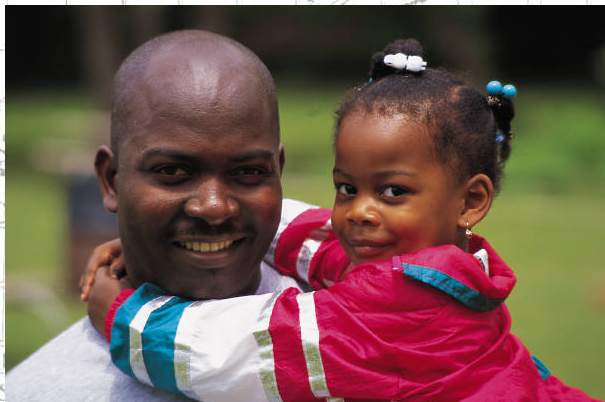


THE HEALTH OF GENESEE COUNTY



2008

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INTRODUCTION:

This second edition of the Health of Genesee County Data Book provides an updated snapshot of the health status of Genesee County, Michigan residents. The public's health is measured by more than the absence or presence of disease, it is also measured by the conditions in which people live, work, and raise their families. This is reflected in this data book as well as the Genesee County Health Department's current strategic plan and annual report. The health indicators found in this book were selected according to the Core Indicators List outlined in the Community Health Status Assessment of a strategic planning tool for community health improvement known as Mobilizing for Action through Planning and Partnerships (MAPP). This tool was developed by the National Association of County and City Health Officials (NACCHO) and the Centers for Disease Control and Prevention (CDC) and was used in developing the Genesee County Health Department's 2008-2012 Strategic Plan.

The data presented here were compiled from a variety of sources and are meant to be informative and useful to individuals, groups, and agencies working to understand and improve the health of Genesee County residents. Every effort was made to assure that data presented in this report are accurate and up-to-date. This book does not attempt to explain why conditions are as they are. This picture of current conditions is intended to spur readers to want to learn even more, and become involved in changing those health conditions they find alarming and building upon those that reflect community strengths.

A special thank you must be given to Health Department staff and community partners who contributed to both the first and second editions of the Health of Genesee County Data book. It is quite an undertaking to collect, organize, display, and narrate this amount of information. Their work has created what we hope is a useful tool. Perhaps this data book will stimulate "Better Life Through Better Health" in Genesee County.

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CHAPTER 1:

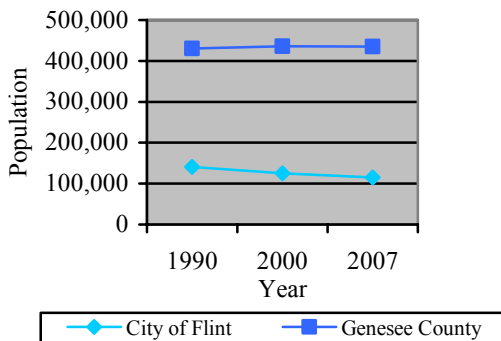
Demographic Characteristics

Genesee County is the 5th most populous county in Michigan, representing 4.3% of the State’s population. The City of Flint comprises 24% of the County’s population and is the largest city in Genesee County. While there has been a slight change in the population of Genesee County between 1990 and 2007, the City of Flint has seen considerable population changes during that time period. African Americans and Whites are the two predominant racial/ethnic groups in both Genesee County and Flint, although the distribution of racial groups differs by geographic area, with a larger proportion of African Americans residing in Flint than in Out County areas. The population of Genesee County has a slightly higher proportion of females than males.

Source: U.S. Census Bureau, U.S Census 2000 and American Community Survey, 2007

POPULATION TRENDS

Fig. 1.1 Population Trends, Genesee County and City of Flint, 1990-2007



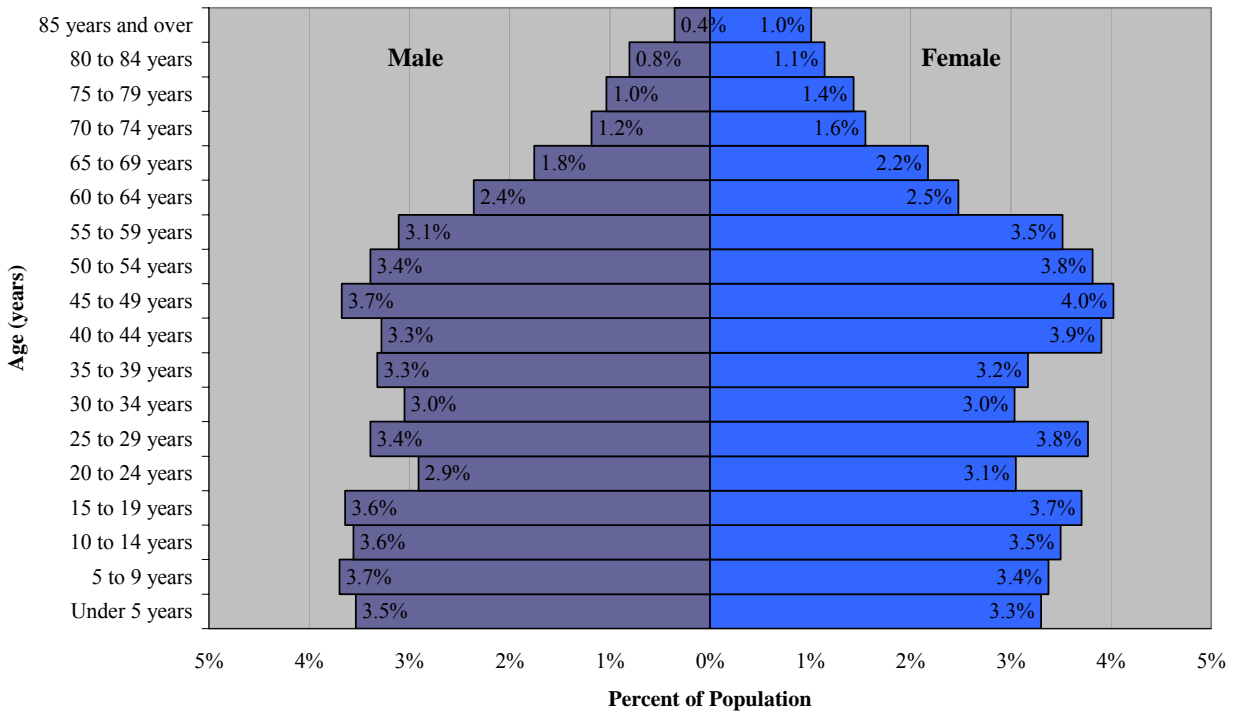
Source: U.S. Census Bureau, 2007 American Community Survey

- ◆ Between 2000 and 2007, the population of Genesee County decreased slightly by 0.3% from 436,141 in 2000 to 434,715 in 2007.
- ◆ The County’s slight population decrease between 2000 and 2007 was opposite that of the State of Michigan, which saw a minor population increase of 1.3% during that same time period.
- ◆ The City of Flint population decreased from 140,761 in 1990 to 124,943 in 2007 (-11.2%) to 114,662 in 2007 (-8.2%).

TOTAL POPULATION

- ◆ The total population of Genesee County in 2007 was 434,715, with 24.1% residing in the City of Flint.
- ◆ 12.4% of the County population is over the age of 65 years.
- ◆ Children under the age of 5 years accounted for 6.8% of the County's total population.
- ◆ People under the age of 18 years comprise 25.8% of the population of Genesee County.
- ◆ The population density (people per square mile) of Genesee County in 2007 was 679.7.
- ◆ The median age for residents of Genesee County in 2007 was 36.7 years.
- ◆ Approximately 48% of the Genesee County population is male, while 52% is female.

Fig. 1.2 Population Distribution of Genesee County by Age and Gender, 2007



Source: U.S. Census Bureau, 2007 American Community Survey

RACE AND ETHNICITY

- ◆ Genesee County's population is predominantly White (76%), while about one-fifth of the total population is African American. Hispanic/Latino persons, who could be of any race, comprise about 2.4% of the County's population, which is lower than the proportion of Hispanics/Latinos in the City of Flint or Michigan.
- ◆ In the City of Flint, African Americans comprise over one-half (52.2%) of the population, while 42.7% of the City's residents are White. The proportion of City residents who are Hispanic/Latino, of any race, is higher (3.2%) than the County as a whole, but lower than the State of Michigan (3.9%)
- ◆ The proportion of Genesee County residents who are American Indian/Alaska Native is similar to the State of Michigan while the proportion of residents who are Asian is less in Genesee County than the State. In Flint, the proportion of residents who are American Indian/Alaska Native or Asian is lower than the proportion in Michigan. A greater proportion of Flint and Genesee County residents identify with two or more races than in the State.

Fig. 1.3 Population by Race/Ethnicity, 2007

Population Subgroup	City of Flint		Genesee County		Michigan
	Number	Percentage	Number	Percentage	Percentage
Total Population	104,867	100%	434,715	100%	100%
Hispanic/Latino of any race	3,383*	3.2%	10,514	2.4%	4.0%
Total One Race	101,958	97.2%	425,580	97.9%	98.1%
African American/Black	54,719	52.2%	84,830	19.5%	14.1%
White	44,766	42.7%	330,597	76%	79.4%
American Indian/Alaska Native	293	0.3%	2,550	0.6%	0.5%
Asian	143	0.1%	3,731	0.8%	2.4%
Pacific Islander/Native Hawaiian	46	<0.1%	166	<0.1%	<0.1%
Some Other Race	1991	1.9%	3,706	0.8%	1.7%
Total Two or More Races	2,909	2.8%	9,135	2.1%	1.9%

*The number of Hispanic/Latino of any race for the city of Flint is from the 2005-2007 American Community Survey and represents the average number over the 3-year period of time.

Source: U.S. Census Bureau, 2007 American Community Survey

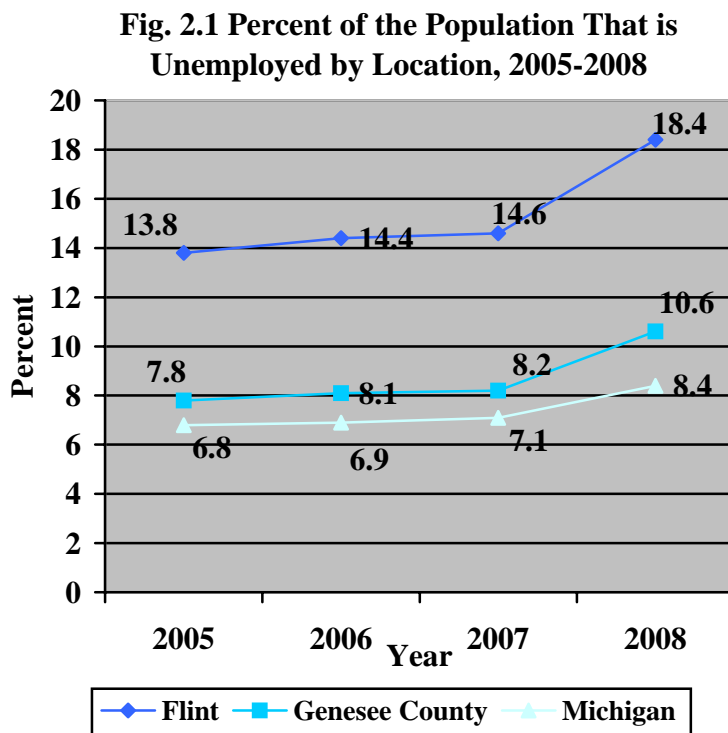
CHAPTER 2:

Socioeconomic Characteristics

Socioeconomic measures such as income, education, and employment are associated with health status. These factors influence health in a variety of ways and are important indicators of a community's overall health. Like other areas of Michigan and the United States, there are marked differences in indicators of socioeconomic status between the urban and suburban areas of Genesee County. In particular, Flint has seen a dramatic shift in socioeconomic status over the last 20 to 30 years and has been plagued by higher unemployment and poverty rates than Genesee County as a whole.

EMPLOYMENT AND INCOME

Unemployment



- ◆ Flint's unemployment rates from 2005-2008 are consistently higher than Genesee County and Michigan.
- ◆ The rate of unemployment in Genesee County as a whole is slightly higher than Michigan for years 2005-2008.
- ◆ The City of Flint has seen out-migration of jobs and residents.
- ◆ There was a significant increase in unemployment between 2007 and 2008 for the City of Flint, Genesee County and the State of Michigan. Increases in unemployment were also seen nationally.

Source: Michigan Department of Labor & Economic Growth, Employment Service Agency

Income

- ◆ The median household income for Genesee County in 2007 was almost \$5,000 less than the median household income for Michigan and over \$7,000 less than the United States.
- ◆ The City of Flint’s median household income was nearly \$22,000 less than the median income for Genesee County as a whole.

Source: U.S. Census Bureau, 2007 American Community

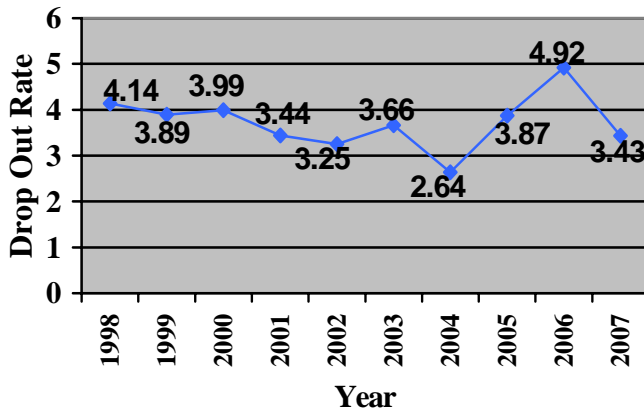
Fig. 2.2 Median Household Income (2007)	
City of Flint	\$26,143
Genesee County	\$43,112
Michigan	\$47,950
United States	\$50,740

Survey

EDUCATION

High School Drop Out

Fig. 2.3 Average High School Drop Out Rates, Genesee County, 1998-2007

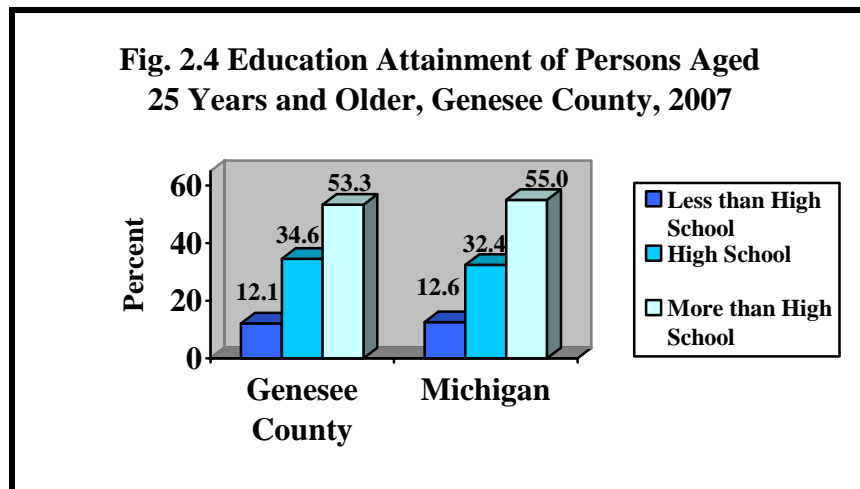


- ◆ Although they vary year to year, high school drop out rates generally decreased in the 10 year period shown.

Source: Statistical Summary 2008-2009, Genesee Intermediate School District

Educational Attainment

- ◆ Genesee County had a similar proportion of people who attained less than a high school education or a high school education as the State of Michigan. The percentage of people who have had more than a high school education is slightly lower in Genesee County compared to the State.

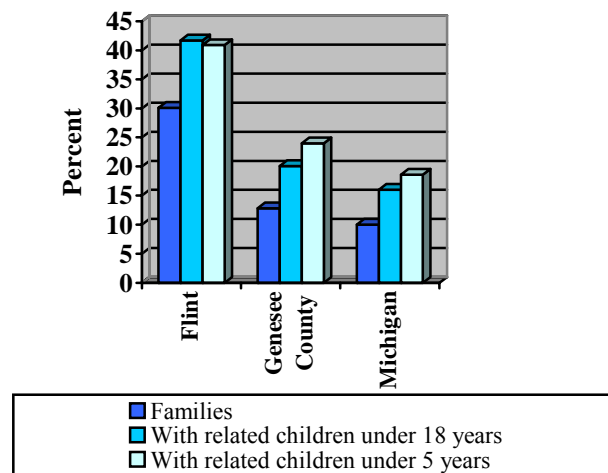


Source: U.S. Census Bureau, 2007 American Community Survey

POVERTY

- ◆ In 2007, 9.3% of Genesee County residents 18 years and over and 19.9% of City of Flint residents over 18 years had incomes that were below the poverty level, compared to 9% of Michigan residents 18 years and over.

Fig. 2.5 Percent of Families Below Poverty Level, 2007



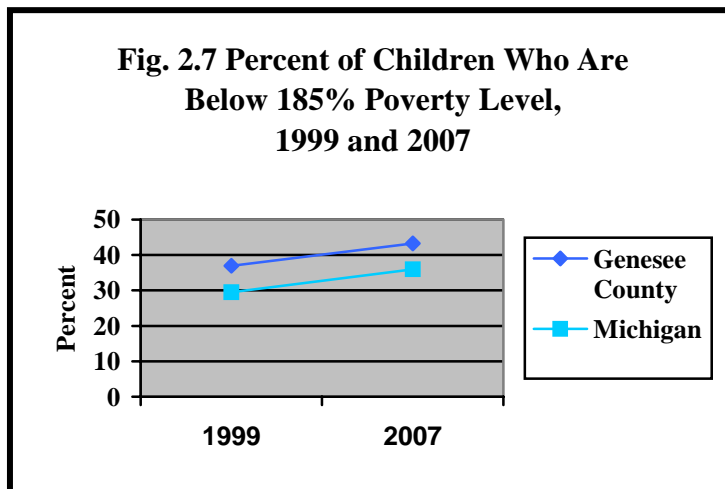
Source: U.S. Census Bureau, 2007 American Community Survey

- ◆ The indicators below suggest that the socioeconomic status of Genesee County children has decreased from 2002-2003 to 2007-2008. However, because of limited data and possible program changes, it is difficult to ascertain whether that is the case.
- ◆ The percentage of students receiving free/reduced-price school lunches and percentage of children receiving food assistance in 2007-2008 in Genesee County are higher than the overall State rates.

