

THE HEALTH



OF

GENESEE COUNTY



ACKNOWLEDGEMENTS:

We thank the following people, whose assistance helped us to complete this report.

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A publication of the Genesee County Health Department
Printed April 2005

INTRODUCTION:

This first edition of the Health of Genesee County Data Book provides a snapshot of the health status of Genesee County, Michigan residents. Health indicators 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 2003-2007 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. Hopefully, readers will want to learn even more, and become involved in changing those health conditions they find alarming and building upon those that reflect community strengths.

Perhaps this data book will stimulate "Better Life Through Better Health" in Genesee County. Feedback on the enclosed brief user survey will be appreciated.

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CHAPTER 1:

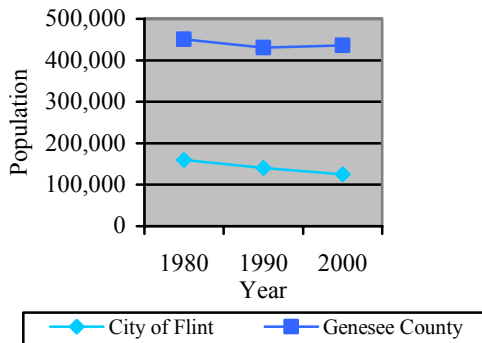
Demographic Characteristics

Genesee County is the 5th most populous county in Michigan, representing 4.4% of the State’s population. The City of Flint comprises nearly 29% of the County’s population and is the largest city in Genesee County. Flint and Genesee County have both seen significant population changes from 1980-2000. 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 2000

POPULATION TRENDS

Fig. 1.1 Population Trends, Genesee County and City of Flint, 1980-2000

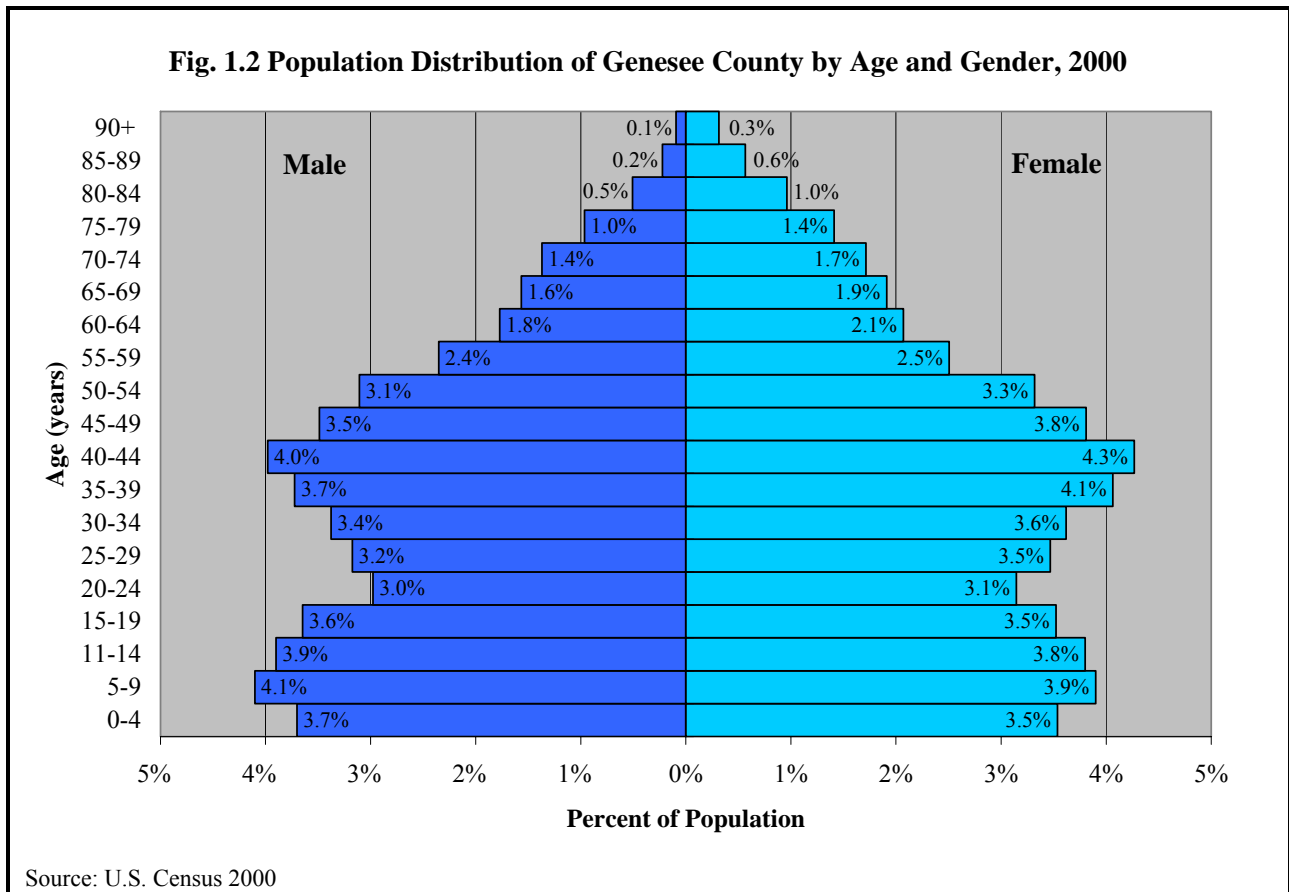


Source: U.S. Census 2000

- ◆ Between 1990 and 2000, the population of Genesee County increased by 1.3%, from 430,459 in 1990 to 436,141 in 2000. This followed a substantial population decrease that occurred from 1980-1990.
- ◆ The County’s population increase from 1990-2000 was relatively small compared to that of the State of Michigan, which increased 6.9% in the same time period.
- ◆ The City of Flint population decreased from 159,611 in 1980 to 140,761 in 1990 (-11.8%) to 124,943 in 2000 (-11.2%).

TOTAL POPULATION

- ◆ The total population of Genesee County in 2000 was 436,141, with 28.6% residing in the City of Flint.
- ◆ Nearly 12% of the County population (11.6%) is over the age of 65 years.
- ◆ Children under the age of 5 years accounted for 7.3% of the County's total population.
- ◆ People under the age of 18 years comprise 27.4% of the population of Genesee County.
- ◆ The population density (people per square mile) of Genesee County in 2000 was 681.9.
- ◆ The median age for Genesee County in 2000 was 35.0 years.
- ◆ Approximately 48% of the Genesee County population is male, while 52% is female.



RACE AND ETHNICITY

- ◆ The Genesee County population is predominantly White (75.3%), while about one-fifth of the total population is African American. Hispanic/Latino persons, who could be of any race, comprise about 2.3% of the County’s population, which is slightly lower than the proportion of Hispanics/Latinos in the City of Flint or in Michigan.
- ◆ In the City of Flint, African Americans comprise over one-half (53.3%) of the population, while 41.4% of the City’s residents are White. The proportion of City residents who are Hispanic/Latino, of any race, is slightly higher (3.0%) than the County as a whole, but slightly lower than the State of Michigan (3.3%).
- ◆ The proportion of City of Flint and Genesee County residents who are American Indian/Alaska Native is the same as Michigan, while the proportion of residents who are Asian or of Some Other Race is slightly less in Flint and Genesee County than the State.

Fig. 1.3 Population by Race/Ethnicity, 2000

Population Subgroup	City of Flint		Genesee County		Michigan
	Number	Percentage	Number	Percentage	Percentage
Total Population	124,943	100%	436,141	100%	100%
Hispanic/Latino of any race	3,742	3.0%	10,152	2.3%	3.3%
Total One Race	121,018	96.9%	426,622	97.8%	98.1%
African American/Black	66,560	53.3%	88,843	20.4%	14.2%
White	51,710	41.4%	328,350	75.3%	80.2%
American Indian/Alaska Native	798	0.6%	2,414	0.6%	0.6%
Asian	547	0.4%	3,515	0.8%	1.8%
Pacific Islander/Native Hawaiian	19	<0.1%	92	<0.1%	<0.1%
Some Other Race	1,384	1.1%	3,408	0.8%	1.3%
Total Two or More Races	3,925	3.1%	9,519	2.2%	1.9%

Source: U.S. Census 2000

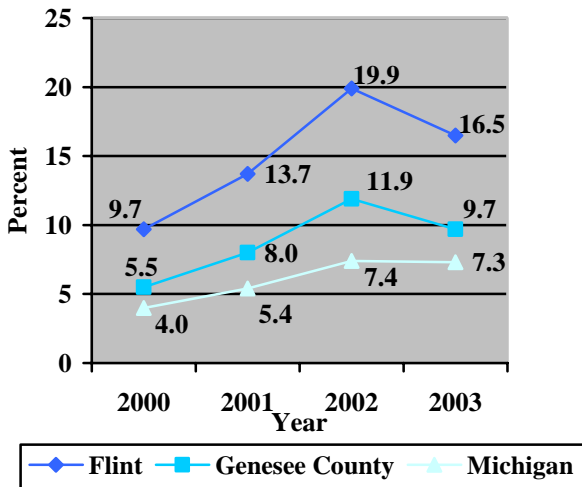
CHAPTER 2:

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

Fig. 2.1 Percent of the Population That is Unemployed by Location, 2000-2003



- ◆ Flint’s unemployment rates from 2000-2003 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 2000-2003.
- ◆ The City of Flint has seen out-migration of jobs and residents, particularly as General Motors plants have closed over the past 25 years.

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

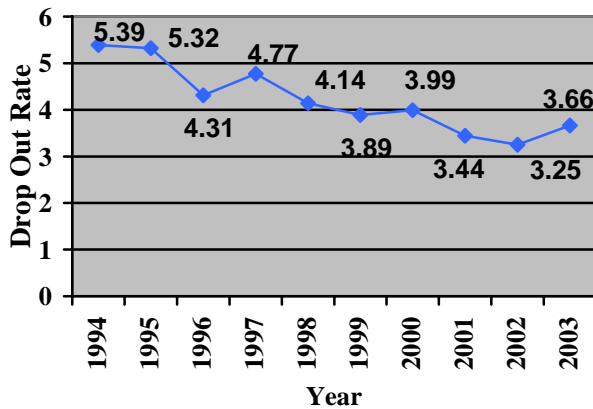
- ◆ The median household income for Genesee County in 1999 was almost \$3,000 less than the median household income for Michigan, but only slightly less than the median income for the United States.
- ◆ The City of Flint’s median household income was nearly \$14,000 less than the median income for Genesee County as a whole.

Fig. 2.2 Median Household Income (1999)	
City of Flint	\$28,015
Genesee County	\$41,951
Michigan	\$44,667
United States	\$41,994

Source: U.S. Census 2000

EDUCATION

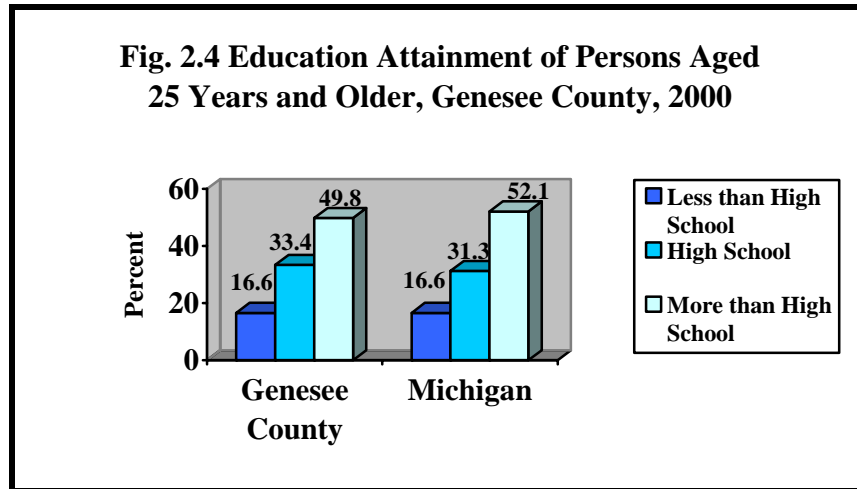
Fig. 2.3 Average High School Drop Rates, Genesee County, 1994-2003



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

Source: Statistical Summary 2003-2004, Genesee Intermediate School District

- ◆ 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.

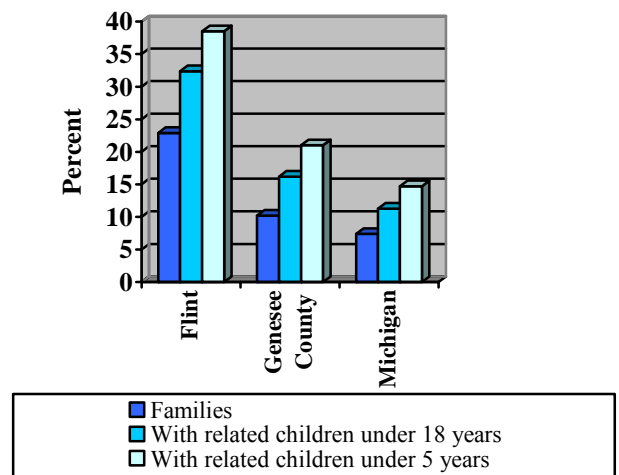


Source: U.S. Census 2000

POVERTY

- ◆ In 1999, 13.1% of Genesee County residents 18 years and over and 26.4% of City of Flint residents over 18 years had incomes that were below the poverty level, compared to 10.5% of Michigan residents 18 years and over.

Fig. 2.5 Percent of Families Below Poverty Level, 1999



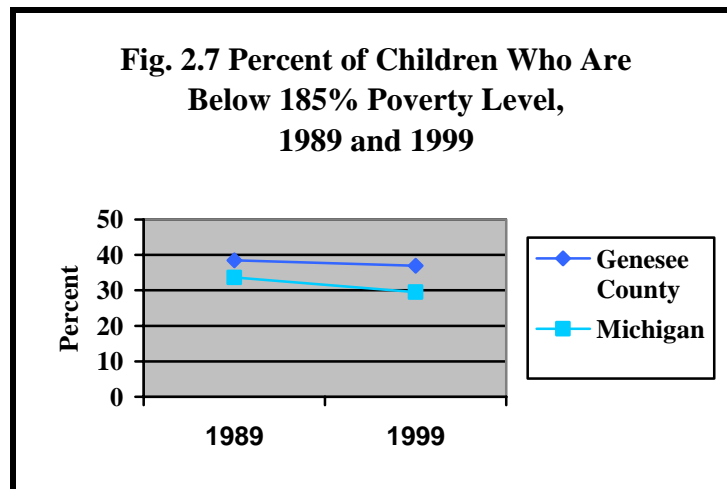
Source: U.S. Census 2000

- ◆ The indicators below suggest that the socioeconomic status of Genesee County children has decreased from 1989-1990 to 2002-2003. However, because of limited data and possible program changes, it is difficult to ascertain whether that is the case.
- ◆ The percent of students receiving free/reduced-price school lunches and percent of children receiving food assistance in 2002-2003 in Genesee County are higher than the overall State rates.

