

**Sheboygan
County
Community
Health Needs
Assessment**

2009



Public Health
Prevent. Promote. Protect.

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Part I: Introduction

This Community Health Assessment was designed to fulfill the local health department's requirement to regularly and systematically collect, assemble, analyze, and make available information on the health status of Sheboygan County. Findings will be utilized to assist the local health department and community partners as they plan collaborative efforts designed to improve the health of our community.

The assessment is divided into seven sections:

- Part I: Introduction
- Part II: Executive Summary
- Part III: Demographics and Economic Profiles
- Part IV: Review of Recent Assessments
- Part V: Initiatives Designed to Promote a Healthy Community
- Part VI: Sheboygan County Health Findings Based on Healthiest Wisconsin 2020 Focus Areas
- Part VII: References

Part II: Executive Summary

This section provides a brief overview of the purpose of the assessment and examples of significant findings.

Part III: Demographic and Economic Profiles

Profiles were completed using secondary data analysis. Part III relied on data from a variety of sources including, but not limited to, U.S. Census Bureau, Wisconsin Department of Health Services Reference Center, and the Wisconsin Department of Workforce Development.

Part IV: Review of Recent Assessments

This section includes key health findings from community assessments completed in the past five years in Sheboygan County (2004-2009). These assessments were completed by other entities and provided to the Sheboygan County Division of Public Health for review and use. This section will provide an overview of the purpose and data collection methods of these assessments and will provide an overview of the common themes.

Part V: Initiatives Designed to Promote a Healthy Community

This section provides background information regarding the State Health Initiative known as Healthiest Wisconsin 2020 and our local community health coalition, Healthy Sheboygan County 2020.

Part VI: Sheboygan County Findings based on Healthiest Wisconsin 2020 Focus Areas

This section provides assessment findings and secondary data analysis in relation to the twelve health focus areas identified in the Wisconsin Health Plan. The twelve health focus areas identified include:

- 1) Adequate, appropriate, and safe food and nutrition
- 2) Chronic disease prevention and management
- 3) Communicable disease prevention and control
- 4) Environmental and occupational health
- 5) Healthy growth and development
- 6) Mental health
- 7) Oral health
- 8) Physical activity
- 9) Reproductive and sexual health
- 10) Tobacco use and exposure
- 11) Unhealthy alcohol and drug use
- 12) Violence and injury prevention

Local health data was located via a variety of published sources; most frequented sources include the Wisconsin Department of Health Services Health Statistics website (<http://dhs.wisconsin.gov/stats/>) and the 2008 Wisconsin County Health Rankings published by the University of Wisconsin School of Medicine and Public Health.

Regional, State, and National comparison data is included in the report in many instances. Because raw numbers cannot be used to compare populations of varying sizes, rates are included as available. Rates, which have been calculated using common denominators, allow for comparisons between areas with varying population sizes.

The major type of comparison in this report is described below.

County vs. regional vs. state comparison. The State of Wisconsin collects health data at the regional level, in addition to the county and state levels. The state has been divided into five regions for this purpose: the northern, northeastern, southeastern, southern and western regions. Sheboygan County is part of the northeastern region which is why northeastern region data is included in this report for the purpose of comparison. The counties in the northeastern region are listed below.

Northeastern region – Brown, Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, **Sheboygan**, Waupaca, Waushara, Winnebago.

Part VII: References

This section includes a comprehensive list of sources of secondary data and references utilized to compile this report. (Data is often updated on a frequent basis and resources may change. This list can be utilized to verify data or check data for updates.)

The Division of Public Health acknowledges David Rebedew, U.W. Madison Medical School student and Gen Flores, RN, U.W. Milwaukee School of Nursing student who provided assistance in researching local health data and drafting a preliminary version of the 2009 Community Health Assessment during their clinical experiences at the local health department.

PART II: EXECUTIVE SUMMARY

In the practice of public health, the community is the patient and the health of the community is monitored and evaluated on a regular basis by examining key population health indicators such as local disease rates, causes of death, and behavioral health determinants such as smoking or drinking rates. In Wisconsin, each local health department is required to conduct a community health assessment every five years. The assessment findings are widely disseminated among community members in an effort to allow public health practitioners and their community partners to identify community trends and priorities which may require attention as community health improvement plans are updated.

The 2008 Wisconsin County Health Rankings Report ranks Sheboygan County 36th of the 72 Wisconsin Counties in relation to “health outcomes.” This “middle” ranking is further substantiated throughout the 2009 Sheboygan County Health Assessment as comparisons between local, state and national data demonstrate.

Local assessment findings demonstrate that significant progress has been made during the past decade in several distinct areas including, but not limited to, childhood lead poisoning, physical activity and expansion in health care coverage among low income persons via the Wisconsin Medicaid Program. Significant local health findings which require attention including binge drinking, tobacco use, obesity, sexually transmitted diseases, domestic violence, and limited access to primary health and dental services for uninsured or underinsured residents of our community continue to present unique challenges. Key findings related to the Healthiest Wisconsin 2020 objectives are summarized at the conclusion of each section throughout Part VI of this document for the reader’s quick reference.

Part III: Demographic and Economic Profile

Sheboygan County Demographic Profile

Population

- The U.S. Census Bureau estimated Sheboygan County's 2008 population to be 114,561.
- Sheboygan County's population grew by 1.7% between the 2000 US Census and the 2008 population estimate. In comparison, the population of the State of Wisconsin grew by 4.9% and the population of the United States grew by 8.0% during the same period.

The population growth in Sheboygan County is the result of natural increase (births) and net migration.

Age

A higher percentage of Sheboygan County residents are 65 years of age or older when compared to state and national statistics. Likewise, Sheboygan County has fewer individuals under the age of 18 years as demonstrated in the following table.

	Sheboygan County	Wisconsin	United States
2008 percent of persons under 5 years	6.3%	6.4%	6.9%
2008 percent of persons under 18 years	23.1%	23.4%	24.3%
2008 percent of persons 65 years or older	14.0%	13.3%	12.8%

(Source: [US Census Bureau, 2008 data](#))

Sheboygan County's median age is 36.8 years as compared to Wisconsin's median age of 36.0 and the national median age of 36.4.

(Source: [Bureau of Health Information and Policy, Division of Public Health, Wisconsin Department of Health Services, and American Community Survey, U.S. Census Bureau, 2008](#))

Race and Ethnicity

Like Wisconsin and the nation, Sheboygan County is a predominantly white, non-Hispanic (88.4%) community. Sheboygan County has become increasingly diverse since the 1990 census, but remains less diverse than the state or nation as demonstrated in the following charts.

2008 Race Data by County, State, and U.S.

	Sheboygan County	Wisconsin	United States
2008 percent of White persons	93.2%	89.7%	79.8%
2008 percent of black persons	1.5%	6.1%	12.8%
2008 percent of American Indian and Alaska Native	0.4%	1.0%	1.0%
2008 percent of Asian persons	3.9%	2.0%	4.5%
Persons Reporting two or more races	1.0%	1.2%	1.7%

(Source: [US Census Bureau, 2008 data](#))

2008 Ethnicity Data by County, State and U.S.

	Sheboygan County	Wisconsin	United States
White persons not Hispanic, percent, 2008	88.4%	85.1%	65.6%
Persons of Hispanic or Latino Origin, percent, 2008	5.0%	5.1%	15.4%

(Source: [US Census Bureau, 2008 data](#))

As previously stated, Sheboygan County is becoming increasingly diverse. The following data further demonstrates this increasing diversity between 1990 and 2007.

Estimates Hispanic/Asian 1990-2007

	1990	2000	2007	% Increase
Hispanic	1,668	3,789	5,660	239%
Asian	2,061	3698	4,690	128%

(Sources: 1990 and 2000 data from [2007 United Way Survey](#). 2007 data from [2007 Public Health Profile](#))

Nativity and Language

In Sheboygan County between 2006 and 2008:

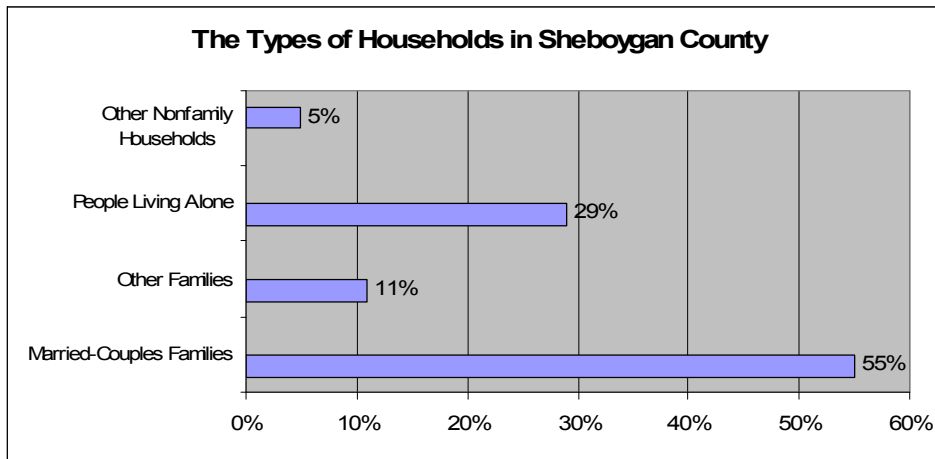
- 95% of persons were born in the United States.
- 78% were born in Wisconsin.
- 5% were foreign born.
- 9% of those five years of age or older spoke a language other than English at home.

- Of those who spoke another language other than English:
 - 46% spoke Spanish,
 - 54% spoke another language, and
 - 43% reported they did not speak English very well

(Source: [American Community Survey, US Census Bureau, 2006-2008](#))

Household Characteristics

According to the American Community Survey conducted by the U.S. Census Bureau, there were 46,278 households in Sheboygan County in 2007. The majority of these households were comprised of married couple families.



(Source: [American Community Survey, U.S. Census Bureau, 2007](#))

Population Density

The 2007 Wisconsin Public Health Profile reports that Sheboygan County is more densely populated than most counties in the state. In 2007, Sheboygan County remained ranked as 12th out of 72 counties and the City of Milwaukee in terms of population density with an average of 226 persons per square mile. The State of Wisconsin had 104 persons per square mile and the U.S. Census indicates nationally there were 79.6 persons per square mile in 2000.

Sheboygan County Economic Profile

Employers, Industry, and Wages

Sheboygan County has a large number of employers and there is a substantial amount of diversity among the county's prominent employers (listing follows):

Prominent Employers in Sheboygan County 2007		
Company	Product or Service	Size
Kohler Co.	Plumbing Fixtures	1000+ employees
Sheboygan Area School District	Public Education	1000+ employees
Bemis Mfg Co	Plastics	1000+ employees
County of Sheboygan	Government	1000+ employees
J L French Automotive Castings	Die Casting	1000+ employees
Aurora Medical Group Inc	Health Care	500-999 employees
Aurora Health Care Central Inc	Health Care	500-999 employees
Rockline Industries Inc	Converted Paper Product Mfg	500-999 employees
Sargento Foods Inc	Cheese Processing	500-999 employees
Johnsonville Sausage LLC	Meat Processing	500-999 employees

(Source: [Wisconsin Department of Workforce Development, 2008](#))

The Sheboygan County economy is dominated by the manufacturing industry with approximately 37% of the area's jobs related directly to manufacturing. The recent decline in manufacturing jobs as reported by the Wisconsin Department of Workforce Development will likely present ongoing challenges to the Sheboygan County economy.

Labor Force

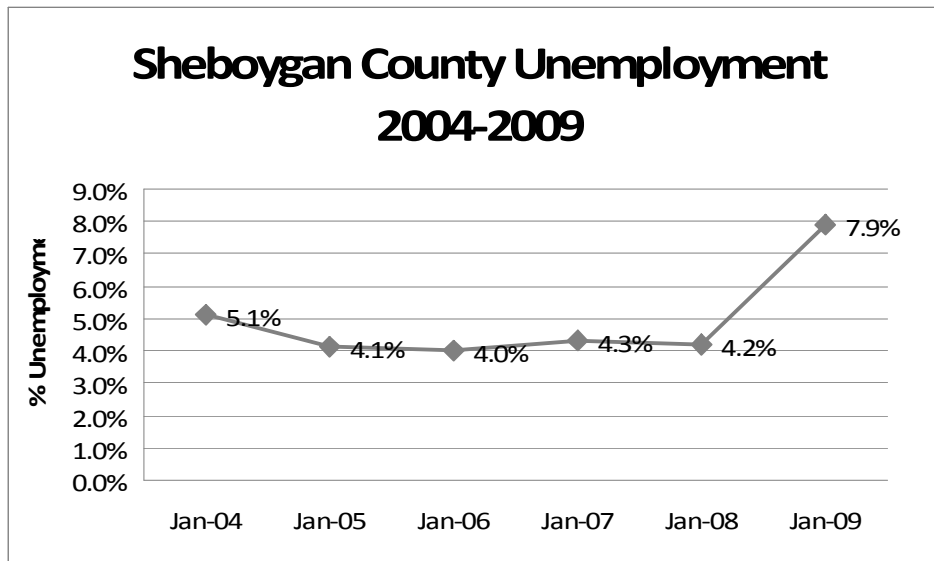
Labor force is defined as the number of residents age 16 and older that are either working or looking for work. People who are not in the labor force do not work for a variety of reasons: retirement, school attendance, inability to perform available work, physical incapacity, or no work is available to them.

Approximately 65,644 people participated in Sheboygan's County's labor force during 2007. This means the county's labor force participation rate was 72.1% in 2007, which was higher than Wisconsin's reported participation rate (70.2%).

Unemployment

The Sheboygan County employment rate has been affected by the recent economic downturn. The Department of Workforce Development reports indicate that Sheboygan County unemployment rates rose from 4.2% in October 2008 to 8.1% in October 2009. The local unemployment rate exceeded the state unemployment rate of 7.6% in October 2009. During the same period, the national unemployment rate of 9.5% was higher than our local rate.

The following chart reflects Sheboygan County’s percentage of unemployment in January of each year from 2004 through 2009.

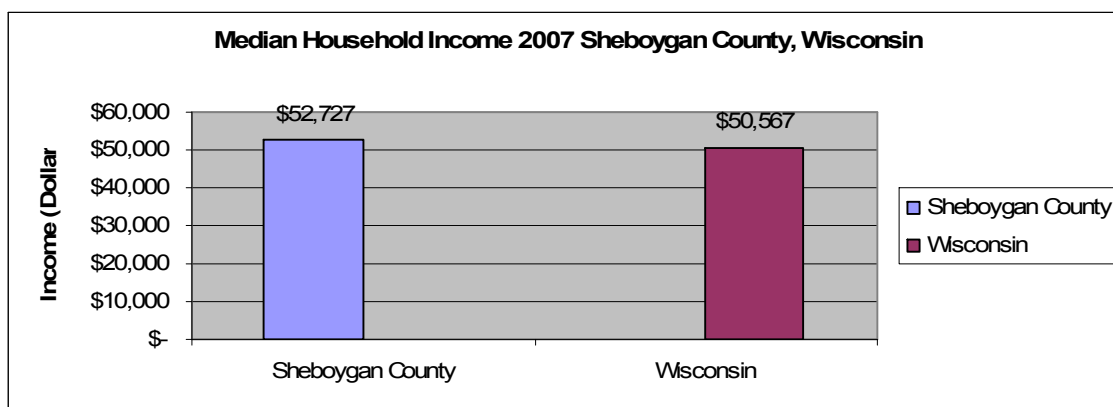


(Source: [US Department of Labor, Bureau of Labor Statistics](#))

Income

The annual average wage for Sheboygan County workers in 2007 was \$37,079, which was 97.4% of the state average of \$38,070. The only Sheboygan County industry that paid higher than the statewide average was the public administration industry, at \$41,076 or 103% of the statewide average for the industry. (Source: [Wisconsin Department of Workforce Development, 2008](#))

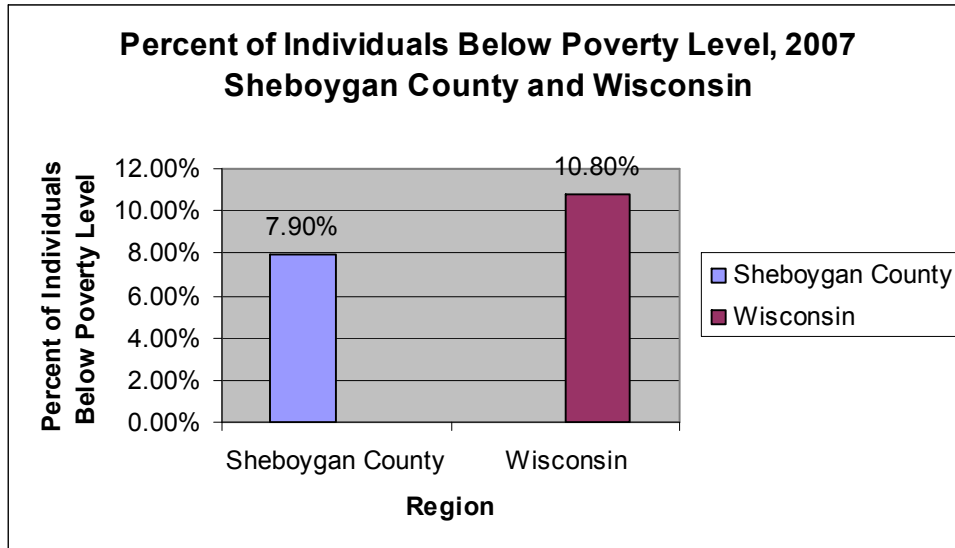
In 2007, Sheboygan County’s median household income (\$52,727) was reported to be higher than Wisconsin’s median household income (\$50,567).



(Source: [U.S. Census Bureau](#))

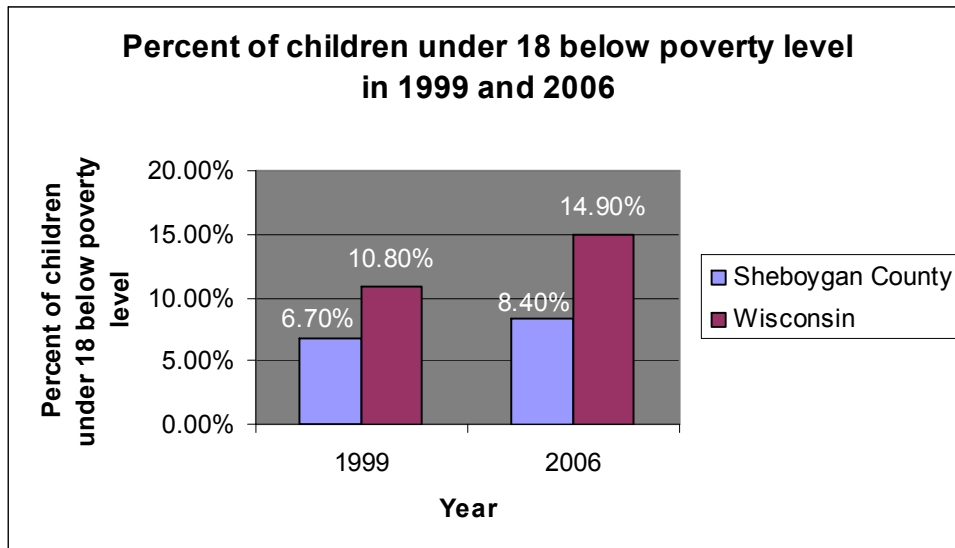
Poverty

In 2007, 7.9% of individuals residing in Sheboygan County living below the poverty level. During this same time period, 8.4% of individuals residing in Wisconsin lived below the poverty level.



(Source: [U.S. Census Bureau](#))

Levels of Sheboygan County children experiencing poverty has increased since 1999, but local childhood poverty rates continue to be lower than the average Wisconsin level.



(Source: [U.S. Census Bureau](#))

Homeownership

In 2000, 71.4% of Sheboygan County residents owned homes. In 2005, the State of Wisconsin had a 71% homeownership rate which was higher than the nation's rate of 68.9%.

