

Community Health Needs Assessment 2016

OSF SAINT ANTHONY'S HEALTH CENTER

MADISON COUNTY

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Community Health Needs Assessment

July 2016

Collaboration for sustaining health equity

Executive Summary

The Madison County Community Health-Needs Assessment is a collaborative undertaking by OSF Saint Anthony's Health Center to highlight the health needs and well-being of residents in Madison County. Through this needs assessment, collaborative community partners have identified numerous health issues impacting individuals and families in the Madison County region. Several themes are prevalent in this health-needs assessment – the demographic composition of the Madison County region, the predictors for and prevalence of diseases, leading causes of mortality, accessibility to health services and healthy behaviors.

Results from this study can be used for strategic decision-making purposes as they directly relate to the health needs of the community. The study was designed to assess issues and trends impacting the communities served by the collaborative, as well as perceptions of targeted stakeholder groups.

This study includes a detailed analysis of secondary data to assess information regarding the health status of the community. In order to perform these analyses, information was collected from numerous secondary sources, including publically available sources as well as private sources of data. Additionally, primary data were collected for the general population and the at-risk or economically disadvantaged population. Areas of investigation included perceptions of the community health issues, unhealthy behaviors, issues with quality of life, healthy behaviors and access to medical care, dental care, prescription medications and mental-health counseling. Additionally, demographic

characteristics of respondents were utilized to provide insights into why certain segments of the population responded differently.

Ultimately, the identification and prioritization of the most important health-related issues in the Madison County region were identified. The collaborative team considered health needs based on: (1) magnitude of the issue (i.e., what percentage of the population was impacted by the issue); (2) severity of the issue in terms of its relationship with morbidities and mortalities; (3) potential impact through collaboration. Using a modified version of the Hanlon Method, the collaborative team prioritized two significant health needs:

- ***Obesity***
- ***Behavioral Health – including mental health and substance abuse/tobacco use***

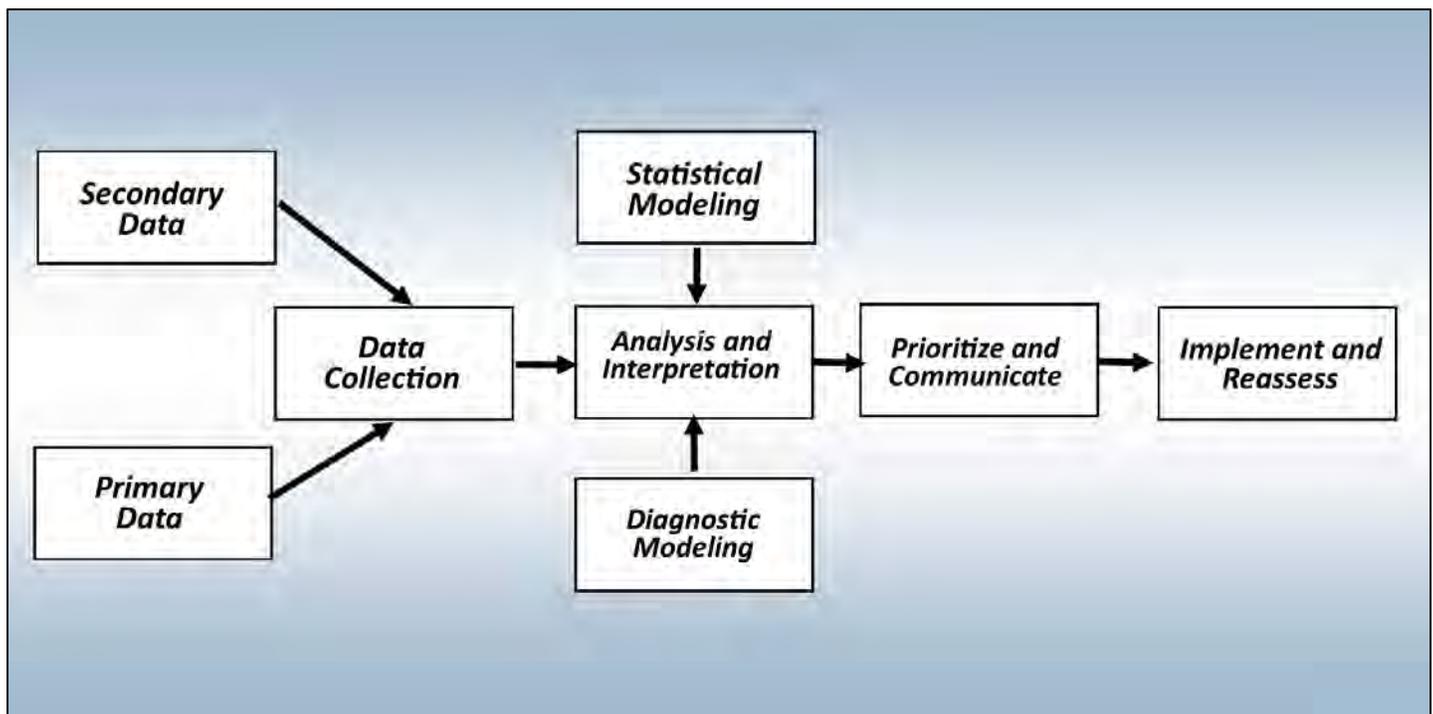
I. INTRODUCTION

Background

The Patient Protection and Affordable Care Act (Affordable Care Act), enacted March 23, 2010, added new requirements for tax-exempt hospitals to conduct community health-needs assessments and to adopt implementation strategies to meet the community health needs identified through the assessments. This community health-needs assessment (CHNA) takes into account input from specific individuals who represent the broad interests of the community served by OSF Saint Anthony's Health Center including those with special knowledge of or expertise in public health. For this study, a community health-needs assessment is defined as a systematic process involving the community, to identify and analyze community health needs and assets in order to prioritize these needs, create a plan, and act upon unmet community health needs. Results from this assessment will be made widely available to the public.

The structure of the CHNA is based on standards used by the Internal Revenue Service to develop Form 990, Schedule H—Hospitals, designated solely for tax-exempt hospitals. The fundamental areas of the community health-needs assessment are illustrated in Figure 1.

Figure 1. Community Health Needs Assessment Framework



Design of the Collaborative Team: Community Engagement, Broad Representation and Special Knowledge

In order to engage the entire community in the CHNA process, a collaborative team of health-professional experts and key community advocates was created. Members of the collaborative team were carefully selected to ensure representation of the broad interests of the community. Specifically,

team members included representatives from OSF Saint Anthony's Health Center, members of the Madison County Health Department, and administrators from key community partner organizations. Engagement occurred throughout the entire process, resulting in shared ownership of the assessment. The entire collaborative team met in April and July 2015 and in the first quarter of 2016. Additionally, numerous meetings were held between the facilitators and specific individuals during the process.

Specifically, members of the **Collaborative Team** consisted of individuals with special knowledge of and expertise in the healthcare of the community. Note that the collaborative team provided input for all sections of the CHNA. Individuals, affiliations, titles and expertise can be found in Appendix 1.

Definition of the Community

In order to determine the geographic boundaries for OSF Saint Anthony's Health Center, analyses were completed to identify what percentage of inpatient and outpatient activity was represented by Madison County. Data show that Madison County alone represents 83% of all patients for the hospital.

In addition to defining the community by geographic boundaries, this study targets the at-risk population as an area of potential opportunity to improve the health of the community.

Purpose of the Community Health-Needs Assessment

In the initial meeting, the collaborative committee identified the purpose of this study. Specifically, this study has been designed to provide necessary information to health-care organizations, including hospitals, clinics and health departments, in order to create strategic plans in program design, access and delivery. Results of this study will act as a platform that allows health-care organizations to orchestrate limited resources to improve management of high-priority challenges. By working together, hospitals, clinics, agencies and health departments will use this CHNA to improve the quality of healthcare in Madison County.

Community Feedback from Previous Assessments

The 2013 CHNA was made widely available to the community to allow for feedback. Specifically, the hospital posted both a full version and a summary version of the 2013 CHNA on its website. While no written feedback was received by individuals from the community via the available mechanism, verbal feedback was provided by key stakeholders from community-service organizations and incorporated as part of the collaborative process.

Summary of 2013 CHNA Identified Health Needs and Implementation Plans

The 2013 CHNA for Madison County identified 8 significant health needs. These included: access, substance abuse, healthy lifestyles/obesity, mental health, health literacy, housing/homelessness, chronic conditions (cancer, diabetes, and asthma) and air quality. Specific actions were taken to address these needs. Detailed discussions of goals and strategies to improve these health needs can be seen in Appendix 2.

II. METHODS

To complete the comprehensive community health-needs assessment, multiple sources were examined. Secondary statistical data were used to assess the community profile, morbidity rates and causes of mortality. Additionally, based on a sample of 1,042 survey respondents from Madison County, a study was completed to examine perceptions of the community health issues, unhealthy behaviors, issues with quality of life, healthy behaviors and access to healthcare.

Secondary Data for the Community Health Needs Assessment

We first used existing secondary statistical data to develop an overall assessment of health-related issues in the community. Within each section of the report, there are definitions, importance of categories, data and interpretations. At the end of each chapter, there is a section on key takeaways.

Based on several retreats, a separate OSF Collaborative Team used COMP data to identify six primary categories of diseases, including: age related, cardiovascular, respiratory, cancer, diabetes and infections. In order to define each disease category, we used modified definitions developed by Sg2. Sg2 specializes in consulting for healthcare organizations. Their team of experts includes MDs, PhDs, RNs and healthcare leaders with extensive strategic, operational, clinical, academic, technological and financial experience.

Primary Data Collection

In addition to existing secondary data sources, primary survey data were also collected. This section describes the research methods used to collect, code, verify and analyze primary survey data. Specifically, we discuss the research design used for this study: survey design, data collection and data integrity.

A. Survey Instrument Design

Initially, all publicly available health-needs assessments in the U.S. were assessed to identify common themes and approaches to collecting community health-needs data. By leveraging best practices from these surveys, we created our own pilot survey in 2012, designed for use with both the general population and the at-risk community. To ensure that all critical areas were being addressed, the entire OSF collaborative team was involved in survey design/approval through several fact-finding sessions. Additionally, several focus groups were used to collect the qualitative information necessary to design survey items. Specifically, for the community health-needs assessment, five specific sets of items were included:

Ratings of health issues in the community – to assess the importance of various community health concerns. Survey items included assessments of topics such as cancer, diabetes and obesity. In all, there were 16 choices provided for survey respondents.

Ratings of unhealthy behaviors in the community – to assess the importance of various unhealthy behaviors. Survey items included assessments of topics such as violence, drug abuse and smoking. In all, there were 13 choices provided for survey respondents.

Ratings of issues concerning well-being – to assess the importance of various issues relating to well-being in the community. Survey items included assessments of topics such as access to healthcare, safer neighborhoods and effective public transportation. In all, there were 12 choices provided for survey respondents.

Accessibility to healthcare – to assess the degree to which residents could access healthcare when needed. Survey items included assessments of topics such as access to medical, dental and mental-healthcare, as well as access to prescription medications.

Healthy behaviors – to assess the degree to which residents exhibited healthy behaviors. The survey items included assessments of topics such as exercise and healthy eating habits.

Finally, demographic information was collected to assess background information necessary to segment markets in terms of the five categories discussed above.

After the initial survey was designed, a pilot study was created to test the psychometric properties and statistical validity of the survey instrument. The pilot study was conducted at the Heartland Community Health Clinic's facilities. The Heartland Clinic was chosen as it serves the at-risk population and also has a facility that serves a large percentage of the Latino population. A total of 230 surveys were collected. Results from the pilot survey revealed specific items to be included/excluded in the final survey instrument. Item selection criteria for the final survey included validity, reliability and frequency measures based on responses from the pilot sample. A copy of the final survey is included in Appendix 3.

B. Sample Size

In order to identify our potential population, we first identified the percentage of the Madison County population that was living in poverty. Specifically, we multiplied the population of the county by its respective poverty rate to identify the minimum sample size to study the at-risk population. The poverty rate for Madison County was 13.9% in 2014. The population used for the calculation was 266,560, yielding a total of 37,052 residents living in poverty in the Madison County area.

We assumed a normal approximation to the hypergeometric distribution given the targeted sample size.

$$n = (Nz^2pq)/(E^2 (N-1) + z^2 pq)$$

where:

n = the required sample size

N = the population size

pq = population proportions (set at .05)

z = the value that specified the confidence interval (use 90% CI)

E =desired accuracy of sample proportions (set at +/- .05)

For the total Madison County area, the minimum sample size for those living in poverty was 269. Note that for *aggregated* analyses (combination of at-risk and general populations); an additional 271 random surveys were needed from those not living in poverty in order to properly represent the views of the population in Madison County.

The data collection effort for this CHNA yielded a total of 1,042 usable responses. This exceeded the threshold of the desired 90% confidence interval.

To provide a representative profile when assessing the aggregated population for the Madison County region, the general population was combined with a portion of the at-risk population. To represent the at-risk population as a percentage of the aggregate population, a random-number generator was used to select at-risk cases to include in the general sample. This provided a total usable sample of 810 respondents for analyzing the aggregate population. Sample characteristics can be seen in Appendix 4.

C. Data Collection

To collect data in this study, two techniques were used. First, an online version of the survey was created. Second, a paper version of the survey was distributed. In order to be sensitive to the needs of respondents, surveys stressed assurance of complete anonymity. Note that versions of both the online survey and paper survey were translated into Spanish.

To specifically target the at-risk population, surveys were distributed at all homeless shelters, food pantries and soup kitchens. Since we specifically targeted the at-risk population as part of the data collection effort, this became a stratified sample, as we did not specifically target other groups based on their socio-economic status.

D. Data Integrity

Comprehensive analyses were performed to verify the integrity of the data for this research. Without proper validation of the raw data, any interpretation of results could be inaccurate and misleading if used for decision-making. Therefore, several tests were performed to ensure that the data were valid. These tests were performed before any analyses were undertaken. Data were checked for coding accuracy, using descriptive frequency statistics to verify that all data items were correct. This was followed by analyses of means and standard deviations and comparison of primary data statistics to existing secondary data.

E. Analytic Techniques

To ensure statistical validity, we used several different analytic techniques. Specifically, frequencies and descriptive statistics were used for identifying patterns in residents' ratings of various health concerns. Additionally, appropriate statistical techniques were used for identification of existing relationships between perceptions, behaviors and demographic data. Specifically, we used Pearson correlations, χ^2 tests and tetrachoric correlations when appropriate, given characteristics of the specific data being analyzed.

CHAPTER 1 OUTLINE

- 1.1 Population
- 1.2 Age, Gender and Race Distribution
- 1.3 Household/Family
- 1.4 Economic Information
- 1.5 Education
- 1.6 Key Takeaways from Chapter 1

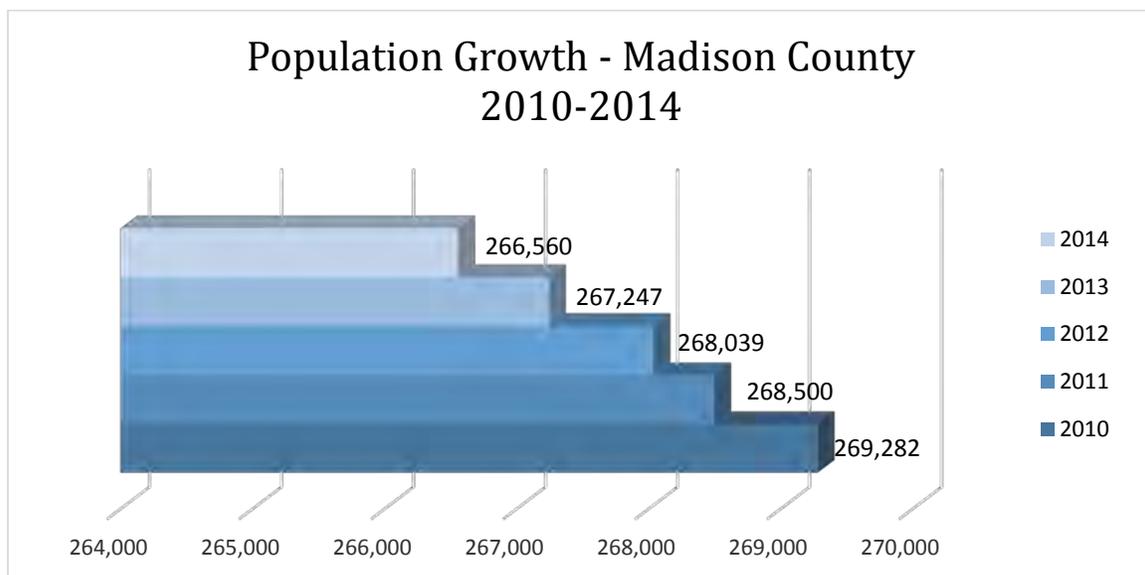
CHAPTER 1. DEMOGRAPHIC PROFILE

1.1 Population

Importance of the measure: Population data characterize individuals residing in Madison County. Population data provide an overview of population growth trends and build a foundation for additional analysis of data.

Population Growth

The population in Madison County has decreased from 269,282 residents to 266,560 residents (approximately 1%) between 2010 and 2014.



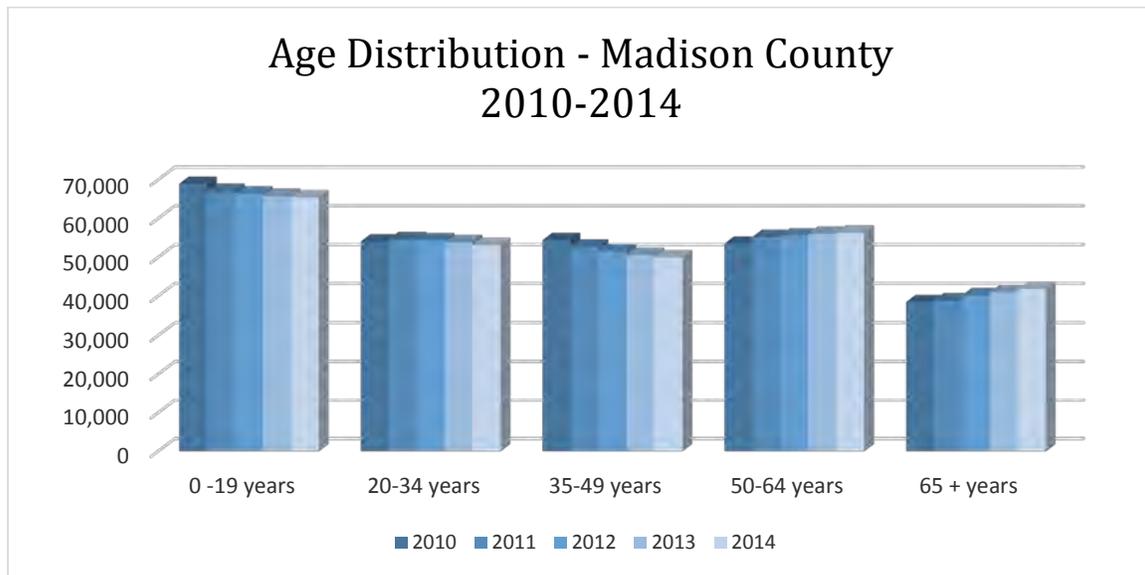
Source: US Census

1.2 Age, Gender and Race Distribution

Importance of the measure: Population data broken down by age, gender, and race groups provide a foundation to analyze the issues and trends that impact demographic factors including economic growth and the distribution of healthcare services. Understanding the cultural diversity of communities is essential when considering healthcare infrastructure and service delivery systems.

Age

As indicated below, the number of individuals in Madison County aged 50-64 increased between 2010 and 2014 from 53,479 to 56,290. Similarly, the number of individuals in Madison County aged 65 and older increased between 2010 and 2014 from 38,428 to 41,772.

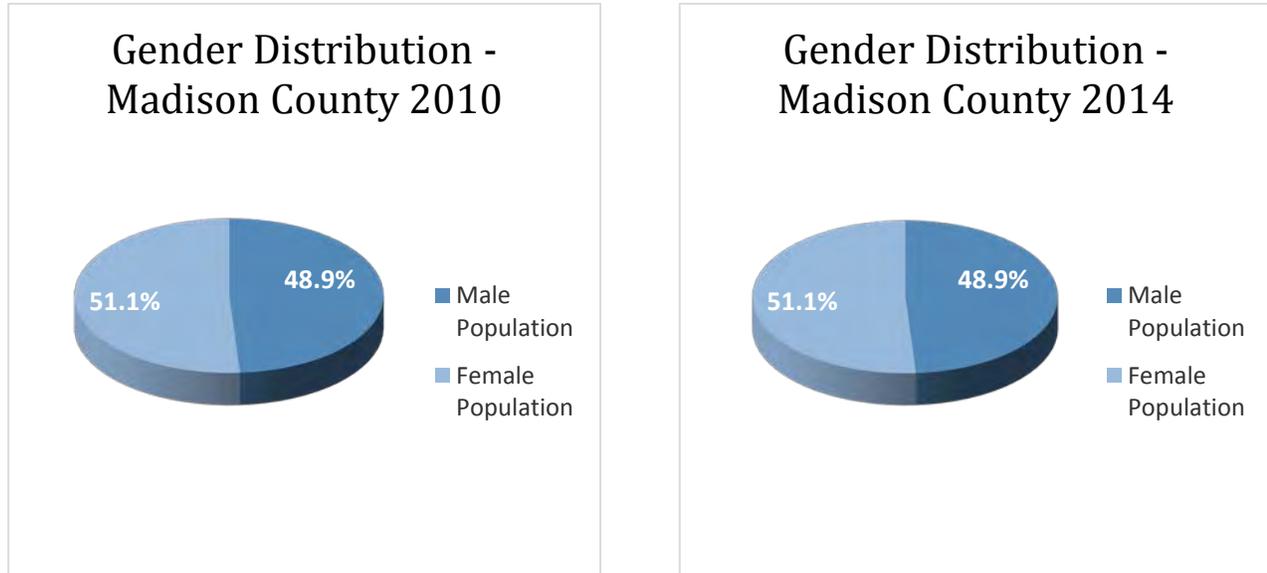


Age	2010	2011	2012	2013	2014
0 -19 years	68,899	67,109	66,418	65,797	65,424
20-34 years	54,066	54,645	54,366	53,831	53,121
35-49 years	54,410	52,685	51,517	50,599	49,953
50-64 years	53,479	55,211	55,562	56,052	56,290
65 + years	38,428	38,850	40,176	40,968	41,772

Source: US Census

Gender

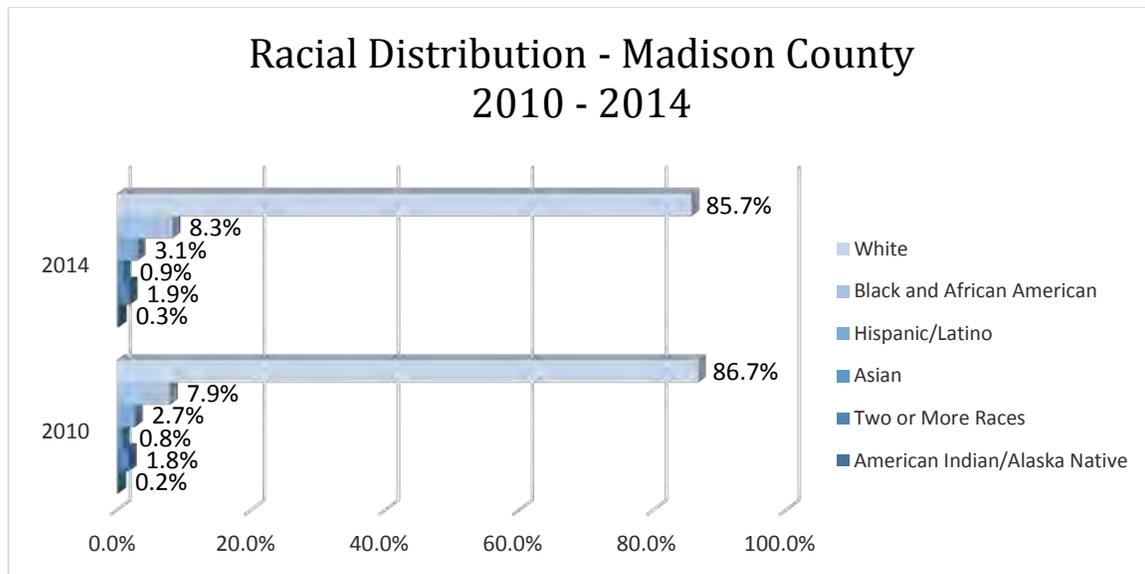
The gender distribution of Madison County residents has remained consistent between 2010 and 2014.



Source: US Census

Race

With regard to race and ethnic background, Madison County is largely homogenous, yet in recent years, the county is becoming more diverse. Data from 2010 suggest that White ethnicity comprises over 85% of the population in Madison County. However, the non-White population of Madison County has been increasing (from 13.3% to 14.3% in 2014), with Black ethnicity comprising 8.3% of the population, and Hispanic/Latino ethnicity comprising 3.1% of the population.

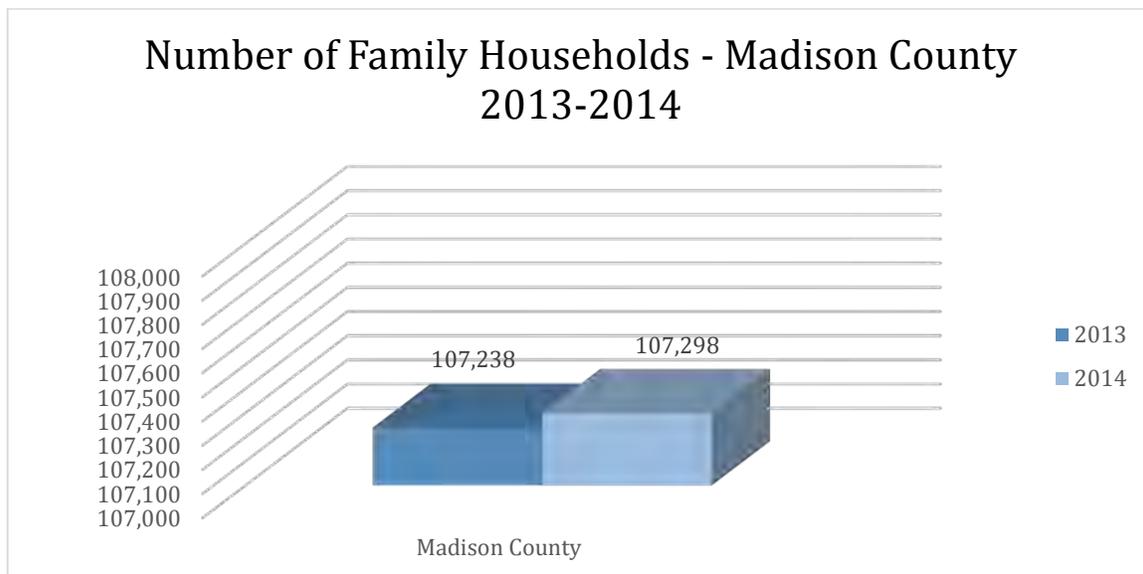


Source: US Census

1.3 Household/Family

Importance of the measure: Families are an important component of a robust society in Madison County, as they dramatically impact the health and development of children and provide support and well-being for older adults.

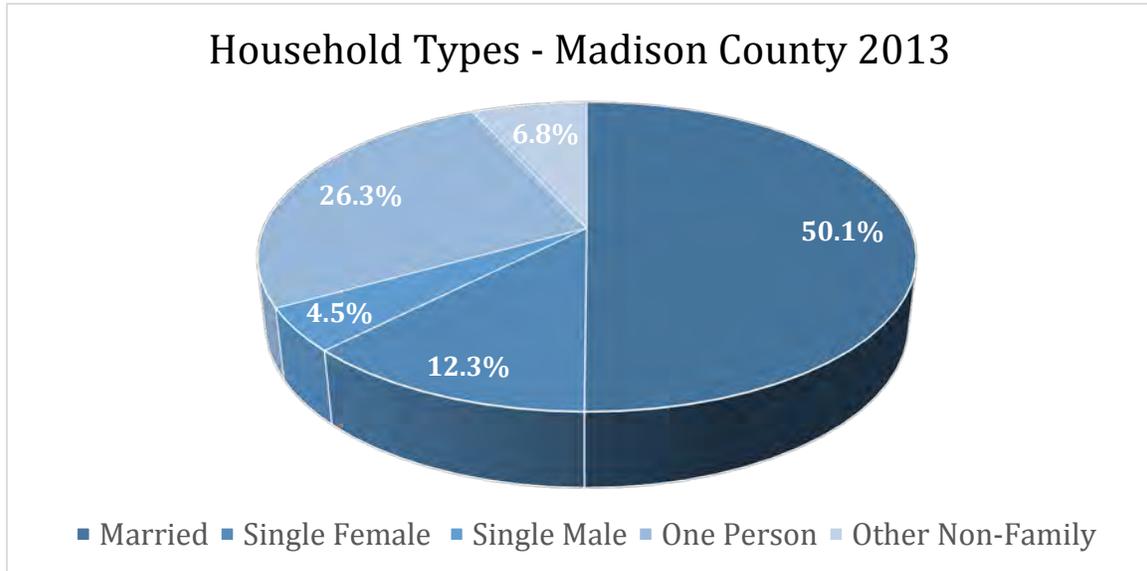
As indicated in the graph below, the number of family households within Madison County increased slightly from 2013-2014.



Source: US Census

Family Composition

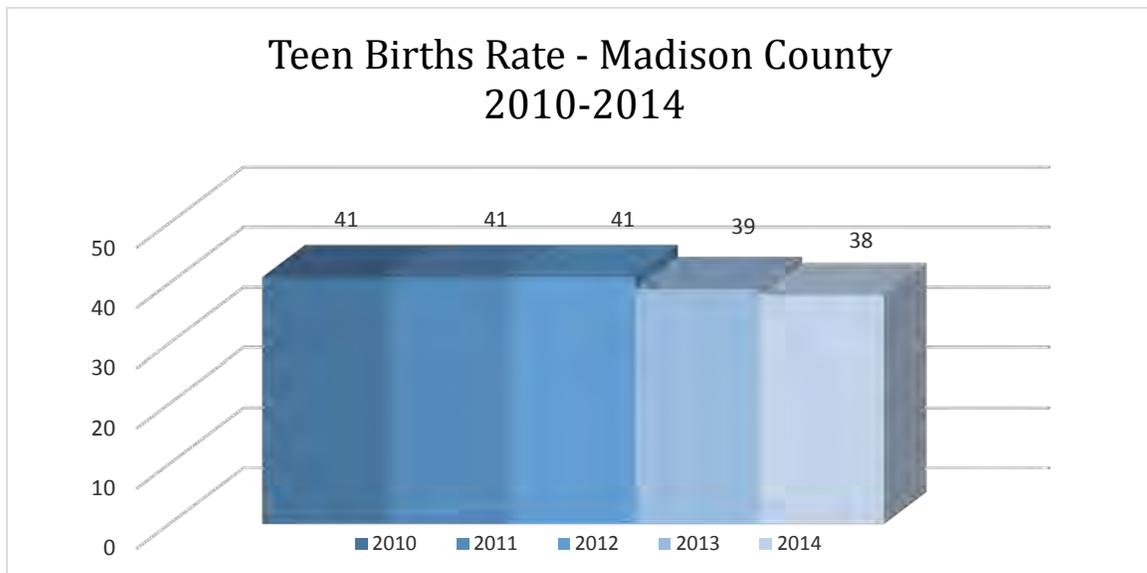
In Madison County, data from 2013 suggest the percentage of two-parent families in Madison County is just over 50%. Single-female head of households represent 12.3% of the county population.



Source: 2013 Statisticalatlas.com

Early Sexual Activity Leading to Births from Teenage Mothers

Madison County experienced a decrease in teenage birth rate per 100,000 women. However, teen births are slightly higher than the Illinois average of 36 per 1,000 women.



