Community Health Needs Assessment 2019

OSF Holy Family Medical Center

Warren County

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Community Health Needs Assessment

2019

Collaboration for sustaining health equity

Executive Summary

The Warren County Community Health-Needs Assessment is a collaborative undertaking by OSF Holy Family Medical Center to highlight the health needs and well-being of residents in Warren County. Through this needs assessment, collaborative community partners have identified numerous health issues impacting individuals and families in the Warren County region. Several themes are prevalent in this health-needs assessment – the demographic composition of the Warren 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 publicly 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 Warren 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, two significant health needs were identified and determined to have equal priority:

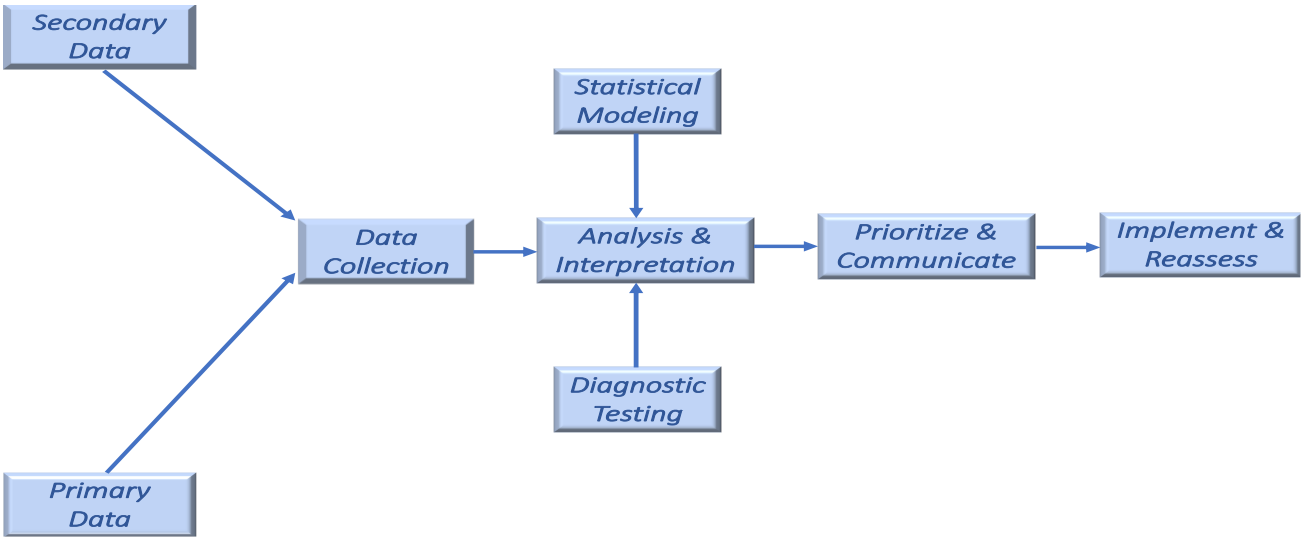
- **Healthy Behaviors –** ***defined as active living and healthy eating, and their impact on obesity***
- **Behavioral Health –** ***including mental health and substance abuse***

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 Holy Family Medical 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. This CHNA Report was approved by the OSF Healthcare System's Board of Directors on July 29, 2019.

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 below.



Collaborative Team and Community Engagement

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 Holy Family Medical Center, members of the Warren 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 the first and second quarters of 2018 and in the first quarter of 2019.

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. Individuals, affiliations, titles and expertise can be found in Appendix 1. Note that the collaborative team provided input for all sections of the CHNA.

Definition of the Community

In order to determine the geographic boundaries for OSF Holy Family Medical Center, analyses were completed to identify what percentage of inpatient and outpatient activity was represented by Warren County. Data show that Warren County alone represents 76% 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. Note that the at-risk population was defined as those individuals that were eligible to receive Medicaid based on the state of Illinois guidelines using household size and income level.

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 Warren County. When feasible, data are assessed longitudinally to identify trends and patterns by comparing with results from the 2016 CHNA and benchmarked with State of Illinois averages.

Community Feedback from Previous Assessments

The 2016 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 2016 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.

2016 CHNA Health Needs and Implementation Plans

The 2016 CHNA for Warren County identified three significant health needs. These included: Healthy Behaviors, defined as healthy eating and active living, and their impact on obesity; Use of Emergency Department, defined as a primary source of medical care; and Heart Disease. 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 403 survey respondents from Warren County, a study was completed to examine perceptions of the community health-related issues, healthy behaviors, behavioral health, food security, social determinants of health and access to healthcare.

Secondary Data Collection

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.

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 2018, designed for use with both the general population and the at-risk community. To ensure that all critical areas were being addressed, the entire 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, eight 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.

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.

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.

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, healthy eating habits and cancer screenings.

Behavioral health – to assess community issues related to areas such as anxiety and depression.

Food security – to assess access to healthy food alternatives.

Social determinants of health – to assess the impact that social determinants may have on the above-mentioned areas.

Finally, demographic information was collected to assess background information necessary to segment markets in terms of the eight 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. A total of 230 surveys were collected in Peoria, IL in May and June 2018. 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.

Sample Size

In order to identify our potential population, we first identified the percentage of the Warren 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 Warren County was 13.8 percent in 2017. The population used for the calculation was 17,167, yielding a total of 2,369 residents living in poverty in the Warren 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 Warren County area, the minimum sample size for *aggregated* analyses (combination of at-risk and general populations) was 376. The data collection effort for this CHNA yielded a total of 403 usable responses. This exceeded the threshold of the desired 90% confidence interval.

To provide a representative profile when assessing the aggregated population for the Warren 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. Additionally, efforts were made to ensure that the demography of the sample was aligned with population demographics according to U.S. Census data. This provided a total usable sample of 317 respondents for analyzing the aggregate population. Sample characteristics can be seen in Appendix 4.

Data Collection

Data were collected in the 3rd quarter of 2018. 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 food pantries and the Health Department and County operated housing units. 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.

Note that use of electronic surveys to collect community-level data may create a potential for bias from convenience sampling error. To recognize for potential bias in the community sample, a second control sample of data was collected. Specifically, the control sample consisted of random patients surveyed at the hospital, assuming that patients receiving care represent an unbiased representation of the community. All questions on the patient version of the survey pertaining to access to healthcare were removed, as these questions were not relevant to current patients. Data from the community sample and the control sample were compared using *t-tests* and tetrachoric correlations when appropriate. Results show that the community sample did not exhibit any significance patterns of bias. If specific relationships exhibited a potential for bias between the community sample and the control sample, they are identified in the social-determinants sections of the analyses within each chapter.

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.

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, x^2 tests and tetrachoric correlations when appropriate, given characteristics of the specific data being analyzed.

CHAPTER 1 OUTLINE

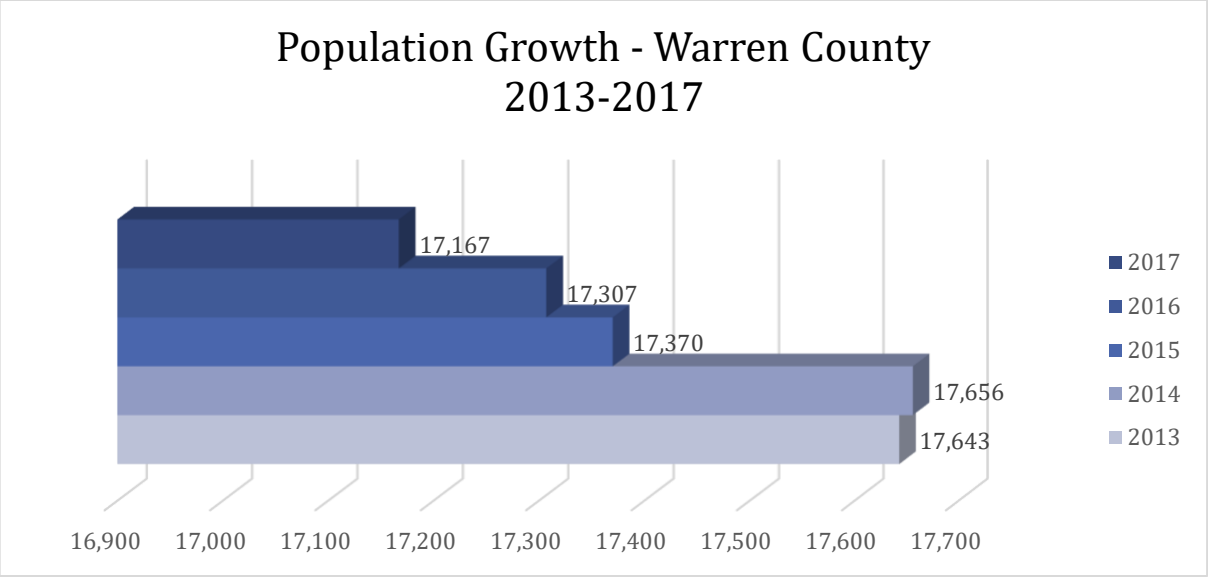
CHAPTER 1
DEMOGRAPHY AND SOCIAL DETERMINANTS

1.1 Population

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

Population Growth

Data from the last census indicate the population of Warren County has slightly decreased (2.7%) between 2013 and 2017.