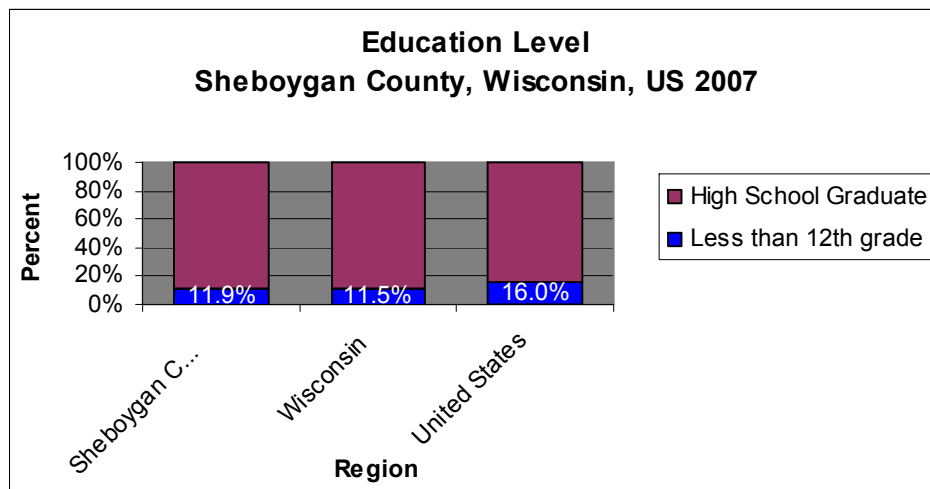
(Source: [U.S. Census Bureau, 2005](#))

2008 US Census Data indicates that there were 49,864 housing units in Sheboygan County. County records show that there were 203 building permits for new homes processed in 2008.

	Sheboygan County	Wisconsin	United States
Housing Units (2008)	49,864	2,569,430	129,065,264
Home Ownership Rate (2000)	71.4%	68.4%	66.2%
Median Value of owner-occupied housing units (2000)	\$106,800	\$112,200	\$119,600

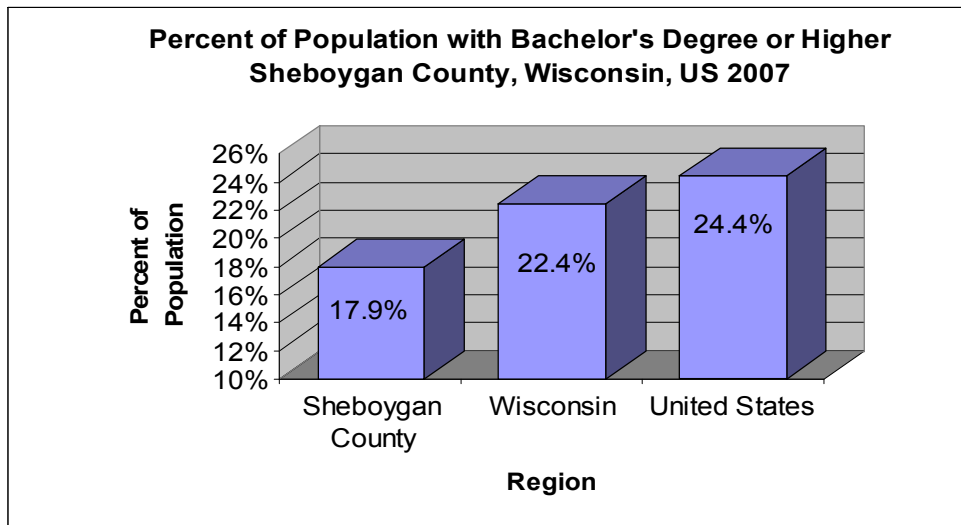
Education

The percentage of adults who have not obtained a high school diploma in Sheboygan County was 11.9% in 2007. This percentage exceeds Wisconsin levels and is lower than the nation as shown in the following graph.



(Source: [American Community Survey, U.S. Census Bureau, 2007](#))

The percentage of the adults residing in Sheboygan County with a bachelor's degree or higher is lower than the state or nation. *(Source: [U.S. Census Bureau, 2000](#))*



(Source: [U.S. Census Bureau](#))

Key Local Demographic and Economic Findings:

- **Sheboygan County population was estimated at 114,561 in 2008.**
- **An estimated population growth of 1.7% occurred between 2000 and 2008.**
- **Percentage of persons age 65 years or older in Sheboygan County exceeds state and national averages.**
- **Sheboygan County residents are predominantly white, with significant increase in racial/ethnic diversity noted since 1990.**
- **Sheboygan County is considered an urban county, with population density higher than state and national averages.**
- **A wide variety of employers with a strong manufacturing base are located in Sheboygan County.**
- **Local percentage of people/ children living in poverty is lower than state and national levels.**
- **Sheboygan County homeownership rate exceeds state and national levels.**

PART IV: REVIEW OF RECENT ASSESSMENTS

Aurora Health Care and the Sheboygan and Plymouth United Way completed surveys and needs assessments in 2007 and 2008 which provided significant contributions to the 2009 Sheboygan County Community Health Assessment process. Key finding and the purpose, data collection methods, and significant themes of these assessments follow:

Sheboygan County Community Health Survey (2008)

The Sheboygan County Community Health Survey was commissioned by Aurora Health Care in partnership with the Center for Urban Population Health Research. The survey report was prepared by the consultant group, JKV Research, LLC.

The purpose of this community health survey project was to provide Sheboygan County with information on the health status of local residents including behavioral and lifestyle habits of the adult population, prevalence of risk factors and disease conditions among adults, and comparative data at the state and national levels. This project was part of a comprehensive survey of Eastern Wisconsin commissioned by Aurora Health Care.

Data was collected through a telephone survey that represented a scientifically selected random sample of adults 18 and older in the county via landline and cell phone. A total of 400 telephone surveys were completed between October 25 and November 15, 2008. Key results from the survey follow:

Overall Health and Health Care Key Findings

- 58% of the respondents reported their health to be excellent or very good.
 - Those who were in the bottom 40% of the household income bracket, unmarried, physically inactive and smokers were more likely to report fair or poor conditions.
- 8% reported they were not currently covered by health insurance and 17% had a household member without insurance at least part of the time in the past 12 months.
 - Low income persons in the bottom 40% of the household income bracket and unmarried respondents were more likely to report a household member without health insurance.
- 78% had a routine medical checkup, 74% had a cholesterol test, 70% had seen a dentist, and 42% had an eye exam in the last year.
- 29% had an influenza vaccination in the past year.

Health Risk Factors Key Findings

- High blood pressure and high blood cholesterol were the two most frequently mentioned conditions among respondents.
- Those 65 years and older and those who were reported as overweight were more likely to report high blood pressure.
- Those 45 years and older, those with a high school education or less, and those who were smokers were more likely to report high blood cholesterol.

- Those 65 years and older and those who were reported as inactive were more likely to report having heart disease or a heart condition.
- Respondents 65 years and older and those who were reported as overweight were more likely to report diabetes.
- Female respondents 18 to 34 years were more likely to report a mental health condition.
- 5% reported always or nearly always felt sad, blue, or depressed in past 30 days.
- 4% reported they seldom or never find meaning and purpose in their daily life.
- 4% reported that they have considered suicide.

Behavioral Risk Factors Key Findings

- Chiropractic care was the most frequently used complementary/alternative treatment in the past three years with 30% of respondents reporting chiropractic care.
- Females were more likely to report chiropractic care.
- Middle wage earners were more likely to use massage therapy than persons from lower or higher income brackets.
- 44% met the recommended amount of physical activity in a week (moderate physical activity five times per week for 30 minutes or vigorous activity three times per week for at least 20 minutes).
- 70% were classified as overweight (BMI greater than or equal to 25.0).
- 64% of respondents eat two or more servings of fruit while 23% eat three or more servings of vegetables.
- 82% of females 40 and over had a mammogram within the past two years.
- 66% of female respondents 65 and older had a bone density scan.
- 91% of female respondents 18 to 65 years reported having a pap smear within the past three years.
- 48% of males 40 and older had a prostate-specific antigen test within the past two years.
- 46% of males 40 and older had a digital rectal exam in the past year.
- 9% of respondents 50 and older had a sigmoidoscopy within the past 5 years while 59% had a colonoscopy within the past 10 years.
- 62% of those 50 and older reported a sigmoidoscopy or colonoscopy in their lifetime.
- 87% of respondents wore seat belts always or nearly always.
- 32% of respondents who rode a bike, used in-line skates or rode a scooter wore a helmet.
- 28% of respondents were smokers.
 - 56% of smokers had tried to quit at least once in the past 12 months.
- 70% of respondents had an alcoholic drink in the past 30 days.
 - 6% were reported to be heavy drinkers (61 or more drinks per month for males, 31 or more drinks per month for females) while 24% were reported to be binge drinkers (males having five or more drinks on one occasion, females having four or more drinks on one occasion).
 - 3% reported having been a driver or passenger when the driver perhaps had too much to drink.
 - 2% reported someone in their household had experienced a problem in connection with drinking in the past year.
- 55% of households had both a working smoke detector and carbon monoxide detector.

- 94% of households had a working smoke detector.
- 56% had a working carbon monoxide detector.
- 39% of households had firearms in or around the home.
 - 15% had a handgun.
 - 35% had a rifle or shotgun.
 - 2% had a loaded firearm.
- 5% reported that someone made them feel afraid for their personal safety in the past year.
 - 3% had been pushed, kicked, slapped, or hit in the past year.

Additional Questions Key Findings

- 21% of respondents were very or somewhat concerned about the Avian Influenza.
- 9% of respondents reported in the past year they did not receive needed medical care while 7% of respondents reported they did not receive needed dental care.

United Way Community Needs Assessment 2007

In 2006, the Sheboygan and Plymouth Area United Way began a community needs assessment process established to meet the following purposes:

1. To determine the community needs;
2. To provide data upon which to base funding allocation decisions;
3. To lay a foundation for future funding decisions;
4. To communicate with the community;
5. To establish baseline information; and
6. To conduct a general evaluation of the perceptions of the United Way.

A Steering Committee, a subcommittee of the United Way Board, established the following goals to be accomplished as a part of the process:

- To provide a wide spectrum of information and data depicting the quality of life in Sheboygan County, Wisconsin;
- To identify the strengths and weaknesses of Sheboygan County that affect all residents;
- To identify community issues and concerns and communicate these to the community;
- To determine what community needs are changing;
- To determine priorities that Sheboygan & Plymouth Area United Way will embrace; and
- To encourage community participation in research efforts.

Engaging the whole community in the assessment was an important component of the process.

Researchers from Chamness Group and University of Wisconsin-Milwaukee Center for Urban Initiatives Research were brought onto the team.

The qualitative stage of research consisted of four components: 45 key informant interviews, an online general public survey, the input from a 14 person Advisory Committee, and World Café Focus Groups. The four focus groups were open to all community residents and two of the four were specifically aimed at the Hispanic and Hmong communities.

The quantitative stage of research consisted of a random household phone survey and secondary research on a variety of quality of life indicators, statistics, demographics, and trends.

A positive key outcome of this survey process is that much of the research proves the fact that Sheboygan County continues to be a great place to live, work, and raise a family.

There were significant points of progress in many areas including the following:

- The rise in annual median household to \$46,237 placing Sheboygan County 5.6% higher than the state median income of \$43,791.
- Lead poisoning was significantly reduced in the county due to combined community efforts.
- Sheboygan County schools continue to be evaluated above the state averages in almost all areas.
- Sheboygan County school districts aggregated graduation rates have exceeded the state rate every year since 1997.

The second key outcome of this survey process involved taking the various survey results and research data to develop an accurate list of the top community needs that should be addressed in order for Sheboygan County to remain a great place to live, work, and raise a family. The listing included the following:

1. Drug and Alcohol Abuse
2. Support for Healthy Families
3. Positive Youth Development
4. Elderly Care and Support
5. Healthcare
6. Diversity
7. Support for Low-Income Individuals and Families
8. Crime and Public Safety
9. Employment and Jobs
10. Childcare

The report also includes detailed field notes from the focus groups and key informant interviews regarding recent changes.

Full copies of the Aurora and United Way Assessments are on file and available for review.

PART V: INITIATIVES DESIGNED TO PROMOTE A HEALTHY COMMUNITY

The 1979 U.S. Surgeon General's Report, "Healthy People" laid the foundation for a national prevention agenda. The 1980 *Promoting Health/Preventing Disease: Objectives for the Nation, and Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, established national health objectives and served as the basis for the development of state and community health plans.

Healthy Sheboygan County Project: An Overview

Following the national lead to improve the health of communities by 2000, a group of interested community members came together in 1993 to review local health data and to put together a plan to address identified local needs. This community coalition known as "Healthy Sheboygan County" has continued to be instrumental in improving the health of Sheboygan County residents since its inception 16 years ago. From the onset, this initiative was designed to be inclusive, community-based, and data-driven.

Early on in the process, five community health subcommittees were formed to address:

- Cardiovascular Health
- Cancer
- Suicide
- Communicable Disease
- Maternal and Child Health

A sixth community health subcommittee was added in 1998 to address Alcohol and Drug (AODA) issues in Sheboygan County.

Community health subcommittees were restructured in 2004 in an effort to prioritize and better coordinate efforts. The group agreed to concentrate efforts on: alcohol and other drug abuse, mental health, and obesity and inactivity.

Healthy Sheboygan County members have continued their work over the past two decades to collaboratively:

- Increase the community's awareness of public health issues specific to Sheboygan County.
- Identify existing and new resources to address specific public health issues.
- Form meaningful, action oriented coalitions of existing resources to reduce any fragmentation of efforts in addressing Sheboygan County quality of life issues.
- Mobilize community residents in taking responsibility for adopting healthier lifestyles.

Healthy Sheboygan County Coalition members maintain minutes of their meetings which reflect their activities and identified changes in community needs and interventions. These minutes can be obtained upon request. A website reflecting current initiatives is available at www.healthysheboygancounty.org.

Healthiest Wisconsin 2020: An Overview

The State of Wisconsin Department of Health Services is required by state law (s. 250.07 (1) (a), Wisconsin Statutes) to develop a public health agenda at least every 10 years. Wisconsin's public health agenda includes objectives which largely reflect the federal objectives with inclusion of specific objectives designed to address the unique needs of Wisconsin residents.

Planning for Healthiest Wisconsin 2020 began in 2008 when a 54 member team of public health experts appointed by Department of Health Services Secretary Karen Timberlake reviewed state data and needs and began the process of developing a new 10 year public health plan for the state that complies with state statutes and revises the statewide approach to public health.

A significant piece of the process was the identification of 12 health focus areas, which affect health conditions and diseases of all Wisconsin residents. Each health condition is influenced by more than one overlapping risk factor (i.e., lung cancer may be caused by tobacco use and exposure as well as environmental and occupational exposures). Also, each risk factor may affect several diseases (i.e., tobacco use and exposure influences the onset of lung cancer, asthma, and cardiovascular disease). The 12 health focus areas that were identified include:

1. Adequate, appropriate, and safe food and nutrition;
2. Chronic disease prevention and management;
3. Communicable disease prevention and control;
4. Environmental and occupation health;
5. Healthy growth and development;
6. Mental health;
7. Oral health;
8. Physical activity;
9. Reproductive and sexual health;
10. Tobacco use and exposure;
11. Unhealthy alcohol and drug use; and
12. Violence and injury prevention.

As a part of the local health assessment process, local public health staff and students who have assisted with this assessment process have gathered local data and assembled the data in correlation with the 12 health focus areas addressed in the Wisconsin 2020 Health Plan known as "Healthiest Wisconsin 2020: Everyone Living Better Longer."

PART VI: SHEBOYGAN COUNTY HEALTH FINDINGS BASED ON HEALTHIEST WISCONSIN 2020 FOCUS AREAS

Community health data provided in this part of the assessment is organized in sections based on the 12 identified “Healthiest Wisconsin 2020” health focus areas. Each of the 12 sections contains a definition of the health focus area and available morbidity and mortality data on health conditions that might result from the health focus area as well as other data commonly linked to the focus area that may be of interest to the reader.

Local health data was collected from a variety of published sources; most frequented sources include the Wisconsin Department of Health Services Health Statistics website (*Source: <http://dhs.wisconsin.gov/stats/>*) and the 2008 Wisconsin County Health Rankings published by the University of Wisconsin School of Medicine and Public Health.

The State of Wisconsin collects health data at the regional level, in addition to the county and state levels. The state has been divided into five regions for this purpose: the northern, northeastern, southeastern, southern and western regions. Sheboygan County is part of the northeastern region. The counties in the northeastern region are listed below.

Northeastern region – Brown, Calumet, Door, Fond du Lac, Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, **Sheboygan**, Waupaca, Waushara, Winnebago.

Regional, state, and national comparison data is included in the report in many instances. Because raw numbers cannot be used to compare populations of varying sizes, rates are included as available. Rates, which have been calculated using common denominators, allow for comparisons between areas with varying population sizes.

ADEQUATE, APPROPRIATE, AND SAFE FOOD AND NUTRITION

Focus area definition

Adequate and appropriate nutrition pertains to all people throughout their lives and refers to access to safe and healthy food and consumption of a healthy diet. A healthy diet is one that permits individuals to meet accepted dietary requirements and standards, supports normal growth and development, reduces the risk of disease, including chronic conditions, such as obesity, Type 2 diabetes, cancer, and cardiovascular disease, and promotes physical, emotional, and social well-being.

The adequate and appropriate nutrition health focus area includes breastfeeding promotion and support, as well as issues of food security and obesity prevention across the lifespan and addresses population-level disparities for these same issues. It also encompasses influences on these issues from all levels of the Social-Ecological Model, including individual, interpersonal, organizational, community, and policy-level factors.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

Research has proven that adequate and appropriate nutrition is linked to breast cancer, cerebrovascular disease (stroke), diabetes, heart disease, infant mortality, and pneumococcal infections.

The following indicators and related data are described in this section:

1. Overweight/Obesity
2. Fruit and Vegetable Intake
3. Cholesterol Screenings
4. WIC Services
5. Free and Reduced Lunch
6. Food Security

Overweight/Obesity

The increasing incidences of overweight/obesity have been reported as a national public health issue. The Wisconsin Division of Health Behavioral Risk Survey reports that 64% of Wisconsin adults are either obese or overweight. (Adults are considered to be overweight if their BMI is 25 or greater and considered obese if their BMI is 30 or greater.)

Both the Wisconsin Behavioral Risk Survey and the Aurora 2008 Community Health Survey reports demonstrate that Sheboygan County has high levels of overweight/obesity. The Community Health Survey indicates that up to 70% of the Sheboygan County adults were overweight/obese in 2008, up from 59% in 2003.

Data from the Wisconsin Behavioral Risk Factor Survey (BRFS) further substantiates overweight/obesity as a local public health problem. The following chart further reflects this.

Sheboygan County Overweight/Obesity Data 1993-2007

Years	% Overweight	% Obese	% Overweight/Obese
2001- 2002	42%	22%	64%
2004- 2006	38.4%	22.0%	60.4%
2005- 2007	37.2%	23.1%	60.3%

(Sources: 2001-2002 Data from [2004 Sheboygan County Community Health Assessment](#). 2004-2007 Data from Department of Health Services [Interactive Behavioral Risk Survey](#))

Fruit/Vegetable Intake

The Aurora Sheboygan County Community Health Survey (2008) reports that 64% of respondents reported having consumed the recommended two or more servings of fruit while 23% reported having consumed the recommended three or more servings of vegetables on a given day. The report further indicated, that no statistical change in the overall percent of respondents who reported eating two servings of fruit or three servings of vegetables a day since 2003.

Cholesterol Screenings

The most recent measure from the Sheboygan County Community Health Survey (2008) shows that 74% of Sheboygan County adults had their blood cholesterol levels measured within the past four years.

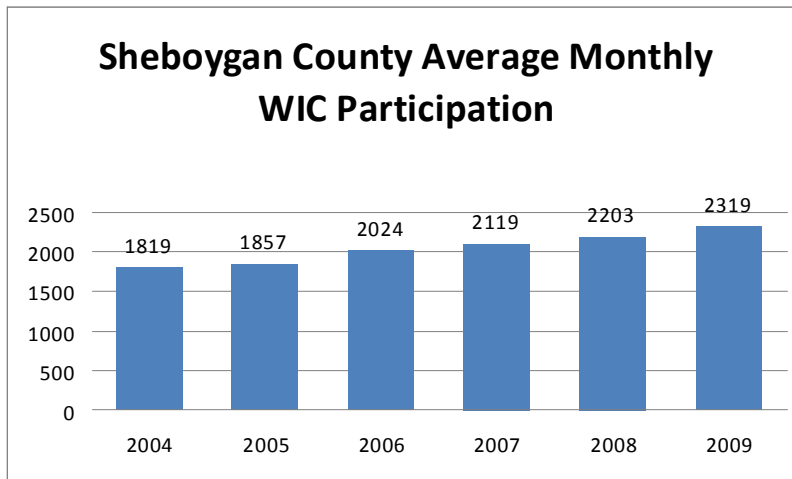
The Wisconsin Behavioral Risk Survey indicates 72.4% of those adults surveyed ever had a cholesterol test performed (2005-2007). Of those tested, 30.4% reported that their cholesterol levels were elevated.