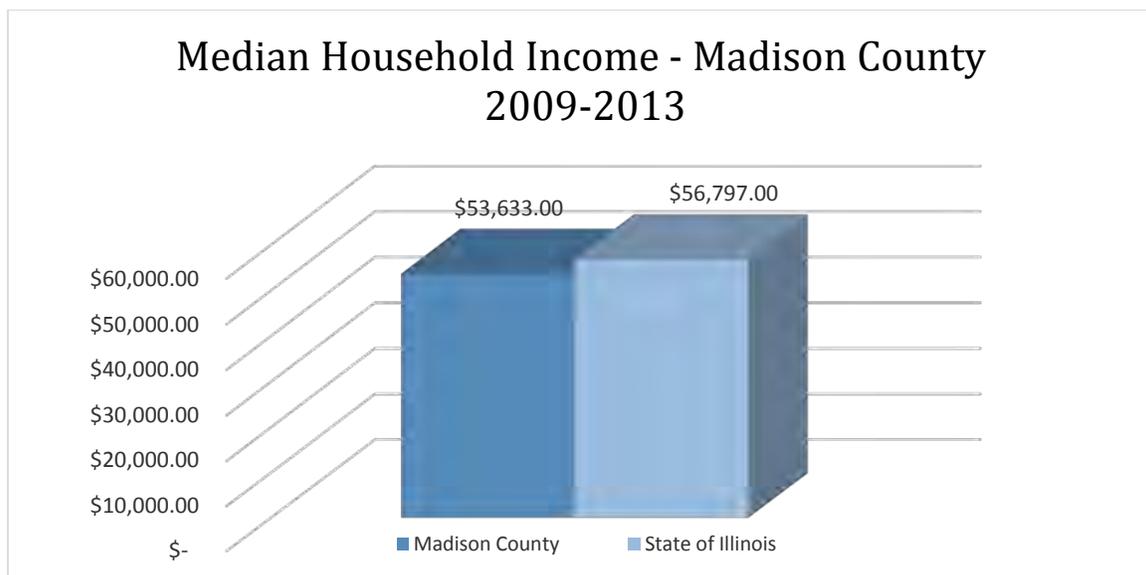
Source: Illinois Department of Public Health

1.4 Economic Information

Importance of the measure: Median income divides households into two segments with one-half of households earning more than the median income and the other half earning less. Because median income is not significantly impacted by unusually high or low-income values, it is considered a more reliable indicator than average income. To live in poverty means to lack sufficient income to meet one's basic needs. Accordingly, poverty is associated with numerous chronic social, health, education, and employment conditions.

Median Income Level

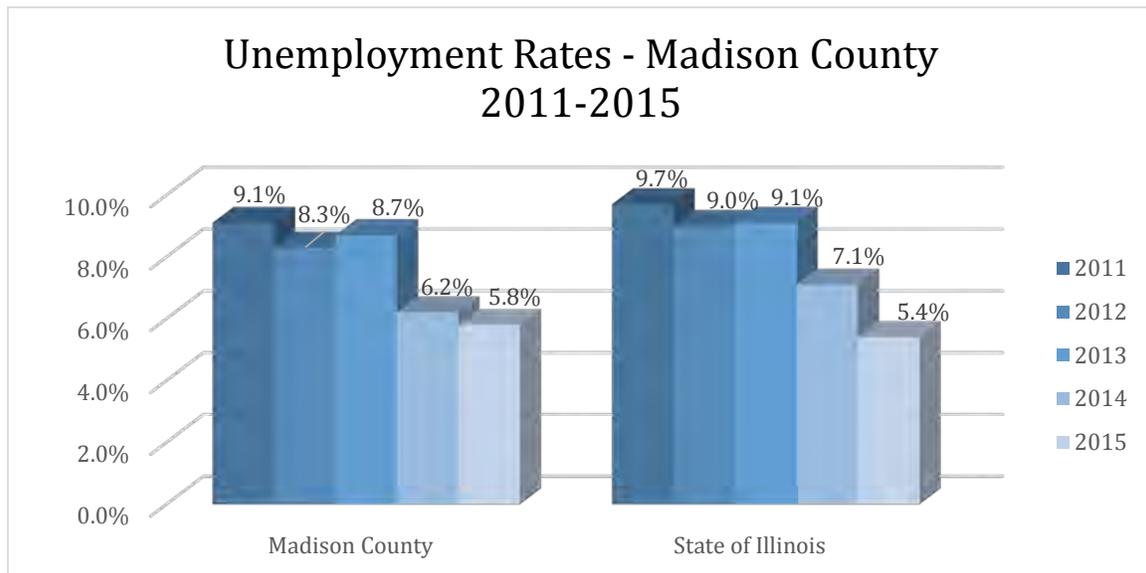
For 2009-2013, the median household income in Madison County was 5.6% lower than the State of Illinois.



Source: US Census

Unemployment

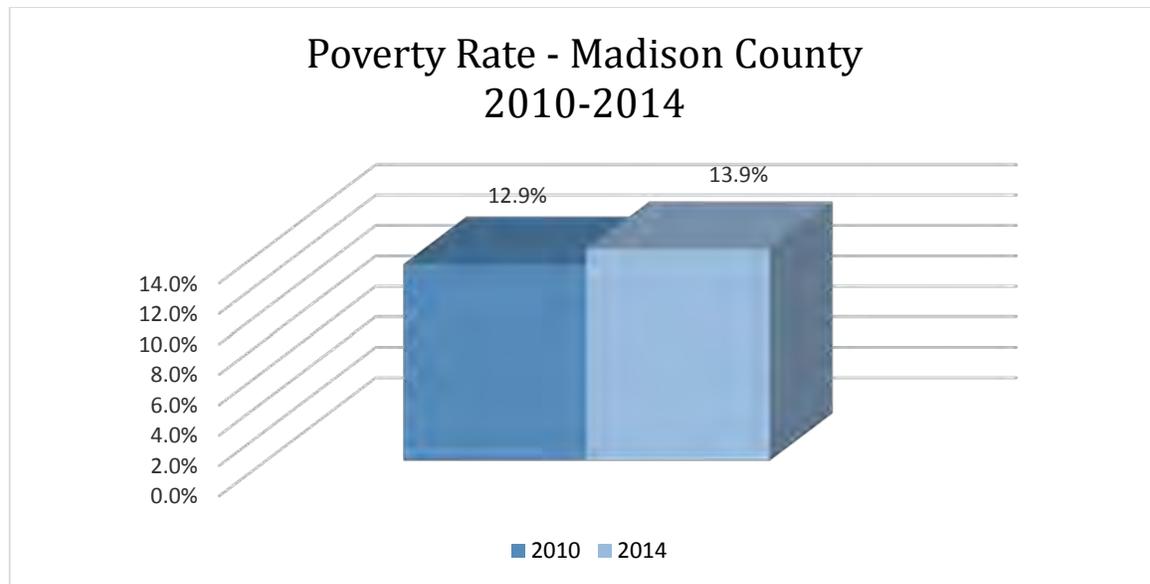
For the years 2011 to 2014, the Madison County unemployment rate has been lower than the State of Illinois unemployment rate. In 2015, Madison County’s unemployment rate is slightly higher than that of the State of Illinois. Between 2013 and 2015, unemployment decreased from 8.7% to 5.8%.



Source: Bureau of Labor Statistics

Families in Poverty

Poverty has a significant impact on the development of children and youth. In Madison County, the percentage of families living in poverty between 2010 and 2014 increased significantly. In Madison County, the overall poverty rate is 13.9%, which is lower than the State of Illinois poverty rate of 14.4%.



Source: US Census

1.5 Education

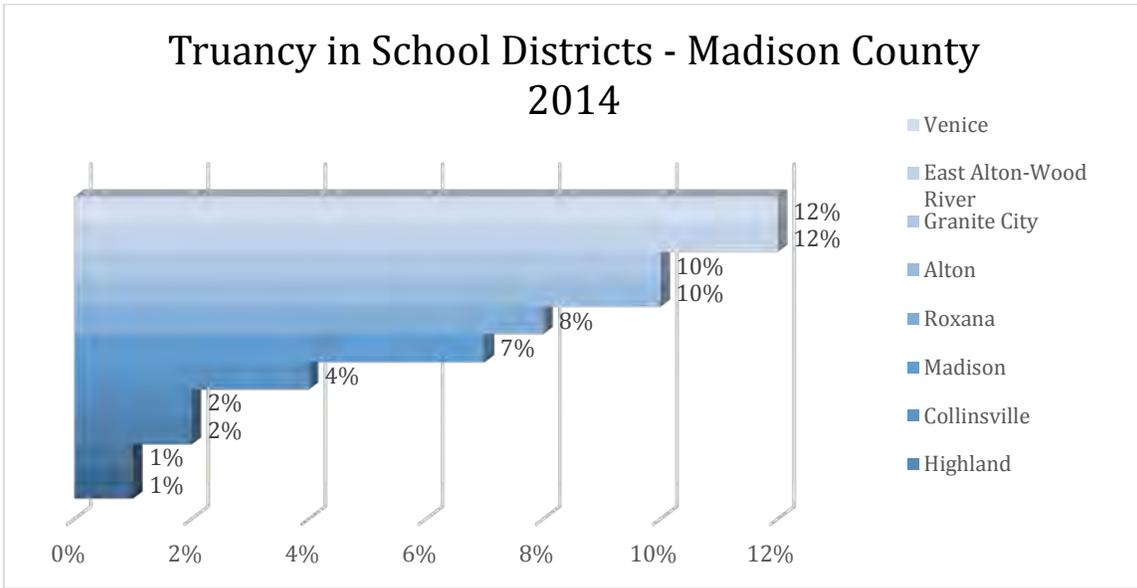
Importance of the measure: According to the National Center for Educational Statistics¹, “The better educated a person is, the more likely that person is to report being in ‘excellent’ or ‘very good’ health, regardless of income.” Research suggests that the higher the level of educational attainment and the more successful one is in school, the better one’s health will be and the greater likelihood of one selecting healthy lifestyle choices. Accordingly, years of education is strongly related to an individual’s propensity to earn a higher salary, gain better employment, and foster multifaceted success in life.

Truancy

Chronic truancy is a major challenge to the academic progress of children and young adults. The causes of truancy vary considerably for young children. Truancy of middle- and high-school students is more likely a result of the inappropriate behavior and decisions of individual students. Primary school truancy often results from decisions and actions of the parents or caregivers rather than the students themselves. The State of Illinois defines truancy as a student who is absent without valid cause for 5% or more of the previous 180 regular attendance days.

Venice and East Alton Wood-River districts had the largest percentage of students who were chronically truant in 2014 with a rate of 12%, followed by Granite City and Alton school districts with chronic truancy percentages of 10%.

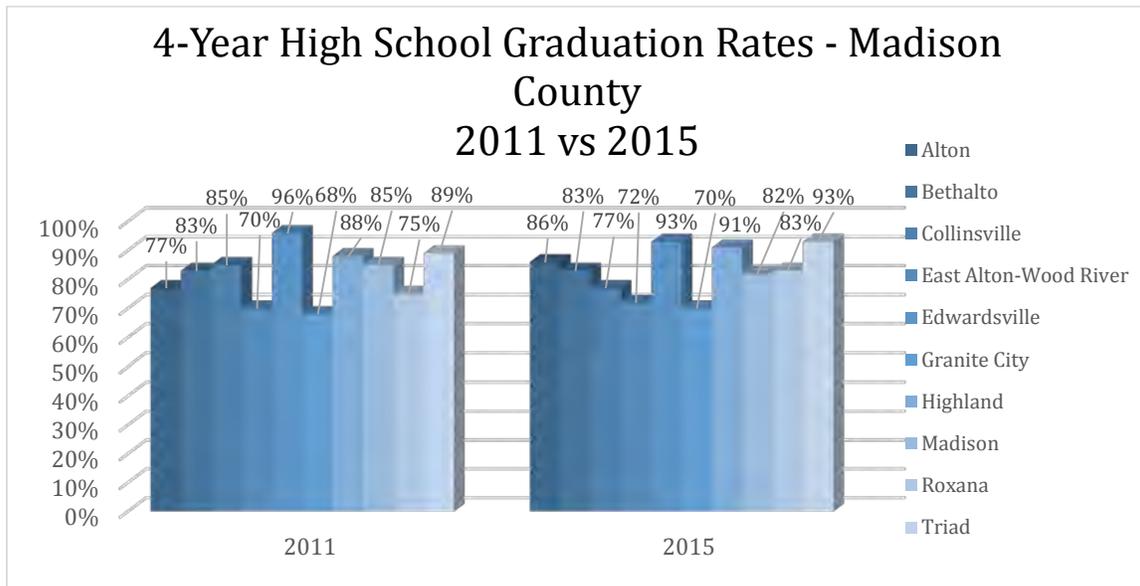
¹NCES 2005



Source: Illinois Report Card

High School Graduation Rates

In 2015, six districts in Madison County reported high school graduation rates that were lower than the State average of 86%. Note graduation rates for Venice CUSD were not available.



Source: Illinois State Board of Education, School Year 2011 & 2015 District Report Card Summary

1.6 Key Takeaways from Chapter 1

- ✓ **POPULATION DECREASED OVER THE LAST 5 YEARS**
- ✓ **POPULATION IS AGING. THE LARGEST PERCENTAGE INCREASE IS IN RESIDENTS OVER AGE 65**
- ✓ **DECREASING WHITE POPULATION, INCREASING BLACK AND LATINO POPULATION**
- ✓ **TEEN BIRTHS PER 1,000 FEMALE POPULATION, AGES 15-19 HAVE DECREASED, BUT ARE STILL SLIGHTLY ABOVE THE AVERAGE ACROSS THE STATE OF ILLINOIS**
- ✓ **SINGLE FEMALE HEAD-OF-HOUSE-HOUSEHOLD REPRESENTS 12.3% OF THE POPULATION. HISTORICALLY, THIS DEMOGRAPHIC INCREASES THE LIKELIHOOD OF FAMILIES LIVING IN POVERTY**
- ✓ **THE MAJORITY OF MADISON COUNTY SCHOOL DISTRICTS HAVE HIGH-SCHOOL GRADUATION RATES BELOW THE STATE AVERAGE**

CHAPTER 2 OUTLINE

- 2.1 Accessibility
- 2.2 Wellness
- 2.3 Access to Information
- 2.4 Physical Environment
- 2.5 Health Status
- 2.6 Key Takeaways from Chapter 2

CHAPTER 2. PREVENTION BEHAVIORS

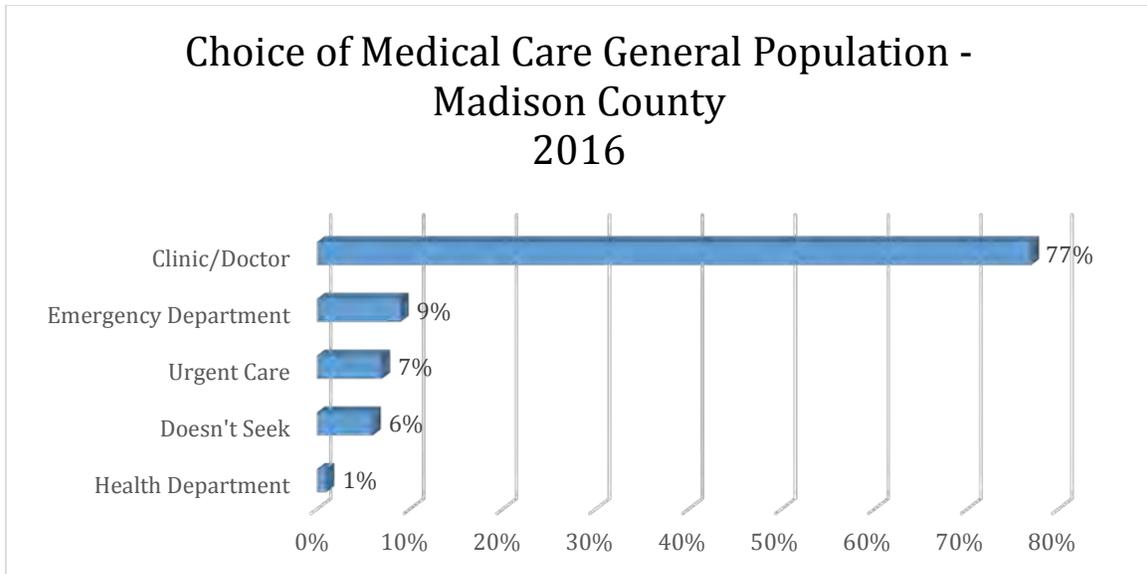
2.1 Accessibility

Importance of the measure: It is critical for healthcare services to be accessible. Therefore, accessibility to healthcare must address both the associated financial costs and the supply and demand of medical services.

Choice of Medical Care

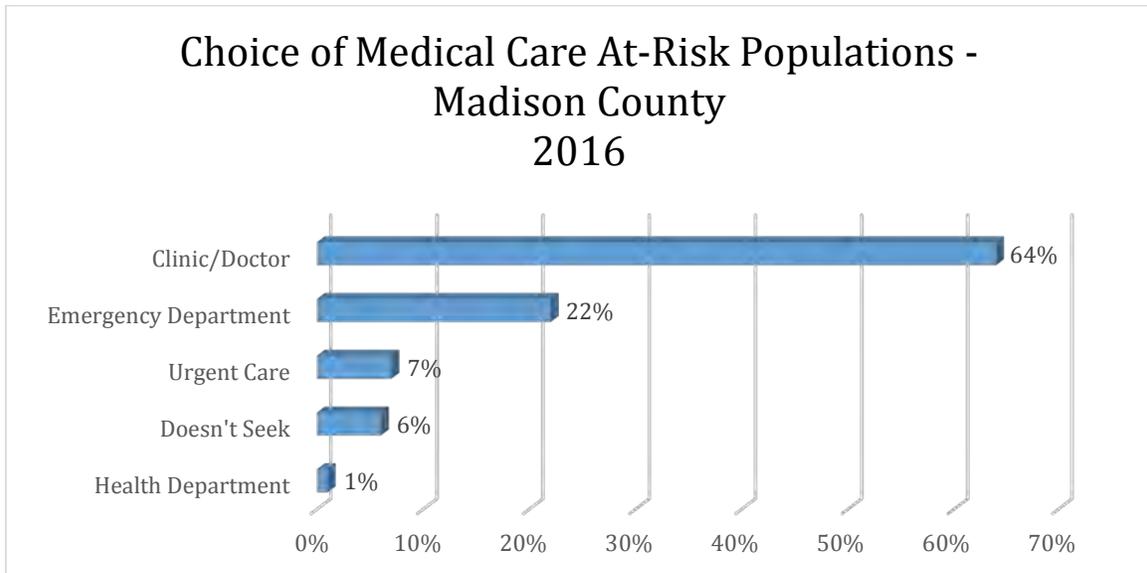
Survey respondents were asked to select the type of healthcare facility used when sick. Six different alternatives were presented, including clinic or doctor's office, emergency department, urgent-care facility, health department, no medical treatment, and other. The modified sample of 810 respondents was used for general population in order to more accurately reflect the demographic characteristics for Madison County.

The most common response for source of medical care was clinic/doctor's office, chosen by 77% of survey respondents. This was followed by the emergency department at a hospital (9%), urgent care (7%), not seeking medical attention (6%), and the health department (1%).



Source: CHNA Survey

For the at-risk population, the most common response for choice of medical care was also clinic/doctor's office (64%). This was followed by the emergency department at a hospital (22%), urgent care facilities (7%), not seeking medical attention (6%), and the health department (1%).



Source: CHNA Survey

Demographic Factors Related to Choice of Medical Care

Several demographic characteristics show significant relationships with an individual's choice of medical care. The following relationships were found using correlational analyses:

Clinic/Doctor's Office tends to be used more often by older people, those of White ethnicity, and those with higher education and income.

Urgent Care is used more often by younger people.

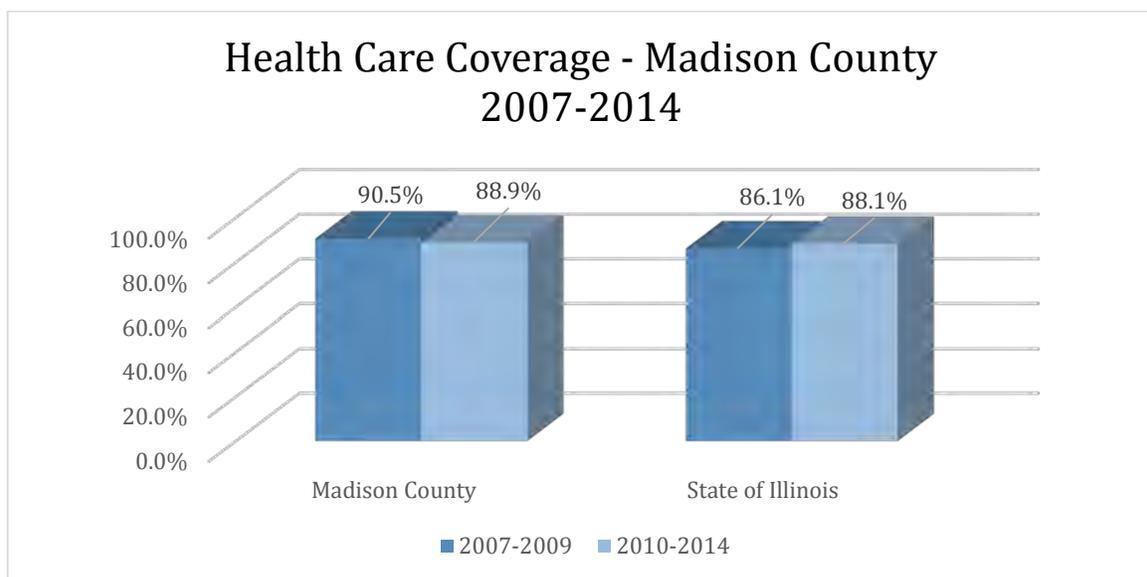
Emergency Department tends to be used more often by younger people, those of Black ethnicity, and those with lower education and income.

Do Not Seek Medical Care is reported more often by men and the homeless.

Health Department does not show significant demographic correlations.

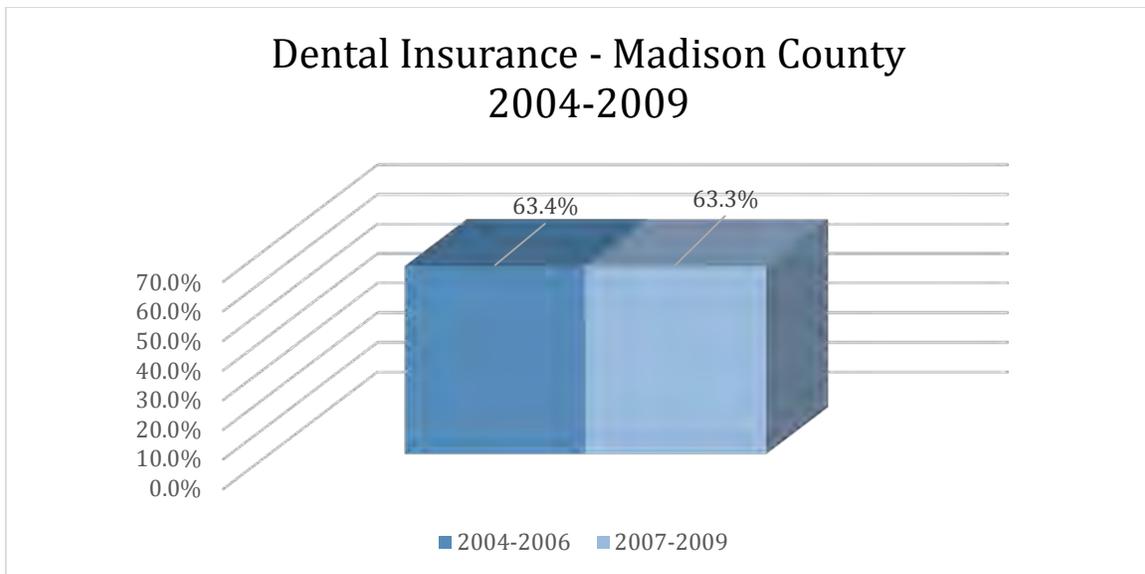
Insurance Coverage

With regard to medical insurance coverage, data gathered from the Illinois Behavioral Risk Factor Surveillance System show that residents in Madison County possess healthcare coverage at a higher rate (88.9%) compared to the State of Illinois (88.1%).



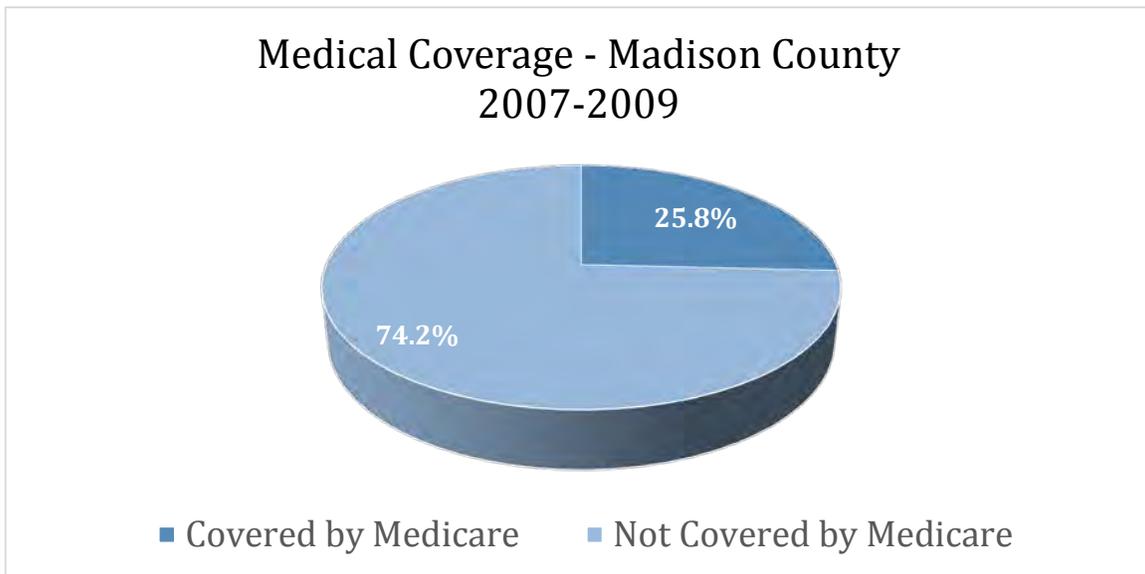
Source: Illinois Behavioral Risk Factor Surveillance System

With regard to dental insurance, 63.3% of Madison County residents possessed dental insurance coverage in 2007-2009 compared to 63.4% of Madison County residents in 2004-2006. These are the most recent data, as the BRFSS has not been updated for this metric since 2009.



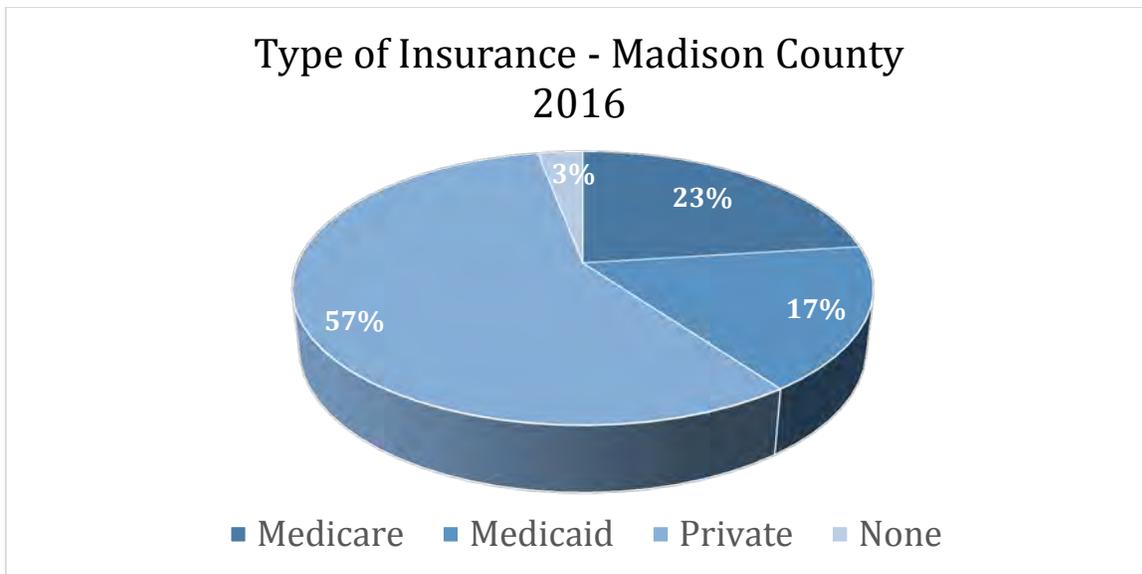
Source: Illinois Behavioral Risk Factor Surveillance System

With regard to Medicare Coverage, approximately 25.8% of Madison County residents received Medicare coverage between 2007 and 2009. These are the most recent data, as the BRFSS has not been updated for this metric since 2009.



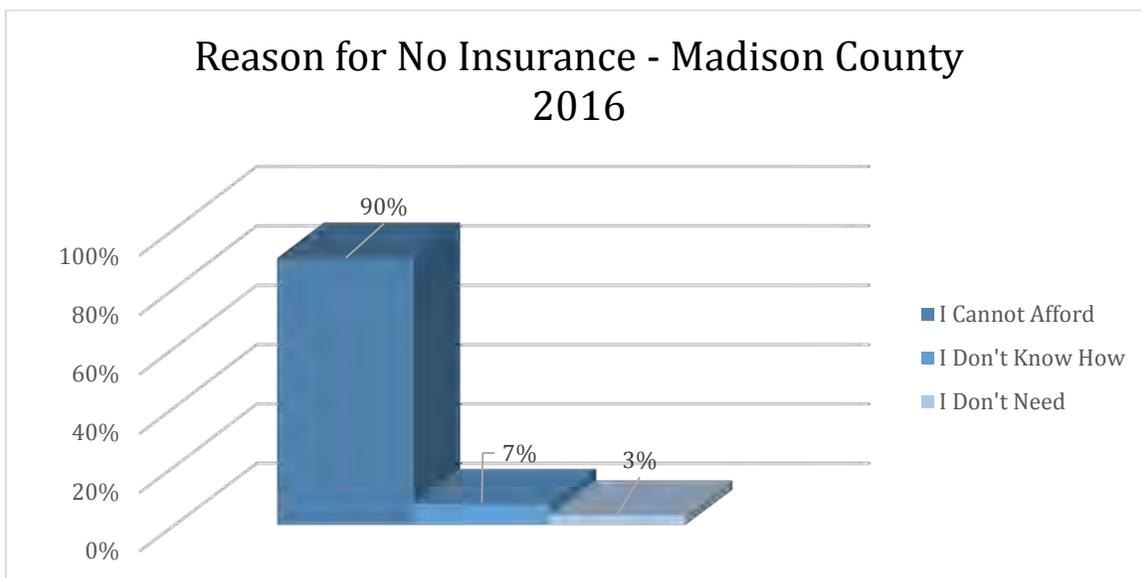
Source: Illinois Behavioral Risk Factor Surveillance System

A more precise analysis for insurance coverage is possible with data from the CHNA survey. According to survey data, 57% of the residents in Madison County are covered by private insurance.



Source: CHNA Survey

Data from the survey show that for the 3% of individuals who do not have insurance, the most common reason was cost.



Source: CHNA Survey

Demographic Factors Related to Type of Insurance

Several demographic characteristics show significant relationships with an individual’s type of insurance. The following relationships were found using correlational analyses:

Medicare tends to be used more frequently by men, people who are older, and those with lower education and income.

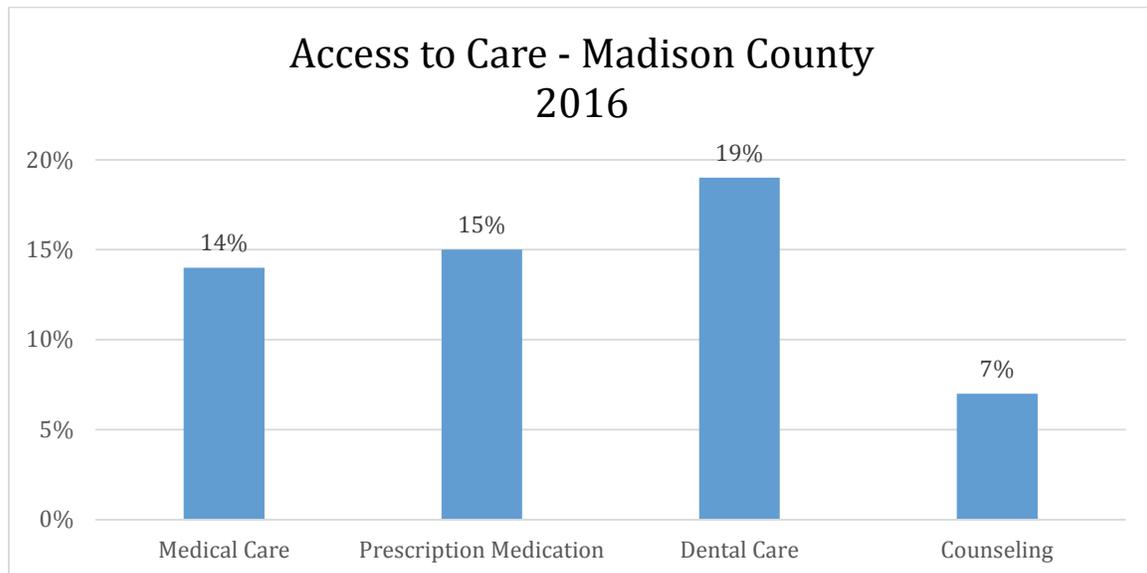
Medicaid tends to be utilized at higher rates by younger residents, people of Black ethnicity, homeless people, and people who have lower income and education.

Private Insurance is used more often by younger people, White people, and those with higher education and income. Private insurance tends to be used less by the Black population.

No Insurance tends to be reported more often by Latino people.

Access to Care

In the CHNA survey, respondents were asked, “Was there a time when you needed care but were not able to get it?” Access to four types of care were assessed: medical care, prescription medications, dental care and counseling. Survey results show that 14% of the population did not have access to medical care when needed; 15% of the population did not have access to prescription medications when needed; 19% of the population did not have access to dental care when needed; and 7% of the population did not have access to counseling when needed.