Fig. 2.6 Socioeconomic Status of Children			
	Genesee County		Michigan
	2002-2003	2007-2008	2007-2008
Percent of students receiving free/reduced-priced school lunches	38.6%	40.4%	37.4%
	Genesee County		Michigan
	2002	2007	2007
Percent of children receiving food assistance	21.1%	29.3%	20.6%
Percent of children, ages 0-12 years, in subsidized child care	11,064	8,719	101,346

Source: Kids Count in Michigan Data Book, 2007

- ◆ Both Genesee County and Michigan have seen an increase in the proportion of children who are below 185% poverty level from 1999 to 2007. The percentage of children who are below 185% poverty level is higher for Genesee County than in Michigan as a whole.



Source: U.S. Census Bureau, American Community Survey, 2007

CHAPTER 3:

Health Resource Availability

Appropriate health care has a major influence on health. Adequate access to health care is related to timely screening for disease, receiving treatment for illness or injury, avoiding preventable hospitalizations, and adopting healthier lifestyles. However, there are many factors that influence whether appropriate and timely health care is obtained. One of these is the health resource availability in a community. In addition, even in areas where adequate health care capacity exists, barriers to care such as lack of health care coverage, cost of care, and difficulty with transportation may exist and prevent the full potential of health resources from being utilized. This section presents the health system capacity in Genesee County, as well as barriers to access to health care.

.....

HEALTH SYSTEM CAPACITY

Health System Facilities

Inventory of Health Care Facilities 2007

Number of Hospitals: 3

Total Number of Licensed Hospital Beds: 1,161

Number of Licensed Hospital Beds rate per total population:
285.2 per 100,000 population*

Nursing Home Long-Term Care Facilities: 15

Hospital Long-Term Care Units: 1

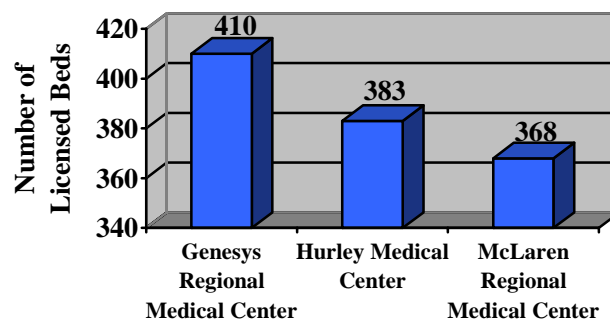
Long-Term Care Beds: 1,777

Facility Occupancy Percentage: 85.84%

Home Health Agencies: 8

Hospice (non-residential): 5

Fig. 3.1 Licensed Hospital Beds in Genesee County by Hospital, 2009



Source: Bureau of Health Systems,
Michigan Department of Community
Health

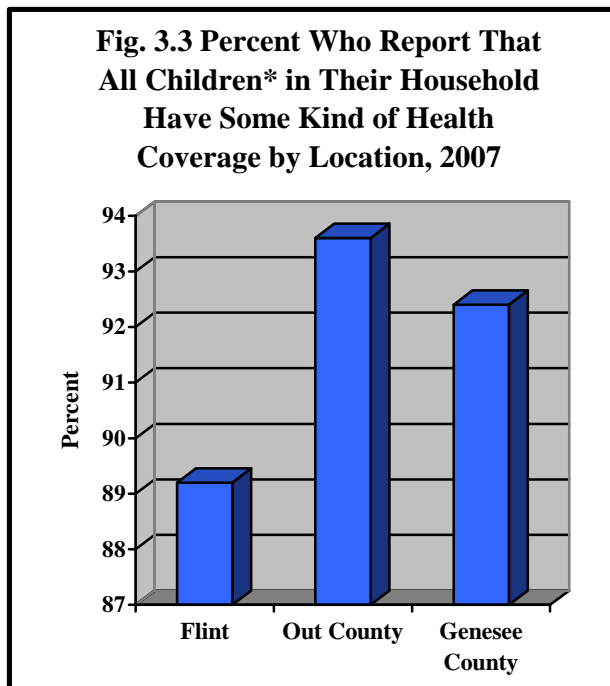
*Based on Census 2000 population. Source: Bureau of Health Systems,
Michigan Department of Community Health

Health System Personnel

Fig. 3.2 Licensed Health System Personnel Inventory*, Genesee County, 2007	
Physicians	179 licensed physicians per 100,000 population**
Dentists	228.4 licensed dentists per 100,000 population**
Nurse Practitioners	90
Nurses	5,130 R.N. 1,142 L.P.N.
Physician's Assistants	102

*It is unknown whether or not health professionals who are licensed in Genesee County actually practice in the County. Numbers above indicate those health professionals who provided an address (whether it is work or home address is unknown) that is in Genesee County on their license application. ** Based on Census 2000 population. Source: Bureau of Health Professions, Michigan Department of Community Health

HEALTH CARE COVERAGE



- ◆ In a 2007 Genesee County survey, 92.4% of respondents living in Out County areas reported that all children 17 years and younger in their household had some type of health care coverage, while 89.2% of City of Flint respondents reported this. Overall, 92.4% of Genesee County respondents reported that all children 17 years and younger in their household had some type of health care coverage.

*Youth ages 17 years and under. Note: Question was only asked of those who reported having youth in their household. Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

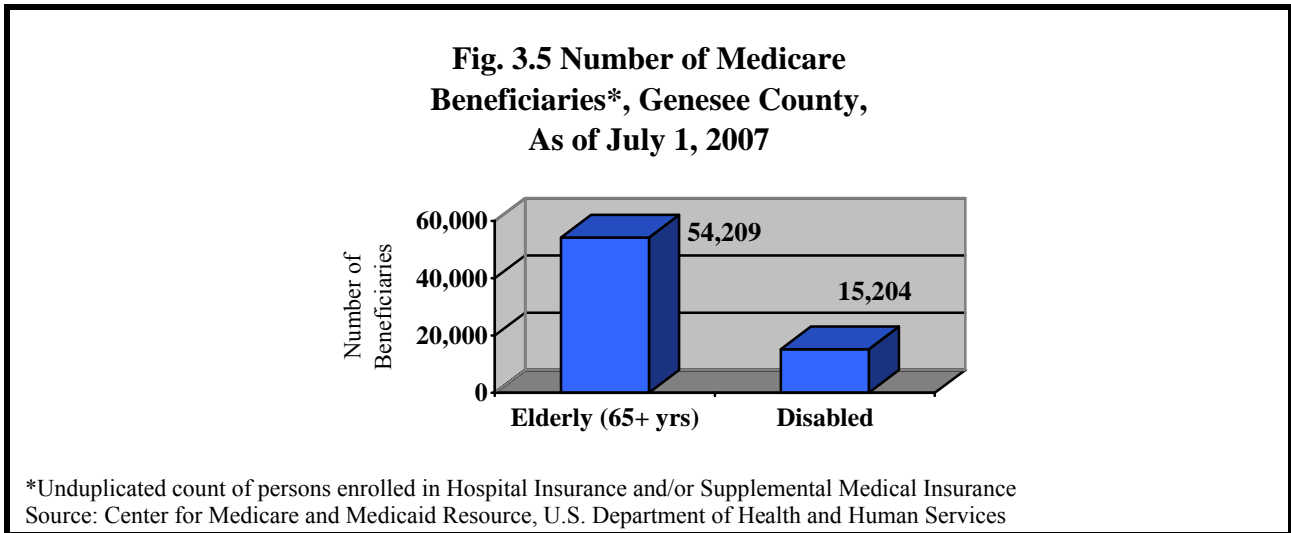
- ◆ As shown in Figure 3.4, 94.8% of Genesee County residents reported having some type of health care coverage in 2007.
- ◆ 94.3% of Flint residents and 95% of Out County residents said they had some type of health care coverage.
- ◆ Younger residents in both Flint and Out County were less likely to have health care coverage than older residents.
- ◆ There was little variation in health care coverage by gender for Flint residents, Out County residents, and Genesee County residents as a whole.

Fig. 3.4 Percent With Any Kind of Health Care Coverage, Genesee County, 2007	
Characteristics	Percent
Overall	94.8%
Gender	
Male	95.0%
Female	94.7%
Race	
African American	96.4%
White	94.5%
Age	
18-24 years	89.0%
25-44 years	93.1%
45-64 years	96.4%
65+ years	99.6%
Type of Health Care Coverage*	
Employer Provided	57.4%
Self Bought	4.9%
Medicaid	11.6%
Medicare	18.3%
Genesee Health Plan	6.9%
Some other Source	10.4%

*Note: Respondents may have indicated more than one type of health care coverage
Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

Medicare

- ◆ Medicare is the national health insurance program for people age 65 or older, some people under age 65 with disabilities, and people with End-Stage Renal Disease.
- ◆ Figure 3.5 shows the number of Medicare Beneficiaries in Genesee County.



Medicaid

- ◆ Medicaid is a program that pays for medical assistance for certain individuals and families with low incomes and resources. As of August 2009, there were a total of 68,980 Medicaid beneficiaries in Genesee County.

Fig. 3.6 Medicaid Beneficiaries in Genesee County August 2009

Plan	Number of Enrollees
CareSource Michigan	1,635
Health Plan of Michigan	5,222
HealthPlus Partners Inc	40,924
McLaren Health Plan	15,400
Molina Healthcare of Michigan	2,250
Total Health Care	3,549
County Total	68,980

Source: Michigan Department of Community Health

Genesee Health Plan

- ◆ The mission of the Genesee Health Plan (GHP) is to improve the health of uninsured Genesee County residents by helping to pay for doctor visits, prescriptions, lab tests and x-rays. GHP provides access to quality health care when people cannot afford or do not qualify for health insurance.
- ◆ In August 2009 the average age for Genesee Health Plan enrollees was 39 years.

Fig. 3.7 Genesee Health Plan Enrollees, 2002 and 2003					
	2004	2005	2006	2007	2008
Number of Active Enrollees	9,897	19,742	24,543	25,209	22,084
Percentage					
Female	53%	55%	58%	52%	52%
Male	47%	45%	42%	48%	48%

Source: Genesee Health Plan

BARRIERS TO HEALTH CARE ACCESS

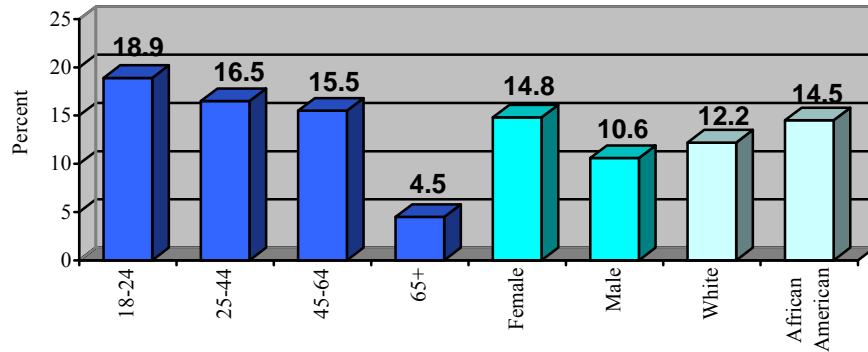
Cost

Fig. 3.8 Cost as a Barrier to Health Care Access By Location, 2007			
	Flint	Out County	Genesee County
Percent who reported a time in the past year when they needed to see a doctor, but did not because of the cost	19.6%	10.7%	12.9%

Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

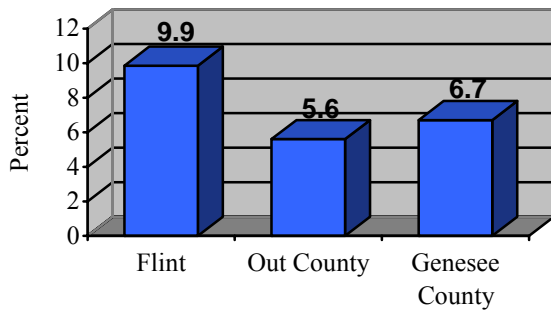
- ◆ As shown in Figure 3.8, Flint has the largest percentage of people who reported cost as a barrier to doctor's visit and were more likely than Out County residents to report that cost was a barrier to visiting a doctor when they needed to in the past year.
- ◆ Cost as a barrier to a doctor's visit was more likely for younger Genesee County residents.
- ◆ Women in Genesee County were more likely to report cost as a barrier to a doctor's visit.

Fig. 3.9 Percent Citing Cost as a Barrier to Doctor's Visit in the Past Year by Age and Gender, 2007



Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

Fig. 3.10 Percent Citing Cost as a Barrier to a Child's Doctor's Visit in the Past Year by Location, Genesee County, 2007

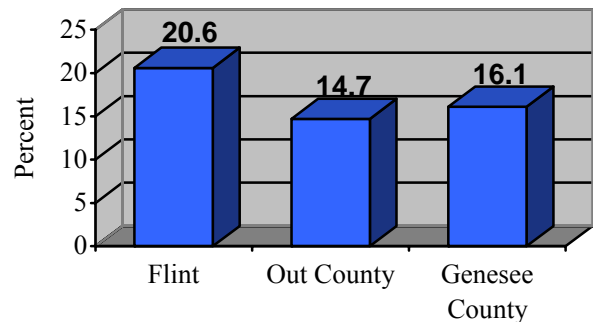


Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

- ◆ A higher percentage of Flint Residents reported having someone in their household who needed a prescription but could not afford it than Out County Residents.

- ◆ As shown in Figure 3.10, Flint residents were more likely to report cost as a barrier to a child's doctor's visit in the past year than Out County residents.

Fig. 3.11 Percent Citing Someone in Their Household Needed a Prescription But Could Not Afford It, by Location, 2007



Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

CHAPTER 4:

Quality of Life

Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.

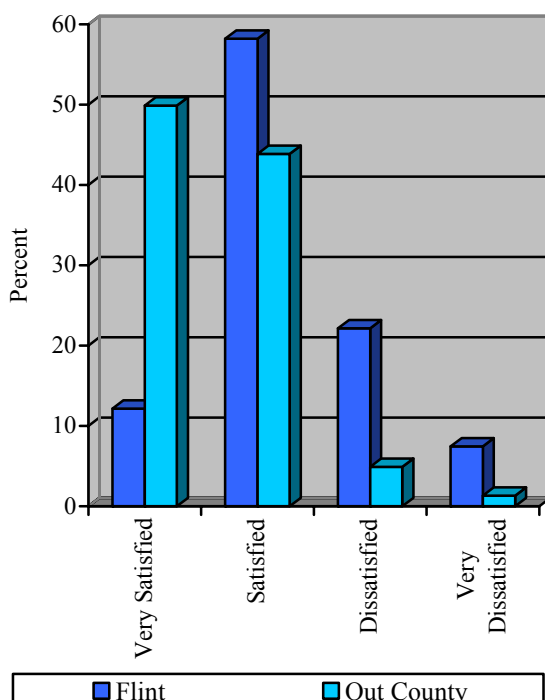
-World Health Organization

When we are concerned with promoting good health, we must also be concerned with those other facets of life that contribute to health and overall well-being. This chapter presents data on neighborhood conditions, such as fear of crime and neighborhood participation as well as data on sleep behaviors, including reported problems sleeping and quality of sleep. Data on access to fresh fruits and vegetables, civic participation, and satisfaction with health care in Flint and Genesee County, which all affect quality of life, are presented.

NEIGHBORHOOD CONDITIONS

Neighborhood Satisfaction

Fig. 4.1 Neighborhood Satisfaction, Genesee County, 2007



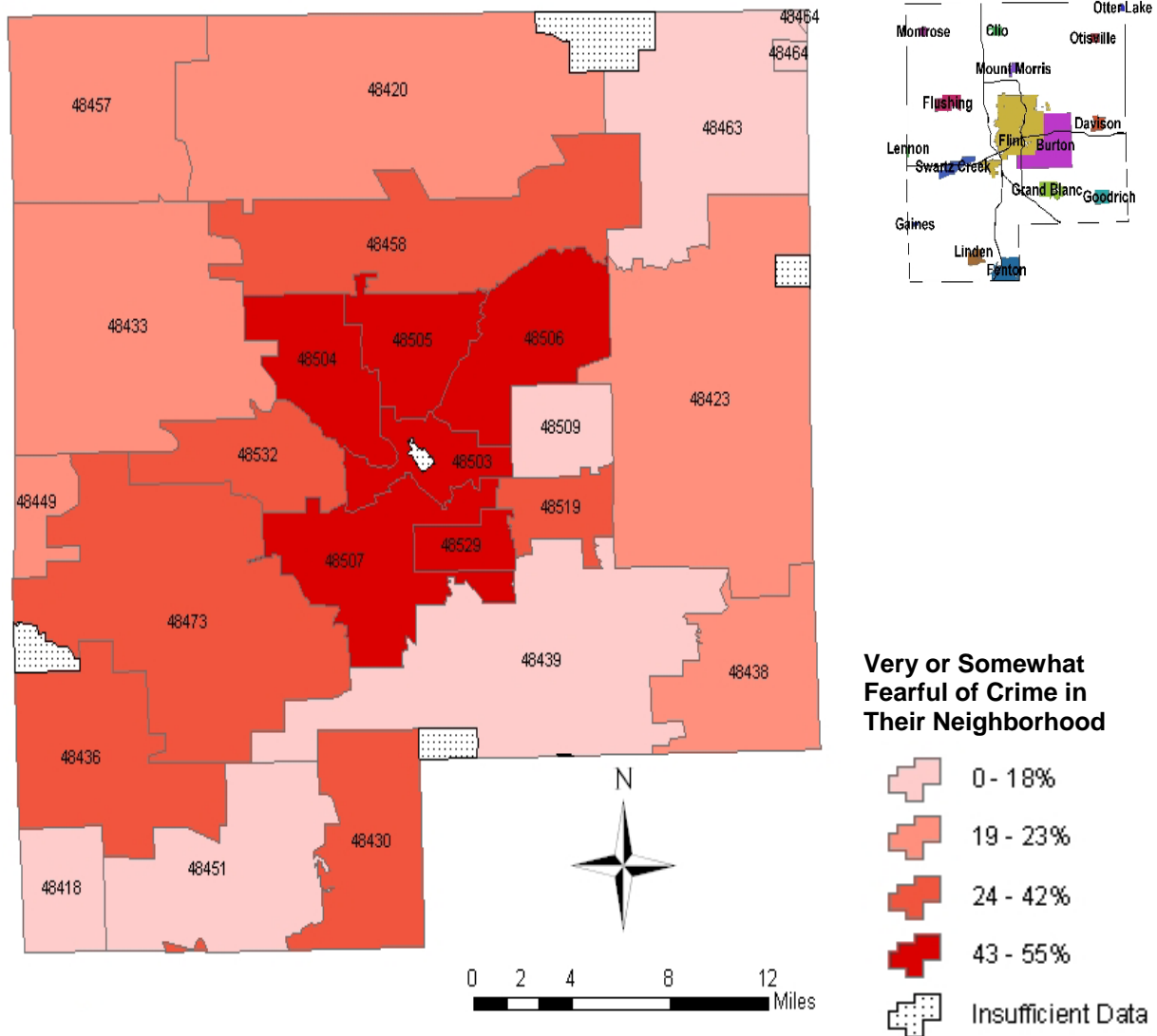
- ◆ Over 70% (70.4) of Flint residents and 93.7% of Out County Residents said they were *very satisfied* or *satisfied* with the quality of life in their neighborhood.
- ◆ Over three-quarters (78.2%) of Flint and 91.6% of Out County residents *strongly agreed* or *agreed* that people in their neighborhood are willing to help their neighbors.
- ◆ In Flint, 58.5% of residents and 88.6% of Out County residents *strongly agreed* or *agreed* that people in their neighborhood can be trusted.

Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

Fear of Crime

- ◆ 55.1% of City of Flint residents said that they were *very* or *somewhat fearful* of crime in their neighborhood. Only 21.8% of Out County residents reported this.
- ◆ In Flint, 52.9% of Whites and 58% of African Americans compared to only 21.4% of African Americans and 21.1% of Whites in Out County areas said they were very or somewhat fearful of crime in their neighborhood.

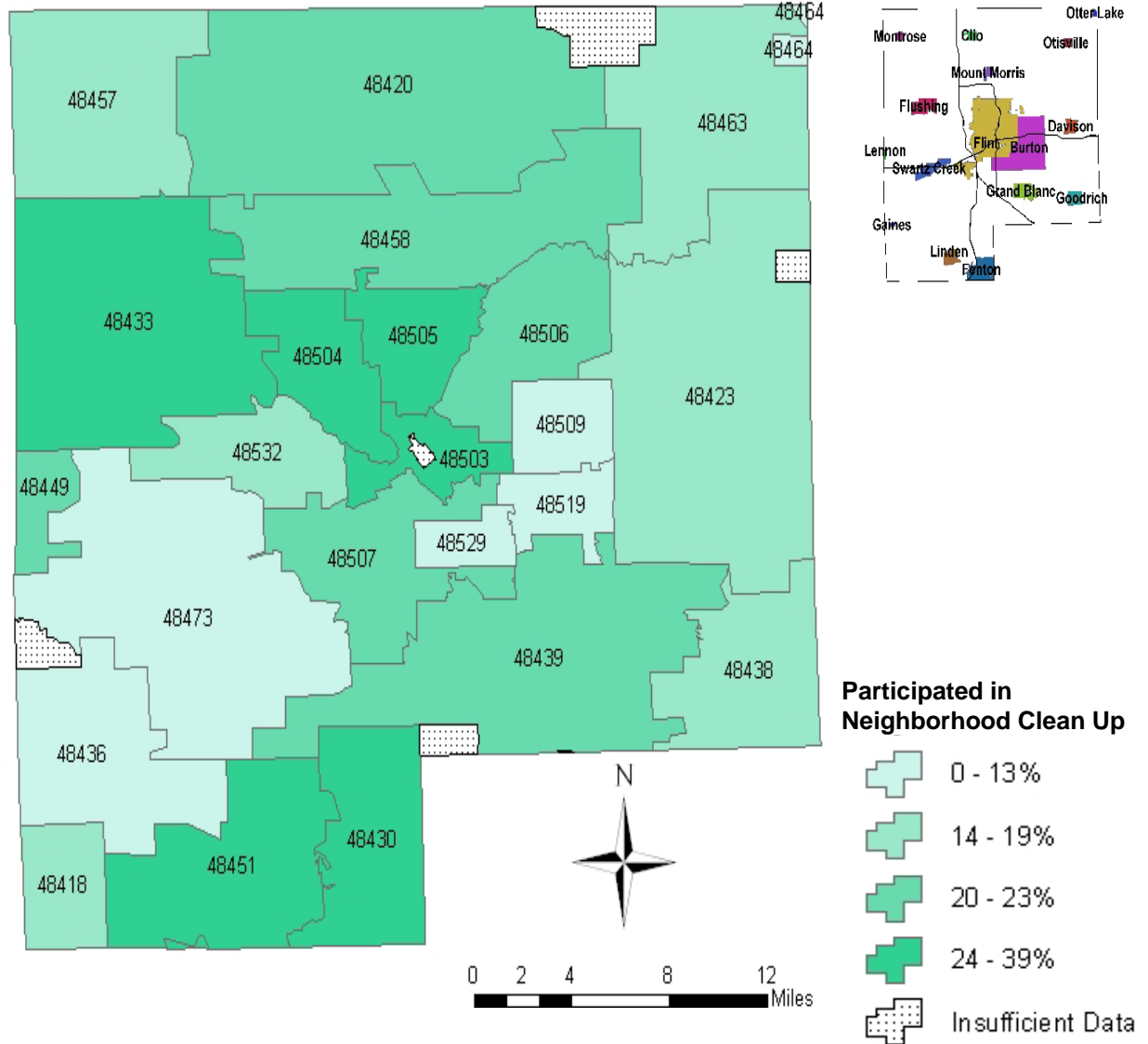
Fig. 4.3 Percent of Residents Who Are Very or Somewhat Fearful of Crime in Their Neighborhood by ZIP Code, Genesee County, 2007



Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

Neighborhood Participation

Fig. 4.4 Percent of Residents with a Household Member Who Participated in Neighborhood Clean Up by ZIP Code, Genesee County, 2007

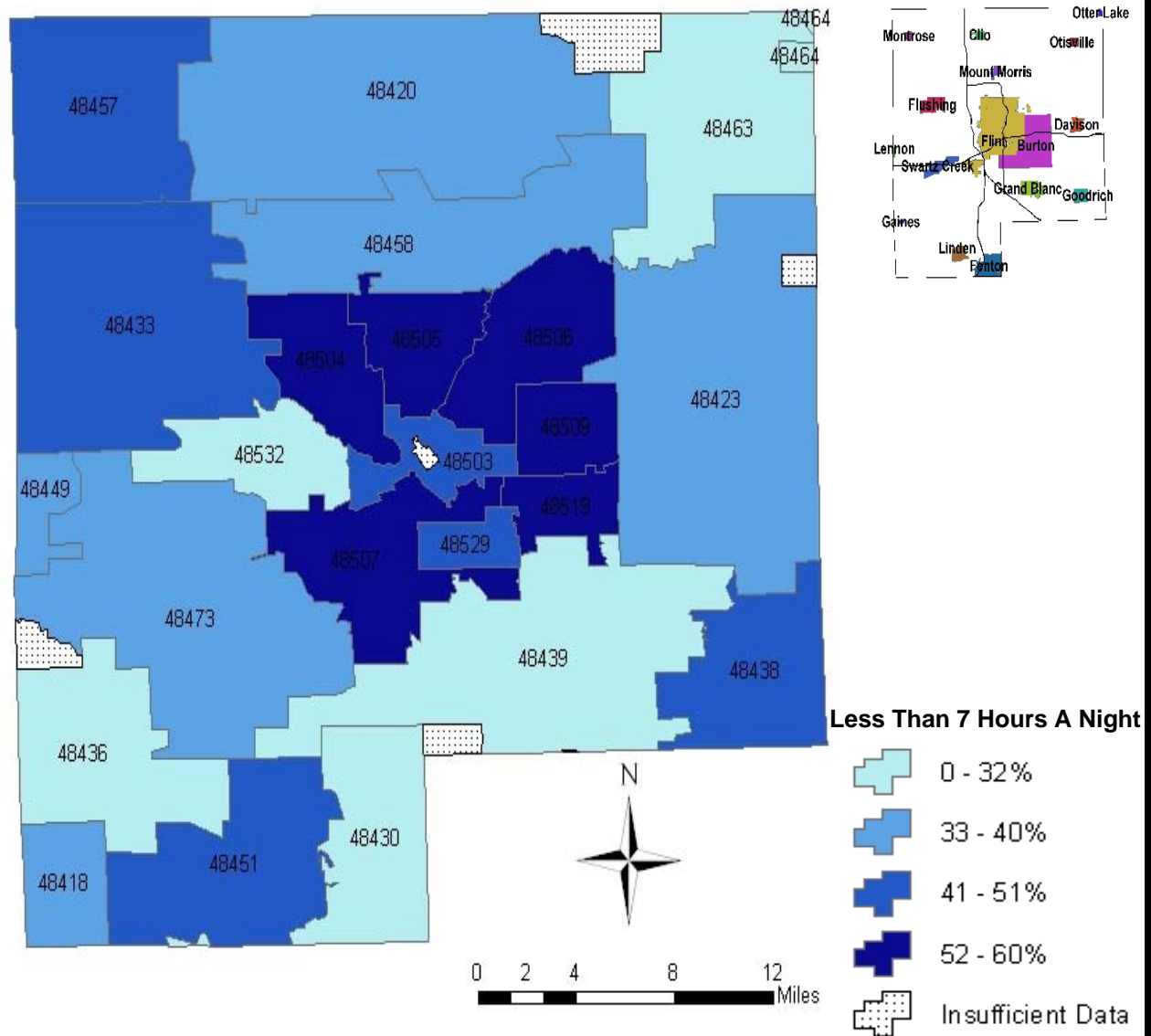


Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

- ◆ In a 2007 Genesee County survey, 30.9% of residents in Flint and 20% of Out County residents reported that at least one member of their household had participated in one or more neighborhood activities, such as a community garden, neighborhood crime watch, beautification project, or neighborhood clean-up.
- ◆ The survey also showed that households where the respondents identified themselves as African American were more likely to participate in a neighborhood activity and participated in more activities, on average, than households where the respondents identified as White.

SLEEP
Adequate Sleep

Fig. 4.5 Percent of Residents Who Slept Less Than The Recommended 7 Hours a Night by ZIP Code, Genesee County, 2007



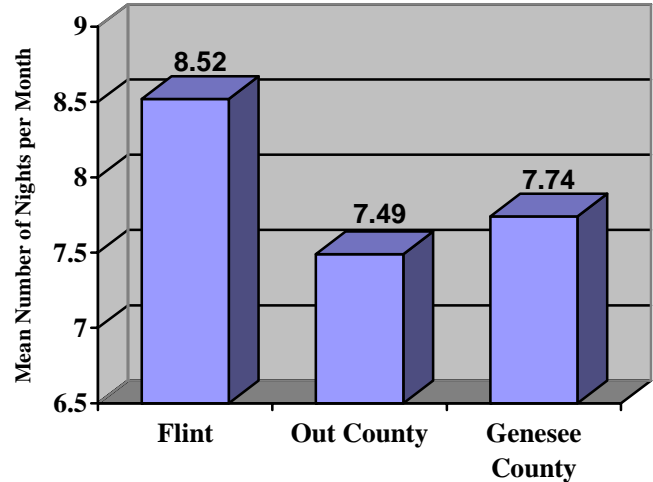
Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

- ◆ In a 2007, Genesee County residents reported sleeping less than the recommended 7 hours a night, with a mean of 6.73 hours of sleep per night. The mean for Flint residents was 6.45 hours of sleep per night which was less than the County mean and the mean for Out County residents, 6.82 hours of sleep per night.

Problem Sleeping

- ◆ In 2007, the mean number of nights Flint residents reported having trouble sleeping was higher than that for Out County residents and higher than the mean for the County as a whole.

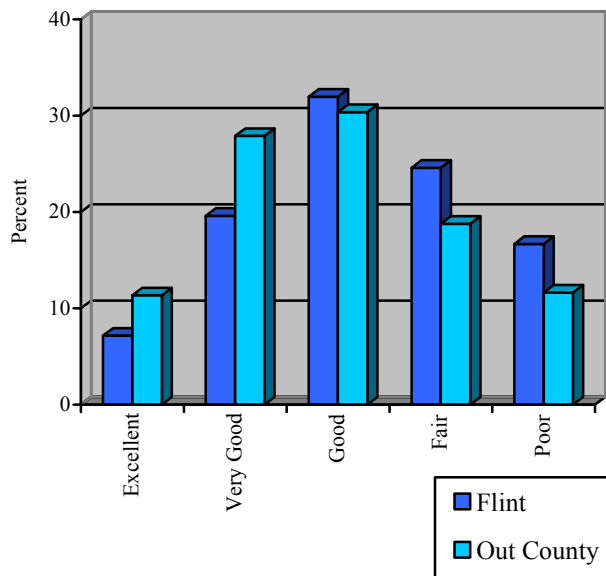
Figure 4.6 Mean Number of Nights Per Month Residents Reported Having Trouble Sleeping by Location, Genesee County, 2007



Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

Quality of Sleep

Fig. 4.7 Rate of Quality of Sleep During the Past Month, Genesee County, 2007



- ◆ In 2007, 67.0% of Genesee County residents rated their quality of sleep as *excellent*, *very good* or *good*. This was higher than residents of the City of Flint who rated their quality of sleep similarly and slightly lower than Out County residents, 58.7% and 69.6%, respectively.

Source: Speak to Your Health! Community Survey 2007, Prevention Research Center of Michigan

ACCESS TO FRESH PRODUCE

Fig. 4.9 Percent Of Respondent's Level Of Difficulty Of Getting To A Grocery Store Or Supermarket That Has A Good Variety Of Fresh Fruits And Vegetables			
	Flint 2007	Out County 2007	Genesee County 2007
No Difficulty	74%	86%	83.1%
Not Much Difficulty	12.2%	9.4%	10%
Some Difficulty	10.6%	3.6%	5.3%
A lot of Difficulty	3.2%	1%	1.5%

Source: Speak to Your Health! Community Survey 2007, Prevention Research Center of Michigan

- ◆ Overall about 6.8% of Genesee County residents say that they have *some* or *a lot* of difficulty getting to a grocery store or supermarket that has a good variety of fresh fruits and vegetables. Flint has a higher proportion of residents (13.8%) who say they have some or a lot of difficulty getting to grocery stores or supermarkets that carry a good variety of fresh fruits and vegetables than Out County residents (4.6%).

CIVIC PARTICIPATION

Percent of Registered Voters in Genesee County Who Vote

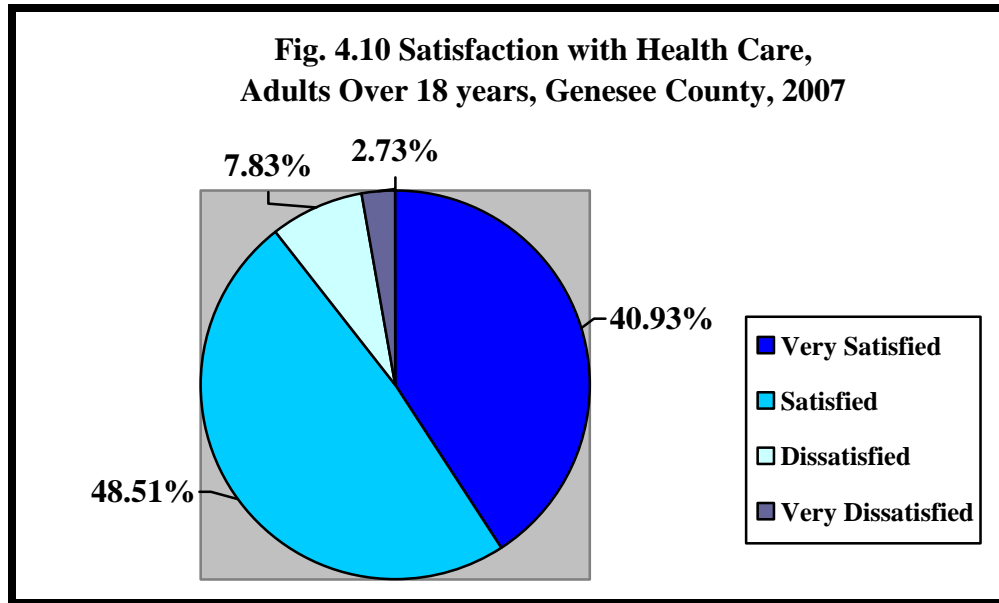
Fig. 4.9 Percent of Registered Voters in Genesee County Who Vote, 2008		
	Percent	Number of Total Registered Voters
August 5, 2008 Election*	13.6%	340,258
November 4, 2008 Election**	63.8%	347,432

*Current as of 8/8/08. ** Current as of 11/17/08. Source: Genesee County Clerk's Office

- ◆ In 2004, 64.0% of the 335,361 total registered voters in Genesee County voted in the November 2nd election.
- ◆ In 2000, 60.9% of the 319,719 total registered voters in Genesee County voted in the November 7th election.

SATISFACTION WITH HEALTH CARE

- ◆ Nearly 90% (89.4%) of Genesee County residents reported they were *very satisfied* or *satisfied* with the health care they received.



Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

CHAPTER 5:

Behavioral Risk Factors

One determinant of health is lifestyle and health-related behaviors. Alcohol, tobacco, and other drug use and abuse, obesity, and physical activity are indicators of the level of healthy living in a population. This chapter presents information on these factors, each of which contributes to chronic diseases, such as heart disease, cancer, stroke, and diabetes, as well as injuries. The proportion of the population receiving health screenings is also presented because this is an important indicator of a community's disease prevention and early detection efforts. Although risk factors and health screenings are a result of an individual's behaviors, it is important to consider the other factors that influence the adoption of healthy choices, such as social norms and the availability of individual and community resources.

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SUBSTANCE USE AND ABUSE

Fig. 5.1 Behavioral Risk Factors: Substance Use			
	Flint 2007	Genesee County 2007	Michigan 2007
Heavy Drinking¹	3.7%	6%	6.1%
Binge Drinking²	36.8%	33.6%	18.4%
Current Smoker³	36.1%	25.6%	21.1%

Source: 2007 Michigan Behavioral Risk Factor Survey, 2007, Michigan Department of Community Health; Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan.

¹ Proportion of respondents who reported consuming on average more than two alcoholic drinks per day (males) or more than one alcoholic drink per day (females) in the past 30 days.