Sheboygan County WIC Enrollment

The Special Supplemental Nutrition Program for Women, Infants and Children Program (WIC) is a United States Department of Agriculture program that provides supplemental nutritious foods, nutrition and breastfeeding information, and referrals to other health and nutrition services to at-risk pregnant, breastfeeding and postpartum women, infants and children to the age of five years. Enrollment is based on meeting financial and health/nutritional risk factors.

In Sheboygan County, the Sheboygan County Division of Public Health administers the local WIC project. In September of 2009, participation at our local WIC project was 2515. In 2008, \$1,555,972 WIC drafts were redeemed for WIC approved foods at local vendors.

Sheboygan County has experienced a 27.5% increase in annual WIC enrollment between 2004 and 2009 as demonstrated in the following graph.



(Source: Sheboygan County WIC Project Reports)

A strong component of the WIC Program is the provision of breastfeeding education and support. Research has shown that there is no better food than breast milk for the baby's first year of life. Breastfeeding provides health, nutritional, economical, and emotional benefits to the mother and baby. The American Academy of Pediatrics recommends that infants be exclusively breastfed for the first six months of life.

The following chart reports the breastfeeding incidence among WIC participants between 2007 and September 2009.

	Sheboygan County – Ever Breastfed	Wisconsin- Ever Breastfed	Sheboygan County - Exclusively Breastfed 6 months	Wisconsin - Exclusively Breastfed 6 months
2007	62.7%	62.9%	5.7%	8.7%
2008	64.3%	64.3%	12.0%	8.9%
10/08-9/09	66.8%	66.0%	11.2%	9.1%

(Source: WIC System Computer generated report)

Free/Reduced Lunch

Children enrolled in local schools qualify for free/reduced hot lunch if their family meets federal income guidelines. The 2009-2010 financial eligibility guidelines are based on earnings at/below 185% of the federal poverty level (i.e. during the 2009-2010 school year a student from a family of four was eligible for free/reduced hot if the family's annual income was \$40,473 or less).

State and local enrollment comparison data from 2002 to 2006 is shown in the chart below. A lower percentage of children are enrolled locally than at the state level.

	2002	2004	2005	2006
Sheboygan Co.	21%	22%	25%	24%
Wisconsin	28%	29%	30%	31%

(Source: [Wisconsin Council on Children and Families, 2006](#))

The following chart demonstrates that 1 in 4 Sheboygan County public school students were enrolled in the free/reduced hot lunch program in school year 2008-2009.

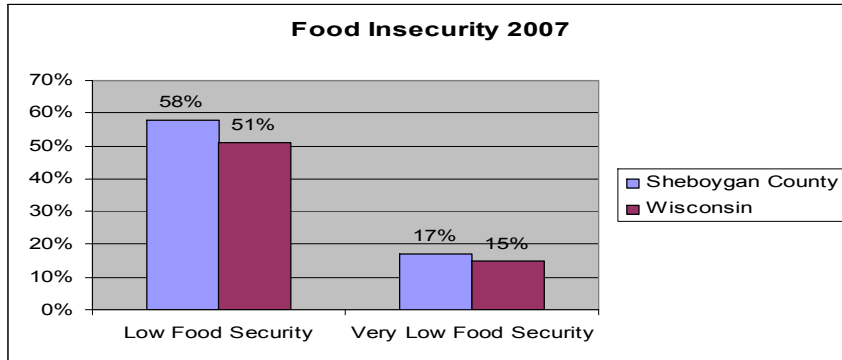
School District	Total School Enrollment	Free/Reduced Hot Lunch Enrollment	Percent Enrolled in Free/Reduced Hot Lunch
Cedar Grove	1079	109	10%
Elkhart Lake	527	101	19%
Howards Grove	983	48	5%
Kohler	480	0	0%
Oostburg	1008	81	8%
Plymouth	2420	455	19%
Random Lake	929	205	22%
Sheboygan Area	10292	3712	36%
Sheboygan Falls	1785	341	19%
Total	19503	5052	25.9%

(Source: [Wisconsin Department of Public Instruction](#))

Food Security

A 2007 Wisconsin WIC survey was conducted to determine the percentage of WIC households reporting a lack of reliable food sources and a need to rely on emergency sources of food such as food pantries. Fifty-eight percent of Sheboygan County WIC recipients surveyed were reported as food insecure and 17% of Sheboygan County WIC recipients were identified as in households with hunger. State comparisons follow. (Source: [Wisconsin Department of Health Services, 2007](#)).

Note: Survey respondents were identified as “food insecure” if they answered in the affirmative to two or more survey questions. They were identified with “hunger” if they answered five or more questions affirmatively.



(Source: [Wisconsin Department of Health Services, 2007](#))

Key Findings – Adequate, Appropriate and Safe Food and Nutrition:

- **Approximately two of three County adults are overweight/obese.**
- **Numbers of persons consuming recommended servings of fruits and vegetables remain unchanged from 2003 to 2008.**
- **Nearly two-thirds of county residents had blood cholesterol levels measured in the past four years.**
- **Annual WIC enrollment increased by 27.5% between 2004 and 2009**
- **Local WIC participants report higher food insecurity and hunger concerns than State average.**
- **Most recent WIC data shows that 66.8% of WIC enrolled infants have been breastfed, with 11.2% exclusively breastfed for the first six months of life.**
- **One in four Sheboygan County Public School students are enrolled in a free/reduced hot lunch program.**

CHRONIC DISEASE PREVENTION AND MANAGEMENT

Focus area definition

Chronic disease prevention and management means preventing, delaying, detecting, and controlling chronic diseases and conditions throughout the life course that are non-communicable, prolonged in duration, do not resolve spontaneously, are rarely cured completely, and often result in disability later in life.

Chronic disease prevention includes strategies to promote and improve the health of individuals and communities by focusing on four common modifiable risk behaviors: tobacco use, insufficient physical activity, poor eating habits, and excessive alcohol use. Promoting community-based policies such as indoor air regulations, menu labeling, advertising restrictions, pricing strategies, and changes to the built environment create environments that promote and protect health.

Chronic disease management includes strategies to enhance quality of care through collaborative practice models and evidence-based practice guidelines. It empowers patients through evidence-based self-management education, promoting self-efficacy to maintain and improve function and independence, peer support, and resources.

Examples of key chronic diseases and conditions include heart disease, stroke, cancer, diabetes, arthritis, asthma, and obesity.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

The profile of diseases contributing most heavily to death, illness, and disability among Americans changed dramatically during the last century. Today, chronic diseases such as cardiovascular disease (primarily heart disease and stroke), cancer, and diabetes are among the most prevalent, costly, and preventable of all health problems. (Source: [CDC](#))

Research has proven that in order to improve the health of the community we need to focus on modifying the four common modifiable risk behaviors (i.e. tobacco use, insufficient physical activity, poor eating habits, and excessive alcohol use) to control chronic diseases.

The following indicators and related data directly relate to this focus area section:

1. Heart Disease
2. Stroke (Cerebrovascular Disease)
3. Cancer
4. Diabetes
5. Asthma

The following chart provides information regarding local cause of death and death rates associated with chronic illnesses.

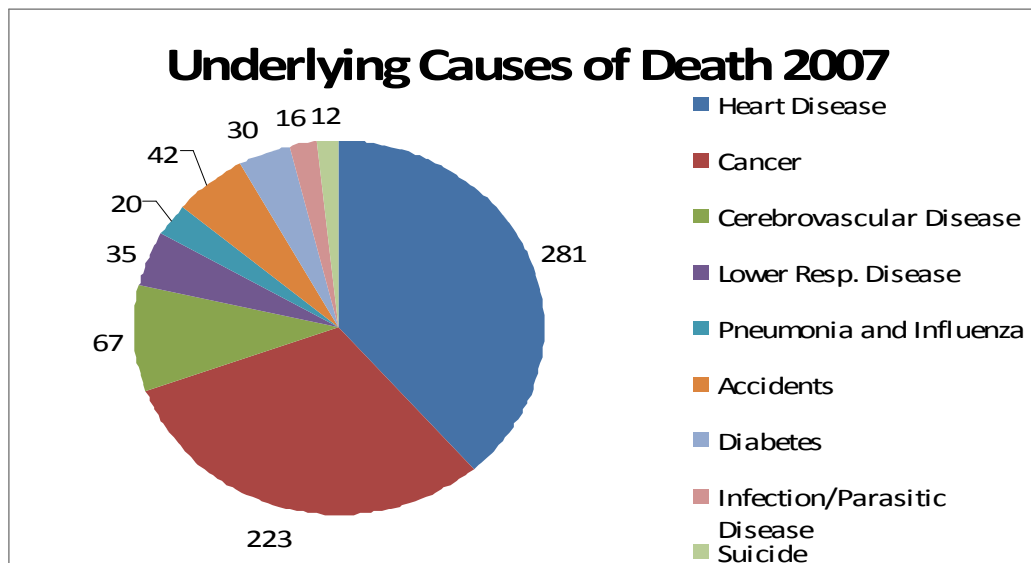
2007 Deaths by Underlying Cause and Rate per 100,000 Population

	Total Deaths	County Rate	State Rate
Heart Disease	281	242	198
Cancer	223	192	194
Cerebrovascular Disease	67	58	47
Lower Respiratory Disease	35	30	42
Pneumonia/Influenza	20	17	18
Accidents	42	36	46
Diabetes	30	26	20
Infection/Parasitic Disease	16	*	14
Suicide	12	*	13

*Number insufficient to determine rate

(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

The following pie chart shows the 2007 deaths by underlying cause in a graphic format.



(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Coronary Heart Disease

Morbidity: There were 720 hospitalizations due to coronary heart disease in Sheboygan County in 2007. The rate of hospitalizations related to coronary heart disease for 2007 was 6.2 per 1,000 population. The hospitalization for the State of Wisconsin was 4.9 per 1,000 for the same year. (Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Mortality: Sheboygan County's age *adjusted death rate* for heart disease from 2003 to 2007 was 209.3. This is higher than the northeastern region of 190.85. Heart disease accounted for 1,482 deaths from 2003 to 2007 in Sheboygan County or 28% of all deaths during the 5-year period. (Source: [Wisconsin Department of Health Services – WISH](#))

There were 281 deaths due to coronary heart disease in 2007 in Sheboygan County. County mortality crude rate for heart disease in 2007 was 242 per 100,000 population. This compares to a state rate of 198 per 100,000.

The following charts show heart disease death and hospitalization state/local comparison data from 2004 through 2007.

2004-2007 Deaths by Heart Disease Crude Rates per 100,000 Population County and State Comparison

	Sheboygan Co. Rate – Heart Disease (All)	State Rate – Heart Disease (All)	Sheboygan Co. Rate – Ischemic Heart Disease	State Rate – Ischemic Heart Disease
2004	257	215	144	138
2005	279	211	170	136
2006	287	204	158	128
2007	242	198	119	121

(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

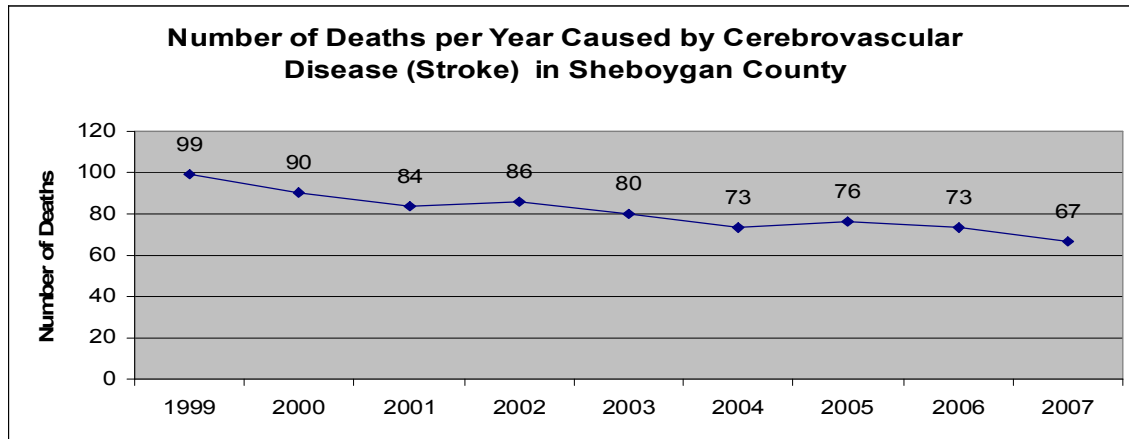
2004-2007 Coronary Heart Disease Hospitalization Rates Sheboygan County and Wisconsin

	Sheboygan Co. Coronary Heart Disease Hospitalizations	Sheboygan Co. Coronary Heart Disease Hospitalization Rate (per 1000 population)	Wisconsin Coronary Heart Disease Hospitalization Rate (per 1000 population)
2004	772	6.7	5.8
2005	706	6.1	5.6
2006	764	6.6	5.4
2007	720	6.2	4.9

(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Stroke (Cerebrovascular Disease)

There were 369 deaths attributable to stroke (or cerebrovascular disease) in Sheboygan County from 2003 to 2007 representing 7% of all deaths for the five year period. The county death rate due to stroke for the time period of 2003-2007 was 63.9 per 100,000, which was higher than the northeastern region at 56.5. (Source: [Wisconsin Department of Health Services – WISH](#))



(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Cancer

The Wisconsin Cancer Reporting System collects reports of all newly diagnosed Wisconsin resident cancer cases from hospitals, clinics, physician offices and out-of state central cancer registries. In November of 2009, The Wisconsin Department of Health Services released summary information collected via the Wisconsin Cancer Reporting System related to cancer incidence and deaths that occurred from 2002 through 2006.

There were 1,183 deaths attributable to cancer in Sheboygan County from 2002-2006 with an average death rate in our county of 183.2 per 100,000 population. This rate was slightly lower than the Wisconsin death rate of 184.3. (Source: [Wisconsin Cancer Incidence and Mortality, November, 2009](#))

A summary of cancer incidence by type follows:

2002-2006 Cancer Incidence – Age-adjusted Rates per 100,000

Cancer Site	Sheboygan County Cases	Sheboygan County Average Age-Adjusted Rate	Wisconsin Age-Adjusted Rate
All Sites	3218	516.5	470.3
Breast Cancer (Female)	380	116.3	122.7
Cervical	12	3.8	6.6
Colon and Rectum	436	68.4	49.4
Uterine	132	41.0	28.7
Esophageal	40	6.5	5.9

CONTINUED	Sheboygan County Cases	Sheboygan County Average Age-Adjusted Rate	Wisconsin Age-Adjusted Rate
Kidney/Renal Pelvis	91	14.6	14.8
Leukemia	119	19.3	14.5
Lung and Bronchus	350	56	64.8
Melanoma of the Skin	155	25.8	15.3
Non-Hodgkin Lymphoma	115	18.4	20.3
Ovary	62	19.0	15.7
Pancreas	69	10.9	11.4
Prostate	518	185.1	156.9
Urinary Bladder	165	25.6	21.8

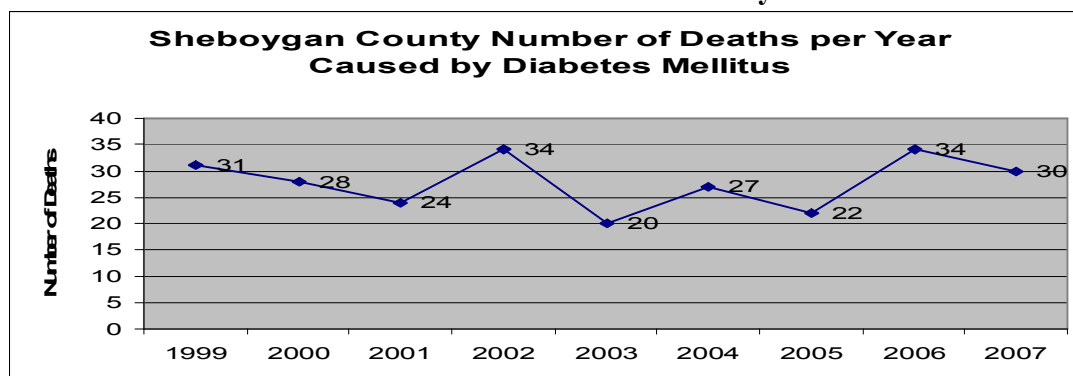
(Source: [Wisconsin Cancer Incidence and Mortality, November, 2009](#))

Diabetes

Morbidity: There were 89 hospitalizations for the year due to diabetes in Sheboygan County in 2007. The rate of hospitalizations related to diabetes for 2007 was 0.8 per 1,000 population. The diabetes hospitalization rate for the northeastern region was 1.0 for the same year and 1.2 for the state. (Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Mortality: There were 30 deaths due to diabetes in 2007 in Sheboygan County. Sheboygan County's mortality rate for diabetes in 2007 was 26 per 100,000 population. This is a higher mortality rate than the northeastern region (21) and the state (20). This rate was higher than the reported Sheboygan County's 2004 rate of 17 per 100,000 and the 2006 rate of 29 per 100,000. (Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Diabetes Mortality



(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

**2004-2007 Diabetes Hospitalization and Death Rates
Sheboygan County and Wisconsin**

Year	Sheboygan County Hospitalization Rate (per 1000 population)	Wisconsin Hospitalization Rate(per 1000 population)	Sheboygan County Death Rate (per 100,000 population)	Wisconsin Death Rate (per 100,000 population)
2004	0.9	1.2	23	24
2005	1.0	1.2	19	23
2006	1.1	1.2	29	22
2007	0.8	1.2	26	20

(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Diabetes Incidence:

The 2008 Aurora Community Health Survey reports an increase in the number of respondents reporting a history of diabetes than in previous surveys. Eight percent of respondents reported a history of diabetes in 2008 as compared to 7% in 2005 and 5% in 2003. Persons 65 years and older were more likely to report a history of diabetes (15%). Overweight respondents were more likely to report diabetes (10%) compared to respondents who were not overweight (less than one percent).

Asthma

In Sheboygan County, from 2003-2005, there was a statistically higher hospitalization rate per 10,000 hospitalizations (13.2) for asthma when compared to the State of Wisconsin's rate (10.4). This places Sheboygan County as having the 7th highest asthma-related hospitalization rate among Wisconsin counties.

In comparison, the 2003-2005 Sheboygan County asthma-related emergency room visit rate per 10,000 emergency room visits (21.3) is significantly lower than the state's rate (41.3). This ranks Sheboygan County as the 59th Wisconsin county with emergency department visits for asthma.

(Source: [Burden of Asthma in Wisconsin, 2007](http://dhs.wi.gov/eh/Asthma/pdf/boawi_2007.pdf) http://dhs.wi.gov/eh/Asthma/pdf/boawi_2007.pdf)

Key Findings Chronic Disease Prevention and Management:

- **28% of all Sheboygan County deaths in 2007 were due to heart disease.**
- **Local heart disease deaths rates exceeded state rates each year from 2004-2007.**
- **22% of all Sheboygan County deaths are due to cancer.**
- **Cancer incidence was higher in Sheboygan County than Wisconsin for the following cancer types:**
 - **Colon and Rectal**
 - **Esophagus**
 - **Leukemia**
 - **Melanoma of the Skin**
 - **Ovary**
 - **Prostate**
 - **Urinary Bladder**
- **High incidence of asthma related hospitalizations.**
- **Most recent Sheboygan County diabetes mortality rate exceeds Wisconsin rate.**
- **Approximately two of three county adults are overweight or obese.**

COMMUNICABLE DISEASE PREVENTION AND CONTROL

Focus area definition

Communicable disease prevention and control means surveillance for and protection from communicable diseases that may result from: changes in or evolution of existing infectious agents (bacteria, viruses, parasites, or fungi); spread of infectious agents to new geographic areas or among new populations; persistence of infectious agents in geographic areas and populations; newly emerging infectious agents; or bioterrorism. Communicable disease protection includes, but is not limited to, isolation and quarantine, appropriate immunization, prophylactic (preventive) measures, early interventions including antimicrobial treatment, and public health education.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

Improved sanitation and nutrition, vaccinations, antibiotics, antiviral, and antiparasitic medications have led to dramatic reductions in communicable disease rates in communities around the globe. Worldwide, lower respiratory infections (i.e. pneumonia), diarrhea, tuberculosis and AIDS present unique challenges and are leading causes of death. While death rates associated with communicable diseases are low in Sheboygan County, significant communicable disease challenges associated with existing, emerging, and re-emerging communicable diseases continue.