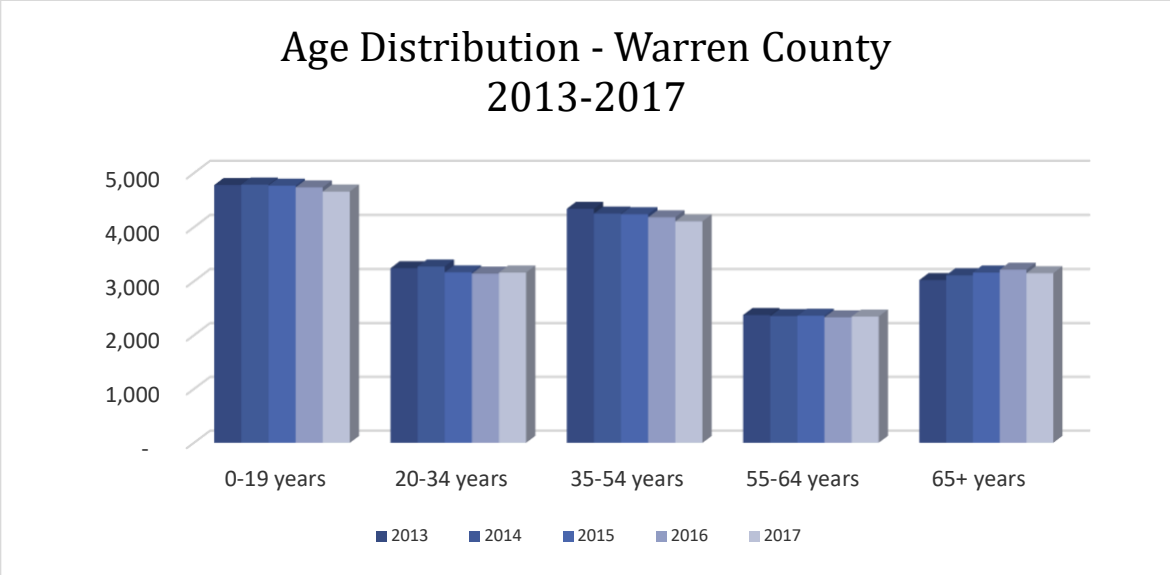
Source: US Census

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 in the graph below, the percentage of individuals in Warren County aged 35-54 declined 5.3% between 2013 and 2017, and the percentage of individuals aged 65 and older increased 4.2% between 2013 and 2017.

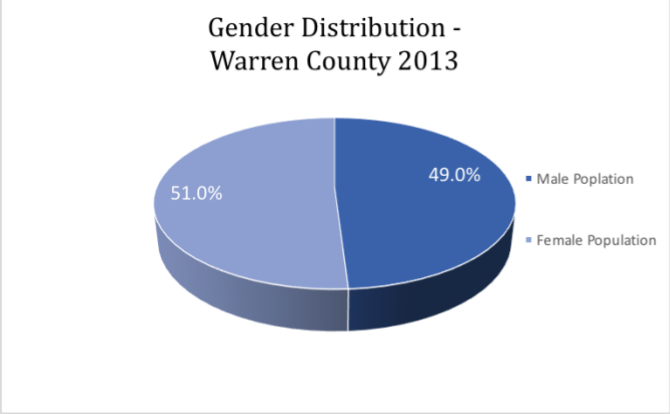


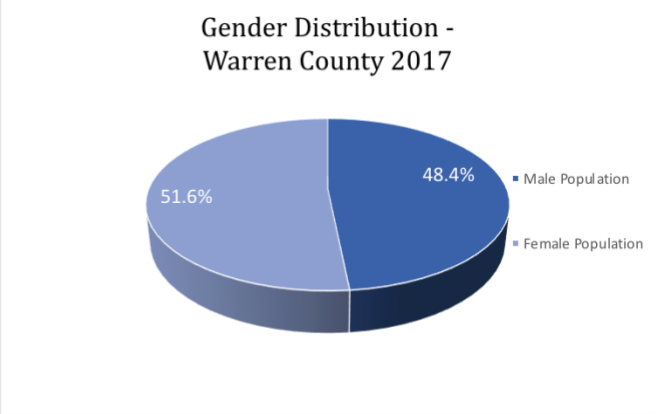
Age	2013	2014	2015	2016	2017
0-19 years	4,780	4,788	4,768	4,736	4,659
20-34 years	3,242	3,274	3,166	3,142	3,163
35-54 years	4,340	4,252	4,240	4,183	4,108
55-64 years	2,377	2,358	2,364	2,335	2,349
65+ years	3,023	3,112	3,163	3,215	3,150

Source: US Census

Gender

The gender distribution of Warren County residents has remained relatively consistent between 2013 and 2017.

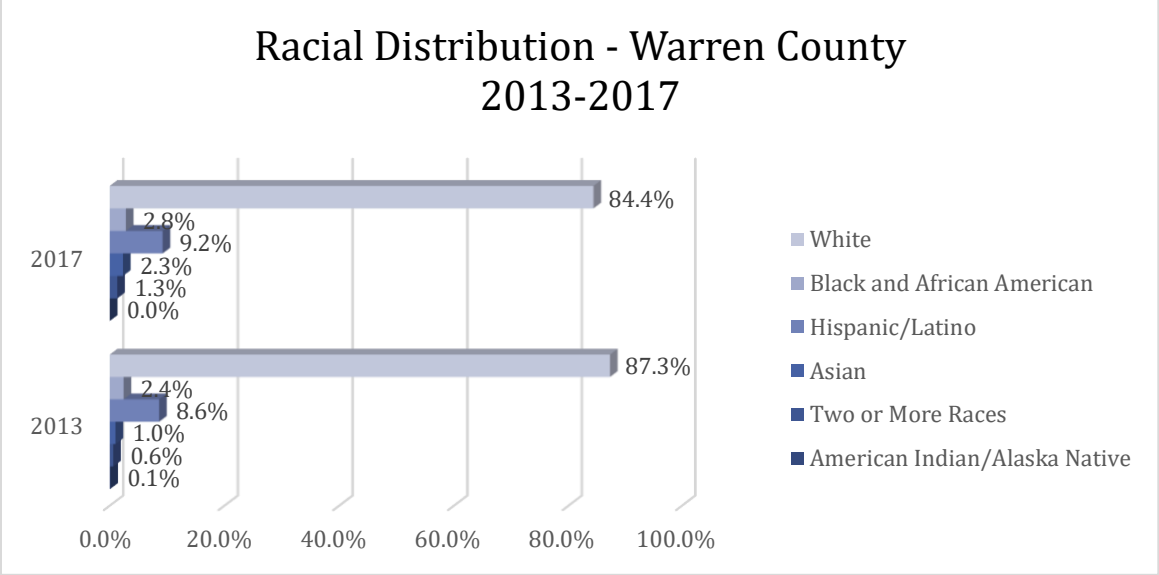




Source: US Census

Race

With regard to race and ethnic background, Warren County is largely homogenous, yet in recent years, the county is becoming more diverse. Data from 2017 suggest that White ethnicity comprises 84.4% of the population in Warren County. However, the non-White population of Warren County has been increasing (from 12.7% to 15.6% in 2017), with Black ethnicity comprising 2.8% of the population, multi-racial ethnicity comprising 1.3% of the population, and Hispanic/Latino ethnicity comprising 9.2% of the population.