Source: CHNA Survey

Demographic Factors Related to Access to Care

Several demographic characteristics show a significant relationship with an individual’s ability to access care when needed. The following relationships were found using correlational analyses:

Access to medical care tends to be higher for older people, White people, and those with higher education and income. Black residents are less likely to report access to medical care.

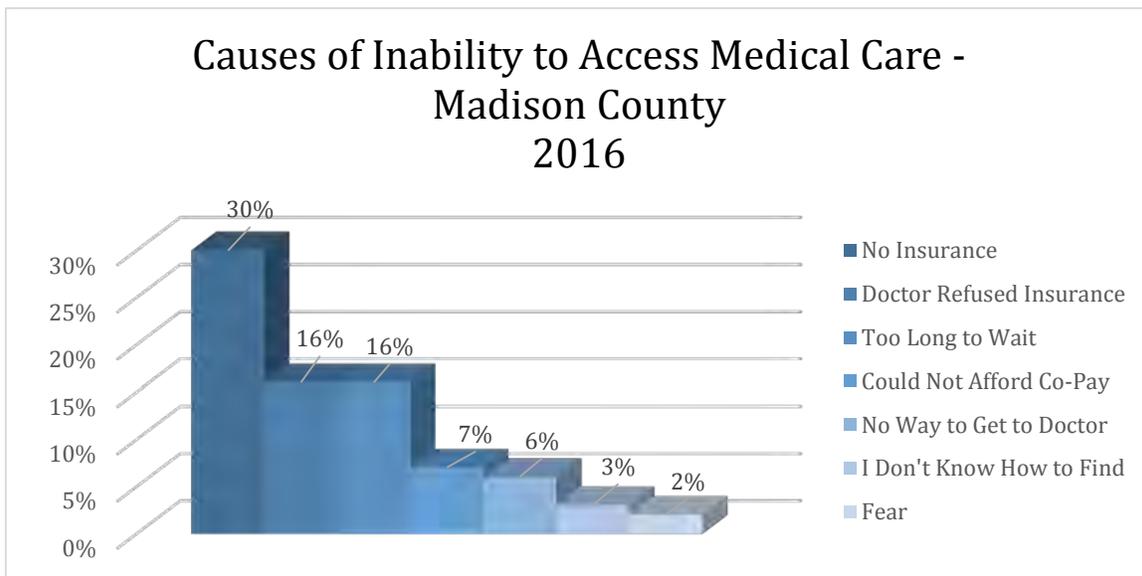
Access to prescription medications tends to be higher for older people, White people, and people with higher education and income. Black residents are less likely to access prescriptions when needed.

Access to dental care tends to be higher for older people, White people, and those with higher education and higher income. Black people and the homeless are less likely to have access to dental care.

Access to counseling tends to be rated higher by older people, White people, and those with higher income.

Reasons for No Access – Medical Care

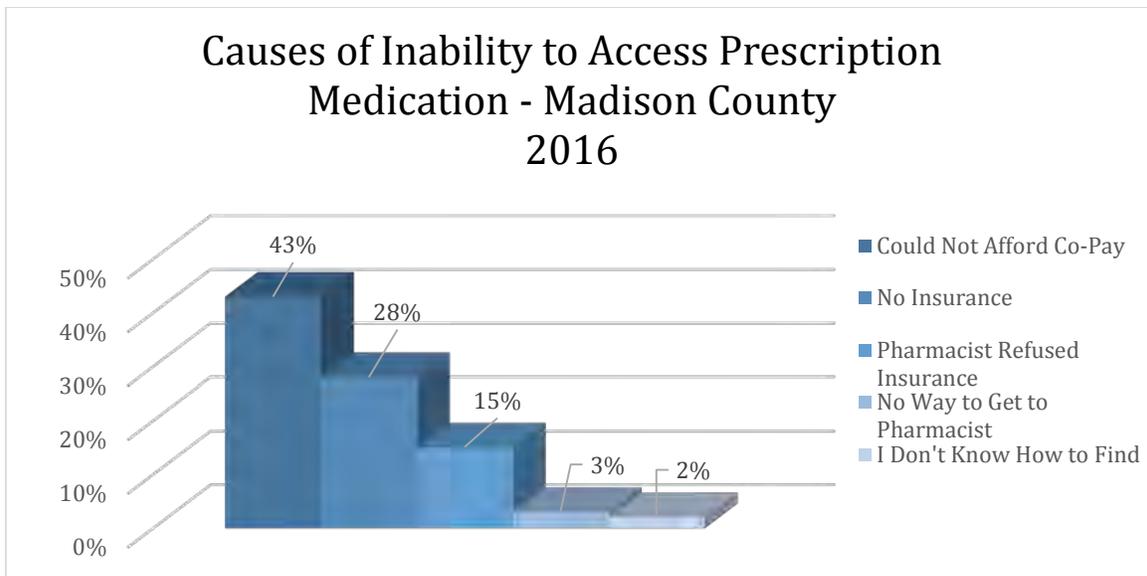
Survey respondents who reported they were not able to get medical care when needed were asked a follow-up question. The leading causes of the inability to gain access to medical care were no insurance (30%), refusal of insurance by physician (16%) and too long to wait for an appointment (16%). This was followed by the inability to afford copayments or deductibles (7%), lack of ability to get to a provider (6%), lack of knowledge (3%) and fear (2%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



Source: CHNA Survey

Reasons for No Access – Prescription Medication

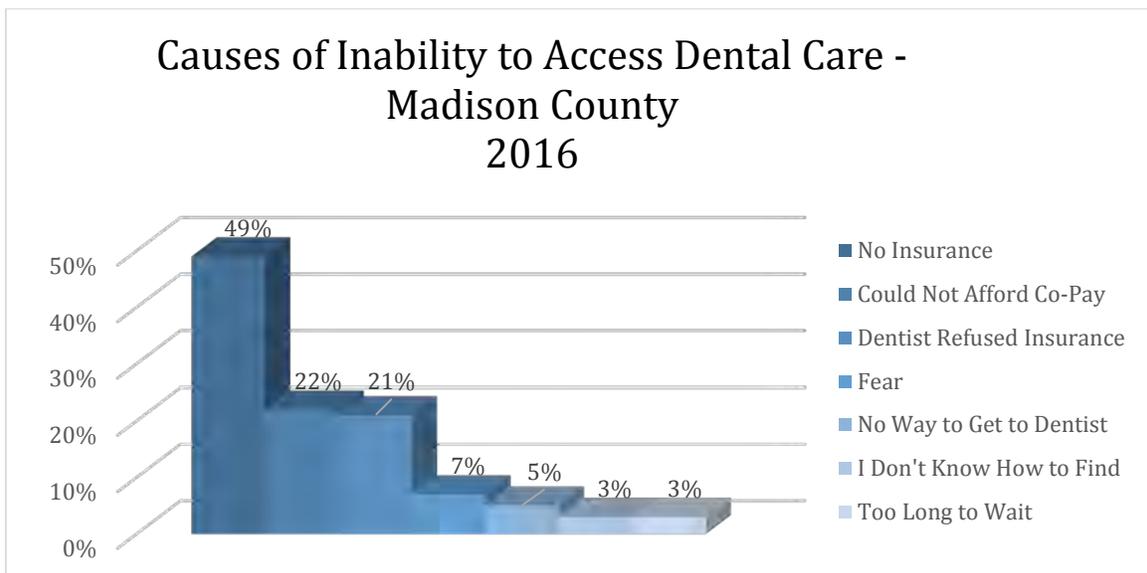
Survey respondents who reported they were not able to get prescription medications when needed were asked a follow-up question. In Madison County, the leading causes of the inability to gain access to prescription medicine were the inability to afford copayments or deductibles (43%) and no insurance (28%). The pharmacist's refusal of insurance was also a significant reason (15%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



Source: CHNA Survey

Reasons for No Access – Dental Care

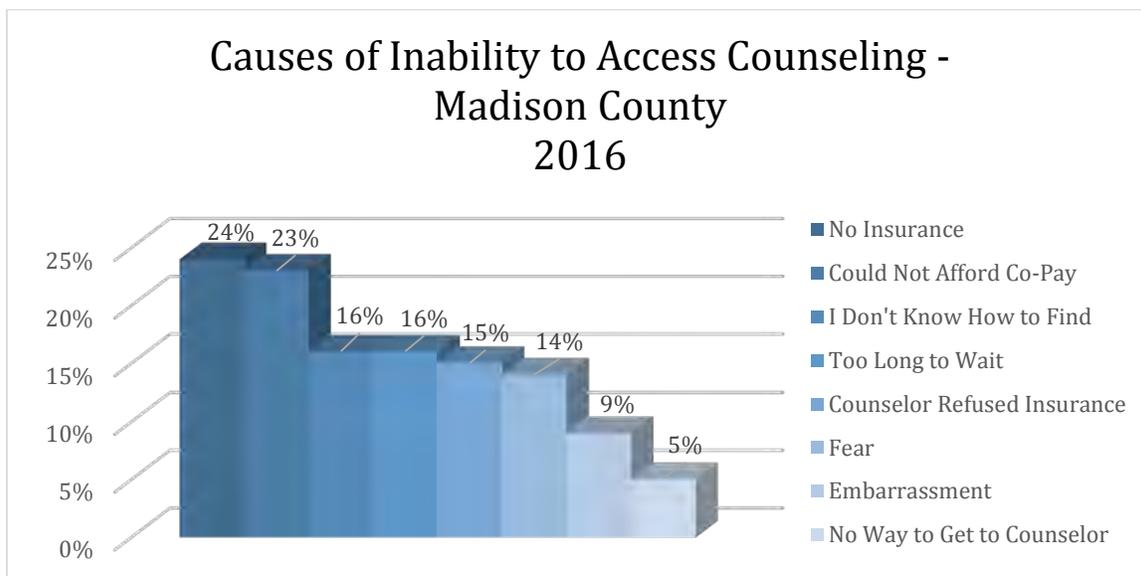
Survey respondents who reported they were not able to get dental care when needed were asked a follow-up question. The leading causes of inability to gain access to dental care were no insurance (49%), and the inability to afford copayments or deductibles (22%). The dentist’s refusal of insurance was also a frequently cited cause, with 21%. Fear (7%), no way to get to the dentist (5%), not knowing how to find care (3%), and having too long to wait (3%) were also cited. Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



Source: CHNA Survey

Reasons for No Access – Counseling

Survey respondents who reported they were not able to get counseling when needed were asked a follow-up question. In Madison County, the leading causes of the inability to gain access to counseling were the lack of insurance (24%), inability to afford co-pay (23%), the inability to find and too long to wait (each at 16%), counselor’s refusal of insurance (15%), fear (14%), embarrassment (9%), and no way to get to the counselor (5%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



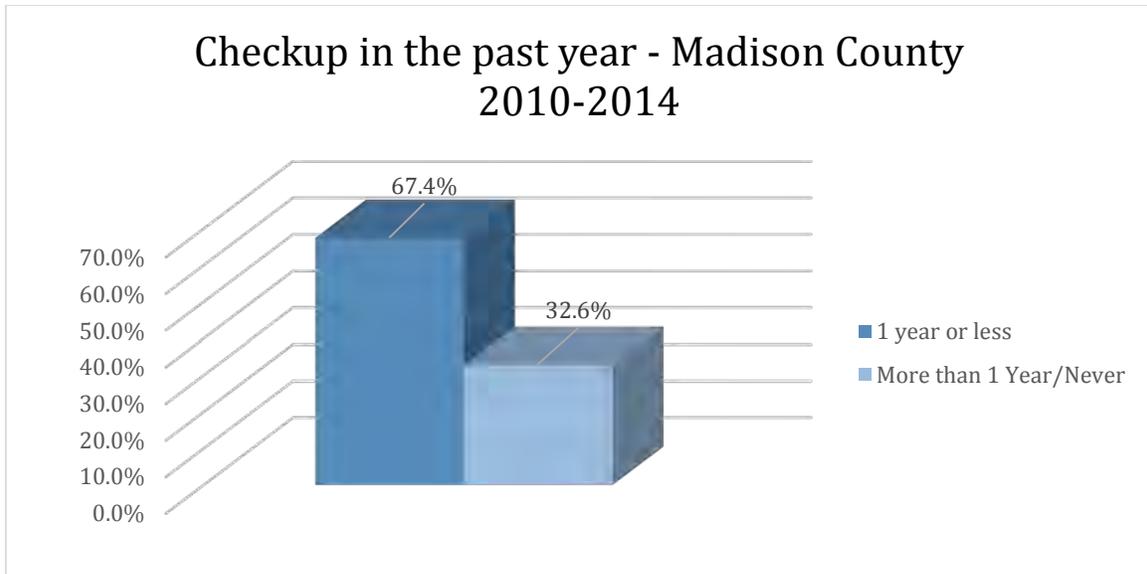
Source: CHNA Survey

2.2 Wellness

Importance of the measure: Preventative healthcare measures, including scheduling a routine well-visit, getting a flu shot, engaging in a healthy lifestyle, and undertaking screenings for diseases are essential to combating morbidity and mortality while reducing healthcare costs.

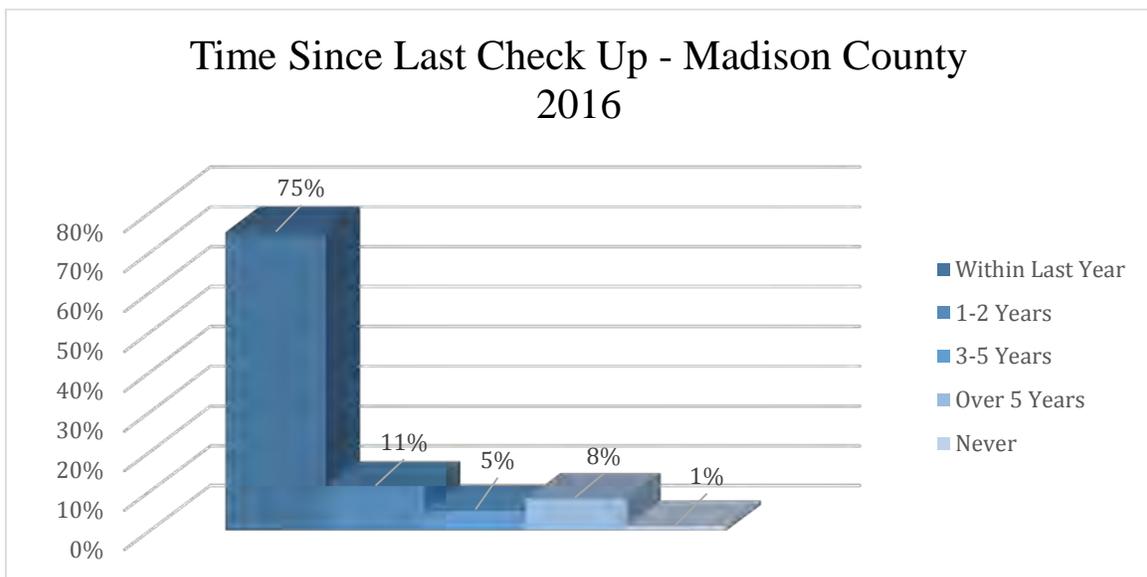
Frequency of Checkup

Numerous health problems can be minimized when detected early. Therefore, regularly scheduled checkups can be very important. According to the latest data from the Illinois BRFSS, 67.4% of residents in Madison County report having had a routine checkup within the last year.



Source: Illinois Behavioral Risk Factor Surveillance System

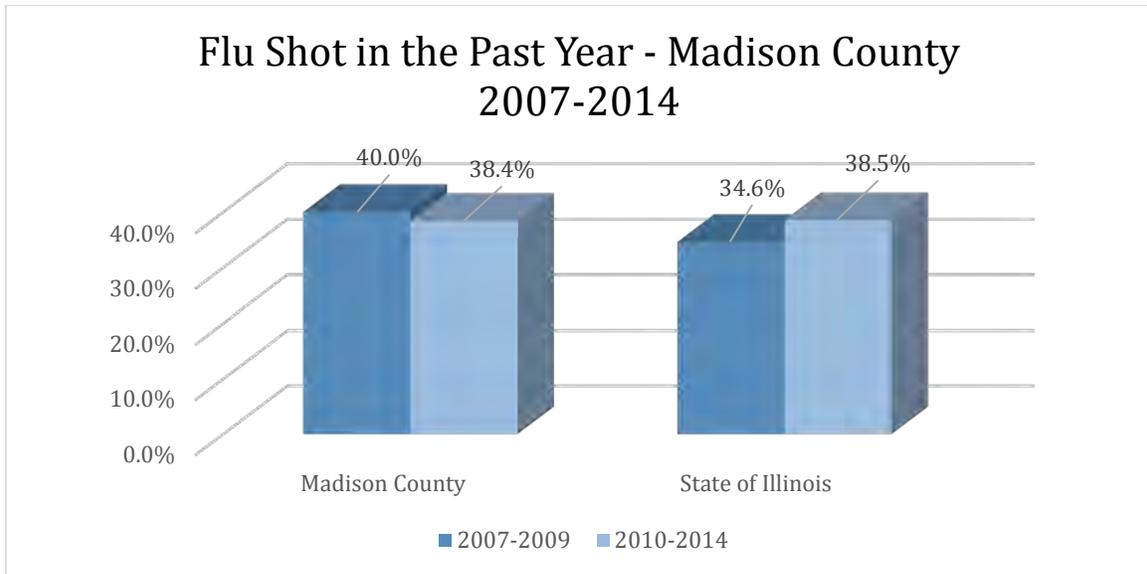
Results from the CHNA survey show higher percentages of residents getting a checkup. Survey results show that 75% of Madison County residents have had a checkup in the last year.



Source: CHNA Survey Data

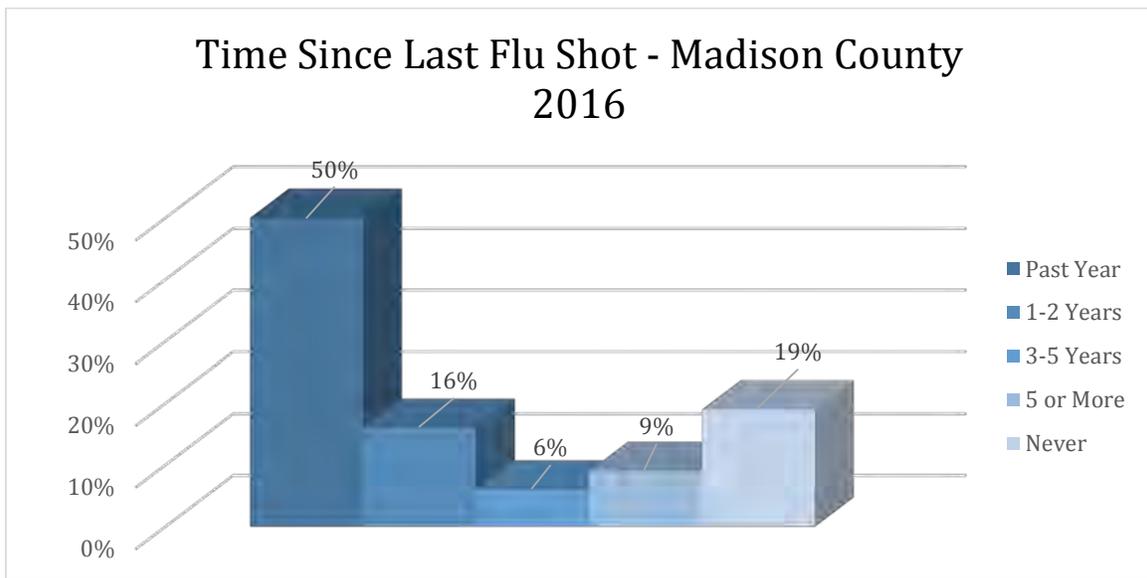
Frequency of Flu Shots

The overall health of a community is impacted by preventative measures including immunizations and vaccinations. The chart below shows that the percentage of people who have had a flu shot in the past year is 38.4% for Madison County in 2010-2014 compared to 40.0% for 2007-2009. During the same timeframe, the State of Illinois realized an increase.



Source: Illinois Behavioral Risk Factor Surveillance System

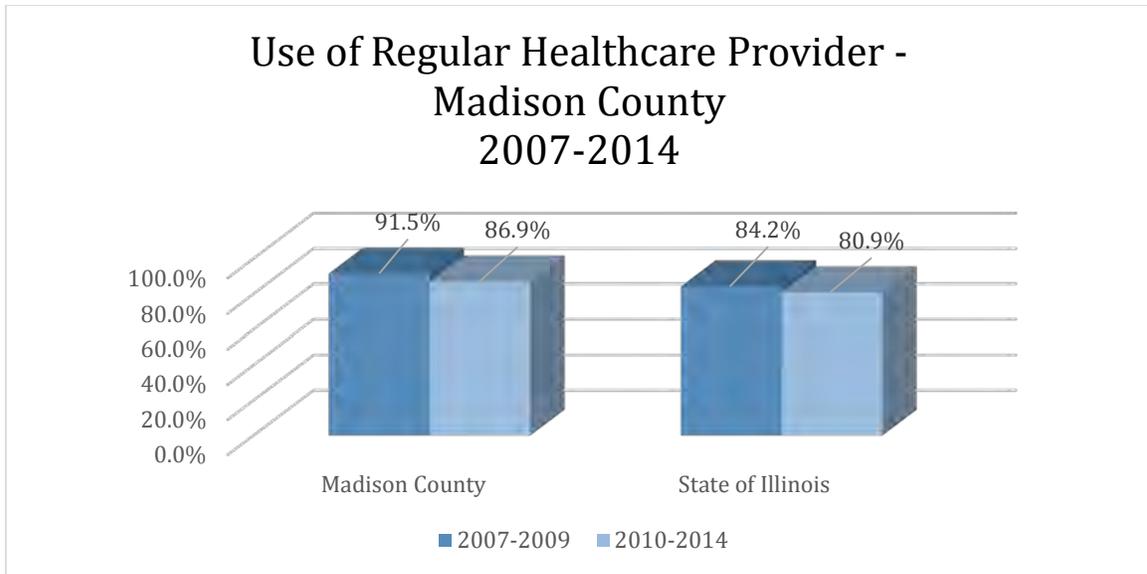
CHNA survey data provide additional insights into prevalence of flu shots, and a more positive result for Madison County.



Source: CHNA Survey

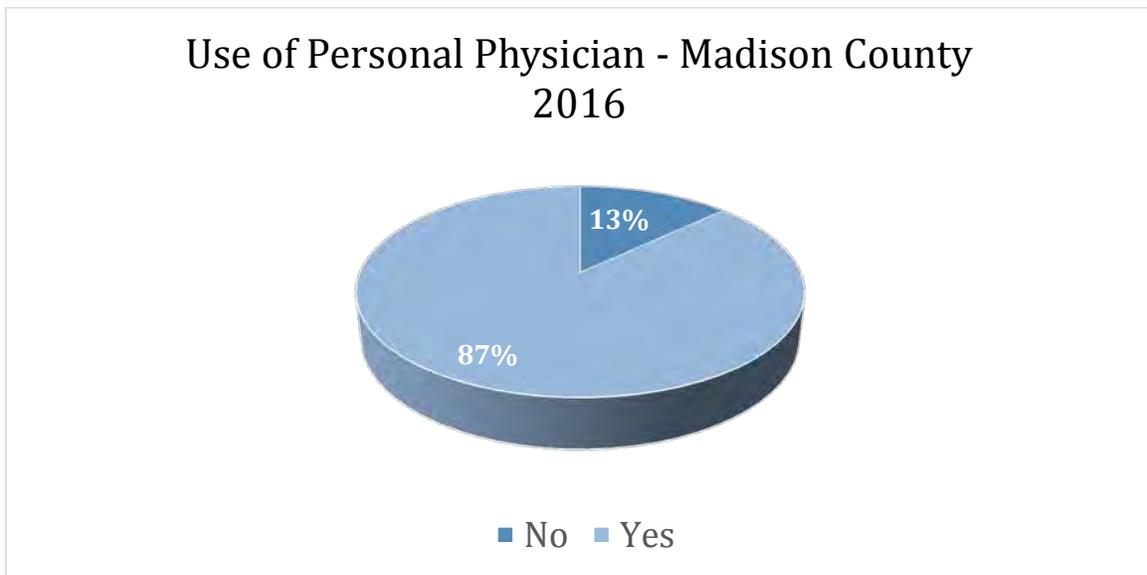
Usual Healthcare Provider

In Madison County, the most recent secondary data indicate 86.9% of residents utilize a regular healthcare provider, down from 2007-2009. The percentage of residents in Madison County reporting a usual healthcare provider is higher than the State of Illinois average, which also fell from 2007-2009.



Source: Illinois Behavioral Risk Factor Surveillance System

Similarly, the CHNA survey asked respondents if they had a personal physician. Having a personal physician suggests that individuals are more likely to get wellness check-ups and less likely to use an emergency department as a primary healthcare service. According to survey data, 87% of residents have a personal physician.



Source: CHNA Survey

Demographic Factors Related to Wellness

Multiple demographic characteristics show significant relationships with wellness. The following relationships were found using correlational analyses:

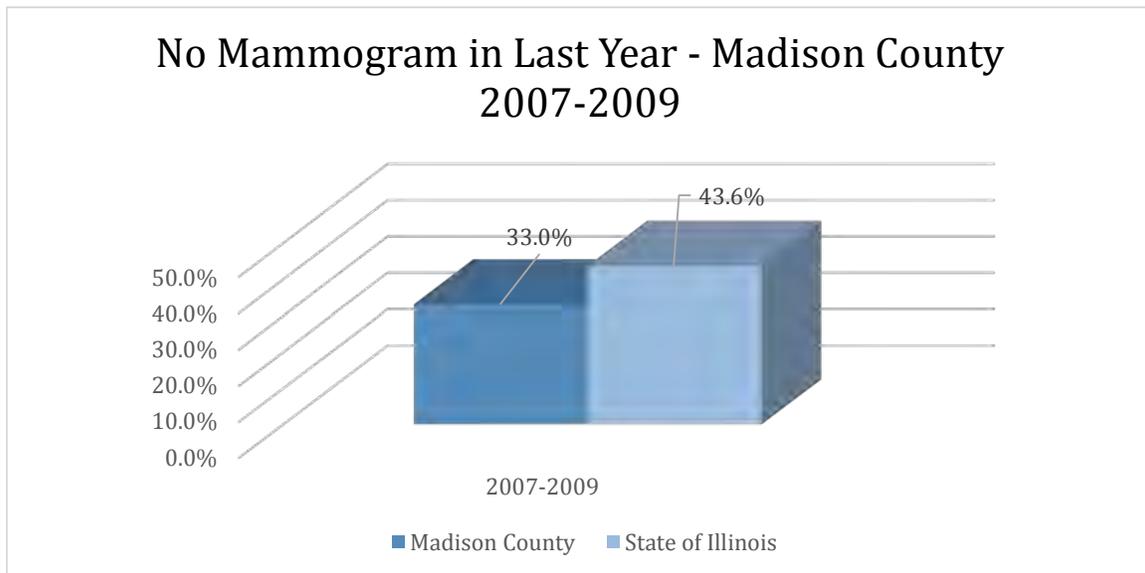
Frequency of checkup tends to be greater for older people.

Frequency of flu shot tends to be higher for older people and White people. Black people are less likely to get a flu shot.

Having a personal physician tends to be more likely for older people, White people, and those with higher education and income. Black people are less likely to report having a personal physician.

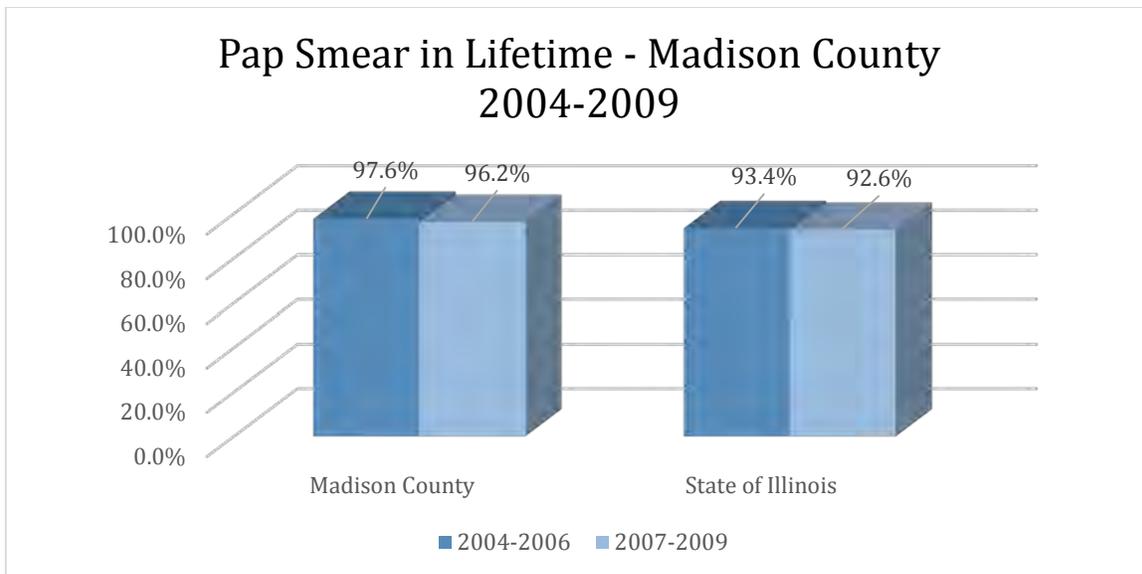
Women's Healthcare

Using the most recent available data from 2007-2009, 33.0% of residents from Madison County reported they had not had a mammogram within the last year.



Source: Illinois Behavioral Risk Factor Surveillance System

Research suggests pap smears are important in detecting pre-cancerous cells in the uterus and cervix. The percentages of women who have ever had a pap smear has decreased slightly between 2004-2006 and 2007-2009. Compared to the State of Illinois, Madison County is slightly higher.



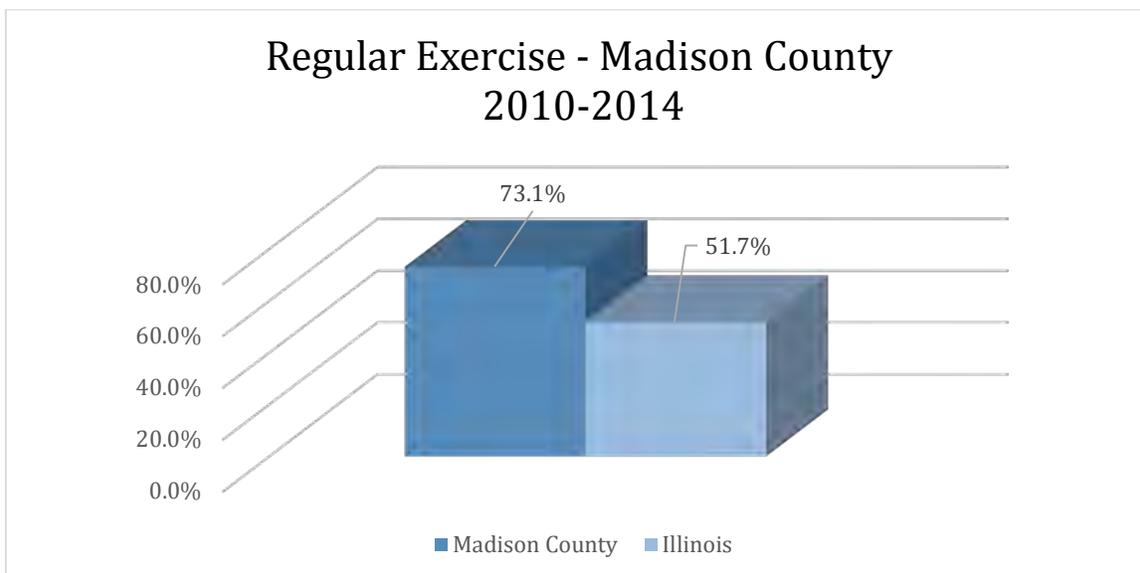
Source: Illinois Behavioral Risk Factor Surveillance System

Healthy Lifestyle

A healthy lifestyle, comprised of regular physical activity and balanced diet, has been shown to increase physical, mental, and emotional well-being.