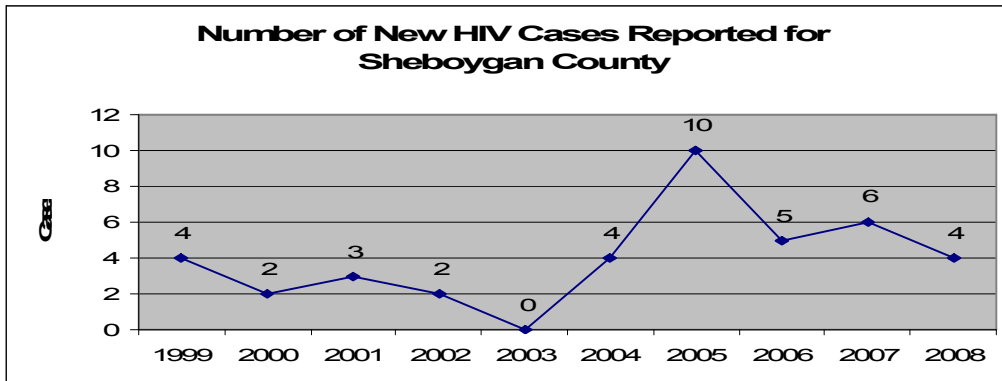
The following indicators and related data are described in this section:

1. AIDS/ HIV Infection
2. Sexually Transmitted Diseases
3. Food and Water Borne Illnesses
4. Respiratory Illnesses: Pneumonia, Influenza, HINI and Tuberculosis

Wisconsin Statute 252.05 and Administrative Rule Chapter HFS 145 require that health care providers and certain other persons (i.e. person in charge of infection control at a health care facility, laboratory directors, school nurses, principals of schools and daycare directors) having knowledge that a person has a communicable disease report this information to the appropriate health department.

AIDS/ HIV Infection

There were 88 cases of HIV infection reported in Sheboygan County between 1983 and 2008. The following graph shows the number of new reports of HIV infection in Sheboygan County each year from 1999-2008.



The following chart provides additional information regarding HIV in Sheboygan County.

1983-2008 Reported Cases of HIV Infection

	1983-2008	Percent	Cases Presumed Alive
Total Cases	88	100%	57
Disease Category			
AIDS	61	69%	31
Non-AIDS	27	31%	26
Sex			
Male	73	83%	46
Female	15	17%	11
Race			
White	63	72%	67%
Non-White	25	28%	33%
Age when diagnosed			
<5 years	2	2%	1
5-14 years	0	0%	0
15-19 years	2	2%	0
20-24 years	11	13%	1
25-44 years	58	66%	31
45+ years	15	17%	23
Risk Exposure			
Men who have sex with men (MSM)	47	53%	28
Injecting Drug Use (IDU)	6	7%	3
MSM and IDU	2	2%	2
High-Risk Heterosexual Contact	12	14%	7
Other	7	8%	5
Undetermined	14	16%	12

(Source: Wisconsin Department of Health Services, Reported cases of HIV infection Sheboygan County, Wisconsin, 1983-2008)

Sexually Transmitted Diseases

The local incidence of sexually transmitted diseases has increased significantly since the 2004 Community Needs Assessment was completed. The chart below demonstrates the increase in incidences of Chlamydia, Herpes, and Gonorrhea from 1999-2008.

	# Reported Cases 2003-2008	Annual Average # of Reported Cases 2003-2008	Annual Average # of Reported Cases 1999-2001
Chlamydia	1537	256	134
Genital Herpes*	262	52	34
Gonorrhea	163	27	17

* *Genital Herpes no longer reported effective 3/08*

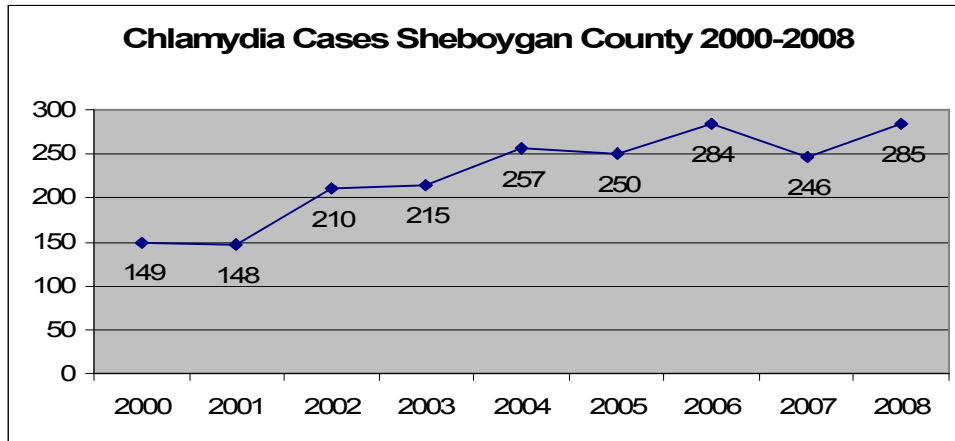
(Source: [Wisconsin Department of Health Services Reference Center](#))

The 2008 Sheboygan County STD rate was 270 per 100,000 as compared to Wisconsin's rate of 482 per 100,000. Additional surveillance data that describes sex, race, and age characteristics of 2008 Sheboygan County cases follows.

	# Cases	Percent of Cases	Rate per 100,000
Total Reports	309	100%	270
Sex			
Male	75	27.8%	149
Female	223	72.2%	394
Race			
White	195	63.1%	181
African-American	26	8.4%	1410
American Indian	3	1.0%	586
Asian/Pacific Islander	23	7.4%	495
Other	12	3.9%	-
Unknown	50	16.2%	-
Hispanic Ethnicity			
Hispanic	31	10%	564
Non-Hispanic	227	73.5%	208
Unknown	51	16.5%	-
Age			
15-19 years	93	30.1%	1219
20-24 years	125	40.5%	1827
25-29 years	56	18.1%	695
30-34 years	19	6.1%	272
35-39 years	10	3.2%	133
40-44 years	2	0.6%	23
45-49 years	2	0.6%	21
50+ years	2	0.6%	5

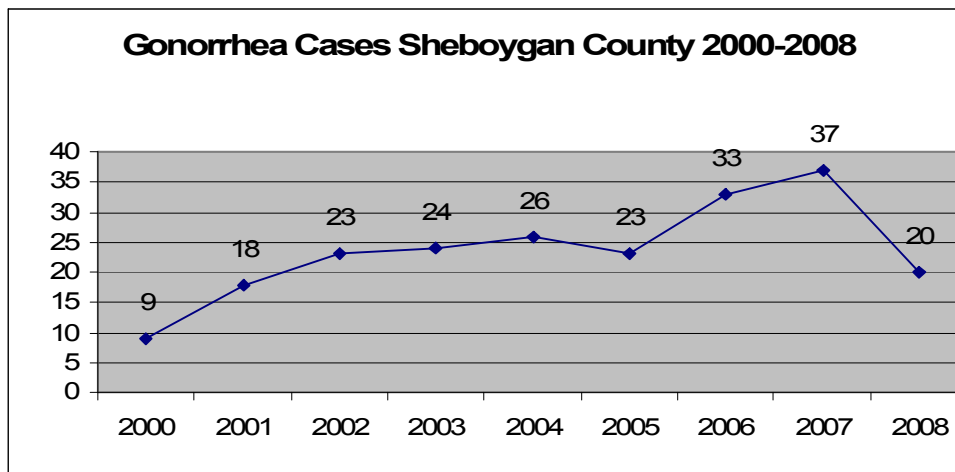
(Source: [2008 Wisconsin STD Program Data Report](#))

Incidence of Chlamydia increased from 149 to 285 cases per year from 2000 and 2008.



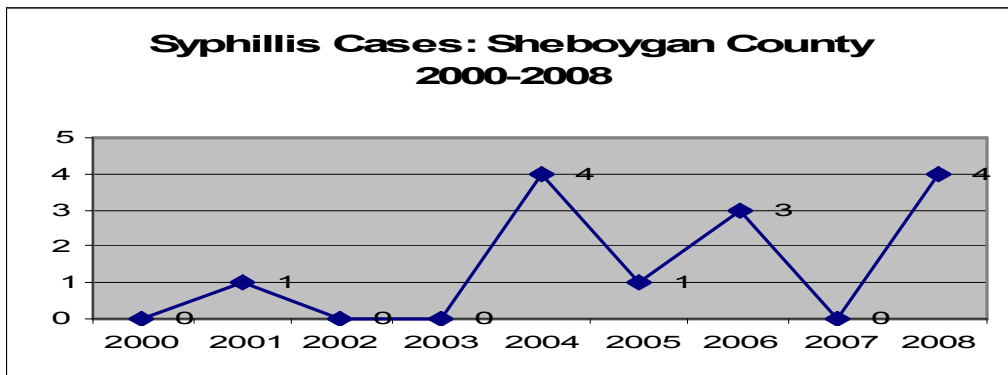
(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Incidence of Gonorrhea increased from 9 to 20 cases per year from 2000 to 2008.



(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Incidence of Syphilis is low but increased in 2008. There were a total of 13 cases reported in Sheboygan County from 2000-2008 with four of the cases reported in 2008.



(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Food and Water Borne Illnesses

Food and water borne illnesses are caused by consuming contaminated foods and/or beverages. Campylobacter and Salmonella are the most commonly recognized food borne bacterial infections occurring in the United States. Public Health investigations and interventions are provided in an effort to reduce and/or stop the spread of disease. Improvements in sanitation have dramatically reduced the burden of water and food borne disease outbreaks.

In Sheboygan County, the Division of Public Health Sanitarians inspect licensed food establishments and special events in an effort to reduce the risk of outbreaks. The incidence of Campylobacter Enteritis and Salmonella for the period of 1999-2007 are described below.

	# Reported Cases 2003-2007	Annual Average # of Reported Cases 2003-2007	Annual Average # of Reported Cases 1999-2001	2007 County Case Rate
Campylobacter	143	29	26	27
Salmonella	74	15	15	17
Shigella	9	< 5	< 5	0

(Source: [Wisconsin Department of Health Services Reference Center](#))

Pneumonia and Influenza

There were 132 deaths due to pneumonia or influenza from 2003 to 2007 in Sheboygan County as compared to 131 deaths from 1999-2001.

In 2007, Sheboygan County's rate of death due to pneumonia or influenza was 17.0 per 100,000, compared to 19.0 for the northeastern region, and 18.0 for the state. *(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))*

H1N1 Influenza

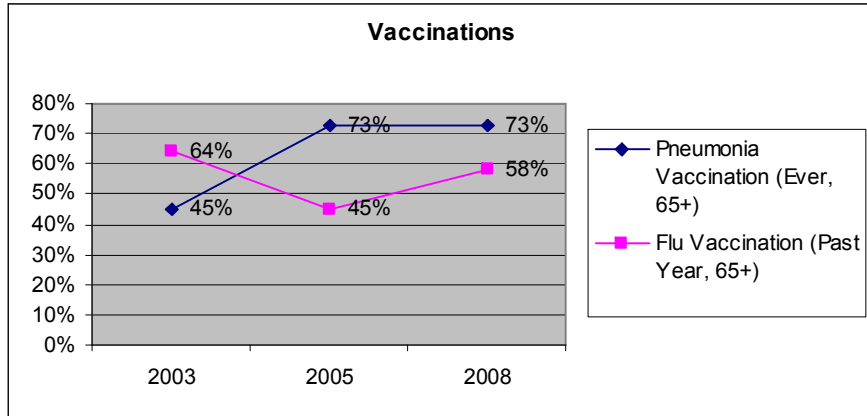
Sheboygan County, like other communities throughout the world, continues to experience the effects of the 2009 H1N1 Influenza Pandemic. There have been 181 cases of H1N1 reported in Sheboygan County between April 15 and December 8, 2009. During that same time period, 21 persons were hospitalized for more than 24 hours with H1N1 infection and two Sheboygan County deaths were due to H1N1. *(Source: www.pandemic.wisconsin.gov)*

A community vaccination campaign continues through the efforts of public and private healthcare providers to reduce further H1N1 disease transmission.

Related Data

Seasonal Flu Vaccinations: 58% of those 65 years and older participating in the Aurora Community Health Survey reported that they received a flu vaccination in 2008. Seventy-three percent of those 65 years and older participating in the same survey reported that they received a

vaccination for pneumonia as shown in the graph below. Comparably, 74% of those 65 years and older received a flu vaccination in Wisconsin and 72% in the United States. In Wisconsin, 69% of those 65 years and older received the pneumonia vaccination while 67% received the vaccine in the United States.

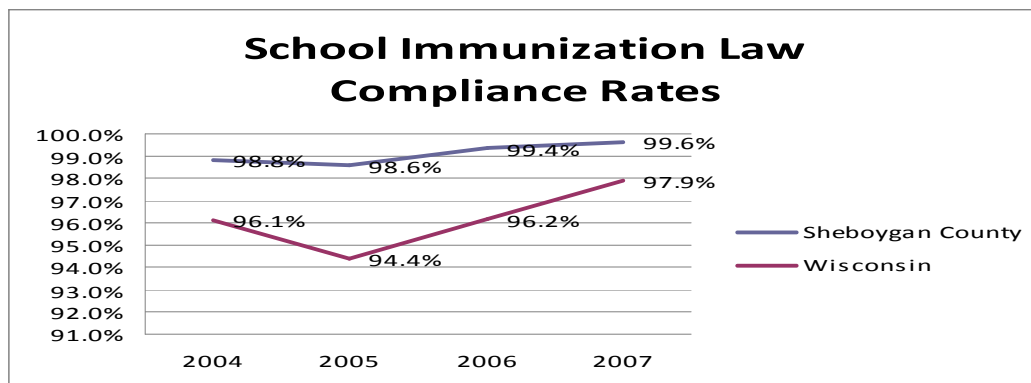


(Source: 2008 Aurora Community Health Survey)

Childhood Vaccination: Vaccines have been proven to be among the most affordable and effective health interventions available today. During the 1950's, nearly every child developed measles, an easily spread virus known for causing a rash, fever, cough and watery eyes, and feared because it can also cause pneumonia, seizures, brain damage or death. Today, thanks to childhood immunizations, childhood vaccine preventable diseases like measles are extremely rare in the United States.

National immunization recommendations indicate by age two that all children receive a basic series of childhood vaccinations. A January 2009 audit of 1496 records of Sheboygan County children born in 2006 demonstrated that 83% or 1236 were up-to-date with recommended vaccinations (4 DTaP, 3 Hepatitis B, 3 Hib, 1 MMR, 3 Polio, 3 Pneumococcal and 1 Varicella).

Wisconsin Immunization Law requires students to receive a minimum number of required immunizations to attend school or daycare. Waivers are available only for religious, health and personal conviction reasons. Local school immunization law compliance rates exceed the state average as demonstrated in the following chart.



(Source: [Wisconsin Department of Health Services, Public Health Profiles](#))

Re-emerging Diseases of Interest:

Tuberculosis: Old diseases, such as tuberculosis (TB), are reemerging in areas where they were once under control. In some cases, the bacteria have become resistant to the antibiotics that have been effective in reducing the incidence of the disease in the past. In 2008, the first case of Multi-Drug Resistant TB was reported in Sheboygan County. This individual remains to be infectious and under court-ordered isolation through 2009. Significant health care costs and human suffering related to this disease has ensued.

Total Tuberculosis Cases for Sheboygan and for the State 2002-2008

	2002	2003	2004	2005	2006	2007	2008
Sheboygan	3	2	4	1	0	0	3
State	78	66	95	78	75	70	68

Key Findings:

- **Significant increase in local incidence of sexually transmitted diseases since 2004.**
- **Chlamydia trachomatis is the most frequently reported sexually transmitted infection.**
- **The greatest incidence of food borne illnesses is attributed to Campylobacter enteritis.**
- **83% of children born in 2006 received their basic series of childhood vaccines by age two.**
- **The first local case of multi-drug resistant TB was reported in 2008. Client remained infectious and in court-ordered isolation throughout 2008-2009.**

ENVIRONMENTAL AND OCCUPATIONAL HEALTH

Focus area definition

Environmental and occupational health includes the broad and diverse suite of interrelated regulatory and educational programs and services needed in every Wisconsin community to prevent, identify, and mitigate illnesses and injuries resulting from hazards in the natural, built, and work environments. Environmental and occupational health practice requires close collaboration with environmental and public health system partners to achieve and maintain the healthy places required for healthy living.

Environmental and health activities include but are not limited to:

Identifying, evaluating, and controlling chemical, radiological, and biological hazards in the air, water, soil, food, and built environment.

Assuring a safe and healthy food supply that considers the “farm to fork” concept.

Assuring basic sanitation and safety in hotels, pools, campgrounds, and other public places and workplaces.

Monitoring the safe use and handling of radioactive materials in health care and industry.

Ensuring that Wisconsin’s workers are adequately protected from the range of physical, chemical, biological, and psychosocial hazards associated with work.

Preparing for and responding to natural and manmade disasters, including those potentially exacerbated by global climate change.

Conducting surveillance of occupational and environmental hazards and relevant health outcomes to provide evidence needed to take action in local, regional, and statewide communities.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

This health focus area data suggests that environmental and occupational health hazards are linked to lung cancer, chronic obstructive pulmonary disease, motor vehicle crashes, and pneumococcal infections.

The following indicators and related data directly relate to this focus area section:

1. Air Quality
2. Nitrate in Water
3. Housing with increased lead risk
4. Lead Poisoned Children

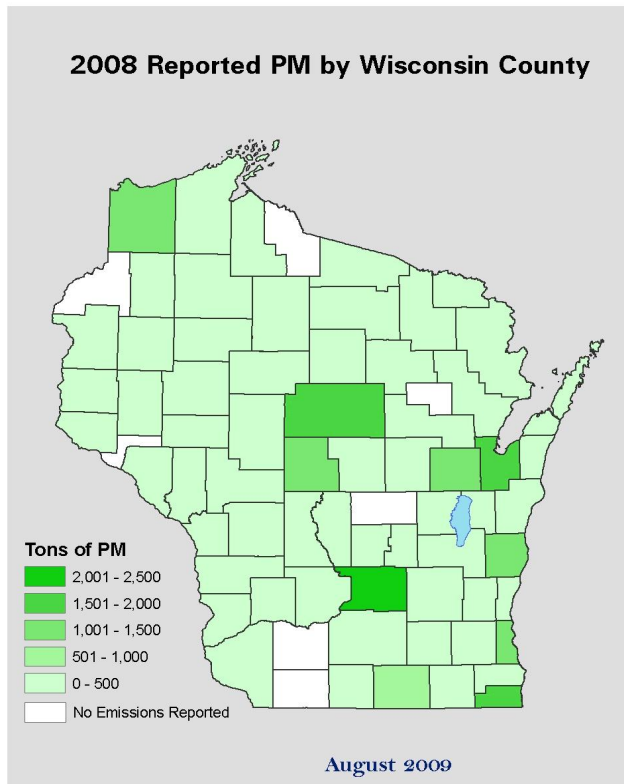
5. Radon Risk
6. Method of Commuting

Air Quality

Sheboygan ranks 68 out of 72 counties and the City of Milwaukee in Wisconsin for air quality according to the 2008 Wisconsin County Health Rankings.