Fig. 2.6 Socioeconomic Status of Children			
	Genesee County		Michigan
	1989-1990	2002-2003	2002-2003
Percent of students receiving free/reduced-priced school lunches	27.3%	38.6%	32.9%
	Genesee County		Michigan
	1989-1990	2002	2002
Percent of children receiving food assistance	Not available	21.1%	13.3%
Number of children, ages 0-12 years, in subsidized child care	Not available	11,064	133,350

Source: Kids Count in Michigan Data Book, 2003

- ◆ Both Genesee County and Michigan have seen a decline in the proportion of children who are below 185% poverty level from 1989-1999. However, Genesee County's rate has only slightly decreased.



Source: Kids Count in Michigan Data Book, 2003

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 2004

Number of Hospitals: 3

Total Number of Licensed Hospital Beds: 1,161

Number of Licensed Hospital Beds rate per total population: 266.2 per 100,000 population*

Nursing Home Long-Term Care Facilities: 13

Hospital Long-Term Care Units: 1

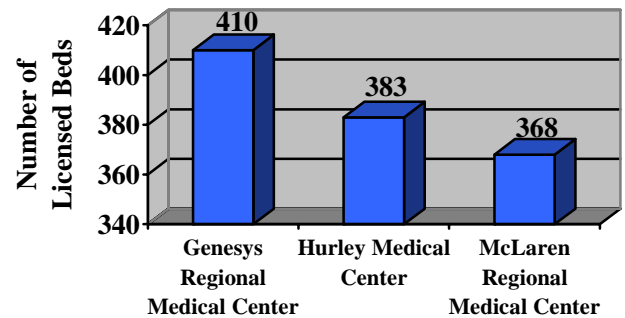
Long-Term Care Beds: 1,549

Long-Term Care Facility Occupancy Rate: 91.9%

Home Health Agencies: 8

Hospice (non-residential): 5

Fig. 3.1 Licensed Hospital Beds in Genesee County by Hospital, 2004



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

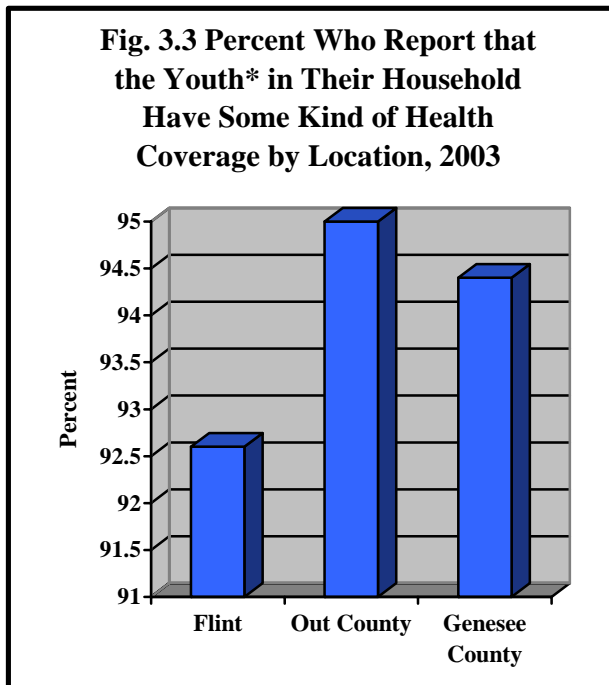
*Based on Census 2000 population. Source: Bureau of Health Systems, Michigan Department of Community Health; Genesee County Health Department

Health System Personnel

Fig. 3.2 Licensed Health System Personnel Inventory*, Genesee County, 2004	
Physicians	253.8 licensed physicians per 100,000 population**
Dentists	56.2 licensed dentists per 100,000 population**
Nurse Practitioners	68
Nurses	4,703 R.N. 1,203 L.P.N.
Physician's Assistants	76

*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 2003 Genesee County survey, 95.0% of respondents living in Out County areas reported that the youth 17 years and younger in their household had some type of health care coverage, while 92.6% of City of Flint respondents reported this. Overall, 94.4% of Genesee County respondents reported that youth 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, 2003, Prevention Research Center of Michigan

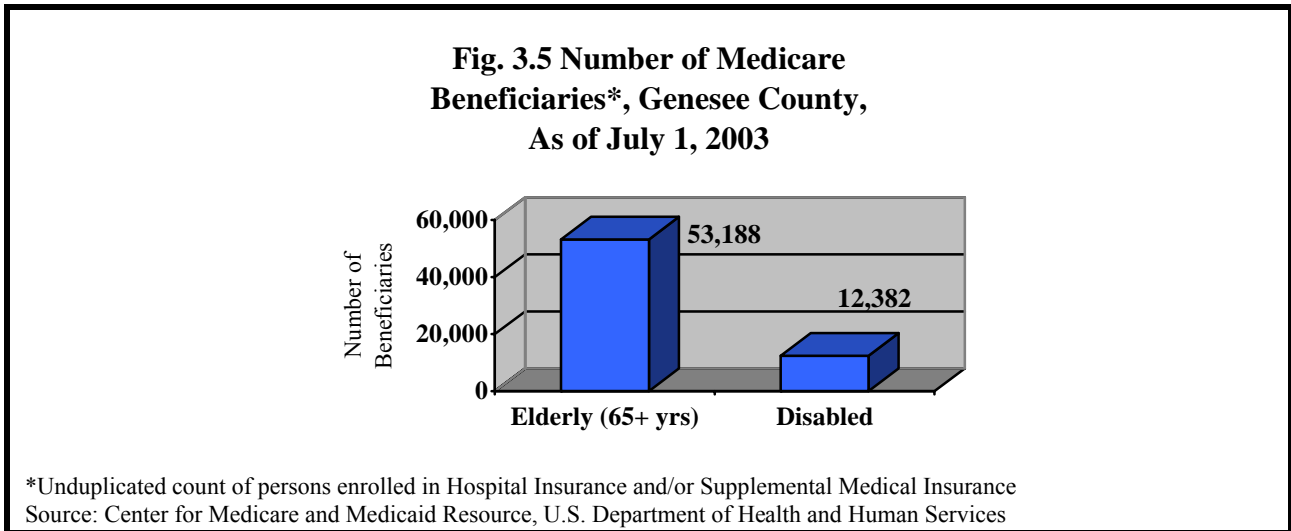
- ◆ As shown in Figure 3.4, 87.3% of Genesee County residents reported having some type of health care coverage in 2003.
- ◆ 82.1% of Flint residents and 89.2% of Out County residents said they had some type of health care coverage.
- ◆ Younger residents in both Flint and Out County were less likely to have health care coverage than older residents.
- ◆ There was variation in health care coverage by gender, with men being almost twice as likely to be without health coverage as women.

Fig. 3.4 Percent With Any Kind of Health Care Coverage, Genesee County, 2003	
Characteristics	Percent
Overall	87.3%
Gender	
Male	83.6%
Female	90.5%
Race	
African American	86.4%
White	87.7%
Age	
18-24 years	78.9%
25-44 years	82.1%
45-64 years	92.4%
65+ years	97.3%
Income	
<\$10,000	81.5%
\$10,000-19,999	69.0%
\$20,000-34,999	77.5%
\$35,000-49,999	85.6%
\$50,000-69,999	92.8%
\$70,000+	93.2%

Source: Speak to Your Health! Community Survey, 2003, 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 25, 2004, there were a total of 77,226 Medicaid beneficiaries in Genesee County.

Fig. 3.6 Medicaid Beneficiaries in Genesee County as of August 2004*		
	Fee-for-Service Beneficiaries	Health Plan Beneficiaries
Genesee County	15,259	61,967
Grand Total	77,226	

*As of August 17, 2004. 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.

Fig. 3.7 Genesee Health Plan Enrollees, 2002 and 2003		
	2002	2003
Number of Active Enrollees	971	1,273
Percentage		
Female	70%	65%
Male	30%	34%
Unknown	None	<1%
Average Enrollee Monthly Income	\$935.72	\$923.78
Average Enrollee Age	41 years	39 years

Source: Genesee County Health Department

BARRIERS TO HEALTH CARE ACCESS

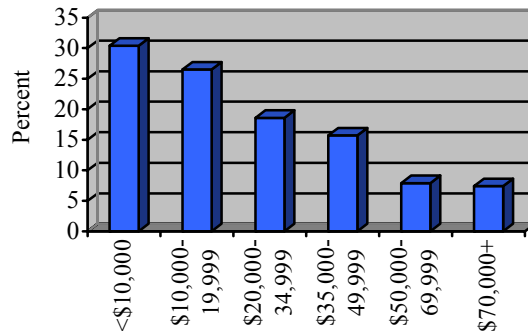
Cost

Fig. 3.8 Cost as a Barrier to Health Care Access By Location, 2003			
	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	17.0%	11.8%	13.2%

Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

- ◆ Flint residents 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.
- ◆ As shown in Figure 3.9, in Genesee County, as income increased, the percent that cited cost as a barrier to a doctor’s visit decreased.

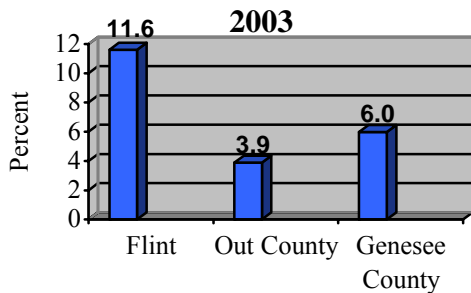
Fig. 3.9 Percent Who Cited Cost as a Barrier to Doctor's Visit in the Past Year by Income, Genesee County, 2003



Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

Transportation

Fig. 3.10 Percent Who Have Difficulty Getting Transportation to See Their Doctor By Location, 2003

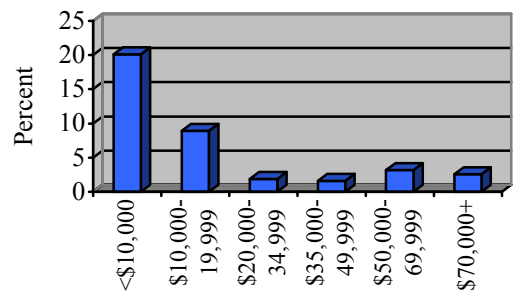


Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

- ◆ As shown in Figure 3.10, Flint residents were more likely to report difficulty with transportation to see a doctor than Out County residents.
- ◆ In Genesee County, African Americans (11.9%) were significantly more likely to report difficulty getting transportation to see their doctor than Whites (3.9%).

- ◆ A higher percentage of residents who reported household incomes of \$19,999 or less reported difficulty with transportation to see their doctor than residents at income levels greater than \$20,000.

Fig. 3.11 Percent Who Have Difficulty Getting Transportation to See Their Doctor by Income, Genesee County, 2003



Source: Speak to Your Health! Community Survey, 2003, 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.

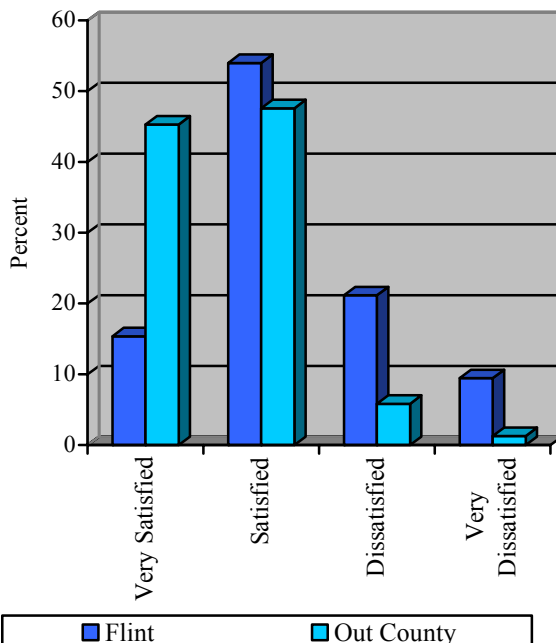
-World Health Organization

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 civic participation and satisfaction with health care in Flint and Genesee County, which all affect quality of life.

NEIGHBORHOOD CONDITIONS

Neighborhood Satisfaction

Fig. 4.1 Neighborhood Satisfaction, Genesee County, 2003

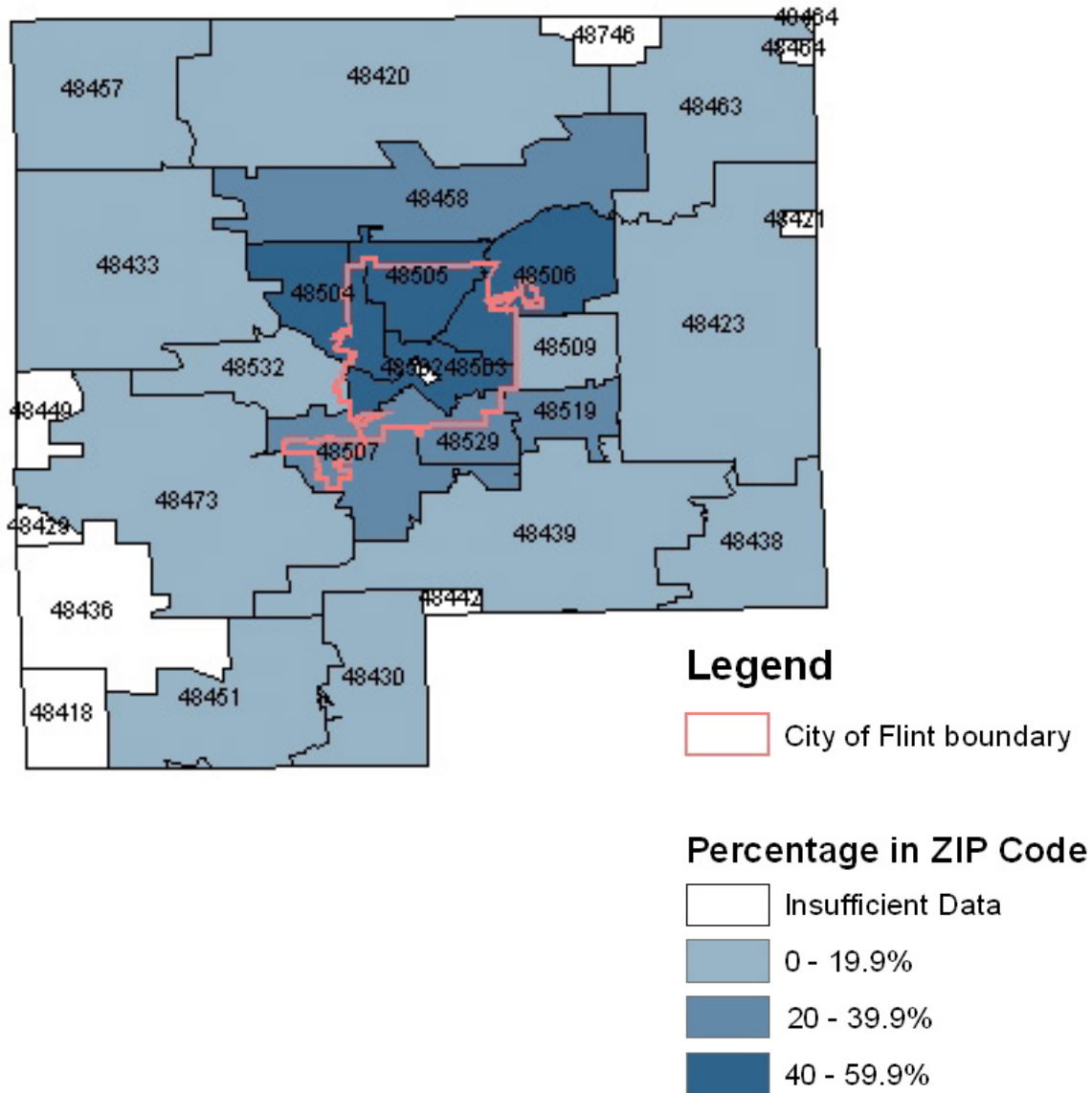


- ◆ Almost 70% (69.4) of Flint residents and 92.9% of Out County residents said they were *very satisfied* or *satisfied* with the quality of life in their neighborhood.
- ◆ Three-quarters (74.9%) of Flint and 91.2% of Out County residents *strongly agreed* or *agreed* that people in their neighborhood are willing to help their neighbors.
- ◆ In Flint, 60.2% of residents and 89.0% of Out County residents *strongly agreed* or *agreed* that people in their neighborhood can be trusted.

Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

Neighborhood Safety

Fig. 4.2 Percent of Residents Who Rate Walking in Their Neighborhood After Dark as Extremely or Somewhat Dangerous by ZIP Code, Genesee County, 2003



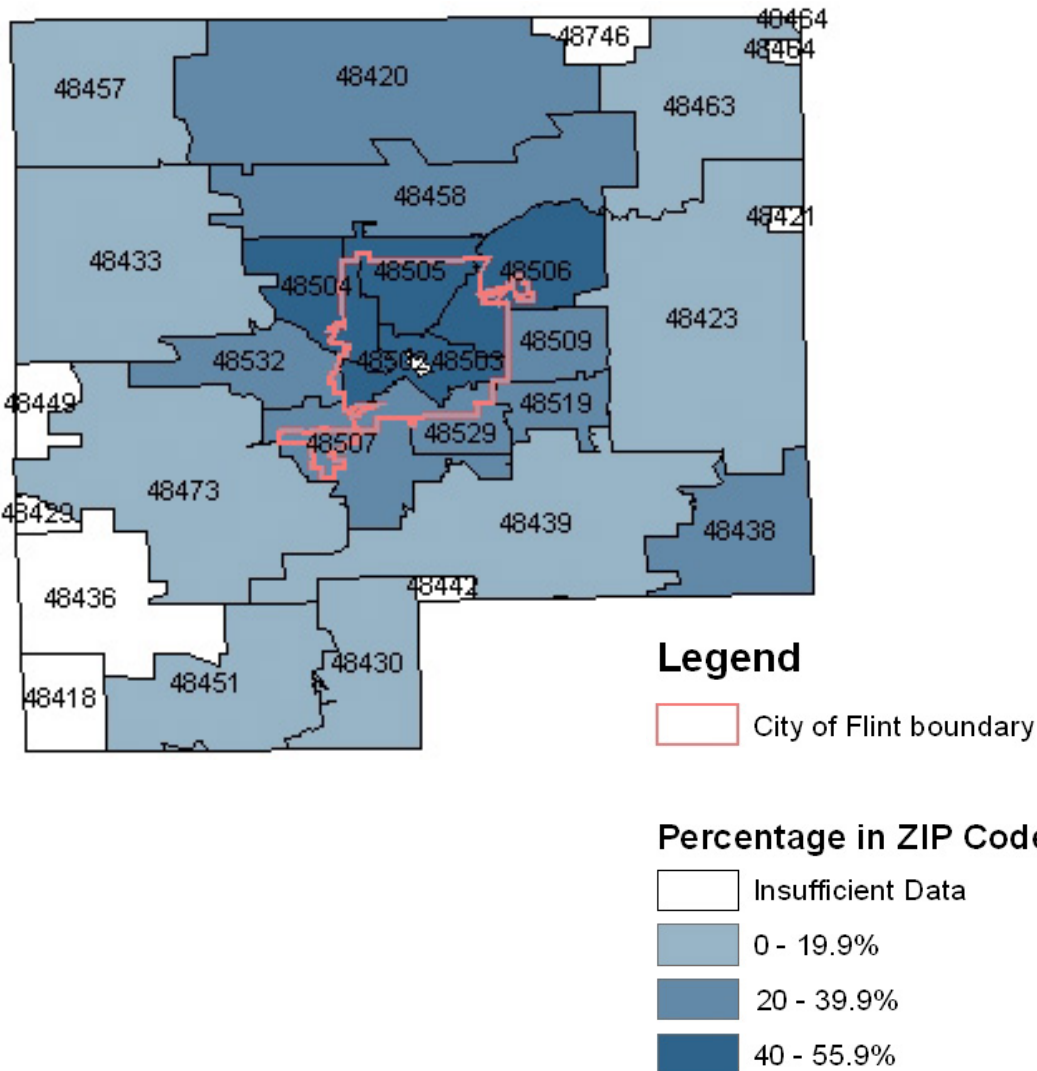
Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

- ◆ Nearly one-half (49.9%) of Flint residents said that it was *extremely* or *somewhat* dangerous to walk around alone in their neighborhood after dark.
- ◆ The percent of Out County residents who reported this was substantially lower (13.6%).

Fear of Crime

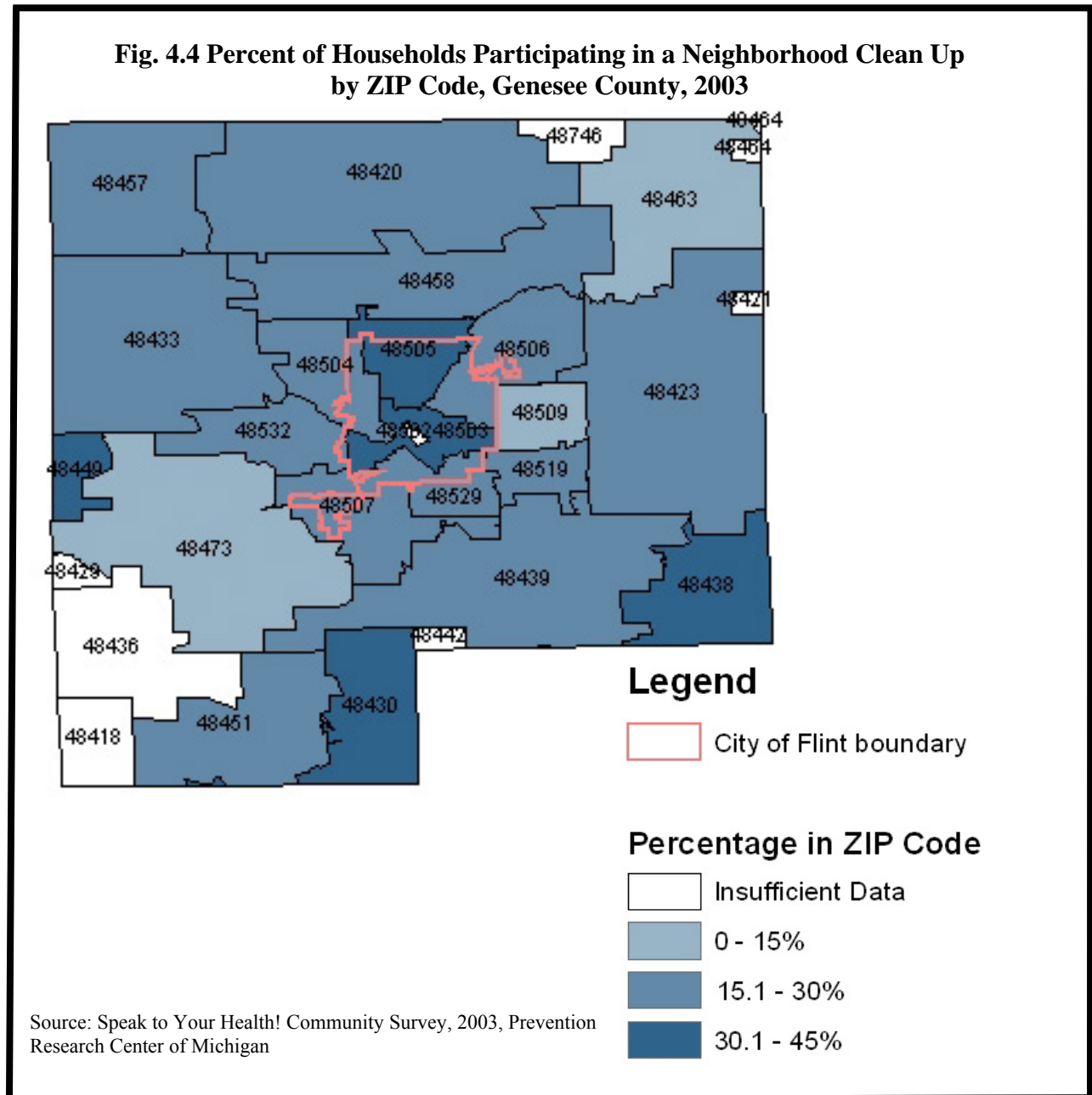
- ◆ Almost 50% (48.5) of City of Flint residents said that they were *very* or *somewhat* fearful of crime in their neighborhood. Only 19% of Out County residents reported this.
- ◆ In Flint, 50.9% of Whites and 46.7% African Americans compared to only 24.4% of African Americans and 17.8% of Whites in 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, 2003



Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

Neighborhood Participation



- ◆ In a 2003 Genesee County survey, nearly 80% (78.8) of households in Flint and 75.8% of Out County households 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 respondent identified 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.

CIVIC PARTICIPATION

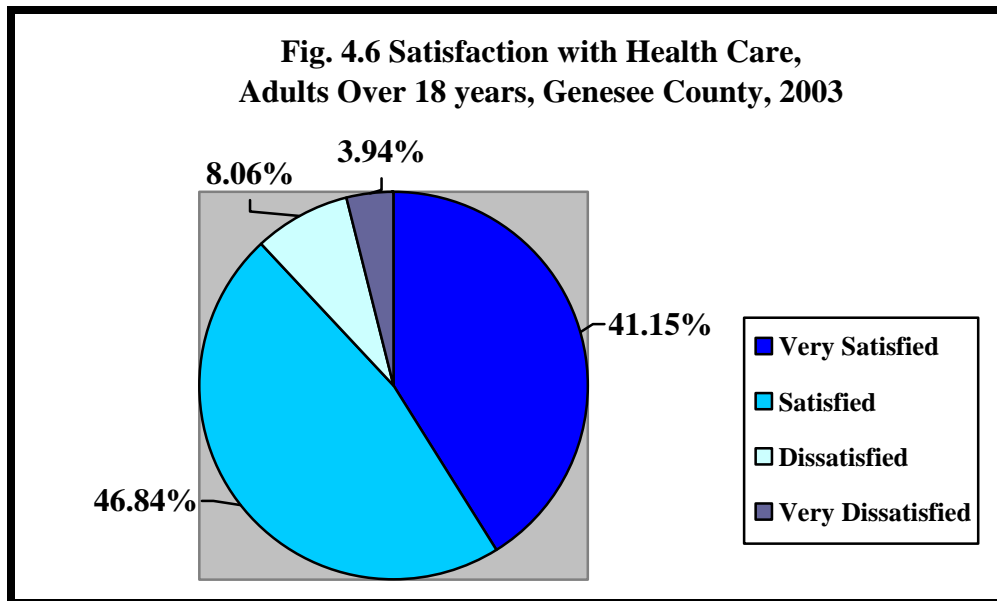
Percent of Registered Voters in Genesee County Who Vote

Fig. 4.5 Percent of Registered Voters in Genesee County Who Vote, 2004		
	Percent	Number of Total Registered Voters
August 3, 2004 Election*	19.2%	326, 456
November 2, 2004 Election**	64.0%	335, 361

*Current as of 8/6/04. ** Current as of 11/5/04. Source: Genesee County Clerk's Office

SATISFACTION WITH HEALTH CARE

- ◆ Nearly 88% of Genesee County residents reported they were *very satisfied* or *satisfied* with the health care they received.



Source: Speak to Your Health! Community Survey, 2003, 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 who receive health screenings is also presented as this is an important indicator of how well a community is doing in regards to prevention and early detection of disease. 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.

SUBSTANCE USE AND ABUSE

	Flint 2003	Genesee County 2003	Michigan 2003
Heavy Drinking ¹	5.6%	5.8%	6.2%
Binge Drinking ²	12.3%	14.4%	19.1%
Current Smoker ³	31%	26.8%	25.8%
Mean Age Began Smoking	14.6 years	15.0 years	Not Available

Source: 2003 Michigan Behavioral Risk Factor Survey, 2004, Michigan Department of Community Health; Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan.

Tobacco Use

- ◆ Overall about 27% of Genesee County residents say that they currently smoke on *every* or *some days*. Flint has a higher proportion of residents (31%) who say they currently smoke than Out County residents (25.3%).

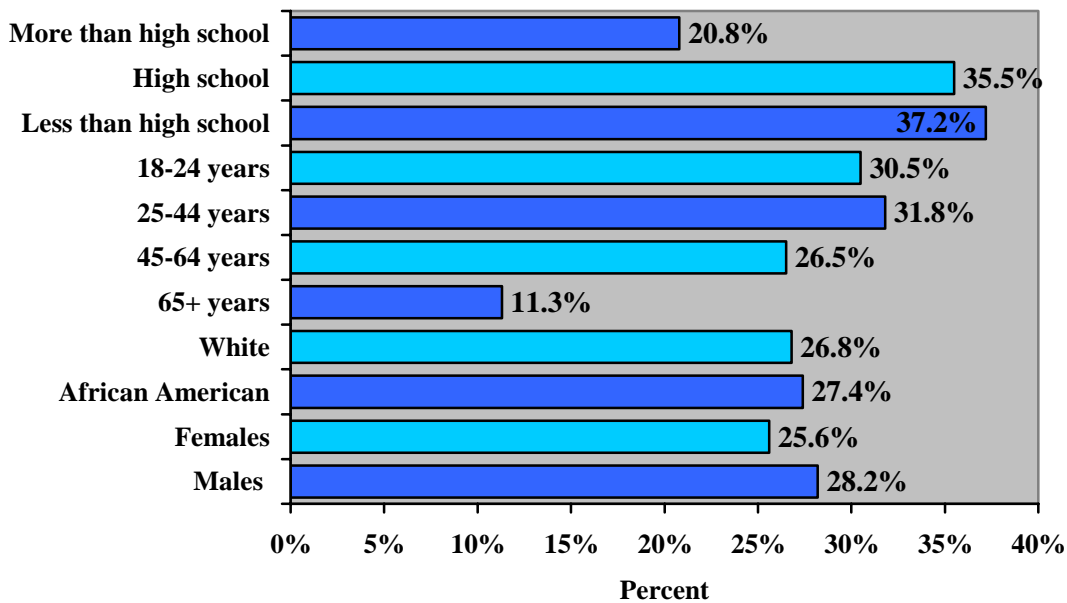
¹ Proportion of respondents who reported consuming on average more than two alcoholic drinks per day (males) or more than one alcoholic drink per day (females) in the past 30 days.