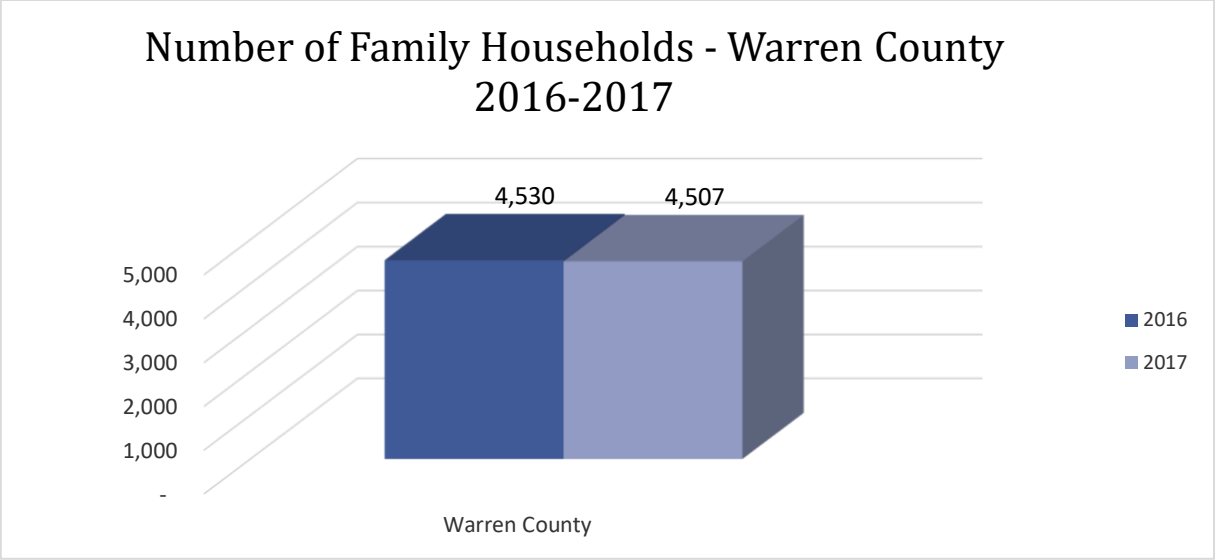


Source: US Census

1.3 Household/Family

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

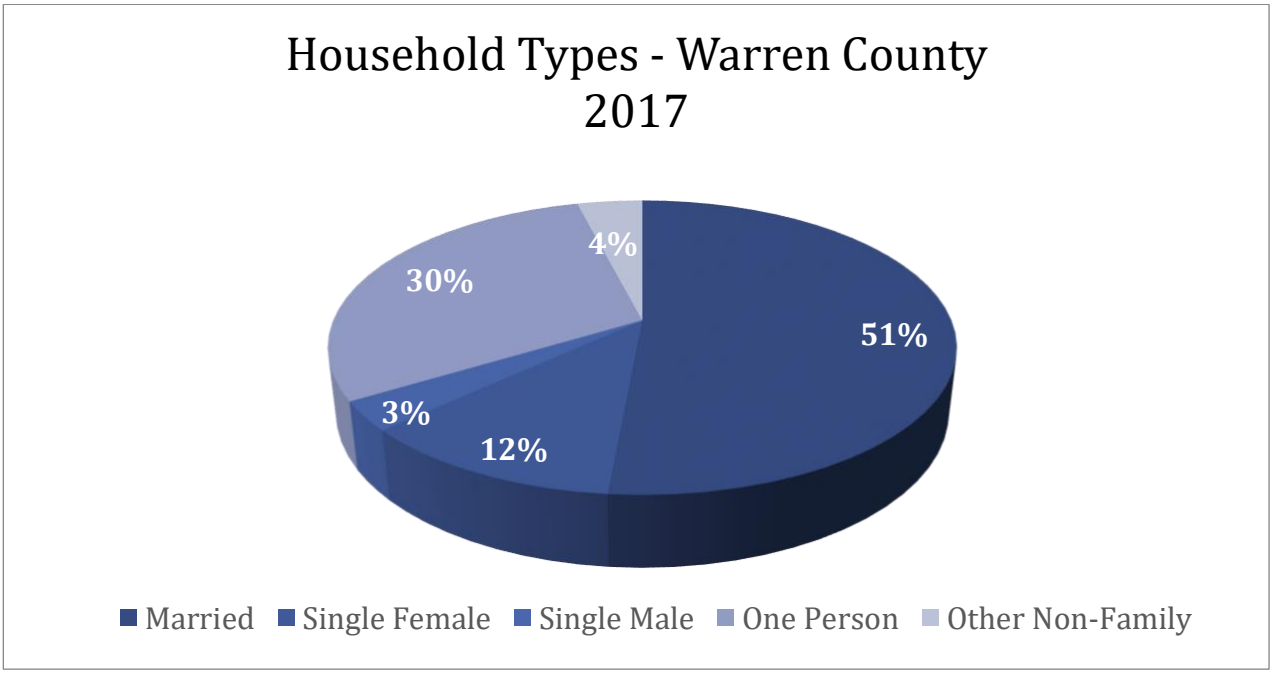
As indicated in the graph below, the number of family households in Warren County decreased slightly from 2016 to 2017.



Source: US Census

Family Composition

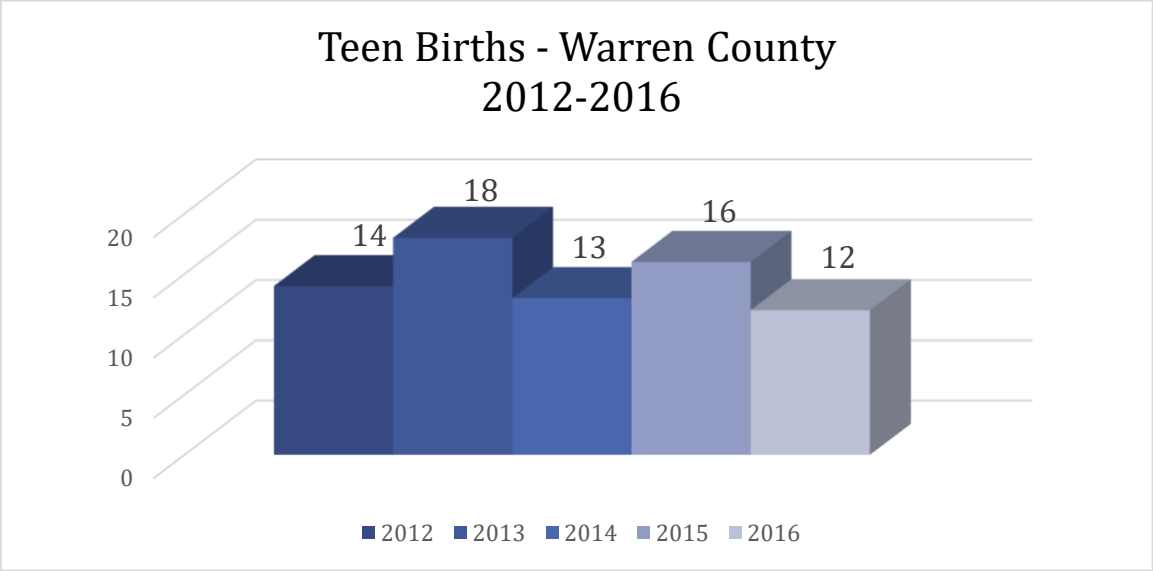
Data from 2017 suggest the percentage of two-parent families in Warren County is over 50%. One-person households represent 30% of the county population, and single-female households represent 12%.



Source: US Census

Early Sexual Activity Leading to Births from Teenage Mothers

Warren County has experienced a fluctuation in teenage birth count between 2012 and 2016.



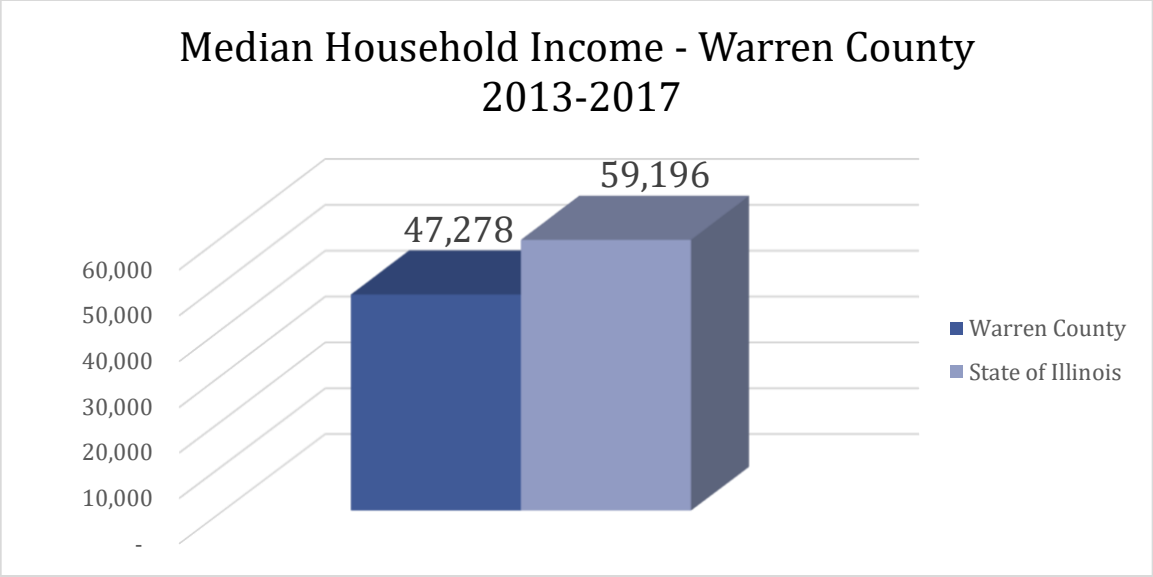
Source: Illinois Department of Public Health

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

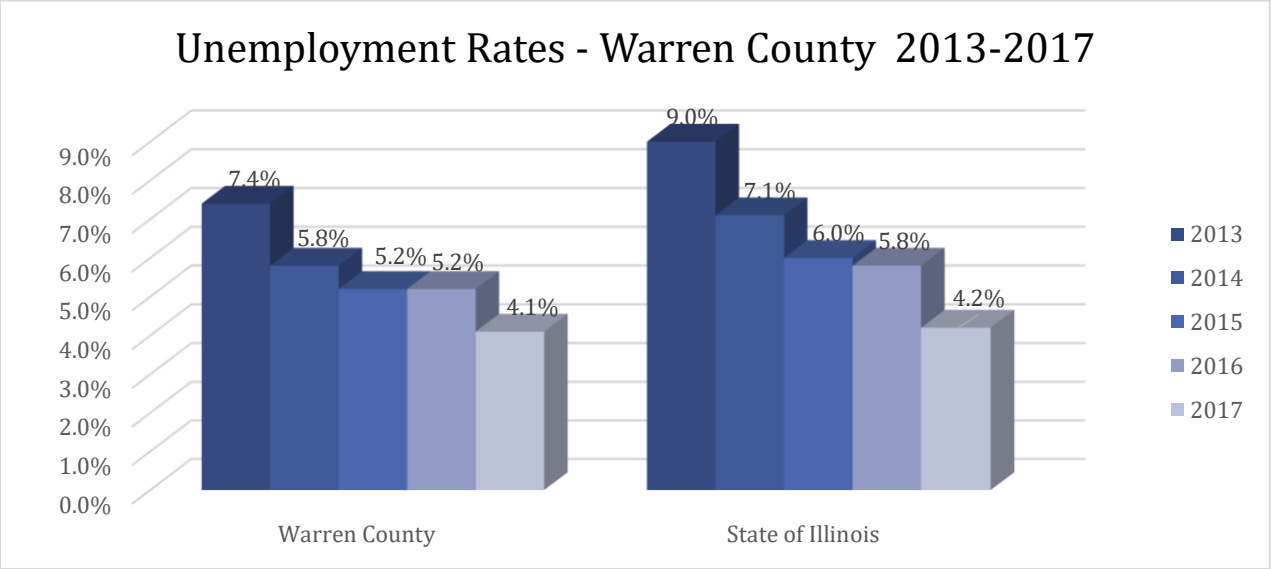
For 2013-2017, the median household income in Warren County was lower than the State of Illinois.



