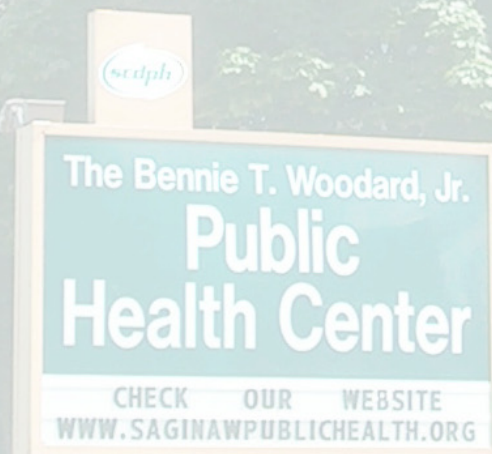




SAGINAW COUNTY
DEPARTMENT OF PUBLIC HEALTH

protecting and promoting the public's health since 1928

Saginaw County Community Health Status Report 2008



1600

Prepared in collaboration with the University of Michigan School of Public Health, Office of Public Health Practice.

Building the Practice of Public Health



Saginaw County Department of Public Health
1600 N. Michigan Avenue
Saginaw, MI 48602
(989) 758-3800

This report is also available at www.saginawpublichealth.org.

Saginaw County Community Health Status Report 2008
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Saginaw, Michigan

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Health Officer: Natasha J. V. Coulouris, M.P.H.

Medical Director: Neill D. Varner, D.O., M.P.H.



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DEPARTMENT OF PUBLIC HEALTH

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Natasha J.V. Coulouris, M.P.H.
Health Officer

Neill D. Varner, D.O., M.P.H.
Medical Director

Dear citizens of Saginaw County,

On behalf of the Saginaw County Department of Public Health (SCDPH), I am delighted to present to you the 2008 Saginaw County Community Health Status Report. Community health assessment--a specific way to identify problems, needs and strengths in a community to make decisions, set priorities and objectives, and explore ways to take action--is a fundamental cornerstone of public health practice. Despite state budget cuts that eliminated our community health assessment program, SCDPH recognized the need to continue this work and mobilized a partnership with the University of Michigan, School of Public Health to complete this project.

This Report represents the first step in a longer, more comprehensive process. It serves as a snapshot of the current data we have on the health status of Saginaw County. One of the primary conclusions we have drawn from this process is that we need more data, and the ability to drill down more specifically into areas of interest. Second, we will use this Report as a springboard to implement the Mobilizing for Action through Planning and Partnerships (MAPP) process, a nationally recognized model developed by the National Association of City and County Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC). We have been careful not to draw too many conclusions on our own but rather hope to engage the community in a dialogue on, "What does this mean? What matters most to us? How do we respond?"

In this spirit, I hope the Report is useful to all members of the community, including families and neighborhood groups, partner community organizations, health care providers, and policy makers. SCDPH commits to using it in a collaborative framework to set health priorities and use data to drive our decisions, and measure progress over time. We welcome your input and guidance in this process.

Finally, many thanks to the team who generously contributed time and expertise to create this Report—from the University of Michigan: Dr. Matthew Boulton, Dr. JoLynn Montgomery, Josh Clayton, Amy Sarigiannis, Ryan Isakson, and Erin Rothney; from SCDPH: Christina Harrington, Patricia Ritter, Tamara Theisen, Pamela Smith and our Regional Epidemiologist Tim Bolen. This work simply would not have been possible without you.

Sincerely,

A handwritten signature in black ink, appearing to read "Natasha J.V. Coulouris". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Natasha J.V. Coulouris, M.P.H.
Director/Health Officer
Saginaw County Department of Public Health

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INTRODUCTION

A *community health assessment* is a specific way to identify problems, needs, and strengths in a community to make decisions, set priorities, define objectives and explore ways to take action.

The Saginaw County Community Health Status Report ('Report') reflects a partnership between the Saginaw County Department of Public Health (SCDPH) and the University of Michigan School of Public Health's Office of Public Health Practice to conduct a community health assessment. This Report addresses a gap in SCDPH's capacity to carry out the first of the three core functions of public health as defined by the Institute of Medicine: *assessment*, assurance and policy development. Unfortunately, state budget cuts in the mid-1990s eliminated our Community Health Assessment Initiative, which resulted in the loss of all SCDPH funding and staff to support this fundamental process. Since that time, SCDPH has worked in creative ways to monitor health status in separate programs but desired a comprehensive health assessment document.

Further, this effort reflects SCDPH's strategic plan with its newest Vision Priority, "*We will achieve our prioritized health outcomes for Saginaw County*". Goals and actions to support this priority include identifying community health needs, establishing health priorities, and measuring health outcomes over time. This Report provides a snapshot of the current health status of the county, and will be used to discuss priorities and as a benchmark for measuring progress over time.

■ NACCHO MAPP MODEL

The basic outline of this Report follows a national model called Mobilizing for Action through Planning and Partnerships (MAPP). Developed by the Centers for Disease Control and Prevention (CDC) and the National Association of County and City Health Officials (NACCHO), MAPP is a community-wide strategic planning tool for improving community health. This tool was selected for its comprehensive approach to assessment, its national credibility, and because it embodies SCDPH's guiding principle of collaboration with a truly community-driven approach. Community health status assessment is one of four key assessments that lie at the core of the MAPP process¹. This Report will be used to initiate the MAPP process throughout Saginaw County.



Figure 1.1: The MAPP Model

■ HEALTH INDICATORS

Indicators are measures of the health and well-being in a population. Indicators take general ideas and put them in more specific terms that you can measure over time. The 10 indicators comprising this Report are Demographic Characteristics; Socioeconomic Characteristics; Health Resource Availability; Quality of Life; Behavioral Risk Factors; Environmental Health Indicators; Social and Mental Health; Maternal and Child Health; Death, Illness, and Injury; and Communicable Disease.

METHODS

Data were collected from various sources including Saginaw County Department of Public Health (SCDPH), Michigan Department of Community Health (MDCH), Centers for Disease Control and Prevention (CDC), U.S. Census Bureau, Michigan Behavioral Risk Factor Surveillance System (BRFSS) and other county, state, and federal agencies and reports. *See Data Sources for further information.*

The health indicators were compared to data available for Saginaw County and the state of Michigan, over consistent time periods. For several of the indicators comparisons were used to Genesee County due to its similar demographics and geographic location. Data sources are noted just below each table or figure.

■ REPORT LIMITATIONS

This Report is limited to data that is currently available. SCDPH lacks the capacity to gather and analyze information on vulnerable populations and specific geographic areas. One of the primary barriers in developing this Report was the lack of comprehensive data. This leads to a recommendation for further data collection and analysis.

■ DATA LIMITATIONS

Most data represented in this Report are from secondary data sources and may include limitations on direct interpretation due to small sample sizes, representativeness of the county, or data projections and estimates.

As an example, the CDC's Behavioral Risk Factor Surveillance System collects data on preventive health practices and risk behaviors of individuals 18 years and older for infectious and chronic diseases in addition to injuries. A state-based, random sample of telephone land lines are surveyed monthly. As the sample is designed to be representative of the state, not necessarily of the county, and that various factors bias the results (i.e., not all households have phones), problems exist in estimating county-level prevalence of most risk factors. This is true of Saginaw County BRFSS data and any conclusions that are made should take this into account. Several potential biasing factors include a lack of sampling from low income individuals due to the inability to pay for a telephone line or under-representing the young adult population which has a higher prevalence of cell phones in place of telephone land lines.

Despite the limitations, the data provide a basic overview of the health and well-being of the residents of Saginaw County. Further assessment is warranted for issues identified within this Report.

ASSESSMENT

INDICATOR 1 - DEMOGRAPHICS

To understand the health of a community, it is important to know the traits of people living therein. Characteristics such as age, sex, race, and ethnicity provide valuable information to guide current activities and interventions as well as provide a base for future planning of services.

POPULATION

According to U.S. Census Bureau data:

- Saginaw County was the tenth most populous county in Michigan in 2000.
- The population of Saginaw County in 2007 decreased from 2000 while Michigan's population increased.
- Saginaw is the largest city in the County with an estimated population of 56,263 (27.9% of the County population).
- Of Saginaw County's 30 local municipalities, 8 had an increase in population while the remaining 22 areas decreased.
- Saginaw County has a higher percentage of rural households (31%) than Michigan (25%).

Table 1.1: Population in Comparison

	Population		Net Change from 2000	Population Density in 2000
	2000	July 1, 2007 Estimate		
Saginaw County	210,039	202,268	-3.7%	260/sq. mi.
Genesee County	436,141	434,715	-0.3%	682/sq. mi.
Michigan	9,938,444	10,071,822	+1.3%	175/sq. mi.

Source: U.S. Census Bureau, 2007 Population Estimates

Table 1.2: Population of Saginaw County Jurisdictions

Change in Population 2000 – 2007		Change in Population 2000 – 2007	
Albee Twp.	-3.8	Kochville Twp.	+ 17.8
Birch Run Twp.	-2.4	Lakefield Twp.	+ 0.1
Blumfield Twp.	-6.7	Maple Grove Twp.	-1.5
Brady Twp.	-4.6	Marion Twp.	+3.3
Brant Twp.	+2.5	Richland Twp.	-0.8
Bridgeport Twp.	-6.5	Saginaw City	-8.9
Buena Vista Twp.	-8.2	Saginaw Twp.	-1.9
Carrollton Twp.	-8.5	St. Charles Twp.	-4.9
Chapin Twp.	+0.6	Spaulding Twp.	-7.6
Chesaning Twp.	-2.2	Swan Creek Twp.	-2.4
Frankenmuth City	-2.7	Taymouth Twp.	-5.4
Frankenmuth Twp.	-5.7	Thomas Twp.	+ 3.6
Fremont Twp.	+0.7	Tittabawassee Twp.	+ 12.0
James Twp.	-3.6	Zilwaukee City	-7.2
Jonesfield Twp.	-4.4	Zilwaukee Twp.	-0.8

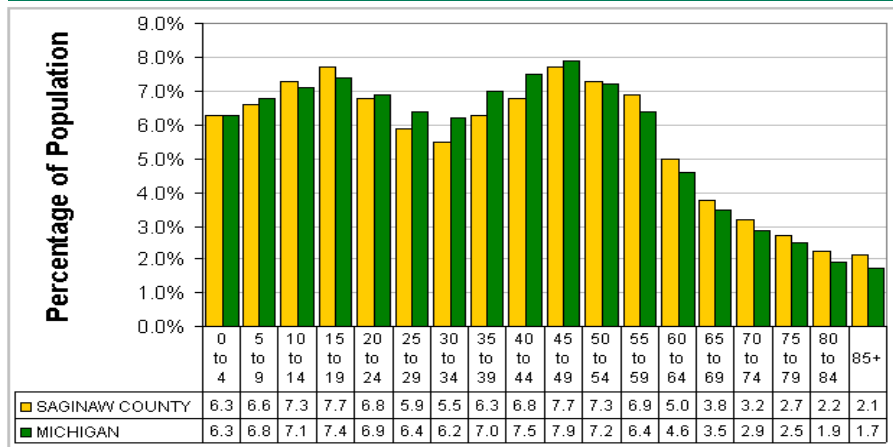
Source: The Saginaw News, 2008

AGE

U.S. Census Bureau 2006 population estimates reveal that:

- The age distribution of Saginaw County and Michigan residents is very similar with peaks in population in the 15 to 19 and the 45 to 49 year age groups.
- Saginaw County had a slightly greater percentage of residents aged 50 years and older.

Figure 1.1: Population Distribution by Age, 2006



Source: U.S. Census Bureau, 2006 Population Estimates

ASSESSMENT

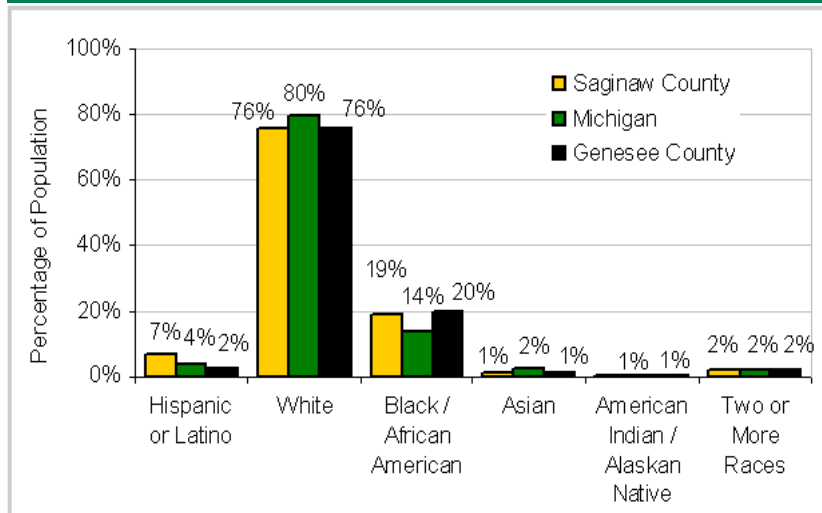
INDICATOR 1 - DEMOGRAPHICS

RACE/ETHNICITY

This Report uses race/ethnicity categories as defined in the U.S. Census 2000 (see Definitions). Differences in terminology, data collection procedures, perceptions of group identity, and changing demographics present particular challenges for surveillance.

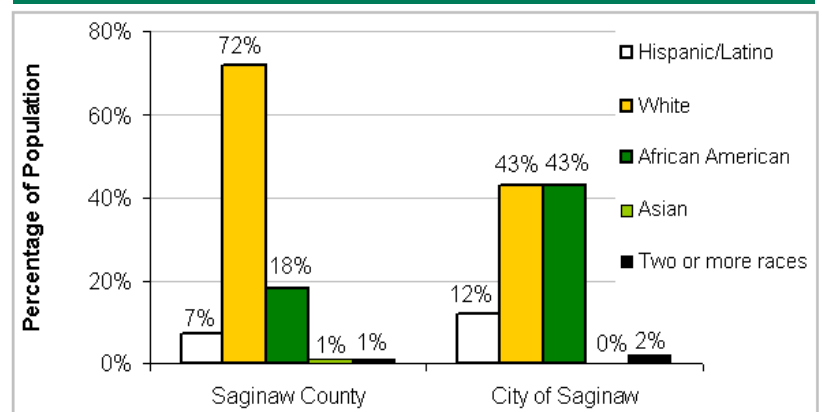
- As shown by Figure 1.2, Genesee County has a population base similar to Saginaw County in terms of geographic location and racial make-up.
- In comparison to State figures, Saginaw County has a higher percentage of African American residents as well as residents self-reported as Hispanic or Latino.
- In 2000, African Americans within the City of Saginaw account for 68% of the county's total African American population. Another 26% of the county's African American residents live in areas directly adjacent to the city.

Figure 1.2: County Population Distribution by Race/Ethnicity, 2006



Source: U.S. Census Bureau, 2006 American Community Survey

Figure 1.3: County & City Population Distribution by Race/Ethnicity, 2000



Source: U.S. Census Bureau, 2000

LANGUAGE

- In Saginaw County, 5.1% of the population speaks a language other than English at home which is lower than the 9.0% reported for Michigan.