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.

- ◆ Current smoking status varies by age. Younger respondents were more likely to report that they currently smoke compared to older respondents.
- ◆ A higher percentage of people who have a less than high school education are current smokers (37.2%) than high school graduates (35.5%) or people with more education than high school (20.8%).

Fig. 5.2 Current Smokers, Adults Aged 18 Years or Older, Genesee County, 2003

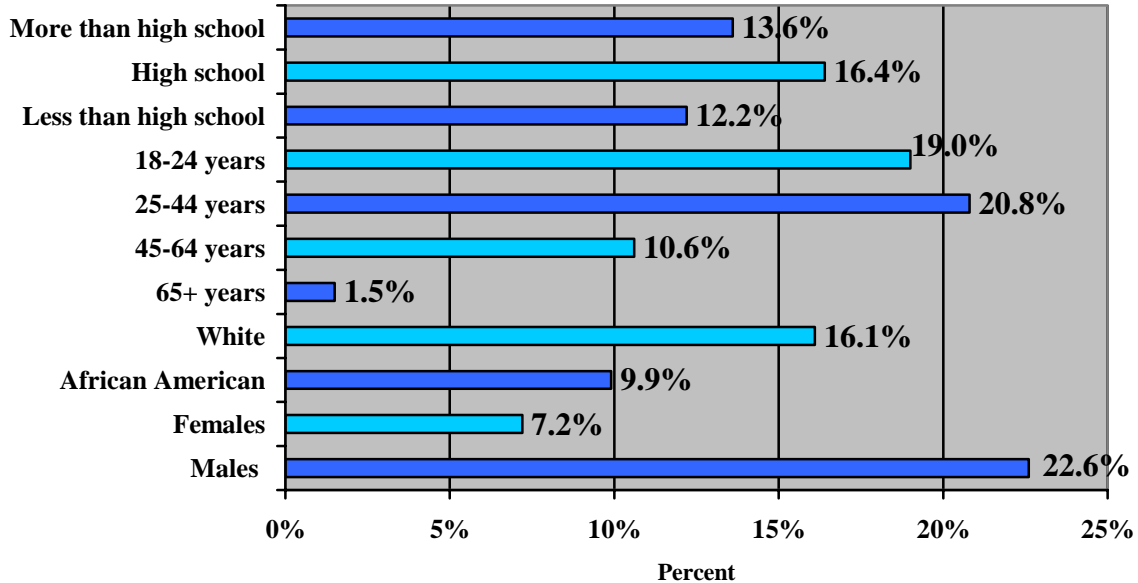


Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

Alcohol Use

- ◆ Overall, 14.4% of adults in Genesee County say that they have engaged in at least one episode of binge drinking in the past 30 days. Out County has a higher percentage of binge drinkers (15.2%) than City of Flint (12.3%).
- ◆ Binge drinking in Genesee County is significantly more prevalent in males (22.6%) than females (7.2%).
- ◆ A higher proportion of Whites (16.1%) report binge drinking than African Americans (9.9%).
- ◆ Males (8.5%) were more likely to be heavy drinkers than females (3.5%).

Fig. 5.3 Binge Drinking*, Adults Aged 18 Years and Older, Genesee County, 2003



*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, 2003, Prevention Research Center of Michigan

LIFESTYLE FACTORS

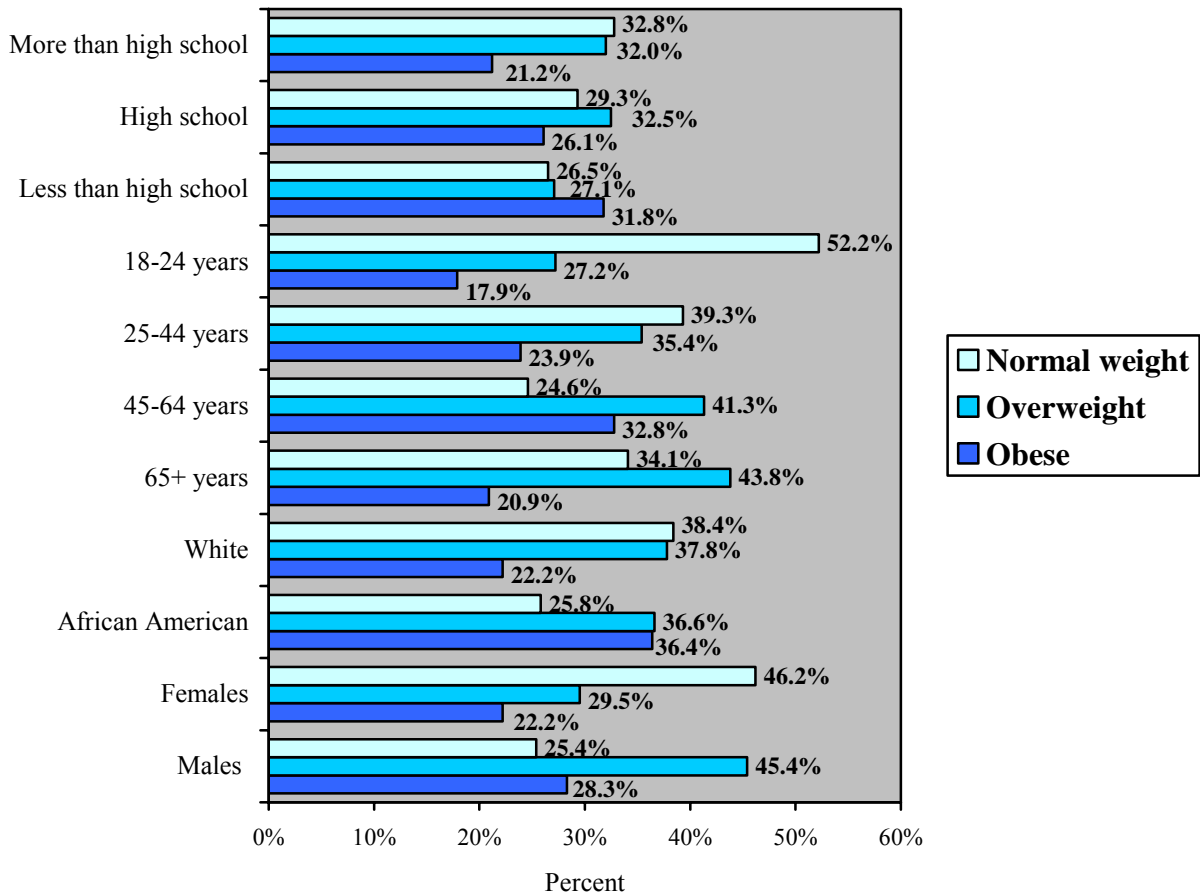
- ◆ Figure 5.4 shows that the City of Flint has a higher proportion of residents that are obese (30.9%) than Genesee County as a whole (25.3%) and Michigan (25.4%).
- ◆ In general, Flint, Genesee County, and Michigan have similar proportions of residents who spend their time at work sitting or standing. However, Flint and the County as a whole have higher percentage of residents whose occupations involve mostly heavy labor or physical work than Michigan.
- ◆ Overall, nearly 58% of Genesee County residents say they engage in physical activity for at least 20 minutes 3 times per week or more.
- ◆ Flint residents, women, and African Americans were more likely to consume at least 2 servings of fruit per day.
- ◆ The proportion of residents who consumed at least 1 serving of green salad per day was nearly the same for the City of Flint and Genesee County as a whole.
- ◆ For Genesee County, women and African Americans were more likely to eat at least 1 serving of green salad per day.

Fig. 5.4 Behavioral Risk Factors: Lifestyle			
	Flint 2003	Genesee County 2003	Michigan 2003
Overweight (BMI 25-29.9)	36.8%	37.5%	36.6%
Obese (BMI \geq 30)	30.9%	25.3%	25.4%
Physical Activity Frequency⁴			
<1 time per week	26.7%	21.3%	Not available
1-2 times per week	20.2%	20.8%	Not available
3 times per week	15.5%	17.5%	Not available
4+ times per week	37.6%	40.5%	Not available
Occupational Physical Activity			
Mostly standing/sitting	57.7%	57.5%	64.5%
Mostly walking	20.9%	22.5%	20.7%
Mostly Heavy Labor or Physical Work	21.4%	20.1%	14.9%
Consumed at Least 2 Servings of Fruit per Day	36.6%	32.4%	29.5%
Consumed at Least 1 Serving of Green Salad per Day	24.2%	24.8%	17.9%

Source: 2003 Michigan Behavioral Risk Factor Survey, 2004, Michigan Department of Community Health; Speak to Your Health! Community Survey, 2003, 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.

Fig. 5.5 Weight Status*, Adults Aged 18 Years or Older, Genesee County, 2003



*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, 2003, Prevention Research Center of Michigan

- ◆ Flint residents had a higher average Body Mass Index (BMI) than Out County residents.
- ◆ Residents in 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 1998-2002, health screening rates for Genesee County are similar to State of Michigan rates.
- ◆ In 2003, 72.4% of Genesee County adults 45 years and older reported being screened or checked for diabetes in the past year.

Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan.

Fig. 5.6 Health Screenings for Adults Age 18 Years and Older		
	Genesee County 1998-2002*	Michigan 1998-2002
Cholesterol Ever Checked	76.5%	77.6%
Cholesterol Checked Within the Past 5 Years	73.0%	72.7%
Ever Had an HIV Test	44.8%	45.5%
Ever Had Blood Stool Test	51.8%	52.3%
Had a Blood Stool Test in Past 2 Years	31.1%	35.2%
Had Pap Test in Past 3 Years	84.7%	85.4%

*Due to limited sample sizes, health screening data is unavailable for individual years by county. Source: Michigan Behavioral Risk Factor Survey 1998-2002, 2004, 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 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.

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.

AIR QUALITY

- ◆ Two stations in Genesee County are monitored 24 hours a day by the Michigan Department of Environmental Quality. They 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 , 2000-2002		
	Ever Told They Have Asthma	Still Have Asthma
Genesee County	15.2%	11.0%
Michigan	12.1%	8.5%

Source: Michigan Behavioral Risk Factor Survey, 1998-2002, 2004, Michigan Department of Community Health

Indoor Clean Air

Smoke-Free Facilities

- ◆ As of October 2004, there were **156** 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 some exceptions, smoking is prohibited in all enclosed places, worksites, and business vehicles within Genesee County.

Radon

- ◆ As of 2003, **less than 20% of homes** in Genesee County have actually tested radon levels. Ideally, every home should be tested, as radon levels vary throughout the County.
- ◆ From September 1993 through December 2002, 978 radon tests from Genesee County homes were done and analyzed. The **average result was 3.0 pCi/l and 20.2% exceeded the action guideline** of 4 pCi/l. These figures are not necessarily representative of all Genesee County. However, because 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 October 2004, there are **22 body art establishments** in Genesee County which are licensed and monitored by the Genesee County Health Department.

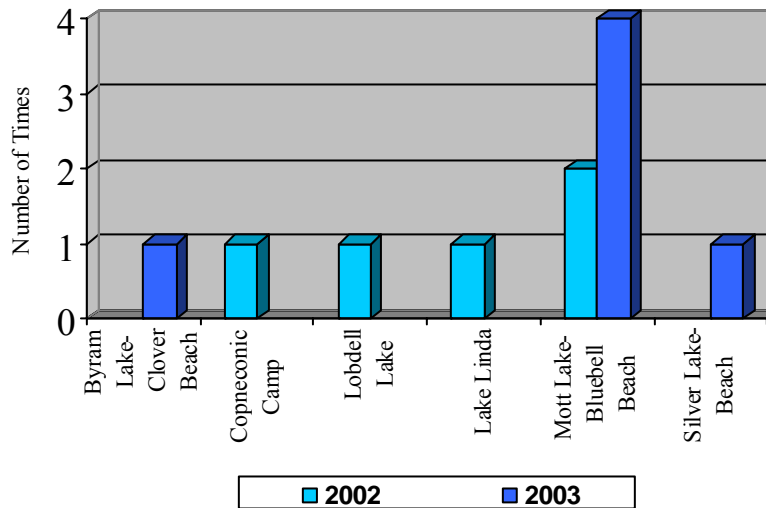
RABIES

- ◆ There were no animal or human rabies cases reported in Genesee County for 2002 or 2003.

WATER QUALITY

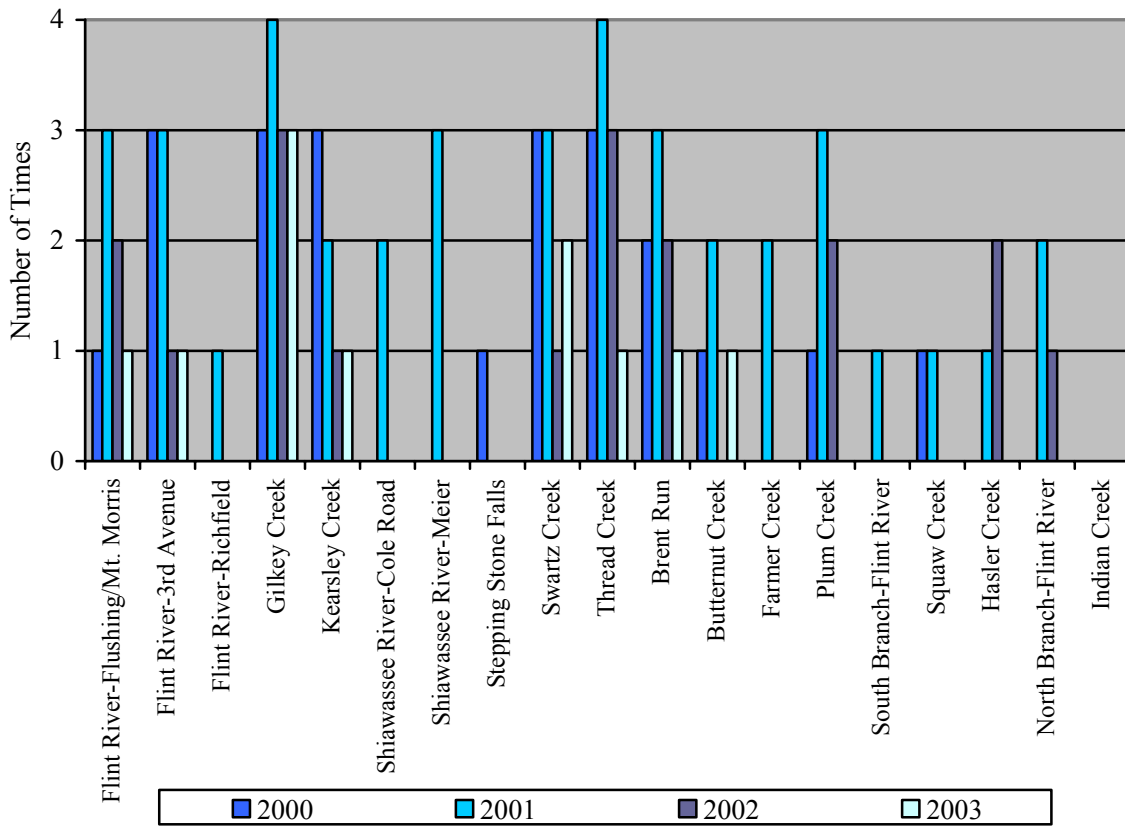
- ◆ 100% of rivers, lakes, and estuaries that support recreational uses (fishing and swimming) are monitored by the Genesee County Health Department (GCHD).
- ◆ Partial and/or Total Body Contact Advisories are issued by the GCHD when surface water sampling reveals E.coli bacterial levels that exceed the State of Michigan guidelines. For public bathing beach areas, the State guideline is 300 E. coli per 100 ml. For river watershed areas, this State guideline is 1000 E. coli per 100 ml. The number of times that bathing beach areas and river watershed areas exceeded these State guidelines for bacterial concentrations is shown below in Figures 6.2 and 6.3.