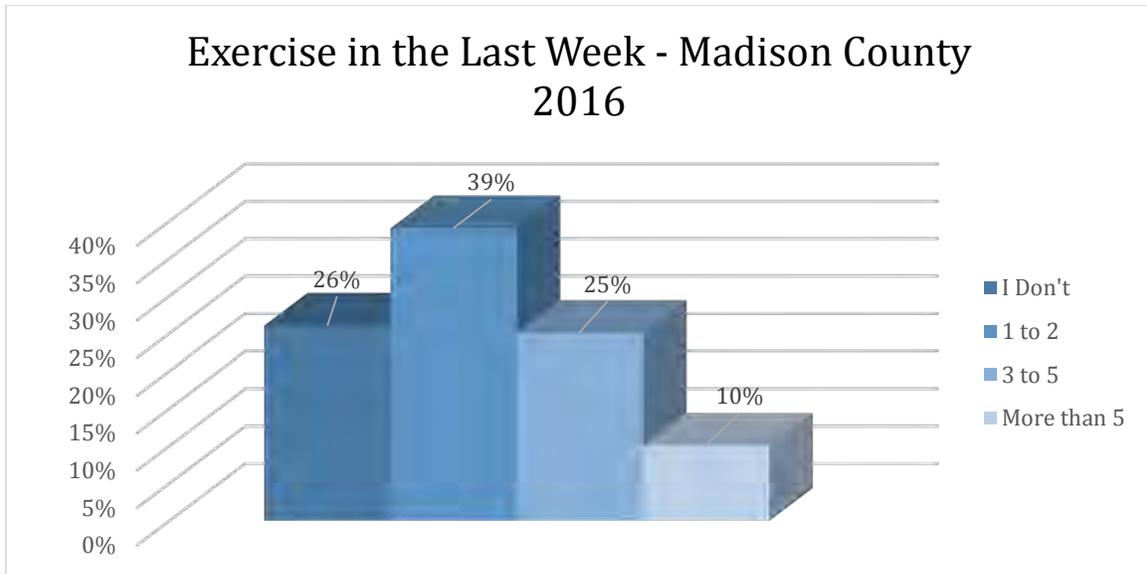
Physical Exercise

According to recent data, 73.1% of the residents in Madison County exercise. The percentage of individuals who exercise in Madison County is higher than the State of Illinois.



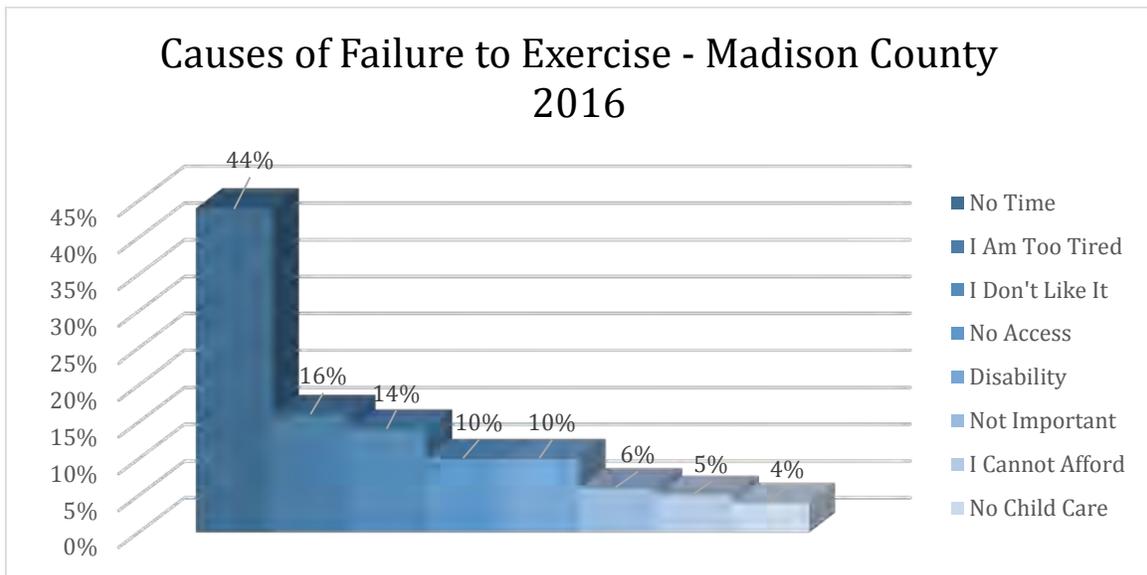
Source: Illinois Behavioral Risk Factor Surveillance System

CHNA survey data allow for a more detailed assessment of exercise. Specifically, 26% of respondents indicated that they do not exercise at all, while the largest percentage of residents (39%) exercise 1-2 times per week.



Source: CHNA Survey

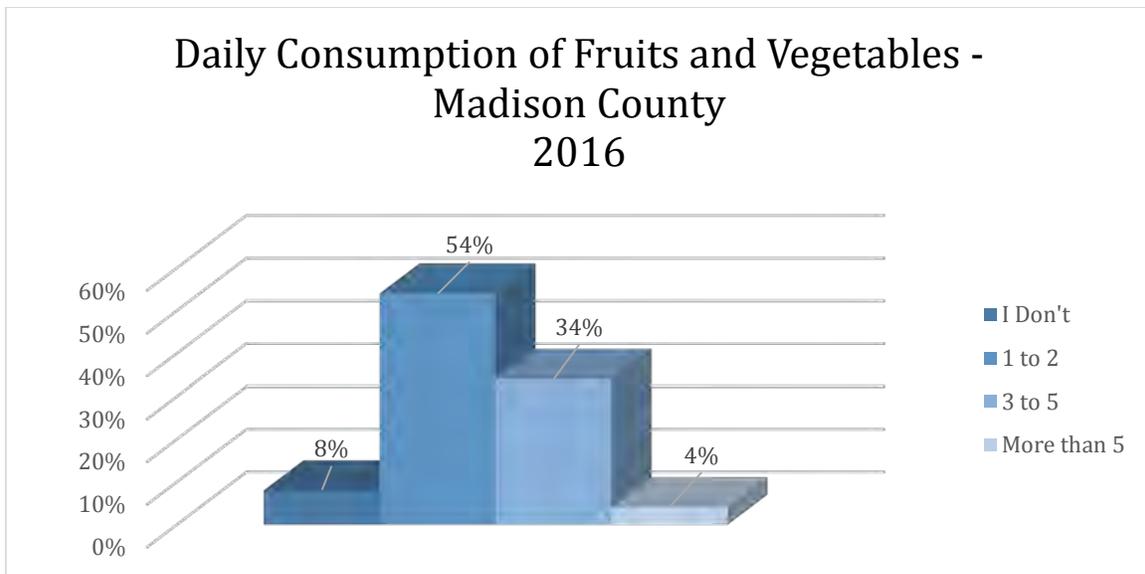
To find out why some residents do not exercise at all, a follow up question was asked. The most common reason for not exercising is not having enough time.



Source: CHNA Survey

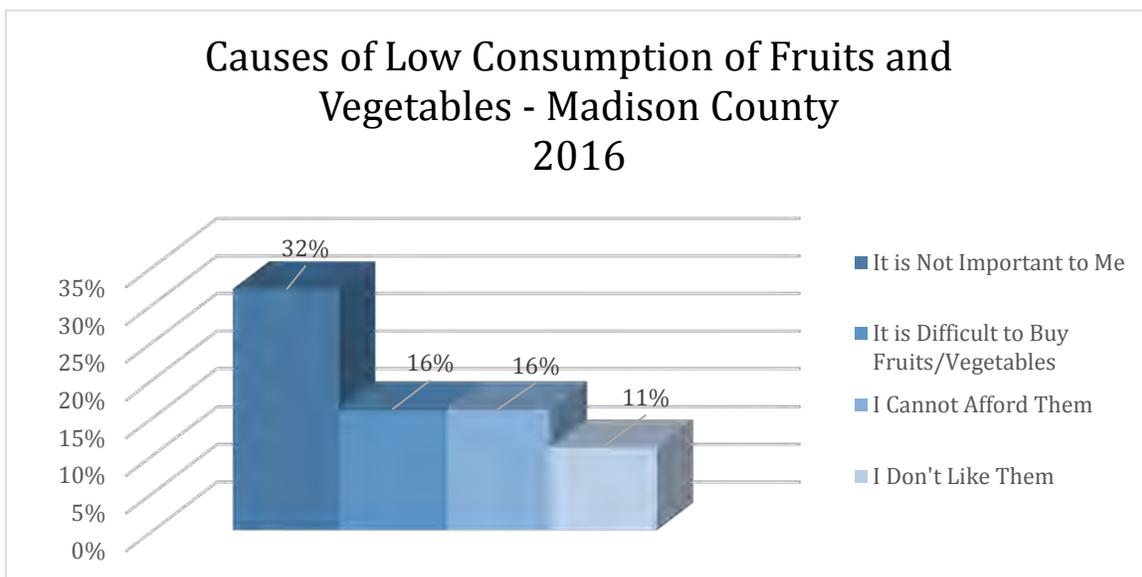
Healthy Eating

Nutrition and diet are critical to preventative care. Well over half (62%) of Madison County residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of Madison County residents who consume five or more servings per day is only 4%.



Source: CHNA Survey

Those individuals who indicated they do not eat any fruits or vegetables were asked a follow up question. Reasons most frequently given for failing to eat more fruits and vegetables are the lack of importance (32%), difficulty to buy fruits and vegetables (16%), the expense involved (16%), and a lack of appeal (11%).



Source: CHNA Survey

Demographic Factors Related to Healthy Lifestyle

There are multiple demographic characteristics showing significant relationships with healthy lifestyle. The following relationships were found using correlational analyses:

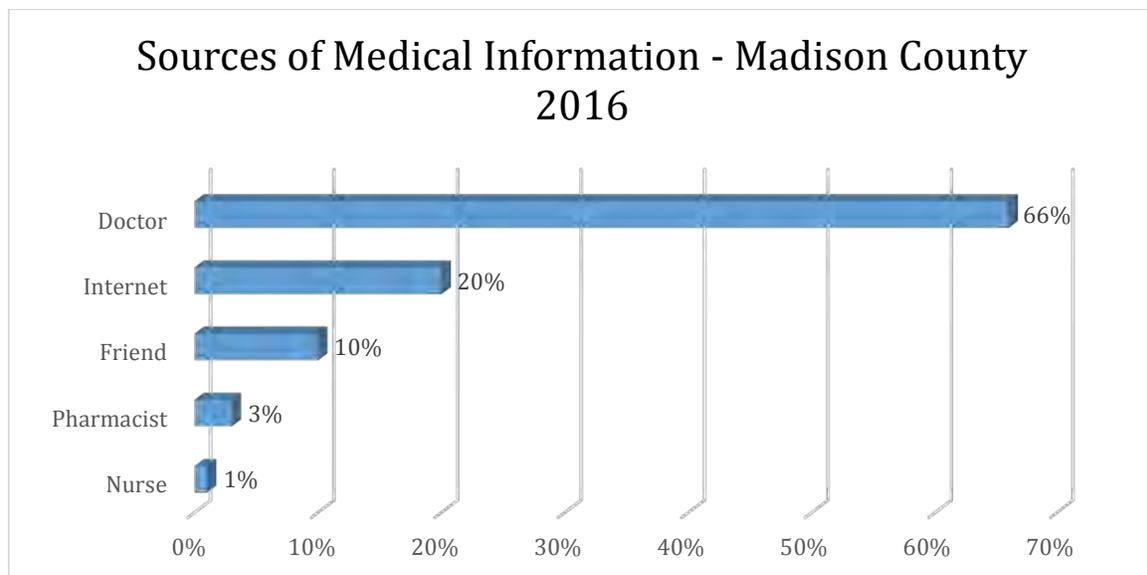
Frequency of exercise tends to be higher for White people, and those with higher education and income. Black residents report a lower frequency of exercise.

Frequency of fruit and vegetable consumption tends to be higher for men, White people, and people with higher education. Black residents report lower consumption.

2.3 Access to Information

Importance of the measure: It is important to understand how people access medical information. The more proactive the population becomes in managing its own health, the more important access to accurate information becomes.

Respondents were asked, “Where do you get most of your medical information?” The vast majority of respondents obtained information from their doctor. While the Internet was the second most common choice, it was significantly lower than information from doctors.



Source: CHNA Survey

Demographic Factors Related to Access to Information

Several demographic characteristics show significant relationships with frequency of access to various sources of information. The following relationships were found using correlational analyses:

Access to Information from a Doctor tends to be higher for older people.

Access to Information from a Friend tends to be higher for people with low income.

Access to Information from the Internet tends to be higher for men, younger people, and those with higher education.

Access to Information from a Pharmacy tends to be higher for Black people.

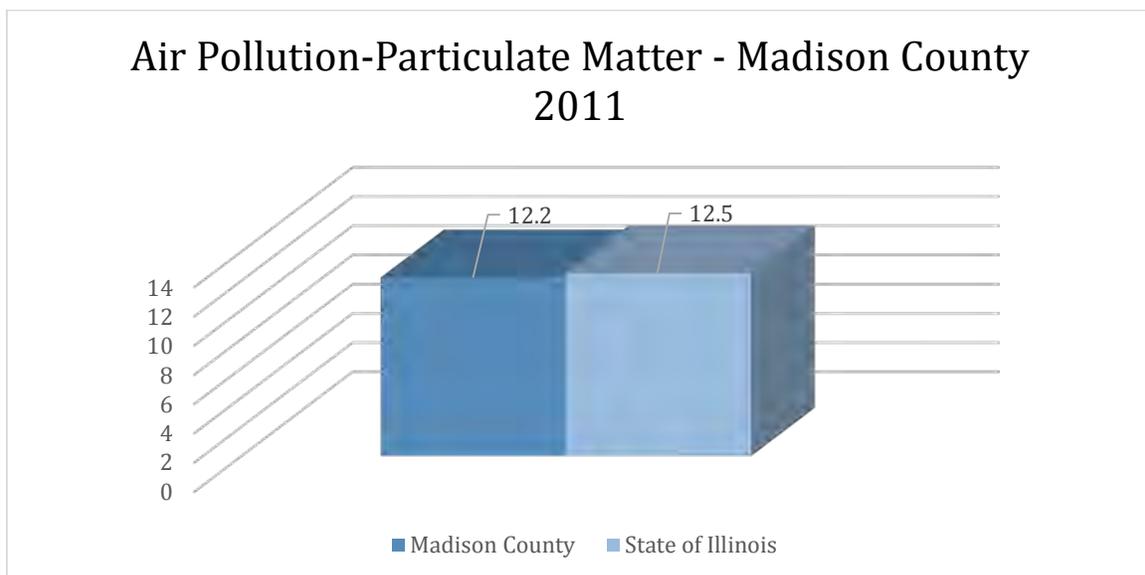
Access to Information from a Church Nurse tends to be higher for Latino residents.

2.4 Physical Environment

Importance of the measure:

According to the County Health Rankings, Air Pollution - Particulate Matter (APPM) is the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in a county. Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter less than 2.5 micrometers. These particles can be directly emitted from sources such as forest fires, or they can form when gases are emitted from power plants, manufacturing facilities and automobiles.

The relationship between elevated air pollution, particularly fine particulate matter and ozone, and compromised health has been well documented. Negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects. The APPM for Madison County (12.2) is slightly lower than the State average of 12.5.



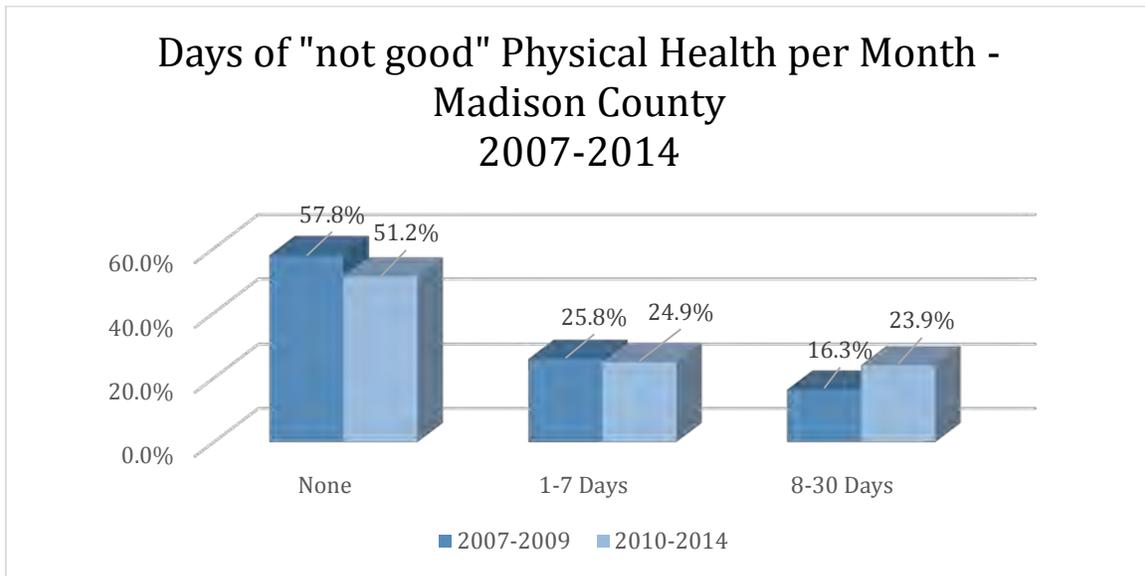
Source: County Health Rankings 2011 Data

2.5 Health Status

Importance of the measure: Self-perceptions of health can provide important insights to help manage population health. Not only do self-perceptions provide benchmarks regarding health status, but they can also provide insights into how accurately people perceive their own health.

Physical Health

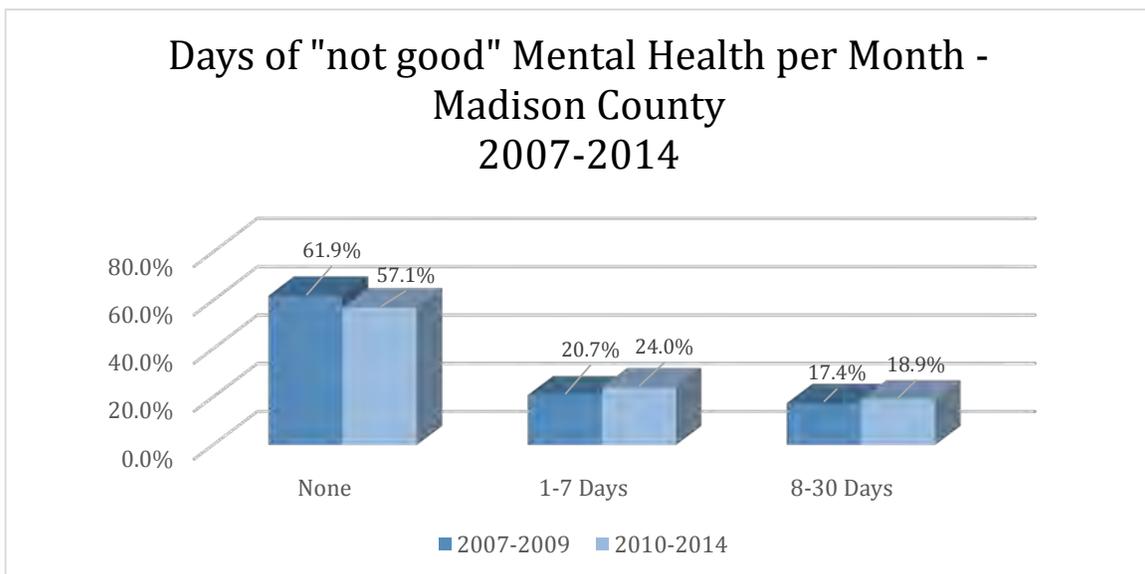
There was a significant increase in the percentage of Madison County residents reporting they felt physically unhealthy on 8 or more days per month in 2009 (16.3%) versus 2014 (23.9%).



Source: Illinois Behavioral Risk Factor Surveillance System

Mental Health

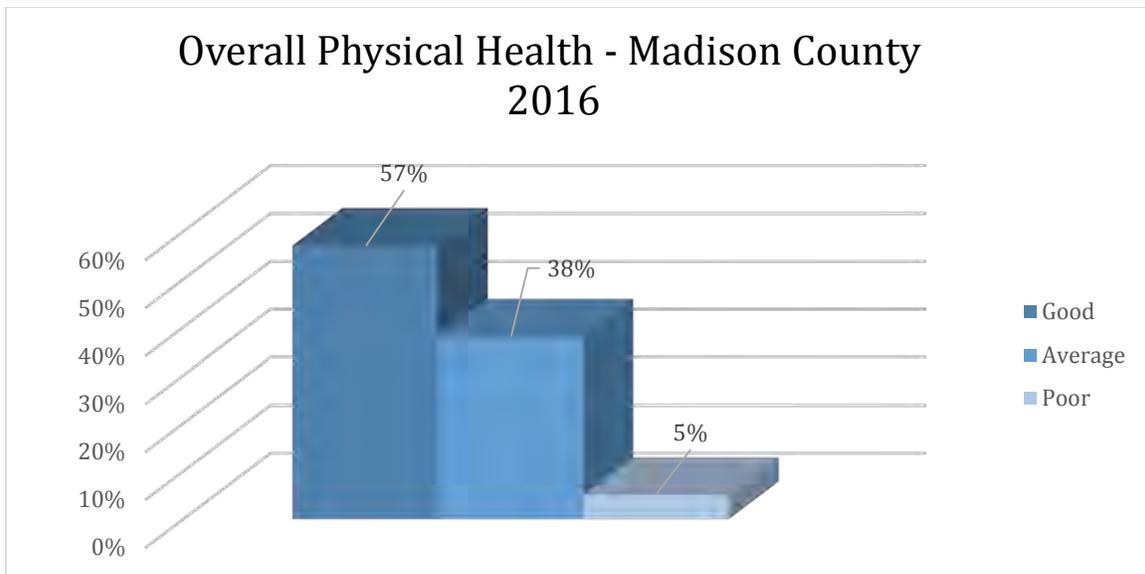
In 2009, 20.7% of residents in Madison County reported they had experienced 1-7 days with poor mental health per month and 17.4% felt mentally unhealthy on 8 or more days per month. In 2014, there was an increase in the number of people that reported poor mental health for 1-7 days (24%) and an increase in the number of people that reported poor mental health 8 or more days per month (18.9%).



Source: Illinois Behavioral Risk Factor Surveillance System

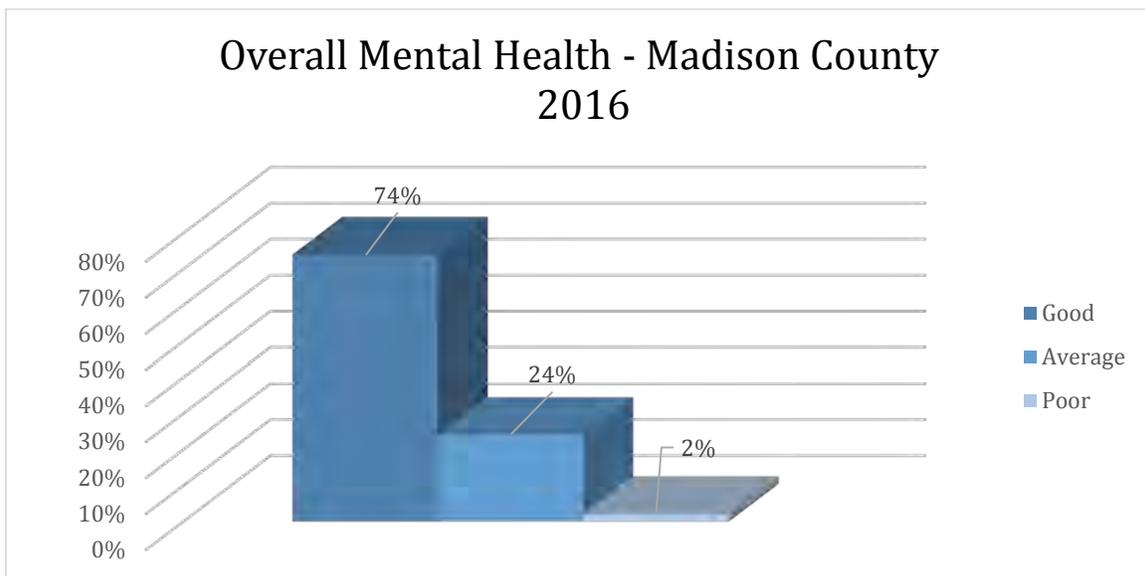
Self Perceptions of Overall Health

Over half (57%) of Madison County Residents report having good overall physical health, while 5% rated themselves as having poor physical health.



Source: CHNA Survey

In regard to overall mental health, 74% of respondents stated they have good overall mental health and 2% stated it is poor.



Source: CHNA Survey

Demographic Factors Related to Self Perceptions of Health

Demographic characteristics show significant relationships with self-perceptions of health. The following relationships were found using correlational analyses:

Perceptions of physical and mental health tend to be higher for those with higher education and income. Black residents rate themselves as less physically healthy.

2.6 Key Takeaways from Chapter 2

- ✓ **ED IS CHOSEN BY 22% OF THE AT-RISK POPULATION AS THE PRIMARY SOURCE OF HEALTHCARE**
- ✓ **APPROXIMATELY TWO-THIRDS OF THE MADISON COUNTY POPULATION EXERCISES TWO OR FEWER TIMES PER WEEK**
- ✓ **APPROXIMATELY TWO-THIRDS OF THE MADISON COUNTY POPULATION EAT 2 OR FEWER SERVINGS OF FRUITS AND VEGETABLES PER DAY**
- ✓ **THERE HAS BEEN AN INCREASE IN THE PERCENTAGE OF RESIDENTS THAT REPORTED POOR PHYSICAL HEALTH FOR 8 OR MORE DAYS PER MONTH**
- ✓ **THERE HAS BEEN AN INCREASE IN THE PERCENTAGE OF RESIDENTS THAT REPORTED POOR MENTAL HEALTH FOR BOTH 1-7 DAYS AND 8 OR MORE DAYS PER MONTH**
- ✓ **MOST RESIDENTS HAVE HIGH SELF-PERCEPTIONS OF BOTH PHYSICAL AND MENTAL HEALTH**

CHAPTER 3 OUTLINE

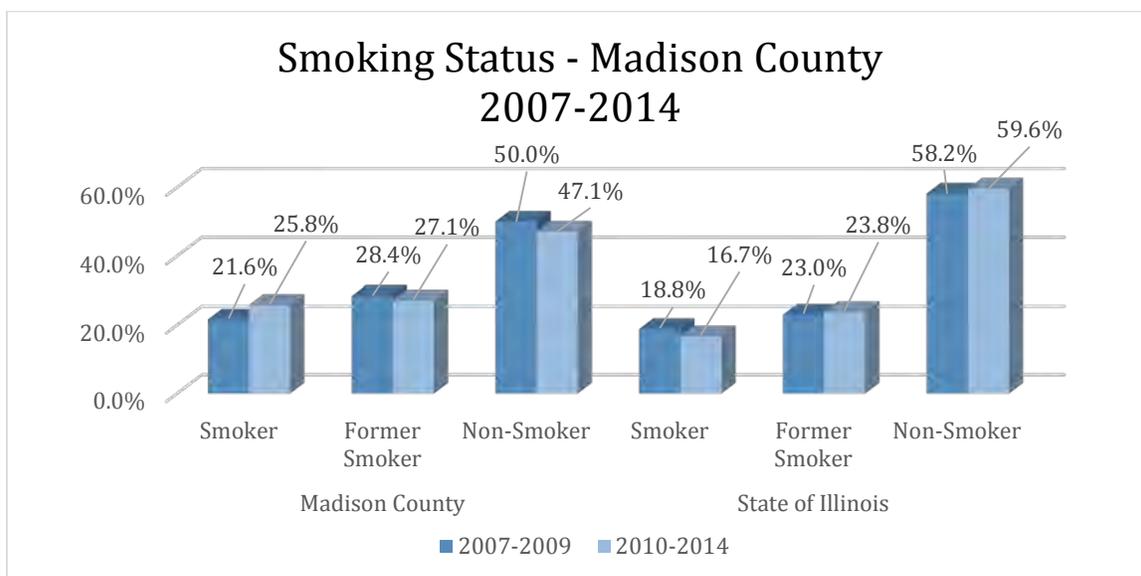
- 3.1 Tobacco Use
- 3.2 Drug and Alcohol Use
- 3.3 Overweight and Obesity
- 3.4 Predictors of Heart Disease
- 3.5 Key Takeaways from Chapter 3

CHAPTER 3. SYMPTOMS AND PREDICTORS

3.1 Tobacco Use

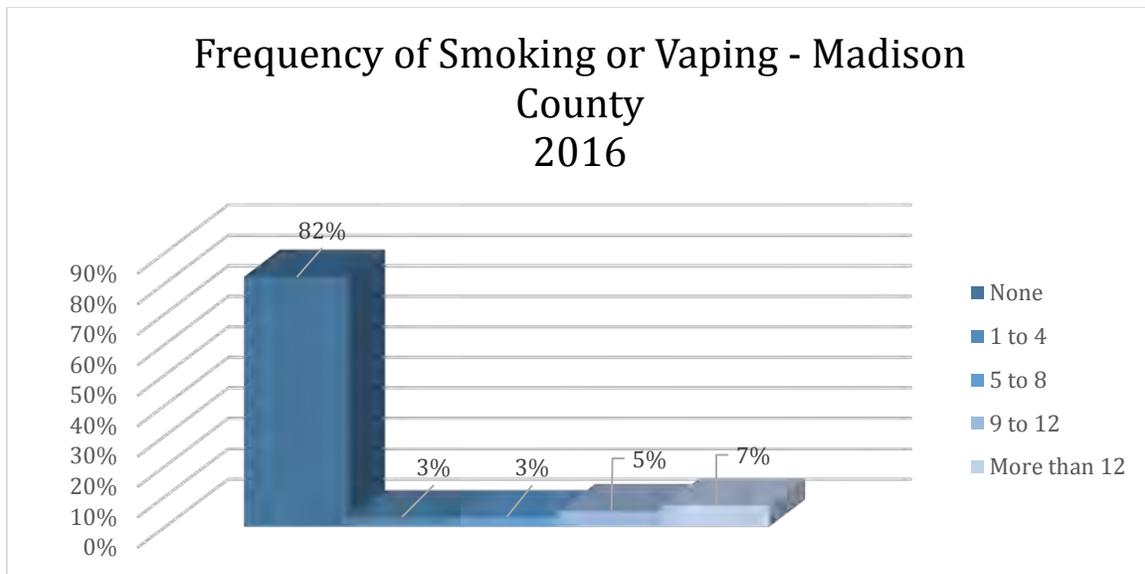
Importance of the measure: In order to appropriately allocate healthcare resources, a thorough analysis of the leading indicators regarding morbidity and disease must be conducted. In this way, healthcare organizations can target affected populations more effectively. Research suggests tobacco use facilitates a wide variety of adverse medical conditions.

Smoking rates have increased in Madison County and are above the State of Illinois averages. There was a significant increase in the percentage of Madison County residents reporting they were current smokers between 2007-2009 (21.6%) and 2010-2014 (25.8%). There was a decrease in the percentage of Madison County residents reporting they were current non-smokers between 2007-2009 (50.0%) and 2010-2014 (47.1%).



Source: Illinois Behavioral Risk Factor Surveillance System

CHNA survey data show 82% of Madison County respondents do not smoke. However, 7% of respondents state they smoke (or vape) more than 12 times per day.



Source: CHNA Survey

Demographic Factors Related to Smoking

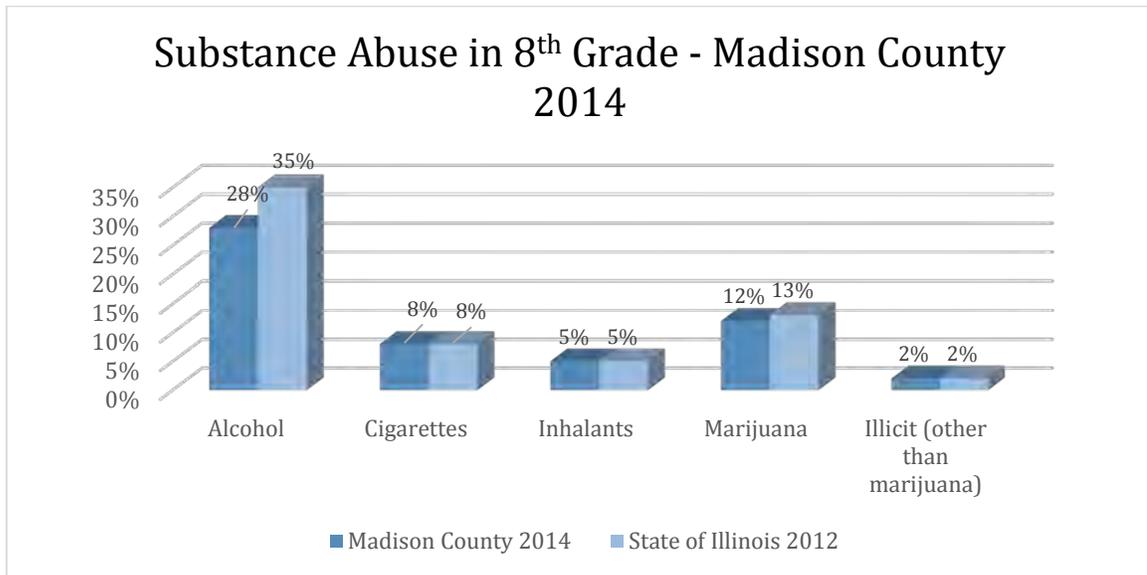
Several demographic characteristics show significant relationships with incidence of smoking or vaping. The following relationships were found using correlational analyses:

Frequency of smoking or vaping was higher among younger people, those with lower education and income, and homeless people.