Table 1.3: Spoken Language

	SAGINAW COUNTY		MICHIGAN
	2000	2006	2006
Language other than English spoken at home	6.4%	5.1%	9.0%
Speak a language other than English and speak English less than 'very well' (over 5 years old)	1.8%	1.6%	3.4%

Source: U.S. Census Bureau, 2006 American Community Survey and 2000 Census

ASSESSMENT

INDICATOR 2 - SOCIOECONOMICS

Socioeconomic status is one of the most important predictors of health². Income, education, and occupation information comprise the socioeconomic characteristics which are monitored when assessing why health outcomes are prevalent in different communities.

INCOME & POVERTY

- Saginaw County’s median household income is \$8,820 less than that of all Michigan residents.
- Saginaw County’s percentage of residents living in poverty is higher than that of Michigan.
- In 2005, 48% of Saginaw County and 38% of Michigan children received free/reduced school lunch.

Table 2.1: Income and Poverty

	Saginaw County		MI
	2000	2006	2006
Median Household Income	\$38,637	\$38,362	\$47,182
Individuals of all ages living in poverty	13.9%	18.6%	13.5%
Children under 18 living in poverty	20.7%	26.2%	18.3%
	2000-01	2006-07	2006-07
Children receiving free/reduced priced school lunches ¹	42.4%	48.4%	38.1%

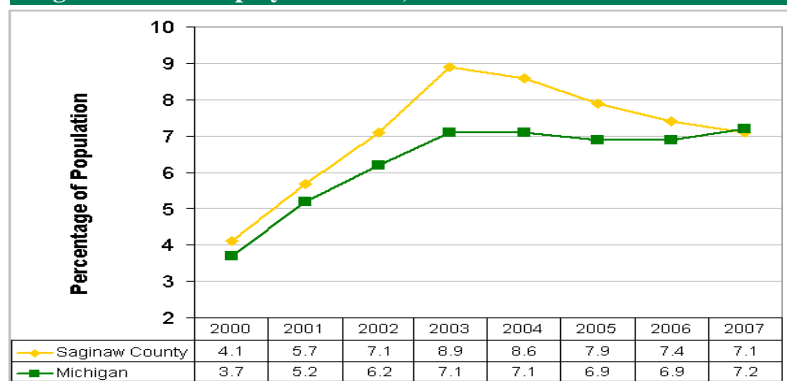
Source: U.S. Census Bureau, 2006 American Community Survey and 2000 Census Kids Count in Michigan – Data Book 2007

¹Family income for eligible students is below 185 percent poverty level

UNEMPLOYMENT

- Saginaw County’s unemployment rate has been slightly higher than the State from 2000 to 2006.
- Saginaw County’s unemployment rate reached a peak in 2003 and has steadily decreased each year afterward.
- According to the 2000 U.S. Census, 81.6% of Saginaw County residents work within the county. Conversely, 26,735 residents from other counties commute to Saginaw County.

Figure 2.1: Unemployment Rate, 2000-2007



Source: Michigan Department of Labor and Economic Growth, Labor Market Information

EDUCATION

- The high school graduation rate is slightly lower in Saginaw County compared to Michigan but increased by 1.4% since 2000.
- In Saginaw County, 17.1% percent of all families were headed by single parents, compared to 14.1% in Michigan.
- The majority of families in Saginaw County are headed by a female (83.7%)³.

Table 2.2: Education

	Saginaw County		MI
	2000	2006	2006
High school graduates aged 25 and older	81.6%	85.8%	87.2%
	2000	2004	2004
New mothers without a high school diploma ¹	20.2%	18.4%	16.8%
	2005	2005	2005
Children achieving Reading proficiency in 3 rd grade	86.7%		86.6%
Children achieving Mathematics proficiency in 3 rd grade	87.7%		87.0%

Source: US Census Bureau, 2006 American Community Survey and 2000 Census Early Childhood Investment Corporation

¹Three-year moving average with middle year listed (2003-2005 average)

ASSESSMENT

INDICATOR 2 - SOCIOECONOMICS

HOMELESSNESS

- The number of Saginaw County homeless persons was 1,723 for 2007.
- There were 254 homeless youth in Saginaw County who were unaccompanied by an adult.
- In Saginaw County, 86 persons reported being chronically homeless.

Table 2.3: Homelessness

	Saginaw County Homeless Totals, 2007	Michigan Homeless Totals, 2007
Total Single Adults	1,312	30,843
Total Unaccompanied Youth	254	938
Total Adults in Families	255	13,358
Total Children in Families	540	16,751
Overall Unduplicated Total	1,723	59,555
Total Chronically Homeless	86	7,080

Source: Saginaw County Homeless Management Information System (HMIS), 2007 Michigan Coalition Against Homelessness, The State of Homelessness in Michigan: 2007 Annual Report

HEALTH INSURANCE

- Saginaw County's percentage of uninsured individuals is higher than that of Michigan.
- Saginaw County also has lower employer-based and individually purchased insurance rates than Michigan.
- In 2004, 50.4% of Saginaw County births were paid for by Medicaid compared to 34.3% of all Michigan births.

Table 2.4: Health Insurance Coverage for Persons 65 years or less¹

Coverage Type	Saginaw Metro Area ²	Michigan
Uninsured	16.9%	12.1%
Employer-based	60.7%	69.4%
Individually Purchased	4.2%	6.6%
Other	18.2%	11.9%

Source: Michigan Department of Community Health, Special Report: Characteristics of the Uninsured and Individuals with Selected Health Insurance Coverage in Michigan, June 2007

¹ 2004-2005 Average

² Saginaw-Saginaw Township North Metropolitan Statistical Area is defined as Saginaw County, MI

OTHER HEALTHCARE COVERAGE

Other options for healthcare coverage in Saginaw County, outside of Medicaid and Medicare, which exists for individuals with limited access to care or inability to pay include:

- MICHild - a state-wide program that provides health insurance to children in families who can't afford coverage due to low income and don't qualify for Medicaid. According to the Early Childhood Investment Corporation (ECIC), the percent of children aged 0-18 years insured by either Medicaid or MICHild was 42.8% for Saginaw County and 33.4% for Michigan in 2005.
- MIChoice is another state-wide program for the aged and disabled Medicaid beneficiaries to receive in-home services allowing them to stay at home rather than receive care at a nursing home.
- The Saginaw Health Plan is a form of public assistance for basic services for the uninsured, but is not insurance. For 2007, there were 57,326 (28%) Saginaw County residents covered by the county health plan.

ASSESSMENT

INDICATOR 3 - HEALTH RESOURCE AVAILABILITY

The health resources available in a community include the number of healthcare providers, the number of beds and services offered by hospitals, and even the number of public health professionals. These factors contribute to the access, use, cost, and quality of healthcare and preventive services.

HOSPITALS & BEDS

Saginaw County is establishing itself as a regional medical hub for the Northeast Central region of Michigan. Saginaw County has five hospitals providing services which include emergency, laboratory, children's health, cancer care, and cardiology services.

HEALTHCARE PROVIDERS

- Listed in Table 3.2 are the occupations and count of selected licensed health professionals living within Saginaw County. Licensure within the county does not imply the health professional works in the county.
- The east side of the City of Saginaw received a geographic designation as a health professional shortage area (HPSA) in primary medical care by the Health Resources and Services Administration (HRSA) in 2007.
- Health Delivery, Inc., a Federally Qualified Health Center, has nine facilities within Saginaw County and a bilingual staff to offer services in behavioral health, dental, family medicine, HIV/AIDS, mammography, OB/GYN, and radiology without regard to ability to pay.
- Saginaw County is also served by several in-home healthcare agencies such as Visiting Nurses Association, Visiting Angels, A & D Health Care, and Lutheran Home Care Agency.
- In 2007, Saginaw County Department of Public Health had 105.6 full-time equivalent employees and an operating budget of \$15,152,500. This budget equates to annual spending of nearly \$72 per resident per year.

Table 3.1: Hospitals and Licensed Beds in Saginaw County

Hospital Name	Type	Licensed
St Mary's of Michigan	Acute care	268
Covenant Healthcare	Acute care	623
Aleda E Lutz VA Medical Center	Acute and Chronic Care	22
HealthSource Saginaw	Rehabilitation and Psychiatric	65
Select Specialty Hospital	Specialty Care	32

Source: MDCH - Division of Licensing and Certification

Table 3.2: Healthcare Workforce in Saginaw County

Occupation	Count
Physicians ¹	582
Physician Assistants	47
Nurse Practitioners	63
Registered Nurses	2245
Chiropractors	27
Dentists	130
Pharmacists	186
Professional Counselors	67
Physical Therapists	97
Occupational Therapists	115
First Responders	213
EMTs	235
Paramedics	93

Source: Michigan Department of Community Health, Bureau of Health Professions, As of June 2008

¹Includes allopathic and osteopathic physicians

Table 3.3: Statistics Saginaw Department of Public Health

Saginaw County Department of Public Health	2007
Employees	105.6
Budget	\$15,152,500
Budget per capita*	\$72

Source: Saginaw County Department of Public Health, Background of Public Health in Saginaw County

*U.S. Census Bureau, 2000 Census

ASSESSMENT

INDICATOR 3 - HEALTH RESOURCE AVAILABILITY

HEALTHCARE ACCESS

- In Saginaw County, 11.2% of individuals have no personal health care provider versus 15.2% in Michigan.
- The percentage of Saginaw County population versus Michigan population having no routine checkup in the past year was similar with 30.6% and 30.1%, respectively.
- The percentage of Saginaw County individuals reporting as having no health care due to cost in the last year was 11% in comparison to 12.2% in the State.

Table 3.4: Health Care Access

	Saginaw County	Michigan
No personal health care provider	11.2%	15.2%
No routine checkup in past year	30.6%	30.1%
No health care access during past 12 months due to cost	11.0%	12.2%

Source: Michigan Behavioral Risk Factor Survey, 2002-2006 Combined

HEALTHCARE CONCERNS

A United Way and Saginaw Community Foundation survey of 400 Saginaw County residents reported:

- 78.7% of survey respondents in 2007 saw providing affordable health care as a major issue in the county compared to 72.8% in the same survey given in 2002.
- 19.3% of respondents had experienced a major problem of not having enough money to pay for a doctor or prescription in the past 12 months.

Table 3.5 Health Care Concerns

	Saginaw County	
	2002	2007
Respondents seeing affordable health care as major issue	72.8%	78.7%
Households experiencing "major" issue of not enough money to pay doctor/ prescriptions in past 12 months	15.5%	19.3%

Source: United Way of Saginaw and Saginaw Community Foundation, Saginaw Residents' Views of Community Needs and Household Problems, February 2008

ASSESSMENT

INDICATOR 4 - QUALITY OF LIFE

Quality of Life (QOL) is often used to assess the current views of a wide range of household and community factors. These factors are primarily composed of physical and psychological aspects and form the overall feeling of well-being a person maintains. As this state of well-being is intangible, proxies are used to measure the effects for research purposes.

RESIDENT PERCEPTION

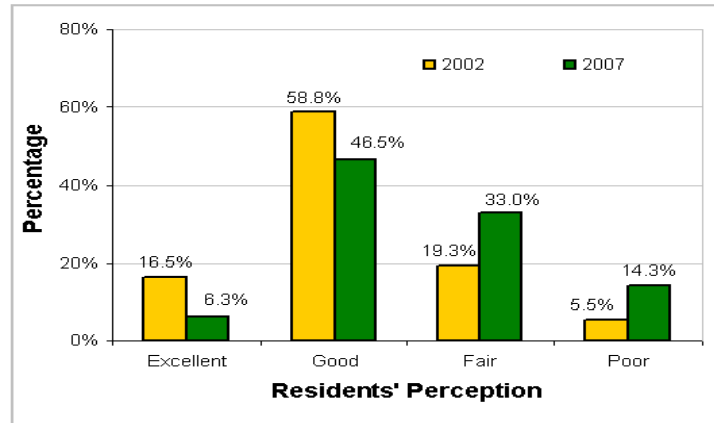
A sample of Saginaw County residents participated in a United Way and Saginaw Community Foundation survey and were asked to rate QOL for individuals like themselves⁴.

- Perceived QOL in Saginaw County decreased from 2002 to 2007. The percentage of individuals who rated QOL as "excellent" or "good" decreased during this period, while the percent who rated quality as "fair" or "poor" increased.
- The question, "What one thing do you like most about living in Saginaw County?" elicited predominant responses of convenience, small population, and rural (21.0%). Other responses included family, friends, job and general atmosphere.
- Survey respondents ranked two problems high above all others. Jobs, finances, and income ranked highest with 45.7% and gangs, crime, and drugs ranked second with 31.7%. No other single category had more than a 5% response rate.

In the 2006 general election, 53% of Saginaw County residents turned out to vote, which is slightly above the 50.7% of all Michigan voters. Voter participation is one indicator of civic engagement in a community.

Michigan Department of Human Services and Michigan Community Coordinated Child Care Association each maintain a list of daycare providers across the state. As of March 2008, Saginaw County had 414 licensed day care providers with 8,111 openings. This gives the county a rate of 4.0 daycare openings per 100 population compared with Michigan's rate of 3.7 per 100.

Figure 4.1: Perceptions of the Quality of Life in Saginaw County



Source: United Way of Saginaw and Saginaw Community Foundation, Saginaw Residents' Views of Community Needs and Household Problems, February 2008

Table 4.1: Leading Factors Affecting Quality of Life in Saginaw County

Positive Factor	Percent ¹
Convenience, Small Population, Rural	21.0
Family, Friends, Job here	15.0
Atmosphere, general	12.3
Always here, born here	10.5
Specific Programs or Institutions	10.3

Source: United Way of Saginaw and Saginaw Community Foundation, Saginaw Residents' Views of Community Needs and Household Problems, February 2008

¹Number of respondents: 400

Table 4.2: Leading Problems Facing Saginaw County Residents

Problem	Percent ¹
Jobs – Finances – Income	45.7
Gangs – Crime – Drugs	31.7
Education	5.0
Healthcare	4.3
Government – Organization – Administration	4.0

Source: United Way of Saginaw and Saginaw Community Foundation, Saginaw Residents' Views of Community Needs and Household Problems, February 2008

¹Number of respondents: 400

ASSESSMENT

INDICATOR 5 - BEHAVIORAL RISK FACTORS

The factors assessed below have the potential to positively or adversely affect the short and long-term health of Saginaw County residents. Tobacco use increases the risk of various cancers and alcohol abuse can cause chronic liver disease while positive factors such as adequate fruit and vegetable intake and physical activity can decrease the risk from heart disease and obesity. By providing a summary report of these measures, interventions may be identified to curb negative behaviors to decrease illness and death in later life.

SUBSTANCE ABUSE

According to BRFSS data:

- The proportion of Saginaw County and Michigan residents reporting as never smoked is similar.
- The population reporting as current smokers is slightly lower in Saginaw County than in Michigan.
- There was a decrease between 2002 and 2006 in Saginaw County for both heavy drinking and binge drinking.