Fig. 6.2 Number of Times Public Bathing Beach Areas Exceeded State Bacterial Concentration Guideline of 300 cfu/mL, Genesee County, 2002 and 2003



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

Fig. 6.3 Number of Times River Watershed E. Coli Samples Exceeded State Bacterial Concentration Guideline of 1000 cfu/mL, 2000-2003



Note: Because of budget constraints, river monitoring gradually decreased from 2000 to 2003. Therefore, all locations shown above were not necessarily monitored regularly, or at all, for each of the years shown.

Source: Genesee County Health Department

Waterborne Disease

- ◆ There were no reported cases of waterborne disease in Genesee County in 2002 or 2003.

Private Water Sources

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

Fig. 6.4 Number of Well Permits Issued, Genesee County, 2002 and 2003		
	2002	2003
Genesee County	1,498	1,608

Source: Genesee County Health Department

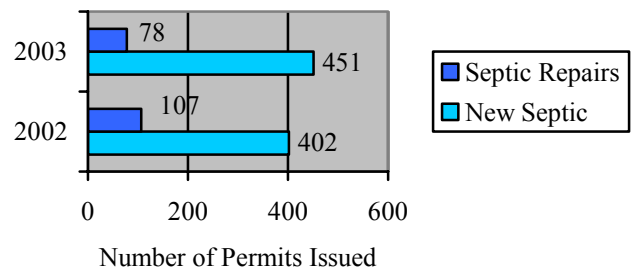
Access to Fluoridated Water

- ◆ 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 existing private septic systems in Genesee County.

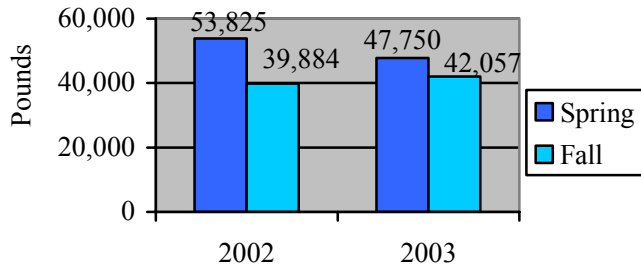
Fig. 6.5 Septic Permits Issued, Genesee County, 2002 and 2003



Source: Genesee County Health Department

HAZARDOUS WASTE

Fig. 6.6 Pounds of Hazardous Waste Collected, Genesee County, 2002 and 2003



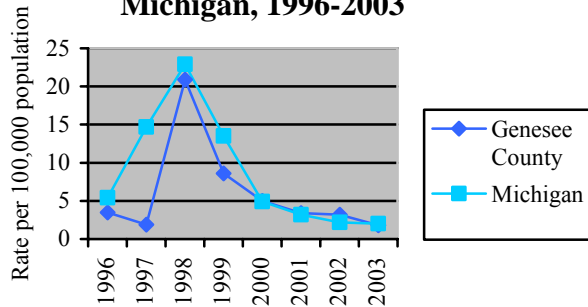
Source: Genesee County Health Department

- ◆ Two Hazardous Waste Collection Days are held in Genesee County each year. Examples of hazardous waste collected at these events include cleaning products, motor oil, pesticides, mercury filled thermometers, and more.
- ◆ In 2002, a total of **93,709 pounds** of hazardous waste was collected at these events. In 2003, **89,807 pounds** was collected.

FOOD SAFETY

Foodborne Disease

Fig. 6.7 Rates of Hepatitis A per 100,000, Genesee County and Michigan, 1996-2003



Source: Michigan Disease Surveillance System

- ◆ Hepatitis A is considered a foodborne disease. For the period 1996-2003, rates in Genesee County were consistently lower than State rates. The spike in 1998 is attributed to a statewide outbreak of Hepatitis A in strawberries.
- ◆ 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, 2002 and 2003		
Disease	Number of Cases (Rate per 100,000 population)	
	2002	2003
E.Coli 0157:H7	5 (1.1)	2*
Giardiasis	26 (6)	18 (4.1)
Campylobacter	22 (5)	24 (5.5)
Salmonellosis	24 (5.5)	33 (7.6)
Shigellosis	4*	7 (1.6)
Cryptosporidiosis	1*	4*

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

Food Service Sanitation

- ◆ There are approximately **1,340** fixed food service establishments in Genesee County.

Fig. 6.9 Number of Food Service Sanitation Inspections Completed by Type of Establishment, Genesee County, 2003	
Type of Establishment	Number of Inspections Completed
Restaurants, Cafeterias, Bars, Concessions, Catering Kitchens, and Other Licensed Food Service Establishments	2,574
Temporary Food Service Concessions such as Carnivals, Festivals, Fund Raisers, etc.	412
Licensed Vending Machine Locations	204

Source: Genesee County Health Department

Food Sanitation Facts for 2003*

- ◆ The average routine inspection identified 6.3 violations of the Michigan Food Law. There was an average of 1.2 critical violations per inspection.
- ◆ Customers made 252 general complaints, each of which was investigated.
- ◆ Customers made 73 complaints of foodborne illness, each of which was investigated. 14 of the 73 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.
- ◆ 9 establishments experienced enforcement action for failure to correct critical violations.
- ◆ 260 food service employees completed a basic sanitation course offered monthly at the Genesee County Health Department (Fiscal Year 2002-2003).
- ◆ 60 food service managers completed an intensive sanitation training course offered quarterly at the Genesee County Health Department (Fiscal Year 2002-2003).
- ◆ Plans for 91 new and remodeled establishments were reviewed and approved by the Genesee County Health Department.
- ◆ Establishments with excellent sanitation receive awards and recognition on an annual basis. Others receive license fee credits for consistently high levels of sanitation or completing training courses at the Genesee County Health Department.

*Calendar year 2003 unless otherwise noted. Source: Genesee County Health Department

LEAD EXPOSURE

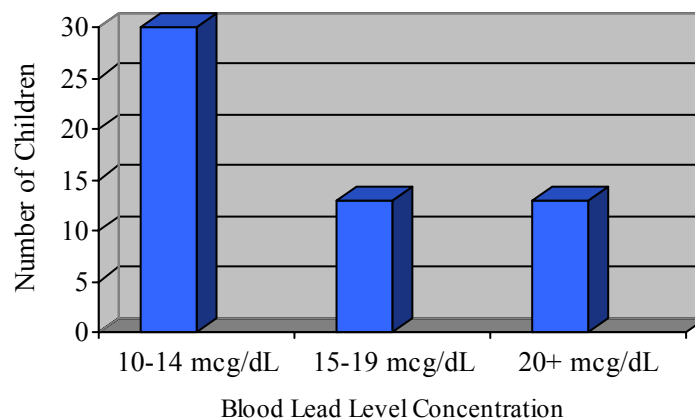
- ◆ In 2003, 23% of houses in Genesee County, and 27% of houses in Michigan, were estimated to have been built before 1950. Houses built before 1950 pose the greatest hazard of lead exposure to children because they are much more likely to contain lead-based paint than newer houses. Children may ingest lead through paint chips or inhale lead as dust.
- ◆ As of September 2004, 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, 2003

Number of children under the age of 6 living in Genesee County	38,236
Number of children under the age of 6 in Genesee County who had their lead level tested	4,115 (11%)
Number of children found to have elevated blood lead levels (≥ 10 mcg/dL)	56 (1.4%)
Number of children found to have elevated blood lead levels who are 1 or 2 years of age	28

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, 2003



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

CHAPTER 7:

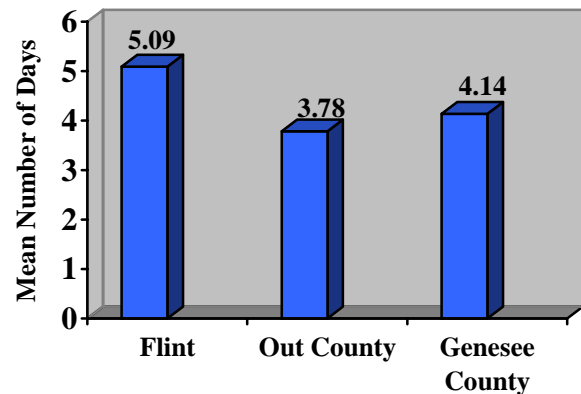
Social and Mental Health

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.

MENTAL HEALTH STATUS

- ◆ As shown in Figure 7.1, Flint residents reported significantly more 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 their mental health status was not good than males.
- ◆ Mental health status varied by age in Genesee County, with reported number of days where mental health status was not good decreasing as age increased.

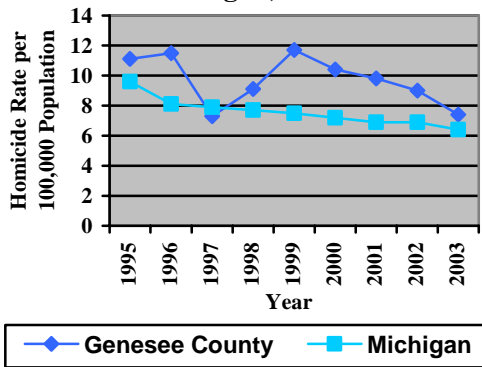
Fig. 7.1 Mean Number of Days Mental Health Was Not Good in the Past 30 Days by Location, 2003



Source: Speak to Your Health! Community Survey, 2003, Prevention Research Center of Michigan

HOMICIDE

Fig. 7.2 Age-Adjusted Homicide Rates, Genesee County and Michigan, 1995-2003



Note: In 1999 the coding and classification for underlying cause of death was changed to reflect changing medical opinion and practice. This change should have little or no impact on the comparisons of mortality statistics for this particular cause of death over time. Source: Michigan Department of Community Health

- ◆ Overall, Genesee County’s homicide rate has fluctuated over the 9 year period shown. Since 1999, the homicide rate has been steadily decreasing.
- ◆ From 1995-2003, the homicide rate for Michigan has been on a slight, but steady decline.

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.

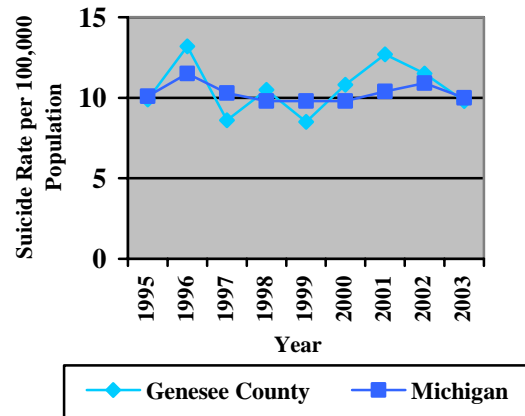
Fig. 7.3 Child Abuse and Neglect, Genesee County, Fiscal Year 2002			
	Number	Rate (per 1,000)	Rank*
Children in investigated families	11,368	95.0	71 of 83
Confirmed Victims of Abuse or Neglect	2,522	21.1	76 of 82

*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. Source: Kids Count in Michigan Data Book, 2003

SUICIDE

- ◆ From 1995-2003, there were large fluctuations in Genesee County's suicide rate, unlike Michigan, whose suicide rate was fairly steady.
- ◆ The highest suicide rate in this time period for both Genesee County (13.2 per 100,000) and Michigan (11.5 per 100,000) occurred in 1996.
- ◆ In 2003, in Genesee County, there were 4 people under the age of 25 years who committed suicide. Due to the small number, a reliable age-specific rate cannot be calculated.

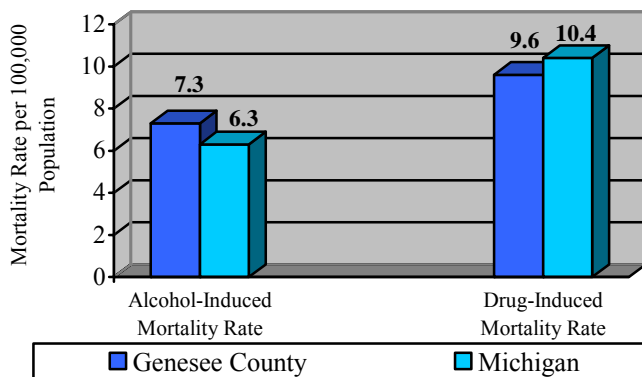
Fig.7.4 Age-Adjusted Suicide Rates for Genesee County and Michigan, 1995-2003



Note: In 1999 the coding and classification for underlying cause of death was changed to reflect changing medical opinion and practice. This change should have little or no impact on the comparisons of mortality statistics for this particular cause of death over time. Source: Michigan Department of Community Health

ALCOHOL AND DRUG-INDUCED DEATHS

Fig. 7.5 Age-Adjusted Alcohol and Drug-Induced Mortality Rates, Genesee County and Michigan, 2003



- ◆ In 2003, Genesee County had a slightly higher rate of alcohol-induced deaths than Michigan, while the County had lower rates of drug-induced deaths than the State.

Source: Michigan Department of Community Health

- ◆ Alcohol-involved traffic crashes are a significant public health issue. The reported alcohol-involved fatal traffic crashes in Genesee County accounted for nearly 7% of all such crashes in the State of Michigan in 2003.

Fig. 7.6 Reported Alcohol Involved Traffic Crashes, Genesee County, 2003						
	All	Fatal	Injury	Property Damage	Persons Killed	Persons Injured
Genesee County	798	25	367	406	26	534

Source: Michigan Office of Highway Safety and Planning

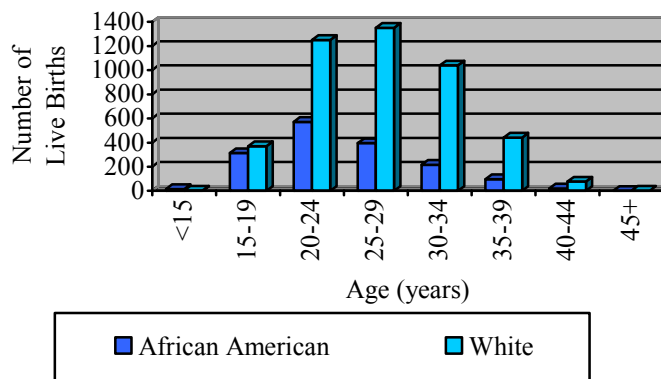
CHAPTER 8:

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. 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, 2003



Source: Michigan Department of Community Health

- ◆ In 2003, there were 6,264 live births in Genesee County and 2,480 (40%) 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 (11 births) and Asian and Pacific Islanders (77 births) are not shown in the figure above.