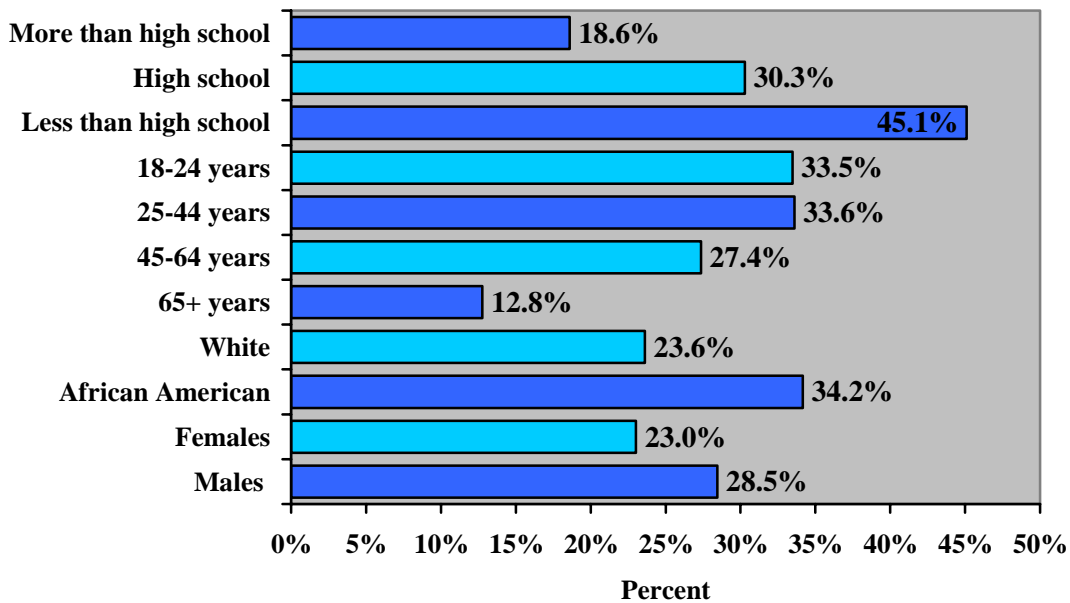
² Proportion of respondents who reported consuming 5 or more drinks on any one occasion at least once in the past 30 days.

³ Proportion of respondents who reported that they had ever smoked 100 cigarettes in their life and that they smoke every day or on some days now.

Tobacco Use

- ◆ Overall about 50.6% of Genesee County residents say that they currently smoke on *every* or *some days*. Flint has a higher proportion of residents (64.5%) who say they currently smoke on *every* or *some days* than Out County residents (45.9%).
- ◆ Current smoking status varies by age. Those 65 years and older were less likely to report they currently smoke compared to younger respondents.
- ◆ A higher percentage of people who have a less than high school education are current smokers (45.1%) than high school graduates (30.3%) or people with more education than high school (18.6%).

Fig. 5.2 Current Smokers, Adults Aged 18 Years or Older, Genesee County, 2007

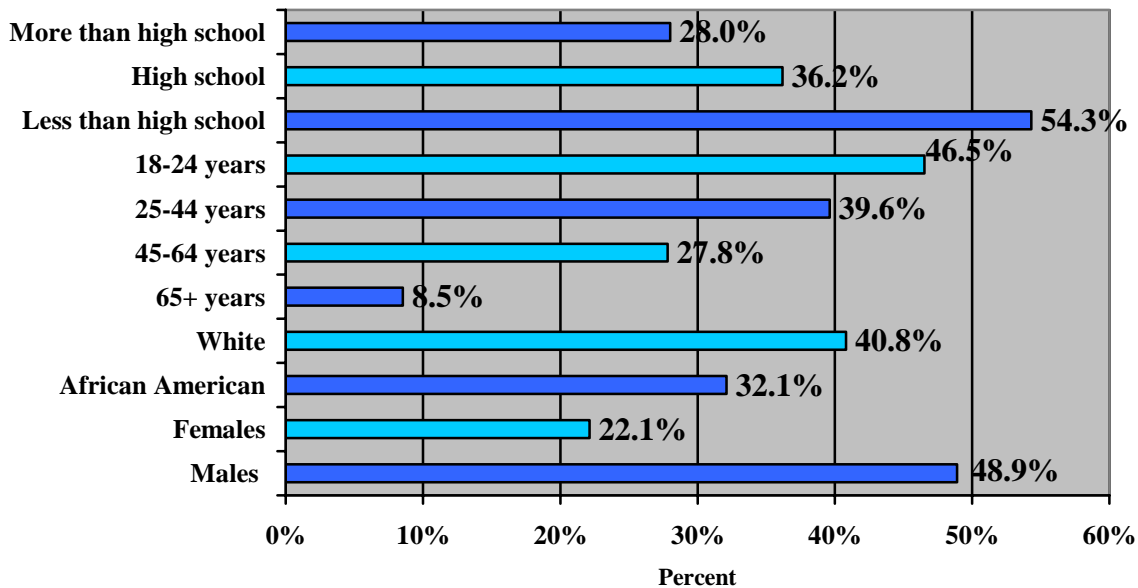


Source: Speak to Your Health! Community Survey, 2007 Prevention Research Center of Michigan

Alcohol Use

- ◆ Overall, 33.6% of adults in Genesee County say they have engaged in at least one episode of binge drinking in the past 30 days. Flint has a higher percentage of binge drinkers (36.8%) than Out County residents (32.9%).
- ◆ Binge drinking in Genesee County is significantly more prevalent in males (48.9%) than females (22.1%).
- ◆ A higher proportion of Whites (40.8%) report binge drinking than African Americans (32.1%).

Fig. 5.3 Binge Drinking*, Adults Aged 18 Years and Older, Genesee County, 2007



*Respondents who said that they consumed 5 or more drinks on an occasion at least once in the past 30 days
Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

LIFESTYLE FACTORS

- ◆ Figure 5.4 shows that the City of Flint has a higher proportion of residents that are obese (38.5%) than Genesee County as a whole (32.5%) and Michigan (28.4%).
- ◆ Nearly 57% of Genesee County residents say they engage in physical activity for at least 20 minutes 3 times per week or more.
- ◆ The percentage of residents who drink fruit juice, eat fruits, and eat vegetables at least 5 times per day was equal for both Flint and Genesee County.
- ◆ Women and African Americans in Genesee County were more likely to drink fruit juice, eat fruits, and eat vegetables at least 5 times per day.
- ◆ A higher proportion of residents of the City of Flint, 58.8%, report *always* using a condom when having sex with a new partner than Genesee County as a whole, 49.3%.

Fig. 5.4 Behavioral Risk Factors: Lifestyle

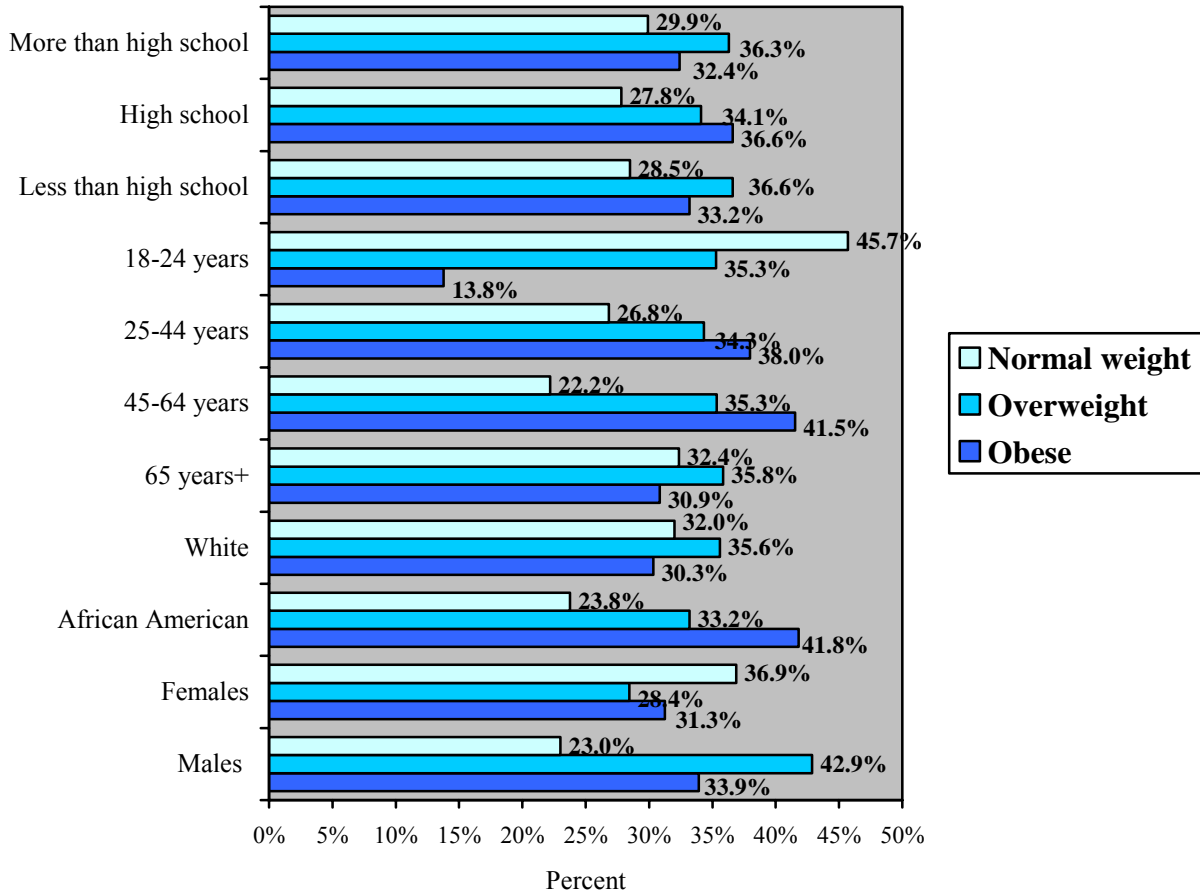
	Flint 2007	Genesee County 2007	Michigan 2007
Overweight (BMI 25-29.9)	31.7%	35.4%	36.2%
Obese (BMI ≥30)	38.5%	32.5%	28.4%
Physical Activity Frequency⁴			
<1 time per week	31.1%	22.2%	Not available
1-2 times per week	20.8%	21.6%	Not available
3 times per week	12.6%	18.4%	Not available
4+ times per week	35.5%	37.9%	Not available
Percent of respondents who drink fruit juice, eat fruits, and eat vegetables five times per day	24.6%	24.6%	21.3%
Condom use when having sex with a new partner			
Always	58.8%	49.3%	Not available
Most of the time	6.7%	8.2%	Not available
Sometimes	6.0%	4.3%	Not available
Rarely or never	28.5%	38.3%	Not available

Source: 2007 Michigan Behavioral Risk Factor Survey, Michigan Department of Community Health; Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan.

⁴ Percent who reported engaging in exercise or work, which is hard enough to make you breathe more heavily or make your heart beat faster, that is done for at least 20 minutes.

WEIGHT STATUS

Fig. 5.5 Weight Status*, Adults Aged 18 Years or Older, Genesee County, 2007



*Body Mass Index (BMI) is calculated using respondents self-reported weight and height. BMI is defined as weight in kilograms divided by height in meters squared [weight in kg/(height in meters)²]. BMI categories are 18.5-24.9, Normal weight; 25-29.9, Overweight; 30 or above, Obese.

Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

- ◆ Flint residents had a higher average Body Mass Index (BMI) than Out County residents.
- ◆ The age groups 45-64 years and over 65 years have a higher percentage of residents who are classified as overweight (BMI 25-29.9) and obese (BMI ≥ 30) than younger age groups.
- ◆ In Genesee County, African Americans have a higher average BMI than Whites.
- ◆ Weight status also varies by gender, with males having a higher average BMI than females.

HEALTH SCREENINGS

- ◆ As shown below in Figure 5.6, for the period 2005-2007, health screening rates for Genesee County are similar to State of Michigan rates.
- ◆ In 2007, 73.7% of Genesee County residents reported visiting a doctor or other health care professional for a routine check up in the past year.
Source: Speak to Your Health! Community Survey, 2007

Fig. 5.6 Health Screenings for Adults Age 18 Years and Older		
	Genesee County 2005-2007*	Michigan 2005-2007
Cholesterol Ever Checked	80.9%	81%
Cholesterol Checked Within the Past 5 Years	77.7%	77.2%
Ever Had an HIV Test	39%	38.6%
Had a Blood Stool Test in Past 2 Years	36.1%	31%
Women Cervical Cancer Screening	81.5%	83.5%
Women Breast Exam/Mammogram (40 Years and Older)	62.9%	55.7%

*Due to limited sample sizes, health screening data is unavailable for individual years by county. Source: Michigan Behavioral Risk Factor Survey 2005-2007, 2007 Michigan Department of Community Health

CHAPTER 6:

Environmental Health

The physical environment directly influences health and quality of life. Clean water and air, safely prepared and wholesome food, and preventing exposure to harmful substances that could affect health are essential to good community health. Setting standards, monitoring, and timely amelioration of conditions that exceed recommended guidelines ensure the health of residents and the environment of Genesee County.

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AIR QUALITY

- ◆ Two air quality stations in Genesee County are monitored 24 hours a day by the Michigan Department of Environmental Quality.
- ◆ The stations are monitored for the following Criteria Pollutants, set by the Federal government: Carbon Monoxide, Nitrogen Dioxide, Sulfur Dioxide, Volatile Organic Compounds which create Ozone when coupled with high temperatures, Particulate Matter, and Lead.
- ◆ Genesee County meets all of the National Ambient Air Quality Standards.

Asthma

Fig. 6.1 Asthma in Genesee County , 2005-2007		
	Ever Told They Have Asthma	Still Have Asthma
Genesee County	13.5%	9.2%
Michigan	14.1%	9.3%

Source: Michigan Behavioral Risk Factor Survey, 2005-2007, Michigan Department of Community Health

Indoor Clean Air

Smoke-Free Facilities

- ◆ As of October 2008, there were **324** restaurants in Genesee County that were designated as smoke-free.
- ◆ Pursuant to the *Genesee County Regulation to Prohibit Smoking in Enclosed Places*, effective February 2004, with few exceptions smoking is prohibited in all enclosed places, worksites, and business vehicles within Genesee County.

Radon

- ◆ Inhalation of radon gas, which can be found in any home, is the second leading cause of lung cancer.
- ◆ As of 2008, less than 10% of homes in Genesee County have been tested radon levels. Ideally, every home should be tested, because radon levels vary from house to house, even between those on the same street.
- ◆ From September 1993 through August 2008, 2,289 radon tests from Genesee County homes were analyzed. The average result was 2.8 pCi/l. 19.4% exceeded the action guideline of 4 pCi/l.
- ◆ These figures are not necessarily representative of all Genesee County. However, because nearly one-fifth of the homes that were tested exceeded the action guideline, it illustrates the importance of radon testing for all Genesee County homes.

Source: State of Michigan Department of Environmental Quality

BODY ART

- ◆ In order to assure that body art (e.g., body piercing, tattooing) techniques are safe and standardized, Genesee County has a *Regulation to Require License to Operate a Body Art Establishment and to Establish Minimum Standards for Body Art Establishments*. As of June 2009, there are 29 body art establishments in Genesee County which are licensed and monitored by the Genesee County Health Department.

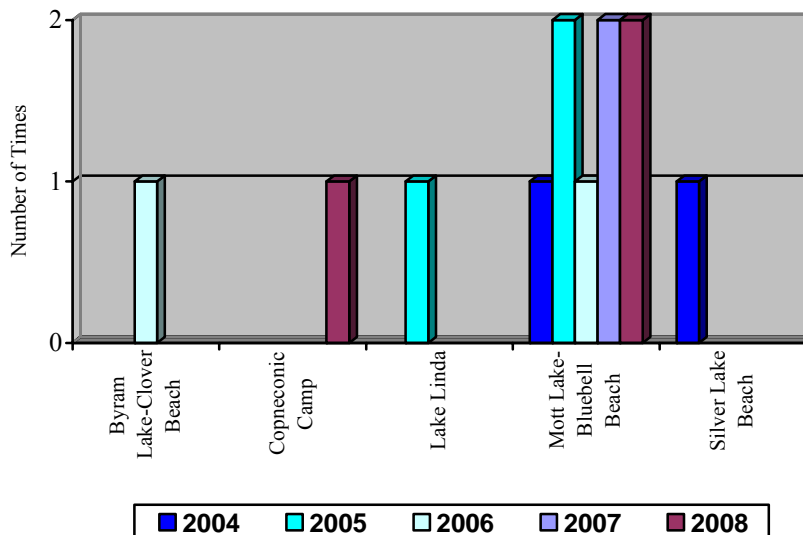
RABIES

- ◆ There were 7 cases of rabies in animals reported in Genesee County between 2004 and 2008 and no human cases reported.

WATER QUALITY

- ◆ The Genesee County Health Department (GCHD) conducts weekly sanitary surveys and water quality monitoring is done at 17 different bathing beach locations throughout the summer season.
- ◆ Partial and/or Total Body Contact Advisories are issued by the GCHD when surface water sampling reveals *E.coli* bacterial levels that exceed the State of Michigan guidelines. For public bathing beach areas, the State guideline is 300 *E. coli* per 100 ml. The number of times that bathing beach areas exceeded these State guidelines for bacterial concentrations is shown below in Figure 6.2.

Fig. 6.2 Number of Times Public Bathing Beach Areas Exceeded State Bacterial Concentration Guideline of 300 cfu/mL, Genesee County, 2006-2008



Note: Public bathing beach locations not shown in the figure above met the State guidelines for every week during that particular year's bathing beach season, which normally runs from the beginning of May through the last week of September.
Source: Genesee County Health Department

Waterborne Disease

- ◆ There were a small number of isolate cases and no outbreaks of waterborne disease in Genesee County in 2007 or 2008.

Fig. 6.3 Number of Cases of Waterborne Disease in Genesee County, 2007 and 2008		
Disease	Number of Cases (Rate per 100,000 population)	
	2007	2008
Cryptosporidiosis	5 (1.1)	1*
Giardiasis	15 (3.4)	15 (3.4)
Legionella	5 (1.1)	10 (2.3)

* A rate is not calculated when there are fewer than 5 cases. Source: Michigan Disease Surveillance System

Private Water Sources

- ◆ In order to ensure that private water sources (wells) are safe for human consumption and use, the Genesee County Health Department reviews all applications for new wells that are proposed in Genesee County and issues permits to install and use the wells when standards are met.