Table 5.1: Substance Use and Abuse

Status	Saginaw County		Michigan
	2002	2006	2006
Current Smoker	23.5%	22.4%	23.0%
Former Smoker	N/A	25.2%	26.0%
Never Smoked	N/A	52.4%	50.9%
Heavy Drinker ¹	6.1%	4.9%	5.5%
Binge Drinker ²	15.0%	14.8%	17.0%

Source: Michigan Behavioral Risk Factor Survey, 1998-2002 and 2002-2006 Combined

¹ Proportion reporting 2 or more alcoholic beverages/day for men; 1 or more/day for women

² Proportion reporting 5 or more alcoholic beverages per occasion at least once in past month

AUTOMOBILE

According to BRFSS data:

- The proportion of Saginaw County residents who reported driving a motor vehicle after drinking alcohol is lower than that of Michigan.
- The percentage of the population always wearing their seatbelt is higher in Saginaw County than in Michigan.
- Observations of child passengers showed more Saginaw County residents using child restraint devices than State residents.

Table 5.2: Automobile Practices

	Saginaw County	Michigan
Drove Motor Vehicle After Drinking ¹	1.6%	2.9%
Always Uses a Seatbelt ²	88.2%	85.6%
Percent of Vehicles using Child Restraint Device	93.5%	91.8%

Source: Michigan Behavioral Risk Factor Survey, 2002-2006 Combined

Office of Highway Safety Planning, Child Restraint Device Use and Misuse Survey, October 2007

¹ Average of 2002, 2004, 2006, Michigan Behavioral Risk Factor Survey

² Average of 2002 and 2006 Data, Michigan Behavioral Risk Factor Survey

NUTRITION & LIFESTYLE

According to BRFSS data:

- In Saginaw County, the percentage of residents eating an inadequate amount of fruits and vegetables is greater than the percentage for Michigan residents.
- Saginaw County no leisure-time physical activity percentages are slightly higher than those of Michigan.

Table 5.3: Nutrition & Physical Activity Lifestyle

	Saginaw County		Michigan
	2002	2006	2006
Inadequate fruit & vegetable intake	81.6%	79.9%	77.7%
No leisure-time physical activity	24.9%	26.7%	22.8%
Inadequate physical activity	N/A	53.4%	51.4%

Source: Michigan Behavioral Risk Factor Survey, 1998-2002 and 2002-2006 Combined

ASSESSMENT

INDICATOR 5 - BEHAVIORAL RISK FACTORS

WEIGHT STATUS

Obesity is defined as a body mass index (BMI) greater than 30. *Overweight* is defined as a BMI greater than 25 but less than 30. $BMI = [Weight (lbs) \div Height (in^2)] \times 703$

- Saginaw residents were higher in both categories with 33.8% being obese and 35.3% being overweight.
- From 2002 to 2006, the percentage of overweight in Saginaw remained the same, but the percent who were identified as obese increased.

CANCER

- *Breast cancer screening* refers to women aged 40 years and older who had both a clinical breast exam and a mammogram in the previous year. In Saginaw County, 64.9% of women were screened while 55.7% underwent screening in Michigan. For Saginaw County, this is an increase of 8.6% from 2002.
- *Cervical cancer screening* refers to women aged 18 years and older who had a Pap test within 3 years. 88.6% of Saginaw County women and 83.5% of Michigan women were screened.
- *Prostate cancer screening* refers to men aged 50 years and older who had a prostate specific antigen (PSA) blood test in the past year. The proportion of men who were screened in Saginaw County and Michigan is 62.7% and 58.5%, respectively. This is a decrease from 80.3% reported in 2000 for Saginaw County.
- The first category for *colorectal cancer screening* is the proportion of adults aged 50 years and older who had a blood stool test using a home kit in the past two years. In Saginaw County, 39.5% of respondents met these criteria compared with 31.0% in Michigan.
- The second category for *colorectal cancer screening* is the proportion of adults aged 50 years and older who had either a sigmoidoscopy or colonoscopy in the past 5 years. The percentage of Saginaw County residents meeting the criteria was 50.4% and 50.6% of Michigan's.

Table 5.4: Weight Status

	Saginaw County		Michigan
	2002	2006	2006
Obese	29.2%	33.8%	26.4%
Overweight	36.5%	35.3%	36.4%

Source: Michigan Behavioral Risk Factor Survey, 1998-2002 and 2002-2006 Combined

Table 5.5: Selected Cancer Screening Rates

	Saginaw County		Michigan
	2002 ¹	2006	2006
Breast Cancer Screening ²	56.3%	64.9%	55.7%
Cervical Cancer Screening ³	87.0%	88.6%	83.5%
Prostate Cancer Screening ⁴	80.3%	62.7%	58.5%
Colorectal Cancer Screening ⁵			
Blood Stool Test in Past 2 Years	35.4%	39.5%	31.0%
Sigmoidoscopy or Colonoscopy in Past 5 years	N/A	50.4%	50.6%

Source: Michigan Behavioral Risk Factor Survey, 1998-2002 and 2002-2006 Combined

¹Due to small sample size, data reflect Region 10 (Bay, Huron, Saginaw, Sanilac, and Tuscola Counties)

²Among women age 40 and older, Exam and mammogram in past year

³Among women age 18 and older, Pap test in previous three years

⁴Among men aged 50 and older

⁵Among adults aged 50 and older

ASSESSMENT

INDICATOR 5 - BEHAVIORAL RISK FACTORS

YOUTH BEHAVIOR

The Michigan Profile for Healthy Youth (MIPHY) surveyed 9th and 11th graders to determine high school student habits. Saginaw County had a larger proportion of students consuming the recommended amount of fruits and vegetables, a higher proportion of physically active students, and lower percentages of students reported having ever, in their lifetime, smoked a whole cigarette or drank alcohol.

Table 5.6: Youth Behavior Profile¹, 2007-2008

<i>(number of responses to questions vary)</i>	Saginaw County	Michigan
Students who ever had sexual intercourse (lifetime)	40.5%	42.4%
Students who had sexual intercourse with one or more people during past 3 months	30.6%	30.0%
Students who were ever physically forced to have sexual intercourse when they did not want to	6.3%	10.3%
Physical Activity		
Students who are overweight (>95 percentile for BMI by age and sex)	15.2%	12.4%
Students who ate five or more servings per day of fruits and vegetables during the past seven days	28.2%	17.0%
Students who were physically active for a total of at least 60 minutes per day on five or more of the past seven days	55.8%	44.0%
Seatbelt Use		
Students who never or rarely wore a seatbelt when riding in a car driven by someone else	7.5%	6.2%
Substance Use		
Students who ever smoked a whole cigarette (lifetime)	34.3%	51.2%
Students who smoked cigarettes during the past 30 days	17.9%	18.0%
Students who ever drank alcohol (lifetime)	62.1%	72.2%
Students who had at least one drink of alcohol during the past 30 days	38.1%	42.8%
Students who have ever been drunk (lifetime)	44.8%	--
Students who had five or more drinks of alcohol in a row, within a couple of hours, during the past 30 days (binge)	26.1%	24.6%
Students who drove a car or other vehicle when they had been drinking alcohol one or more times during the past 30 days	9.4%	9.1%

Source: Michigan Department of Education and Michigan Department of Community Health, Michigan Profile for Healthy Youth, 2007-2008 Survey

¹Represents surveyed 9th and 11th graders

ASSESSMENT

INDICATOR 6 - ENVIRONMENTAL HEALTH

Environmental health addresses all the physical, chemical, and biological factors external to a person, and all the related factors impacting behaviors⁵. The primary indicators for environmental health include air quality, water quality, and blood lead levels to name a few. Microbes present in the environment also play an important role in the acquisition of disease. Assessing and controlling the levels of these potential hazards is the best way to prevent unnecessary illness and death.

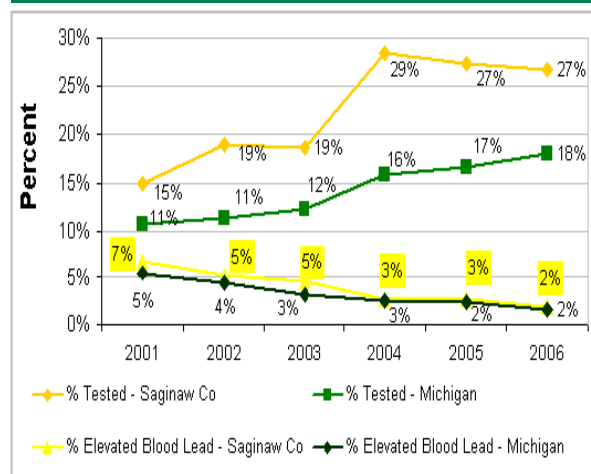
ENVIRONMENTAL FACTORS

- Michigan Department of Environmental Quality (MDEQ) data shows that from 2000 to 2006, Saginaw County has met the National Ambient Air Quality Standards (2006 report data is from Bay City monitor and monitors are designed to report particulate matter results only).
- In 2006, the Saginaw County Clean Indoor Air Regulation prohibited smoking in public and private worksites and public places excluding bars and restaurants.
- Saginaw County is served by the Saginaw Water Treatment Plant which receives its water from Lake Huron. Water Quality Reports from 2001 to 2007 show the drinking water has met all state and federal standards.
- In 2004, routine monitoring of the rivers which flow through Saginaw County was discontinued. However, since 2008, monitoring data has been collected and captured in a database for Saginaw County's two beaches.
- Dioxins are a concern in Saginaw County. The University of Michigan conducted a dioxin exposure study measuring people's exposure levels in several locations including portions of Saginaw County. View the study results at <http://www.sph.umich.edu/dioxin/>.
- The Environmental Protection Agency (EPA) suggests fluoridated water be maintained between 0.7 and 1.2 parts per million, a level of fluoride that prevents dental carries⁶. Centers for Disease Control and Prevention's Reporting System showed 85.5% of the county's population receives fluoridated water. Of the people connected to a public water system, 97.1% receive fluoridated water.

LEAD EXPOSURE

- A blood lead level greater than 10 micrograms per deciliter ($\mu\text{g}/\text{dL}$) is considered an elevated blood lead level (ebll) by the CDC. Lead is toxic and especially detrimental to the developing nervous systems in fetuses and young children⁷.
- The percentage of existing housing stock built prior to 1950, the timeframe which lead was widely used, provides an estimate of potential lead exposure. The City of Saginaw's pre-1950 housing is 54.4% compared to 29.3% of county and 27% of Michigan housing.
- In 2006, 21.9% of children under 6 years old were tested for blood lead in Saginaw County and 1.1% had an ebll; 26.7% of City of Saginaw children under 6 were tested and 1.9% had an ebll; 18% of Michigan children were tested with 1.6% having eblls.
- Lead poisoning and asthma have shared aspects. Risk factors for both include low socioeconomic status, living in the inner city or polluted areas, ethnic minority, or young age. The disease process has other common risk factors like house dust and airborne particles.

Figure 6.1: Saginaw County Children < 6 years old, Tested and with Elevated Blood Lead Levels, 2001-2006



Source: Michigan Department of Community Health: 2006 Annual Report on Blood Lead Levels in Michigan Children < 6 years old

ASSESSMENT

INDICATOR 7 - SOCIAL AND MENTAL HEALTH

Social and mental health indicators are extremely important components of an individual's wellness. It is estimated that the prevalence of mental disorders in the U.S. general population during one year is 26.2%⁸. This prevalence has the potential to echo throughout the community by influencing the health and safety of citizens.

According to the BRFSS data, the proportion of adults reporting poor mental health, which includes stress, depression, and emotional problems, for at least 14 days in the past month, is also greater for Saginaw County (13.7%) than for Michigan (11%).

HOMICIDES

- The rate of homicides in Saginaw and Genesee Counties has been increasing since 1999.
- The homicide rate (per 100,000) in Saginaw County is more than twice as high as that of Michigan (14.5 versus 7.1 per 100,000 population).
- In Saginaw County, the rate of African American deaths due to homicide exceeds the rate of Whites.
- African American homicides have continued to increase since 2002.
- Since 2000, African American homicides within the 0 to 24 and 25 to 44 age groups have increased.

Figure 7.1: Homicide Rates¹, 1997-2006

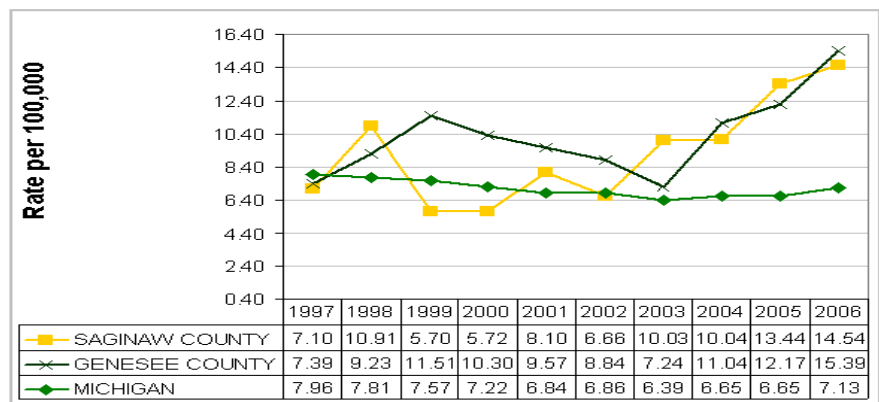


Figure 7.2: Saginaw County Homicide Rates² by Race, 1997-2006

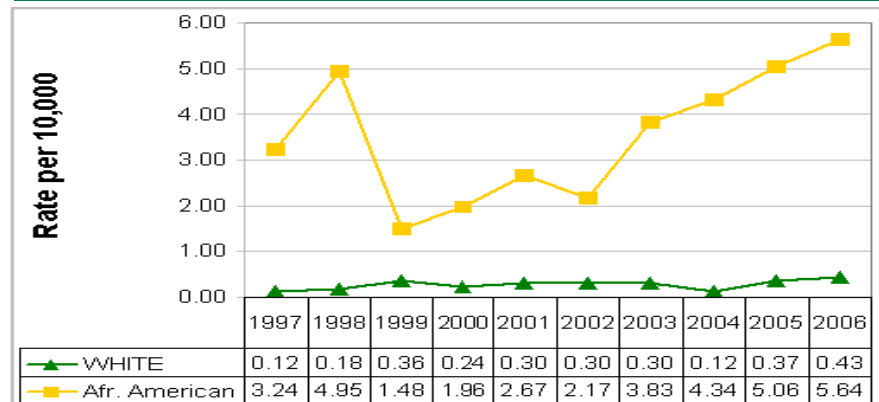
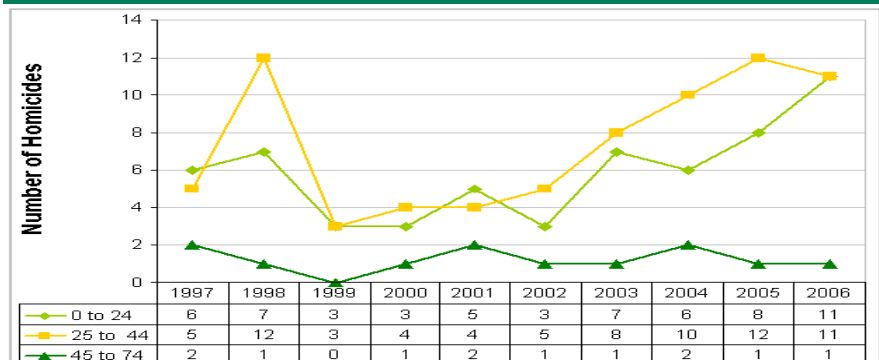


Figure 7.3: Saginaw County African American Homicides by Age, 1997-2006



Source for all figures on page:
Michigan Department of Community Health, Vital Records & Health Data Development Section, 1989-2006 Michigan Resident Death Files
¹Rate per 100,000
²Rate per 10,000

ASSESSMENT

INDICATOR 7 - SOCIAL AND MENTAL HEALTH

SUICIDES

- Trends for Saginaw, Genesee, and Michigan have been similar over the past decade.
- Within Saginaw County from 2000 to 2006, the majority of individuals committing suicide were White.
- Saginaw County White suicide rate was most prevalent for the 45 to 74 year old age group. There was a 1.5-fold increase from 2005 to 2006 for this population. In contrast for the county's White population between the ages of 25 to 44, there was a 3-fold decrease in the number of suicides from 2005 to 2006.