Selected Birth Characteristics

Fig. 8.2 Selected Birth Characteristics, Genesee County and Michigan, 2003

Maternal Characteristics	Genesee County	Michigan
Under 20 years	11.3%	9.5%
First births	37.4%	39.0%
Fourth and higher order births	12.6%	11.4%
Less than 12 years of education	18.6%	16.9%
Cesarean delivery rate	30.7%	26.3%
Weight gained while pregnant less than 16 pounds	11.6%	11.8%
Smoked while pregnant	17.5%	14.4%
Unmarried	46.1%	34.6%
Received prenatal care during first trimester	84.2%	84.1%

Source: Michigan 2003 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 Cesarean section deliveries in the County than the State.

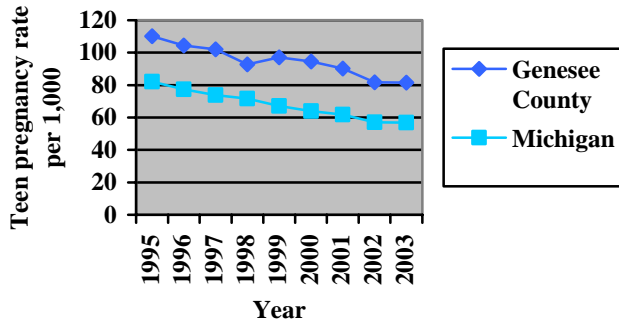
TEEN PREGNANCY

- ◆ The 2003 estimated teen pregnancy rate for Genesee County was 81.5 per 1,000 females ages 15-19 years. The Michigan rate for the same year was 56.9 per 1,000 females ages 15-19 years.

Fig. 8.3 Number of Live Births for Teens <19 years old, Flint and Genesee County Residents, 2003						
	White		African American		Other	
	<15 years	15-19 years	<15 years	15-19 years	<15 years	15-19 years
City of Flint	2	131	11	271	0	3
Genesee County	3	369	14	313	0	5

Note: City of Flint live births are also a part of the Genesee County numbers. Source: Michigan 2003 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, 1995-2003



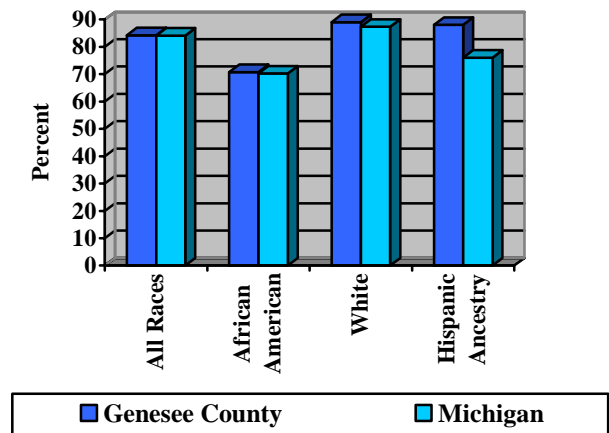
- ◆ Teen pregnancy in Genesee County and Michigan has generally been decreasing from 1995-2003.
- ◆ However, Genesee County’s teen pregnancy rate is still higher than the State rate.

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

PRENATAL CARE

- ◆ In 2003, a higher percentage of White women (89.0%) in Genesee County entered prenatal care in the first trimester of pregnancy than African American women (70.7%) and women of Hispanic ancestry (88.0%).
- ◆ Overall, Genesee County’s rates of prenatal care beginning in the first trimester are slightly higher than the State of Michigan’s rates.

Fig. 8.5 Percent of Live Births with Prenatal Care Beginning in the First Trimester, Genesee County and Michigan, 2003



Source: 2003 Michigan Resident Birth File, Vital Records & Health Data Development Section, Michigan Department of Community Health

BIRTHWEIGHT

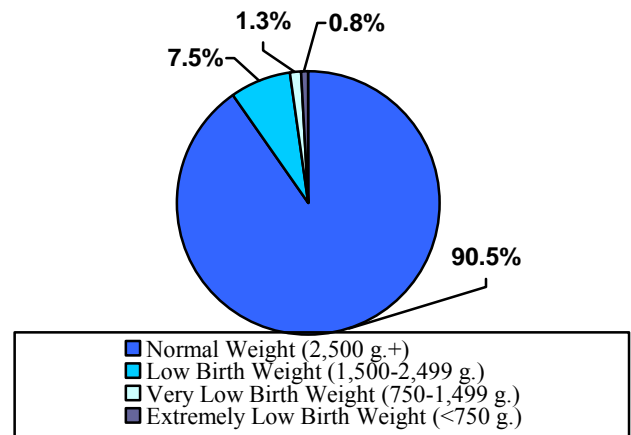
Birthweight is an important indicator of child health, as infants born below a certain birthweight are more likely to have serious health problems as newborns, are at risk for long-term disabilities, and are at higher risk for infant death.

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

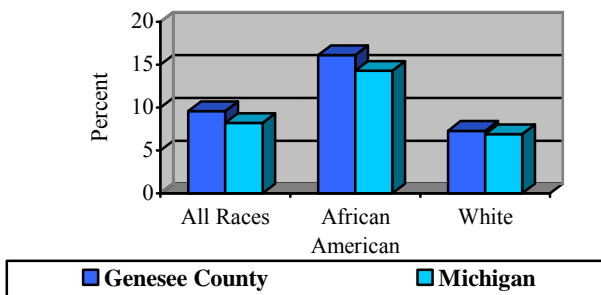
- ◆ In 2003, Genesee County had a higher proportion (9.6%) of live births that were low birthweight (below 2,500 grams) than Michigan (8.2%).

Fig. 8.6 Percent of Live Births by Birthweight, All Races, Genesee County Residents, 2003



Source: 2003 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, 2003



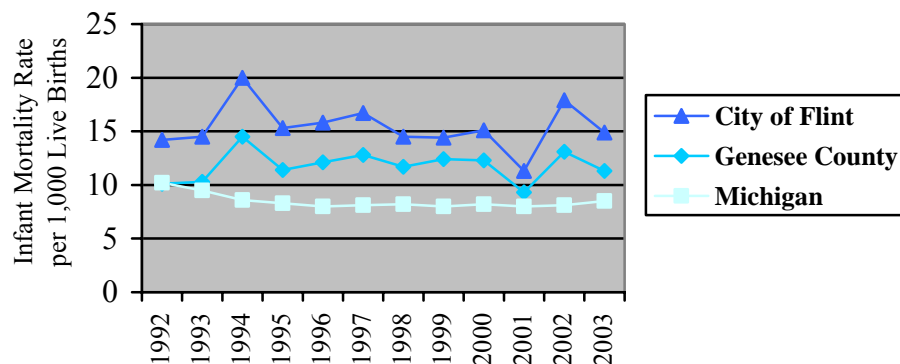
Source: 2003 Michigan Resident Birth File, Vital Records Health Data Development Section, Michigan Department of Community Health

- ◆ In Genesee County, in 2003, 16.1% of live births to African American mothers were low birthweight (any birth less than 2,500 grams) compared to 7.3% of live births to White mothers. This difference by race is similar for Michigan and the United States.

INFANT MORTALITY

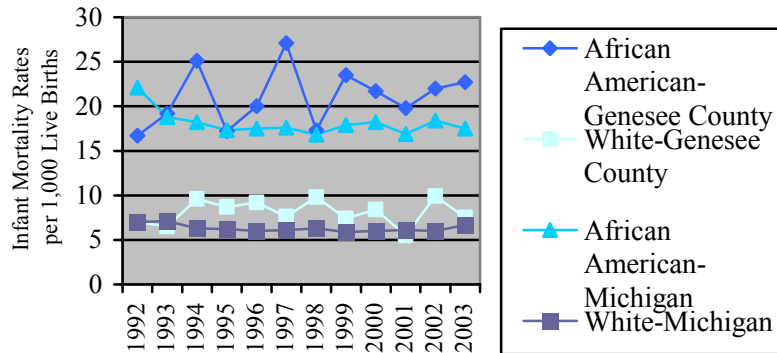
- ◆ Infant mortality is defined as the death of an infant under the age of 1 year.
- ◆ With the exception of 1992, infant mortality rates in Genesee County have been greater than the State of Michigan rate for all years shown below. The infant mortality rate in the City of Flint was higher than both the County rate and State rate for each of the years shown in Figure 8.8.
- ◆ The infant mortality rate in Genesee County has fluctuated during the period 1992-2003 from a high of 14.5 infant deaths per 1,000 live births in 1994 to a low of 9.3 infant deaths per 1,000 live births in 2001.
- ◆ In 2003, the infant mortality rate in the City of Flint was 14.9 per 1,000 live births, 11.3 per 1,000 live births in Genesee County, and 8.5 per 1,000 live births in the State of Michigan.

**Fig. 8.8 Infant Mortality Rates,
City of Flint, Genesee County and Michigan,
1992-2003**



Source: 1992-2003 Michigan Resident Death Files and Michigan Resident Birth Files, Epidemiology Services Division, Vital Records and Health Data Development Section, Michigan Department of Community Health

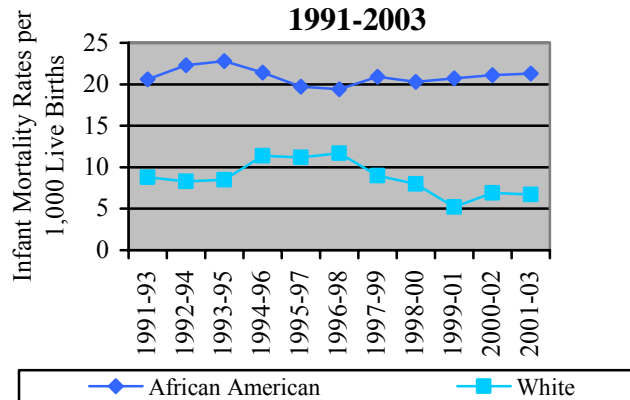
Fig. 8.9 Infant Mortality Rates by Race, Genesee County and Michigan, 1992-2003



Source: 1992-2003 Michigan Resident Death Files, Vital Records and Health Data Development Section, 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 1992-2003.
- ◆ 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, 1991-2003



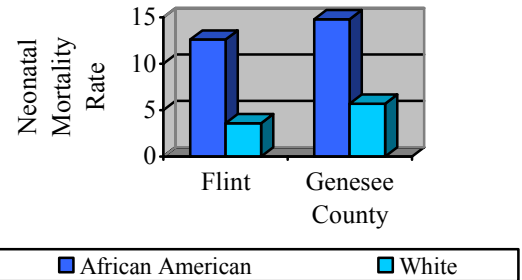
Source: 1992 - 2003 Michigan Resident Death Files and Michigan Resident Birth Files, Vital Records and Health Data Development Section, Michigan Department of Community Health

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 as a whole.
- ◆ In 2003, the overall neonatal infant mortality rate for Genesee County was 8.0 per 1,000 live births and 8.5 per 1,000 live births in Flint.

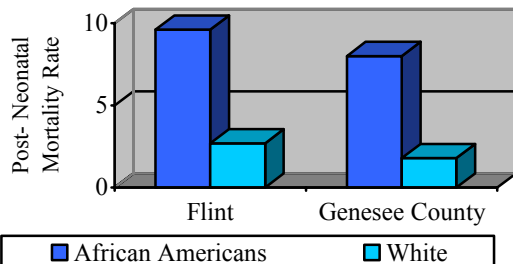
Fig. 8.11 Neonatal Infant Mortality Rates by Race, Flint and Genesee County, 2003



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

Post-Neonatal Infant Mortality

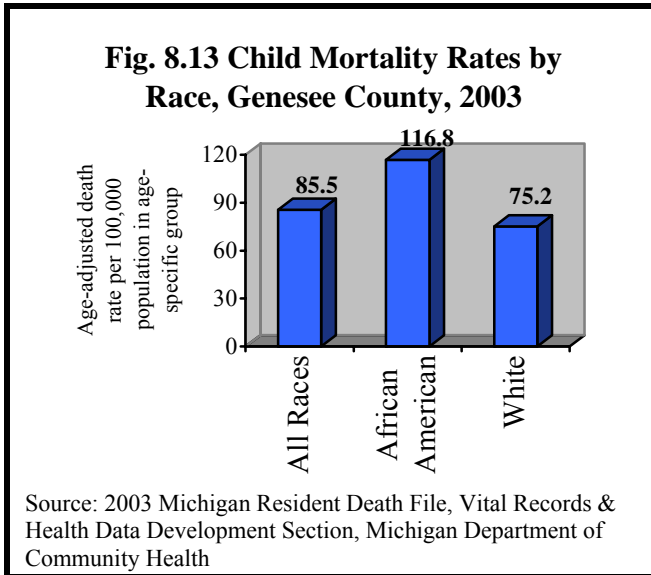
Fig. 8.12 Post-Neonatal Infant Mortality Rates by Race, Flint and Genesee County, 2003



*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.
- ◆ The 2003 Genesee County post-neonatal infant mortality rate was 3.4 per 1,000 live births. In 2003, the Flint rate was 6.5 per 1,000 live births.

Child Mortality

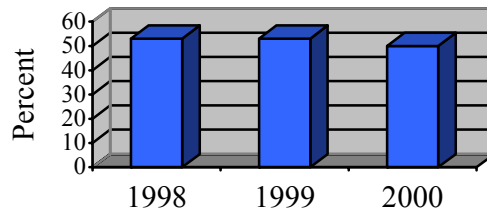


- ◆ In 2003, the child mortality rate (ages 1-14 years) was 85.5 per 100,000 population in the specified age and race group.
- ◆ Child deaths are disparate by race in Genesee County, with African Americans having a higher death rate than Whites.

WOMEN, INFANTS, AND CHILDREN (WIC)

- ◆ In 1998-2000, approximately one-half of live births to Genesee County residents were enrolled in WIC (the Women, Infants, and Children program).

Fig. 8.14 Percent of Live Births Enrolled in WIC, Genesee County, 1998-2000



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

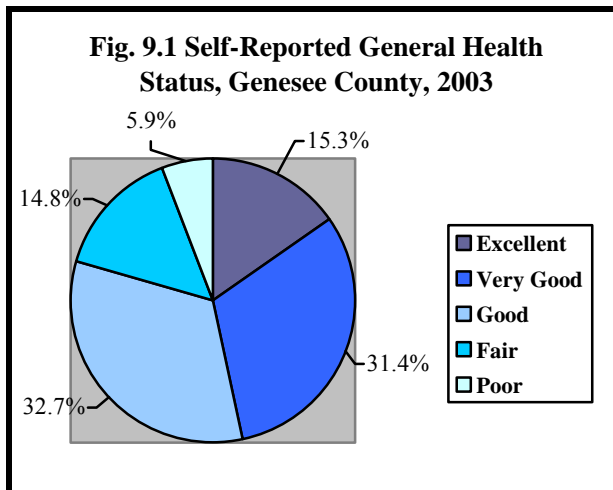
CHAPTER 9:

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 2003, 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, unless otherwise noted.