Fig. 6.4 Number of Well Permits Issued, Genesee County, 2007 and 2008		
	2007	2008
Genesee County	760	614

Source: Genesee County Health Department

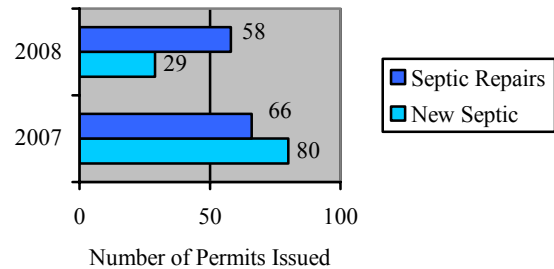
Access to Fluoridated Water

- ◆ Genesee County’s ground water supply contains naturally occurring fluoride, and fluoride is added to Lake Huron water sources, resulting in 100% of the Genesee County population receiving fluoridated water.

Septic System Permits

- ◆ To ensure the safe disposal of sewage waste, a permit must be obtained for the installation or repair of private septic systems in Genesee County.

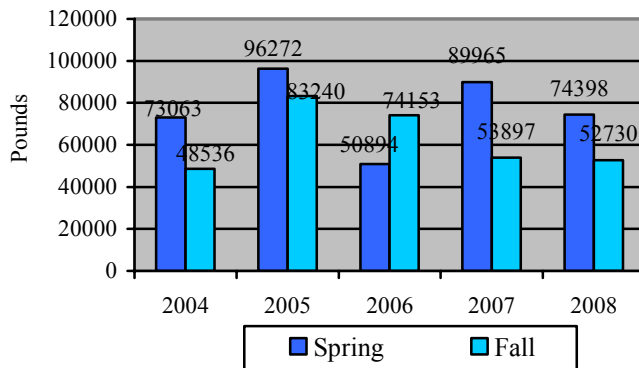
Fig. 6.5 Septic Permits Issued, Genesee County, 2007 and 2008



Source: Genesee County Health Department

HAZARDOUS WASTE

Fig. 6.6 Pounds of Hazardous Waste Collected, Genesee County, 2004 - 2006



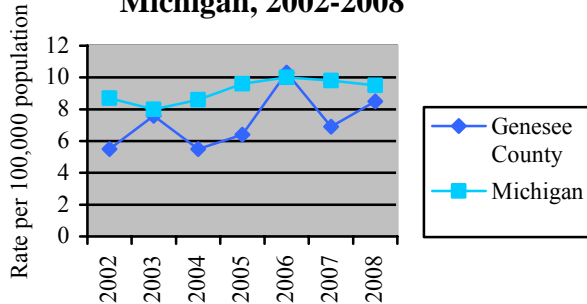
Source: Genesee County Health Department

- ◆ Two Household Hazardous Waste Collection Days are held in Genesee County each year, one in the spring and one in the fall.
- ◆ Collections are held at two to three sites within Genesee County each Household Hazardous Waste Collection Day. One collection site is typically in the City of Flint and the other site or sites are in various Out-County locations.
- ◆ Examples of hazardous waste collected at these events include cleaning products, motor oil, pesticides, mercury filled thermometers, and more.

FOOD SAFETY

Foodborne Disease

Fig. 6.7 Rates of Hepatitis A per 100,000, Genesee County and Michigan, 2002-2008



Source: Michigan Disease Surveillance System

- ◆ Hepatitis A is considered a foodborne disease. For the period 2002-2008, rates in Genesee County were similar to or lower than State rates.
- ◆ Rates of other foodborne disease are shown below in Figure 6.8.

Fig. 6.8 Rates and Number of Cases of Foodborne Disease in Genesee County, 2007 and 2008

Disease	Number of Cases (Rate per 100,000 population)	
	2007	2008
Campylobacter	19 (4.4)	18 (4.1)
<i>E. coli</i> 0157:H7	1*	3*
Hepatitis A	6 (1.4)	8 (1.8)
Salmonellosis	30 (6.9)	37 (8.5)
Shigellosis	1*	1*

*A rate is not calculated when there are fewer than 5 cases. Source: Michigan Disease Surveillance System

Food Service Sanitation

- ◆ There are approximately **1,480** licensed food service establishments in Genesee County.

Fig. 6.9 Number of Food Service Sanitation Inspections Completed by Type of Establishment, Genesee County, 2008	
Type of Establishment	Number of Inspections Completed
Restaurants, Cafeterias, Bars, Concessions, Catering Kitchens, and Other Licensed Food Service Establishments	2,660
Temporary Food Service Concessions such as Carnivals, Festivals, Fund Raisers, etc.	346
Licensed Vending Machine Locations	148

Source: Genesee County Health Department

Food Sanitation Facts for 2008*

- ◆ There were 2,161 violations of the Michigan Food Law cited by inspectors. Of these violations, 15% were critical.
- ◆ Customers made 212 general complaints, each of which was investigated.
- ◆ Customers made 63 complaints of foodborne illness, each of which was investigated. 4 of the 63 complaints made involved two or more people with similar symptoms and a common food source, which is the Centers for Disease Control and Prevention and Michigan Department of Community Health definition of an outbreak of infectious disease.
- ◆ 14 establishments experienced enforcement action for failure to correct critical violations.
- ◆ 252 food service employees completed a basic sanitation course offered monthly at the Genesee County Health Department (Fiscal Year 2007-2008).
- ◆ 61 food service managers completed an intensive sanitation training course offered quarterly at the Genesee County Health Department (Fiscal Year 2007-2008).
- ◆ Plans for 62 new and remodeled establishments were reviewed and approved by the Genesee County Health Department.
- ◆ Establishments with excellent sanitation receive awards and recognition annually. Others receive license fee credits for consistently high levels of sanitation or completing training courses at the Genesee County Health Department.

*Calendar year 2008 unless otherwise noted. Source: Genesee County Health Department

LEAD EXPOSURE

- ◆ In 2008, 22.8% of houses in Genesee County and 40.9% in the city of Flint were estimated to have been built before 1950. Houses built before 1950 pose the greatest hazard of lead exposure to children because they are much more likely to contain lead-based paint than newer houses. Children may ingest lead through paint chips or inhale lead as dust.

Source: Pre-1950 Housing calculated from U.S. Bureau 2000 Census

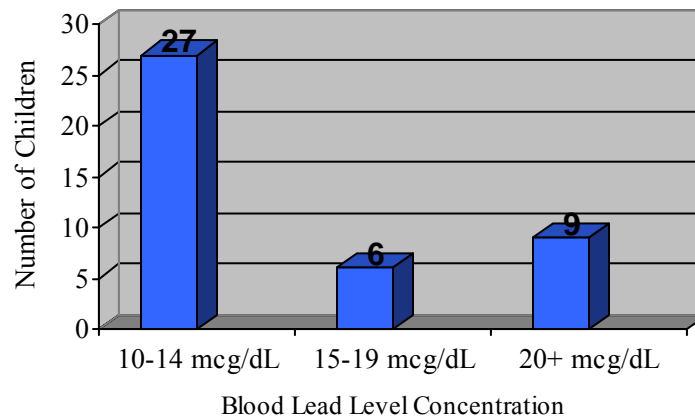
- ◆ As of June 2009, the State of Michigan designated high-risk zip codes for childhood lead poisoning in Genesee County are 48418, 48436, 48458, 48502, 48503, 48504, 48505, 48506, 48507, and 48529.

Childhood Lead Exposure in Genesee County, 2008

Number of children under the age of 6 living in Genesee County	35,729
Number of children under the age of 6 in Genesee County who had their lead level tested	6,532 (18.3%)
Number of children under age 6 found to have elevated blood lead levels (≥ 10 mcg/dL)	58 (< 1%)
Number of children 1 or 2 years of age found to have elevated blood levels (≥ 10 mcg/dL)	20

Source: Michigan Department of Community Health

Fig. 6.10 Number of Children Under 6 Years With Confirmed* Elevated Blood Lead Levels by Blood Lead Level, Genesee County, 2008



*Blood lead level was confirmed by venous blood draw, not just reading from capillary blood testing. Source: Michigan Department of Community Health

CHAPTER 7:

Social and Mental Health

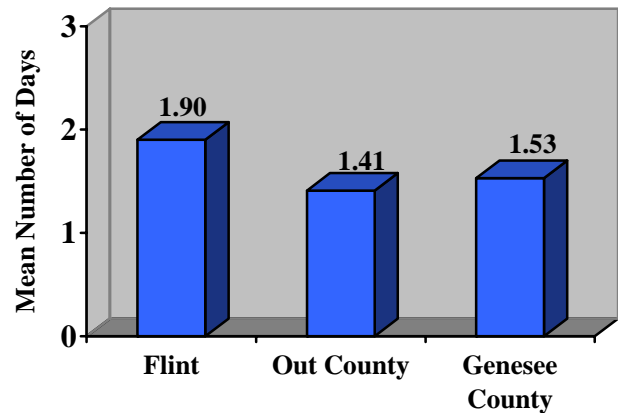
Because health is not only the absence of physical disease, it is important to consider mental health status and other indicators of social health when assessing a community's overall health. Also, those factors which influence mental health status, including substance abuse, violence, and other safety issues, may also affect physical health.

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MENTAL HEALTH STATUS

- ◆ As shown in Figure 7.1, Flint residents had a higher mean number of days where their mental health status was not good than Out County residents.
- ◆ In Genesee County, females were more likely to report more days where mental health status was not good than males.
- ◆ Mental health status varied by age with the age group 45-64 having the highest average of poor mental health days.

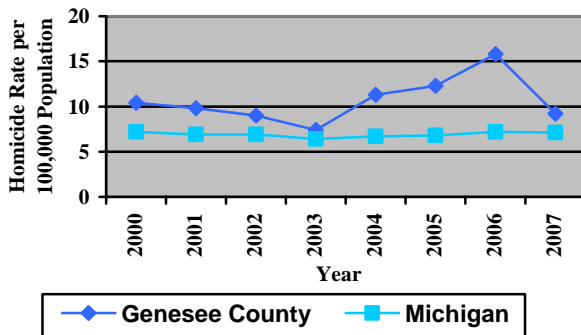
Fig. 7.1 Mean Number of Days Mental Health Kept Residents From Doing Usual Activities in the Past 30 Days by Location, 2007



Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

HOMICIDE

Fig. 7.2 Age-Adjusted Homicide Rates, Genesee County and Michigan, 2000-2007



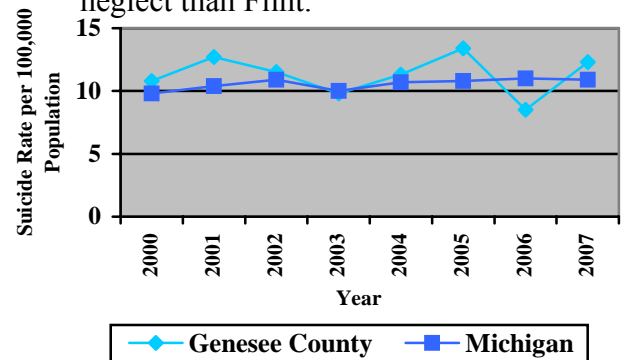
Source: Michigan Department of Community Health.

- Overall, Genesee County’s homicide rate has fluctuated over the 7 year period shown, peaking in 2006 with a rate of 15.8 homicides per 100,000 people.
- Michigan has had a steady homicide rate over the 7 year period.

SUICIDE

- Between 2000 and 2007 the number of suicides in Genesee County ranged from 37 to 58 with an average number of 49 suicides per year.
- The number of suicides of persons under 25 years of age ranged from 4 to 8 between 2000 and 2007, peaking in 2005 with 8 suicides among persons in that age group.

Fig. 7.4 Age-Adjusted Suicide Rates for Genesee County and Michigan, 2000-2007



Michigan has a lower rate of suicide than Flint.

CHILD ABUSE AND NEGLECT

- According to the data in Figure 7.3, Genesee County has some of the highest rates of confirmed victims of child abuse or neglect in Michigan.
- Michigan’s rate of investigated families is 65.2 per 1000 compared to Genesee County’s much higher rate of 103.4.

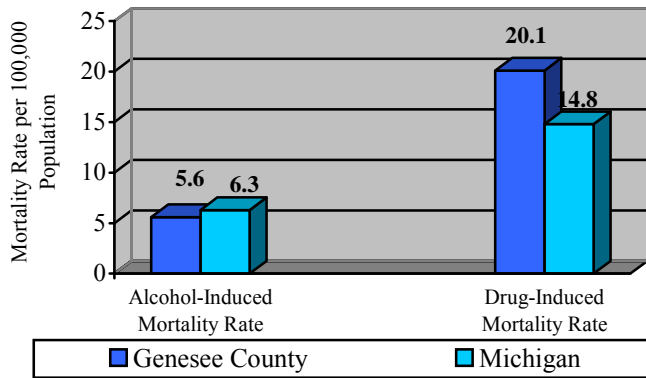
Source: Michigan Department of Community Health.

Fig. 7.3 Child Abuse and Neglect, Genesee County, Fiscal Year 2007			
	Number	Rate (per 1,000)	Rank*
Children in investigated families	11,873	103.4	73 of 83
Confirmed victims of abuse or neglect	2,113	18.4	61 of 82

*Rank is out of Michigan’s 83 counties. A rank of 1 means a county has the best rate compared to other counties in the state. Not all 83 counties can be ranked on all indicators. Source: Kids Count in Michigan Data Book, 2008

ALCOHOL AND DRUG-INDUCED DEATHS

Fig. 7.5 Age-Adjusted Alcohol and Drug-Induced Mortality Rates, Genesee County and Michigan, 2007



- ◆ In 2007, Genesee County had a slightly lower rate of alcohol-induced deaths than Michigan, while the County had higher rates of drug-induced deaths than the State.

Source: Michigan Department of Community Health

ALCOHOL-INVOLVED TRAFFIC CRASHES

- ◆ Alcohol-involved traffic crashes are a significant public health issue. The reported alcohol-involved fatal traffic crashes in Genesee County accounted for nearly 6.1% of all such crashes in the State of Michigan in 2007 and 6.4% in 2008.

Fig. 7.6 Reported Alcohol-Involved Traffic Crashes, Genesee County, 2007-2008

	All	Fatal	Injury	Property Damage	Persons Killed	Persons Injured
2007	537	19	243	275	20	324
2008	446	19	193	234	22	273

- ◆ In 2008, the rate of alcohol-involved fatal traffic crashes in Genesee County was 4.43 per 100,000 residents. This was higher than the rate for the State of Michigan, 2.97 per 100,000 residents.

Source: Michigan Office of Highway Safety and Planning

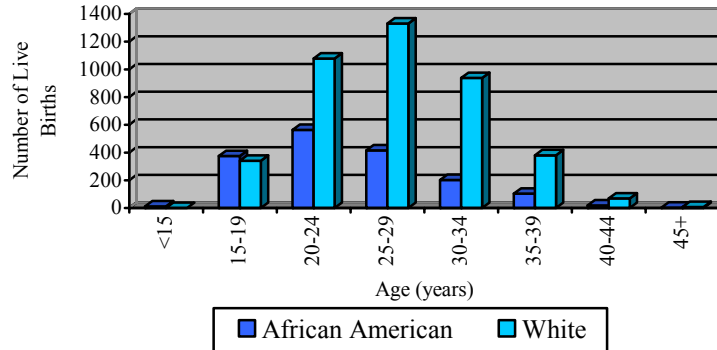
CHAPTER 8:

Maternal and Child Health

The health status of mothers and children is often considered one of the most important indicators of a community’s health. This chapter presents data on births and birth outcomes, as well as infant and child mortality data. Measures of access to and utilization of prenatal care are also presented. In the area of maternal and child health, Genesee County still faces many challenges. Racial disparities in birth outcomes, particularly in low birthweight births and infant mortality, exist. Rates of teen pregnancy in Genesee County continue to be higher than State of Michigan rates, although they are decreasing.

BIRTHS

Fig. 8.1 Live Births by Age and Race of Mother, Genesee County Residents, 2007



Source: Michigan Department of Community Health

- ◆ In 2007, there were 6,033 live births in Genesee County and 2,378 (39%) of those were to City of Flint residents.
- ◆ Figure 8.1 shows the distribution of live births by age and race of the mother. Due to small numbers, live births to American Indians (12 births) and all other races (63 births) are not shown.

Selected Birth Characteristics

Fig. 8.2 Selected Birth Characteristics, Genesee County and Michigan, 2007

Maternal Characteristics	Genesee County	Michigan
Under 20 years	12.5%	10.1%
First births	38.2%	39.3%
Fourth and higher order births	12.7%	11.8%
Less than 12 years of education	18.5%	16.6%
Caesarean delivery rate	37.9%	30.6%
Weight gained while pregnant less than 16 pounds	12.7%	12.6%
Smoked while pregnant	21.5%	14.8%
Unmarried	51.2%	39.6%
Received prenatal care during first trimester	81.2%	81.5%

Source: Michigan 2007 Resident Birth files, Vital Records & Health Data Development Section, Michigan Department of Community Health

- ◆ Figure 8.2 shows that Genesee County has a higher percentage of births to women younger than 20 years, those with less than 12 years of education, women who smoked while pregnant, and women who were unmarried, than the State of Michigan. There is also a higher percentage of Caesarean section deliveries in the County than the State.

TEEN PREGNANCY

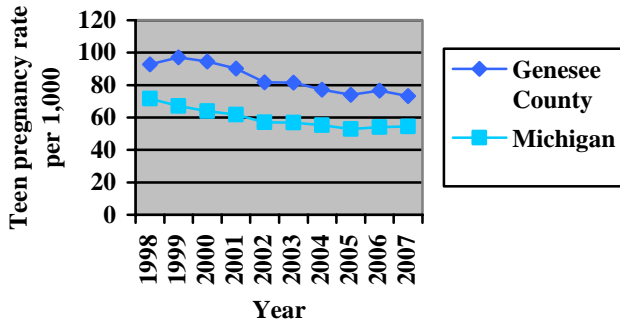
- ◆ Births given by those under 20 years of age made up 12.5% of the total births for Genesee County and 10.1% for Michigan.

Fig. 8.3 Number of Live Births for Teens <19 years old, Flint and Genesee County Residents, 2007

	White		African American		Other	
	<15 years	15-19 years	<15 years	15-19 years	<15 years	15-19 years
City of Flint	0	136	11	311	2	10
Genesee County	1	341	13	375	2	21

Note: City of Flint live births are also a part of the Genesee County numbers. Source: Michigan 2007 Resident Birth files, Vital Records & Health Data Development Section, Michigan Department of Community Health.