Source: US Census

Unemployment

For the years 2013 to 2017, the Warren County unemployment rate was lower than the State of Illinois unemployment rate. Overall, between 2013 and 2017, unemployment in Warren County decreased by 3.3%.

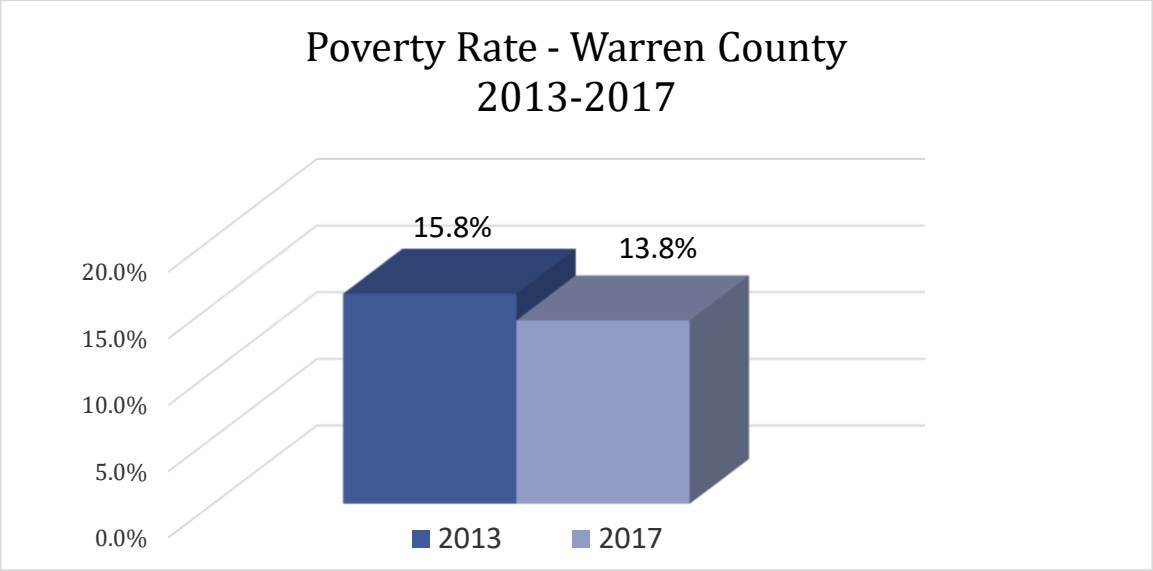


Source: Bureau of Labor Statistics

Individuals in Poverty

In Warren County, the percentage of individuals living in poverty between 2013 and 2017 decreased by 2.0%. The poverty rate for individuals is 13.8%, which is slightly higher than the

State of Illinois individual poverty rate of 13.5%. Poverty has a significant impact on the development of children and youth. In 2017 the poverty rate for families living in Warren County (9.3%) was lower than the State of Illinois family poverty rate (9.8%).



Source: US Census

1.5 Education

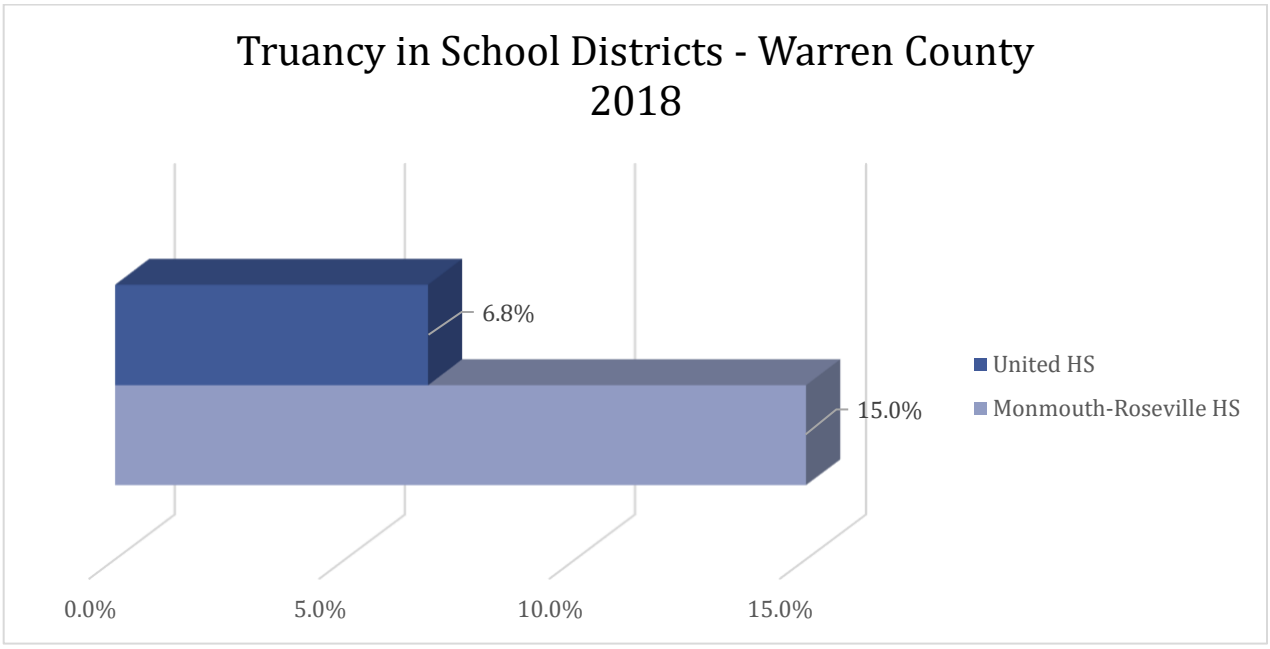
Importance of the measure: According to the National Center for Educational Statistics[1], "The better educated a person is, the more likely that person is to report being in 'excellent' or 'very good' health, regardless of income." Research suggests that the higher the level of educational attainment 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.

[1] NCES 2005

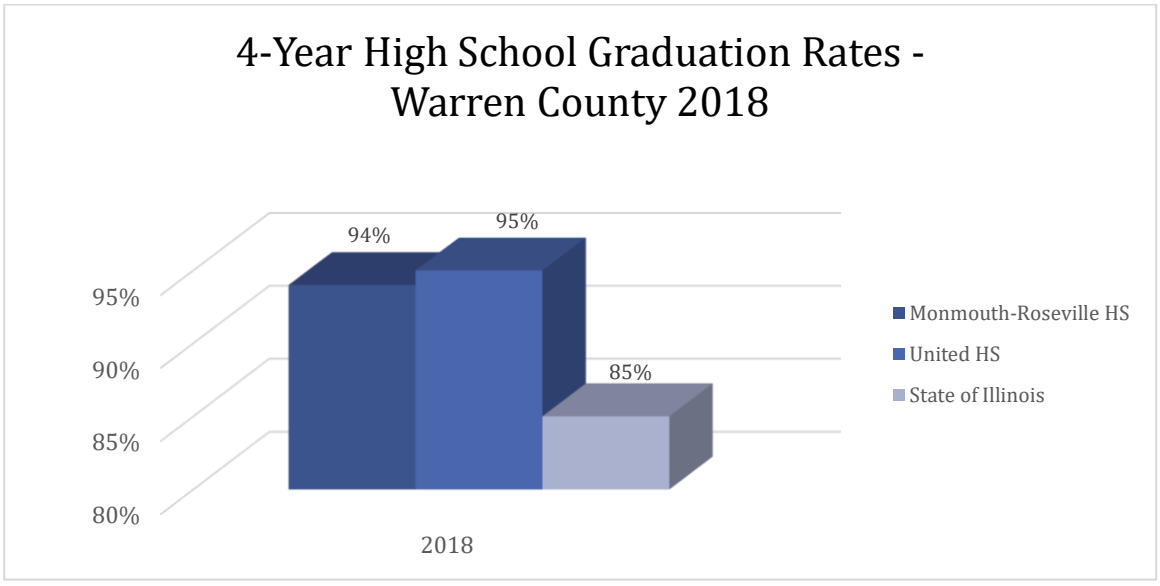
Monmouth-Roseville High School had the largest percentage of students who were chronically truant in 2018.