"Particulate matter," also known as particle pollution or PM, is a complex mixture of particulates and droplet pollutants that suspend in the air. The size of particles is directly linked to their potential for causing health problems. The Environmental Protection Agency (EPA) is concerned about particles that are 10 micrometers in diameter or smaller as those generally pass through the throat and nose and enter deep into the lung tissue exacerbating respiratory conditions like asthma. Examples of particles 2.5 to 10 micrometers in diameter are typically found near roadways or dusty industries. Fine particles 2.5 micrometers in diameter and smaller are often emitted from power plants, industry and automobiles. *(Source: [US Environmental Protection Agency](#))*

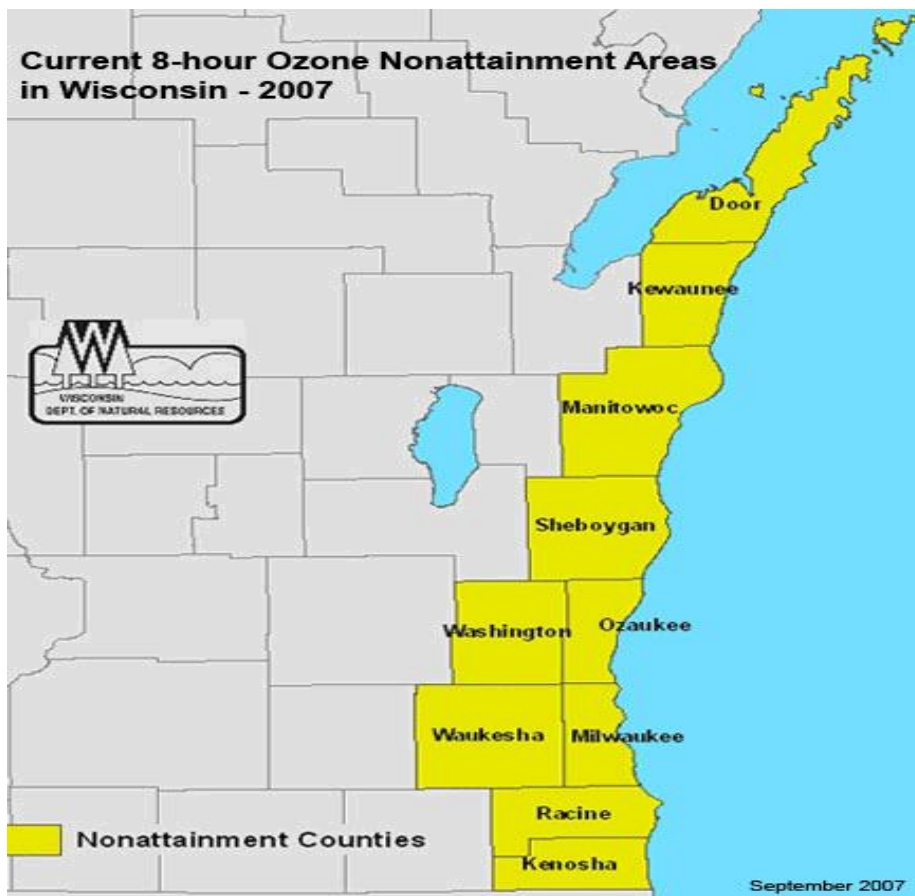
According to the Wisconsin Department of Natural Resources (DNR), in 2008 Sheboygan County produced 1,359.13 tons of particulate matter of varying sizes.



(Source: [Wisconsin Department of Natural Resources](#))

Ground level ozone is created by a reaction between nitrogen oxides (NO_x) and volatile organic compounds (VOCs) in the presence of sunlight. Automotive exhaust, industrial emissions, and chemical and gasoline vapors are some sources of NO_x and VOCs that create ground level ozone. Ozone may generate health problems even at low levels. Peak levels normally occur during warm summer conditions. The health effects associated with ozone exposure include decreased lung function, aggravated asthma, increased emergency department visits, hospital admissions and premature death. On March 12, 2008, the EPA adjusted the ozone standards to be lowered to the level of 0.075 parts per million (ppm). (Sources: [Wisconsin Department of Natural Resources](#) and [US Environmental Protection Agency](#))

By definition, when classified as a "nonattainment area" for ozone, a county has not met the EPA standard. Several counties in eastern Wisconsin, including Sheboygan, have been given this designation. The DNR has developed and is developing plans for nonattainment areas that detail how the state and industries will come to meet federal standards. On March 12, 2009, Gov. Doyle wrote to the EPA, outlining the progress made toward these goals and recommended all Wisconsin counties be considered "attainment areas" for the ozone standard. (Source: [Wisconsin Dept of Natural Resources](#))

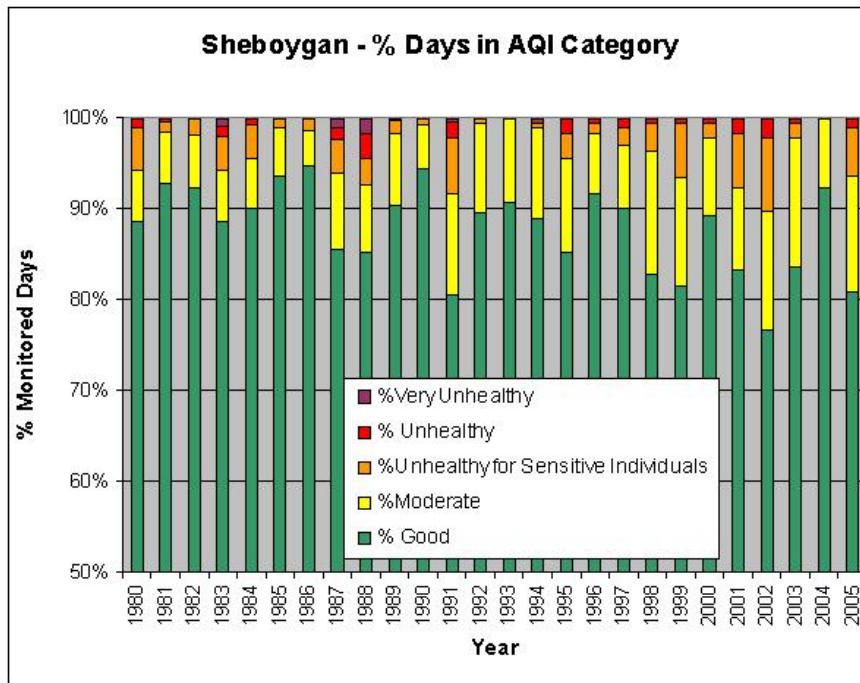


(Source: [Wisconsin Department of Natural Resources](#))

The Air Quality Index (AQI) is a scale for reporting daily air quality, gauging how clean or polluted the air is, and what related health effects might be of concern. The AQI is divided into six categories. Advisories are issued by the DNR when the AQI for ground level ozone or fine particle matter (2.5 micrometers in diameter and smaller) reaches the orange level or above. When a health advisory is issued, people with heart or lung disease, asthma, and other sensitive groups like older adults and children, are advised to reschedule or cut back on strenuous outside activities.

Good (Green)	Moderate (Yellow)	Unhealthy for Sensitive Groups (Orange)	Unhealthy (Red)	Very Unhealthy (Purple)	Hazardous (Brown)
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(Source: [Wisconsin Dept of Natural Resources](#))



(Source: [Wisconsin Department of Natural Resources](#))

Nitrate in Water

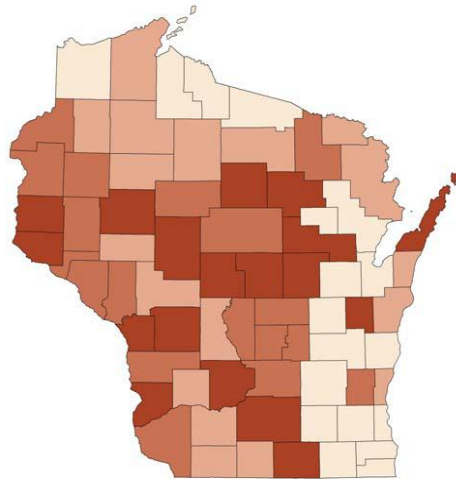
Sheboygan ranks 24 out of 72 counties and the City of Milwaukee for water quality with an estimated 14.6% of the county's population potentially exposed to nitrate in the water, according to the 2009 Wisconsin County Health Rankings.

Long term consumption of high levels of nitrate may increase cancer risk, lead to birth defects and infants given formula made with contaminated water can develop "blue baby syndrome." Common sources of nitrate contamination include fertilizers, animal waste, septic tanks, and sewage treatment systems. State and federal laws set the allowable level of nitrate in public drinking water

at 10 milligrams per liter (10 parts per million). These laws apply to all city and village water supplies and are used as an advisory for private well owners. (Source: [Wisconsin Department of Natural Resources](#))

According to DHS Environmental Public Health Tracking, 71.20% of Sheboygan County residents receive their water from regulated public (surface water) supplies and 28.8% use private (ground water) wells which only are advised to be tested. (Source: [WI EPHT](#))

Counties are shaded in quartile, with lighter counties having fewer people exposed to nitrate levels exceeding the preventative action level.



(Source: [2008 Wisconsin County Health Rankings Full Report](#))

Housing with Increased Lead Risk

Sheboygan ranks 60 out of 72 counties and the City of Milwaukee for housing with increased lead risk according to the 2008 Wisconsin County Health Rankings.

Lead may be present in dust, paint, and drinking water. When it enters the body, it poses a serious risk, especially to young children. Exposure can cause nervous system and kidney damage, a gamut of developmental problems and even lead to death. Homes built before 1950 have a higher risk of lead poisoning for its inhabitants. In Sheboygan County, 41.4% of the housing is pre-1950's stock, above the state average of 31%. (Source: [2008 Wisconsin County Health Rankings Full Report](#))

Lead Poisoned Children

Sheboygan County remains to rank 71 of 72 counties and the City of Milwaukee for childhood lead poisoning according to the 2008 Wisconsin County Health Rankings. This 71st rank persists despite the fact that the percentage of county children less than six years of age found to have elevated lead levels on screening has decreased from 15.9% in 1995 to 3.14% in 2007.

Much of the local progress associated with the reduction in childhood lead poisoning is credited to the acquisition and use of Federal HUD grants secured by the City of Sheboygan Planning Department for safe lead abatement of eligible homes. Abatement of environmental lead in housing stock reduces the risk of lead poisoning for children residing in these homes. (Source: Sheboygan County Division of Public Health Records)

Lead Screenings: In 2007, of the 1,876 children less than 6 years old who were tested for lead poisoning in Sheboygan County, 3.14% were found to be poisoned by lead. (Source: Lead Safe Wisconsin, 2007)

Note: Column description definitions given after the charts.

Sheboygan County Lead Testing Data 2004-2007

One Year Olds Tested

Year	Total Tested	Total Poisoned	Total Cases	% Poisoned
2004	648	24	4	3.70%
2005	666	24	2	3.60%
2006	641	23	2	3.59%
2007	714	16	4	2.24%

Two Year Olds Tested

Year	Total Tested	Total Poisoned	Total Cases	% Poisoned
2004	349	25	3	7.16%
2005	345	31	7	8.99%
2006	356	24	6	6.74%
2007	392	23	4	5.87%

Children Less Than Six Years Tested

Year	Total Tested	Total Poisoned	Total Cases	% Poisoned
2004	1582	68	8	4.30%
2005	1677	81	9	4.83%
2006	1706	63	11	3.69%
2007	1876	59	10	3.14%

Total Tested:

Number of children who had a capillary or venous blood lead test. If the test is a capillary sample followed within three months by a venous test, the date and age of the child at the time of venous test is counted.

Total Poisoned:

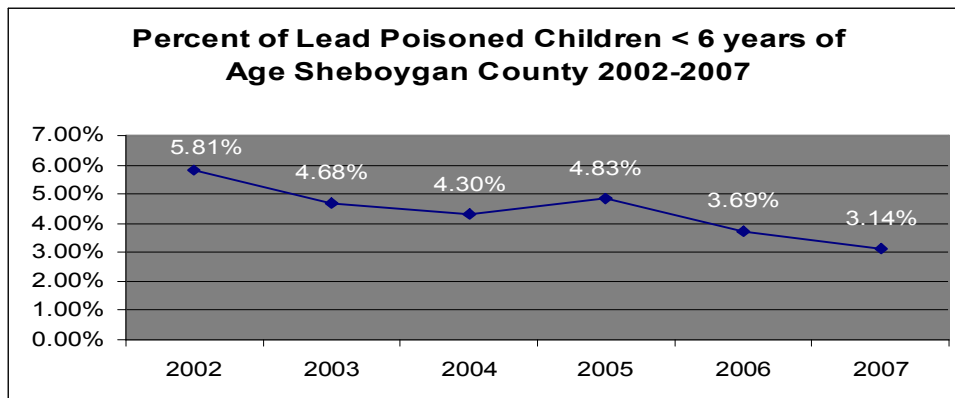
The number of children with a capillary or venous blood lead level (BLL) greater than or equal to 10 micrograms per deciliter (mcg/dl); if the test is a capillary sample followed within three months by a venous test, the value of the venous test is used to determine poisoned status.

Total Cases:

The number of children with a venous BLL greater than or equal to 20mcg/dl or two venous BLL's greater than or equal to 15 mcg/dl drawn at least 90 days apart; this number includes both new cases and those initially identified in a previous calendar year.

Percent Poisoned: The percentage of children tested in a community who are found to be lead poisoned.

The following chart demonstrates that a significant reduction in childhood lead poisoning has occurred since 2002.



(Source: Lead Safe Wisconsin, 2007)

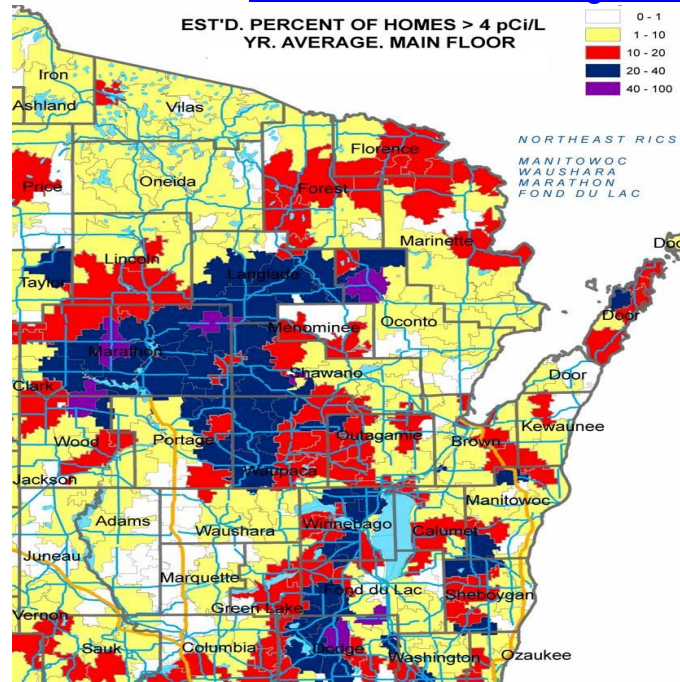
Radon Risk

Sheboygan County ranks 22 of 72 counties and the City of Milwaukee for homes tested for radon that exceed the EPA guideline of 4 picoCuries per Liter (pCi/L) according to the 2008 Wisconsin County Health Rankings.

Radon is a naturally occurring odorless gas that is the second leading cause of lung cancer and is associated with 15,000 to 22,000 lung cancer deaths annually in the United States. Radon can enter homes through cracks in floors, walls, or foundations, and collect indoors. According to the

Wisconsin Department of Health Services, 1034 radon tests were performed throughout Sheboygan County in 2006. Of those, 306 tested above 4pCi/L. Sheboygan County Division of Public Health was awarded a radon outreach grant for 2010 to promote radon awareness, testing and mitigation. (*Source: National Cancer Institute [Radon and Cancer](#) and WI DHS [Radon Test Results](#)*)

Updated December 22, 2009 *Source* :WI DHS [Estimated Radon Percentage Rates](#)



Method of Commuting

81% of Sheboygan County's workforce (16 and older) drives to work alone compared to the state average of 79.5%, ranking Sheboygan 57 out of 72 counties and the City of Milwaukee, according to the 2008 Wisconsin County Health Rankings.

Method of commuting encapsulates whether a community's blueprint supports alternative modes of transportation. Research shows that a community not dependent on cars can expect positive health effects, including a reduction in obesity, heart disease, and diabetes, as well as less air and water pollution. (*Source: [2008 Wisconsin County Health Rankings Full Report](#)*)

In 2005, Sheboygan County was one of four communities in the United States chosen for a non-motorized transportation pilot program. As part of this program, Sheboygan County has received funding to enhance and/or develop pedestrian and bicycle paths connecting neighborhoods, schools, and employment centers.

“The average round-trip commute distance in the City of Sheboygan is roughly 18.1 miles/day. The Department of Energy estimates that 19.564 pounds of carbon dioxide is released for every gallon of gasoline burned. This correlates into roughly 17.6 pounds of carbon dioxide released per commute and over 4,500 pounds per average working year.” (Source: [Sheboygan County Pedestrian & Bicycle Comprehensive Plan 2035](#))

Key Findings:

- **Sheboygan County air quality ranks 68 out of 72 counties and the City of Milwaukee in Wisconsin.**
- **High cancer mortality rate (22% of all deaths due to cancer).**
- **Moderate lung cancer mortality rate.**
- **High rate of hospitalization for asthma (13.2 per 100,000 population).**
- **Sheboygan County continues to exceed state average in childhood lead poisoning rate despite a reduction in percentage of Sheboygan County children found to be lead poisoned.**

MENTAL HEALTH

Focus area definition

“Mental health is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community.” (WHO, 2001) “Mental health is the foundation for well-being and effective functioning for an individual and community. It is more than the absence of mental illness; it is a resource vital to individuals, families, and societies (BC Ministry of Health, 2007)”

World Health Organization (WHO) 2001. Strengthening mental health promotion. Geneva, World Health Organization (Fact sheet no.220)

British Columbia Ministry of Health 2007. Evidence review: Mental Health Promotion.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

Mental health disorders are common in the United States and internationally. According to the National Institute of Mental Health (NIMH), an estimated 1 in 4 adults suffers from a diagnosable mental disorder in a given year. When applied to the 2004 U.S. Census adult population estimate, this translates to 57.7 million Americans. Despite these large numbers, the main burden of illness is concentrated upon a smaller population. An estimated 1 in 17 suffers from a serious mental illness. Additionally, serious mental disorders are the leading cause of disability in the U.S. for those age 15- 44. (Source: [National Institute of Mental Health](#))

The following indicators and related data are examined in this section:

1. Psychiatric Hospitalizations
2. Suicide
3. Access to Mental Health Services

Psychiatric Hospitalizations

From 2003 to 2007, Sheboygan County had an average of 886 psychiatric hospitalizations per year at a rate of 7.7 per 1,000 population per year. For the same time period, the average psychiatric hospitalization rate for the northeastern region was 6.0 per 1,000 population per year and the state was 6.5 per 1,000 population per year. (Source: [Wisconsin Department of Health Services Reference Center](#))

One specific type of psychiatric hospitalization that can occur during an acute situation is an Emergency Detention. An Emergency Detention is a statutory responsibility which gives law enforcement or other authorized professionals the ability to place an individual temporarily into custody in a secure hospital setting when there is cause to believe they are an immediate danger to themselves or others for reasons of mental illness, drug dependence or developmental

disability. The table below indicates the number of psychiatric hospitalizations that were defined as Emergency Detentions. (*Source: [Sheboygan County Ad Hoc Committee for Behavioral Health Services Final Report](#)*)

Emergency Detentions in Sheboygan County 2003 – 2007

	2003	2004	2005	2006	2007
<i>Number of Emergency Detentions per year</i>	403	367	359	380	365

(*Source: [Sheboygan County Ad Hoc Committee for Behavioral Health Services Final Report](#)*)

Suicide

In Wisconsin, suicide was listed as the second leading cause of death for those 15-24 years of age and the third leading cause of death for those 25-44 years of age for both 2007 and 2008. (*Source: [Wisconsin Department of Health Services, Wisconsin Deaths 2008](#)*) Sheboygan County has seen a moderate to high rate of suicide when compared to the region and state. The greatest number of suicides occurred in individuals aged 35-44 and the greatest number of inpatient hospitalizations and emergency department visits occurred in younger individuals, aged 15-24. These findings are similar at the state level. Firearms were the most frequently used method in Sheboygan County suicides (44%) followed by poisoning (25%) and hanging, strangulation, or suffocation (25%). (*Source: [The Burden of Suicide in Wisconsin Report, September 2008](#)*)

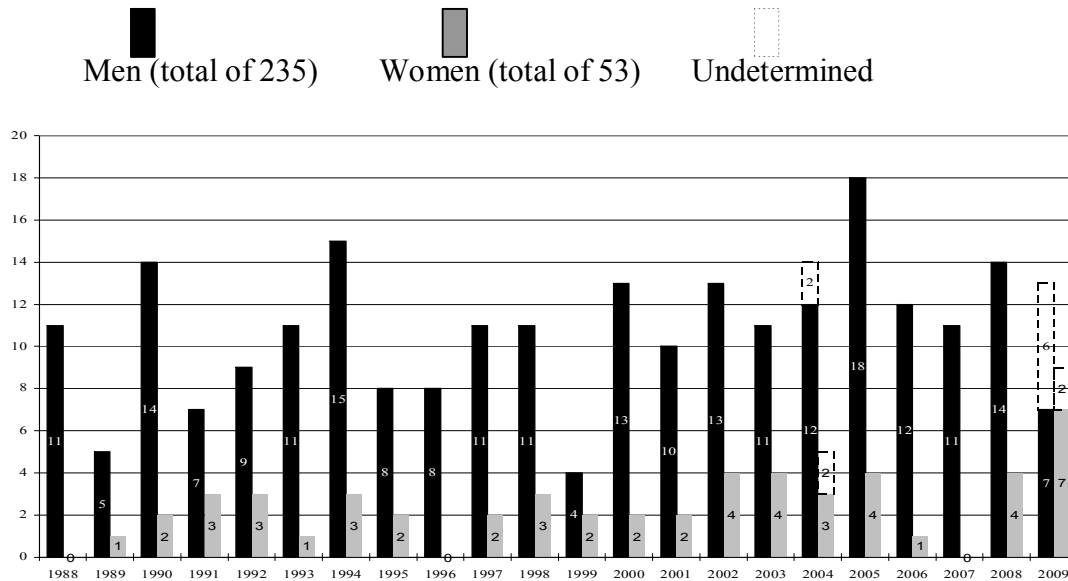
Suicide Rate per 100,000 population

	2004	2005	2006
<i>Wisconsin</i>	11.68	11.77	11.77
<i>Northeast Wisconsin</i>	12.39	12.88	12.65
<i>Sheboygan County</i>	13.89	19.0	12.8

(*Source: [Wisconsin Department of Health Services Reference Center, WISH](#)*)

In 2009, 14 suicides were confirmed by the Sheboygan County Coroner. In addition, there were 8 deaths ruled as “undetermined” where gun shot wounds or drug overdoses were involved. The amount of undetermined deaths should be reflected upon in areas of suicide and unhealthy alcohol and drug use components of this document. (*Source: [Sheboygan County Coroner](#)*)

Sheboygan County Total Suicides by Year 1988-2009



(Source: Sheboygan County Coroner's office, in conjunction with Healthy Sheboygan County 2020 Mental Health Committee. Data for deaths ruled as undetermined begins in 2004.)