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, 2003, Prevention Research Center of Michigan

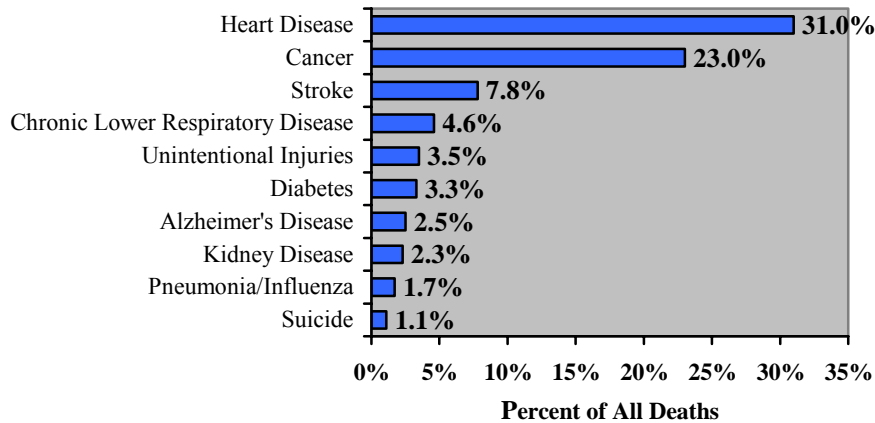
- ◆ Whites were more likely to report better general health status than African Americans.
- ◆ Over 80% (81.6) of Out County residents rated their general health as *Excellent*, *Very Good*, or *Good* compared to nearly three-quarters (73.4%) of City of Flint residents.
- ◆ Males reported better health status than females.
- ◆ Although the majority of Genesee County residents (75.4%) reported that poor physical or mental health status did not keep them from doing their usual activities in the past month, Flint residents reported significantly more days where their physical or mental health status did keep them from their usual activities than Out County residents.

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 2003, 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 Unintentional Injuries.

Fig. 9.2 Ten Leading Causes of Death for Genesee County Residents, 2003



Source: 2003 Michigan Resident Death File, Vital Records & Health Data Development Section, 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, 2003 (per 100,000 population)

Cause of Death	All Races	White		African American			
	Overall	Total	Male	Female	Total	Male	Female
Heart Disease	286.5	273.1	347.6	222.2	353.2	420.9	299.2
Cancer	206.0	207.4	240.7	188.3	201.7	228.1	185.1
Stroke	73.8	66.8	64.9	66.2	109.5	102.5	110.2
Chronic Lower Respiratory Disease	42.0	44.8	55.9	39.6	*	*	*
Unintentional Injuries	31.5	30.1	43.5	19.1	40.2	60.1	*
Diabetes Mellitus	29.5	25.5	37.3	17.4	47.2	*	*
Alzheimer's Disease	24.5	25.8	*	31.9	*	*	*
Pneumonia/Influenza	15.9	15.3	21.3	12.4	*	*	*
Kidney Disease	20.7	18.5	23.6	15.8	30.0	*	*
Suicide	9.8	9.1	12.4	*	*	*	*
All Other Causes	174.6	154.9	186.5	127.5	261.3	283.4	239.4
Total	914.9	871.3	1,046.9	746.7	1,111.2	1,254.8	990.1

*Number of cases is too small to calculate a reliable rate. Source: Michigan Department of Community Health

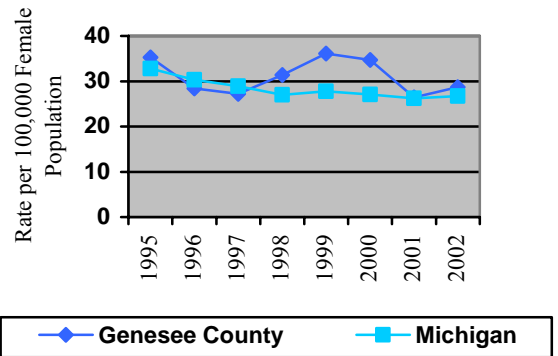
CANCER

Cancer was the second leading cause of death for Genesee County residents in 2002 and 2003. The most prevalent types of cancer include breast cancer, lung cancer, colorectal cancer, and prostate cancer. In Genesee County in 2002, lung cancer accounted for more deaths (262) than breast, colorectal, and prostate cancer combined (211). In the United States, tobacco use remains the number one cause of lung cancer.

Breast Cancer

- ◆ In 2002, the age-adjusted death rate from invasive breast cancer was 28.7 per 100,000 female population in Genesee County compared to 26.7 per 100,000 female population in Michigan

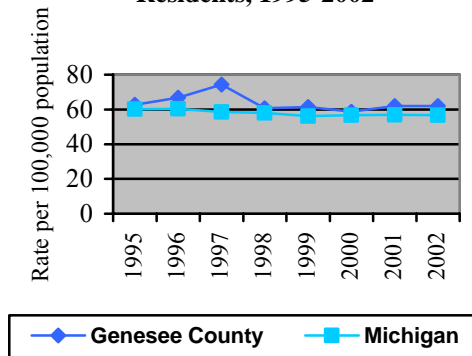
Fig. 9.4 Age-Adjusted Invasive Breast Cancer Mortality Rates, Female Residents, Genesee County and Michigan, 1995-2002



Source: 1985-2002 Michigan Resident Death Files, Vital Records & Health Data Development Section, Michigan Department of Community Health

Lung Cancer

Fig. 9.5 Age-Adjusted Invasive Lung Cancer Mortality Rates, Genesee County and Michigan Residents, 1995-2002



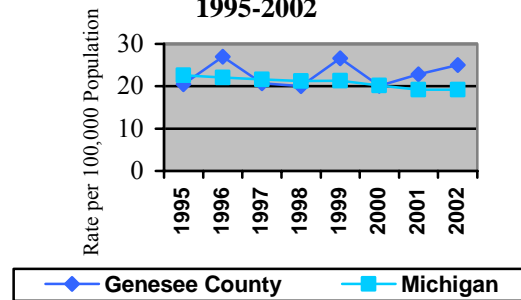
- ◆ In 2002, the age-adjusted death rate for invasive lung cancer was 61.9 per 100,000 population in Genesee County and 56.6 per 100,000 population in Michigan.

Source: 1985-2002 Michigan Resident Death Files, Vital Records & Health Data Development Section, Michigan Department of Community Health

Colorectal Cancer

- ◆ In Genesee County, the age-adjusted death rate for colorectal cancer was 25.0 per 100,000 population in 2002. Michigan's rate was 19.2 per 100,000 population.

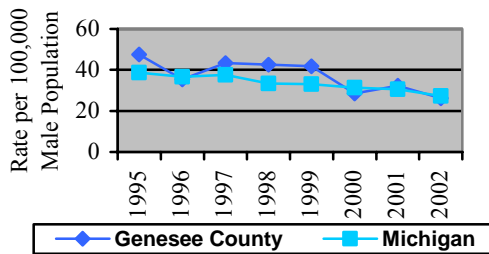
Fig. 9.6 Age-Adjusted Invasive Colorectal Cancer Rates, Genesee County and Michigan, 1995-2002



Source: 1985-2002 Michigan Resident Death Files, Vital Records & Health Data Development Section, Michigan Department of Community Health

Prostate Cancer

Fig. 9.7 Age-Adjusted Invasive Prostate Cancer Mortality Rates, Genesee County and Michigan, 1995-2002



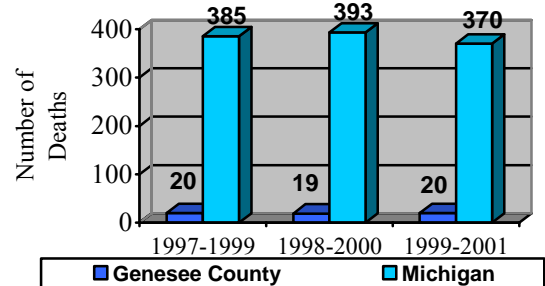
Source: 1985-2002 Michigan Resident Death Files, Vital Records & Health Data Development Section, Michigan Department of Community Health

- ◆ In 2002, the age-adjusted death rate for prostate cancer was 26.2 per 100,000 male population in Genesee County and 27.2 per 100,000 male population in Michigan.

Cervical Cancer

- ◆ In Genesee County from 1999-2001 the age-adjusted death rate for cervical cancer was 2.8 per 100,000 female population. The age-adjusted death rate in Michigan for the same time period was 2.3 per 100,000 female population.

Fig. 9.8 Numbers of Deaths Due to Invasive Cervical Cancer, Genesee County and Michigan, 1997-2001



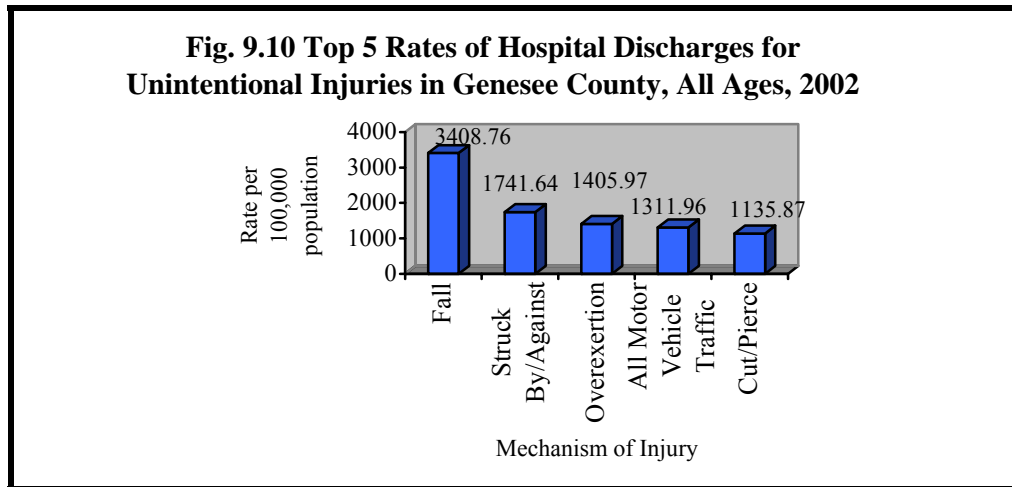
Source: 1997-2001 Michigan Resident Death Files, Michigan Department of Community Health, Vital Records and Health Data Development Section.

DIABETES

- ◆ In 2002 there were an estimated 24,930 adults over the age of 18 years who have been diagnosed with diabetes in Genesee County, including 890 Hispanics/Latinos. The overall rate of diabetes in adults in Genesee County is estimated to be 7.4 per 100 people.
- ◆ Figure 9.9 shows that in Genesee County, African Americans 18 years and older have higher rates of diabetes than Whites in the same age group.
- ◆ In 2004, the U.S. Department of Health and Human Services estimated that there are an additional 10,010 Genesee County adults with undiagnosed diabetes.

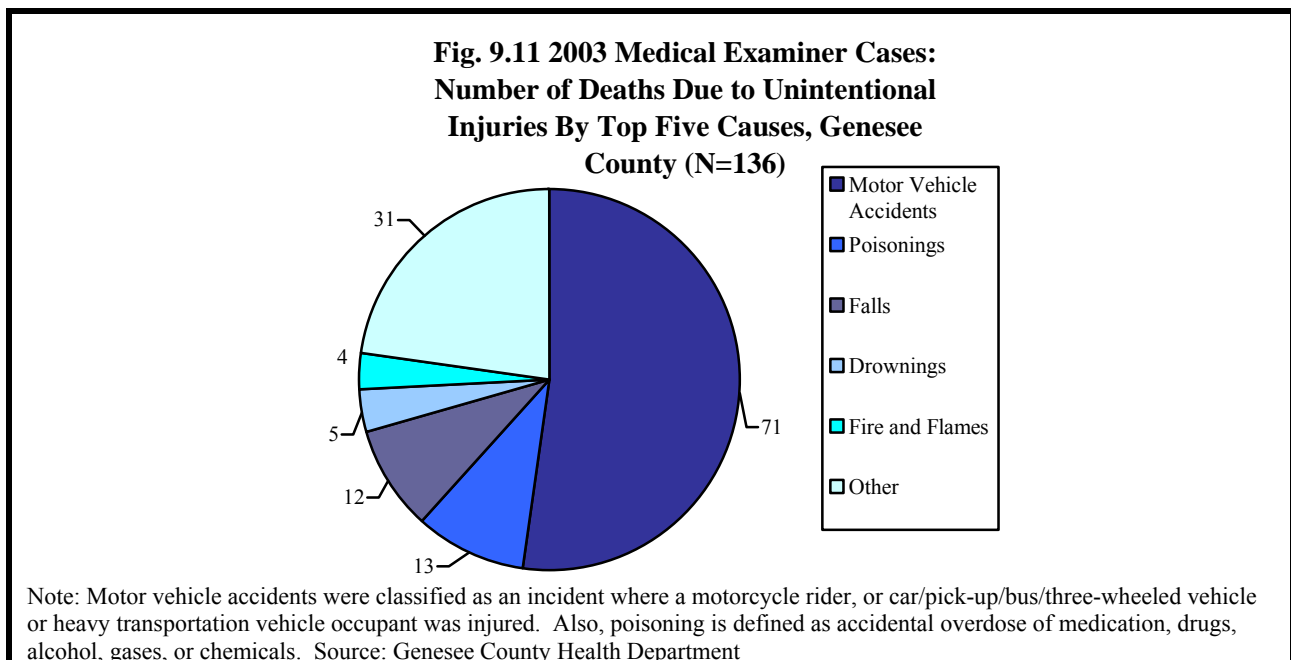


UNINTENTIONAL INJURIES



Source: Flint's Youth Violence Prevention Center, 2004

- ◆ Figure 9.10 shows that in 2002, falls accounted for the highest number and highest proportion of hospital discharges for unintentional injuries in Genesee County.
- ◆ In 2003, unintentional injury deaths accounted for 136, or 23%, of all medical examiner cases. As shown in Figure 9.11, motor vehicle accidents contributed to the majority (52%) of deaths due to unintentional injuries.
- ◆ More males (91) died as a result of unintentional injuries than females (45). Whites accounted for 76.5% of unintentional injury deaths in 2003, while 22.8% of unintentional injury deaths were to African Americans.