Source: Illinois Report Card

High School Graduation Rates

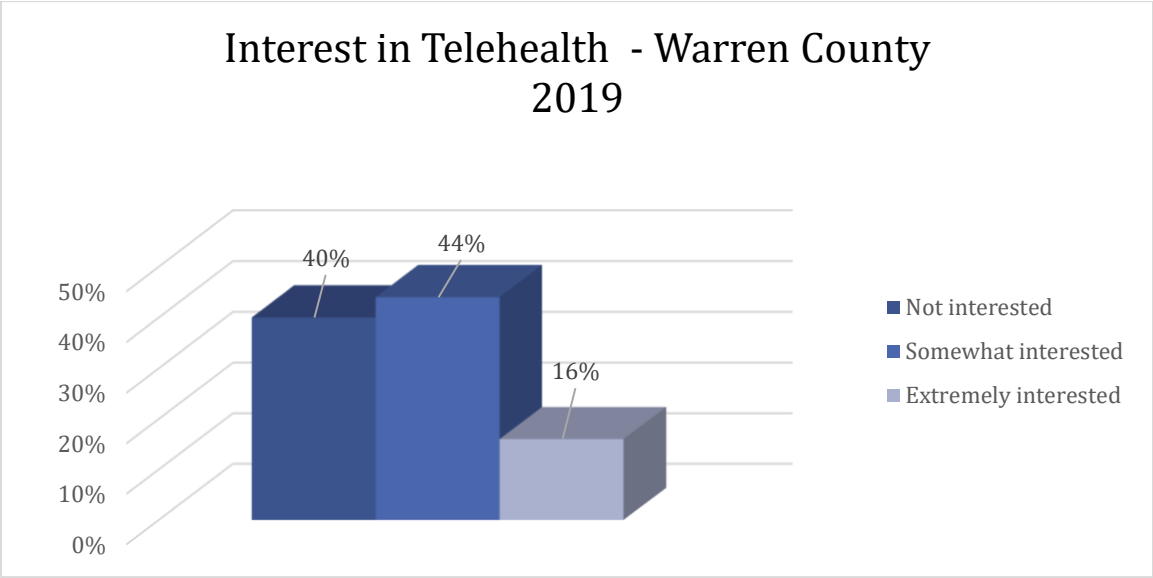
In 2018, none of the schools in Warren County reported high school graduation rates that were below the State average of 85%.



Source: Illinois Report Card

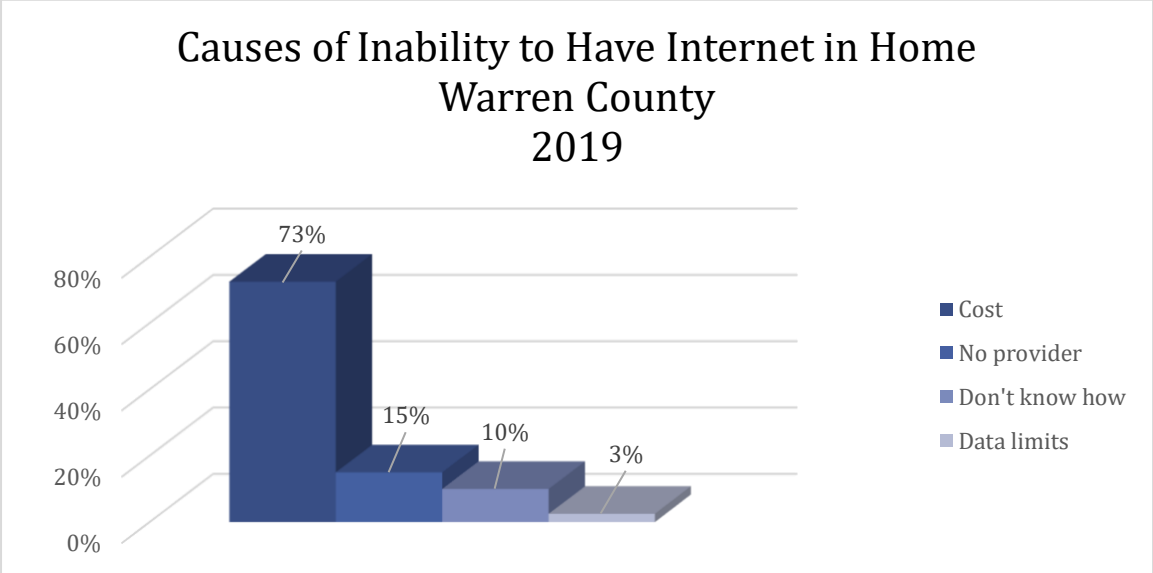
1.6 Telehealth Interest and Internet Accessibility

Survey respondents were asked *How interested would you be in health services provided through Internet or phone?* Of respondents, 60% indicated they would be either somewhat or extremely interested.



Source: CHNA Survey

In terms of accessibility, 87% of respondents indicated they had access to free public Internet, and 84% indicated they had Internet in their homes. For those that did not have Internet in their home, cost was the most frequently cited reason.



Source: CHNA Survey

Social Determinants Related to Telehealth and Internet Access

Several factors show significant relationships with an individual's interest in telehealth and Internet access. The following relationships were found using correlational analyses:

Interest in telehealth tends to be rated higher by younger people, those with higher education and those with higher income.

Access to Internet tends to be rated higher for those with higher education , those with higher income and those with a stable housing environment.

1.7 Key Takeaways from Chapter 1

- ✓ POPULATION DECREASED OVER THE LAST 5 YEARS.
- ✓ POPULATION OVER AGE 65 IS INCREASING.
- ✓ SINGLE FEMALE HEAD-OF-HOUSE-HOUSEHOLD REPRESENTS 12% OF THE POPULATION. HISTORICALLY, THIS DEMOGRAPHIC INCREASES THE LIKELIHOOD OF FAMILIES LIVING IN POVERTY.
- ✓ APPROXIMATELY 2/3 OF THE POPULATION IS INTERESTED IN TELEHEALTH SERVICES.

CHAPTER 2 OUTLINE

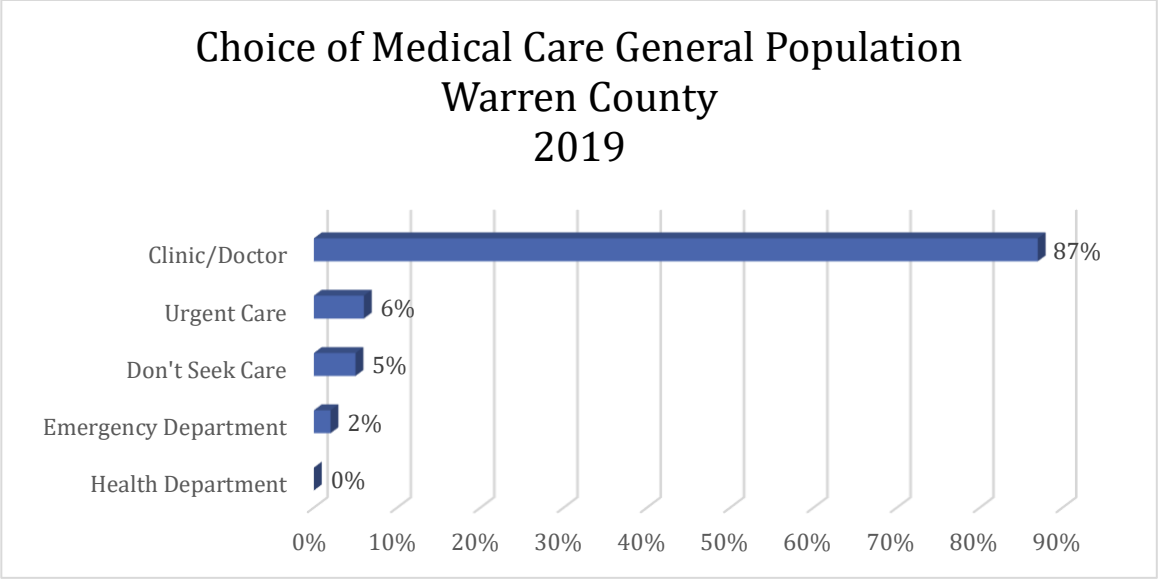
CHAPTER 2
PREVENTION BEHAVIORS

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 most common response for source of medical care was clinic/doctor's office, chosen by 87% of survey respondents. This was followed by urgent care (6%), not seeking medical attention (5%), the emergency department at a hospital (2%), and the health department (0%).



Source: CHNA Survey

Comparison to 2016 CHNA

Clinic/doctor's office remained relatively stable (85% in 2016 and 87% in 2019). Emergency department as a primary choice for healthcare had a significant decrease from 7% in 2016 to 2% in 2019.

Social Determinants Related to Choice of Medical Care

Several factors 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, women and those with a stable housing environment.

Urgent Care tends to be used more by younger people.