Figure 7.4: Suicide Rates, 1997-2006

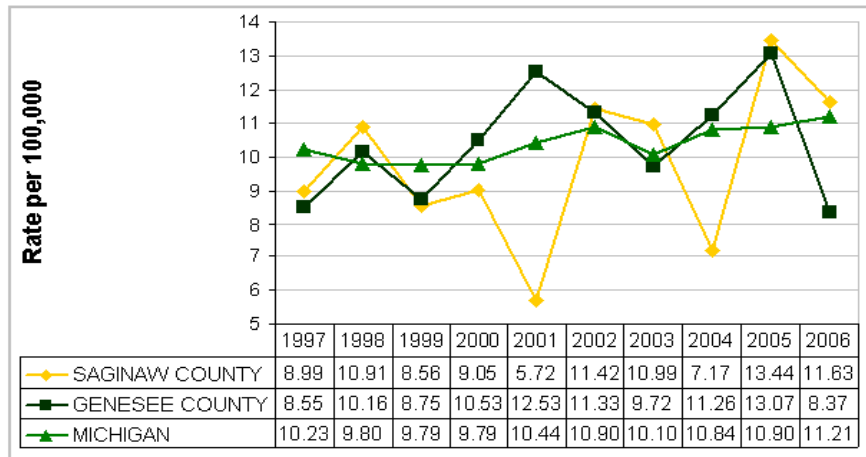


Figure 7.5: Saginaw County Suicide Rates by Race, 1997-2006

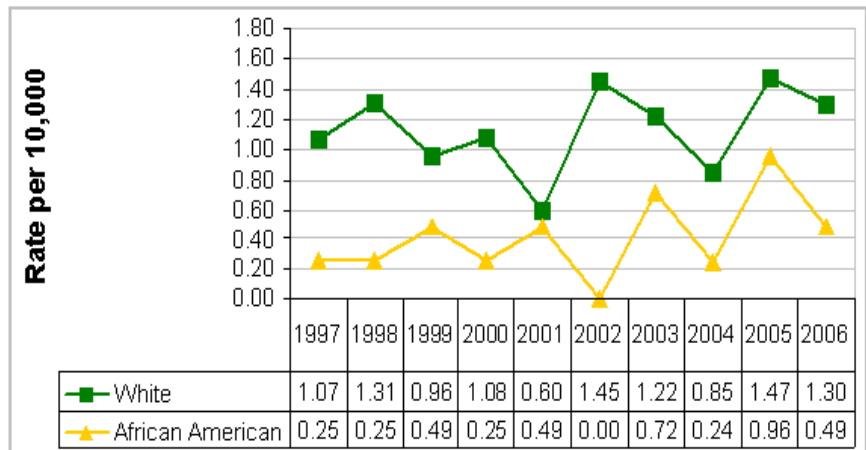
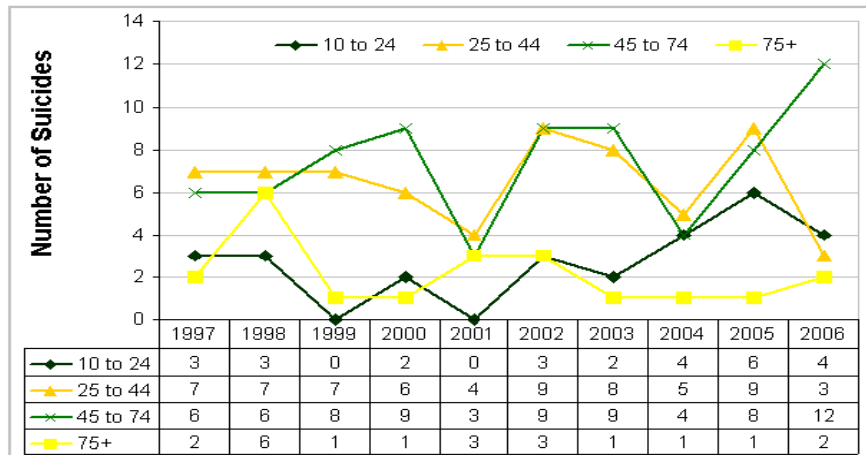


Figure 7.6: Saginaw County White Suicides by Age, 1997-2006



Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1989-2006 Michigan Resident Death Files

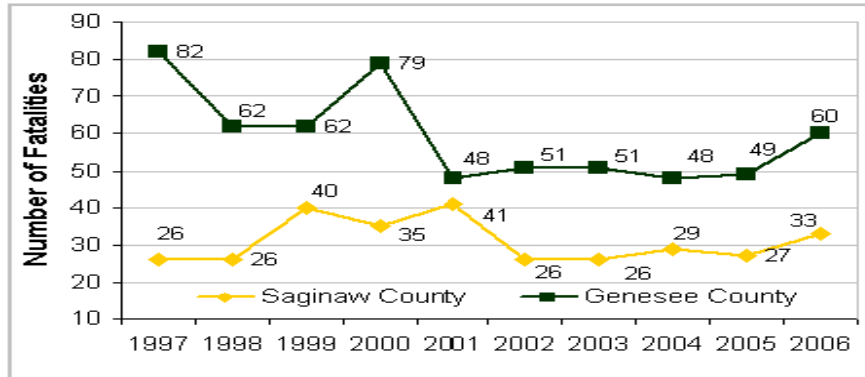
ASSESSMENT

INDICATOR 7 - SOCIAL AND MENTAL HEALTH

CRASH FATALITIES

- Saginaw County automobile crash fatalities from 1997 to 2006 appear to follow a similar trend as Genesee County for the same time period.
- Saginaw County has a rate of 6 per 100,000 fatalities involving alcohol compared to Michigan's 4 per 100,000.
- The same county-state distinction is seen with the drug-related crash rates, which are 20 for Saginaw County versus 15 per 100,000 Michigan.
- Although not included in the table, the percentage of crash fatalities resulting from alcohol in Saginaw County is 44.4% and 38.9% for Michigan.

Figure 7.7: Automobile Crash Fatalities



Source: National Highway Traffic Safety Administration, Fatality Analysis Reporting System

Table 7.1: Automobile Crash Rates¹, 2007

	Saginaw County	Michigan
Number of Total Crashes	6,309	324,174
Total crash rate	3,119	3,219
Alcohol-related crash rate	123	121
Drug-related crash rate	20	15
Total fatal crash rate	13	11
Alcohol-related fatal crash rate	6	4
Drug-related fatal crash rate	1	1

Source: Michigan State Police, Criminal Justice Information Center Crash Statistics, Crashes by County 2007
¹Rate per 100,000 population

SUBSTANCE ABUSE TREATMENT

- Among substance abuse prevention and treatment centers, Saginaw County Department of Public Health has a lower admissions rate than the combined state-wide programs with 584.6 versus 703.3 per 100,000 population.
- Admission characteristics show the groups most served are unemployed and Whites.

Table 7.2: Substance Abuse Treatment Statistics, 2006

	Saginaw County Dept. of Public Health	Programs State-wide
Admissions/Transfers	1,218	71,175
Admissions Rate ¹	584.6	703.3
Admission Characteristics:		
Male	62%	66%
<18 years old	9%	6%
18 to 35 years old	47%	48%
White	49%	64%
African American	40%	30%
Unemployed	66%	56%
Primary Drug	Alcohol (46%)	Alcohol (42%)
Completed Treatment	35%	38%
Left Treatment against Advice	32%	29%

Source: Michigan Department of Community Health, Office of Drug Control Policy, Substance Abuse Prevention, Education, and Treatment Programs, 2006
¹Rate per 100,000 persons, aged 12 or greater

ASSESSMENT

INDICATOR 7 - SOCIAL AND MENTAL HEALTH

CHILD SAFETY

- The rate of families investigated for child abuse and neglect increased between 2000 and 2006 in Saginaw County and was higher than the rate for Michigan in 2006.
- The rate of confirmed abuse or neglect also increased between 2000 and 2006 and was higher than that reported for Michigan.

Table 7.3: Child Safety

	Saginaw County		Michigan
	2000	2006	2006
Children in investigated families ¹	80.0	101.2	62.6
Confirmed victims of abuse or neglect ¹	14.2	20.1	11.4

Source: Michigan Behavior Risk Factor Survey, 2002-2006 Combined
Kids Count in Michigan – Data Book 2007
¹Rate per 1,000 Children

DOMESTIC VIOLENCE

- According to the collected domestic violence data for Saginaw County, most offenders of domestic violence are male while most domestic violence victims are females.
- In Saginaw County, the relationships between the victim and offender were often a boyfriend or girlfriend (29.8%), spouse (13.0%), parent (11.1%), or child (10.0%).

Table 7.4: Domestic Violence Victims, 2006

	Total Number of Victims	Victim to Offender Relationship			Victim Race					Victim Sex	
		Boyfriend/ Girlfriend	Spouse	Parent	African American	American Indian/ Alaskan Native	Asian Pacific Islander	Unknown	White	Male	Female
Saginaw County	3,648	1,087	473	407	1,681	2	4	72	1,889	916	2,728
Michigan	100,958	24,452	15,854	9,402	36,296	205	331	2,268	61,858	27,043	73,810

Table 7.5: Domestic Violence Offenders, 2006

	Total Number of Offenses	Offense Type			Offender Race					Offender Sex	
		Non-Aggravated Assault	Aggravated Assault	Vandalism	African American	American Indian/ Alaskan Native	Asian Pacific Islander	Unknown	White	Male	Female
Saginaw County	3,649	1,980	429	252	1,821	1	4	98	1,672	2,697	896
Michigan	103,389	57,979	11,138	7,110	40,056	231	316	2,102	59,210	75,803	25,987

Source: Michigan State Police, Uniform Crime Report, 2006.

ASSESSMENT

INDICATOR 8 - MATERNAL AND CHILD HEALTH

Maternal and child health indicators are strong measures of the overall health and well-being of the community. The health of mothers, infants, and children is important, both as an indicator of population health and as a predictor of the next generation's health. Traditional maternal and child health indicators include those that affect pregnant and postpartum women, as well as the health and survival of their infants and children. Increasingly, there is recognition that the general health status of women even before pregnancy has an impact on birth outcomes.

BIRTH DEFECTS

Birth defects are reportable to the Michigan Birth Defects Registry if identified within the first two years of a child's life.

- The number one reported birth defect for Saginaw County as well as Michigan is heart and circulatory system defects.

Table 8.1: Birth Defects¹, (2000-2005)

	Year of Diagnosis					
	2000	2001	2002	2003	2004	2005
Saginaw County	283	285	206	262	248	272
Genesee County	375	362	351	360	331	352
Michigan	11,643	12,250	11,603	11,451	11,295	12,095

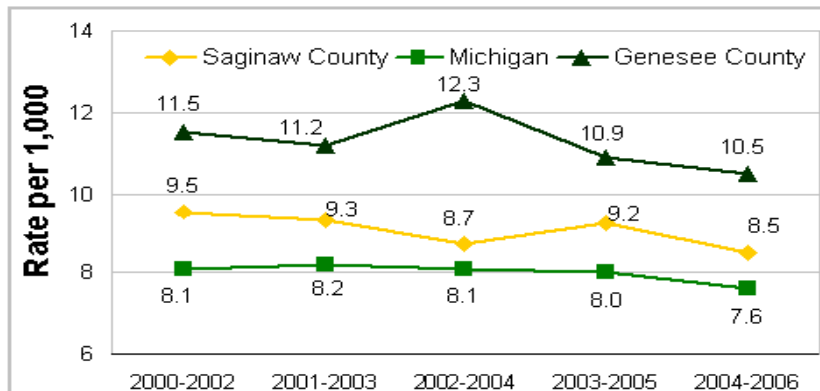
Source: Michigan Department of Community Health, Michigan Birth Defects Registry
¹Identified within the first two years of a child's life.

INFANT MORTALITY

Infant mortality rates provide insight into the health of the child and mother and is defined as the number of children dying under one year of age per 1,000 live births.

- The 3-year moving average for infant mortality rates was higher than the state average for Saginaw County, but lower than that of Genesee County. Infant mortality rates have decreased slightly for all areas.

Figure 8.1: Infant Mortality Rate¹, 2000-2006



Source: Michigan Department of Community Health, Vital Records and Health Data Development Section, 1989-2006 Michigan Resident Death Files and Michigan Resident Birth Files
¹Rate per 1,000 live births

NEONATAL, POST-NEONATAL, AND CHILD MORTALITY

Neonatal mortality rate is defined as infant deaths occurring within the first 27 days of life per 1,000 live births. The 3-year moving average for Saginaw County and Michigan for 2004 to 2006 is 5.0 and 5.3 per 1,000 live births, respectively.

Post neonatal mortality rate is defined as death of a child occurring after the first 28 days of life and before the first year (up to 364 days of age). The 3-year moving average for Saginaw County and Michigan for 2004 to 2006 is 3.6 and 2.3 per 1,000 live births, respectively.

The child mortality rate (death of a child between the ages of 1 to 14 years) is higher in Saginaw County (24.2 per 100,000 population) than Michigan (17.1 per 100,000 population).

ASSESSMENT

INDICATOR 8 - MATERNAL AND CHILD HEALTH

INFANT MORTALITY BY RACE

- The data shows the mortality rate being much higher, approximately 3 times higher, for African-American infants at the county and state level compared to White infants.
- Since 1995, the 3-year moving average shows infant mortality rates for Saginaw County and Michigan to be similar for White infants and African-American infants.
- In Saginaw County, the disparity between the infant mortality rates of Whites and African Americans persists as it does across the country⁹.