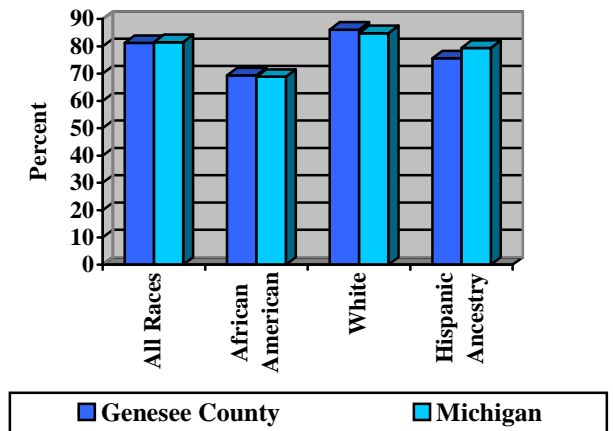
Fig. 8.4 Estimated Teen Pregnancy Rates, Genesee County and Michigan, 1998-2007



- ◆ Teen pregnancy in Genesee County and Michigan has generally been decreasing from 1998-2007.
- ◆ However, Genesee County’s teen pregnancy rate is still higher than the State rate.

Note: All rates are per 1,000 age and sex specific population. Source: Live Births, Abortions, and Population Estimates Obtained from Vital Records & Health Data Development Section, Michigan Department of Community Health

Fig. 8.5 Percent of Live Births with Prenatal Care Beginning in the First Trimester, Genesee County and Michigan, 2007



PRENATAL CARE

- ◆ In 2007, a higher percentage of White women (86.1%) in Genesee County entered prenatal care in the first trimester of pregnancy than African American women (69.3%) and women of Hispanic ancestry (75.6%).
- ◆ Overall, Genesee County’s rates of prenatal care beginning in the first trimester are very similar to the state of Michigan rates.

Source: 2007 Michigan Resident Birth File, Vital Records & Health Data Development Section, Michigan Department of Community Health

BIRTHWEIGHT

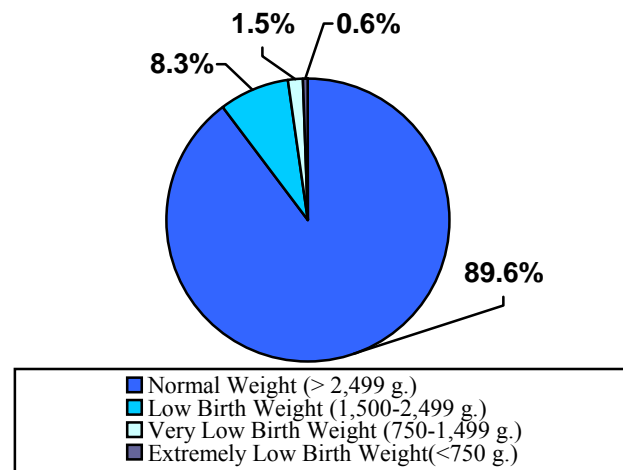
Birthweight is an important indicator of child health, as infants born below a certain birthweight are more likely to have serious health problems as newborns, are at risk for long-term disabilities, and are at higher risk for infant death.

There are several categories of low birth weight:

- ◆ Low weight births are less than 2,500 grams
- ◆ Very low weight births are less than 1,500 grams
- ◆ Extremely low weight births are less than 750 grams

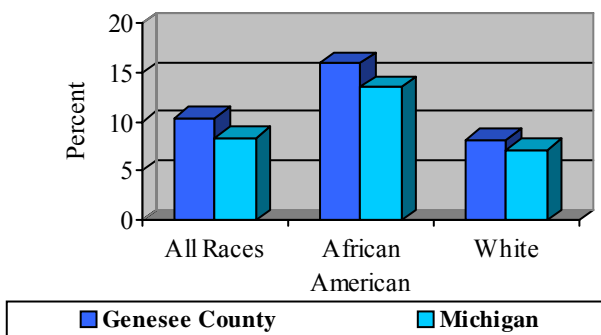
Fig. 8.6 Percent of Live Births by Birthweight, All Races, Genesee County Residents, 2007

- ◆ In 2007, Genesee County had a higher proportion (10.4%) of live births that were low birthweight (below 2,500 grams) than Michigan (8.4%).



Source: 2007 Michigan Resident Birth File, Vital Records & Health Data Development Section, Michigan Department of Community Health

Fig. 8.7 Percent of Live Births that are Low Birthweight (<2,500 g) by Race, Genesee County and Michigan, 2007



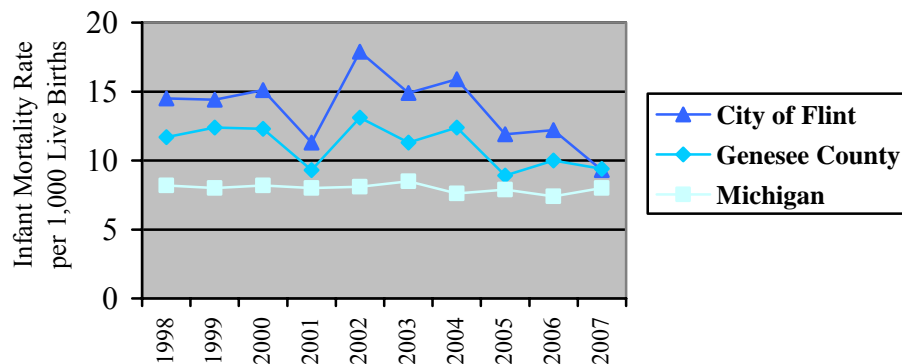
- ◆ In Genesee County, in 2007, 16% of live births to African American mothers were low birthweight (any birth less than 2,500 grams) compared to 8.2% of live births to White mothers. This difference by race is similar for Michigan and the United States.

Source: 2007 Michigan Resident Birth File, Vital Records Health Data Development Section, Michigan Department of Community Health

INFANT MORTALITY

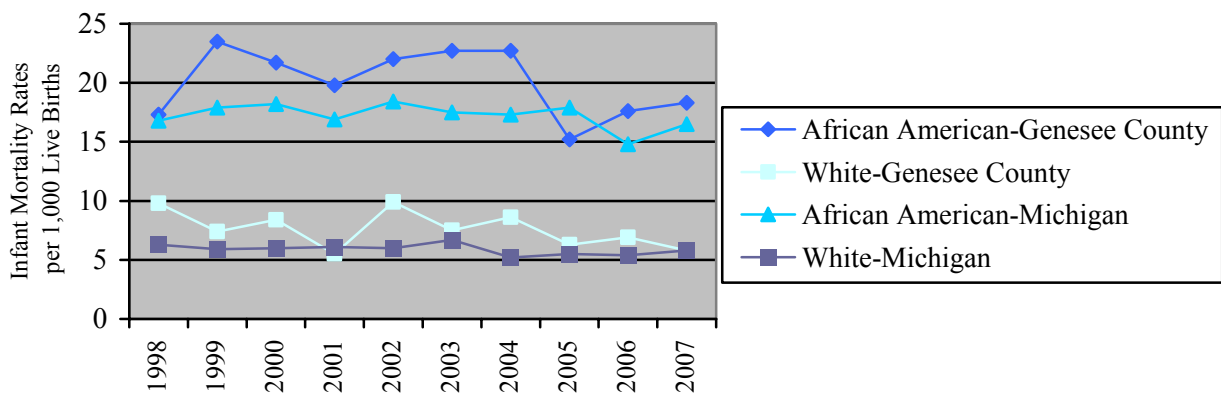
- ◆ Infant mortality is defined as the death of an infant under the age of 1 year.
- ◆ The infant mortality rate in the City of Flint has been declining. In 2007, the infant mortality rate of City of Flint and Genesee County has been the lowest in the last 10 years shown in figure 8.8.
- ◆ The infant mortality rates in both Flint and Genesee County have fluctuated over the nine year period, while Michigan has stayed at a fairly consistent level.
- ◆ In 2007, the infant mortality rate in the City of Flint was 9.3 per 1,000 live births, 9.4 per 1,000 live births in Genesee County, and 8.0 per 1,000 live births in the State of Michigan.
- ◆ Reducing infant deaths and reducing the racial disparity among infant deaths has been a priority of the Genesee County Health Department and its local public health system partners for the last ten years.

**Fig. 8.8 Infant Mortality Rates,
City of Flint, Genesee County and Michigan,
1998-2007**



Source: 1998-2007 Michigan Resident Death Files and Michigan Resident Birth Files, Epidemiology Services Division, Vital Records and Health Data Development Section, Michigan Department of Community Health

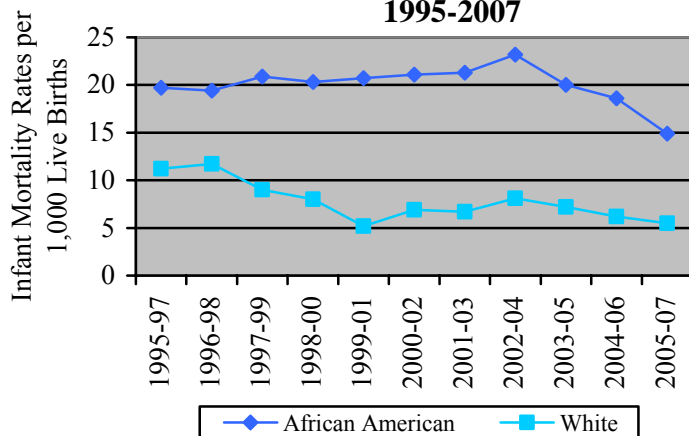
Fig. 8.9 Infant Mortality Rates by Race, Genesee County and Michigan, 1998-2007



Source: 1998-2007 Michigan Resident Death Files, Division for Vital Records & Health Statistics, Michigan Department of Community Health

- ◆ Racial disparities in infant mortality exist in both Genesee County and Michigan, with African Americans having higher infant mortality rates than Whites for the years 1998-2007.
- ◆ Figure 8.10 depicts infant mortality by race for the City of Flint. Because of small numbers, infant mortality rates are calculated for three years rather than by individual year.

Fig. 8.10 Three-Year Moving Average Infant Mortality Rates by Race, City of Flint, 1995-2007



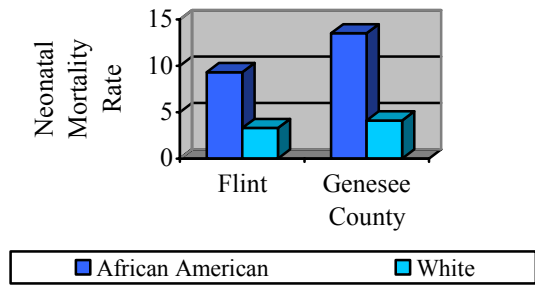
Source: 1998-2007 Michigan Resident Death Files, Division for Vital Records & Health Statistics, Michigan Department of Community Health

NEONATAL, POST-NEONATAL, AND CHILD MORTALITY

Neonatal Infant Mortality

- ◆ Infant deaths during the neonatal period (death during the first 27 days of life) are disparate by race and location. African American neonatal mortality rates are higher than White neonatal mortality rates in Flint and Genesee County.
- ◆ In 2007, the overall neonatal infant mortality rate for Genesee County was 6.8 per 1,000 live births and 6.7 per 1,000 live births in Flint.

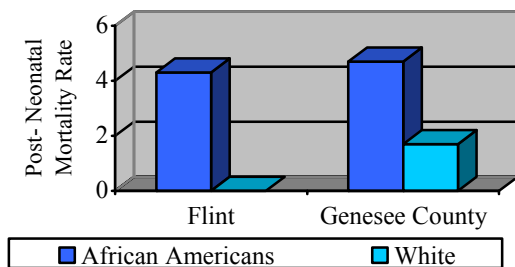
Fig. 8.11 Neonatal Infant Mortality Rates by Race, Flint and Genesee County, 2007



*Rate per 1,000 Live Births. Source: Michigan Department of Community Health and Genesee County Health Department

Post-Neonatal Infant Mortality

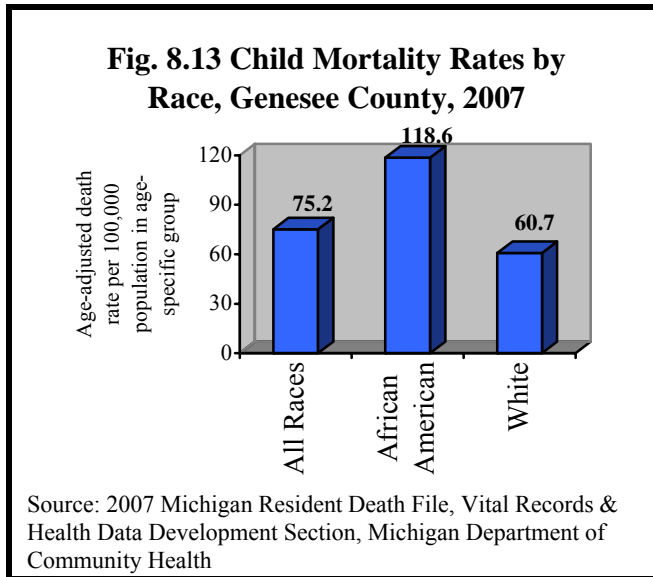
Fig. 8.12 Post-Neonatal Infant Mortality Rates by Race, Flint and Genesee County, 2007



*Rate per 1,000 Live Births. Source: Michigan Department of Community Health and Genesee County Health Department

- ◆ Infant deaths during the post-neonatal period (28 days-364 days of life) are also disparate by race and location. African American post-neonatal rates are higher than White post-neonatal rates in Flint and Genesee County.
- ◆ In 2007, the overall post-neonatal infant mortality rate for Genesee County was 2.7 per 1,000 live births and 2.5 per 1,000 live births for Flint.

Child Mortality

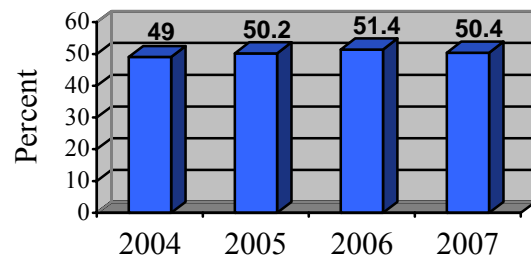


- ◆ In 2007, the child mortality rate (ages 1-14 years) was 75.2 per 100,000 population for all races.
- ◆ Child deaths are disparate by race in Genesee County, with African Americans having a higher death rate than Whites.

WOMEN, INFANTS, AND CHILDREN (WIC)

- ◆ In 2004-2007, approximately one-half of live births to Genesee County residents were enrolled in the WIC (the Women, Infants, and Children) supplemental nutrition program.

Fig. 8.14 Percent of Live Births Enrolled in WIC, Genesee County, 2004-2007



Source: Michigan WIC Program Data, Michigan Department of Community Health

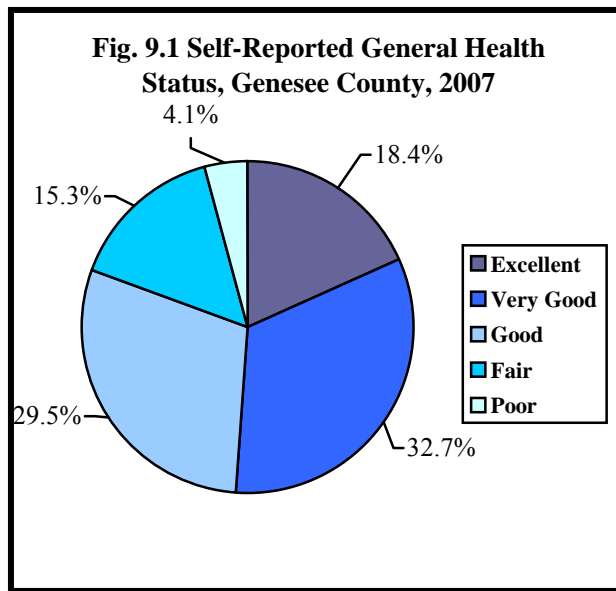
CHAPTER 9:

Death, Illness, and Injury

Health status in a community is often presented according to indicators of death (mortality) and disease or injury (morbidity). This chapter presents the ten leading causes of death in Genesee County in 2007, as well as more detailed information on cancer and diabetes. Racial disparities in mortality and morbidity for many of the leading causes of death exist and are presented here. Age-adjusted rates are used to eliminate the effect of age differences in the population on the rate of disease. All age-adjusted rates shown are adjusted to the standardized U.S. population 2000.

GENERAL HEALTH STATUS

- ◆ Self-reported health status is a strong measure of overall health status and is associated with physical health, use of health services, and mortality¹.



Source: Speak to Your Health! Community Survey, 2007, Prevention Research Center of Michigan

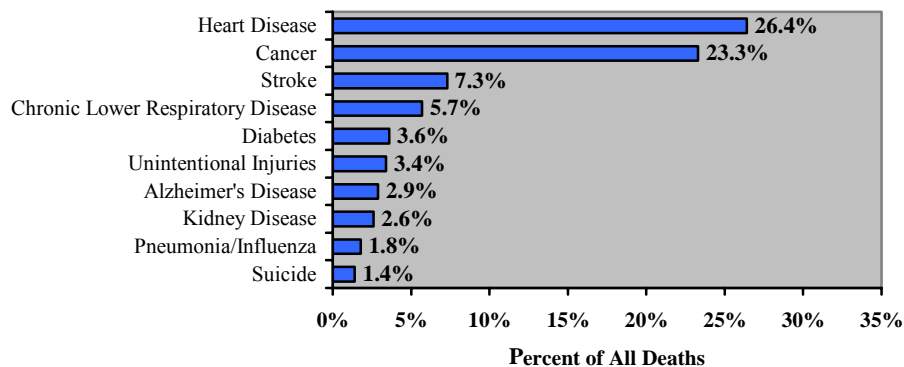
- ◆ Whites were more likely to report better general health status than African Americans.
- ◆ 83.9% of Out County residents rated their general health as *Excellent*, *Very Good*, or *Good* compared to 70.6% of City of Flint residents.
- ◆ Males reported better health status than females.
- ◆ The age group 18-24 compared to older age groups was more likely to report better general health status, than older age groups.

¹ CDC, Council of State and Territorial Epidemiologists, and the Association of State and Territorial Chronic Disease Program Directors. Indicators for chronic disease surveillance. (2004). MMWR, 53 (RR-11), 1-6.

LEADING CAUSES OF DEATH

- ◆ In 2007, Heart Disease was the leading cause of death for Genesee County residents of all race/ethnicities. Cancer was the second leading cause of death followed by Stroke, Chronic Lower Respiratory Disease, and Diabetes.