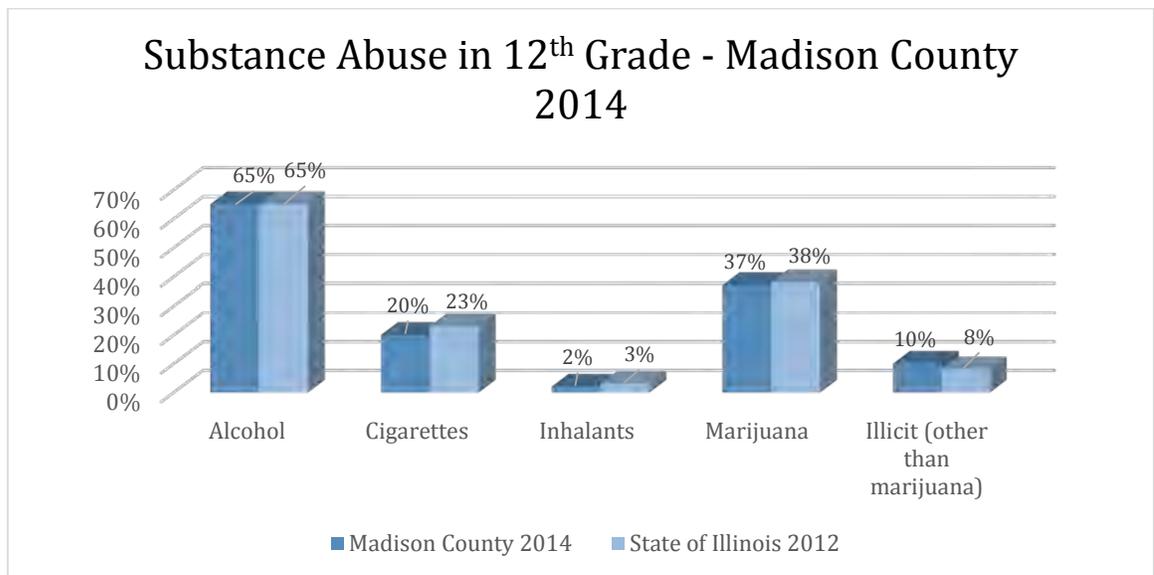
3.2 Drug and Alcohol Abuse

Importance of the measure: Alcohol and drugs impair decision-making, often leading to adverse consequences and outcomes. Research suggests that alcohol is a gateway drug for youth, leading to increased usage of controlled substances in adult years. Accordingly, the substance abuse values and behaviors of high school students is a leading indicator of adult substance abuse in later years.

Data from the 2014 Illinois Youth Survey measures illegal substance use (alcohol, tobacco, and other drugs – mainly marijuana) among adolescents. Madison County is similar to State averages in all categories among 8th graders with the exception of alcohol, which is lower than the State average. Similarities exist for all categories among 12th graders. Note that data are not available for Illinois in 2014; therefore, 2012 benchmarks are used.



Source: https://iys.cprd.illinois.edu/UserFiles/Servers/Server_178052/File/2014/cnty14_madison.pdf



Source: https://iys.cprd.illinois.edu/UserFiles/Servers/Server_178052/File/2014/cnty14_madison.pdf

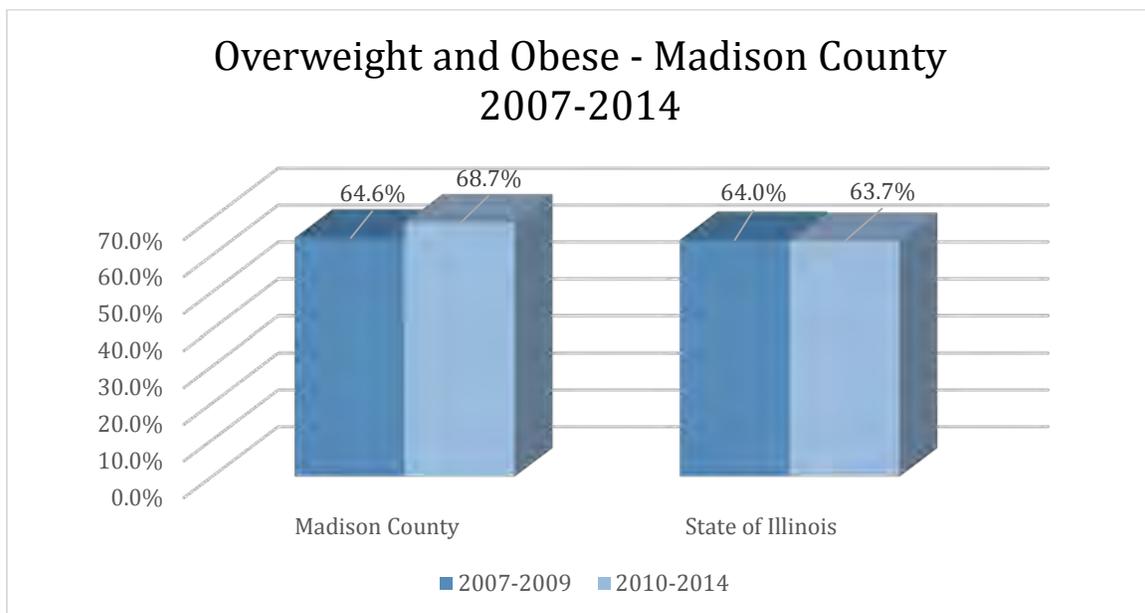
3.3 Overweight and Obesity

Importance of the measure: Individuals who are overweight and obese place greater stress on their internal organs, thus increasing the propensity to utilize health services. Research strongly suggests that obesity is a significant problem facing youth and adults nationally, in Illinois, and within Madison County. The US Surgeon General has characterized obesity as “the fastest-growing, most threatening disease in America today.” According to the Obesity Prevention Initiative from the Illinois General Assembly, 20% of Illinois children are obese. The financial burden of overweight and obese individuals is staggering, as the estimated annual medical costs attributed to obesity in Illinois for 1998-2000 exceeded \$3.4 billion, ranking Illinois 6th in the nation for obesity-attributed medical costs.

With children, research has linked obesity to numerous chronic diseases including Type II diabetes, hypertension, high blood pressure, and asthma. Adverse physical health side effects of obesity include orthopedic problems due to weakened joints and lower bone density. Detrimental mental health side effects include low self-esteem, poor body image, symptoms of depression and suicide ideation. Obesity impacts educational performance as well; studies suggest school absenteeism of obese children is six times higher than that of non-obese children.

With adults, obesity has far-reaching consequences. Testimony to the Illinois General Assembly indicated that obesity-related illnesses contribute to worker absenteeism, slow workflow, and high worker compensation rates. A Duke University study on the effects of obesity in the workforce noted 13 times more missed workdays by obese employees than non-obese employees. Nationwide, lack of physical activity and poor nutrition contribute to an estimated 300,000 preventable deaths per year.

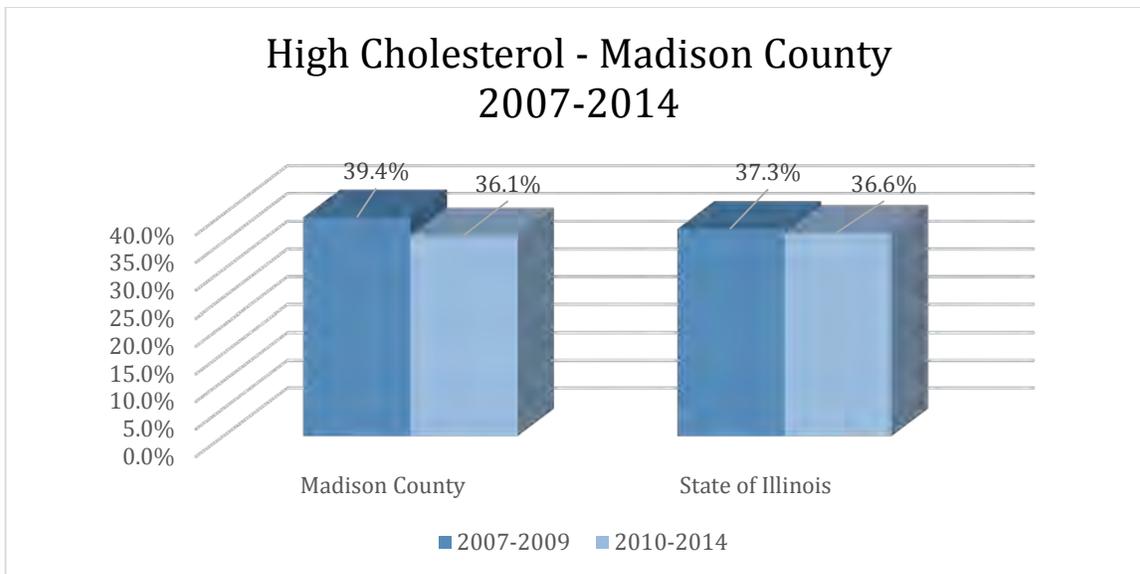
In Madison County, the number of people diagnosed with obesity and being overweight has increased from 2007-2009 to 2010-2014. Note specifically that the percentage of obese and overweight people has increased from 64.6% to 68.7%. Overweight and obesity rates in Illinois have decreased from 2009 (64.0%) to 2014 (63.7%).



Source: Illinois Behavioral Risk Factor Surveillance System

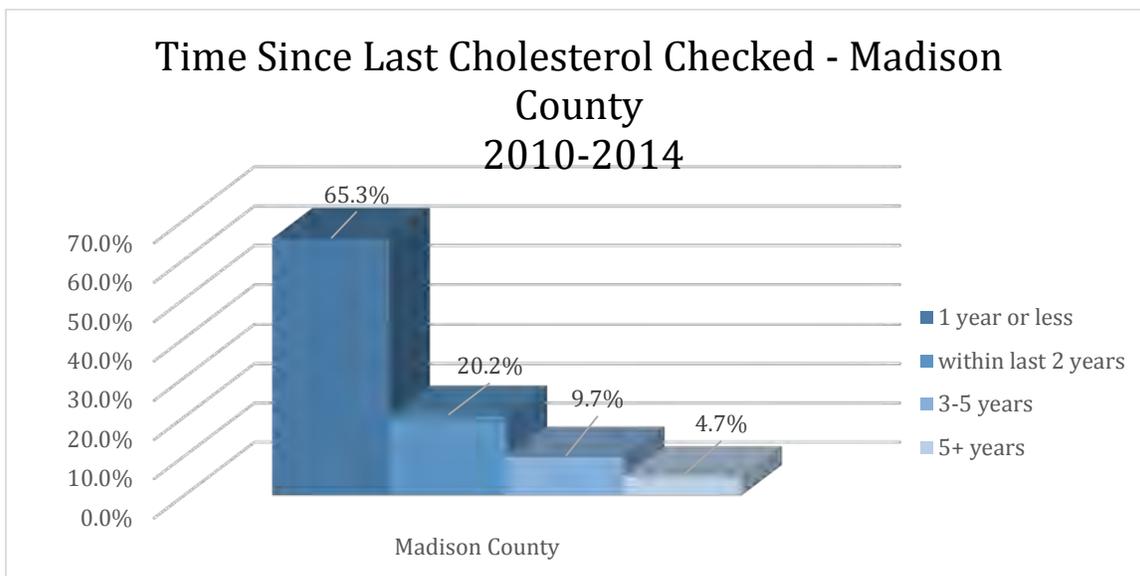
3.4 Predictors of Heart Disease

The percentage of residents who report they have high cholesterol is slightly lower in Madison County (36.1%) than the State of Illinois average of 36.6%.



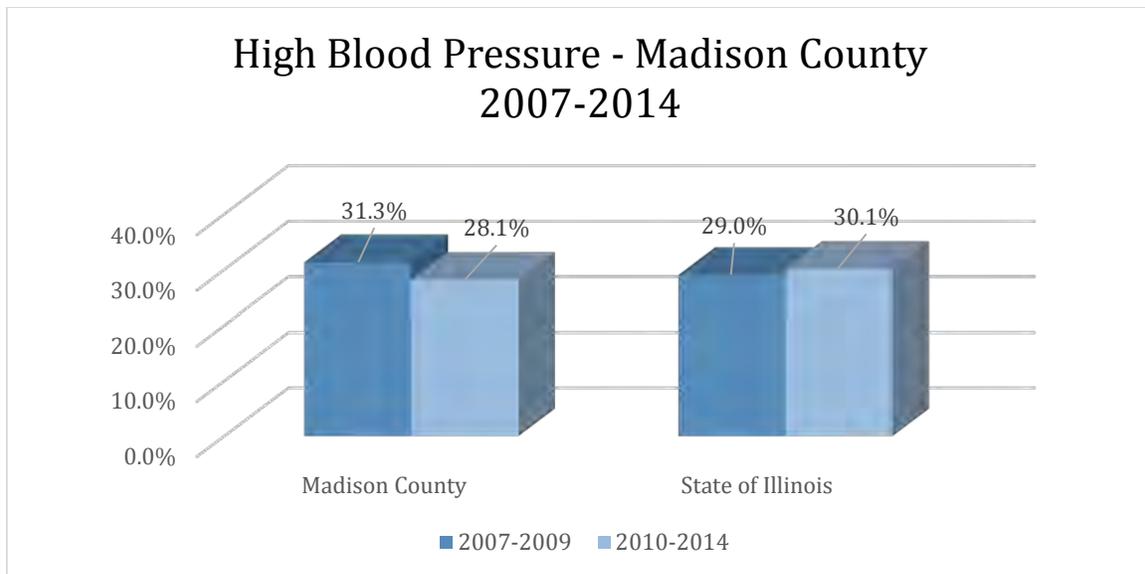
Source: Illinois Behavioral Risk Factor Surveillance System

Most residents of Madison County report having their cholesterol checked within the past year.



Source: Illinois Behavioral Risk Factor Surveillance System

With regard to high blood pressure, Madison County has a lower percentage of residents with high blood pressure than residents in the State of Illinois as a whole. The percentage of Madison County residents reporting they have high blood pressure in 2014 decreased from 31.3% to 28.1%.



Source: Illinois Behavioral Risk Factor Surveillance System

3.5 Key Takeaways from Chapter 3

- ✓ **TOBACCO USAGE HAS INCREASED IN MADISON COUNTY AND IS SIGNIFICANTLY HIGHER THAN STATE AVERAGES**
- ✓ **NEARLY ALL TYPES OF SUBSTANCE ABUSE ARE SIMILAR TO STATE AVERAGES FOR BOTH 8TH AND 12TH GRADERS**
- ✓ **THE PERCENTAGE OF PEOPLE WHO ARE OVERWEIGHT AND OBESE HAS INCREASED IN MADISON COUNTY AND IS HIGHER THAN STATE AVERAGES**
- ✓ **RISK FACTORS FOR HEART SUCH AS CHOLESTEROL LEVELS AND BLOOD PRESSURE ARE DECREASING AND LOWER THAN STATE AVERAGES**

CHAPTER 4 OUTLINE

- 4.1 Healthy Babies
- 4.2 Cardiovascular
- 4.3. Respiratory
- 4.4 Cancer
- 4.5 Diabetes
- 4.6 Infectious Disease
- 4.7 Injuries
- 4.8 Mortality
- 4.9 Key Takeaways from Chapter 4

CHAPTER 4. MORBIDITY AND MORTALITY

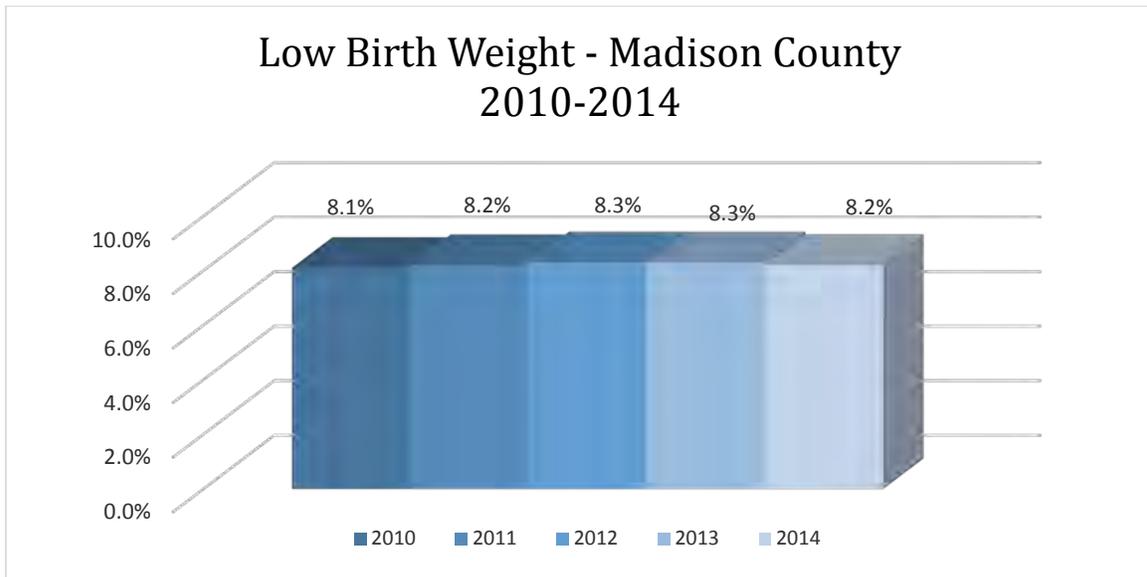
Given the lack of recent disease/morbidity data from existing secondary data sources, much of the data used in this chapter was manually gathered from Madison County hospitals using COMP data. Note that hospital-level data only show hospital admissions and do not reflect outpatient treatments and procedures.

4.1 Healthy Babies

Importance of the measure: Regular prenatal care is a vital aspect in producing healthy babies and children. Screening and treatment for medical conditions as well as identification and interventions for behavioral risk factors associated with poor birth outcomes are important aspects of prenatal care. Research suggests that women who receive adequate prenatal care are more likely to have better birth outcomes, such as full term and normal weight babies. Prenatal care can provide health risk assessments for the mother and fetus, early intervention for medical conditions and education to encourage healthy habits, including nutritional and substance-free health during pregnancy.

Low Birth Weight Rates

Low birth weight rate is defined as the percentage of infants born below 2,500 grams or 5.5 pounds. Very low birth weight rate is defined as the percentage of infants born below 1,500 grams or 3.3 pounds. In contrast, the average newborn weighs about 7 pounds. The percentage of babies born with low birth weight in Madison County has been relatively flat from 2010 (8.1%) to 2014 (8.2%).

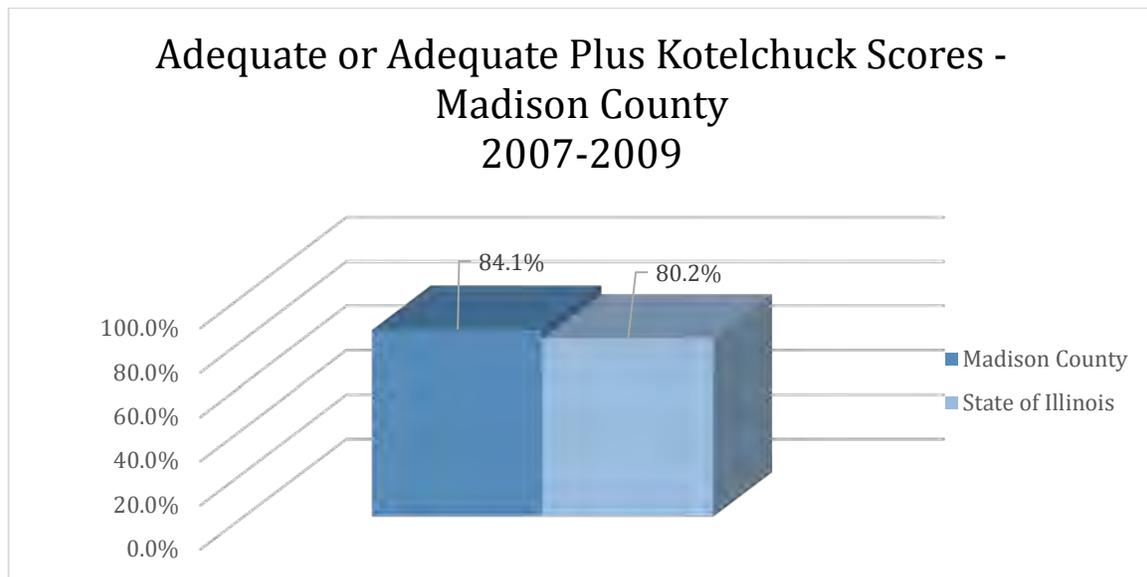


Source: <http://www.countyhealthrankings.org>

Initiation of Prenatal Care

Prenatal care is comprehensive medical care provided for the mother and fetus, which includes screening and treatment for medical conditions as well as identification and interventions for behavioral risk factors associated with adverse birth outcomes. Kotelchuck Index Scores are used to determine the quantity of prenatal visits received between initiation of services and delivery. Adequate (80%-109% of expected visits) and Adequate Plus (receiving 110% of recommended services) of received services is compared to the number of expected visits for the period when care began and the delivery date.

Of the babies born in 2009 in Madison County, 84.1% were born with “Adequate” or “Adequate Plus” prenatal care. This figure is higher than the State of Illinois average of 80.2% of babies born with similar prenatal care. These are the most recent data, and have not been updated since 2009.



Source: Illinois Department of Public Health

4.2 Cardiovascular Disease

Importance of the measure:

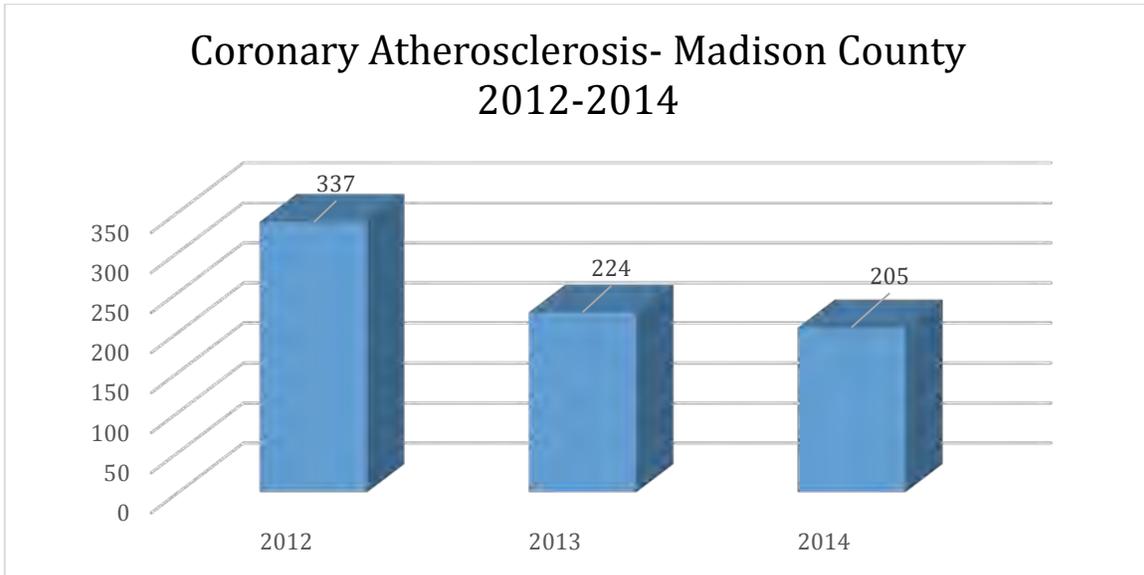
Cardiovascular disease is defined as all diseases of the heart and blood vessels, including ischemic (also known as coronary) heart disease, cerebrovascular disease, congestive heart failure, hypertensive disease, and atherosclerosis.

Coronary Atherosclerosis

Coronary Atherosclerosis, sometimes-called hardening of the arteries, can slowly narrow and harden the arteries throughout the body. When atherosclerosis affects the arteries of the heart, it is called coronary artery disease.

Coronary artery disease is a leading cause of death for Americans. Most of these deaths are from heart attacks caused by sudden blood clots in the heart's arteries.

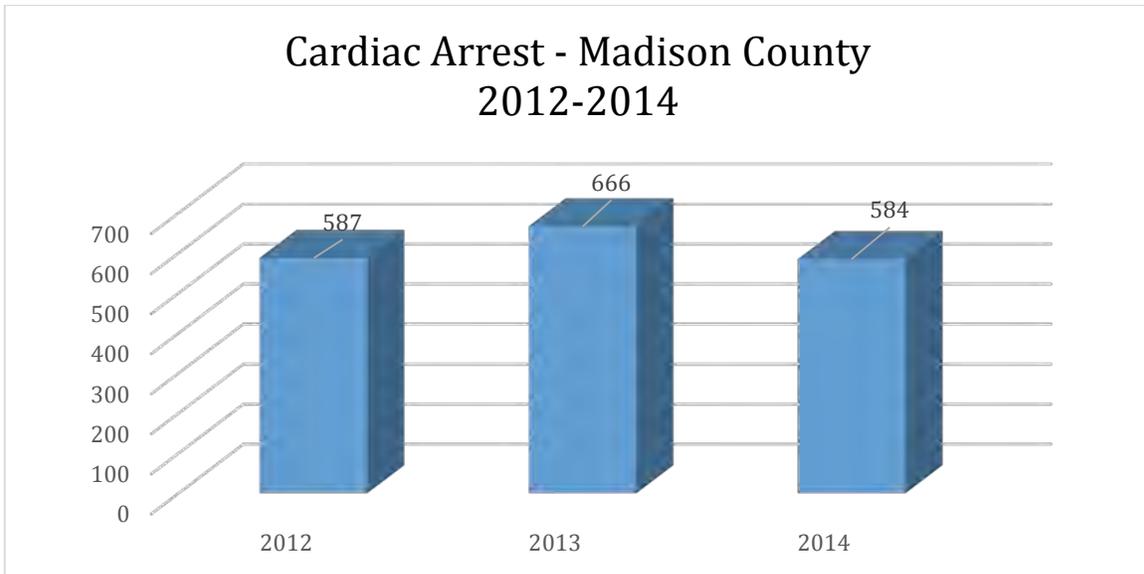
The number of cases of coronary atherosclerosis complication at Madison County area hospitals has decreased significantly from 337 cases in 2012 to 205 cases in 2014. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



Source: COMPdata 2015

Cardiac Arrest

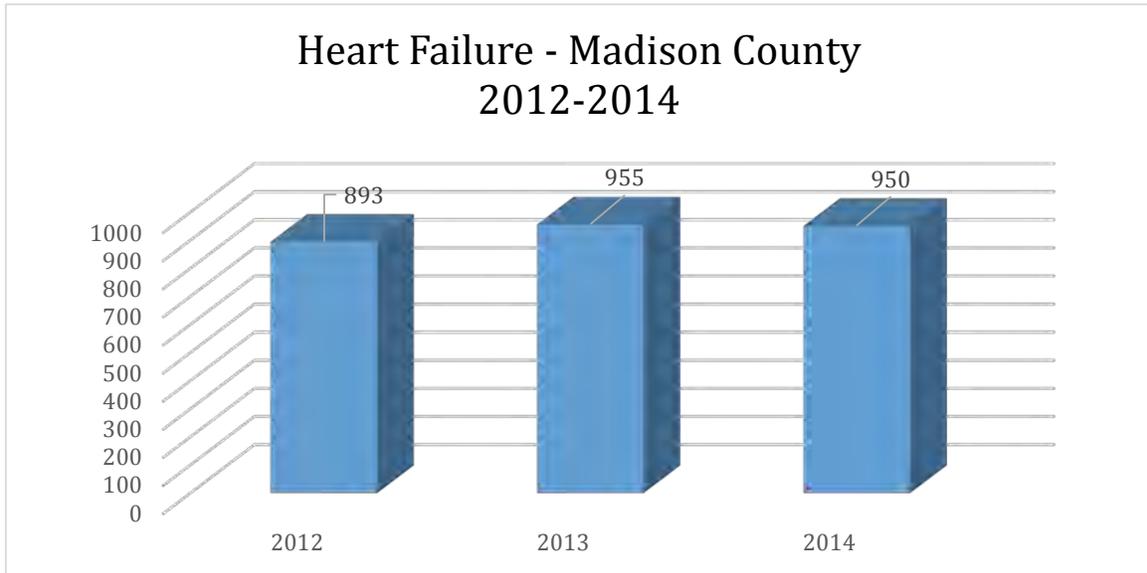
Cases of dysthymia and cardiac arrest at Madison County area hospitals have fallen slightly between FY12 and FY14, despite a peak in FY2013. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2015

Heart Failure

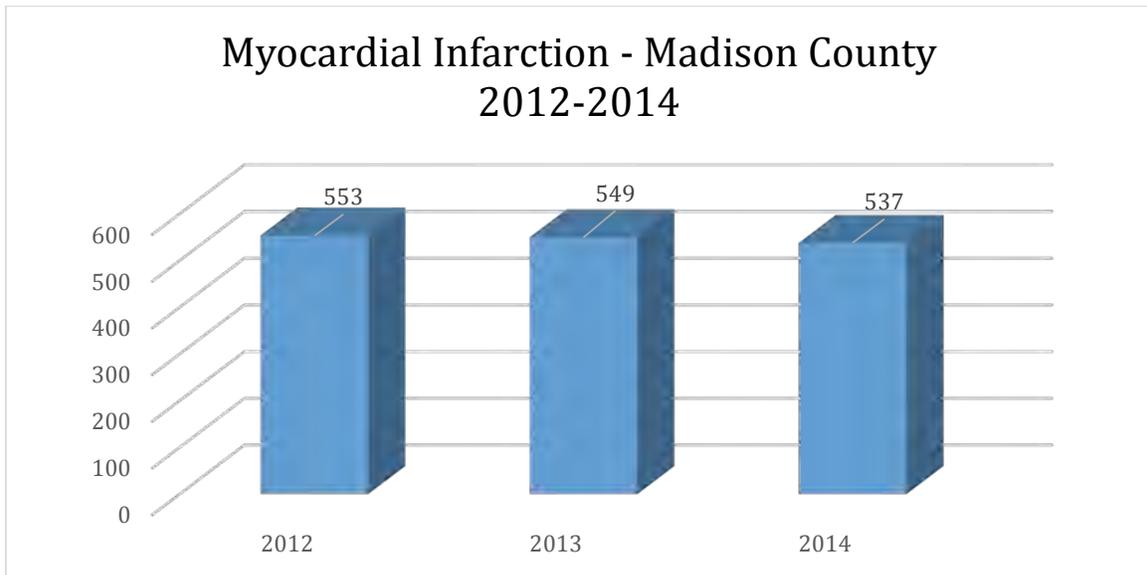
The number of treated cases of heart failure at Madison County area hospitals have increased. In FY 2012, 893 cases were reported, and in FY 2014, there were 950 cases reported. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2015

Myocardial Infarction

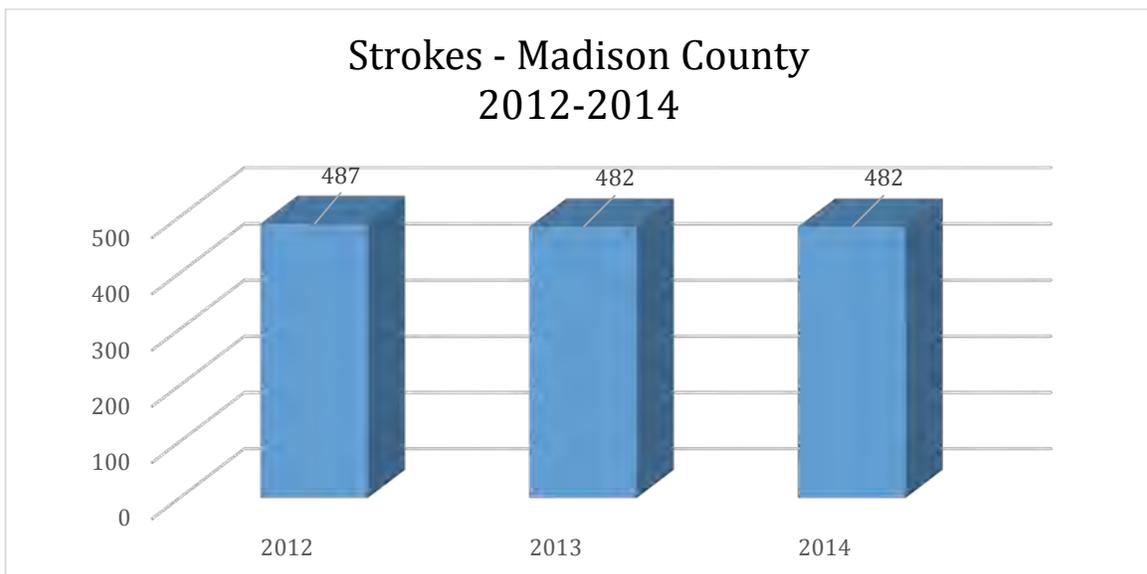
The number of treated cases of myocardial infarction at area hospitals in Madison County have decreased from 553 in 2012 to 537 in 2014. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2015

Strokes

The number of treated cases of stroke at Madison County area hospitals have held steady between FY 2012 and FY 2014. Note that hospital-level data only show hospital admissions and do not reflect outpatient treatments and procedures.