Table 8.2: Infant Mortality Rate¹ by Race, 2006

Race	Saginaw County		Genesee County		Michigan	
	Number of Deaths	Mortality Rate	Number of Deaths	Mortality Rate	Number of Deaths	Mortality Rate
White	9	5.0	30	6.9	534	5.4
African American	9	12.5	29	17.6	339	14.8
Other Races	0	0	2	*	60	10.6
<i>Total</i>	18	7.1	61	10.0	940	7.4

Figure 8.2: Saginaw County Infant Mortality by Race, 1995-97 to 2004-06

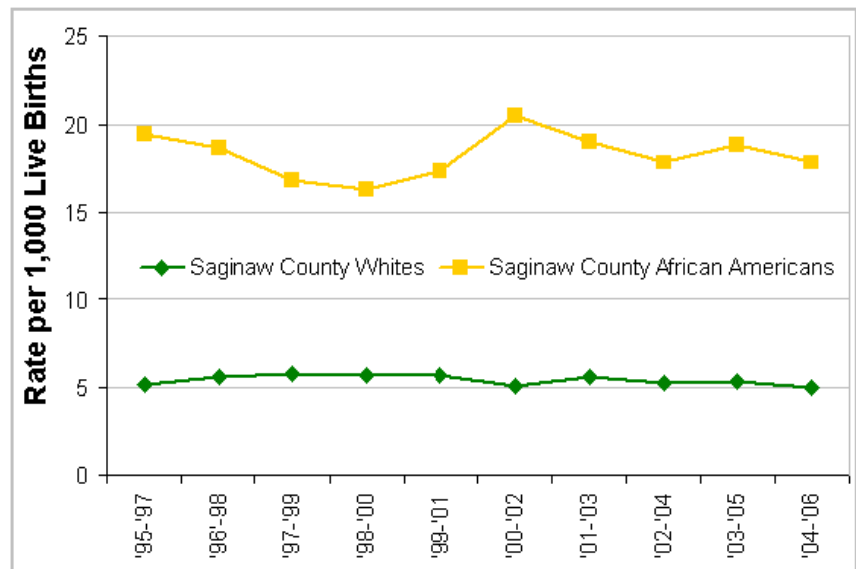
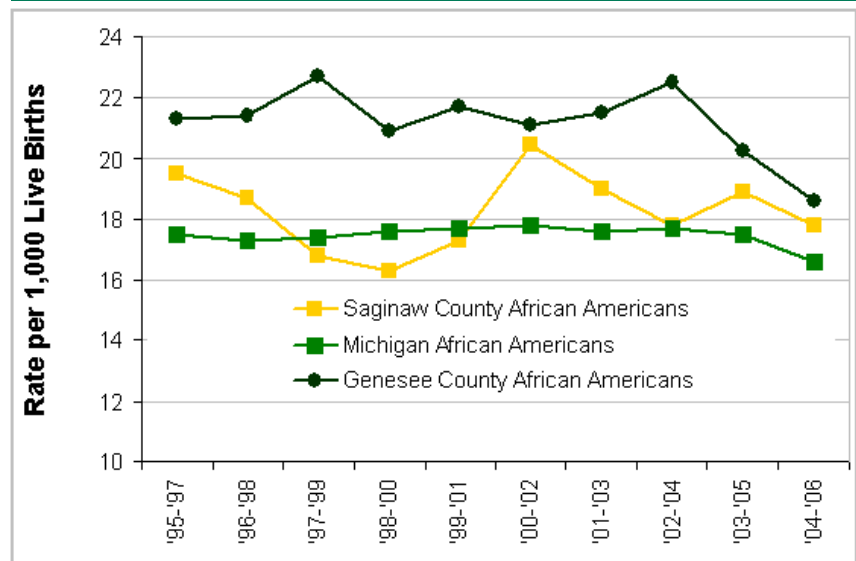


Figure.8.3: Saginaw County African American (AA) Infant Mortality Rate, 1995-97 to 2004-06



Source for all tables and graphs on this page: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1995-2006 Michigan Resident Death Files and Michigan Resident Birth Files

¹ Rate per 1,000 Live Births

*Figure does not meet standards of reliability or precision

ASSESSMENT

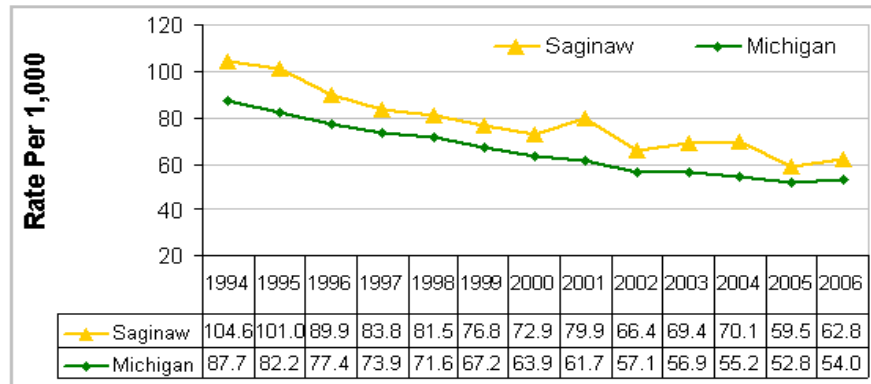
INDICATOR 8 - MATERNAL AND CHILD HEALTH

TEEN PREGNANCY

The *teen pregnancy rate* is an estimate of the proportion of women aged 15-19 who had a live birth, induced abortion, or miscarriage during a given year.

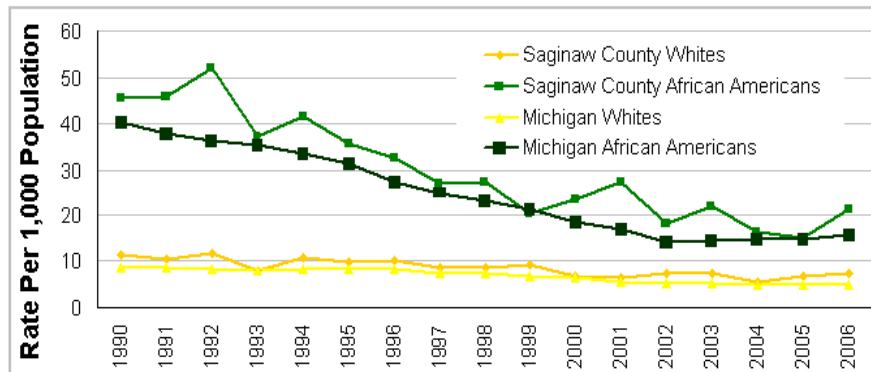
- Saginaw County’s teen pregnancy rate has been higher than Michigan’s from 1994 to 2006. The general trend has been a decrease in teen pregnancy rates.
- In 2006, births to adolescents aged less than 15 years old accounted for a very small proportion of the total live births at 0.1% and was not different from the state percentage.

Figure 8.4: Saginaw County & MI Pregnancies, Ages 15- 19, 1994-2006



Source: Michigan Department of Community Health, Vital Records and Health Data Development Section, 1989-2006 Live Birth, Abortions, and Estimated Miscarriages

Figure 8.5: Live Births to Mothers Less than 18 Years of Age, 1990-2006



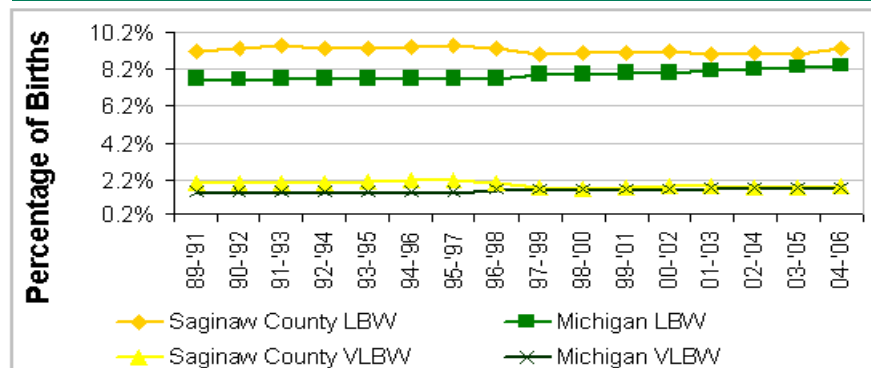
Source: Michigan Department of Community Health, Vital Records & Health Data Development Section

BIRTH WEIGHT

Low birthweight (LBW) is an infant born weighing less than 5 pounds, 8 ounces (2500 grams) and *very low birthweight (VLBW)* is an infant born weighing less than 3 pounds, 4 ounces (1500 grams).

- The moving 3-year averages of low and very low birthweight have not changed appreciably since 1989.
- Since 1989, Saginaw County’s proportion of low birthweight infants has been higher than Michigan’s.

Figure 8.6: Low and Very Low Birthweight, 1989-1991 to 2004-2006



Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 2006 Michigan Resident Birth File

ASSESSMENT

INDICATOR 8 - MATERNAL AND CHILD HEALTH

BIRTH WEIGHT BY RACE & ETHNICITY

Preterm birth is defined as infants born prior to 37 weeks of gestation, while a *full-term pregnancy* is typically 40 weeks.

- Preterm births accounted for 10% of Saginaw County’s 2006 total live births versus 9.6% for the whole of Michigan’s and 9% for Genesee County’s.
- According to Michigan’s Pregnancy Risk Assessment Monitoring System 2004 Annual Report, 68.8% of low birthweight infants were pre-term and was highest among Non-Hispanic African Americans.
- A side-by-side comparison of race and ethnicity within Saginaw County and Michigan shows African Americans having a higher percentage of low and very low birthweight outcomes overall.

Figure 8.7: Low Birthweight as a Percentage of Each Subpopulation’s Live Births, 2006

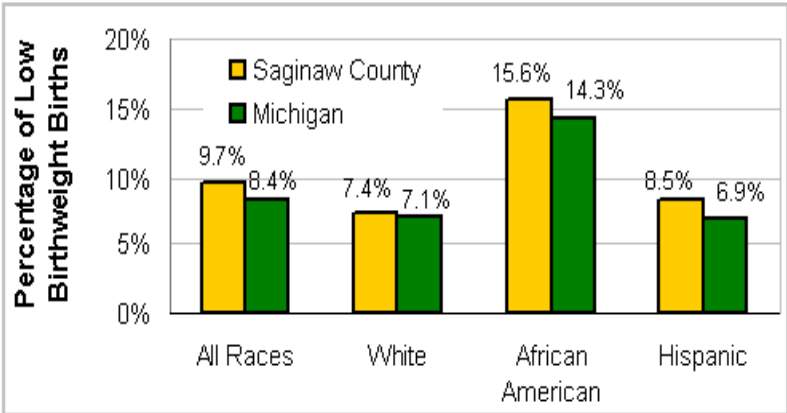
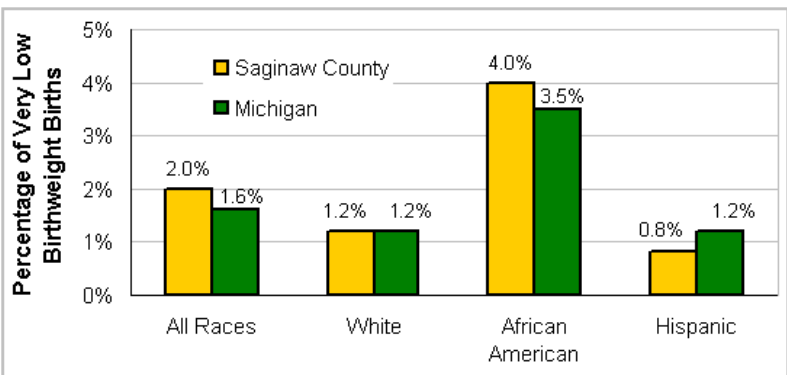


Figure 8.8: Very Low Birthweight as a Percentage of Each Subpopulation’s Live Births, 2006

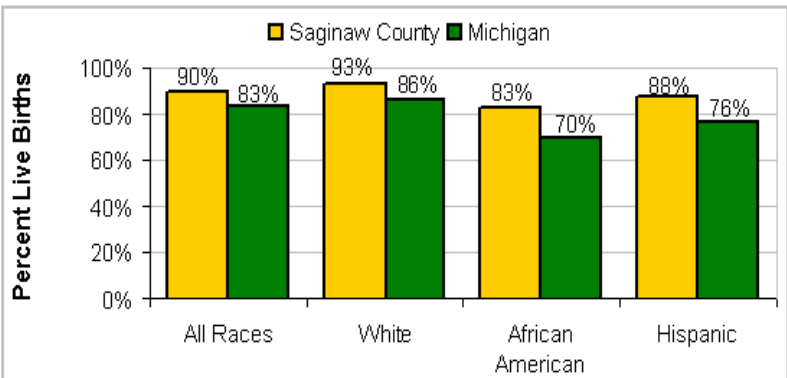


PRENATAL CARE

Prenatal care within the first trimester entails regular physician visits beginning in the first 3 months of pregnancy (*first trimester*) to receive recommendations that will increase the likelihood of having a healthy baby such as nutrition, exercise, and vitamin education.

- Saginaw County’s African American, White, and Hispanic mothers had higher rates of prenatal care beginning in the 1st trimester than all Michigan mothers. Whites had the highest percentage of mothers seeking prenatal care in both areas.

Figure 8.9: Prenatal Care Beginning 1st Trimester, 2006



Source for figures on this page: Michigan Department of Community Health, Vital Records & Health Data Development Section, 2006 Michigan Resident Birth File

ASSESSMENT

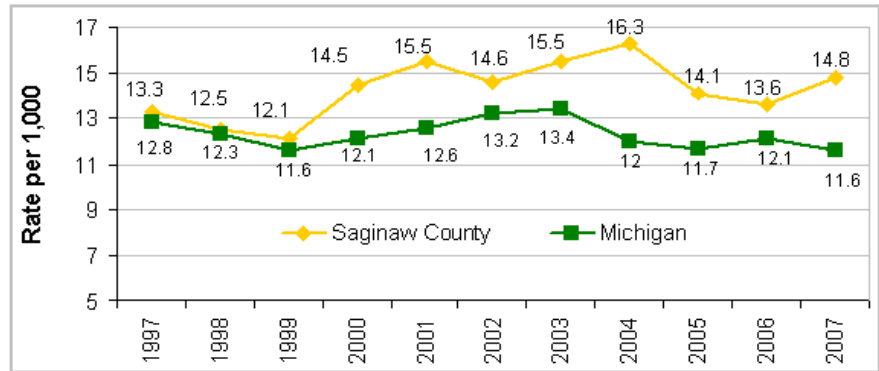
INDICATOR 8 - MATERNAL AND CHILD HEALTH

ABORTION

The term *induced abortion* is used when a surgical or medical procedure ends a pregnancy¹⁰.

- From 1997 to 2007, the abortion rate for Saginaw County was higher than Michigan.
- In 2007, the number of induced abortions for residents of Saginaw County was 599 abortions (Michigan, 24,006).

Figure 8.10: Induced Abortion Rate, 1997-2007



Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1997-2007 Michigan Abortions Files

ASSESSMENT

INDICATOR 9 - DEATH, ILLNESS, AND INJURY

A consistent component in determining health status for a particular locale is report of mortality rates, leading causes of death, and years of potential life lost (YPLL) in the community. Mortality rates offer a way to compare causes of death and effects of race and geography (county, state). YPLL represents the impact of various diseases by assessing the premature loss of life.

PERCEPTION OF HEALTH

- The proportion of individuals who report their general health as either fair or poor is 15.6% in Saginaw County and 14.7% in Michigan.
- Poor physical health, including physical illness or injury, on at least 14 days in the previous month was reported by 11.3% of Saginaw County residents and 11.0% of Michigan residents.

MORTALITY

- For both Saginaw County and Michigan, the top two causes of death in 2006 were heart disease and cancer. Similarity was also seen in the other top causes of death in the county and the state.
- Across both sex and race, Saginaw County had a higher rate of mortality than Michigan.
- Overall for the county and state, African Americans had the highest death rate, followed closely by males, then Whites, and finally females.

