:

- Unintentional injuries (car crashes, burns, drownings)
- Intentional injuries (firearms injury, sexual assaults, domestic violence)
- Alcohol poisoning
- Sexually Transmitted Diseases
- Unintended pregnancies
- Children born with Fetal Alcohol Spectrum Disorders
- Liver disease
- High blood pressure, stroke and other cardiovascular diseases
- Neurological damage
- Poor control of diabetes
- Impaired judgement

In Oakland County during 2007, nearly 169,000 people reported binge drinking in the previous month - 38,000 of them were age 18-24. Persons age 18-24 represent 8% of the overall population but 22.5% of all binge drinkers.

Driving after consuming alcoholic beverages is a particular danger for the individual involved, as well as the public. During 2006, there were 1,305 traffic crashes involving alcohol, with 23 persons killed and 725 persons injured. Two-thirds of these alcohol related traffic crashes occurred on local streets (864) with 17% occurring on interstate highways (217) and nearly 14% occurring on state routes (178).

### Fast Fact:



During 2007, 2.2% of Oakland County residents surveyed reported driving after drinking. This translates into nearly 27,000 people who admitted they drove after drinking in the month prior to the survey. Of the 58 fatal crashes in Oakland County during 2006, 34.5%, or 20, had drinking involvement.

Source: 2006 Michigan Traffic Crash Facts, Michigan Office of Highway Safety Planning.

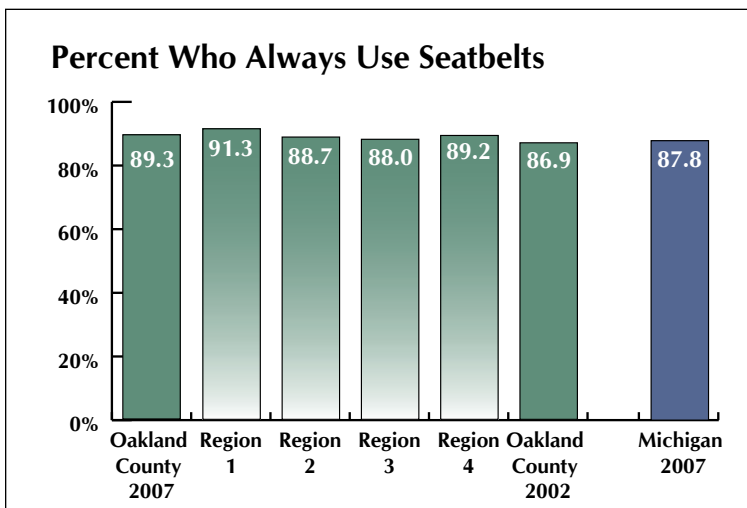
### Alcohol Involved Traffic Crash Summary for Oakland County, 2006

	Crashes	Fatal Crashes		Crashes	Fatal Crashes		Crashes	Fatal Crashes
Addison Twp.	3	0	Huntington Woods	2	0	Pleasant Ridge	8	0
Auburn Hills	66	1	Independence Twp.	48	0	Pontiac	60	1
Berkley	11	0	Keego Harbor	0	0	Rochester	3	0
Beverly Hills	8	0	Lake Angelus	0	0	Rochester Hills	55	1
Bingham Farms	3	0	Lake Orion	8	0	Rose Twp.	15	1
Birmingham	19	1	Lathrup Village	6	0	Royal Oak	66	1
Bloomfield Hills	4	0	Leonard	0	0	Royal Oak Twp.	3	0
Bloomfield Twp.	45	0	Lyon Twp.	28	2	South Lyon	3	0
Brandon Twp.	24	0	Madison Heights	34	1	Southfield	88	0
Clarkston	3	0	Milford	7	0	Southfield Twp.	0	0
Clawson	11	0	Milford Twp.	17	0	Springfield Twp.	21	2
Commerce Twp.	26	1	Northville	0	0	Sylvan Lake	0	0
Farmington	5	0	Novi	44	0	Troy	84	1
Farmington Hills	70	0	Novi Twp.	0	0	Walled Lake	10	0
Ferndale	21	0	Oak Park	20	0	Waterford Twp.	88	1
Franklin	2	0	Oakland Twp.	13	1	W.Bloomfield Twp.	36	0
Groveland Twp.	14	1	Orchard Lake	4	1	White Lake Twp.	24	0
Hazel Park	46	0	Orion Twp.	41	1	Wixom	16	0
Highland Twp.	24	1	Ortonville	2	0	Wolverine Lake	7	0
Holly	4	0	Oxford	3	0			
Holly Twp.	13	1	Oxford Twp.	16	0	<b>County Total</b>	<b>1,305</b>	<b>20</b>

Source: Michigan State Police, 2006

# Seatbelt Use

According to the Michigan State Police, seatbelt use is the single most effective means of reducing fatal and non-fatal injuries in vehicular crashes. Safety belts can prevent serious injury and even death in a crash. During 2006, 1,084 persons were killed and 80,576 persons injured in traffic crashes in Michigan. Of those killed, 37% were not wearing a safety belt.



Statewide, occupants in crashes were 33 times more likely to be killed if they were not wearing restraints.

In 2007, 89.3% of Oakland County respondents reported that they always use seatbelts - an increase over the 86.9% reported in 2002. This rate was slightly higher than the statewide rate of 87.8% reported in 2006. Highest reported seatbelt use was in Region 1 (91.3%), with Regions 2-4 slightly under the Oakland County average.

The Michigan State Police note that it is important to remember that Michigan is a “primary law” state.

- A motorist can be stopped and cited for the sole reason of not wearing a safety belt while driving or riding as a front seat passenger.
- A police officer may stop and cite a motorist if a child ages 4 through 15 is not properly restrained, no matter where they are riding in a vehicle.
- All children under age 8 need to be in an approved child safety seat or booster seat, in all seating positions, unless 4’9” tall.

## Fast Fact:



There are two ways you can get a ticket for not wearing a seatbelt, “primary enforcement” and “secondary enforcement.” States that have primary enforcement laws allow police officers to pull you over and issue you a citation for not wearing a seatbelt, as they would if you were speeding or committing another moving violation. Just over half of all states have primary enforcement laws; Michigan is one. States that have secondary enforcement laws allow police officers to issue a citation for not wearing a seatbelt only after they pull you over for another violation. Only one state, New Hampshire, does not have any law requiring adults to wear seatbelts.

The fine in Michigan for not wearing a seat belt is \$75.





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