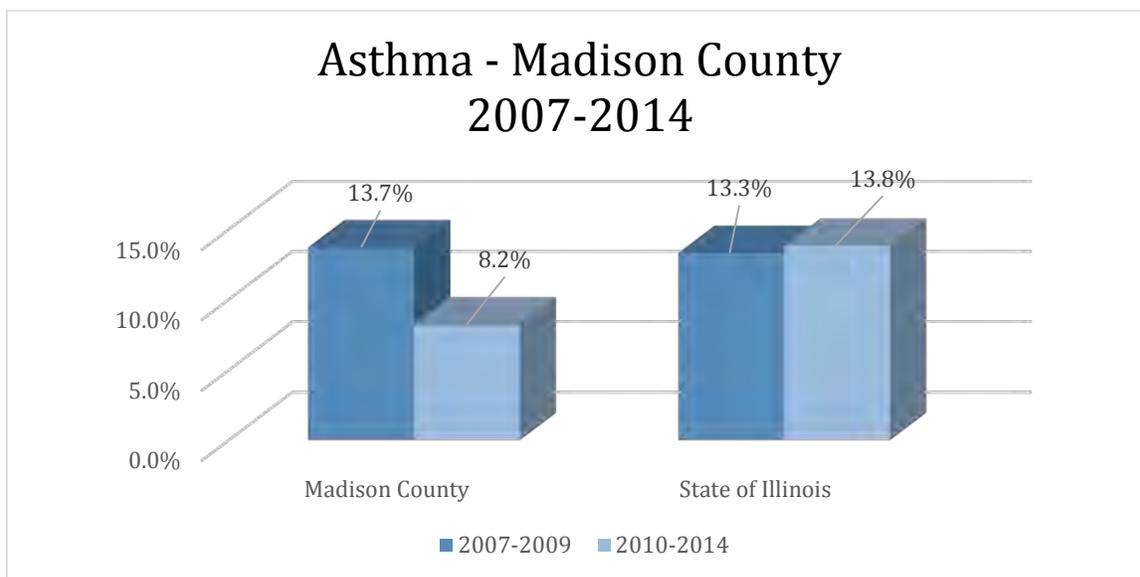
Source: COMPdata 2015

4.3 Respiratory

Importance of the measure: Diseases of the respiratory system includes acute upper respiratory infections such as influenza, pneumonia, bronchitis, asthma, emphysema, and Chronic Obstructive Pulmonary Disease (COPD). These conditions are characterized by breathlessness, wheezing, chronic coughing, frequent respiratory infections, and chest tightness. Many respiratory conditions can be successfully controlled with medical supervision and treatment. However, children and adults who do not have access to adequate medical care are likely to experience repeated serious episodes, trips to the emergency room and absences from school and work. Hospitalization rates illustrate the worst episodes of respiratory diseases and are a proxy measure for inadequate treatment.

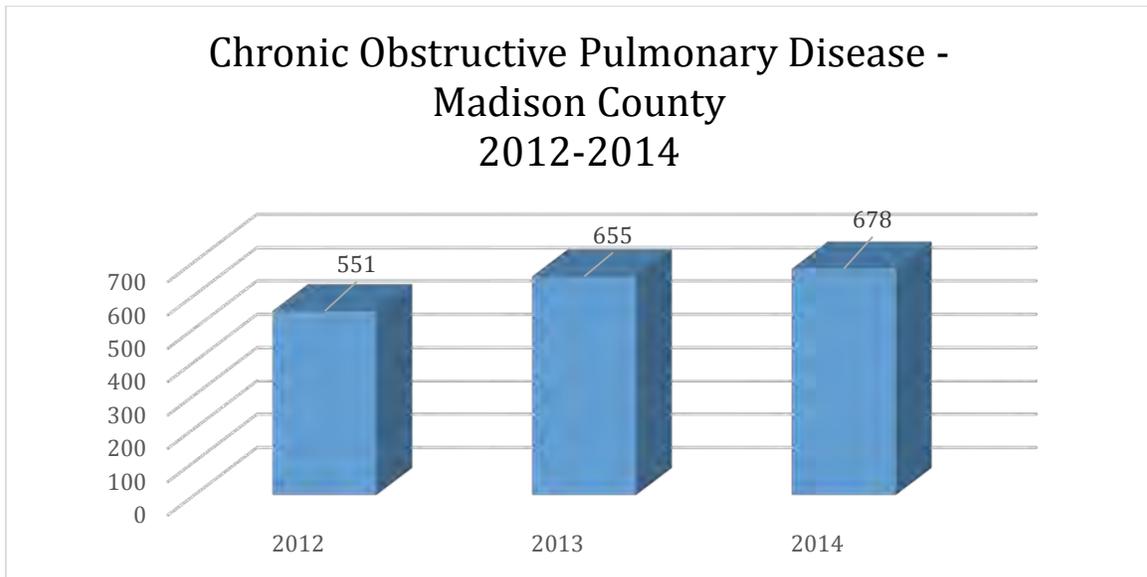
Asthma

The percentage of residents that have asthma in Madison County has decreased between 2007-2009 and 2010-2014, while State averages are increasing slightly. According to the Illinois BRFSS, asthma rates in Madison County (8.2%) are lower than the State of Illinois (13.8%).



Source: Illinois Behavioral Risk Factor Surveillance System

Treated cases of COPD at Madison County area hospitals have increased significantly between FY 2012 and FY 2014. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

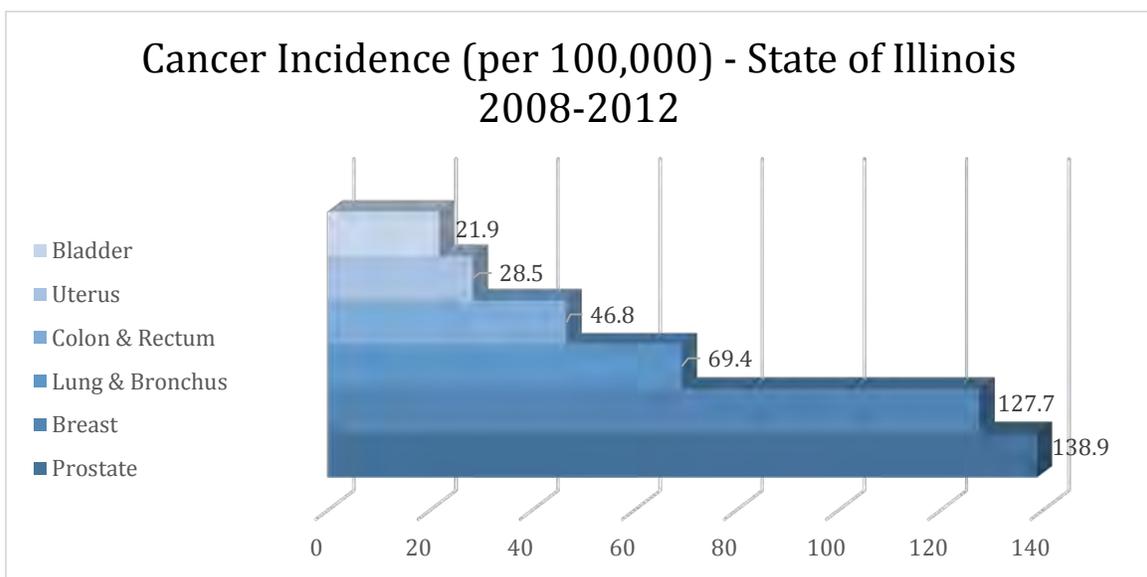


Source: COMPdata 2015

4.4 Cancer

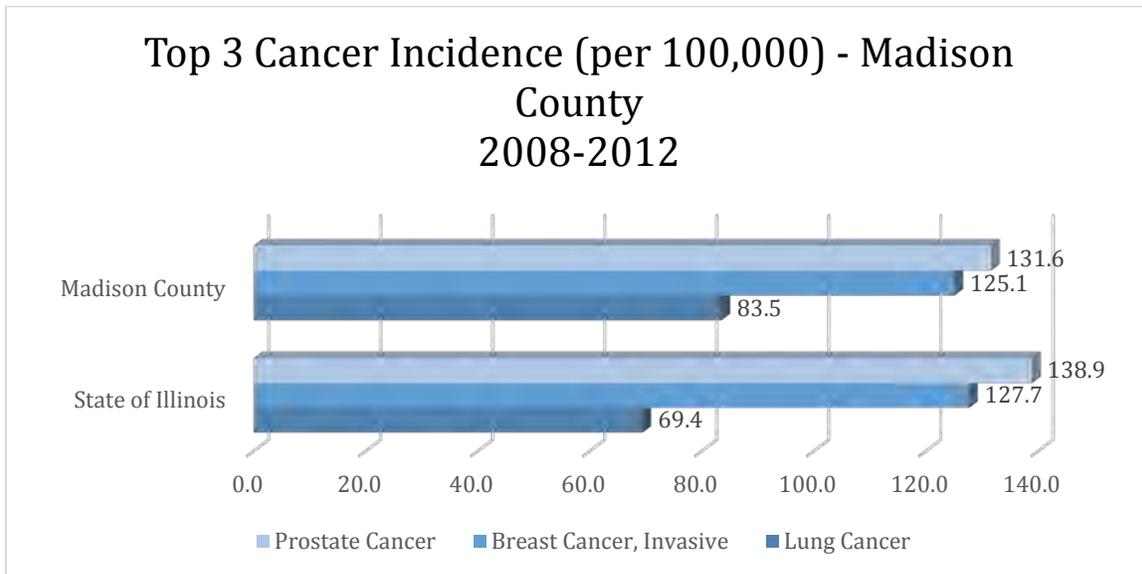
Importance of the measure: Cancer is caused by the abnormal growth of cells in the body and many causes of cancer have been identified. Generally, each type of cancer has its own symptoms, outlook for cure, and methods for treatment. Cancer is one of the leading causes of death in Madison County.

The top six cancers by treatment in the State of Illinois for 2008-2012 can be seen below. The most prevalent cancers in the State of Illinois are prostate cancer, breast cancer and lung and bronchus cancer, respectively.



Source: http://www.idph.state.il.us/cancer/15/county_rpt/County_Section_I_Site_Specific_Cancer_Incidence.pdf

For the top three prevalent cancers in Madison County, comparisons can be seen below. Specifically, prostate cancer and breast cancer are slightly lower than the State, while lung cancer rates are higher than the State of Illinois.



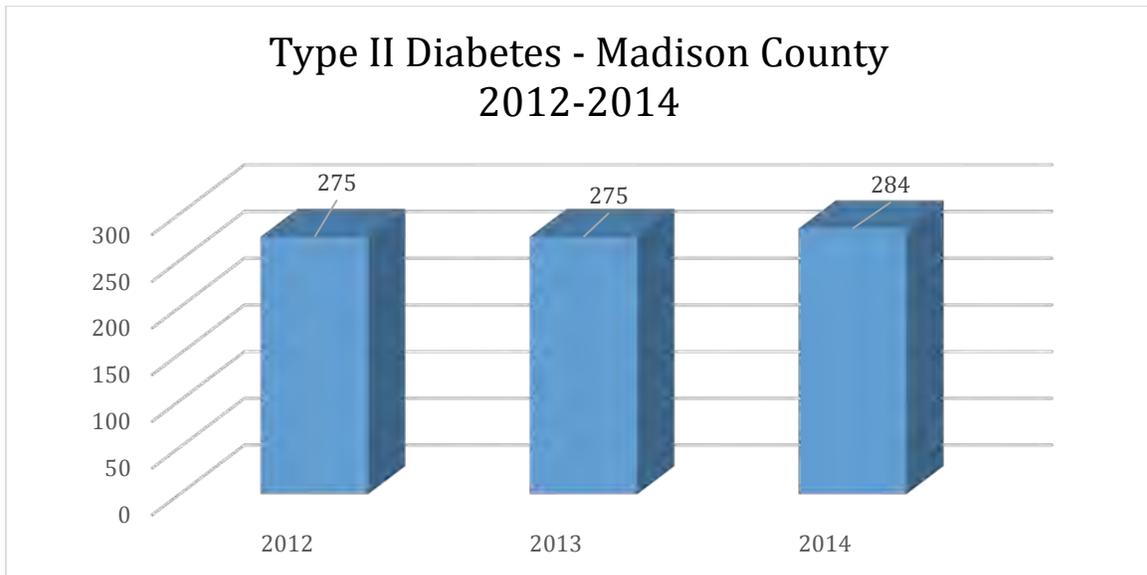
Source: http://www.idph.state.il.us/cancer/15/county_rpt/County_Section_I_Site_Specific_Cancer_Incidence.pdf

4.5 Diabetes

Importance of the measure:

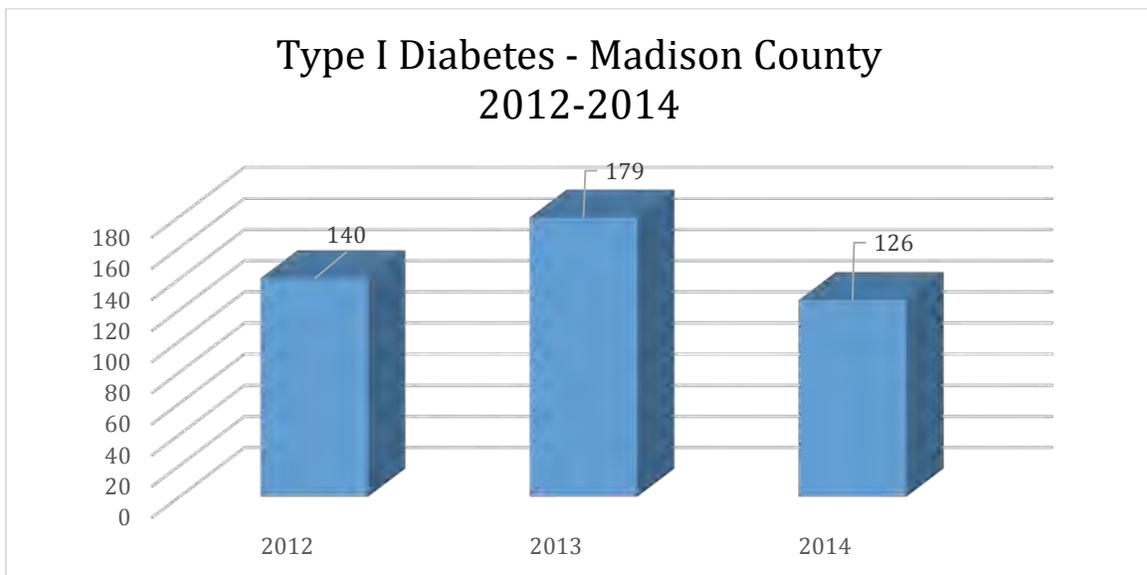
Diabetes is the leading cause of kidney failure, adult blindness and amputations and is a leading contributor to strokes and heart attacks. It is estimated that 90-95% of individuals with diabetes have Type II diabetes (previously known as adult-onset diabetes). Only 5-10% of individuals with diabetes have Type I diabetes (previously known as juvenile diabetes).

Inpatient cases of Type II diabetes from Madison County have slightly increased between FY 2012 (275 cases) and FY 2014 (284 cases). Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



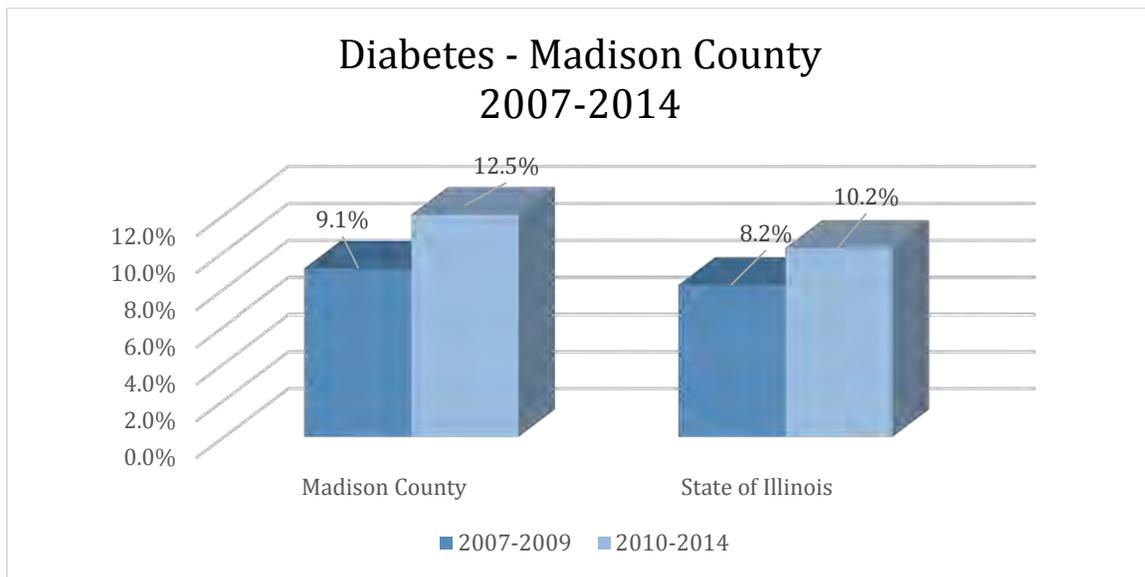
Source: COMPdata 2015

Inpatient cases of Type I diabetes show a decrease from 2012 (140) to 2014 (126) for Madison County, following an increase in FY13. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



Source: COMPdata 2015

Data from the Illinois BRFSS indicate that 12.5% of Madison County residents have diabetes. Trends are concerning, as the prevalence of diabetes is increasing and higher in Madison County compared to data from the State of Illinois.



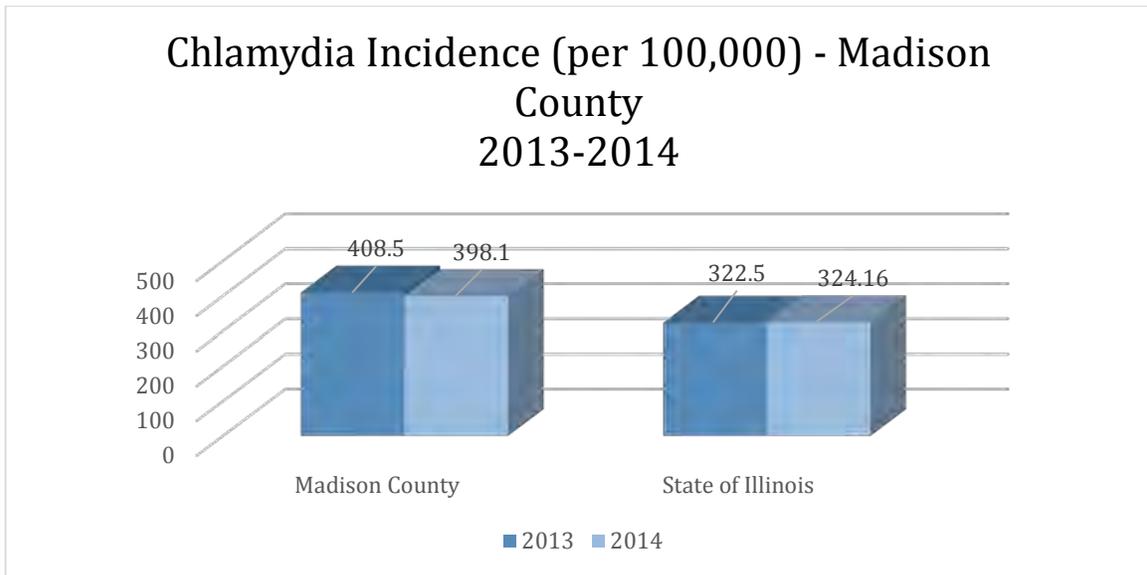
Source: Illinois Behavioral Risk Factor Surveillance System

4.6 Infectious Diseases

Importance of the measure: Infectious diseases, including sexually transmitted infections and hepatitis, are related to high-risk sexual behavior, drug and alcohol abuse, limited access to healthcare, and poverty. It would be highly cost-effective for both individuals and society if more programs focused on prevention rather than treatment of infectious diseases.

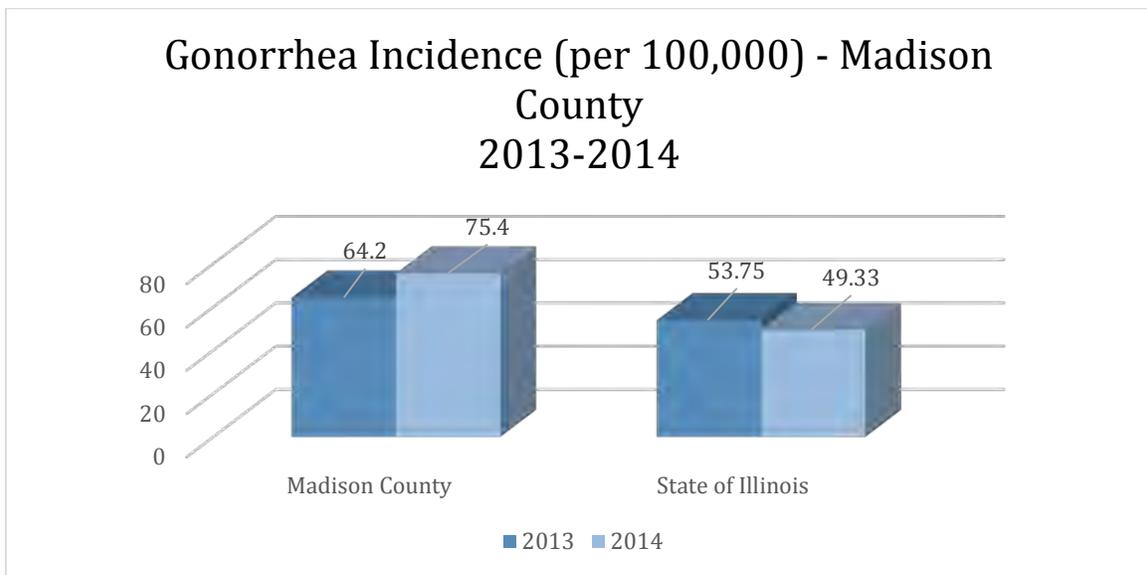
Chlamydia and Gonorrhea Cases

The data for the number of infections of chlamydia in Madison County from 2013-2014 indicate a slight decrease. There is a slight increase of incidence of chlamydia across the State of Illinois. Rates of chlamydia in Madison County remain higher than State averages.



Source: Illinois Department of Public Health

The data for the number of infections of gonorrhea in Madison County indicate an increase from 2013-2014 compared to a decrease across the State of Illinois from 2013-2014.



Source: Illinois Department of Public Health

Vaccine preventable diseases

A vaccine-preventable disease is an infectious disease for which an effective preventive vaccine exists. If a person acquires a vaccine-preventable disease and dies, the death is considered a vaccine-preventable death. According to the Illinois Public Health Department, the most common and serious vaccine-

preventable diseases are: Varicella (chickenpox), Tetanus (lockjaw), Pertussis (whooping cough), Poliomyelitis (Polio), Measles (Rubella), Mumps, Rubella (German measles), Diphtheria, Hepatitis B, and Hemophilic Influenza Type B (HIB) Infections. These diseases used to strike thousands of children each year. Today there are relatively few cases, but outbreaks still occur each year because some babies are not immunized.²

Vaccine Preventable Diseases 2011-2014 Madison County Region

Mumps	2011	2012	2013	2014
Madison County	0	3	1	1
State of Illinois	78	32	26	142
Pertussis	2011	2012	2013	2014
Madison County	10	97	42	24
State of Illinois	1509	2026	785	764
Varicella	2011	2012	2013	2014
Madison County	2	19	18	18
State of Illinois	881	898	731	598

Source: <http://iquery.illinois.gov/DataQuery/Default.aspx>

Tuberculosis 2011-2014 Madison County Region

Tuberculosis	2011	2012	2013	2014
Madison County	0	1	0	1
State of Illinois	358	347	327	320

Source: *Illinois Electronic Disease Surveillance System (I-NEDSS)*

² Source: <http://www.idph.state.il.us/about/vpcd.htm>

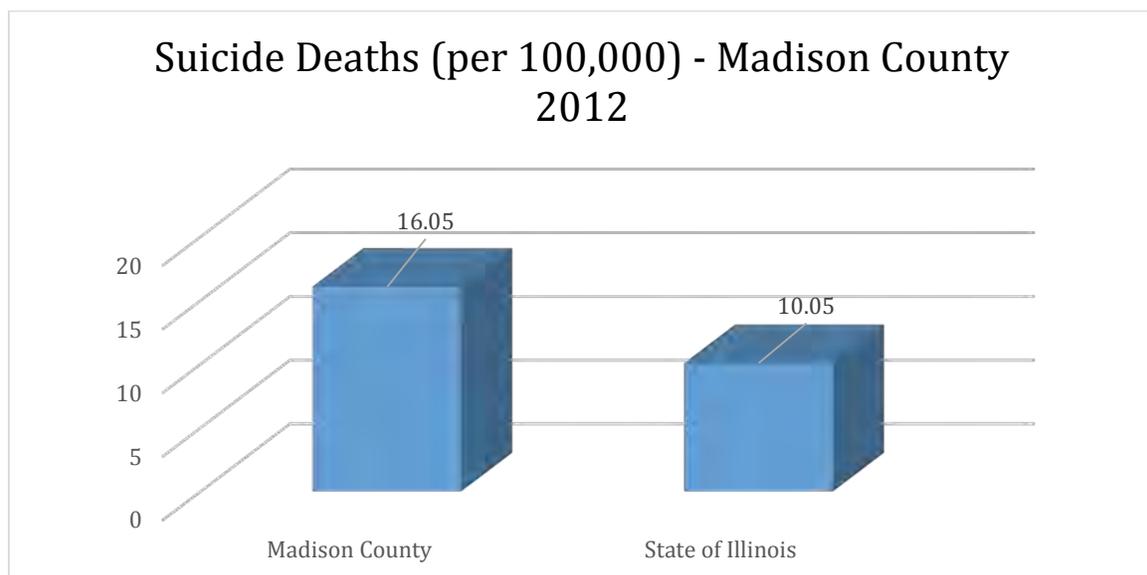
4.7 Injuries

Importance of the measure:

Unintentional injuries are injuries or accidents resulting from car accidents, falls and unintentional poisonings. In many cases, these types of injuries—and the deaths resulting from them—are preventable. Suicide is intentional self-harm resulting in death. These injuries are often indicative of serious mental health problems requiring the treatment of other trauma-inducing issues.

Intentional – suicide

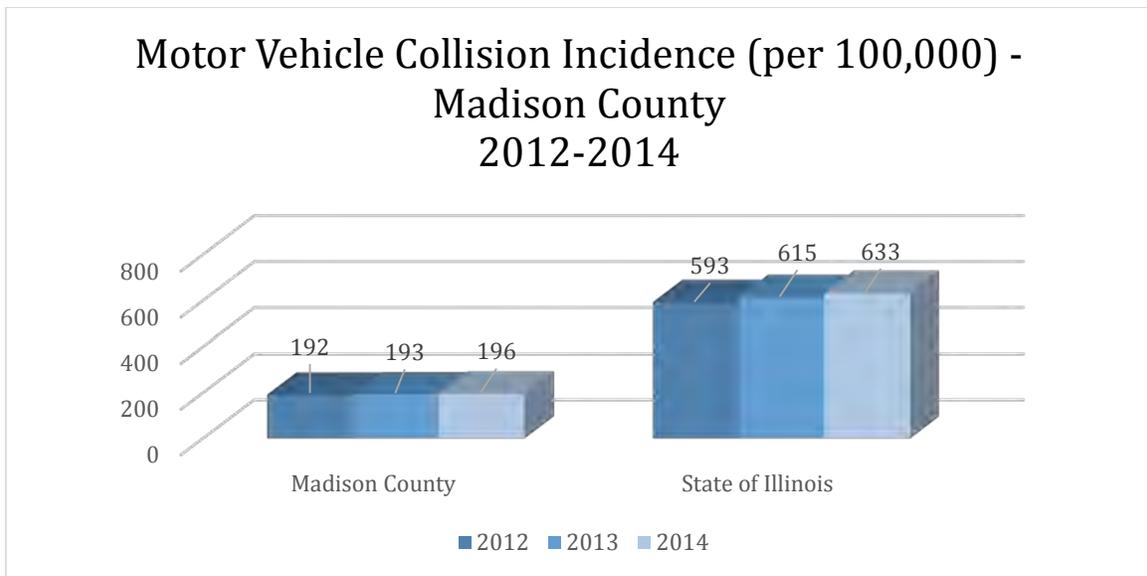
The number of suicides in Madison County indicate higher incidence than State of Illinois averages, as there were approximately 16 per 100,000 people in Madison County in 2012.



Source: Illinois Department of Public Health

Unintentional – motor vehicle

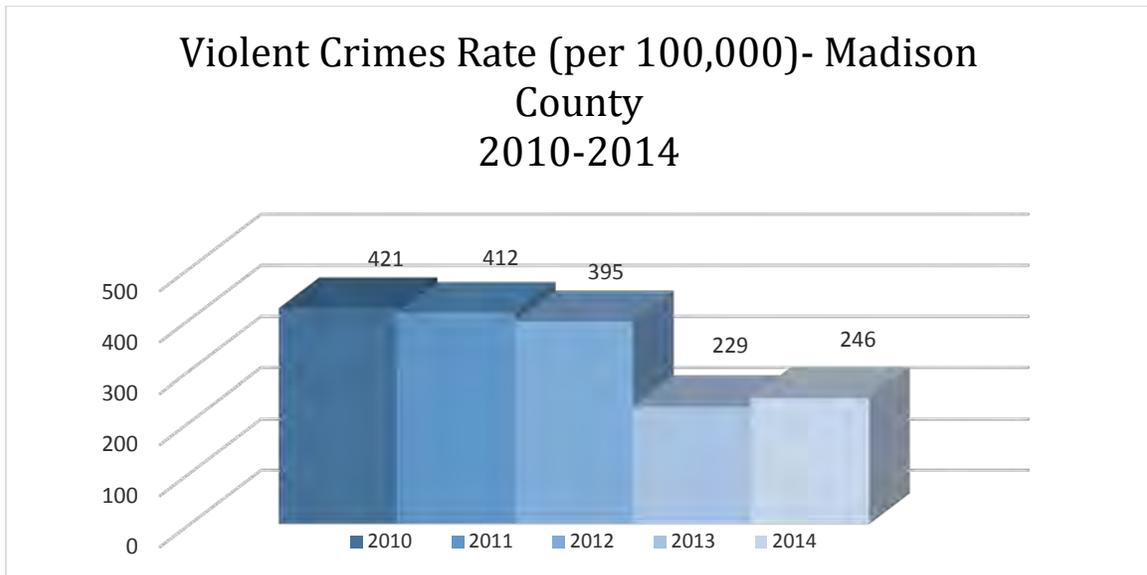
Research suggests that car accidents are a leading cause of unintentional injuries. In Madison County, the number of incidents between 2012 and 2014 for several types of motor vehicle collisions including vehicle overturn, railroad train, sideswipe, angle, parked motor vehicle, turning, and rear-end accidents have increased slightly but are significantly lower than State of Illinois averages.



Source: Illinois Department of Transportation

Violent Crimes

Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault. Violent crime is represented as an annual rate per 100,000 people. The number of violent crimes has decreased significantly from 2010-2014 in Madison County.



Source: Illinois County Health Rankings and Roadmaps

4.8 Mortality

Importance of the measure: Presenting data that focuses on causes of mortality provides an opportunity to define and quantify which diseases are causing the most deaths.

The top two leading causes of death in the State of Illinois and Madison County are similar as a percentage of total deaths in 2013. Cancer is the cause of 23.9% of deaths in Madison County and Diseases of the Heart are the cause of 22.9% of deaths in Madison County.

Top 5 Leading Causes of Death for all Races by County, 2013		
Rank	Madison County	State of Illinois
1	Malignant Neoplasm (23.9%)	Diseases of Heart
2	Diseases of Heart (22.9%)	Malignant Neoplasm
3	Chronic Lower Respiratory Disease (6.8%)	Cerebrovascular Disease
4	Accidents (5.6%)	Chronic Lower Respiratory Disease
5	Cerebrovascular Disease (5.1%)	Accidents

Source: Illinois Department of Public Health

4.9 Key Takeaways from Chapter 4

- ✓ **LOW BIRTH WEIGHTS HAVE HELD STEADY IN MADISON COUNTY**
- ✓ **SOME VARIATIONS OF CARDIAC DISEASE HAVE SEEN A DECREASE SINCE 2012**
- ✓ **CANCER RATES FOR LUNG CANCER IN MADISON COUNTY ARE HIGHER THAN STATE AVERAGES**
- ✓ **ASTHMA RATES HAVE SEEN A SIGNIFICANT REDUCTION IN MADISON COUNTY AND ARE LOWER THAN STATE AVERAGES**
- ✓ **DIABETES IS TRENDING UPWARD SIGNIFICANTLY IN MADISON COUNTY AND HIGHER THAN STATE AVERAGES**
- ✓ **INCIDENCE OF STIs IN MADISON COUNTY ARE HIGHER THAN STATE AVERAGES**
- ✓ **CANCER AND HEART DISEASE ARE THE LEADING CAUSES OF MORTALITY IN MADISON COUNTY**

CHAPTER 5 OUTLINE

- 5.1 Perceptions of Health Issues
- 5.2 Perceptions of Unhealthy Behavior
- 5.3. Perceptions of Issues with Well Being
- 5.4 Summary of Community Health Issues
- 5.5 Community Resources
- 5.6 Significant Health Needs Identified and Prioritized

CHAPTER 5. PRIORITIZATION OF HEALTH-RELATED ISSUES

In this chapter, we identify the most critical health-related needs in the community. To accomplish this, we first consider community perceptions of health issues, unhealthy behaviors and issues related to well-being. Using key takeaways from each chapter, we then identify important health-related issues in the community. Next, we complete a comprehensive inventory of community resources; and finally, we prioritize the most significant health needs in the community.