Source for figures on this page: Michigan Department of Community Health, Vital Records & Health Data Development Section, 2006 Michigan Resident Death Files

¹Rate per 100,000 population

Table 9.1: Self-reported Health Status

	Saginaw County	Michigan
Percent reporting health as Fair or Poor	15.6%	14.7%
Poor physical health at least 14 days in past month	11.3%	11.0%

Source: Michigan Behavioral Risk Factor Survey, 2002-2006 Combined

Figure 9.1: Age-Adjusted Total Mortality¹ by Race & Sex, 2006

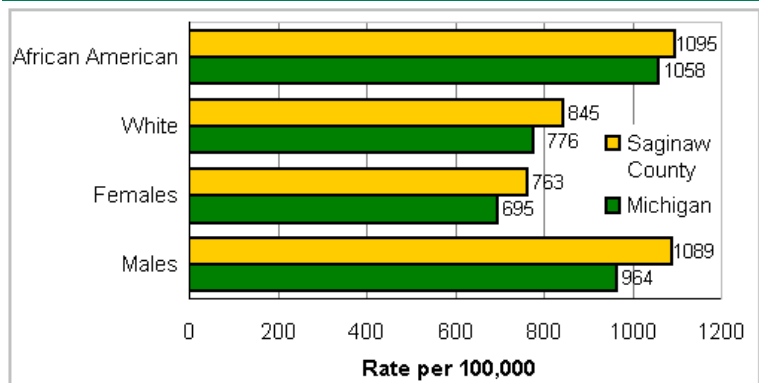
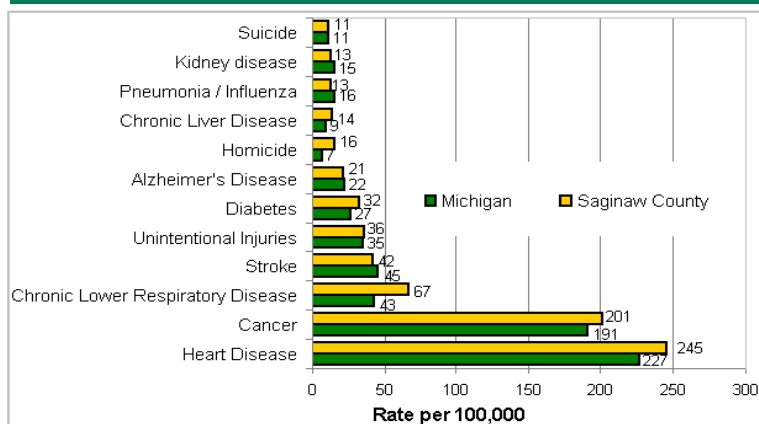


Figure 9.2: Age-Adjusted Mortality¹, Selected Diseases, 2006



ASSESSMENT

INDICATOR 9 - DEATH, ILLNESS, AND INJURY

MORTALITY-LEADING CAUSES

In Saginaw County the leading causes of death for 2006 were heart disease, cancer, chronic lower respiratory disease, and stroke, respectively.

- In 2006, 294 men and 303 women died of heart disease.
- Cancer mortality has been slightly above the state rate, but all mortality rates have been gradually decreasing.
- The stroke age-adjusted mortality for Saginaw County closely mirrors that of the entire state.
- The chronic lower respiratory disease mortality for both Saginaw County and the whole of Michigan have increased over the past 17 years.
- The age-adjusted mortality rate for unintentional injuries (accidents) is 37.6 deaths per 100,000 population in Saginaw County and 34.5 per 100,000 in Michigan.

Table 9.2: Age-Adjusted Mortality Rates¹ for Leading Causes, 2006

Cause of Death	Saginaw County					MI Total
	Total	Sex		Race		
		Male	Female	White	AA	
Heart Disease	245.3	316.2	196.0	230.3	307.4	226.7
Cancer	201.3	221	191.1	190.6	256.0	190.8
Stroke	41.7	53.2	33.8	38.1	*	44.7
Chronic Lower Respiratory Disease	67.1	88.6	53.0	68.8	*	42.9
Unintentional Injuries	36.1	47.8	27.4	35.2	*	34.5
Diabetes Mellitus	32.0	42.6	23.7	28.8	*	26.7
Alzheimer's Disease	21.1	*	21.8	20.8	*	21.7
Pneumonia/Influenza	13.1	*	*	11.9	*	15.7
Kidney Disease	12.9	*	*	11.4	*	15.0
Intentional Self-harm	11.0	*	*	11.6	*	11.0
All other causes	216.6	247.2	189.6	197.8	273.8	183.0
Total	898.1	1,089	762.6	845.1	1,094.6	812.8

Figure 9.3: Age-Adjusted Heart Disease Mortality, 3-Year Moving Avg., 1989-1991 to 2004-2006

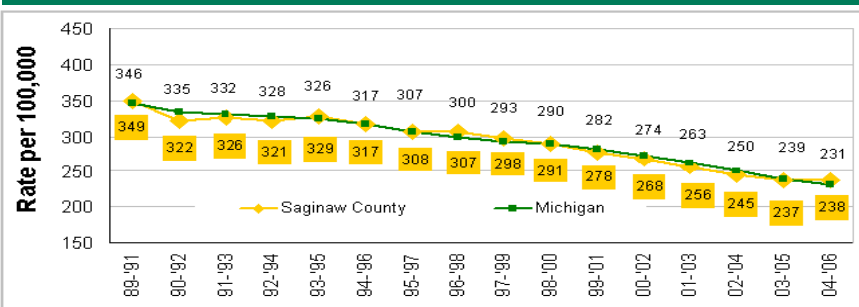
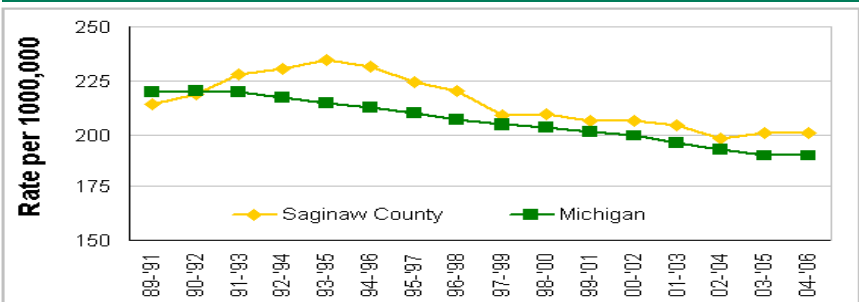


Figure 9.4: Age-Adjusted Cancer Mortality, 3-Year Moving Average, 1989-1991 to 2004-2006



Source for all figures and the table on this page: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1989-2006 Michigan Resident Death Files

¹ Rate per 100,000 population

*Number is too small to calculate a useful estimate

ASSESSMENT

INDICATOR 9 - DEATH, ILLNESS, AND INJURY

MORTALITY - LEADING CAUSES CONTINUED

Figure 9.5: Age-Adjusted Chronic Lower Respiratory Disease Mortality, 3-Year Moving Average, 1989-91 to 2004-06

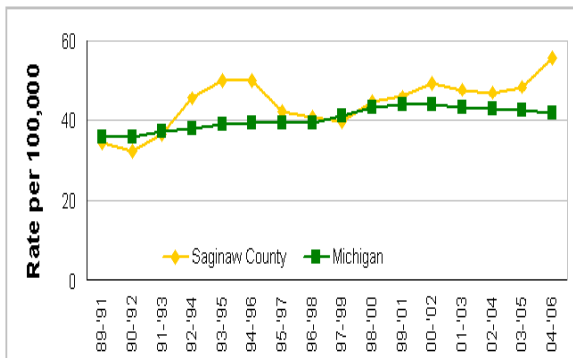
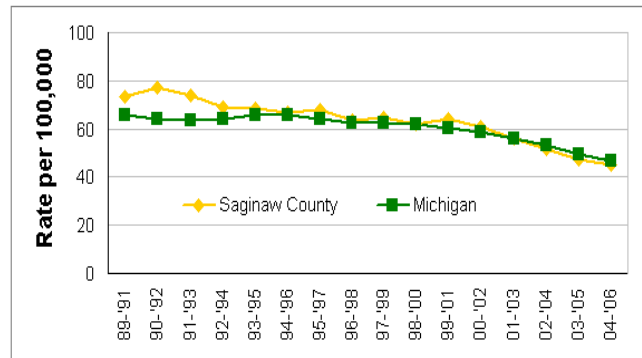


Figure 9.6: Age-Adjusted Stroke Mortality, 3-Year Moving Average, 1989-1991 to 2004-2006¹



Source for figures on this page: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1989-2006 Michigan Resident Death Files
¹Rate per 100,000 population

YEARS OF POTENTIAL LIFE LOST

Years of Potential Life Lost (YPLL) is a measurement of the impact a disease or event has on a population. Beyond looking at the number of deaths from a specific cause, the number of years lost prematurely before age 75 is added into the calculation.

- The YPLL for men is 2,055. This is much higher than the YPLL of 1,226 for Saginaw women.

Table 9.3: Years of Potential Life Lost¹, Selected Causes of Death, 2006

	YPLL Rate Due to Selected Causes of Death (Under Age 75)			
	Saginaw County			Michigan Total
	Male	Female	Total	
Cancer	1,583.7	1,941.0	1,765.3	1,671.0
Heart Disease	2,055.1	1,226.1	1,633.6	1,261.4
Accidents	1,497.9	770.3	1,127.9	957.4
Homicide	1,273.3	*	724.9	308.8
Suicide	*	*	354.1	342.9

Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 2006 Michigan Resident Death Files

¹Rate per 100,000 population

*Number is too small to calculate a useful estimate

ASSESSMENT

INDICATOR 9 - DEATH, ILLNESS, AND INJURY

MORTALITY/MORBIDITY - BREAST CANCER

Figure 9.7: Breast Cancer, Age-Adjusted Incidence¹, 2000-2005

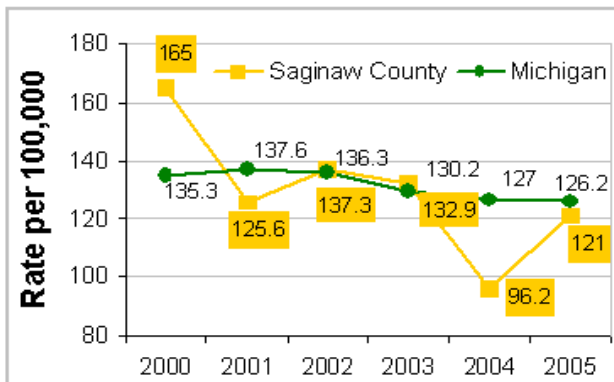
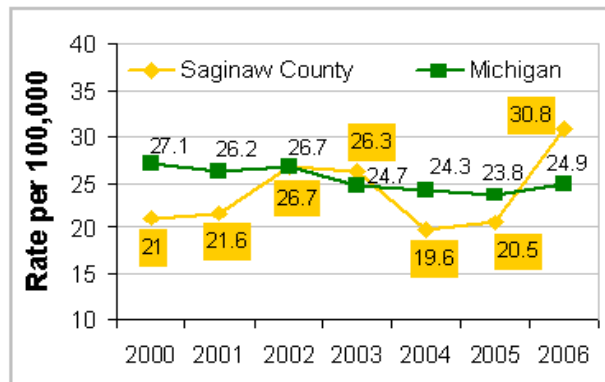


Figure 9.8: Breast Cancer, Age-Adjusted Mortality¹, 2000-2006



Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1989-2006 Michigan Resident Death Files

¹Rate per 100,000 population

MORTALITY/MORBIDITY - COLORECTAL CANCER

Figure 9.9: Colorectal Cancer, Age-Adjusted Incidence, 2000-2005

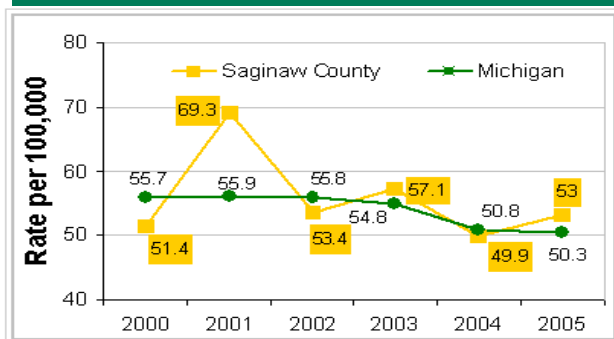
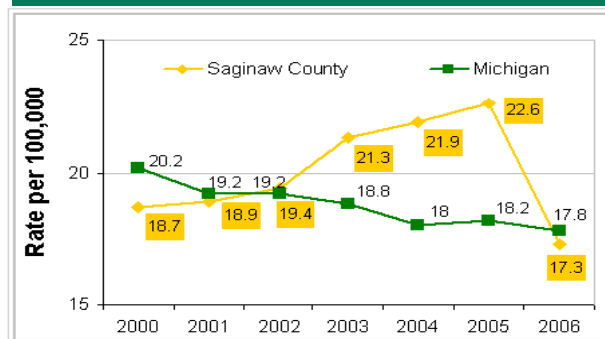


Figure 9.10: Colorectal Cancer, Age-Adjusted Mortality, 2000-2006



Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1985-2005 Michigan Resident Cancer Incidence File

¹Rate per 100,000 population

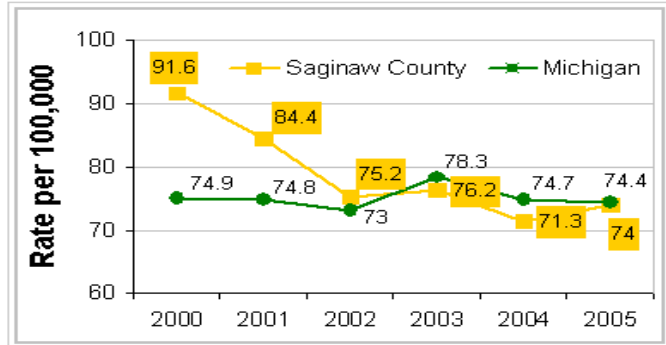
ASSESSMENT

INDICATOR 9 - DEATH, ILLNESS, AND INJURY

MORTALITY/MORBIDITY - LUNG CANCER

- Since 2000, the trend in lung cancer incidence has decreased in Saginaw County.

Figure 9.11: Lung Cancer, Age-Adjusted Incidence, 2000-2005



Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1985-2005 Michigan Resident Cancer Incidence File

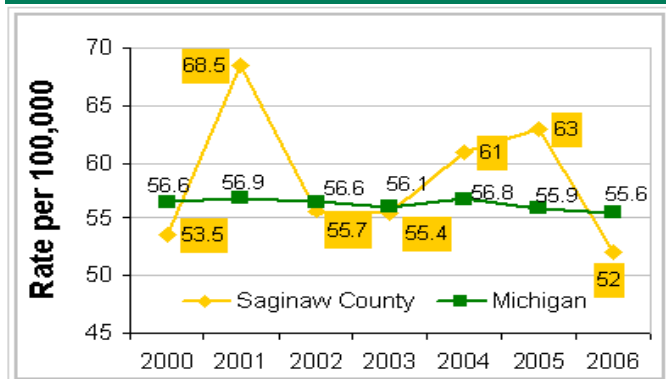
¹Rate per 100,000 population

MORTALITY/MORBIDITY - LATE STAGE CANCER

According to the National Cancer Institute, *late-stage cancer* describes a cancer growth which has spread to the lymph nodes or other places in the body¹¹. Early stage cancer is more easily treated and results in less patient mortality than late stage cancer due to the cancer not having spread as far throughout the body.