Fig. 9.2 Ten Leading Causes of Death for Genesee County Residents, 2007



Source: 2007 Michigan Resident Death File
Division for Vital Records & Health Statistics, Michigan Department of Community Health

- ◆ Figure 9.3 shows that in Genesee County, with the exception of Stroke, men generally die from the ten leading causes at a higher rate than women. There are also marked differences in death rates between African Americans and Whites for these causes of death.

Fig. 9.3 Age-Adjusted Death Rates for Ten Leading Causes by Race and Sex, Genesee County Residents, 2007 (per 100,000 population)

Cause of Death	All Races	White		African American			
	Overall	Total	Male	Female	Total	Male	Female
Heart Disease	231.3	219.8	274.7	184.8	280.1	371.1	224.3
Cancer	199.8	190.1	230.3	166.9	24.9	338.4	180
Stroke	65.7	60.9	59.3	60.6	90.1	102.3	79.9
Chronic Lower Respiratory Disease	50.3	52.5	66.1	44.3	37.7	78.5	*
Unintentional Injuries	30.1	30.5	45.2	19.3	26.3	*	*
Diabetes Mellitus	31.1	29.4	43.3	20.2	40.1	*	*
Alzheimer's Disease	26.1	26.9	21.2	29.9	*	*	*
Pneumonia/Influenza	16.9	18.2	26.2	14	*	*	*
Kidney Disease	22.7	21.3	22.5	21.4	*	*	*
Suicide	12.3	13.7	23	*	*	*	*
All Other Causes	189.4	168.5	215	142.5	266.7	323.1	199.9
Total	875.8	831.8	1005.9	708.8	1044.4	1362.7	800.4

*Number of cases is too small to calculate a reliable rate.

Source: 2007 Michigan Resident Death File
Division for Vital Records & Health Statistics, Michigan Department of Community Health

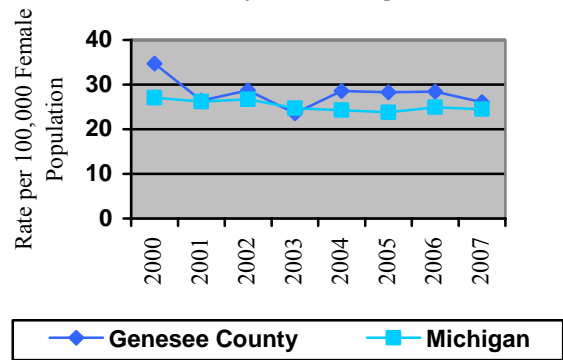
CANCER

Cancer was the second leading cause of death for Genesee County residents in 2006 and 2007. The most prevalent types of cancer include breast cancer, lung cancer, colorectal cancer, and prostate cancer. In Genesee County in 2007, lung cancer accounted for more deaths (293) than breast, colorectal, and prostate cancer combined (180). In the United States, tobacco use remains the number one cause of lung cancer.

Breast Cancer

- ◆ In 2007, the age-adjusted death rate from invasive breast cancer was 26.1 per 100,000 female population in Genesee County compared to 24.5 per 100,000 female population in Michigan

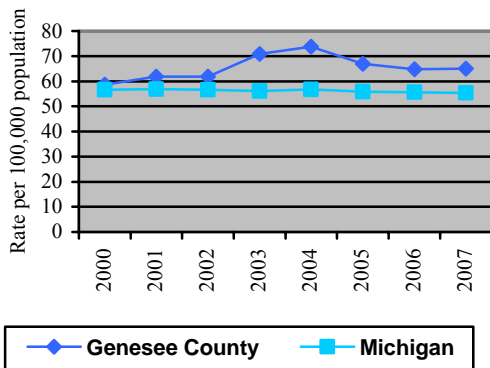
Fig. 9.4 Age-Adjusted Invasive Breast Cancer Mortality Rates, Female Residents, Genesee County and Michigan, 2000-2007



Source: 2000-2007 Michigan Resident Death Files, Division for Vital Records & Health Statistics, Michigan Department of Community Health

Lung Cancer

Fig. 9.5 Age-Adjusted Invasive Lung Cancer Mortality Rates, Genesee County and Michigan Residents, 2000-2007



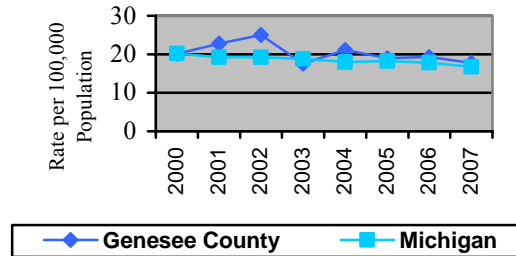
- ◆ In 2007, the age-adjusted death rate for invasive lung cancer was 65 per 100,000 population in Genesee County and 55.4 per 100,000 population in Michigan.

Source: 2000-2007 Michigan Resident Death Files, Division for Vital Records & Health Statistics, Michigan Department of Community Health

Colorectal Cancer

- ◆ In Genesee County, the age-adjusted death rate for colorectal cancer was 17.7 per 100,000 population in 2007. Michigan's rate was 16.7 per 100,000 population.

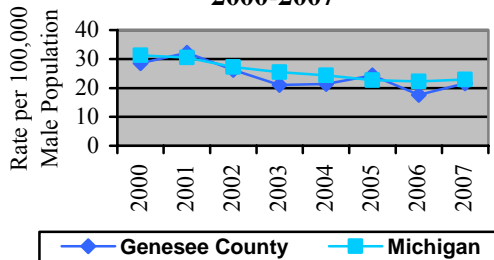
Fig. 9.6 Age-Adjusted Invasive Colorectal Cancer Rates, Genesee County and Michigan, 2000-2007



Source: 2000-2007 Michigan Resident Death Files, Division for Vital Records & Health Statistics, Michigan Department of Community Health

Prostate Cancer

Fig. 9.7 Age-Adjusted Invasive Prostate Cancer Mortality Rates, Genesee County and Michigan, 2000-2007



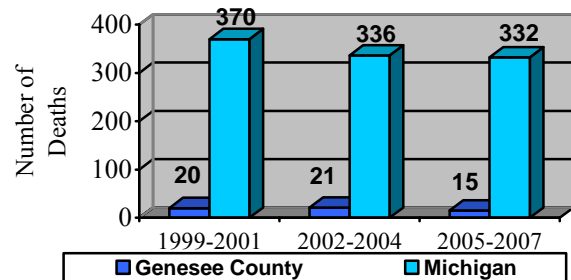
- ◆ In 2007, the age-adjusted death rate for prostate cancer was 21.6 per 100,000 male population in Genesee County and 22.9 per 100,000 male population in Michigan.

Source: 2000-2007 Michigan Resident Death Files, Division for Vital Records & Health Statistics, Michigan Department of Community Health

Cervical Cancer

- ◆ In Genesee County from 2005-2007 the age-adjusted death rate for cervical cancer was 2.2 per 100,000 female population. The age adjusted death rate in Michigan for the same time period was 2.0 per 100,000 female population.

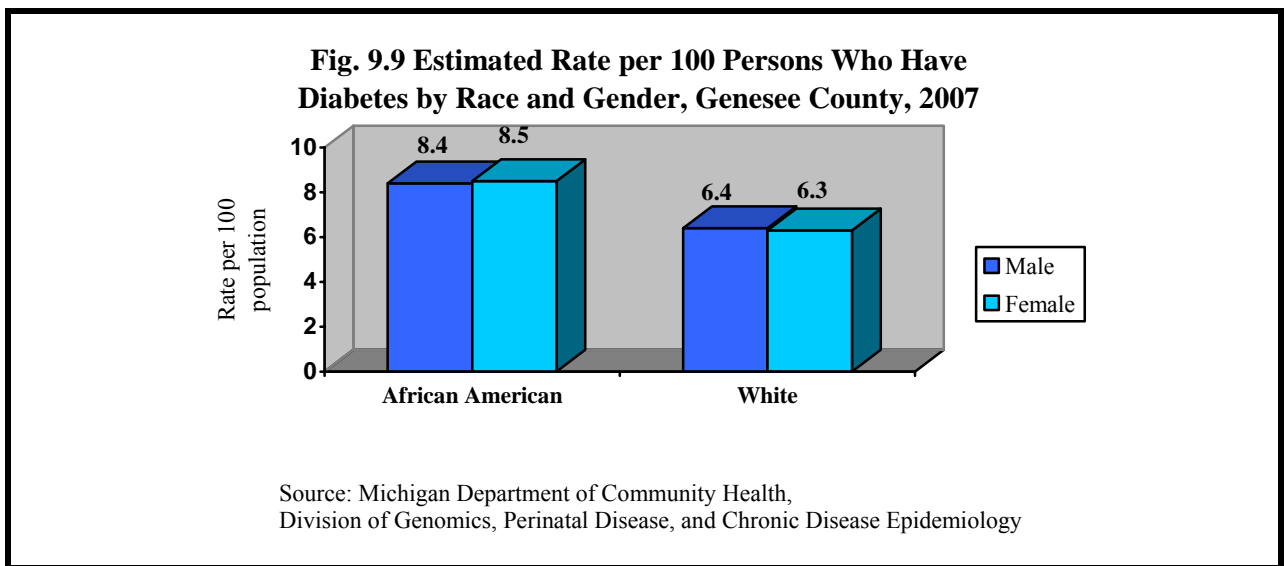
Fig. 9.8 Numbers of Deaths Due to Invasive Cervical Cancer, Genesee County and Michigan, 1999-2007



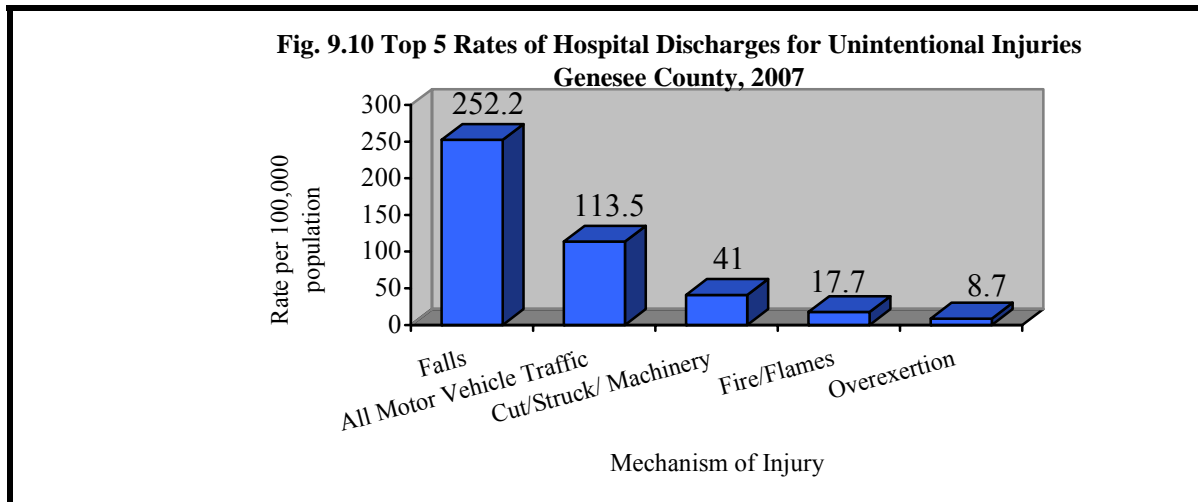
Source: 2005-2007 Michigan Resident Death Files, Division for Vital Records & Health Statistics, Michigan Department of Community Health

DIABETES

- ◆ In 2007 there were an estimated 28,300 adults over the age of 18 years who have been diagnosed with diabetes in Genesee County, including 910 Hispanics/Latinos. The overall rate of diabetes in adults in Genesee County is estimated to be 6.5 per 100 people.
- ◆ Figure 9.9 shows that in Genesee County, African Americans both male and female have higher rates of diabetes than Whites both male and female.
- ◆ In 2007, the U.S. Department of Health and Human Services estimated that there are an additional 18,900 Genesee County adults with undiagnosed diabetes.

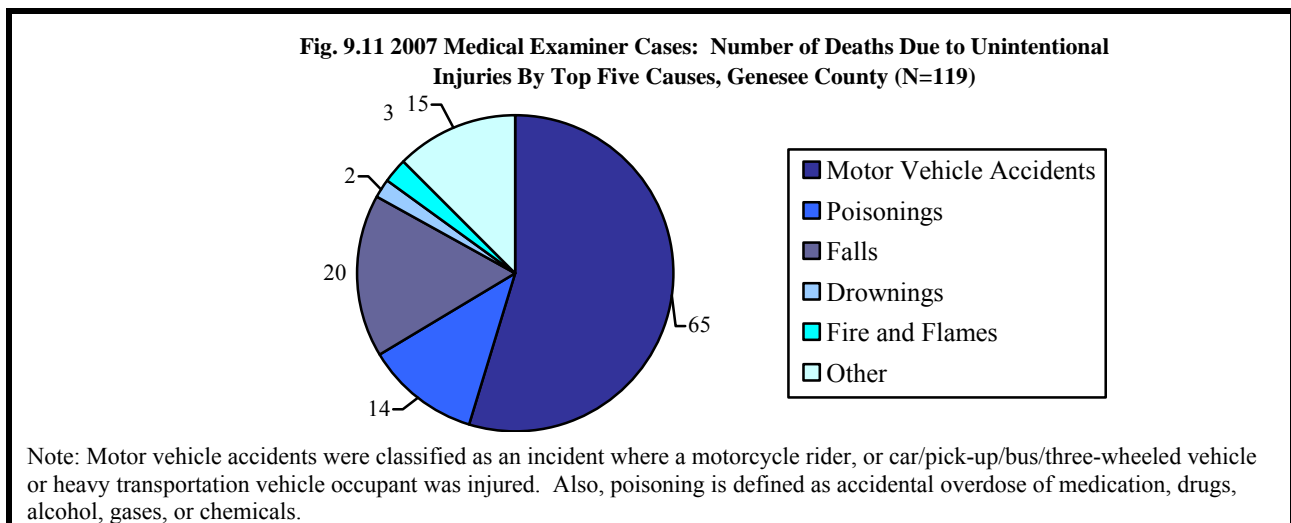


UNINTENTIONAL INJURIES



Source: 2007 Michigan Resident Inpatient Files, Division for Vital Records and Health Statistics, Michigan Department of Community Health.

- ◆ Figure 9.10 shows that in 2007, falls accounted for the highest number and highest proportion of hospital discharges for unintentional injuries in Genesee County.
- ◆ In 2007, unintentional injury deaths accounted for 119, or 14%, of all medical examiner cases. As shown in Figure 9.11, motor vehicle accidents contributed to the majority (54%) of deaths due to unintentional injuries.
- ◆ More males (83) died as a result of unintentional injuries than females (36).
- ◆ Whites accounted for 83.2% of unintentional injury deaths in 2007, while 15.1% of unintentional injury deaths were to African Americans and 1.7% were to other races. 2.5% of unintentional injury deaths were of Hispanic ancestry.



CHAPTER 10:

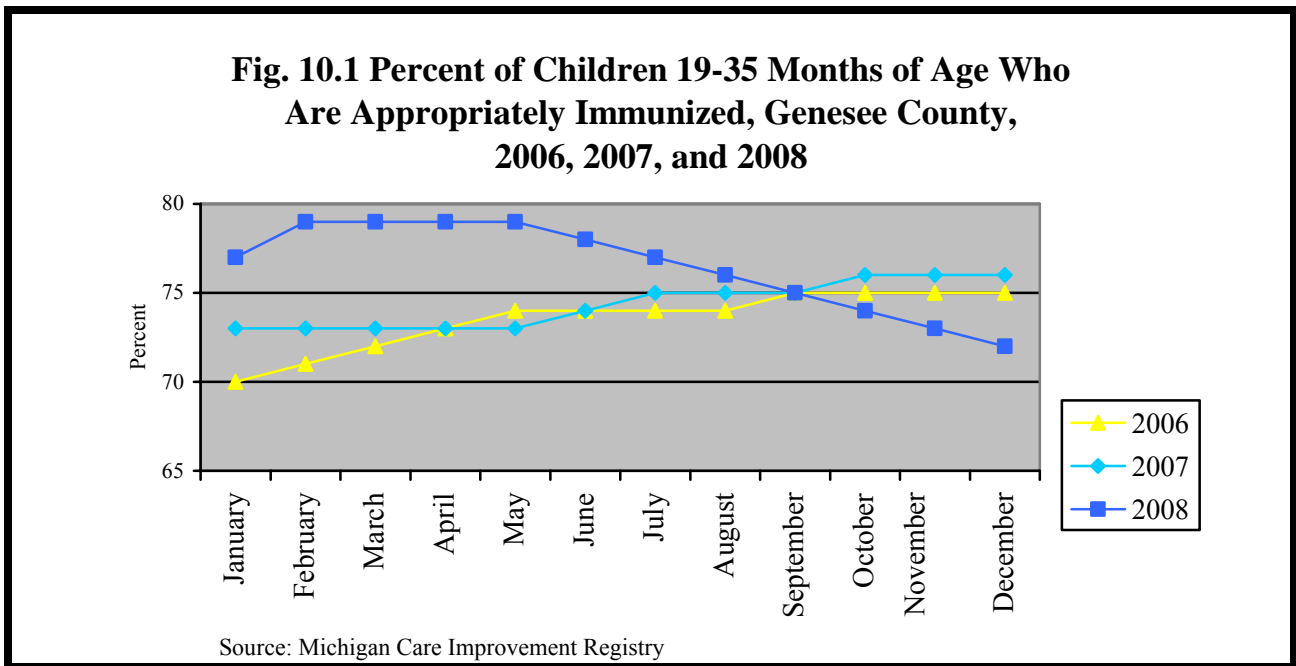
Communicable Disease

Indicators within this category include diseases which are usually transmitted through person-to-person contact or shared use of contaminated materials. Many of these diseases can be prevented through a high level of vaccine coverage of vulnerable populations or through the use of protective measures, such as condoms for the prevention of sexually transmitted diseases.

Source: Mobilizing for Action through Planning and Partnerships (MAPP), Community Health Indicators, National Association of City and County Health Officials and the Centers for Disease Control and Prevention.