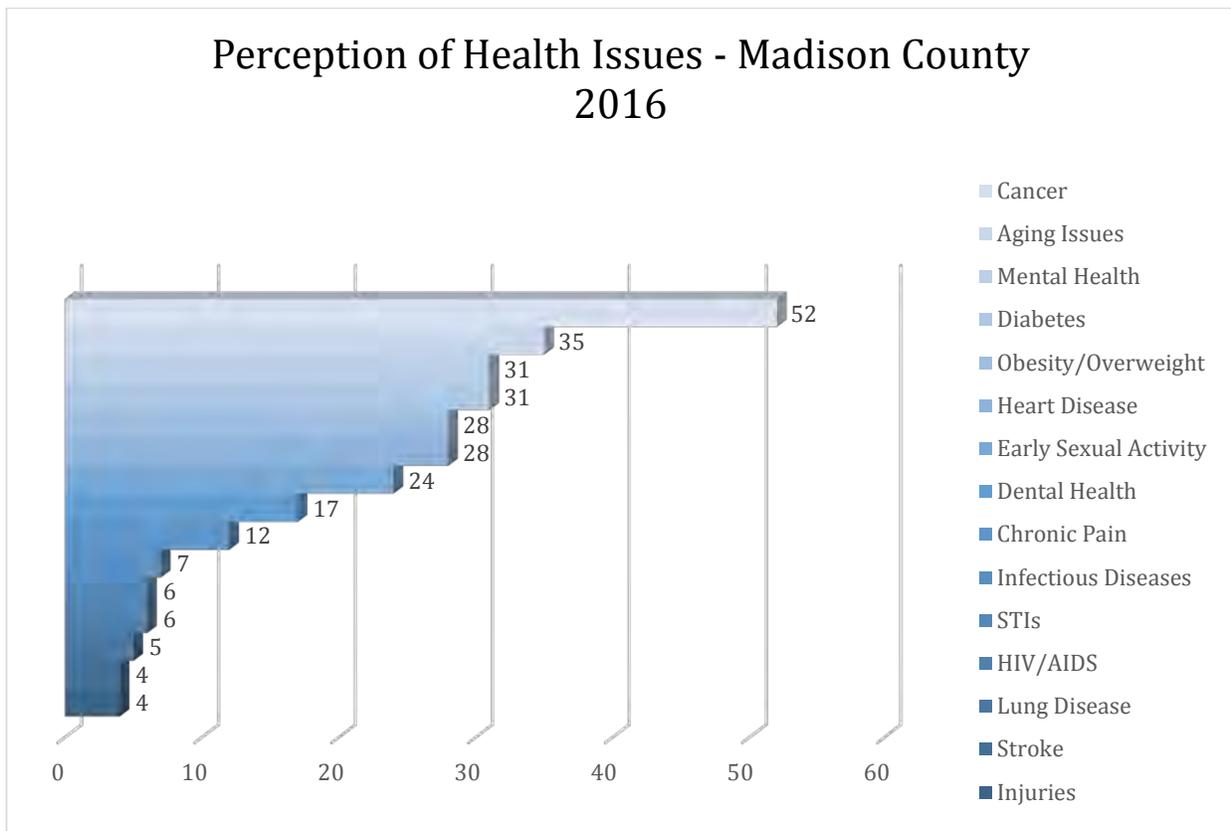
Specific criteria used to identify these issues included: (1) magnitude in the community; (2) severity in the community; (3) potential for impact to the community.

5.1 Perceptions of Health Issues

The CHNA survey asked respondents to rate the three most important health issues in the community. Respondents had a choice of 15 different options.

The health issue that rated highest was cancer. It was identified 52% of the time and was significantly higher than other categories based on *t-tests* between sample means. This was followed by aging issues, mental health issues, and diabetes.

Note that perceptions of the community were accurate in some cases, but inaccurate in others. For example, cancer is the leading cause of mortality in Madison County. Also, obesity is an important concern and the survey respondents accurately identified these as important health issues. However, lung disease is rated relatively low, even though respiratory disease is the third leading cause of death.



Source: CHNA Survey

Demographic Factors Related to Perceptions of Health Issues

Several demographic characteristics show significant relationships with perceptions of health issues. The following relationships were found using correlational analyses:

Aging issues tend to be rated higher by older people and White people, and rated as important less often by Black people.

Cancer tends to be of greater concern to those with lower education.

Chronic Pain does not show significant correlations.

Dental health tends to be rated higher by younger people and those with lower income.

Diabetes tends to be rated higher by Black residents.

Heart disease tends to be rated higher by older people.

HIV tends to be rated higher by younger people, Black people, and those with lower education and income.

Early sexual activity tends to be rated higher by younger people and Black people.

Infectious disease does not show significant correlations.

Injury does not show significant correlations.

Lung disease does not show significant correlations.

Mental health tends to be rated higher by women, and those with higher education and income.

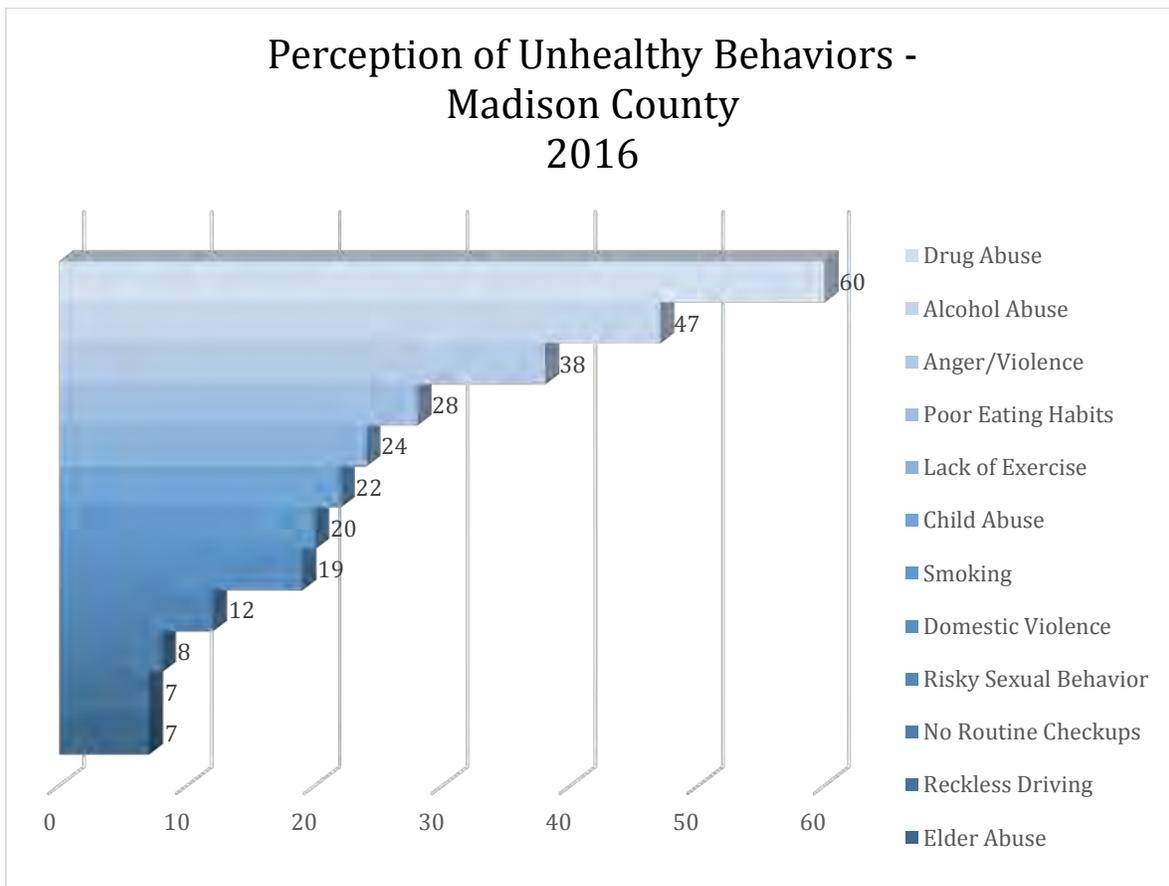
Obesity tends to be rated higher by White people, and those with higher education and income. Black people are less likely to be concerned.

STIs does not show significant correlations.

Stroke does not show significant correlations.

5.2 Perceptions of Unhealthy Behaviors

Respondents were asked to select the three most important unhealthy behaviors in the community out of a total of 12 choices. The unhealthy behaviors that rated highest were drug abuse and alcohol abuse, followed by anger/violence.



Source: CHNA Survey

Demographic Factors Related to Perceptions of Unhealthy Issues

Several demographic characteristics show significant relationships with perceptions of unhealthy behaviors. The following relationships were found using correlational analyses:

Anger/Violence does not show significant correlations.

Alcohol Abuse does not show significant correlations.

Child abuse does not show significant correlations.

Domestic Violence does not show significant correlations.

Drug abuse tends to be rated higher by White individuals.

Elder abuse tends to be rated higher by older people.

Lack of exercise tends to be rated higher by those with high education and income.

No check-ups does not show significant correlations.

Poor eating habits does not show significant correlations.

Reckless driving does not show significant correlations.

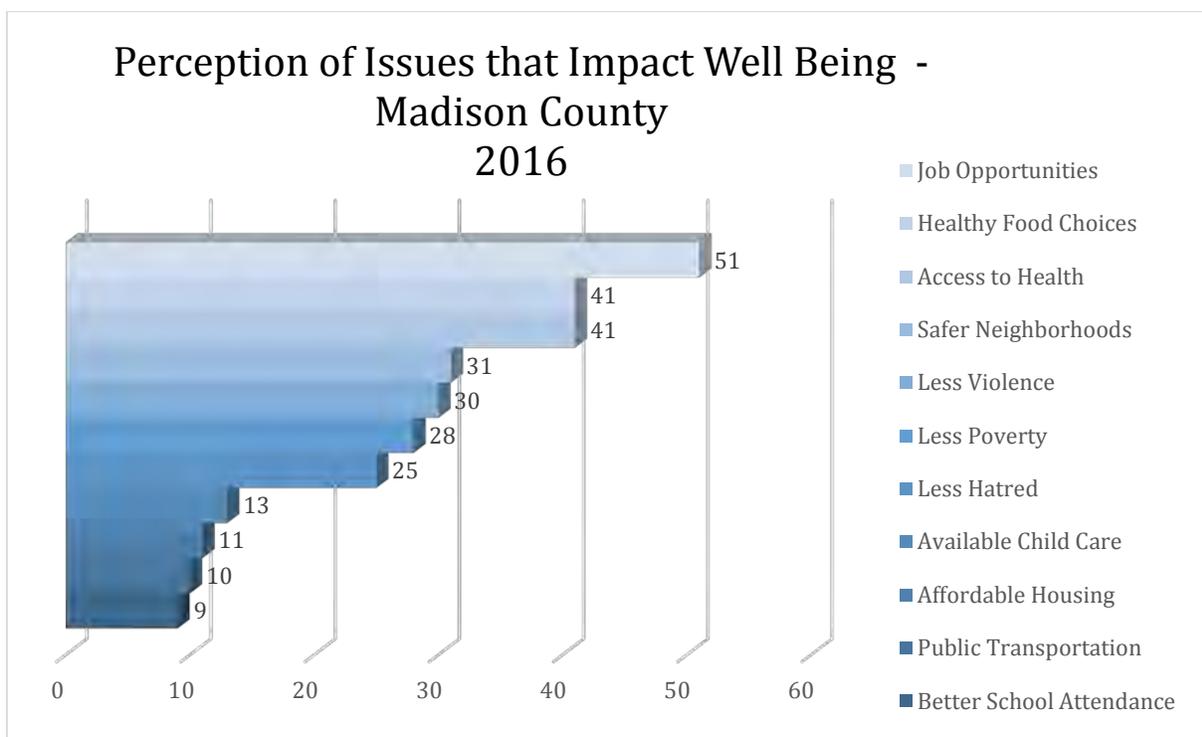
Smoking does not show significant correlations.

Risky Sex Behavior is rated higher by younger people and Black people.

5.3 Perceptions of Issues Impacting Well Being

Respondents were asked to select the three most important issues impacting well being in the community out of a total of 11 choices.

The issue impacting well being that rated highest was job opportunities. Job opportunities was followed by healthy food choices and access to health services.



Source: CHNA Survey

Demographic Factors Related to Perceptions of Well Being

Several demographic characteristics show significant relationships with perceptions of well being. The following relationships were found using correlational analyses:

Access to health services does not show significant correlations.

Affordable housing tends to be rated higher by Black people and those with lower education and income.

Availability of childcare tends to be rated higher by younger individuals and Black residents.

Better schools does not show significant correlations.

Job opportunities does not show significant correlations.

Public transportation does not show significant correlations.

Access to healthy food is rated higher by younger people.

Less poverty does not show significant correlations.

Safer neighborhoods is rated higher by White individuals, those with higher education and income, and the homeless.

Less hatred does not show significant correlations.

Less violence tends to be rated higher by older people.

5.4 Summary of Community Health Issues

Based on findings from the previous analyses, a chapter-by-chapter summary of key takeaways is used to provide a foundation for identification of the most important health-related issues in the community. Considerations for identifying key takeaways include magnitude in the community, strategic importance to the community, existing community resources, and potential for impact and trends and future forecasts.

Demographics (Chapter 1) – Four factors were identified as the most important areas of impact from the demographic analyses:

- Total population is decreasing
- Aging population
- Early sexual activity- teen births are slightly higher than State averages
- Changing population – increasing Black and Latino ethnicities

Prevention Behaviors (Chapter 2) – Four factors were identified as the most important areas of impact from the chapter on prevention behaviors:

- ED usage, particularly among the low-income population
- Lack of exercise
- Incidence of poor physical health and poor mental health are increasing
- Lack of healthy eating

Symptoms and Predictors (Chapter 3) – Three factors were identified as the most important areas of impact from the chapter on symptoms and predictors:

- Tobacco usage
- Substance abuse
- Obesity

Morbidity and Mortality (Chapter 4) – Five factors were identified as the most important areas of impact from the chapter on morbidity/mortality behaviors:

- Low birth weights
- Cancer – lung
- Diabetes
- Heart Disease
- STIs

Identification of Potential Health-Related Needs Considered for Prioritization

Before the prioritization of significant community health-related needs was performed, results were aggregated into 11 potential categories. Based on similarities and duplication, the 11 potential areas considered are:

- **Use of the ED as primary source of medical care**
- **Poor healthy behaviors in terms of eating & exercise**
- **Mental health**
- **Obesity**
- **Low birth weights**
- **Diabetes**
- **Tobacco usage**
- **Substance abuse**
- **STIs**
- **Heart disease**
- **Cancer – Lung**

5.5 Community Resources

After summarizing potential categories for prioritization in the Community Health Needs Assessment, a comprehensive analysis of existing community resources was performed to identify the efficacy to which these 11 health-related areas were being addressed. A resource matrix can be seen in Appendix 5 relating to the 11 health-related issues.

There are numerous forms of resources in the community. They are categorized as recreational facilities, county health departments, community agencies and area hospitals/clinics. A detailed list of community resources and descriptions appears in Appendix 6.

5.6 Significant Needs Identified and Prioritized

In order to prioritize the previously identified dimensions, the collaborative team considered health needs based on: (1) magnitude of the issues (e.g., what percentage of the population was impacted by the issue); (2) severity of the issues in terms of their relationship with morbidities and mortalities; (3) potential impact through collaboration. Using a modified version of the Hanlon Method (as seen in Appendix 7), the collaborative team identified two significant community health needs and considered both priorities:

- **Obesity**
- **Behavioral Health – including mental health and substance abuse/tobacco use**

OBESITY

In Madison County, the number of people diagnosed with obesity and being overweight has increased from 2009 to 2014. Note specifically that the percentage of obese and overweight people has increased from 64.6% to 68.7%. During the same time period, overweight and obesity rates in the State of Illinois have decreased from 2009 (64.0%) to 2014 (63.7%).

BEHAVIORAL HEALTH

Mental Health. In 2009, 20.7% of residents in Madison County reported they had experienced 1-7 days with poor mental health per month and 17.4% felt mentally unhealthy on 8 or more days per month. In 2014, there was an increase in the number of people that reported poor mental health for 1-7 days (24%) and an increase in the number of people that reported poor mental health 8 or more days per month (18.9%).

Substance Abuse. Alcohol and drugs impair decision-making, often leading to adverse consequences and outcomes. Research suggests that alcohol is a gateway drug for youth, leading to increased usage of controlled substances in adult years. Accordingly, the substance abuse values and behaviors of students is a leading indicator of adult substance abuse in later years.

Data from the 2014 Illinois Youth Survey for illegal substance use (including alcohol, cigarettes, inhalants, marijuana and other illicit drugs) show that Madison County youth are similar to State averages in most categories among both 8th graders and among 12th graders. However, note that nearly two-thirds (65%) of 12 graders used alcohol.

Tobacco Use. Smoking rates have increased in Madison County and are above the State of Illinois averages. There was a significant increase in the percentage of Madison County residents reporting they were current smokers between 2009 (21.6%) and 2014 (25.8%). These rates are significantly higher than State of Illinois averages. Moreover, CHNA survey data show 7% of respondents smoke (or vape) more than 12 times per day.

APPENDIX 1. MEMBERS OF COLLABORATIVE TEAM

Members of the **Collaborative Team** consisted of individuals with special knowledge of and expertise in the healthcare of the community. Individuals, affiliations, titles and expertise are as follows:

Sister M. Anselma entered the Sisters of St. Francis of the Martyr St. George in 1997. With a Bachelor's in Business from Franciscan University of Steubenville, and an MBA from Saint Louis University, she has worked in various capacities of Human Resources and Administration, and currently serves as the Chief Operating Officer of OSF Saint Anthony's Health Center.

Sheri L. Banovic, MSN, RN, FNP-BC has worked in the field of nursing in various areas for the past 28 years. A graduate of St. John's Hospital School of Nursing with a diploma in nursing, she obtained her Bachelor's and Master's in Nursing from Southern Illinois University at Edwardsville. She received a Post-Master's certificate in Adult Nurse Practitioner from Jewish Hospital College and Family Nurse Practitioner from Northern Kentucky University. Sheri has worked in nursing education for 18 years. Currently she serves as the Director of Nursing Education at Lewis and Clark Community College. Sheri also has experience as a Family Nurse Practitioner for 7 years full-time. She currently sees patients per diem in the Family Health Clinic located at Lewis and Clark Community College. Sheri served as co-chair for the Illinois Healthcare Action Coalition Education Workgroup, and was a member of the Illinois Workforce Investment Board Healthcare Taskforce. She is Immediate Past-President of the Illinois Community Colleges Deans and Directors.

Kristie Baumgartner is the Assistant Superintendent of the Alton School District. Since 2000, she served in various roles, where wrote and secured over \$22 million in competitive grants that have aided in funding programs for students such as: technology, after school and summer programs, school improvement, homeless youth education programs, professional development, lighting upgrades, drug and alcohol prevention, crisis planning, building security, curriculum enhancements, physical education and many others. Baumgartner received her Bachelor of Arts degree in Elementary Education in 1992. She then received her Master's Degree in Educational Administration in 2007 from McKendree University in Lebanon, Illinois. She is also active in the community and volunteers for many organizations and charitable events, including: RiverBend Head Start, Hayner Library, Senior Services Plus, Alton Marketplace, Alton NAACP, Alton YWCA, American Heart Association, United Way, National Multiple Sclerosis Society, Southwestern Illinois Foundation for Educational Excellence and many others. She and her husband, Steve, have two children.

Ginger Becker, R.D., L.D., is a registered dietician and supervisor of all dieticians at OSF Saint Anthony's Health Center, where she has worked since 2001. He has nearly 20 years of experience in hospital-based dietetics, as well as eight years of nursing home clinical practice experience and three years of dietetic consulting. A graduate of Fontbonne University with a degree in General Dietetics (1987), she has been in a variety of health and wellness programs in the community, including three years as part of a grant program in the Alton School district advancing fitness and healthy eating. She is married with two adult children.

Tina Bennett HT(ASCP) is the Supervisor of Anatomical Pathology at OSF Saint Anthony's Health Center. A graduate of the St. John's Histotechnology School in Springfield, Tina has worked in the Anatomical Pathology Department at OSF Saint Anthony's for 33 years. In addition to her responsibilities in the OSF Saint Anthony's Lab, she is a certified smoking cessation facilitator through the American Lung Association. For the past 30 years, she has helped hundreds to kick the habit through free Freedom from Smoking sessions. Tina is involved in a variety of community activities, including the local Relay for Life and the Susan G. Komen Race for the Cure in St. Louis, as well as various school boards and clubs at St. Mary's and Marquette Catholic High School. Tina is married, with four sons and seven grandchildren.

Denise (Deny) Boettger is the Interim Chief Nursing Officer for OSF Saint Anthony's Health Center. She has worked for the Health Center for 35 years. Deny has most recently been in the role of Assistant Vice President of Nursing Operations and Director of Education. She serves on the Lewis and Clark Nursing Advisory Board and McKendree College Nursing Advisory Board. She obtained her BSN degree from Northern Illinois University. She is a member of the professional organizations for Illinois Nurse Leaders and the American Organization of Nurse Executives.

Kelly Bogowith, PT, DPT, CSCS is the clinical lead therapist at Saint Anthony's Health Center. Kelly began working here in 2008 as a staff physical therapist after graduating from Saint Louis University. Kelly earned her Bachelor's of Science in Exercise Science, Master of Physical Therapy and then Doctor of Physical Therapy all from SLU. Kelly primarily works in outpatient rehab services here and has special interests in athletes, shoulders, knees, and those with cancer. She is busy with an 8-month-old son who is crawling and standing but before this mommy life, Kelly enjoyed participating in sprint triathlons, indoor soccer, sand volleyball, taught high school Sunday school, and growing professionally as a physical therapist through various learning opportunities.

Monica Bristow has been the president of the River Bend Growth Association since 2003. The RBGA is the chamber of commerce and economic development agency for 11 communities in Madison County. Prior to joining the Growth Association as its leader, she had been on the board since 1997 and its board chairman in 2001 through her position at Olin Corporation, the region's largest employer. While at Olin Corporation for 22 years, Monica worked in various functions including human resources, compensation and public relations. Monica earned her BA in Business from Lindenwood University in St. Louis, Missouri. She serves or has served many non-profit community organizations by sitting on their boards or serving on various committees. They include the Leadership Council Southwestern Illinois, Illinois Association of Chamber of Commerce Executives, Illinois Economic Development Association, United Way of Southwestern Illinois, the YWCA of Alton, Pride, Inc., St. Anthony's business and professional committee, The Meeting of the Rivers Foundation, and Marquette Catholic High School in Alton.

Nikki Brunaugh, RN is the Manager of Emergency Services for OSF Saint Anthony's Health Center, a position she has held since 2015. In addition to her current management role, she previously worked as the Clinical Nurse Educator at OSF Saint Anthony's, as well as emergency services registered nurse and manager at several other hospitals in the region. After receiving her Associate's Degree in Nursing from Lewis & Clark Community College, she went on to complete her undergraduate work at Saint Louis University, graduating with her Bachelor's Degree in Nursing. She has worked at several hospitals in the region in emergency services.

Theresa Collins is the Associate Executive Director of Senior Services Plus, Inc. She has worked at Senior Services Plus, Inc. since 2008. Theresa has nearly 15 years' experience in social services and management. She is a graduate of Greenville College where she earned her Bachelors of Science degree. Theresa is a resident of Belleville, Illinois where she lives with her husband and three daughters. Theresa is the Vice President of the Illinois Association of Community Care Program Home Care Providers, Vice President of the Belle Valley School District #119 Board of Education, and serves of the Community Care Program Advisory Committee for the Illinois Department on Aging, and the Older Adults Services Advisory Committee for the State of Illinois.

Kelly Keenan began her role at OSF Saint Anthony's Health Center as a Patient Navigator for Cardiology & Pulmonology in April, 2013. Prior to joining OSF St. Anthony's Health Center, Kelly worked at the United Methodist Village serving in the roles of Director of Resident Services and later Director of Fund Development. Kelly has also worked for Lutheran Senior Services, as an Assistant Director of Activities. She earned her Bachelors of Science in Organizational Leadership from Greenville College. Kelly's community involvement includes: Organizing teams/donations for the American Heart Association "Heart Walk", committee member/co-chair for St. Mary's Oktoberfest silent and live auction. While working at the United Methodist Village she served on the Board of Directors for the Illinois Coalition to Improve End of Life Care, served as a planning member for the Life Care Services National Conference for Resident Services Director's, and is a past member of the North Alton/ Godfrey Business Council, Riverbend Growth Association and "Your Referral Source" networking groups.

Courtney McFarlin, PA-C is a Graduate of Greenville College with a Bachelor of Arts in Science and Pre-Medicine; and Post Graduate studies at SIU Carbondale. Physician Assistant since 2001. She graduated with a Master's of Science and Medicine in Physician Assistant Studies from Trevecca Nazarene University of Nashville, TN. Most of her years as a PA have been in either Neurosurgery/Neurology/ Neuro-oncology or Geriatric Primary Care. Since 2003, she has served as a Physician Assistant for Saint Anthony's Physician Group Internal Medicine/Primary Care, where she provides medical care from a primary care/internal medicine perspective but also see patients as part of its Memory Care Center. A member of the American Academy of Physician Assistants and the Illinois Academy of Physician Assistants, Courtney also volunteers at Trinity Lutheran School in Edwardsville, IL. She is a provider for the Belize Mission Project, a non-profit medical missionary group, as well as a Girl Scout troop leader and assistant coach to various extra-curricular sports for her children.

Yusuf Mohyuddin, M.D., M.P.H. is a Board Certified Family Practice Physician with OSF Saint Anthony's Physician Group in Alton, Illinois. He attended University of Illinois College of Medicine at Peoria (Peoria, IL), completed internship and residency at Southern Illinois University (Carbondale, IL). He has professional Affiliations with Illinois State Medical Society, Madison County Medical Society, American Academy of Family Physicians, Illinois Academy of Family Physicians, Physicians for Human Rights and Physicians for Social Responsibility. He has been practicing medicine with OSF Saint Anthony's Physician Group since 2007. His areas of interest include preventive health and wellness, diabetes, high blood pressure and weight management.

Ajay Pathak has led OSF Saint Anthony's Health Center as President & CEO since 2014. Prior to joining the OSF Saint Anthony's team, Ajay has served The Sisters of the Third Order and OSF Healthcare System in a variety of leadership roles, including the Chief Integration Officer and the Director of Strategic Business Development. Ajay earned his Bachelors of Science (BS) in Biology and Sociology with an emphasis in Health Care from Union College and a Certificate Master's in Public Health from Harvard School of Public Health, as well as a Master's in Business Administration (MBA) with a concentration in Finance from Georgetown University McDonough School of Business. He serves Southern Illinois Employers Association (SIEA) Board, as well as the American Cancer Society (ACS) Regional Leadership Board.

Susanne Ringhausen, MA, LCPC, CEAP is the Manager of Psychological Services and Employee Assistance at OSF Saint Anthony's Health Center. She earned her Master's degree in Applied Clinical Psychology as a Winthrop Fellow at CUA, Washington, D.C. and has over 34 years of experience delivering mental health, substance abuse and EAP services, both as a clinician and administrator. A Mission Partner with Saint Anthony's since 1989, Susanne is an Illinois licensed Clinical Professional Counselor and internationally Certified Employee Assistance Professional. She has served on the Board of Directors of Tri-County Counseling Center and the Employee Assistance Professional's Association. Susanne has consulted in the areas of community prevention, professional training and service development for numerous businesses and community organizations. She and her husband Richard have four grown children, and are active in their local community.

Diane Schuette currently serves as Strategic Marketing Director for OSF Saint Anthony's Health Center in Alton. She has been with the OSF Saint Anthony's Health Center family since 1985, leading areas of marketing, government relations, fundraising, special events, communications and community health. Diane is active in various community organizations, including board positions for the Riverbend Growth Association, American Cancer Society, Greater Alton Community Development Corporation and Pride, Inc., as well as is active with the Phillips 66 Community Advisory Panel, Rotary, USO and the Alton School District's Reach Out And Read (ROAR) program. Diane attended SIU-Edwardsville, receiving her Bachelors in Mass Communications/Journalism and her Master's in Public Administration & Policy Analysis.

K. Margarette Trushel is a founding member of Oasis Women's Center and has served as Executive Director since 1979. She holds a Bachelor's of Arts in Human Services, a Bachelor's of Science in Special Education and a Master's of Science in Counseling/Human Services Administration. In addition, she has attended Post Graduate Workshops at Harvard Medical School on Victimization and Abuse; she is a Certified Domestic Violence Professional. For the last 37 years, Margarette has participated in the Illinois Coalition Against Domestic Violence and is a member of the Illinois Department of Human Services Statewide Domestic Violence Advisory Committee. A Co-Founding Member and Chair of Chairs of the Third Judicial Circuit Family Violence Prevention Council, she chairs the Intervention, Prevention and Education Committee of the Council. She is active in many community organizations as well: the Eva A. McDonald Women's History Coalition, Alton Area Church Women United and College Avenue Presbyterian Church.

Anne Tyree, MPA, CFRE is Vice President Marketing & Business Development for Centerstone in Alton, Illinois, responsible for advocacy, marketing, business development, and public relations for the Centerstone Illinois affiliate. Anne has worked for nonprofit organizations for over 20 years, including those serving women who are chronically homeless, runaway and homeless youth, children with disabilities, a public university, and for the last 14 years for community behavioral healthcare organizations. She helped design the unique collaborative partnership that integrates primary and behavioral healthcare for adults with serious mental illness at Centerstone's Alton location. Anne received her BA from UIC and her MPA with an emphasis on health care from APU, both magna cum laude. She is Vice President for the Community Behavioral Healthcare Association of Illinois, serves on the Madison County CSBG Advisory Group, and served on the Governor's Task Force for Supportive Housing, and the Madison County Illinois Continuum of Care. Born and raised in Chicago, Anne now lives in rural Jersey County in Southwestern Illinois.

Al Womack, Jr. has served as Executive Director of Boys & Girls Club of Alton for 19 years, and also served as assistant football coach at Alton High School for 17 years. Al graduated with a Bachelor's of Science degree in Business Administration from Central State University in Ohio. His community involvement includes: Guest Reader at elementary schools, Alton Education Foundation Board Member (4yrs), Mentor, Madison-Bond Workforce Investment Act Board Member (2yrs.), Community Benefits Committee Member for both OSF Saint Anthony's Health Center and Alton Memorial Hospital, Alton High School Wall of Fame Committee member, Catholic Children's Home Advisory Board, Beverly Farm Foundation Golf Event Volunteer, American Diabetes Association volunteer, Volunteer Godfrey Parks & Recreation basketball coach. Recipient of the 2007 Elijah P. Lovejoy Human Rights Award, 2002 Southern Illinois University at Edwardsville Dr. Martin Luther King Jr. Humanitarian Award, 2001 Illinois Association of Club Women Inc. (Southern District) Mentoring Award.

Maura Wuellner is the Director, Illinois Region for United Way of Greater St. Louis. She has been with United Way since 2014. Her primary responsibilities include the annual fundraising campaigns for the Southwest Illinois Division and Tri-Cities Area Division, as well as supervisory responsibilities for both divisional offices. The Southwest Illinois Division covers the counties of Madison, Calhoun, Jersey, Greene and Macoupin and serves thirty-eight United Way member agencies. The United Way is focused on helping people live measurably better lives. United Way provides these thirty-eight member agencies with ongoing, operational funding on an annual basis. These agencies provide quality services within the Southwest Illinois Division's service area and are organizationally strong. To ensure that the money raised in the community is well invested, volunteer panels review and assess each member agency on the Quality Standards, which measure the agencies' ability to demonstrate success and competency in four key areas: programs, governance, finance, and administration.

Amy J. Yeager, MPH has been the Health Promotion Manager at Madison County Health Department (MCHD) in Illinois for 15 years. She has also worked at SSM Cardinal Glennon Children's Hospital in St. Louis and Chestnut Health Systems in substance abuse prevention and treatment. She has been adjunct faculty at Southern Illinois University Edwardsville and Saint Louis University. In 1995, Amy received her Bachelor of Science in Human Development and Family Studies from The Pennsylvania State University. In 2002, Amy received a Master of Public Health in Behavioral Science and Health Education from Saint Louis University School of Public Health. Amy is the lead for IPLAN (Illinois Project for Local Assessment of Needs), a state mandated process every 5 years for a countywide health needs assessment, the identification of 5-year health priorities, and the development and implementation of a countywide health plan to address those priorities. As a Health Promotion Manager, Amy has guided her team on multiple health communication campaigns for breast and cervical cancer, prostate and testicular cancer, tobacco, underage drinking, youth development, and public health emergency preparedness.