- Late-stage cancer diagnoses were more frequently made in Saginaw County than in Michigan, with the exception of prostate cancer.
- The percent of all cancer types diagnosed during the late stage was 33.8% for Saginaw County and 33.2% for Michigan.
- Lung cancer had the highest percentage of late stage diagnosis in Saginaw County and Michigan with 66.6% and 64.3%, respectively, and prostate cancer was often detected by earlier screening as only 7.7% and 10.5%, respectively, were identified late.
- Late stage cancer diagnosis has been linked to access to health care; uninsured and Medicaid-insured individuals seem to be at higher risk of late stage cancer diagnosis¹².

Figure 9.12: Lung Cancer, Age-Adjusted Mortality, 2000-2006



Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1985-2005 Michigan Resident Death Files

¹Rate per 100,000 population

Table 9.4: Percent Late Stage Cancer Diagnosis

(2000-2004 Incidence)	Saginaw County	Michigan
Breast Cancer	26.0%	23.4%
Colorectal Cancer	52.3%	44.9%
Lung Cancer	66.6%	64.3%
Prostate Cancer	7.7%	10.5%
All Cancer Types	33.8%	33.2%

Source: Michigan Department of Community Health, Vital Records & Health Data Development Section, 1985-2004 Michigan Resident Cancer Incidence File

¹Rate per 100,000 population

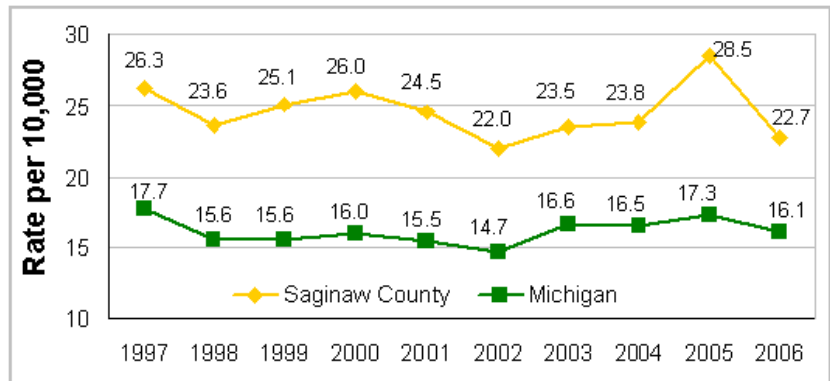
ASSESSMENT

INDICATOR 9 - DEATH, ILLNESS, AND INJURY

ASTHMA

- Asthma remains a concern in Saginaw County with the rate of hospitalizations being higher than that of Michigan as a whole.
- The Epidemiology of Asthma in Michigan 2004 Surveillance Report shows asthma hospitalization being higher for individuals of both White and African American races in Saginaw versus other counties as well as for children <18 years of age and adults \geq 18 years of age.

Figure 9.13: Age-Adjusted Rate of Asthma Hospitalization, 1997-



Source: Michigan Department of Community Health, Division of Genomics, Perinatal Health, and Chronic Disease Epidemiology, Asthma Hospitalization Rates for Saginaw County

OCCUPATIONAL INJURIES AND FATALITIES

The United States Department of Labor, Bureau of Labor Statistics tracks the number of fatal occupational injuries by metropolitan statistical area (MSA) and state.

- For 2006, the Saginaw MSA had 8 occupational fatalities for a rate of 8.7 deaths per 100,000 workers. This is nearly 3 times the rate for that of Michigan with 3.4 deaths per 100,000 workers (157 deaths)¹³. Flint MSA reported 5 occupational fatalities during 2006 for a rate of 2.4 per 100,000 workers.

ASSESSMENT

INDICATOR 10 - COMMUNICABLE DISEASE

Communicable diseases are illnesses that have the capability of being transmitted from person-to-person or animal-to-person (zoonotic), such as chickenpox, pertussis, influenza, etc. Nevertheless, this transmission may be interrupted by using preventive methods. Several of these methods include hand washing, self-isolation of ill, vaccination, and other such public health interventions. These activities have led to decreases in communicable disease outcomes of morbidity, disability, and mortality.

IMMUNIZATIONS

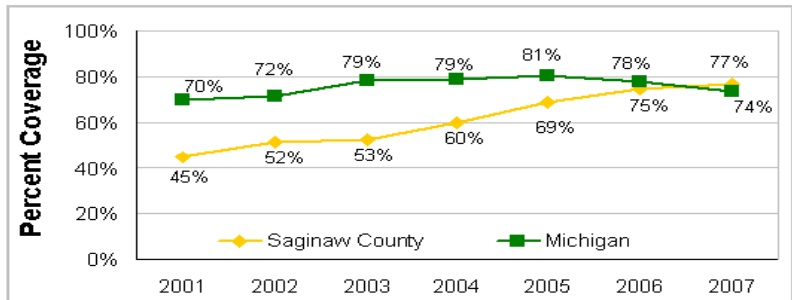
Immunizations reviewed for this indicator were the 4:3:1:3:3:1 vaccination schedule which includes 4 doses of diphtheria, tetanus, and pertussis vaccine, 3 doses of poliovirus vaccine, 1 dose of measles, mumps, and rubella vaccine, 3 doses of *Haemophilus influenzae* type b vaccine, 3 doses of hepatitis B vaccine, and 1 dose of varicella vaccine.

- The proportion of children aged 19 to 35 months current with their immunizations has increased in Saginaw County at a greater rate than that of Michigan. The percentage was lower in Saginaw County since 2001 but surpassed Michigan in 2007 with 77%.

VACCINE COVERAGE

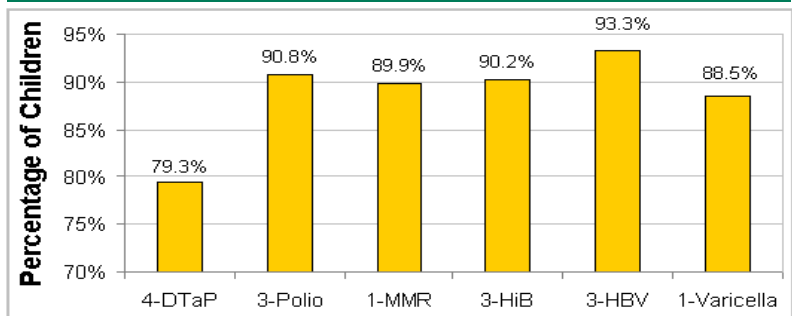
- An analysis of the 19-35 month olds coverage rates reveals the up-to-date status for each recommended immunization. Most of the vaccines in the 4:3:1:3:3:1 series have coverage at or above 88% with one exception being Diphtheria, Tetanus, and acellular Pertussis (DTaP) vaccine which reported the lowest coverage level.
- The percentage of Saginaw County and Michigan residents, aged 65 and older, receiving pneumonia and influenza vaccines has increased from 2002 to 2006. Saginaw County residents were more likely to have received a pneumonia vaccine (69.2% versus 64.5%), than the nasal spray or injectable flu vaccine in 2006 when compared to Michigan residents.

Figure 10.1: 4:3:1:3:3:1 Coverage for 19-35 Month Olds, 2001-2007



Source: National Immunization Survey, 2001-2006 Coverage Tables
Michigan Care Improvement Registry, 2001-2007 Coverage File
Michigan Care Improvement Registry, Immunization Coverage Workbook (11-15-2007)
¹Michigan 2007 immunization rate as of November 15, 2007

Figure 10.2: 2007 Individual Vaccine Coverage, 19-35 Month Olds, Saginaw County



Source: Michigan Care Improvement Registry, Region 4 Immunization Coverage Workbook (11-15-2007)

Table 10.1: Adults Aged 65 and Older Receiving Pneumonia and Flu Vaccines

	Saginaw County		Michigan
	2002 ¹	2006	2006
Ever received pneumonia vaccine	52.4%	69.2%	64.5%
Had influenza vaccine in past year	61.6%	66.0%	68.1%

Source: Michigan Behavioral Risk Factor Survey, 1998-2002 and 2002-2006 Combined
¹Data reflect geographic Region 10 which includes Bay, Huron, Sanilac, Saginaw, and Tuscola Counties

ASSESSMENT

INDICATOR 10 - COMMUNICABLE DISEASE

COMMUNICABLE DISEASES

Table 10.2 lists selected diseases mandated by the Public Health Code to be reported by health care professionals. In June 2004, the Michigan Department of Community Health implemented an electronic disease reporting system, the Michigan Disease Surveillance System (MDSS). Variations in Table 10.2 may not directly reflect an increase in disease prevalence but rather an increase in reporting.

- In 2005, chickenpox reporting requirements changed from aggregated to individual cases.
- Sexually Transmitted Diseases (STD) are the number one category of reported communicable diseases in Michigan and Saginaw County. Gonorrhea incidence decreased by 34% in 2007 and Chlamydia increased 5%.
- SCDPH routinely monitors potential disease outbreaks which extend beyond reporting mandates such as norovirus and Methicillin Resistant Staphylococcus Aureus (MRSA).

Table 10.2: Communicable Diseases in Saginaw County

Disease	Cases 2007	3-Year Median 2004-2006	Percent Change
<i><u>Viral Hepatitis</u></i>			
Hepatitis A	2	0	n/a
Hepatitis B, chronic	20	13	+54%
Hepatitis C, chronic	197	88	+124%
<i><u>Sexually Transmitted</u></i>			
Chlamydia	1055	1009	+5%
Gonorrhea	335	508	-34%
Syphilis	0	1	-100%
<i><u>Diarrheal</u></i>			
Campylobacter	11	9	+22%
Cryptosporidium	0	1	-100%
E. coli	0	1	-100%
Giardia	7	7	+0%
Salmonella	20	12	+67%
Shigella	5	0	n/a
<i><u>Vaccine-Preventable</u></i>			
Mumps	1	1	+0%
Pertussis	1	3	-67%
Chickenpox	98	32	+206%
<i><u>Vectorborne</u></i>			
Malaria	1	0	n/a
Rocky Mountain Spotted Fever	1	0	n/a
<i><u>Other</u></i>			
Tuberculosis	2	3	-33%
Legionella	2	1	+100%
Meningococcal Disease	3	0	n/a
Bacterial Meningitis	6	3	+100%
Strep. pneumonia, Invasive	1	6	-83%
Group A Strep., Invasive	1	0	n/a
Strep. pneumonia, Drug resistant	0	1	-100%
Staph. aureus Infection	0	1	-100%
Cryptococcus	2	2	+0%
Histoplasma	1	2	-50%
Creutzfeldt-Jakob Disease	1	0	n/a
Guillain-Barre Syndrome	1	0	n/a
Unusual Outbreak or Occurrence	5	12	-58%

Source: Michigan Department of Community Health, Michigan Disease Surveillance System, 2004-2007 Disease Reports

ASSESSMENT

INDICATOR 10 - COMMUNICABLE DISEASE

HIV/AIDS

According to the July 2008 Quarterly HIV/AIDS Analysis, 154 people in Saginaw County are living with HIV or AIDS and an estimated 46 additional cases are yet undiagnosed. These undiagnosed cases represent a group of individuals who risk a more rapid deterioration in health leading to a diagnosis of AIDS.

- In 2007, 11 cases of HIV and 6 cases of AIDS were reported.
- African Americans make up 19% of Saginaw County's population yet comprise 58% of all HIV/AIDS cases. African American males account for 37% of all HIV/AIDS cases while African American females account for 21%.

Table 10.3: New Diagnoses, Deaths, and Estimated Prevalence of HIV/AIDS in Saginaw County, 1983-2007

	New HIV Diagnosis	HIV/AIDS Prevalence	New AIDS Diagnosis	HIV/AIDS Deaths
1983	1	1	1	0
1984	0	0	0	1
1985	3	2	1	1
1986	5	7	1	0
1987	5	10	2	2
1988	14	20	6	4
1989	13	28	7	5
1990	10	35	2	3
1991	24	57	8	2
1992	17	69	22	5
1993	13	72	14	10
1994	12	74	8	10
1995	16	75	14	15
1996	18	85	15	8
1997	15	94	9	6
1998	13	103	9	4
1999	13	112	12	4
2000	12	115	7	9
2001	8	116	8	7
2002	10	124	8	2
2003	7	125	6	6
2004	10	129	8	6
2005	8	133	3	4
2006	12	143	5	2
2007	11	150	6	4

Figure 10.3: New Diagnoses, Deaths, and Estimated Prevalence of HIV/AIDS in Saginaw County, 1983-2007

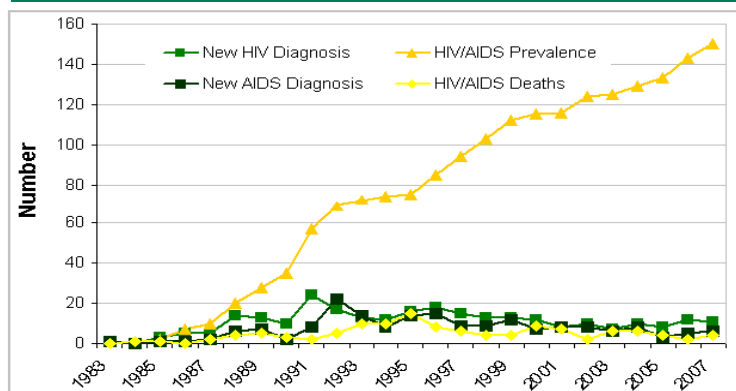
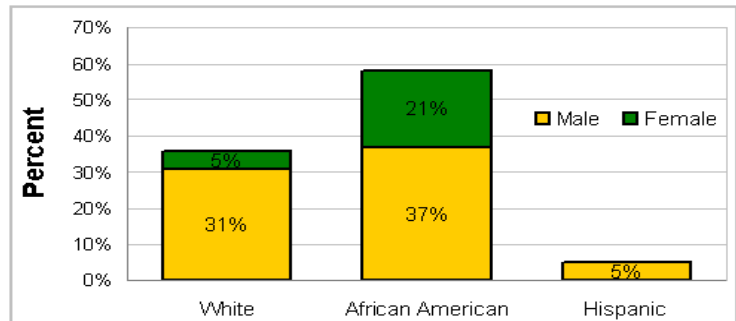


Figure 10.4: HIV/AIDS by Sex, Race & Ethnicity¹, 1983-2008*



Source for figures and table on this page: Michigan Department of Community Health, HIV/AIDS County Level Quarterly Analyses, Saginaw County July 2008
¹In this report, persons described as White, African American (AA), Asian/Pacific Islander (PI), or American Indian/Alaska Native (AN) are all non-Hispanic, persons described as Hispanic might be of any race.

DATA SOURCES

A description of each data source used in the report is included below in alphabetic order.