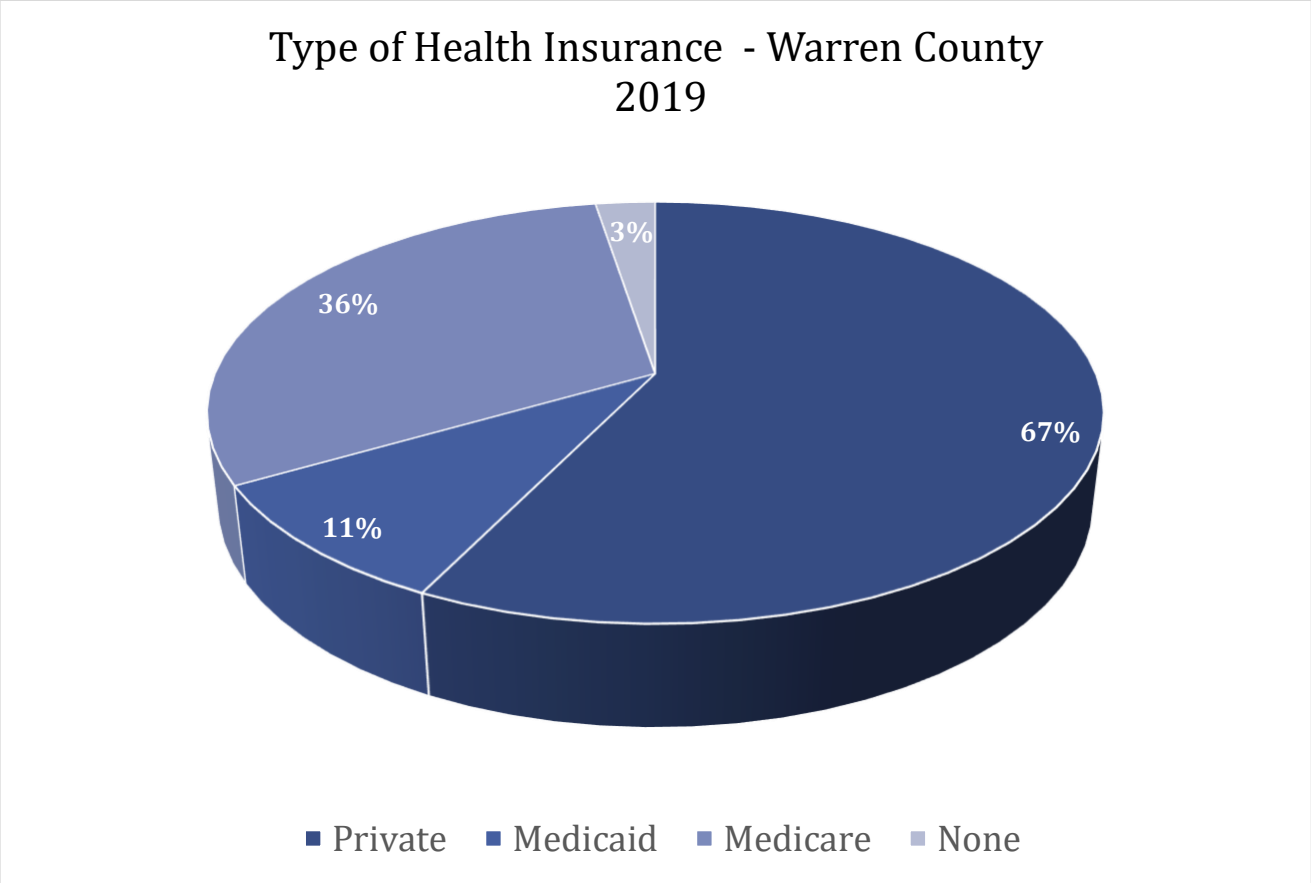
Emergency Department tends to be used more by men, and those with an unstable (e.g., homeless) housing environment.

Do Not Seek Medical Care is more common for those with an unstable (e.g., homeless) housing environment.

Health Department did not have any significant correlates.

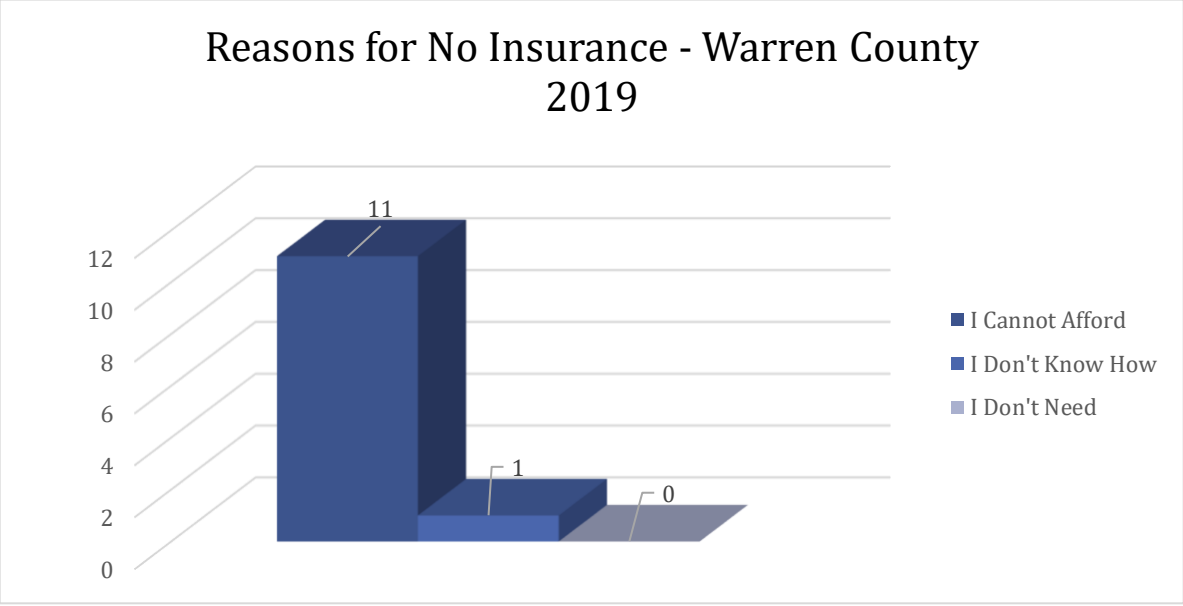
Insurance Coverage

According to survey data, 67% of the residents are covered by private insurance, followed by Medicare (36%), and Medicaid (11%). Only 3% of respondents indicated they did not have any health 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. Note that these data are displayed in frequencies rather than percentages given the low number of responses.



Source: CHNA Survey

Comparison to 2016 CHNA

Compared to survey data from the 2016 CHNA, there has been a significant increase in private insurance from 48% in 2016 to 67% in 2019. There has also been a significant increase in Medicare insurance, from 25% in 2016 to 36% in 2019. Medicaid has decreased from 22% in 2016 to 11% in 2019.

Social Determinants Related to Type of Insurance

Several 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 older people, those with lower education and income.

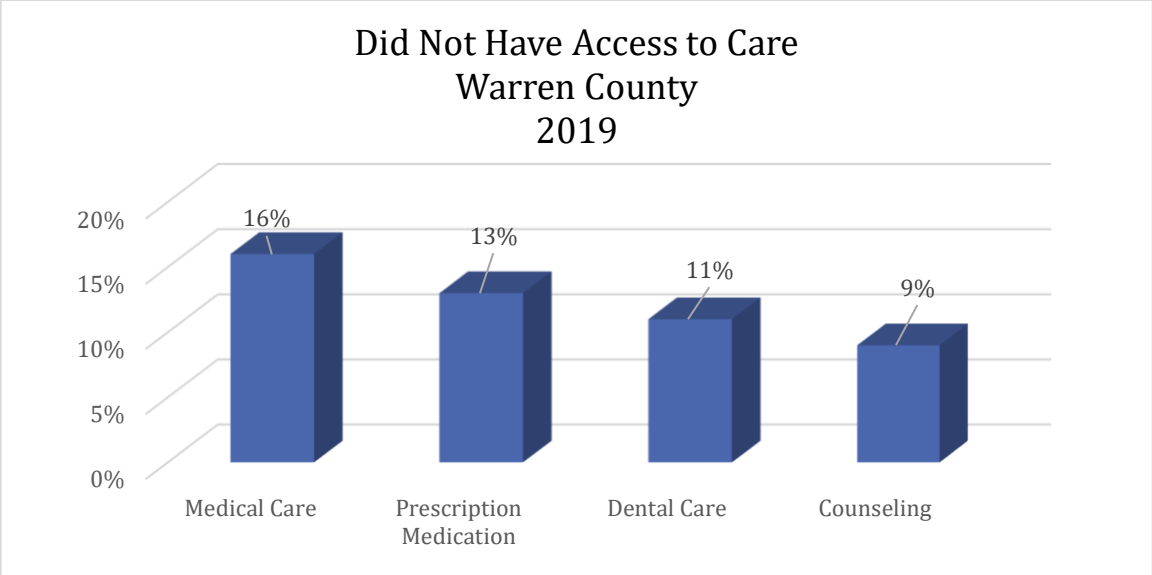
Medicaid tends to be used more frequently by younger people, Black people, those with lower education, those with lower income, and people with an unstable (e.g., homeless) housing environment. Given the low survey response rate for Black people, findings should be interpreted with caution.

Private Insurance is used more often by those with higher education, those with higher income and those with a stable housing environment .

No Insurance tends to be reported more often by those with lower income.

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 16% of the population did not have access to medical care when needed; 13% of the population did not have access to prescription medications when needed; 11% of the population did not have access to dental care when needed; and 9% of the population did not have access to counseling when needed.



Source: CHNA Survey

Social Determinants Related to Access to Care

Several 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 those with a stable housing environment.