Tina Zumwalt currently serves as Community Relations Coordinator with OSF Saint Anthony's Health Center in Alton, and has been with the OSF Saint Anthony's family in since 1985. Tina was most recently in the role of Marketing Coordinator, with extensive experience in event planning, and coordinating health programs for local business partners. She has served on boards and planning committees, leading teams and fundraising efforts for community-based health organizations, including: American Heart Association, American Cancer Society and Arthritis Foundation. Tina is married with three daughters and six grandchildren.

In addition to collaborative team members, the following **facilitators** managed the process and prepared the Community Health Needs Assessment. Their qualifications and expertise are as follows:

Michelle A. Carrothers (Coordinator) is currently the Vice President of Strategic Reimbursement for OSF Healthcare System, a position she has served in since 2014. She serves as a Business Leader for the Ministry Community Health Needs Assessment process. Michelle has over 32 years of health care experience. Michelle obtained both a Bachelor of Science Degree and Masters of Business Administration Degree from Bradley University in Peoria, IL. She attained her CPA in 1984 and has earned her Fellow of the Healthcare Financial Management Association Certification in 2011. Currently she serves on the National Board of Examiners for HFMA. Michelle serves on various Peoria Community Board of Directors and Illinois Hospital Association committees.

Dawn Irion (Coordinator) is a Strategic Reimbursement Analyst at OSF Healthcare System. She has worked for OSF Healthcare System since 2004 and has acted as the coordinator for 11 Hospital Community Health-Needs Assessments. In addition, she has coordinated the submission of the Community Benefit Attorney General report and the filing of the IRS Form 990 Schedule H since 2008. Dawn has been a member of the McMahon-Illini Chapter of Healthcare Financial Management Association for over ten years. Dawn will assume the responsibilities of President-Elect on the board of the McMahon-Illini HFMA Chapter starting in June of 2016.

Dr. Laurence G. Weinzimmer Ph.D. (Principal Investigator) is the Caterpillar Inc. Professor of Strategic Management in the Foster College of Business at Bradley University in Peoria, IL. An internationally recognized thought leader in organizational strategy and leadership, he is a sought-after consultant to numerous *Fortune 100* companies and not-for-profit organizations. Dr. Weinzimmer has authored over 100 academic papers and four books, including two national best sellers. His work appears in 15 languages, and he has been widely honored for his research accomplishments by many prestigious organizations, including the Academy of Management. Dr. Weinzimmer has served as principle investigator for numerous community assessments, including the United Way, Economic Development Council and numerous hospitals. His approach to Community Health Needs Assessments was identified by the Healthcare Financial Management Association (HFMA) as a Best-in-Practice methodology. Dr. Weinzimmer was contracted for assistance in conducting the CHNA.

APPENDIX 2. ACTIVITIES RELATED TO 2013 CHNA PRIORITIZED NEEDS

Eight needs were identified in the Madison County 2013 CHNA. Below are examples of activities implemented during the last three years to address these needs:

Access – Insurance, Transportation, Physician availability: Identified as Prioritized Health Need

- Community awareness communications promoting available healthcare services.

Substance Abuse: Identified as Prioritized Health Need

- Provided educational sessions and participated in local events to provide resources and education.

Healthy Lifestyles – Obesity and Smoking: Identified as Prioritized Health Need

- Measured and collected body mass index with education to community members. Established markers on walking paths and provided education.

Mental Health: Identified as Prioritized Health Need

- Sessions on group therapy were offered. Referrals to mental health providers and connections of resources were established.

Health Literacy: Identified as Prioritized Health Need

- Pharmacy communicated with patients on medication and how to use them. Educational programs were offered in various forms of communication on managing and preventing health related issues.

Housing/homelessness: Identified as Prioritized Health Need

- Worked with local Villa to provide shelter to community members. Provided referrals and other informational materials.

Chronic conditions – cancer, diabetes and asthma: Identified as Prioritized Health Need

- Encouraged and promoted screenings within the community. Provided tracking for patients and referrals for proper treatment plans.

Air Quality: Identified as Prioritized Health Need

- Tracked air quality with local resource to compare with national levels.

APPENDIX 3. SURVEY

COMMUNITY HEALTH-NEEDS ASSESSMENT SURVEY

INSTRUCTIONS

We want to know how you view our community, so we are inviting you to participate in a research study for community health-needs. Your opinions are important. This questionnaire will take approximately 10 minutes to complete. All of your individual responses are confidential. We will use results of the surveys to improve our understanding of health needs in the community.

Please read each question and mark the response that best represents your views of community needs.

I. IMPORTANT HEALTH ISSUES IN OUR COMMUNITY

Please identify the three **(3) most important health issues** in our community.

- | | |
|--|--|
| <input type="checkbox"/> Aging issues, such as Alzheimer’s disease, hearing loss, memory loss or arthritis | <input type="checkbox"/> Infectious/contagious diseases such as flu, pneumonia, food poisoning |
| <input type="checkbox"/> Cancer | <input type="checkbox"/> Injuries |
| <input type="checkbox"/> Chronic pain | <input type="checkbox"/> Lung disease (asthma, COPD) |
| <input type="checkbox"/> Dental health (including tooth pain) | <input type="checkbox"/> Mental health issues such as depression, hopelessness, anger, etc |
| <input type="checkbox"/> Diabetes | <input type="checkbox"/> Obesity/overweight |
| <input type="checkbox"/> Early sexual activity | <input type="checkbox"/> Sexually transmitted infections |
| <input type="checkbox"/> Heart disease/heart attack | <input type="checkbox"/> Stroke |
| <input type="checkbox"/> HIV/AIDS | <input type="checkbox"/> Other _____ |

II. UNHEALTHY BEHAVIORS

Please identify the three **(3) most important unhealthy behaviors** in our community.

- | | |
|---|--|
| <input type="checkbox"/> Angry behavior/violence | <input type="checkbox"/> Not able to get a routine checkup |
| <input type="checkbox"/> Alcohol abuse | <input type="checkbox"/> Poor eating habits |
| <input type="checkbox"/> Child abuse | <input type="checkbox"/> Reckless driving |
| <input type="checkbox"/> Domestic violence | <input type="checkbox"/> Risky sexual behavior |
| <input type="checkbox"/> Drug abuse | <input type="checkbox"/> Smoking |
| <input type="checkbox"/> Elder abuse (physical, emotional, financial, sexual) | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Lack of exercise | |

III. ISSUES WITH YOUR WELL BEING

Please identify the three **(3) most important factors that impact your well being** in our community.

- | | |
|---|---|
| <input type="checkbox"/> Access to health services | <input type="checkbox"/> Healthy food choices |
| <input type="checkbox"/> Affordable clean housing | <input type="checkbox"/> Less hatred & more social acceptance |
| <input type="checkbox"/> Availability of child care | <input type="checkbox"/> Less poverty |
| <input type="checkbox"/> Better school attendance | <input type="checkbox"/> Less violence |
| <input type="checkbox"/> Job opportunities | <input type="checkbox"/> Safer neighborhoods/schools |
| <input type="checkbox"/> Good public transportation | <input type="checkbox"/> Other _____ |

IV. ACCESS TO HEALTH CARE

The following questions ask about your own personal health and health choices. Remember, this survey will not be linked to you in any way.

1. When you get sick, where do you go? Please choose only one.

- Clinic/Doctor's office Emergency Department I don't seek medical attention
 Urgent Care Center Health Department Other _____

2. How long has it been since you have been to the doctor to get a checkup when you were well (not because you were already sick)?

- Within the last year 1-2 years ago 3-5 years ago
 5 or more years ago I have never been to a doctor for a checkup.

3. In the last year, was there a time when you needed medical care but were not able to get it?

- No (please go to question 5) Yes (please go to the next question)

4. If you just answered "yes" to question 3, why weren't you able to get medical care? Choose all that apply.

- I didn't have health insurance. The doctor or clinic refused to take my insurance or Medicaid.
 I couldn't afford to pay my co-pay or deductible. I didn't know how to find a doctor.
 I didn't have any way to get to the doctor. Too long to wait for appointment.
 Fear
 Other _____

5. In the last year, was there a time when you needed prescription medicine but were not able to get it?

- No (please go to question 7) Yes (please go to the next question)

6. If you just answered "yes" to question 5, why weren't you able to get prescription medication? Choose all that apply.

- I didn't have health insurance. The pharmacy refused to take my insurance or Medicaid.
 I couldn't afford to pay my co-pay or deductible. I didn't have any way to get to the pharmacy.
 I didn't know how to find a pharmacy. Other _____

7. About how long has it been since you have been to the dentist to get a checkup (not for an emergency)?

- Within the last year 1-2 years ago 3-5 years ago
 5 or more years ago I have never been to a dentist for a checkup.

8. In the last year, was there a time when you needed dental care but could not get it?

- No (please go to question 10) Yes (please go to the next question)

9. If you just answered "yes" to question 8, why weren't you able to get dental care? Choose all that apply.

- I didn't have dental insurance. The dentist refused to take my insurance or Medicaid.
 I couldn't afford to pay my co-pay or deductible. I didn't know how to find a dentist.
 I didn't have any way to get to the dentist. Too long to wait for appointment.
 Fear.
 Other _____

10. In the last year, was there a time when you needed mental-health counseling but could not get it?

- No (please go to question 12) Yes (please go to the next question)

11. If you just answered "yes" to question 10, why weren't you able to get mental-health counseling?

Choose all that apply.

- | | |
|--|--|
| <input type="checkbox"/> I didn't have insurance. | <input type="checkbox"/> The counselor refused to take my insurance or Medicaid. |
| <input type="checkbox"/> I couldn't afford to pay my co-pay or deductible. | <input type="checkbox"/> I didn't know how to find a counselor. |
| <input type="checkbox"/> I didn't have any way to get to a counselor. | <input type="checkbox"/> Too long to wait for appointment. |
| <input type="checkbox"/> Fear. | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Embarrassment. | |

12. In the last week how many times did you participate in deliberate exercise, (such as jogging, walking, golf, weight-lifting, fitness classes) that lasted for at least 30 minutes or more?

- None (please go to next question) 1 - 2 3 - 5 More than 5

13. If you answered "none" to the last question, why **didn't** you exercise in the past week? Choose all that apply.

- | | |
|---|---|
| <input type="checkbox"/> I don't have any time to exercise. | <input type="checkbox"/> I don't like to exercise. |
| <input type="checkbox"/> It is not important to me. | <input type="checkbox"/> I can't afford the fees to exercise. |
| <input type="checkbox"/> I don't have access to an exercise facility. | <input type="checkbox"/> I am too tired. |
| <input type="checkbox"/> I don't have child care while I exercise. | <input type="checkbox"/> I have a physical disability. |
| <input type="checkbox"/> Other _____ | |

14. On a typical day, how many servings of fruits and/or vegetables do you have?

- None (please go to next question) 1 - 2 3 - 5 More than 5

15. If you answered "none" to the last question, why **didn't** you eat fruits/vegetables? Choose all that apply.

- | | |
|--|--|
| <input type="checkbox"/> It is difficult to buy fruits and/or vegetables | <input type="checkbox"/> I don't like fruits/vegetables |
| <input type="checkbox"/> It is not important to me. | <input type="checkbox"/> I can't afford fruits/vegetables. |
| <input type="checkbox"/> Other _____ | |

16. On a typical day, how many cigarettes do you smoke (either actual or electronic/vapor)?

- None 1 - 4 5 - 8 9 - 12 More than 12

17. Where do you get most of your medical information (*check only one*)

- Doctor Friends/family Internet Pharmacy Nurse at my church

18. Do you have a personal physician? No Yes

19. Overall, my physical health is: Good Average Poor

20. Overall, my mental health is: Good Average Poor

21. How long has it been since you have had a flu shot?

- | | | |
|---|--|--|
| <input type="checkbox"/> Within the last year | <input type="checkbox"/> 1-2 years ago | <input type="checkbox"/> 3-5 years ago |
| <input type="checkbox"/> 5 or more years ago | <input type="checkbox"/> I have never had a flu shot | |

V. BACKGROUND INFORMATION

What county do you live in?

- Madison Other

What type of insurance do you have?

- Medicare Medicaid Private/commercial None

If you answered "none" to the last question, why **don't** you have insurance? Choose all that apply.

- I cannot afford insurance I don't need insurance
 I don't know how to get insurance Other _____

What is your gender? Male Female

What is your age?

- Under 20 21-30 31-40 41-50 51-60 61-70 71 or older

What is your race?

- White Black/African American
 Hispanic/Latino Native American/American Indian/Alaska Native
 Asian (Indian, Pakistani, Japanese, Chinese, Korean, Vietnamese, Filipino)
 Pacific Islander (Native Hawaiian, Samoan, Guamanian/Chamorro)
 Other race not listed here: _____

What is your highest level of education?

- Less than high school Some high school High school degree (or GED/equivalent)
 Some college (no degree) Associate's degree Bachelor's degree
 Graduate or professional degree Other: _____

What was your total income last year, before taxes?

- Less than \$20,000 \$20,001 to \$40,000 \$40,001 to \$60,000
 \$60,001 to \$80,000 \$80,001 to \$100,000 over \$100,000

Do you: Rent Own Other

How many people live in your home? _____

What is your job status?

- Full-time Part-time Unemployed Homemaker
 Retired Disabled Student Armed Forces

Is there anything else you would like to tell us about community concerns, health problems or services in the community?

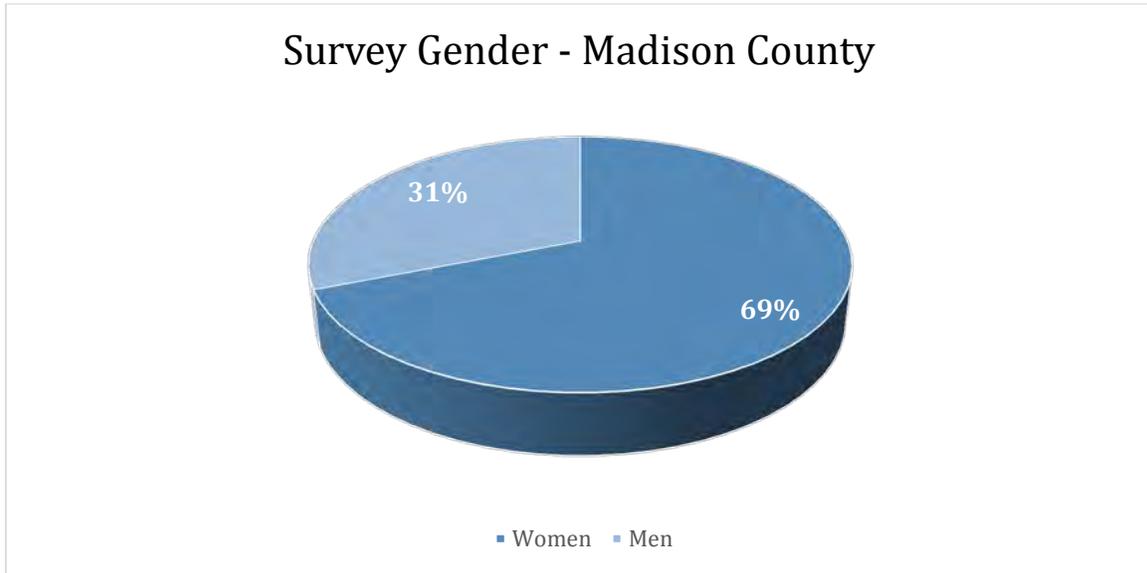
Thank you very much for sharing your views with us!

This survey instrument was reviewed by the Committee on the Use of Human Subjects and Research (CUSHR), Bradley University Institutional Review Board (IRB) in May, 2015

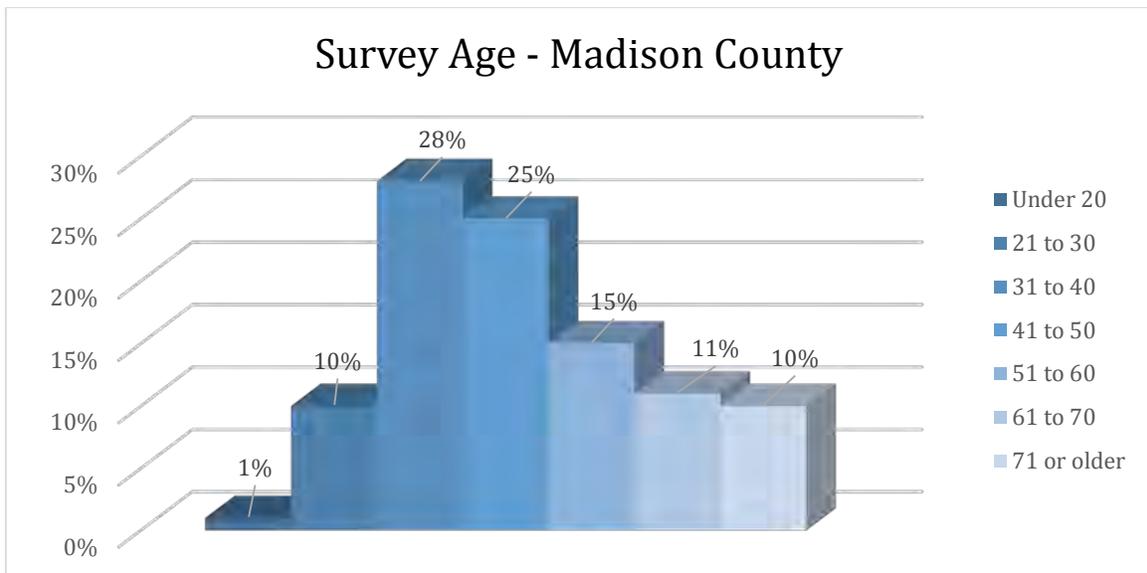
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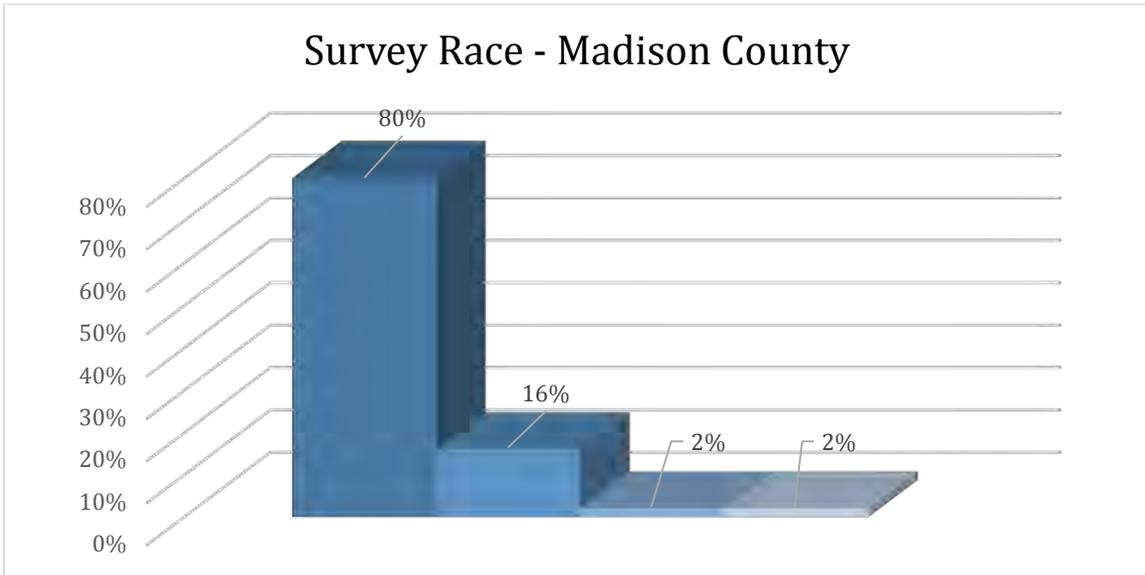
APPENDIX 4. CHARACTERISTICS OF SURVEY RESPONDENTS FOR GENERAL SAMPLE



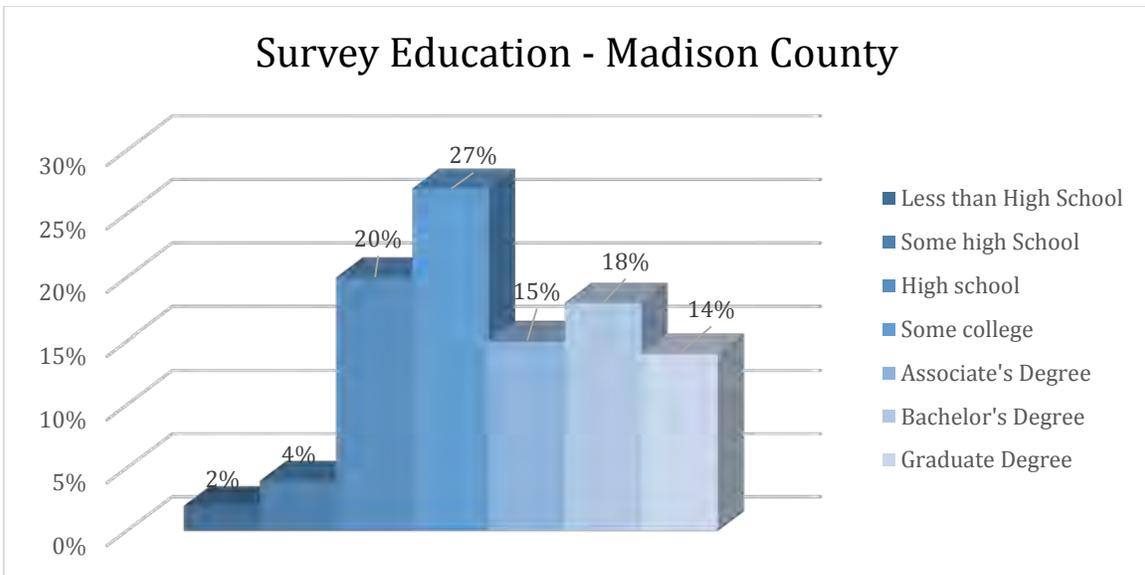
Source: CHNA Survey



Source: CHNA Survey

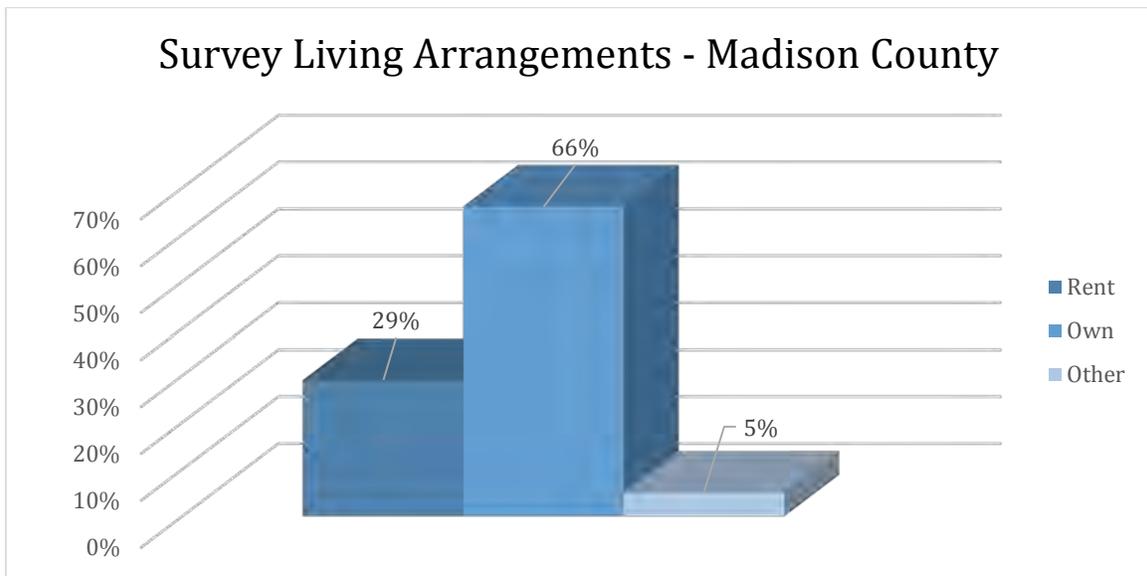


Source: CHNA Survey

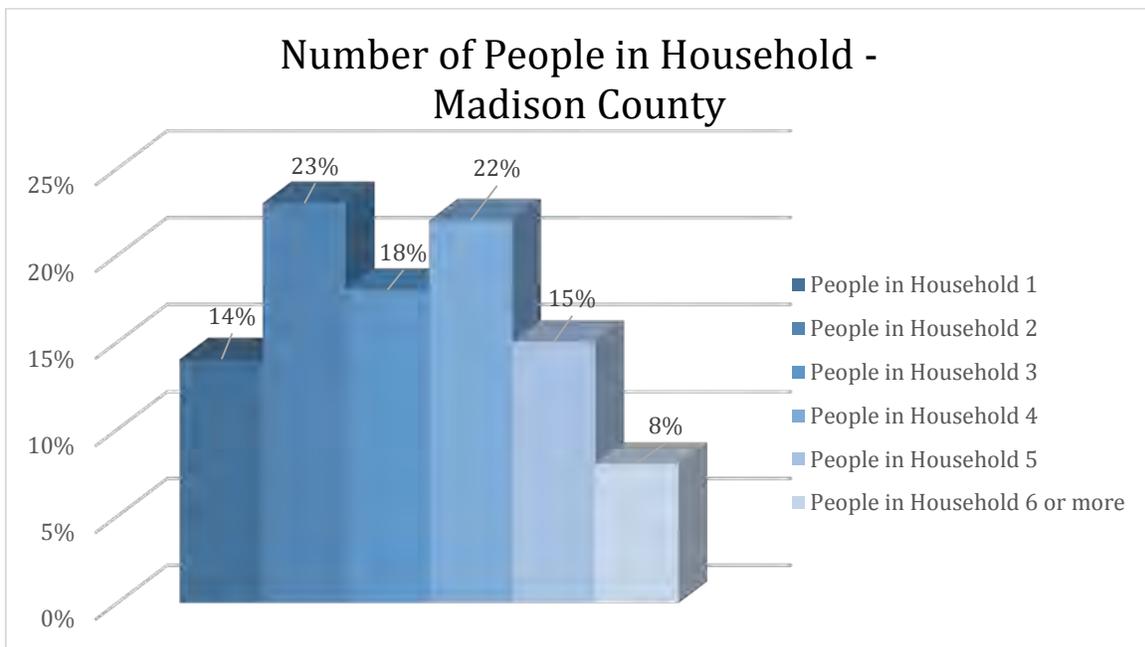


Source: CHNA Survey

Income: Mean income for sample was \$53,002.00



Source: CHNA Survey



Source: CHNA Survey

APPENDIX 5. RESOURCE MATRIX

	Organization name	Cancer (Lung)	Heart Disease	Diabetes	Emergency Department Misuse	Healthy Behaviors/ Eating & Exercise	Mental Health	Low Birth Weights	Obesity	STIs	Substance Abuse	Tobacco Usage
Recreational Facilities												
	Nautilus Fitness Center								x			
	Club Fitness								x			
	Senior Services Plus								x			
	Metro Sports								x			
	Leisure World								x			
Health Departments												
	Madison County Health Department	x	x	x		x	x	x	x	x	x	x
Education												
	Alton Community School District	x	x			x			x			
	Lewis & Clark Community College	x	x						x			
	University of Illinois Extension					x			x			
Community Agencies												
	Alton Main Street - Farmers' Market	x	x		x	x						
	American Cancer Society	x										
	Boys & Girls Club					x			x		x	x
	Drug Free Alton Coalition	x									x	x
	Centerstone						x				x	
	Oasis Women's Center						x					
	Riverbend Family Ministries						x				x	
	Salvation Army		x				x		x		x	x
	United Way						x				x	
	NAACP					x			x		x	x
	American Diabetes Association			x					x			
	American Heart Association					x			x			
	American Lung Association	x										x
Hospitals / Clinics												
	OSF Saint Anthony's Health Center	x	x	x	x	x	x	x	x			x
	Alton Memorial Hospital						x				x	
	Jersey Community Hospital	x										
	Anderson Hospital	x										

APPENDIX 6. DESCRIPTION OF COMMUNITY RESOURCES

Recreational Facilities (5)

Nautilus Fitness Center

Nautilus Fitness Center offers the latest in fitness trends and equipment. The fitness facility offers classes, pool, and boot camp.

Club Fitness

Club Fitness is affordable, friendly and a state of the art fitness facility.

Senior Services Plus

Senior Services Plus is an agency that helps enrich lives of older adults through programs and services that encourage independent living. The agency offers recreation, arts & crafts, and educational classes.

Metro Sports

Metro Sports is a fitness facility offering various classes and equipment.

Leisure World

Leisure World is a fitness facility that commits helping members meet their needs with various classes and equipment.

Health Departments (1)

Madison County Health Department

The Madison County Health Department provides a core of services in the areas of portable water supplies, food protection, infectious disease control, and community health education.

Education (3)

Alton Community School District

Alton Community School District #11 provides students with expanded academic opportunities and/or interventions in order to increase achievement level. The school targets level K – 12.

Lewis & Clark Community College

Lewis & Clark Community College is a two-year higher education institution with multiple campuses, river research center, and community education and training centers located throughout the 220,000+ person college district.

University of Illinois Extension

University of Illinois Extension's programs are aimed at making life better, healthier, safer and more prosperous for individuals and their communities.

Community Agencies/Private Practices (13)**Alton Main Street – Farmers' Market**

Alton Main Street – Farmers' Market is a responsible way for citizens to shop for healthy food. The agency provides fruits and vegetables that are at their freshest and most nutritious – an environmentally, economically and socially responsible way to purchase food.

American Cancer Society

The American Cancer Society saves lives by helping people stay well and get well by finding cures and by fighting back.

Boys & Girls Club

Boys & Girls Club is a youth development agency. The agency enables young people to reach their full potential as productive, responsible and caring citizens.

Drug Free Alton Coalition (DFA)

Drug Free Alton Coalition commits to prevention youth from using alcohol, tobacco, and other drugs. DFA serves the Greater Alton area (Alton and Godfrey).

Centerstone

Centerstone is a community based behavioral health care, offering a full range of mental health services, substance abuse treatment and intellectual and developmental disabilities.

Oasis Women's Center

Oasis Women's Center is a shelter for domestic violence and homeless, chemically dependent woman and their dependent children.

Riverbend Family Ministries

Riverbend Family Ministries provides families and individuals, who have experienced trauma, most often due to violence, addiction, poverty and homelessness, the tools they need to be self-sufficient.

Salvation Army

Salvation Army is an integral part of the Christian Church. It brings comfort to the needy and homeless individual.

United Way

United Way improves lives by mobilizing the caring power of communities around the world to advance the common good.

National Association for the Advancement of Colored People (NAACP)

NAACP is to insure a society in which all individuals have equal rights without discrimination based on race.

American Diabetes Association

American Diabetes Association is a network of more than one million volunteers. It funds research to prevent, cure and manage diabetes.

American Heart Association

American Heart Association is a voluntary organization dedicating to fight heart disease and stroke.

American Lung Association

The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease through education, advocacy and research.

Hospitals/Clinics (4)**OSF Saint Anthony's Health Center**

OSF Saint Anthony's Health Center is established by the Sisters of St. Francis of the Martyr St. George and now sponsored by the Sisters of the Third Order of St. Francis.

Alton Memorial Hospital

Alton Memorial Hospital is a member of BJC Healthcare and a non-profit healthcare organization.

Jersey Community Hospital

Jersey Community Hospital is an independent hospital base of primary care services.

Anderson Hospital

Anderson Hospital is an independent non-profit hospital. The hospital provides personal, convenient, and quality healthcare.

APPENDIX 7. PRIORITIZATION METHODOLOGY

5-STEP PRIORITIZATION OF COMMUNITY HEALTH ISSUES

Step 1. Review Data for Potential Health Issues

Step 2. Briefly Discuss Relationships Among Issues

Step 3. Apply “PEARL” Test from Hanlon Method³

Screen out health problems based on the following feasibility factors:

Propriety – Is a program for the health problem appropriate?

Economics – Does it make economic sense to address the problem?

Acceptability – Will a community accept the program? Is it wanted?

Resources – Is funding available for a program?

Legality – Do current laws allow program activities to be implemented?

Step 4. Use Voting Technique to Narrow Potential Issues

Step 5. Prioritize Issues. Use a weighted-scale approach (1-5 scale) to rate remaining issues based on:

1. Magnitude – size of the issue in the community. Considerations include, but are not limited to:

- *Percentage of general population impacted*
- *Prevalence of issue in low-income communities*
- *Trends and future forecasts*

2. Severity – importance of issue in terms of relationships with morbidities, comorbidities and mortality. Considerations include, but are not limited to:

- *Does an issue lead to serious diseases/death*
- *Urgency of issue to improve population health*

3. Potential for impact through collaboration – can management of the issue make a difference in the community?

Considerations include, but are not limited to:

- *Availability and efficacy of solutions*
- *Feasibility of success*

³ “Guide to Prioritization Techniques.” National Connection for Local Public Health (NACCHO)