Centers for Disease Control and Prevention

- Water Fluoridation Reporting System

Covenant Visiting Nurses Association

- Patients and Services, July 2006 to June 2007

Early Childhood Investment Corporation

Health Resources Services Administration

- Health Professional Shortage Area Designations

Healthy People 2010

- 2010 Health Indicator Goals

Kids Count in Michigan

- Databook 2007

Michigan Behavioral Risk Factor Survey

- 1998-2002 Combined
- 2002-2006 Combined

Michigan Care Improvement Registry

- 2001-2007 Coverage File
- Immunization Coverage Workbook (11-15-2007)

Michigan Coalition against Homelessness

- The State of Homelessness in Michigan: 2007 Annual Report

Michigan Community Coordinated Child Care Association

- List of licensed daycare providers

Michigan Department of Community Health

- 2006 Annual Report on Blood Lead Levels in Adults and Children in Michigan
- Bureau of Health Professions
 - Impromptu Report as of June 2008
- Division of Genomics, Perinatal Health, and Chronic Disease Epidemiology
 - Asthma Hospitalization Rates for Saginaw County
- Division of Licensing and Certification
- HIV/STD & Other Bloodborne Infections Surveillance Section
 - July 2008 Quarterly HIV/AIDS Analysis for Saginaw County
- Michigan Birth Defects Registry
- Michigan Disease Surveillance System
 - Weekly Disease Reports
 - Saginaw County Disease Reports 2003-2007

DATA SOURCES

Michigan Department of Community Health – Cont'd

- Office of Drug Control Policy
 - Substance Abuse Prevention, Education, and Treatment Programs 2006
- Special Report: Characteristics of the Uninsured and Individuals with Selected Health Insurance Coverage in Michigan, June 2007
- Vital Records and Health Data Development Section
 - 1989-2006 Michigan Resident Death Files and Michigan Resident Birth Files
 - 2006 Michigan Resident Infant Death File
 - 2006 Michigan Resident Death File
 - 1989-2006 Live Birth, Abortions, and Estimated Miscarriages
 - 2006 Michigan Resident Birth File
 - 1985-2005 Michigan Resident Cancer Incidence File
 - 1985-2005 Michigan Resident Death Files
 - 1997-2007 Michigan Abortion Files

Michigan Department of Education (Collaborates with MDCH)

- Michigan Profile for Healthy Youth
 - 2007-08 Survey

Michigan Department of Environmental Quality

- Air Quality Division
 - 2006 Annual Air Quality Report

Michigan Department of Labor and Economic Growth

- Labor Market Information

Michigan State Police

- 2006 Michigan Uniform Crime Report
- Criminal Justice Information Center Crash Statistics, Crashes by County 2007

National Highway Traffic Safety Administration

- Fatality Analysis Reporting System

National Immunization Survey

- 2001-2006 Coverage Tables

Office of Highway Safety Planning

- Child Restraint Device Use and Misuse Survey, October 2007

Saginaw County

- County Clerk
 - 2006 November General Election Summary Report

Saginaw County Board of Commissioners

- Clean Indoor Air Regulation

DATA SOURCES

Saginaw County Department of Public Health

- Employees and Budget

Saginaw County Department of Public Services Administration

- Saginaw Water Treatment Plant
 - Drinking Water Quality Report 2007

Saginaw County Human Services Collaborative Body

- The Road Home: 10-year Plan to End Homelessness in Saginaw County

Saginaw County Sheriff's Office

- Michigan Child Restraint Law Violations

State of Michigan Interagency Migrant Services Committee

- Migrant and Seasonal Farmworker Enumeration Profiles Study, September 2006

The Saginaw News

United States Census Bureau

- 2007 Population Estimates
- 2006 Population Estimates
- 2006 American Community Survey
- 2005 Poverty Thresholds
- 2000 Census

United Way of Saginaw and Saginaw Community Foundation

- Saginaw Residents' Views of Community Needs and Household Problems, February 2008

University of Michigan

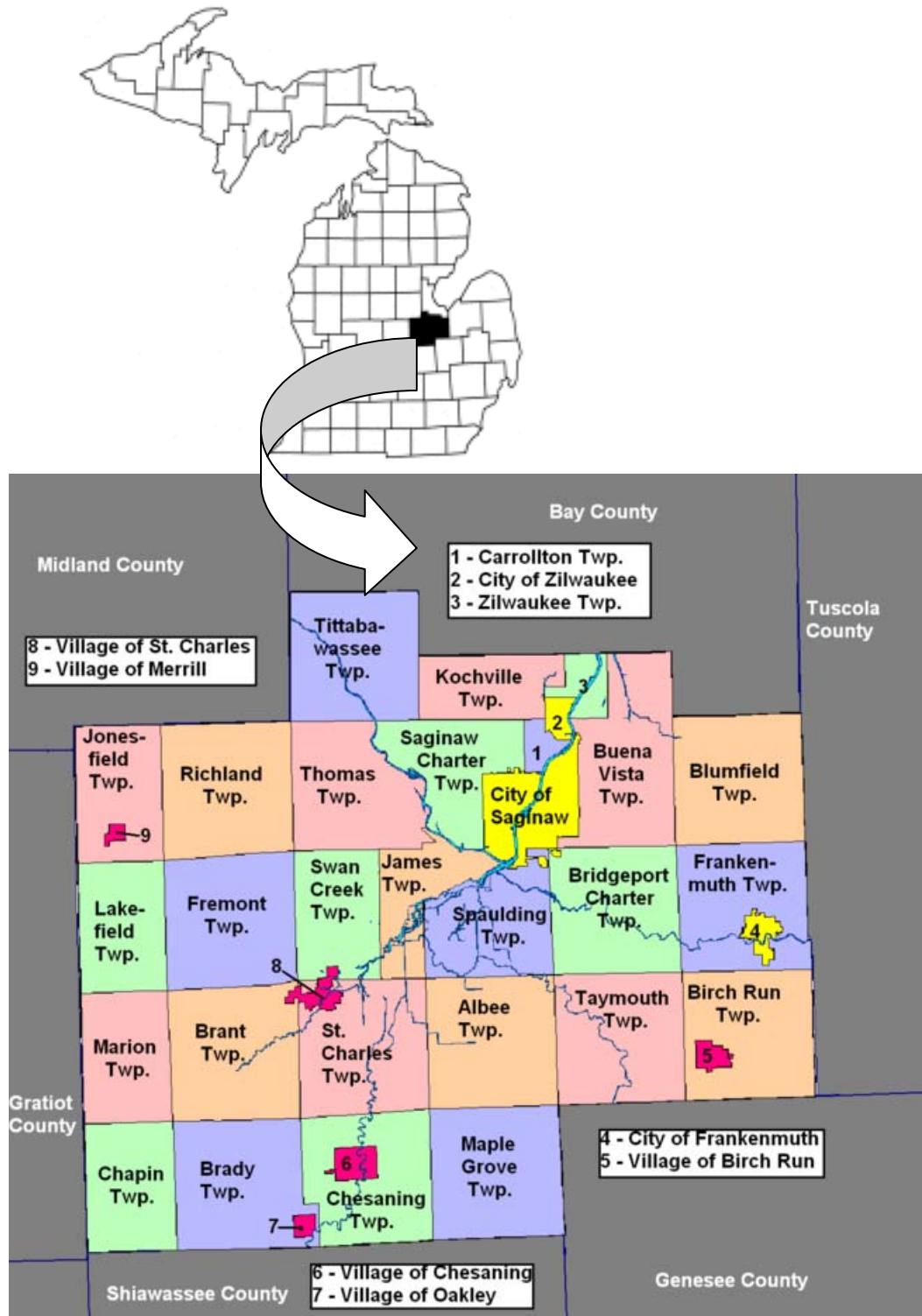
- Measuring People's Exposure to Dioxin Contamination Along the Tittabawassee River and Surrounding Areas: Findings from the University of Michigan Dioxin Exposure Study

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3. 2006 American Community Survey: Percentage of Families whose income in past 12 months is below poverty level. United States Census Bureau. www.census.gov
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7. Meyer et al. Surveillance for Elevated Blood Lead Levels Among Children --- United States, 1997-2001. *CDC Morbidity and Mortality Weekly Report Surveillance Summaries*. 2003; Vol. 52, No. SS-10.
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11. Definition: Late-stage cancer. National Cancer Institute. www.cancer.gov
12. Halpern et al. Association of insurance status and ethnicity with cancer stage at diagnosis for 12 cancer sites: A Retrospective Analysis. *The Lancet Oncology*. 2008; Vol. 9, No. 3: pp. 222-231.
13. Census of Fatal Occupational Injuries, Fatal Occupational Injuries by MSA, 2006. U.S. Department of Labor, Bureau of Labor and Statistics. www.bls.gov/iif/oshcfoi1.htm

ATTACHMENTS

■ ATTACHMENT A — MAP OF SAGINAW COUNTY



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

ATTACHMENTS

■ ATTACHMENT B — HEALTHY PEOPLE 2010

Healthy People 2010 Selected Health Indicator Comparison

#	Objective	Target	Saginaw County
1-1	Increase the proportion of person with health insurance.	100%	83.1%
1-4a	Increase the proportion of persons of all ages who have a specific source of ongoing care.	96%	88.8%
8-1a	Reduce the proportion of persons exposed to air that does not meet the U.S. Environmental Protection Agency's health-based standards for ozone.	0%	0%
14-24a	Increase the proportion of children aged 19 to 35 months who receive all vaccines that have been recommended for universal administration for at least 5 years (4 DTaP, 3 polio, 1 MMR, 3Hib, 3 hepatitis B).	80%	77%
14-29a	Increase the proportion of non-institutionalized adults aged 65 years and older who are vaccinated annually against influenza.	90%	66.0%
14-29b	Increase the proportion of non-institutionalized adults aged 65 years and older who were ever vaccinated against pneumococcal disease.	90%	69.2%
15-15a	Reduce the number of deaths per 100,000 population caused by motor vehicle crashes.	8.0 per 100,000	13 per 100,000
15-32	Reduce homicides.	2.8 per 100,000	15.5 per 100,000
16-6a	Increase the proportion of pregnant women who receive early and adequate prenatal care beginning in the first trimester of pregnancy.	90% of live births	90.0%
19-2	Reduce the proportion of adults who are obese.	15%	33.8%
22-2	Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day 5 or more days per week or vigorous physical activity for at least 20 minutes per day 3 or more days per week.	50%	46.6%
26-10a	Increase the proportion of adolescents not using alcohol or any illicit drugs during the past 30 days.	91%	61.9%
26-11c	Reduce the proportion of adults aged 18 years and older engaging in binge drinking of alcoholic beverages.	13.4%	14.8%
27-1a	Reduce cigarette smoking by adults.	12%	22.4%
27-2b	Reduce cigarette smoking by adolescents (past month).	16%	17.9%
27-10	Reduce the proportion of nonsmokers exposed to environmental tobacco smoke.	63%	0%

ATTACHMENTS

■ ATTACHMENT C — ACRONYMS

BMI	Body Mass Index
BRFS	Behavioral Risk Factor Survey
BRFSS	Behavioral Risk Factor Surveillance System
CARRS	Center for Applied Research and Rural Studies
CDC	Centers for Disease Control and Prevention
DLEG	Department of Labor and Economic Growth
ECIC	Early Childhood Investment Corporation
EPA	Environmental Protection Agency
FQHC	Federally Qualified Health Center
HRSA	Health Resources and Services Administration
IMSC	Interagency Migrant Services Committee
LMI	Labor Market Information
MAPP	Mobilizing for Action through Planning and Partnerships
MCIR	Michigan Care Improvement Registry
MDCH	Michigan Department of Community Health
MDEQ	Michigan Department of Environmental Quality
MPCA	Michigan Primary Care Association
MRSA	Methicillin Resistant Staphylococcus Aureus
MSA	Metropolitan Statistical Area
NACCHO	National Association of County and City Health Officials
OSHA	Occupational Safety and Health Administration
QOL	Quality of Life
PSA	Prostate Specific Antigen
SCDPH	Saginaw County Department of Public Health
STD	Sexually Transmitted Disease
TEQ	Toxic Equivalency
UM SPH	University of Michigan School of Public Health
USDOL	U.S. Department of Labor
YPLL	Years of Potential Life Lost

ATTACHMENTS

■ ATTACHMENT D — DEFINITION OF TERMS

3-year moving average – The number of deaths due to a specific cause are averaged for a three year consecutive period to smooth yearly variance in order to make seeing trends in the data easier.

Age-adjusted rate – The crude age-specific rates are averaged by weighting the proportion of persons in each age group against a standard population (typically the 2000 U.S. Population Census).

Ethnicity - The Federal government of the United States has mandated that "in data collection and presentation, federal agencies are required to use a minimum of two ethnicities: "Hispanic or Latino" and "Not Hispanic or Latino." The Census Bureau defines "Hispanic or Latino" as "a person of Cuban, Mexican, Puerto Rican, South or Central American or other Spanish culture or origin regardless of race." For discussion of the meaning and scope of the Hispanic or Latino ethnicity, see the Hispanic and Latino Americans and Racial and ethnic demographics of the United States articles.

Incidence – The number of new cases of a disease or event being identified and reported in a population.

Median – The middle number of a group of numbers that are arranged in numerical order. {1, 3, **10**, 75, 76}

Prevalence - Prevalence is the number of cases of a disease, infected persons, or persons with some other attribute present during a particular interval of time. It is often expressed as a rate (for example, the prevalence of diabetes per 1,000 persons during a year).

Proportion – A part of the population with respect to the entire population. {50 men exercise out of 100 men surveyed, so the proportion is 50/100 which is equivalent to 0.5, equivalent to 50% }

Race - According to the U.S. Census Bureau

- **"White.** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa. It includes people who indicate their race as 'White' or report entries such as Irish, German, Italian, Lebanese, Near Easterner, Arab, or Polish."
- **"Black or African American (AA).** A person having origins in any of the Black racial groups of Africa. It includes people who indicate their race as "Black, African Am., or Negro," or provide written entries such as African American, Afro American, Kenyan, Nigerian, or Haitian."
- **"American Indian and Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America) and who maintain tribal affiliation or community attachment."
- **"Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. It includes 'Asian Indian,' 'Chinese,' 'Filipino,' 'Korean,' 'Japanese,' 'Vietnamese,' and 'Other Asian.'"

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■ ATTACHMENT D — DEFINITION OF TERMS

Race – Cont'd

- **"Native Hawaiian and Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands. It includes people who indicate their race as 'Native Hawaiian,' 'Guamanian or Chamorro,' 'Samoan,' and 'Other Pacific Islander.'"
- **"Some other race.** Includes all other responses not included in the 'White,' 'Black or African American,' 'American Indian and Alaska Native,' 'Asian' and 'Native Hawaiian and Other Pacific Islander' race categories described above. Respondents providing write-in entries such as multiracial, mixed, interracial, Wesort, or a Hispanic/Latino group (for example, Mexican, Puerto Rican, or Cuban) in the 'Some other race' category are included here."
- **"Two or more races.** People may have chosen to provide two or more races either by checking two or more race response check boxes, by providing multiple write-in responses, or by some combination of check boxes and write-in responses."

Rate – The number of individuals affected by an event or disease divided by the population (population at risk for the event or disease) expressed per 100,000 (may use rate per 1,000 or another number). {Infant mortality rate would be 10 per 1,000 live births for a population with 2,000 births experiencing 20 infant deaths. $20/2,000 = 0.01 \times 1,000 = 10$ per 1,000}

Years of Potential Life Lost (YPLL) – A measurement of the impact a disease or event has on a population. Beyond looking at the number of deaths from a specific cause, the number of years lost prematurely before age 75 is added into the calculation. An example of this is heart disease in Saginaw County. For 2006, 294 men and 303 women died of heart disease. The YPLL for men is 2,055. This is much higher than the YPLL of 1,226 for women and is due to the younger age at which men die from heart disease.

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