Access to Mental Health Services

In 2006 and 2007, for the first time, the Wisconsin Behavioral Risk Factor Survey (BRFS) included questions on mental health. The BRFS is a telephone survey of state residents ages 18 and older carried out in conjunction with the US Centers for Disease Control and Prevention. This allowed for the inspection of relationships between mental health conditions and chronic disease risks, level of functioning and quality of life among Wisconsin adults. *(Source: Wisconsin Department of Health Services, [Linking Mental and Physical Health: Results from the Wisconsin Behavioral Risk Factor Survey, April 2009](#))*

People with mental health disorders may have difficulty accessing care. The survey showed that in Wisconsin, the prevalence of individuals with severe psychological distress among adults with annual household incomes below \$25,000 is four times that of people making \$25,000-\$49,999 (8% vs. 2%), and people with low incomes are less likely to be insured. For those who are insured, lack of parity between physical and mental health care coverage can result in under-treatment for mental health conditions and out-of-pocket expenses when treatment coverage limits are exceeded. Approximately 33% of those surveyed with severe psychological distress went without care due to cost at some point in the past year. Comparatively, 8% of those surveyed without severe psychological distress went without care due to cost. *(Source: Wisconsin Department of Health Services, [Linking Mental and Physical Health: Results from the Wisconsin Behavioral Risk Factor Survey, April 2009](#))*

The Sheboygan County Ad Hoc Committee for Behavioral Health Services met from June 2008-January 2009 to develop a strategy to address behavioral health needs of the community, including access to care issues. The final report is available for review.

(Source: [Sheboygan County Ad Hoc Committee for Behavioral Health Services Final Report](#))

Key Findings:

- **Local rate of psychiatric hospitalization exceeds state and regional rates.**
- **Moderate to high suicide mortality rate.**
- **Access to psychiatric care challenging for those with Medical Assistance, for those without insurance and for those who are underinsured.**

ORAL HEALTH

Focus area definition

Oral health means that oral health is basic to general overall health throughout the lifespan. It means being free of mouth pain, tooth decay, tooth loss, oral and throat cancer, oral sores, birth defects, gum (periodontal) disease, and other diseases that affect the mouth and surrounding structures.

Oral health includes access to a dental home, which is not a building, but rather a team approach to providing comprehensive oral health care services in a high- quality and cost-effective manner.

Early intervention with preventive measures begins during the prenatal period from both primary care providers and oral health providers and continues through the lifespan.

Early intervention with preventive measures includes children and adults with developmental disabilities who experience significant problems with access to dental services.

Older adults with poor oral health are at risk for malnutrition.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

Oral health is integral to general health. Although preventable, tooth decay is a chronic disease affecting all age groups. Among children, untreated decay has been associated with difficulty in eating, sleeping, learning, and proper nutrition. Among adults, untreated decay and tooth loss can also have negative effects on an individual's self-esteem and employability. The burden of oral disease is found to be far worse among those who have limited access to prevention and treatment services. (Source: [Centers for Disease Control and Prevention](#))

The following indicators and related data are described in this section

1. Youth Oral Health
2. Fluoridation
3. Dental Workforce
4. Access to Oral Care

Youth Oral Health

In 2006, Division of Public Health staff worked jointly with the Wisconsin Department of Health Services Oral Health Program to complete an oral health survey of 401 third grade students at nine Sheboygan County schools. This project was conducted in an effort to assess the oral health status of Sheboygan County children. Based on findings from this sample, 22.5% of Sheboygan County children have dental needs requiring attention. While the oral health survey was not diagnostic in nature, there appears to be some alignment with the Centers for Disease Control

and Prevention report indicating that 1 in 4 elementary school children in the United States are affected by tooth decay. (*Source: [2006 Sheboygan County Division of Public Health Annual Report](#)*)

Fluoride/Fluoridation

Fluoridation of community drinking water has been reported as one of the ten major public health achievements in the 20th century. Community drinking water fluoridation is believed to be largely responsible for the decline in dental caries (tooth decay) that occurred during the second half of the 20th century. Although other fluoride-containing products are available, water fluoridation remains the most equitable and cost-effective method of delivering fluoride to all members of most communities, regardless of age, educational attainment, or income level. (*Source: [MMWR, October 22, 1999](#)*)

Sheboygan County has several areas where water sources have been found to be deficient in fluoride. The 2009 Wisconsin Public Water Supply Fluoridation Census found that water supplies in the following areas are deficient in fluoride: Adell, Elkhart Lake, Glenbeulah, Oostburg, Random Lake, and the Town of Sheboygan. (*Source: [Wisconsin Public Water Supply Fluoridation Census, 2009](#)*) These findings remain consistent with the results of the 2002 Wisconsin Public Water Supply Fluoridation Census as reported in the 2004 Sheboygan County Community Health Needs Assessment.

Dental Work Force

Sixty-eight licensed dentists practice in Sheboygan County. Twelve of these providers are Medicaid certified dentists who serve persons enrolled in Medicaid and who bill Medicaid for services provided.

Access to Oral Care

In a report on the Wisconsin Hospital Association website it is noted that approximately 70% of Wisconsin Medicaid eligible children cannot find a dentist who is willing to take them as a new patient. In Sheboygan County the statistics demonstrate even greater need. Currently, no Sheboygan County dentists are accepting new Medicaid eligible clients for ongoing care.

Wisconsin Medicaid billing records as reported by Forward Health report that only 23.9% of Wisconsin residents enrolled in Medicaid obtained dental services between 7/1/2007 and 6/30/2008. Forward Health reports indicate that in Sheboygan County this percentage was lower with only 19.52% of persons enrolled in Medicaid receiving dental services.

Three hundred seventy-nine emergency room visits for dental related needs took place at the emergency departments of St. Nicholas Hospital and Aurora Sheboygan Memorial Medical Center in the year 2008. Data related to dental visits at walk-in and urgent care facilities is not available. *(Source: Sheboygan County Dental Access Committee Report)*

The 2008 Wisconsin Health Rankings published by the UW Population Health Institute report that 22.3% of Sheboygan County residents did not see a dentist in the past year (ranking 14 of 72 Wisconsin counties and the City of Milwaukee). The Aurora Sheboygan County Community Health Survey found that 70% of participants reported having a dental exam in the prior year as compared to 76% in 2003.

Local Initiative

Concerns regarding local unmet oral health care needs led to the formation of the Sheboygan County Dental Access Committee in 2003. This group has worked with community members to spearhead initiatives to systematically improve dental care access for uninsured, underinsured and Medicaid enrolled persons residing in Sheboygan County. Examples of new and expanded local efforts to meet unmet dental needs which have been implemented since the 2004 Community Health Needs Assessment include Give Kids a Smile Day, the Salvation Army Dental Clinic for uninsured persons, the Lakeshore Technical College Dental Clinic, the Head Start Fluoride Varnish Program and the Sheboygan Area School District Dental Sealant Program.

Key Findings:

- **Currently no dental providers in Sheboygan County are accepting new Medicaid enrolled patients.**
- **Low percentage of Medicaid eligible people receiving ongoing non-emergent dental services.**
- **379 persons sought Emergency Room care at local hospitals for dental problems in 2008.**
- **The Sheboygan County Dental Access Coalition was formed in 2003 to address unmet community oral health needs.**

PHYSICAL ACTIVITY

Focus area definition

Physical activity means any bodily activity that enhances or maintains physical fitness and overall health. Public health strategies focus on environmental and policy changes (e.g., active community environment initiatives, urban planning, safety enforcement, trails and sidewalks) to reach large sections of the population.

Physical activity includes specific time set aside for exercise as well as activity that is part of a person's daily routine (lifestyle activity).

Regular physical activity has been shown to reduce the risk of certain chronic diseases, including high blood pressure, stroke, coronary artery disease, Type 2 diabetes, obesity, colon cancer, and osteoporosis.

Physical activity recommendations include strategies to make physical activity the easy choice. This can be accomplished by creating opportunities for children, adults, and older adults to be active where they live, work, learn, and play.

Adults need 150 minutes of moderate aerobic activity or 75 minutes of intense aerobic activity per week, preferably spread throughout the week. Adults should also do strengthening activities two or more days per week.

Children ages 6 – 17 years of age need 60 minutes of aerobic activity per day. This includes vigorous activity and strengthening activities three days per week each.

Frail older adults need guided physical exercise to improve strength, prevent falls, improve cardiovascular performance, and restore resilience and social connection.

The built environment and overall environment should promote and support people being active.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

The importance of physical activity on overall health is well documented. The Centers for Disease Control and Prevention reports that regular physical activity is one of the most important things that individuals can do to improve their health. Activity can help control weight, reduce the risk of cardiovascular disease, type 2 diabetes and some cancers. It can also strengthen bones and muscles as well as improve mental health and mood. Persons who exercise regularly are more likely to live longer.

The following indicators and related data are described in this section:

1. Moderate Physical Activity
2. Vigorous Physical Activity
3. Physical Well Being and Body Weight Overall

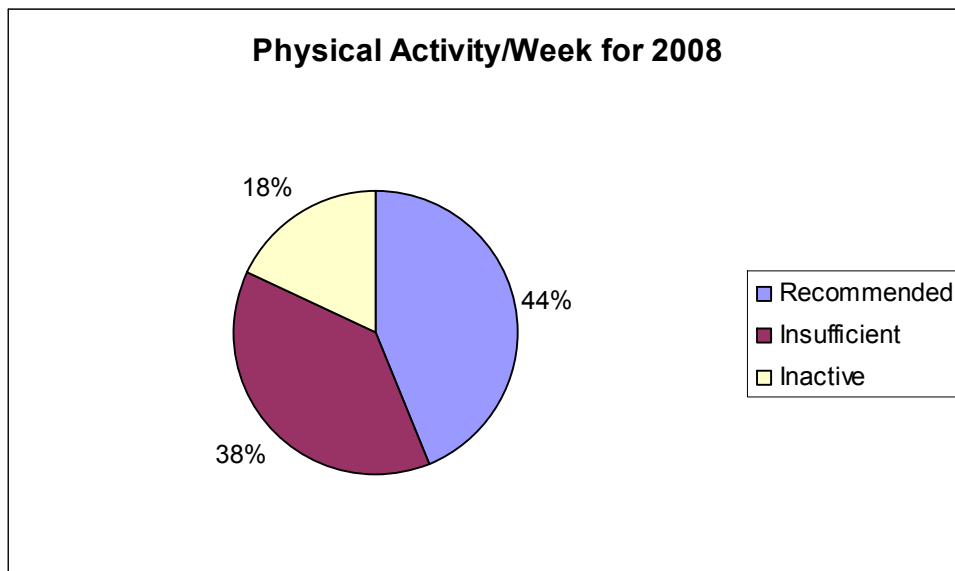
Moderate Physical Activity

In 2008, 32% of those surveyed as a part of the Sheboygan County Community Health Survey indicated that they had regular physical activity five times a week for at least thirty minutes per occasion. Another 46% of those surveyed reported that they participated partially in the recommended amount of physical activity and 21% were classified as inactive. The reported level of moderate physical activity among Sheboygan County residents was lower than Wisconsin (42%) and United States (33%) averages.

Vigorous Physical Activity

In 2008, 24% of those surveyed as a part of the Sheboygan County Community Health Survey reported completing vigorous physical activity at least three times a week for 20 minutes or more. The reported level of vigorous activity among Sheboygan County residents was also lower than Wisconsin (32%) and the United States (28%) averages.

The Centers for Disease Control and Prevention recommends that adults should engage in at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity activity spread throughout the week, plus muscle-strengthening activities on two or more days per week that involves all major muscle groups. The graph below shows that 44% of those surveyed in Sheboygan County meet the recommended amount of physical activity by a combination of moderate or vigorous amount of physical activity in a typical week. Data regarding local reports of recommended muscle-strengthening activities is not currently available.



(Source: *Sheboygan County Community Health Survey Report, 2008*)

Physical Well Being and Body Weight Overall

When comparing data from the 2003 and the 2008 Sheboygan County Community Health Surveys, readers will note that the percentage of individuals reporting that they exercised at a moderate level (5 times a week/30 minutes) increased from 25% in 2003 to 32% in 2008.

Those interested in pursuing more data related to physical *inactivity* throughout the State of Wisconsin can access Wisconsin Department of Health Services, Division of Public Health report entitled “Obesity, Nutrition, and Physical Activity in Wisconsin through the following link (Source: http://dhs.wisconsin.gov/health/physicalactivity/pdf_files/obesityreport.pdf)

Local Initiatives

Sheboygan County has a variety of recreational and exercise facilities which provide programming designed to meet the needs of Sheboygan County residents. Since publication of the 2004 Community Health Assessment, a variety of new and expanded local initiatives designed to increase levels of physical activity among Sheboygan County residents have been implemented. Noted examples include the receipt of the federal Non-Motorized Transportation Grant designed to increase bicycling and walking in Sheboygan County. This project continues to systematically improve infrastructure that can lead to increased uses of biking and walking as a means of transportation through the addition of bike paths, additions to shoulders of roadways, bike racks, sidewalks, etc.

Additional examples of expanded activity opportunities include new or improved community fitness centers at Sheboygan North, Sheboygan South, Random Lake and Oostburg Schools and the addition of wellness plans at area schools.

Key Findings:

- **Percentage of Sheboygan County residents engaging in physical activity exercise has increased since 2003, yet remains less than state and national levels.**
- **A variety of new and local initiatives to promote exercise have taken place over the past five years.**

REPRODUCTIVE AND SEXUAL HEALTH

Focus Area Definition

Reproductive and sexual health means those factors that affect physical, emotional, mental, and social well-being related to sexuality and reproduction for persons across the lifespan and for individuals engaging in same-sex and/or heterosexual behaviors.

Access to comprehensive, evidence-based, age-appropriate sexual health education that addresses boundaries between consensual and nonconsensual sex.

Services and access to biomedical interventions to prevent sexual behaviors that leads to sexually-transmitted infections, including HIV, and unintended first and subsequent pregnancies.

Screening and treatment of sexually-transmitted infections, testing for HIV, and linkage to care.

Pregnancy-related services including preconception, inter-conception (end of one pregnancy and the beginning of the next), and perinatal care (care during pregnancy).

Culturally competent services to address the sexual health needs of diverse populations including people marginalized because of race/ethnicity or socio-economic status; young women and men; older adults; people engaging in same-sex sexual contact and/or identifying as lesbian, gay, bisexual or transgender; deaf and hard of hearing; and people with disabilities.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

The World Health Organization (WHO) defines sexual health as a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. (Source: [World Health Organization](#))

Note: Readers are encouraged to review sexually transmitted and AIDS/HIV infection incidences in the communicable disease focus area of this report.

Reproductive Health:

Within the framework of WHO's definition of health as a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, reproductive health addresses the reproductive processes, functions and system at all stages of life. Reproductive

health, therefore, implies that people are able to have a responsible, satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Data reports on birth outcomes, births to teens, infant mortality and induced terminations of pregnancy follow.

The number of births has increased by 2.0% in Sheboygan County from 1376 in 2003 to 1403 in 2008. The state also experienced a small increase in the number of births during this period as did the northeastern region. *(Source: [Wisconsin Department of Health Services Reference Center, WISH](#))*

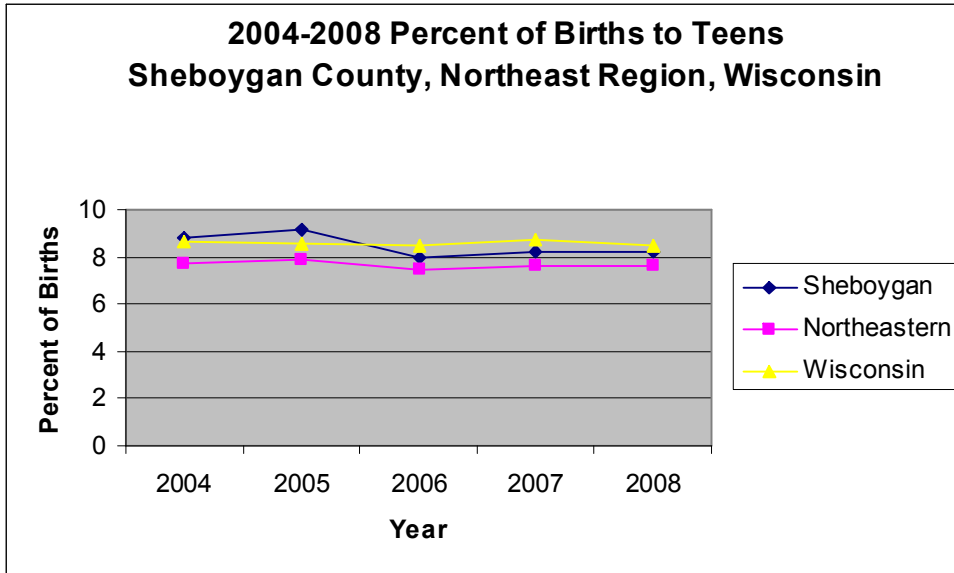
The following table summarizes selected birth characteristics for Sheboygan County and the State of Wisconsin for 2004-2008.