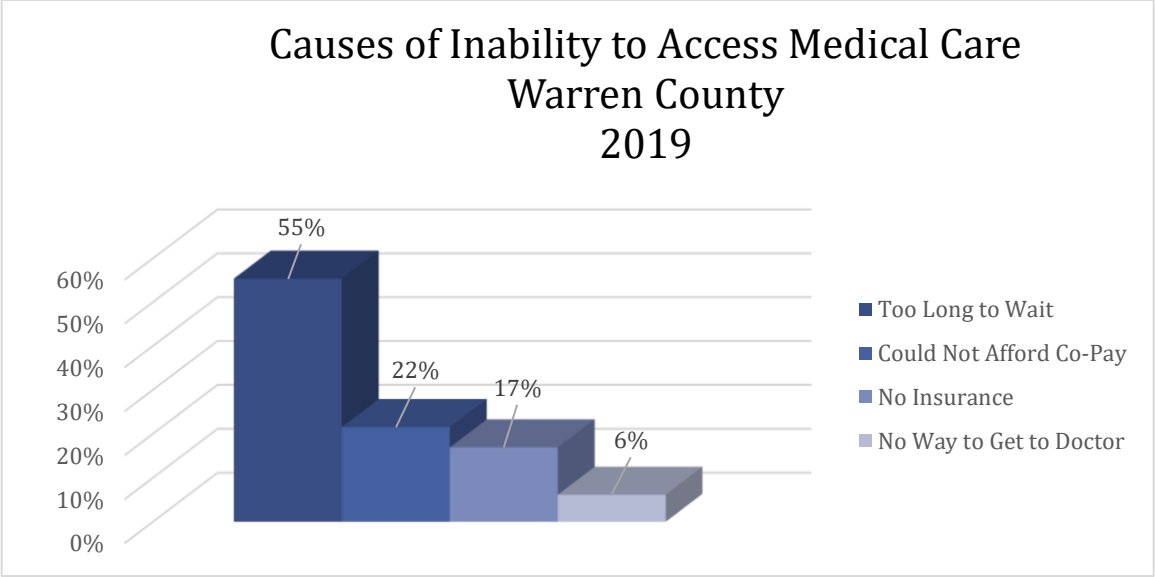
Access to prescription medications tends to be higher for those with a stable housing environment.

Access to dental care tends to be higher for those with higher education and those with higher income. Those with an unstable (e.g., homeless) housing environment are less likely to have access to dental care.

Access to counseling had no significant correlates.

Reasons for No Access – Medical Care

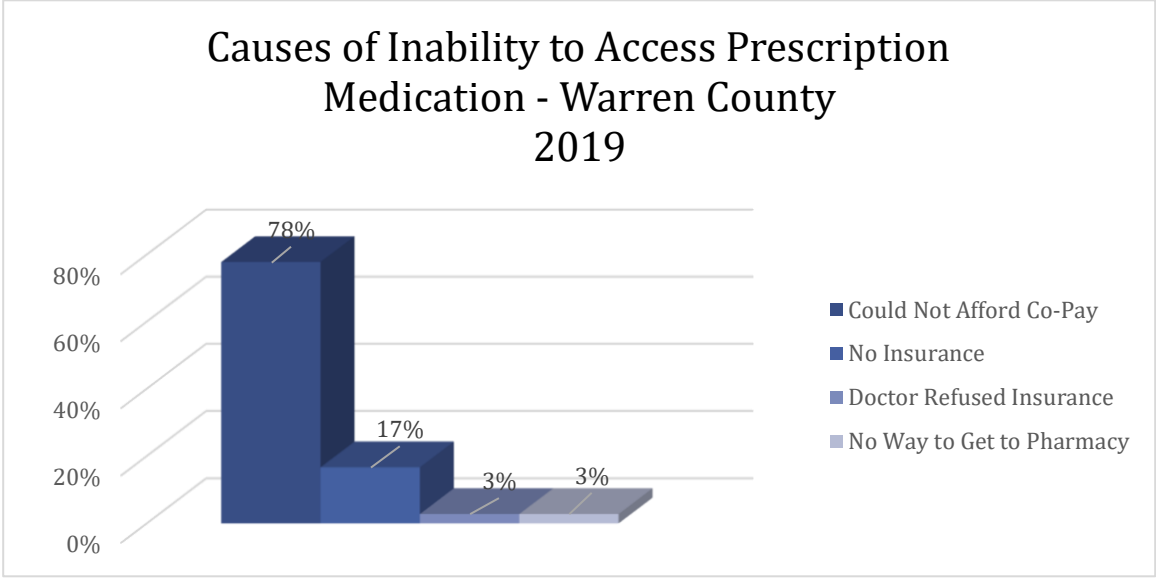
Survey respondents who reported they were not able to get medical care when needed were asked a follow-up question. The leading causes of the inability to gain access to medical care were too long to wait for an appointment (55%), the inability to afford the copay (22%), no insurance (17%) and no way to get to the doctor (6%).



Source: CHNA Survey

Reasons for No Access – Prescription Medication

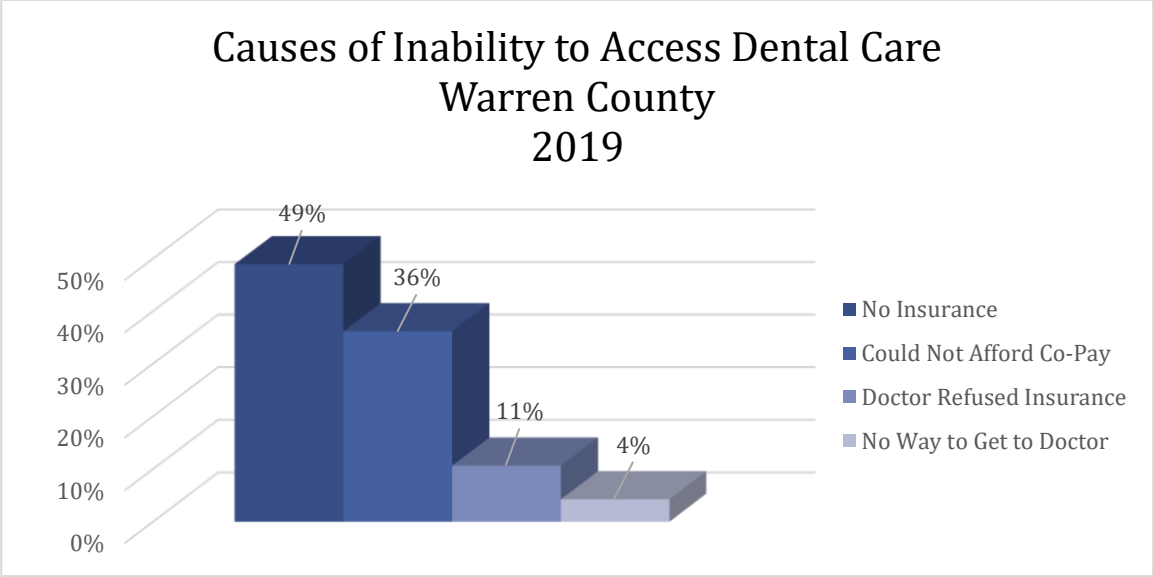
Survey respondents who reported they were not able to get prescription medications when needed were asked a follow-up question. The leading causes of the inability to gain access to prescription medicine were the inability to afford copayments or deductibles (78%) and no insurance (17%).



Source: CHNA Survey

Reasons for No Access – Dental Care

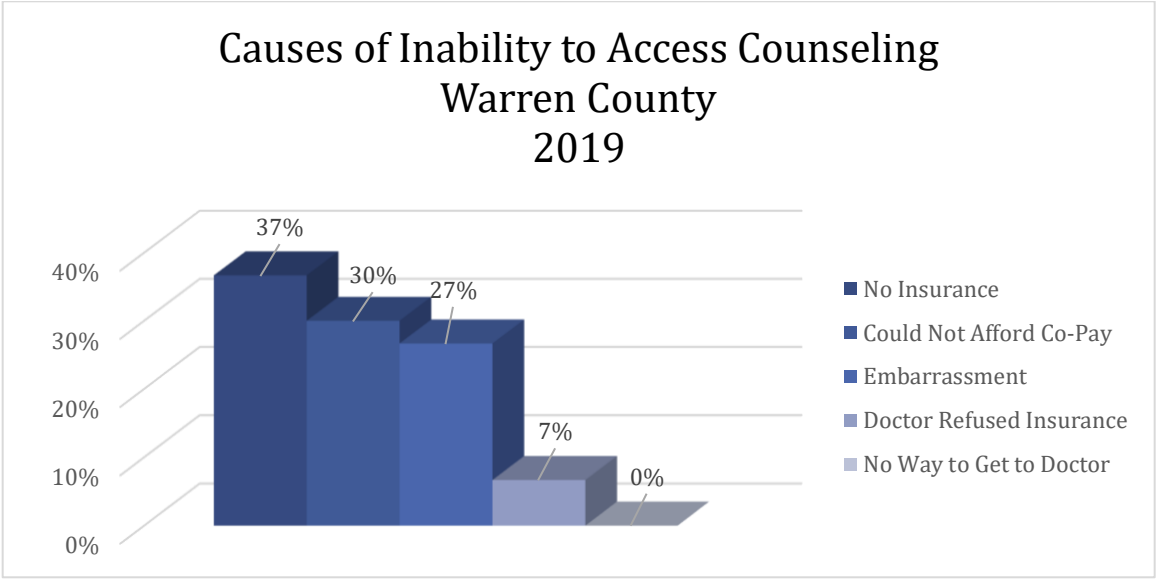
Survey respondents who reported they were not able to get dental care when needed were asked a follow-up question. The leading cause was no insurance (49%), followed by the inability to afford copayments or deductibles (36%), refusal of insurance (11%), and no way to get to the dentist (4)%.