IMMUNIZATIONS

Children



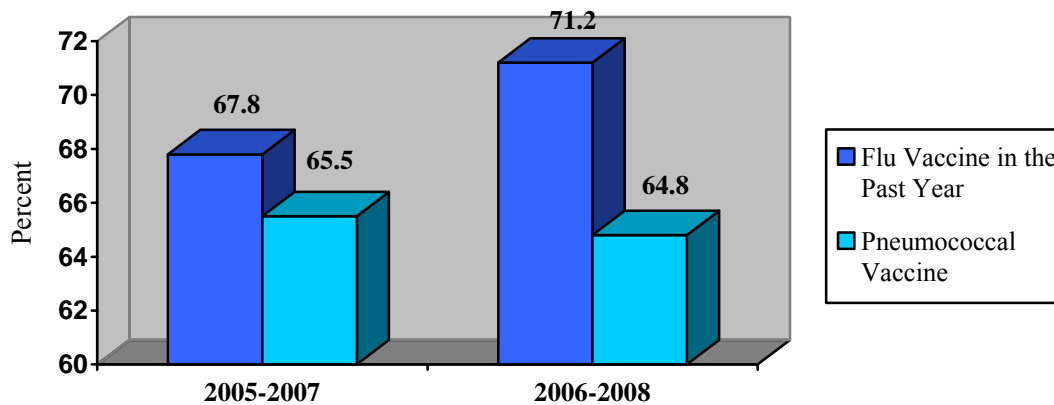
- ◆ Appropriate immunizations for 19-35 month old children are considered:
 - ◆ 4 DTaP (Diphtheria, Tetanus, and Pertussis)
 - ◆ 3 Polio
 - ◆ 1 MMR (Measles, Mumps & Rubella)
 - ◆ 3 Hib (Haemophilus influenzae type B)
 - ◆ 3 Hepatitis B
 - ◆ 1 Varicella (Chickenpox)

- ◆ The goal is to have 100% of children in Genesee County receive all of their age-appropriate vaccinations.
- ◆ In 2007, the average percent appropriately immunized was 74.3% and in 2008 the average percent was 76.5%.
- ◆ There has been impressive progress made over the last few years in Genesee County regarding immunizations. In January 2006, only 68% of 19-35 month olds in Genesee County had received all their age-appropriate immunizations. By the May 2008, 79% of children in that age group were fully immunized.
- ◆ The decline in immunizations during the latter half of 2008 is due to the deferment of the Hib booster dose as a result of a vaccine shortage. A similar decline has been seen statewide.

Adults

- ◆ Between 2006 and 2008, 71.2% of adults aged 65 years and older in Genesee County reported receiving a flu shot in the past year and 64.8% of adults 65 years and older in Genesee County reported ever having a pneumonia shot.
- ◆ Figure 10.2 illustrates an increase in the percent adults aged 65 years and older who receive a flu shot.

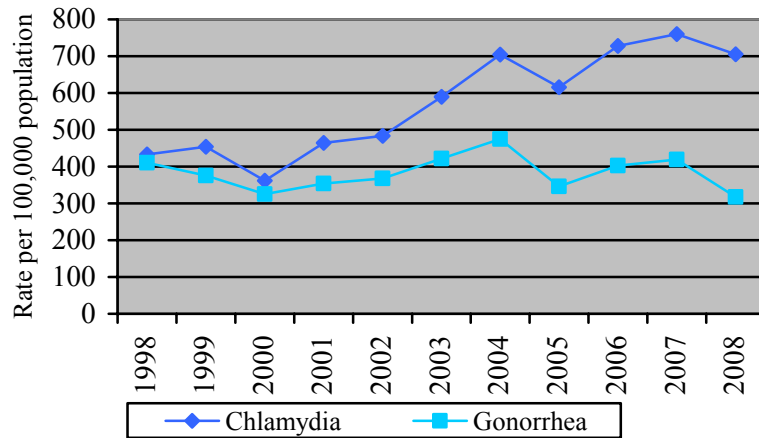
Fig. 10.2 Immunizations Among Adults Aged 65 Years and Older, Genesee County, 2005-2008



Source: 2005-2008 Michigan Behavioral Risk Factor Surveys, Michigan Department of Community Health

SEXUALLY TRANSMITTED DISEASE

Fig. 10.3 Rates of Sexually Transmitted Diseases, Genesee County, 1998-2008



*Rates are per 100,000 population.
 Source: Michigan Sexually Transmitted Diseases Database, Sexually Transmitted Disease Section, Division of HIV/AIDS-STD, Michigan Department of Community Health

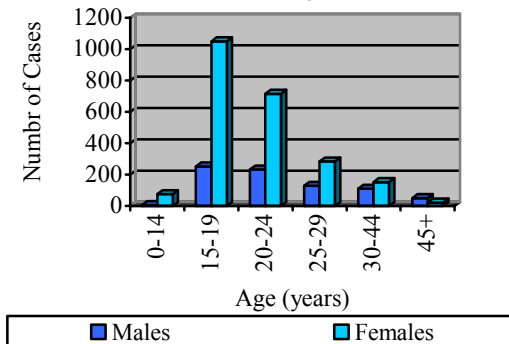
- ◆ In 2008 Genesee County had the 2nd highest rate of Gonorrhea in the State of Michigan, after the City of Detroit.
- ◆ In 2008 Genesee County had the 2nd highest rate of Chlamydia in the State of Michigan, after the City of Detroit.
- ◆ There are significant gender disparities in rates of Chlamydia and Gonorrhea in Genesee County.

Fig. 10.4 Overall Rates of Gonorrhea and Chlamydia, Genesee County and Michigan, 2008

	Genesee County	Michigan
Gonorrhea	317.7	138.5
Chlamydia	705.1	323.3

*Rates are per 100,000 population.
 Source: Michigan Sexually Transmitted Diseases Database, Sexually Transmitted Disease Section, Division of HIV/AIDS-STD, Michigan Department of Community Health

Fig. 10.5 Number of Chlamydia Cases by Gender and Age, Genesee County, 2008

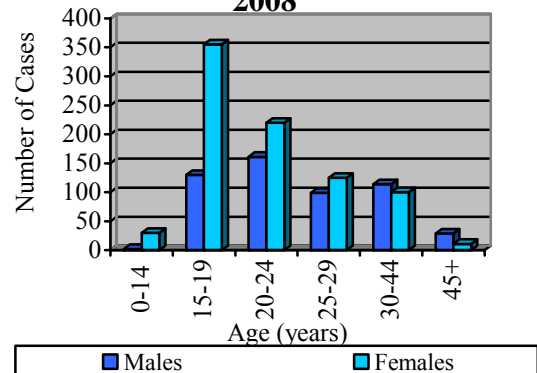


- ◆ Males and females 15-24 years old had the highest incidence of Chlamydia in 2008.

Source: Michigan Sexually Transmitted Disease Database, Sexually Transmitted Disease Section, Division of HIV/AIDS-STD, Michigan Department of Community Health

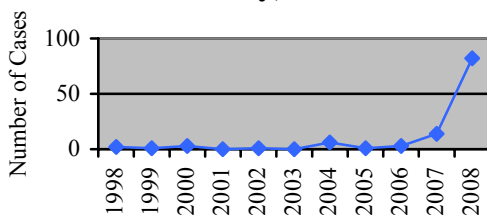
- ◆ Females 15-24 years old had the highest incidence of Gonorrhea in 2008.
- ◆ In 2008, males 20-24 had the highest incidence of Gonorrhea.

Fig. 10.6 Number of Gonorrhea Cases by Gender and Age, Genesee County, 2008



Source: Michigan Sexually Transmitted Diseases Database, Sexually Transmitted Disease Section, Division of HIV/AIDS-STD, Michigan Department of Community Health

Fig. 10.7 Number of Cases of Primary & Secondary Syphilis, Genesee County, 1998-2008

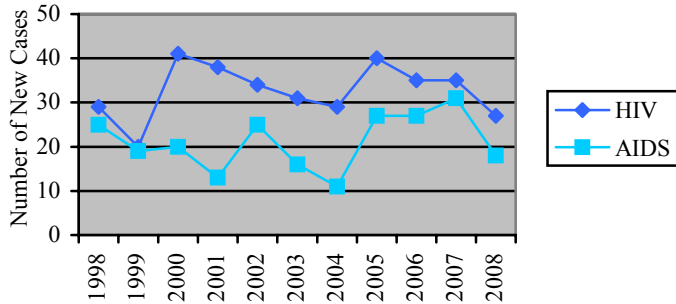


Source: Michigan Sexually Transmitted Diseases Database, Sexually Transmitted Disease Section, Division of HIV/AIDS-STD, Michigan Department of Community Health

- ◆ The number of cases of Primary and Secondary Syphilis fell in the range of 0-6 cases between 1998 and 2006 in Genesee County. In 2007 there were 14 and in 2008 there were 82 cases in Genesee County.
- ◆ In April 2008 the Genesee County Health Department reported an outbreak of infectious syphilis occurring in Genesee County.

HIV/AIDS

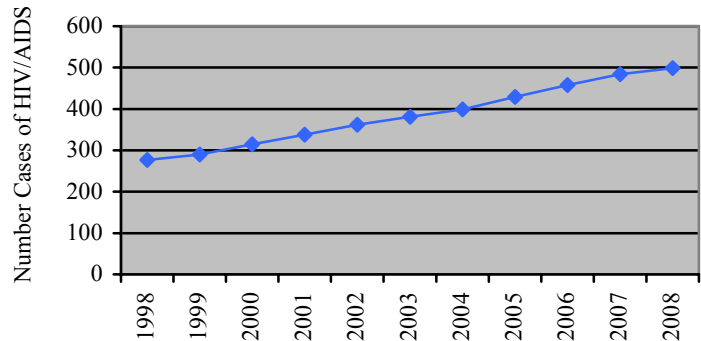
Fig. 10.8 Number of New Cases of HIV and AIDS, Genesee County, 1998-2008



- ◆ In 2008, there were 12 HIV/AIDS deaths in Genesee County.
- ◆ Figure 10.8 shows the trend in the number of number of persons newly diagnosed with HIV and AIDS in Genesee County which is greater than the number of deaths each year.

- ◆ The prevalence of HIV/AIDS in Genesee County has steadily increased as shown in figure 10.9.

Fig. 10.9 Number of Persons Living with HIV or AIDS, Genesee County, 1998-2008



Source: HIV/AIDS Surveillance Section, Michigan Department of Community Health

TUBERCULOSIS

Fig. 10.9 Number of Cases and Rate of Tuberculosis, Genesee County, 2005-2008

	2005	2006	2007	2008
Number of Cases	5	4	18	5
Rate	1.1 per 100,000	**	4.1 per 100,000	1.1 per 100,000

** Numbers are too low to calculate reliable rates
Source: Michigan Disease Surveillance System

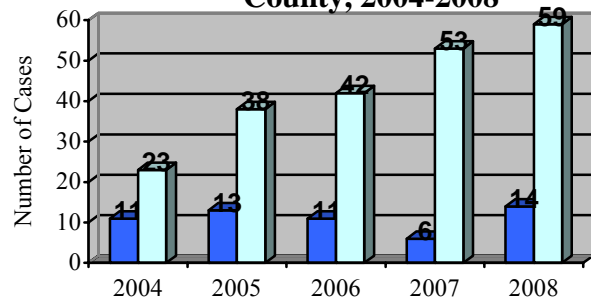
- ◆ A cluster of tuberculosis cases in Flint related to a single source was identified in 2007.

HEPATITIS

Hepatitis B

- ◆ In Genesee County, the number of acute Hepatitis B cases reported has remained relatively stable from 2004-2008, with a decrease in 2006, while the number of chronic Hepatitis B cases detected has steadily increased from 2004-2008.
- ◆ 44% of chronic Hepatitis B cases reported from 2004-2008 have been among females and 78% of those have been among women of childbearing age (10-60 years of age).

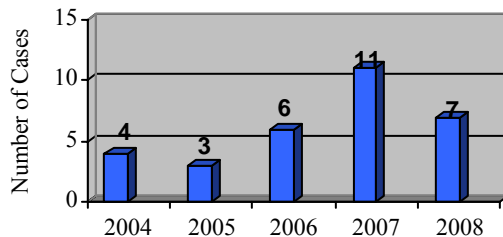
Fig. 10.10 Number of Acute and Chronic Hepatitis B Cases, Genesee County, 2004-2008



Source: Michigan Disease Surveillance System

Hepatitis C

Fig. 10.11 Number of Acute Hepatitis C Cases, Genesee County, 2006-2008



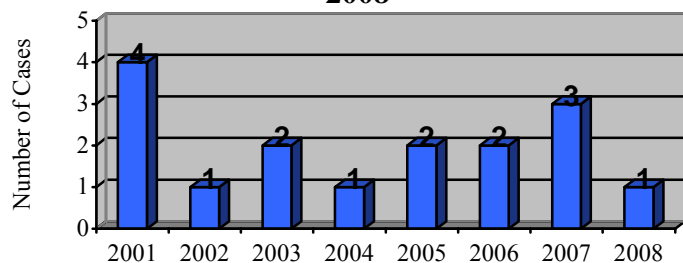
Source: Michigan Disease Surveillance System

- ◆ In Genesee County, the five-year acute case reporting count of hepatitis C for 2004 to 2008 is 31.
- ◆ 58% of the cases have been among females.
- ◆ Approximately half (55%) of the reported acute cases are between the ages of 20-39 years old.

BACTERIAL MENINGITIS

- ◆ From 2000-2008, there have been few cases of Meningococcal Meningitis in Genesee County.

Fig. 10.12 Number of Meningococcal Meningitis Cases, Genesee County, 2000-2008



Source: Michigan Disease Surveillance System

CHAPTER 11:

Sentinel Events

Those cases of preventable disease, disability, or untimely death that could have been avoided if appropriate and timely medical care or preventive services were provided are known as sentinel events. This chapter contains information on sentinel events such as vaccine preventable illness and work-related deaths. Sentinel events may help a community to identify problems in the health system such as inadequate vaccine coverage, lack of appropriate screening or preventive services, or introduction of a new infection or agent to the community.

Source: Mobilizing for Action through Planning and Partnerships (MAPP), Community Health Indicators, National Association of City and County Health Officials and the Centers for Disease Control and Prevention.

VACCINE PREVENTABLE DISEASE

- ◆ Vaccines are available for all of the diseases shown below, so the occurrence of any cases may indicate a vaccine coverage issue in the community.

Fig. 11.1 Number of Cases of Vaccine Preventable Disease, Genesee County, 2008					
	Measles	Mumps	Rubella	Pertussis	Tetanus
Genesee County	0	2	0	7	0

Source: Michigan Disease Surveillance System

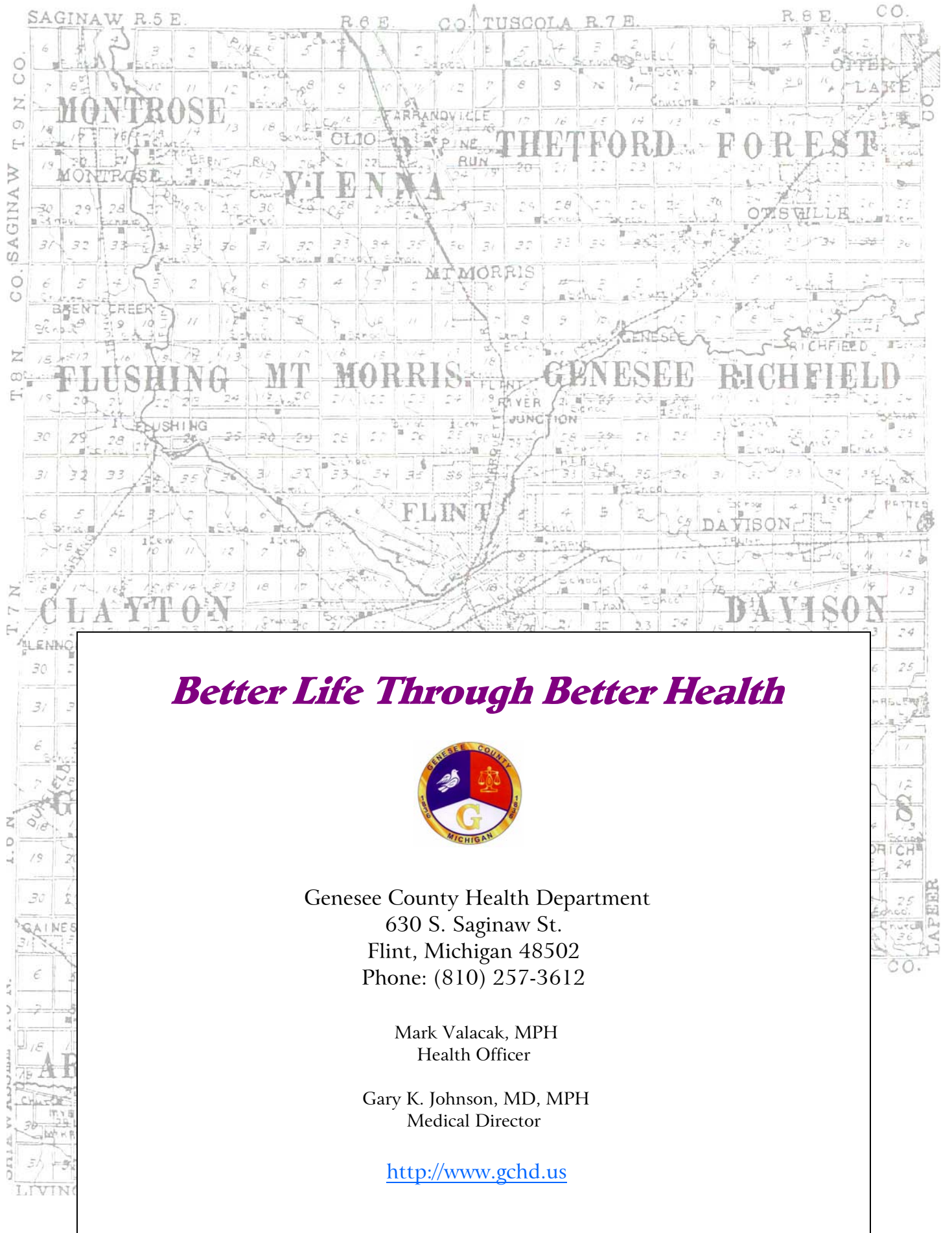
WORK-RELATED DEATHS

Fig. 11.2 Number of Work-Related Deaths in Genesee County, 2004-2007				
	2004	2005	2006	2007
Number of Work Related Deaths	5	4	18	5

Source: Genesee County Health Department

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Better Life Through Better Health



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