Year	2004		2005		2006		2007		2008	
	Sheb	WI	Sheb	WI	Sheb	WI	Sheb	WI	Sheb	WI
Birth Count	1382	70130	1481	70934	1422	72302	1407	72757	1403	72002
Birth Rate	12.00	12.66	12.79	12.71	12.27	12.89	12.1	12.9	12.0	12.7
Home Births	10	948	9	1010	11	1054	13	1091	14	1150
Low Birth Weight Count	84	4906	81	4992	78	4994	84	5089	86	5051
Percent Low Birth Weight	6.08%	7.0%	5.47%	7.04%	5.49%	6.91%	6.0%	7.0%	6.1%	7.0%
Premature Birth Count	129	7702	140	8033	123	8104	144	8072	114	7970
Premature Birth Percent	9.3%	11.0%	9.5%	11.3%	8.7%	11.2%	10.2%	11.1%	8.1%	11.1%

Source: [Wisconsin Department of Health Services Reference Center, WISH](#)

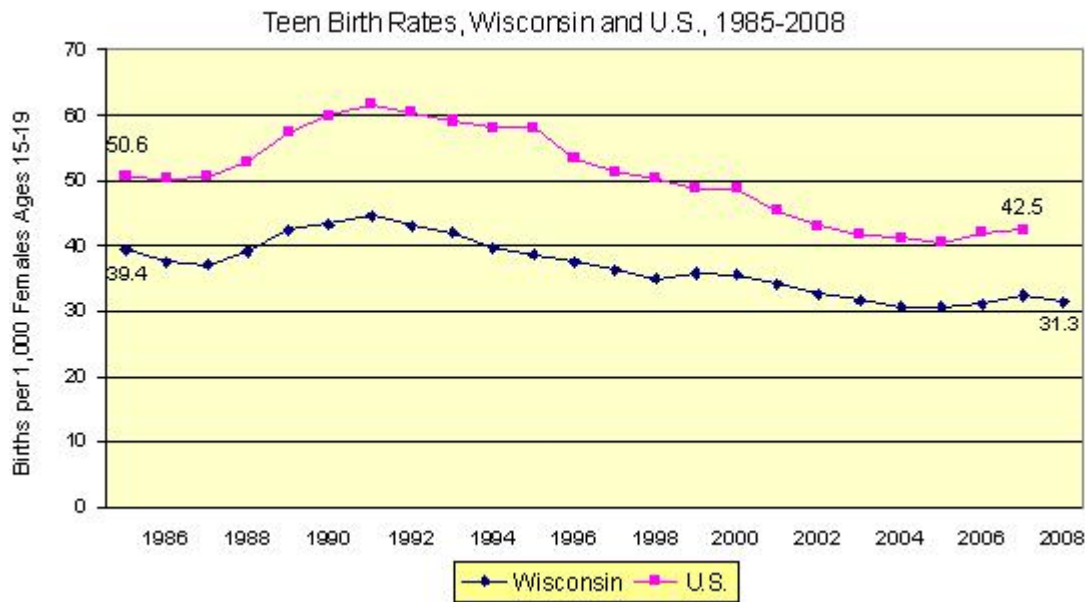
Teen Births/Pregnancies

Of the 5,713 total infants born in Sheboygan County from 2005 to 2008, 479 (or 8.38%) of births were born to teen-aged women (under 20 years old). This compares to 7.65% for the northeastern region and 8.54% for the state of Wisconsin as reflected in the graph that follows.



Source: ([Wisconsin Department of Health Services Reference Center, WISH](#))

The CDC reports that after declining steadily from 1991–2005, teen birth rates for 15 to 19-year-olds increased between 2005 and 2006 in 26 states from all regions of the country. This increase was not seen among younger teens: birth rates for 10 to 14-year-olds declined from 0.7 to 0.6 per 1,000 girls. (Source: [CDC Reproductive Health](#))

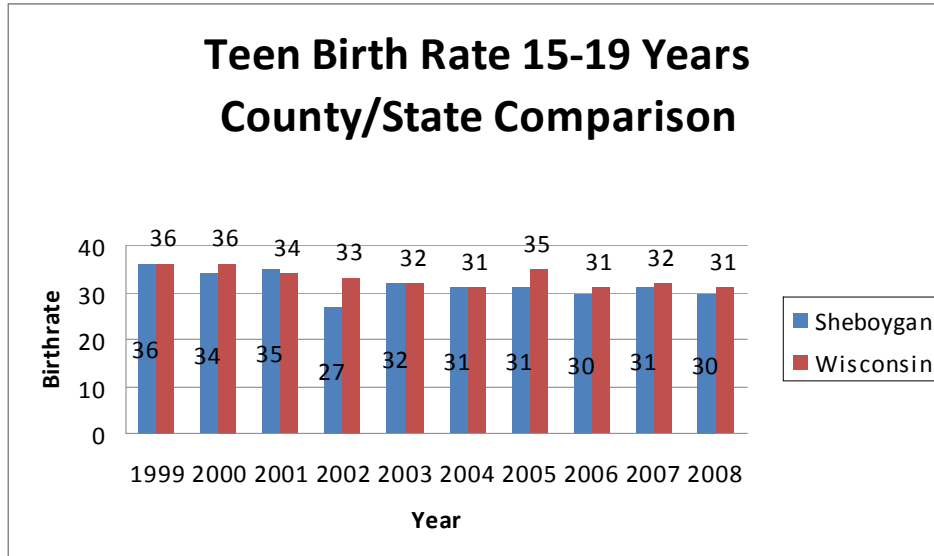


(Source: [Wisconsin Department of Health Services Reference Center](#))

Local birth rates to teens 15-19 years old declined from 36 per 1000 girls in 1999 to 27 per 1000 girls in 2002. Since 2002 the rate has increased to 30 per 1000 girls.

The Sheboygan County 2008 teen birth rate among females 15-19 years old was 30.35 per 1,000 females, which was higher than the northeastern region (27.56) but lower than the state (31.3). *(Source: Wisconsin Department of Health Services Reference Center, 2008)*

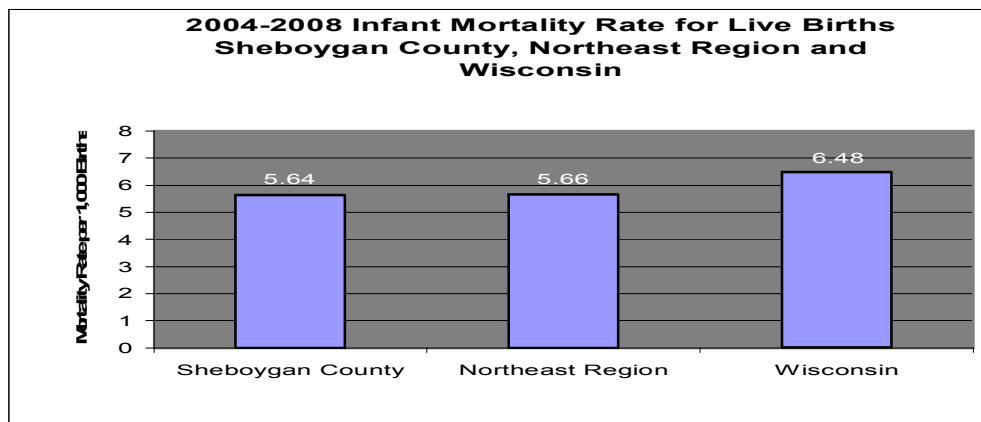
Teen birth rate data for the ten year period of 1999-2008 follows.



(Source: Wisconsin Department of Health Services Reference Center, WISH)

Infant Mortality

Local death files show that there were 40 deaths among infants (less than 1 year old) from 2004 to 2008 in Sheboygan County, which calculates to a rate of 5.64 per 1,000 live births. Thirty of these were neonatal infant deaths (less than 27 days old), and 10 were post-neonatal (28 days old to 1 year old). Sheboygan County's infant mortality rate of 5.64 per 1,000 live births was lower than both the northeast region (5.66) and the state (6.48). *(Source: Wisconsin Department of Health Services Reference Center, WISH)*



(Source: Wisconsin Department of Health Services Reference Center, WISH)

Reported Induced Termination of Pregnancy Data

Data regarding Wisconsin induced terminations of pregnancy is collected through the Wisconsin Induced Termination of Pregnancy Reporting System. Each facility that provides abortion services is required by State Statute to report data in a systematic fashion, protecting client anonymity.

The accuracy of data is affected by a number of factors. State and county of residence, race, ethnicity, and marital status are self-reported by patients, which can affect accuracy of the characteristics measured. The reporting system only includes data related to induced terminations of pregnancy performed in Wisconsin.

Induced Terminations of Pregnancy Data - Sheboygan County and Wisconsin, 2004-2008

Year	2004		2005		2006		2007		2008	
County	Sheb	WI	Sheb	WI	Sheb	WI	Sheb	WI	Sheb	WI
Number of Reported Induced Abortions	152	9,719	124	9,566	146	9,352	127	8,099	82	8,008
Rate per 1,000 women ages 15-44	6.7	8.4	5.5	8.2	6.5	8.1	5.7	7.1	3.7	7.1

(Source: "Reported Induced Terminations of Pregnancy in Wisconsin," Bureau of Health Information and Policy, WDHS)

Three-Year Average Number of Reported Induced Terminations by Age

	<18 years	18-19 years	20-24 years	25+ years	Total
Sheboygan Co.	7	17	38	56	118
Wisconsin	549	926	2,890	4,121	8,486

(Source: "Reported Induced Terminations of Pregnancy in Wisconsin," Bureau of Health Information and Policy, WDHS)

Three-Year Average Number of Induced Abortions by Race and Hispanic Origin

	White	Black	Asian/Pacific Islander	Total by Race	Hispanic Ethnicity
Sheboygan Co.	101	2	11	118	11
Wisconsin	5,856	2,059	337	8,486	761

**Columns reported not to sum due to rounding of numbers*

(Source: "Reported Induced Terminations of Pregnancy in Wisconsin," Bureau of Health Information and Policy, WDHS)

Key Findings:

- **2% increase in number of births per year from 2003 to 2008.**
- **Local birth rates comparable to state.**
- **Percent of infants born prematurely or less than 5.5 pounds less than Wisconsin.**
- **Moderate teen birth rate increased between 2002 and 2008.**
- **Moderate infant mortality rate.**
- **Number of reported induced terminations of pregnancy decreased by 46% from 2004 to 2008.**

TOBACCO USE AND EXPOSURE

Focus area definition

Tobacco use and exposure means improving health by preventing tobacco abuse, promoting tobacco dependent treatment, protecting all residents and visitors from exposure to secondhand smoke, and identifying and eliminating tobacco-related disparities. This is accomplished by partnering with state and local leaders to implement research-based, comprehensive tobacco prevention and control plan.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

Health Focus Area Data

The health and economic effects of cigarette smoking and exposure to second hand smoke are well documented. These effects include higher rates of chronic illnesses, substantial health care costs, reduced productivity, and premature death.

This section addresses the following indicators and related data:

1. Smoking Rates
2. Deaths Directly Related to Smoking
3. Low Birth Weights associated with Smoking

Nationally, the estimated percentage of persons 18 years of age or older who report smoking regularly has decreased from 22.8% in 2000 to 18.3% in 2009. In 2009, Wisconsin ranked 32nd of the 50 states for its smoking prevalence of 19.8%. The 2009 national range of smoking prevalence among states varied from number 1 ranked Utah with a smoking prevalence of 9.3% and number 50 ranked West Virginia with a smoking prevalence of 26.5%. (Source: [America's Health Rankings Smoking Prevalence](#))

The Wisconsin Department of Health Services “2008 Youth Tobacco Survey” indicates that the percentage of Wisconsin high school students who smoke has decreased from 33% in 2000 to 20.7% in 2008. Additional 2008 report findings related to Wisconsin youth follow:

2008 Wisconsin Department of Health Services – Youth Tobacco Survey Results

	Wisconsin Middle School Students	Wisconsin High School Students
% Reporting Currently Smoking Cigarettes	4.3%	20.7%
% Reporting Currently Using Any Tobacco Product (cigarettes, snuff, etc)	6.8%	28.4%
% Reporting Having Seen or Heard Commercials re: the dangers of smoking during the past 30 days	60.7%	77.3%
% Reporting Having Been Taught in Class re: the Danger of Tobacco Use	69.2%	43.6%
% Reporting That They Live in Homes Where others Smoke	36.1%	38.1%
% Reporting That They Have Been In the Same Room as Another Person Smoking During the Past Week	43.4%	58.9%

(Source: <http://dhs.wisconsin.gov/tobacco>)

Sheboygan County specific smoking-related statistics were published in the “2006 Wisconsin Burden of Tobacco Report,” a collaborative report compiled by the University of Wisconsin Tobacco Surveillance and Evaluation Program, the American Cancer Society, and the Wisconsin Division of Public Health’s Tobacco Prevention and Control Program. The following local and state smoking rates for the period of 2000-2004 were documented in that report. (Source: [County Tobacco Reports](#))

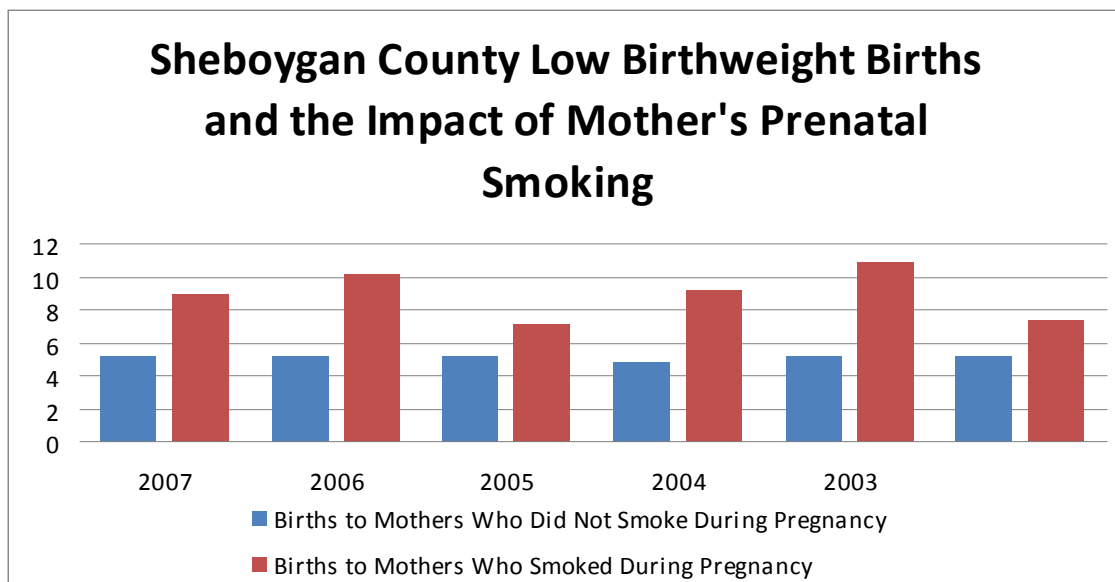
Number of Smokers (2000-2004)	# of Smokers in Sheboygan County	Percent of Sheboygan County Residents Who Smoke	# of Smokers in Wisconsin	Percent of Wisconsin Residents Who Smoke
Adults (18+ years)	21,810	25%	920,000	22%
High School Youth	1,440	21%	66,000	21%
Middle School Youth	400	8%	19,000	8%
Women Smoking During Pregnancy	202	15%	10,000	14%

The same 25% smoking prevalence rate as demonstrated in the Burden of Tobacco document was also reported among respondents to the 1999 and 2003 Sheboygan County Community Health Assessment. While a follow-up report to state-published Burden of Tobacco has not been released for more recent years, 2008 Sheboygan County Community Health Survey data reflects the fact that 28% of persons surveyed reported that they were currently smokers. Sheboygan County has a higher percentage of smokers than other Wisconsin counties, ranking 46th of 72 counties and the City of Milwaukee in the 2008 Wisconsin County Health Rankings. (*Source: 2008 Wisconsin County Health Rankings Full Report*)

Deaths Directly Related to Smoking

The 2006 Burden of Tobacco report indicates that in Wisconsin, an estimated 7,215 people die annually from illnesses directly related to smoking. In Sheboygan County 145 (14%) of the 1042 estimated deaths associated with lung cancer, other smoking related cancers, cardiovascular or respiratory diseases are reported as directly related to smoking. It is estimated 1,880 years of potential life are lost each year in Sheboygan County related to deaths directly related to smoking.

Between 2002 and 2005 an estimated 15.4% of infants were born to mothers who smoked during pregnancy. The following chart demonstrates the fact that infants born to mothers who smoke during pregnancy are more likely to be born weighing less than 5.5 pounds.



(*Source: Wisconsin Department of Health Services Reference Center, 2007*)

Of particular note at the time of this publication is the fact that Wisconsin's Statewide Smoke-Free Air Law will go into effect on July 5, 2010. This law will prohibit persons from smoking in public buildings such as government buildings, schools, daycares, restaurants, taverns, lodging establishments, sports arenas, correctional facilities, etc. The positive health impact of this legislation is expected to be significant.

The following chart includes findings related to the economic impact of cigarette smoking in Wisconsin and Sheboygan County

	Sheboygan County	Wisconsin
Health Care Costs	\$44,620,000	\$2,160,000,000
Lost Productivity	\$33,890,000	\$1,640,000,000
Total Costs	\$78,510,000	\$3,800,000,000

(Source: [2006 Burden of Tobacco](#))

Key Findings:

- **Sheboygan County smoking rates of adults exceed state and national levels.**
- **An estimated 145 Sheboygan County resident deaths are reported as directly related to smoking.**
- **An estimated 15.4% of Sheboygan County pregnant women smoke. Smoking negatively impacts pregnancy outcomes, i.e. low birth weight.**
- **Tobacco use has a significant economic impact in Sheboygan County.**
- **Wisconsin Statewide Smoke Free Air Law goes into effect July 5, 2010.**

UNHEALTHY ALCOHOL AND DRUG USE

Focus area definition

Unhealthy alcohol and drug use means any use of a substance, or uses of substances that result in negative consequences. This includes a broad array of mood altering substances that include but are not limited to: alcohol, prescription substances, and illegal mood altering substances. Negative consequences or unhealthy uses include, but are not limited to: operating a motor vehicle while intoxicated, drinking while pregnant, alcohol dependence, fetal alcohol spectrum disorder, alcohol related hospitalizations, heavy drinking, alcohol related liver cirrhosis deaths, motor vehicle injury or death, liquor law violations, other alcohol-attributable deaths, under-age drinking, drug related deaths, drug related hospitalizations, arrests for drug law violations, and alcohol or drug related crimes (i.e., property crimes, violent crimes).