CHAPTER 10:

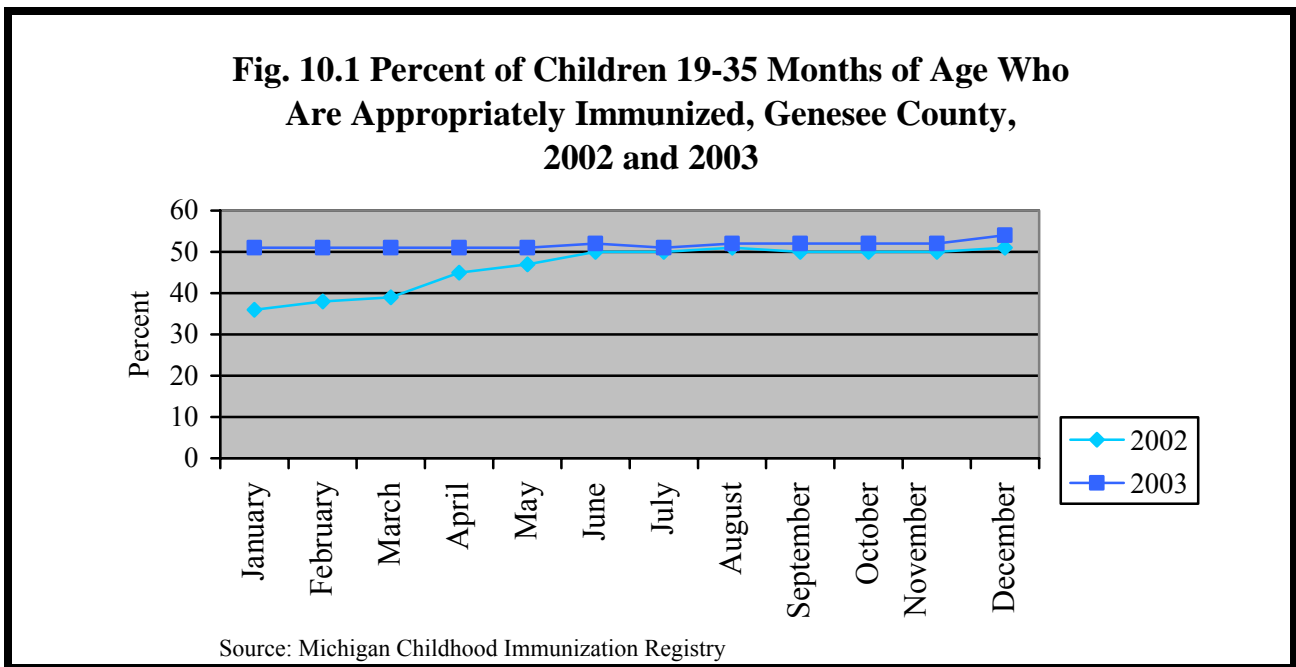
Communicable Disease

Measures 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 Hib (Haemophilus influenzae type B)
 - ◆ 3 Polio
 - ◆ 1 MMR (Measles, Mumps & Rubella)
 - ◆ 1 Hepatitis B
 - ◆ 1 Varicella (Chickenpox)

- ◆ The goal is to have 100% of children in Genesee County receive all of their age-appropriate vaccinations.
- ◆ In 2002, the average rate of coverage was 46% and in 2003 the average rate of coverage was 47%.
- ◆ Figure 10.1 illustrates the impressive progress that has been made in Genesee County over the two years shown. In January 2002, only 36% of 19-35 month olds in Genesee County had received all of their age-appropriate immunizations. By the end of 2003, 54% of children in that age group were fully immunized.

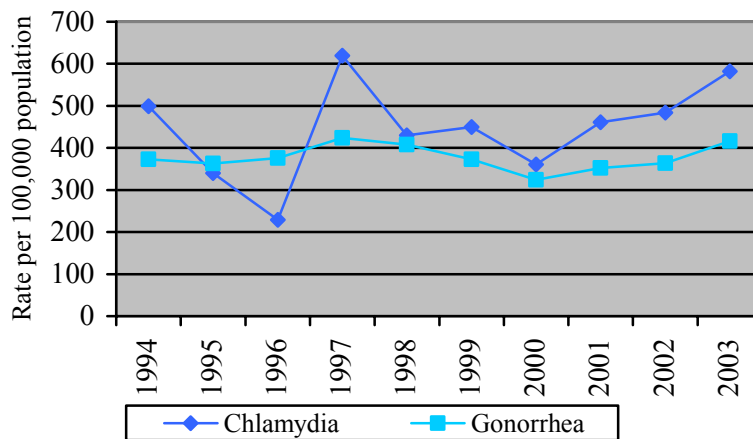
Adults

- ◆ 40.2% of adults aged 65 years and older in Region 2 of Michigan, which includes Genesee, Lapeer, and Shiawassee Counties, have not had a flu shot in the past year.
- ◆ 47.2% of adults 65 years and older in Region 2, have never had a pneumonia shot.

Source: Michigan Behavioral Risk Factor Survey, 1998-2002, 2004, Michigan Department of Community Health

SEXUALLY TRANSMITTED DISEASE

Fig. 10.2 Rates of Sexually Transmitted Diseases, Genesee County, 1994-2003



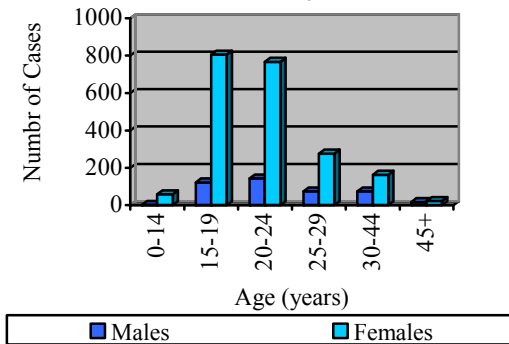
Source: Michigan Sexually Transmitted Diseases Database, Sexually Transmitted Disease Section, Division of HIV/AIDS-STD, Michigan Department of Community Health

- ◆ In 2002 and 2003, Genesee County had the 2nd highest rate of Gonorrhea in the State of Michigan, outside of the City of Detroit.
- ◆ There are significant racial disparities in rates of Chlamydia and Gonorrhea in Genesee County.

Fig. 10.3 Overall Rates of Gonorrhea and Chlamydia, Genesee County and Michigan, 2003		
	Genesee County	Michigan
Gonorrhea	413.7	138.5
Chlamydia	578.5	323.3

*Rates are per 100,000 population. Rate calculations were obtained using 2003 population estimates.
Source: Genesee County Health Department and Michigan Department of Community Health

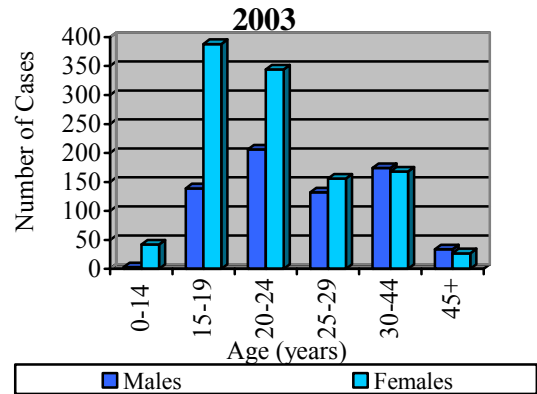
Fig. 10.4 Number of Chlamydia Cases by Gender and Age, Genesee County, 2003



- ◆ Males and females 15-24 years old had the highest incidence of Chlamydia in 2003.

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

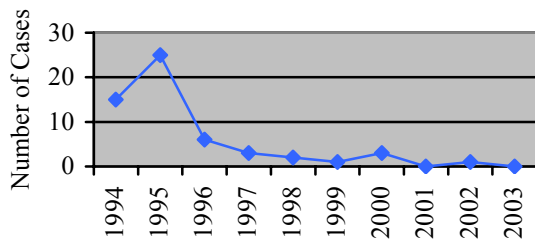
Fig. 10.5 Number of Gonorrhea Cases by Gender and Age, Genesee County, 2003



- ◆ In 2003, females between 15-24 years of age were the group with the highest number of reported cases of Gonorrhea.

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

Fig. 10.6 Number of Cases of Primary & Secondary Syphilis, Genesee County, 1994-2003

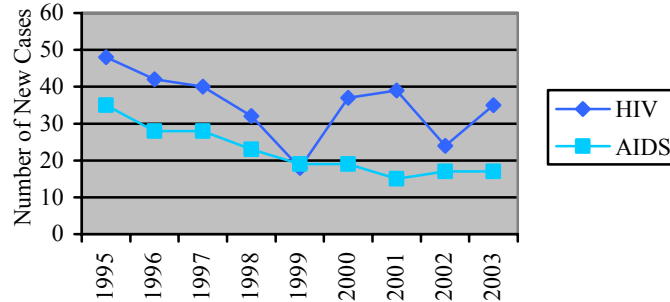


- ◆ Since the number of cases of Primary and Secondary Syphilis peaked in 1995, the number of cases has declined dramatically with few or no cases for several years in the time period shown.

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

HIV/AIDS

Fig. 10.7 Number of New Cases of HIV and AIDS, Genesee County, 1995-2003



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

- ◆ In 2003, there were 13 HIV/AIDS deaths in Genesee County.

TUBERCULOSIS

Fig. 10.8 Number of Cases and Rate of Tuberculosis, Genesee County, 2000-2003

	2000	2001	2002	2003
Number of Cases	11	20	11	7
Rate	2.5 per 100,000	4.6 per 100,000	2.5 per 100,000	1.6 per 100,000

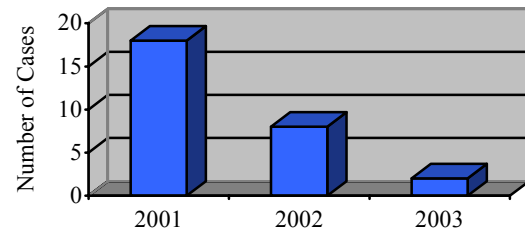
Source: Michigan Disease Surveillance System

HEPATITIS

Hepatitis B

- ◆ In Genesee County, the number of acute Hepatitis B cases has been decreasing since 2001.

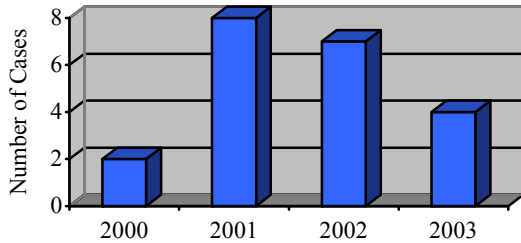
Fig. 10.9 Number of Acute Hepatitis B Cases, Genesee County, 2001-2003



Source: Michigan Disease Surveillance System

Hepatitis C

Fig. 10.10 Number of Acute Hepatitis C Cases, Genesee County, 2000-2003



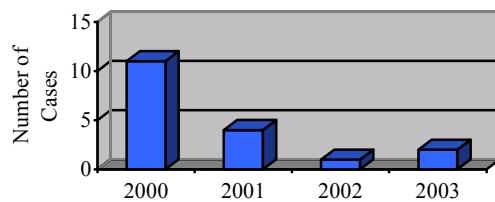
Source: Michigan Disease Surveillance System

- ◆ In Genesee County, there have been few cases of Acute Hepatitis C from 2000-2003.

BACTERIAL MENINGITIS

- ◆ From 2000-2003, there have been few cases of bacterial meningitis in Genesee County.

Fig. 10.11 Number of Bacterial Meningitis Cases, Genesee County, 2000-2003



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 disease shown below, so any cases that are seen may indicate a vaccine coverage issue in the community.

Fig. 11.1 Number of Cases of Vaccine Preventable Disease, Genesee County, 2003					
	Measles	Mumps	Rubella	Pertussis	Tetanus
Genesee County	0	0	0	5	0

Source: Michigan Disease Surveillance System

WORK-RELATED DEATHS

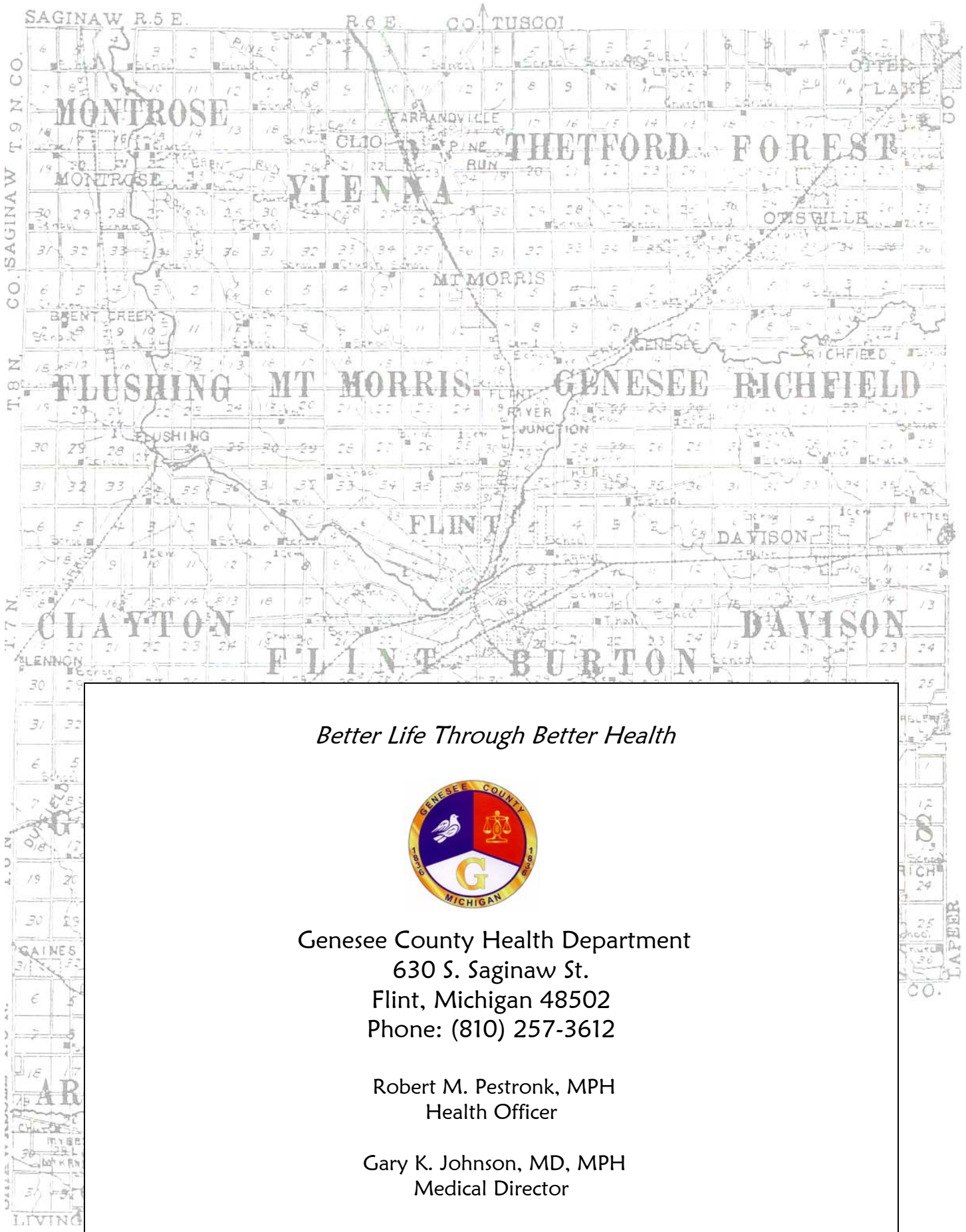
- ◆ In 2003, there were 5 work-related deaths in Genesee County. There were 3 such deaths in 2002, and 1 in 2001.

Source: Genesee County Health Department

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Better Life Through Better Health



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