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

Alcohol use is common in our society. Wisconsin's rates of alcohol use and misuse are among the highest in the nation. (Source: [Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008](#)) Excessive alcohol use, either in the form of heavy drinking (drinking more than two drinks per day on average for men or more than one drink per day on average for women), or binge drinking (drinking five or more drinks during a single occasion for men or four or more drinks during a single occasion for women), can lead to increased risk of health problems such as liver disease or unintentional injuries. In fact, excessive alcohol use is the 3rd leading lifestyle-related cause of death for people in the United States each year. (Source: [Centers for Disease Control and Prevention](#))

The use of illegal drugs is a national problem as well. In this area, Wisconsin tends to mirror national data. For instance, the misuse of prescription drugs for non-medical purposes has emerged as a problem, particularly among young adults both in Wisconsin and nationally. The consequences of illegal drugs and unhealthy alcohol use can lead to criminal behavior, incarceration and many types of morbidity and mortality. (Source: [Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008](#))

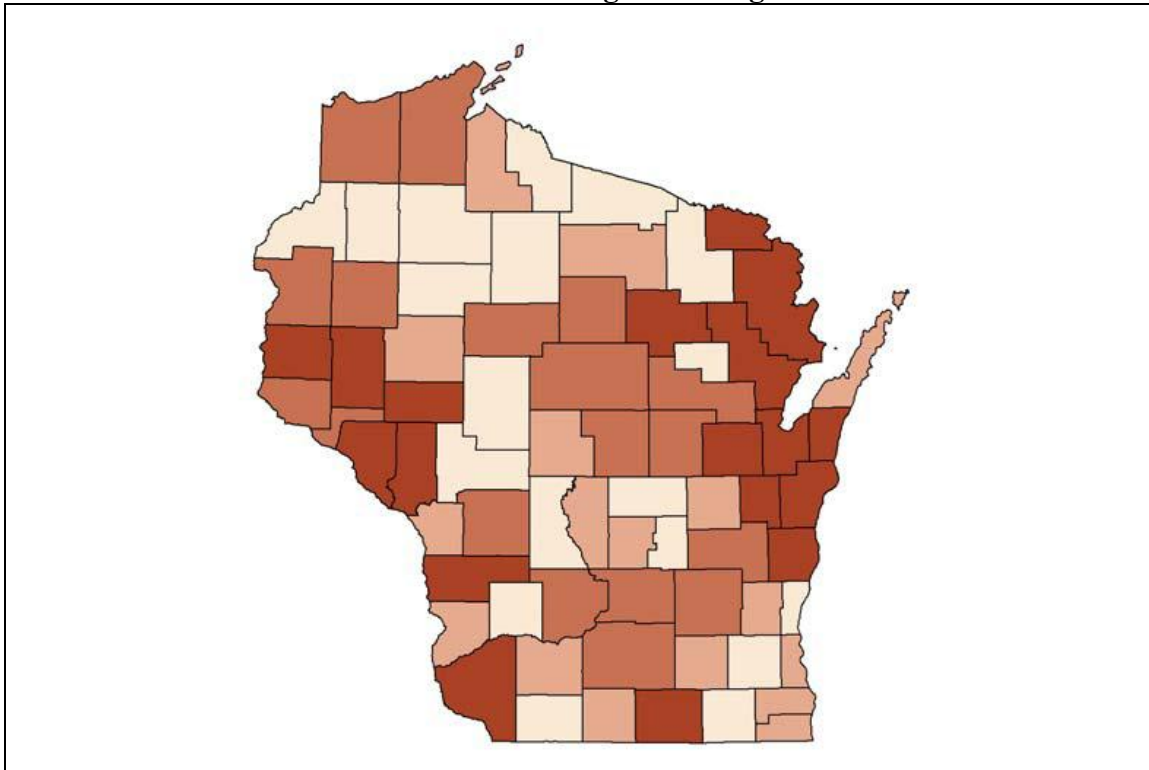
The following focus areas of data are examined in this section:

1. Alcohol Consumption, Binge Drinking and Heavy Drinking
2. AODA (Alcohol and Other Drug Abuse) Hospitalizations
3. AODA as the Underlying Cause of Death
4. Liver Disease
5. Operating While Intoxicated
6. Motor Vehicle Accidents
7. Drug and Other Law Violations

Alcohol Consumption

According to the 2008 Wisconsin County Health Rankings, Sheboygan County ranked 65 out of 72 counties and the City of Milwaukee for reports of binge drinking. The average percentage of adults 18 and older, that were phone surveyed by the Behavioral Risk Factor Surveillance System, who reported binge drinking (drinking five or more drinks on one occasion in the past 30 days) was 28% for the years 2001 to 2007. The overall percentage for Wisconsin was 23.2%. As seen in the map below, Northeast Wisconsin shows a higher concentration of binge drinking as compared with other regions of the state. *(Source: [2008 Wisconsin County Health Rankings Full Report](#))*

Wisconsin Binge Drinking Rates



The counties are shaded by quartile, with lighter counties having lower binge drinking rates. *(Source: [2008 Wisconsin County Health Rankings Full Report](#))*

Heavy drinking data shows a similar trend as that of binge drinking. The percentage of adults that reported heavy drinking (drinking more than two drinks per day for men and more than one drink per day for women) for the northeastern region was 9%. This was higher than the State of Wisconsin at 8% and the United States at 5%. *(Source: [Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008](#))*

AODA (Alcohol and Other Drug Abuse) Hospitalizations

The number of alcohol-related hospitalizations in Wisconsin has increased by 8% since 2002. Sheboygan County has seen an increase as well. In 2004, 949 alcohol-related hospitalizations were tabulated and in 2006 the number rose to 1095. The rate was 896 per 100,000 population

from 2005-2006 for Sheboygan County and 861 per 100,000 population for Wisconsin. ([*Source: Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008*](#))

Additionally, there was an increase of 26% from 2002 to 2006 for drug-related hospitalizations in Wisconsin. Sheboygan County had 318 drug-related hospitalizations in 2004 and 342 in 2006. Sheboygan County had a rate 289 per 100,000 population in 2005-2006 with the state showing a rate of 249 per 100,000 population. ([*Source: Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008*](#))

AODA as the underlying cause of death

From 1999-2006 in Sheboygan County, the annual average number of deaths from alcohol, other than from cirrhosis or motor vehicle accidents, was seven, which is a rate of 9.7 per 100,000 population. In Wisconsin the annual average number was 976 with a rate of 17.9 per 100,000. ([*Source: Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008*](#))

In 2006, there were 526 deaths related to illicit drug use in Wisconsin, which is a rate of 9.3 per 100,000 population. The state is seeing an increase in drug-related deaths as the total number in 1999 was 167, which is a rate of 3.1 per 100,000. Furthermore, the Sheboygan County Coroner's data, as presented in the Mental Health section of the document, reflected that Sheboygan County had an increase in deaths ruled as "undetermined" where drug use or firearms were a factor. ([*Source: Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008*](#))

Liver Disease Mortality

There was an annual average of one alcohol related liver cirrhosis death in Sheboygan County between 1999 and 2006 which is a rate of 1.8 per 100,000 population. The State of Wisconsin had an annual average of 239 deaths due to alcohol-related liver cirrhosis which has a rate of 4.0 per 100,000 population. ([*Source: Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008*](#))

Operating While Intoxicated

In 2006, Sheboygan County had a rate of 1,180 arrests per 100,000 population for operating a vehicle while intoxicated. The county has a higher rate than Wisconsin which had a rate of 775 arrests per 100,000 population for operating while intoxicated. ([*Source: Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008*](#))

In 2006, there was a rate of 806 liquor law arrests per 100,000 population in Sheboygan County. The county's rate of liquor law arrests was slightly lower than the state's 817 arrests per 100,000 population. ([*Source: Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008*](#))

Injuries and Deaths Due to Motor Vehicle Accidents

There was an annual average of 873 persons injured in motor vehicle accidents from 2003 to 2007 in Sheboygan County (data is based on the location of crash, not residence). Eleven percent of the injuries in motor vehicle accidents during the 5-year period were alcohol-related. The northeastern region had a higher percentage of alcohol-related injuries at 14.7% and the state had a similar percentage of alcohol-related injuries at 11%. (*Source: [Wisconsin Department of Health Services Reference Center](#)*)

From 2003 to 2007, there have been 63 people killed in Sheboygan County as a result of motor vehicle injuries. Alcohol was involved with 25 of the 63 deaths, meaning, in Sheboygan County, 40% of the people killed in motor vehicle accidents were alcohol-related. The county had a lower percentage than the northeastern region (44%) and the state (42%). (*Source: [Wisconsin Department of Health Services Reference Center](#)*)

Drug and Other Law Violations

Since 1997, Wisconsin has seen an increase of 22% in arrests for drug law violations. In 2006, Sheboygan County had 419 arrests per 100,000 population for drug law violations compared to the state rate of 465 per 100,000 population. This is also below the 2006 national rate of 637 per 100,000 population. Sheboygan County reported 3,357 property crimes at a rate of 2,925 per 100,000 population in 2006 which was an increase from 2005 of 2,970 or a rate of 2591 per 100,000 population. (*Source: [Wisconsin Department of Health Services, Wisconsin Epidemiological Profile on Alcohol and Other Drug Use, 2008](#)*)

Key Findings:

- **Low liver disease mortality rate.**
- **Rising rate of alcohol and drug-related hospitalizations.**
- **High percentage of binge drinking.**
- **Higher than the state average for OWI arrests.**
- **Moderate percentage of alcohol-related motor vehicle accident deaths.**
- **Drug law and property crime rates are rising.**

VIOLENCE AND INJURY PREVENTION

Focus area definition

Violence and unintentional injury prevention encompasses a broad array of topics (e.g., suicide, falls, child abuse/ neglect, poisoning, homicide, drowning, motor vehicle crashes, sexual assault/ rape, bullying, domestic violence). Common prevention strategies exist across all causes and manners that include but are not limited to environmental changes, education, and enforcement of policies, laws, and standards.

The burden of injury differs across the life-span and analysis of the impact of violence and unintentional injury includes not only costs related to care and treatment of injuries, but also loss of productivity (economic loss to the individual, family and work force), years of potential life loss due to injury mortality and the impact of injury and violence on chronic disease and physical and mental health.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

Violence is a serious public health problem in the United States and affects people in all stages of life. For instance, in 2006 more than 18,000 people were victims of homicide, but the number of violent deaths tells only part of the story. Many more survive violence and are left with permanent physical and emotional scars. Violence can erode communities by reducing productivity and damaging property values. (Source: [Centers for Disease Control and Prevention](#))

Injuries are a preventable public health problem and should not be considered “accidents,” which are thought to be random and therefore, not preventable. There are strategies such as safety devices, planning and preparation that may prevent injuries from occurring. (Source: [Wisconsin Department of Health Services, Burden of Injury in Wisconsin, Fall 2006](#))

The following indicators are examined in this section:

1. Violent Crime
2. Homicide
3. Domestic Abuse
4. Child Abuse and Neglect
5. Injury Prevention

Violent Crime

In the Federal Bureau of Investigation’s (FBI) Uniform Crime Reporting Program (UCR), violent crime is defined as offenses which involve force or threat of force and is composed of four offenses: murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault. (Source: [FBI, 2008 Crime in the United States](#))

According to the FBI, the following violent crimes were cataloged in 2008 for Sheboygan County and other demographically comparable Wisconsin Counties:

2008 Violent crimes reported to law enforcement

2008 County Data	Murder	Forcible Rape	Robbery	Aggravated Assault
Sheboygan	0	3	2	27
Rock	0	14	2	24
Fond du Lac	0	9	1	27
La Crosse	0	1	2	19

Source: [\(FBI, 2008 Crime in the United States\)](#)

Sheboygan County ranked 36 of 72 counties and the City of Milwaukee related to violent crime with a rate of 106 violent crimes per 100,000 adult population averaged from 2002-2005.

(Source: [2008 Wisconsin County Health Rankings Full Report](#))

Homicide

In 2008, homicide was the third leading cause of death for people ages 15-24 in Wisconsin.

(Source: [Wisconsin Department of Health Services, Wisconsin Deaths, 2008](#))

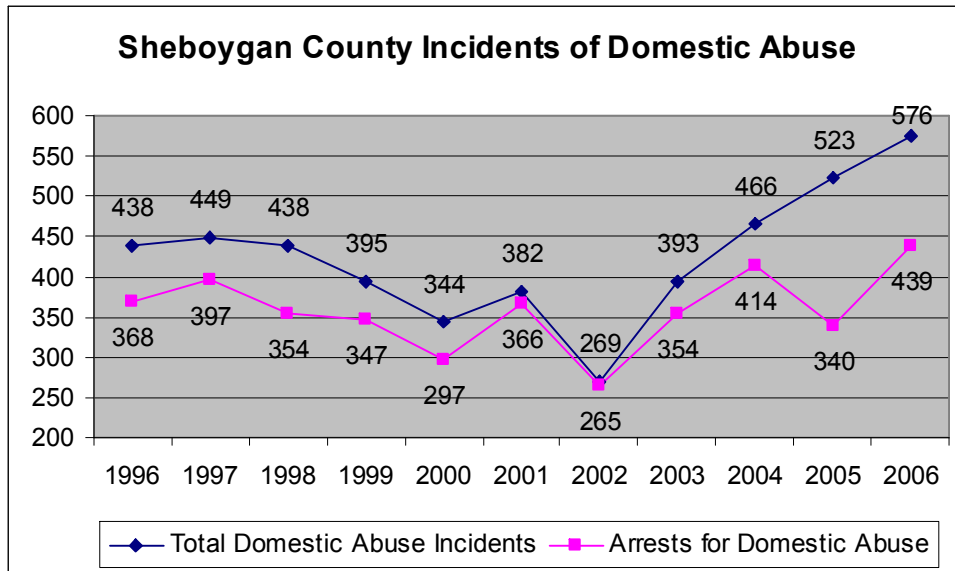
In 2008, the number of persons murdered in Wisconsin decreased by 21%. One homicide was reported in 2007 and no homicides were reported in Sheboygan County in 2008.

(Source: [Wisconsin Office of Justice Assistance, Crime in Wisconsin 2008](#))

Domestic Abuse

In Sheboygan County, the number of total domestic abuse incidents and the number of arrests for domestic abuse have risen since 2002.

(Source: [Sheboygan and Plymouth Area United Way Community Needs Assessment, 2007](#))



(Source: [Sheboygan and Plymouth Area United Way Community Needs Assessment, 2007](#))

In 2005, the Sheboygan County's domestic violence total arrest rate was higher at 3.9 per 1,000 adults than Wisconsin's rate of 2.9 per 1,000 adults. (Source: [2005 Wisconsin Department of Justice, Domestic Abuse Incident Report](#))

Child Abuse and Neglect

Of the 40,616 allegations of child maltreatment that were reported to the State of Wisconsin Department of Children and Families in 2007, 758 were from Sheboygan County. Of these, 188 were for physical abuse; 100 were for sexual abuse; 482 were for neglect; and 70 were for emotional abuse. (The sum of the totals of each type of allegation exceeds the total number of reports because there may be more than one allegation per report. The totals for sexual abuse exclude cases of mutual sexual activity.) The county's maltreatment substantiation rate was lower (12.4%) than the state at 16%. (Source: [Wisconsin Department of Children and Families, Wisconsin Child Abuse and Neglect Report, 2007](#))

Injury Prevention

Related indicators include the following:

1. Safety Belt Use
2. Helmet Use
3. Falls

Safety Belt Use: 87% of Sheboygan County residents surveyed reported that they always/nearly always wear their safety belts while driving or riding in vehicles in 2008. The county had a higher percentage of those who always/nearly always wear their safety belts than the state at 82%. (Source: [Sheboygan County Community Health Survey Report, 2008](#))

Helmet Use: 32% of Sheboygan County residents surveyed reported that they always/nearly always wore a helmet when biking, using in-line roller skates, or riding a scooter. Fifty-eight

percent of those surveyed reported they never wore a helmet when biking, using in-line roller skates, or riding a scooter. (*Source: Sheboygan County Community Health Survey Report, 2008*)

Falls: Falls are the leading cause of injury-related hospitalizations and injury-related emergency department visits in Wisconsin. According to the *Burden of Injury in Wisconsin* released in 2006, from 2002-2004 Wisconsin saw 62,040 hospitalizations from falls with an annual rate of 376 per 100,000 population and Sheboygan County saw 1,343 hospitalizations from falls and an annual rate of 391 per 100,000 population. The report also showed Wisconsin had 336,823 emergency department visits from 2002-2004 related to falls with an annual rate of 2041 per 100,000 population. Sheboygan County saw 6,248 visits with an annual rate of 1819 per 100,000, below the state rate. (*Source: Wisconsin Department of Health Services, Burden of Injury in Wisconsin, Fall 2006*)

Key Findings:

- **Domestic abuse on the rise since 2002.**
- **Increase in percentage of adults who use safety belts.**
- **Low percentage of adults who use helmets (32% usage).**
- **Lower percentage than the state in ER visits related to falls.**

HEALTHY GROWTH AND DEVELOPMENT

Focus area definition

Healthy growth and development requires family-centered, community-based, culturally competent, coordinated care and support throughout the life course during preconception and prenatal periods, infancy, childhood, adolescence, and adulthood. Components include:

Addressing factors that affect biologic, psychological, and social growth and development;

Conducting screening, prevention, and intervention to promote healthy growth and development across the lifespan;

Promoting healthy social, emotional, behavioral, cognitive, linguistic, and motor development.

(Source: [Healthiest Wisconsin 2020: Everyone Living Better Longer](#))

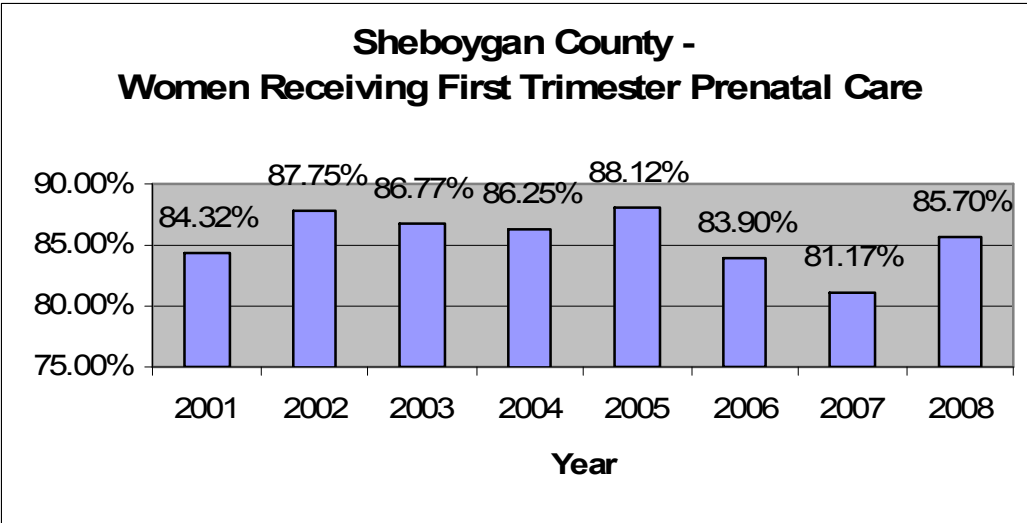
Healthy growth and development is a multifaceted, broad topic. In this section, the following indicators and related data are described:

1. Prenatal Care in the First Trimester
2. Access to Health Care

Prenatal Care in the First Trimester

The importance of early and regular prenatal care is well documented. Research indicates that babies of mothers who do not get early and regular prenatal care are three times more likely to be less than 5.5 pounds (low birth weight) and five times more likely to die than those born to mothers who do get early and regular care. (Source: www.womenshealth.gov)

From 2005 to 2008, 85.7% of pregnant women in Sheboygan County received prenatal care in their first trimester. In comparison, during this time period 84.5% of women residing in the northeastern region and 83.5% of women in Wisconsin received care during their first trimester of pregnancy. The percentage of Sheboygan County women obtaining early prenatal care has decreased since one decade earlier (1995-1998), when 89.5% of Sheboygan County women obtained first trimester care.



(Source: WISH, Prenatal Care Module, Wisconsin Department of Health Services Reference Center)

Access to Health Care

Research demonstrates that the healthy growth and development of youth are closely tied to having safe and healthy environments in which to live and easy/affordable access to health care.

Significant expansion in the numbers of Sheboygan County residents enrolled in Medicaid has occurred over the past six years as demonstrated in the chart below.

Sheboygan County Medical Assistance Enrollment

Service	2004	2005	2006	2007	2008	2009
Family Coverage/Badger Care	6,596	7,131	7,362	7,547	7,929	9,866
Elderly/Disability Coverage	2,788	2,863	2,902	2,775	2,872	2,981
Family Planning Waiver	536	956	1,153	1,057	1,176	876
Other	165	178	180	221	270	330
Total Coverage	10,085	11,128	11,597	11,600	12,247	14,053

**Note: Reflects January enrollment.*

(Source: Division of Economic Support 481 Report)

Despite the increased enrollment in Medicaid, growing concerns regarding healthcare access prevail in our community. In 2006, members of Healthy Sheboygan County began to formally address concerns regarding a growing number of uninsured and underinsured persons experiencing difficulties in accessing primary health care services via a medical home. Area emergency rooms noted an increase in episodic care being sought by persons without health insurance who did not have a medical home or access to primary health care services. Grant

funding was requested and received from the Sheboygan and Plymouth Area United Way (SAUW) to allow for further study of this issue. A broad base of community representatives reviewed findings which has led to the formation of a non-profit corporation with a goal to develop a community-based primary care medical clinic dedicated to serving the underserved population in Sheboygan County. It is anticipated that this clinic will primarily serve individuals enrolled in Medical Assistance as well as the estimated 10,000 Sheboygan County residents without health care coverage. *(Source: Sheboygan Community Health Center Business Plan, November 2009)*

Additional Findings Related to Healthy Growth and Development

Readers will find additional data/findings related to healthy growth and development in several other focus areas of this report (i.e. birth outcomes, child abuse and neglect data, high school/college graduation rates, etc.) as well as other previously mentioned community surveys and assessments.

Key Findings:

- **Decreasing percentage of pregnant women receiving prenatal care in first trimester.**
- **39% increase in Medical Assistance enrollment between 2004 and 2009.**
- **Efforts to establish a Sheboygan Community Health Center to serve growing number of uninsured/underinsured persons are underway.**

PART VII: REFERENCES

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