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. The leading causes of the inability to gain access to counseling were no insurance (37%), inability to afford co-pay (30%), and embarrassment (27%).



Source: CHNA Survey

Comparison to 2016 CHNA

Access to Medical Care – Compared to 2016, results show an increase of 4% for those that were not able to get medical care when needed.

Access to Prescription Medications – Compared to 2016, results show a decrease of 2% in those that were not able to get prescription medication when needed.

Access to Dental Care – Compared to 2016, results show a decrease of 6% in those that were not able to get dental care when needed.

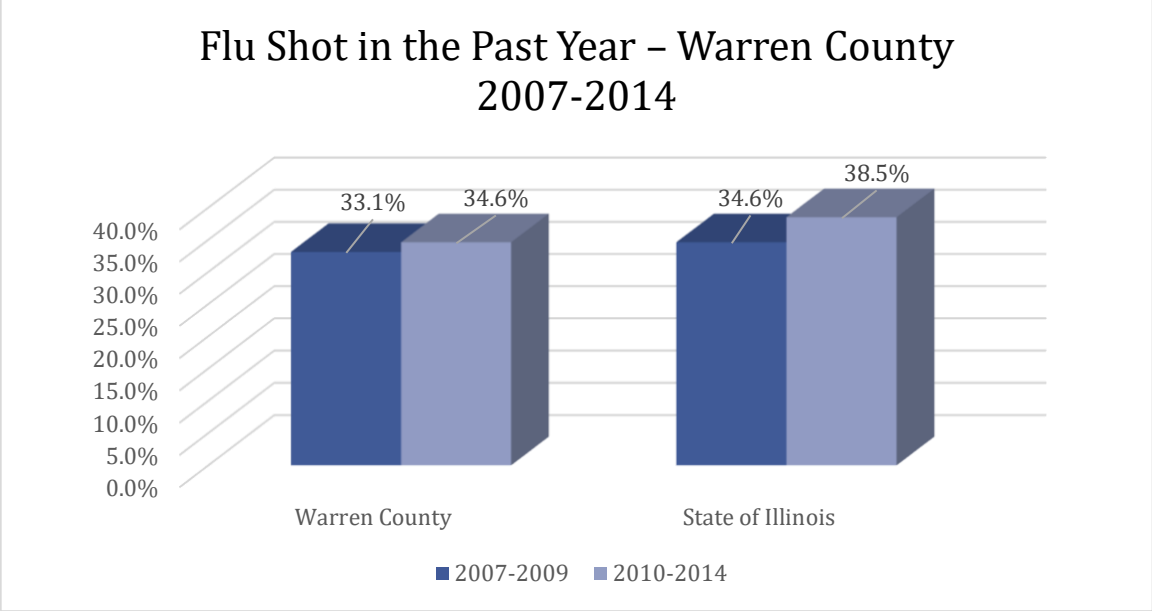
Access to Counseling – Compared to 2016, results show a slight increase of 1% in those that were not able to get counseling when needed.

2.2 Wellness

Importance of the measure: Preventative healthcare measures, including 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 Flu Shots

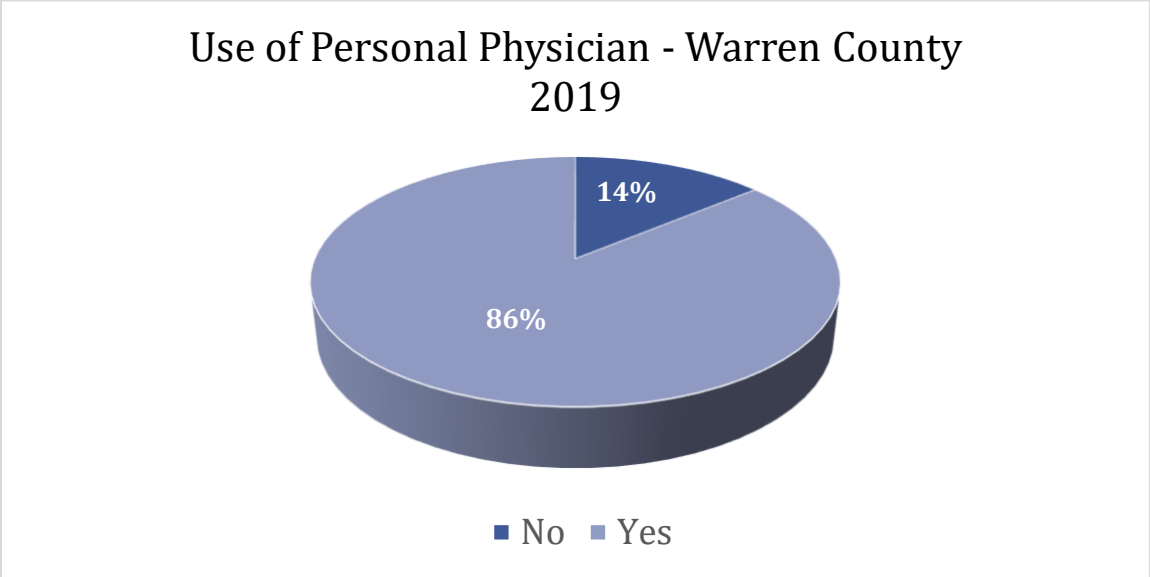
The overall health of a community is impacted by preventative measures including immunizations and vaccinations. The chart below shows that the percentage of people who have had a flu shot in the past year is 33.1% for Warren County in 2007-2009 and 34.6% in 2010-2014. During this timeframe, the State of Illinois realized an increase in the number of people who have had flu shots. Note that data have not been updated by the Illinois Department of Public Health.



Source: Illinois Behavioral Risk Factor Surveillance System

Personal Physician

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, 86% of residents have a personal physician.



Source: CHNA Survey

Comparison to 2016 CHNA

The 2019 CHNA survey results for having a personal physician are higher compared to the 2016 CHNA. Specifically, 80% of residents reported a personal physician in 2016 and 86% reported a personal physician in 2019.

Social Determinants Related to Having a Personal Physician

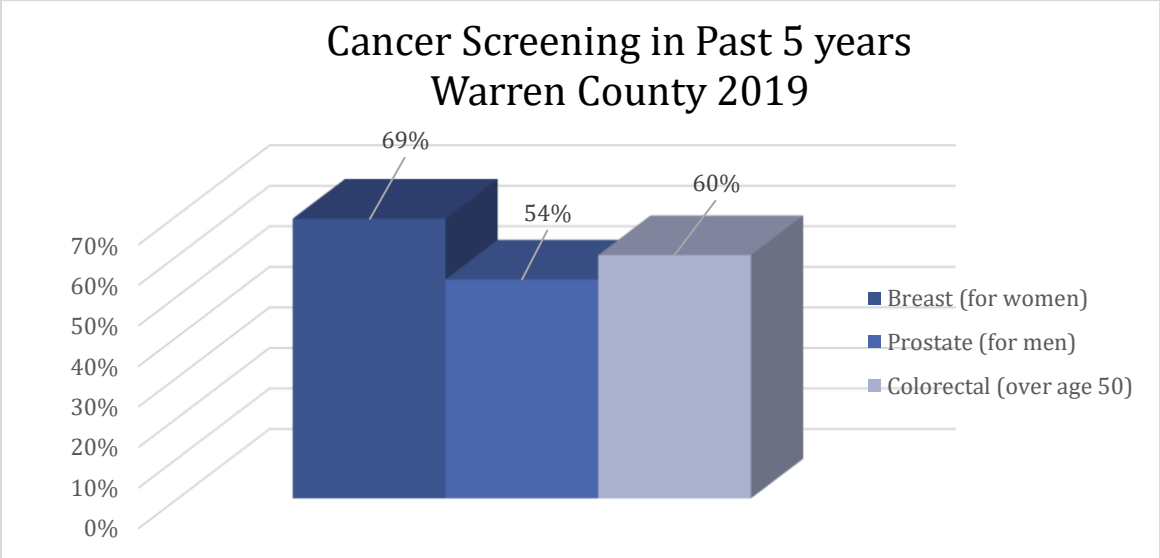
Multiple characteristics show significant relationships with having a personal physician. The following relationships were found using correlational analyses:

Having a personal physician tends to be higher for older people, White people and those with a stable housing environment.

Cancer Screening

Early detection of cancer may greatly improve the probability of successful treatment. In the case of colorectal cancer, early detection of precancerous polyps can prevent cancer. **Cancer screening is a new section to the 2019 CHNA.** Specifically, three types of cancer screening were measured: breast, prostate and colorectal.

Results from the CHNA survey show that 69% of women had a breast screening in the past five years. For men, 54% had a prostate screening in the past five years. For women and men over the age of 50, 60% had a colorectal screening in the last five years.



Source: CHNA Survey

Social Determinants Related to Cancer Screenings

Multiple characteristics show significant relationships with cancer screening. The following relationships were found using correlational analyses:

Breast screening tends to be more likely for women, White people, and those with higher income.

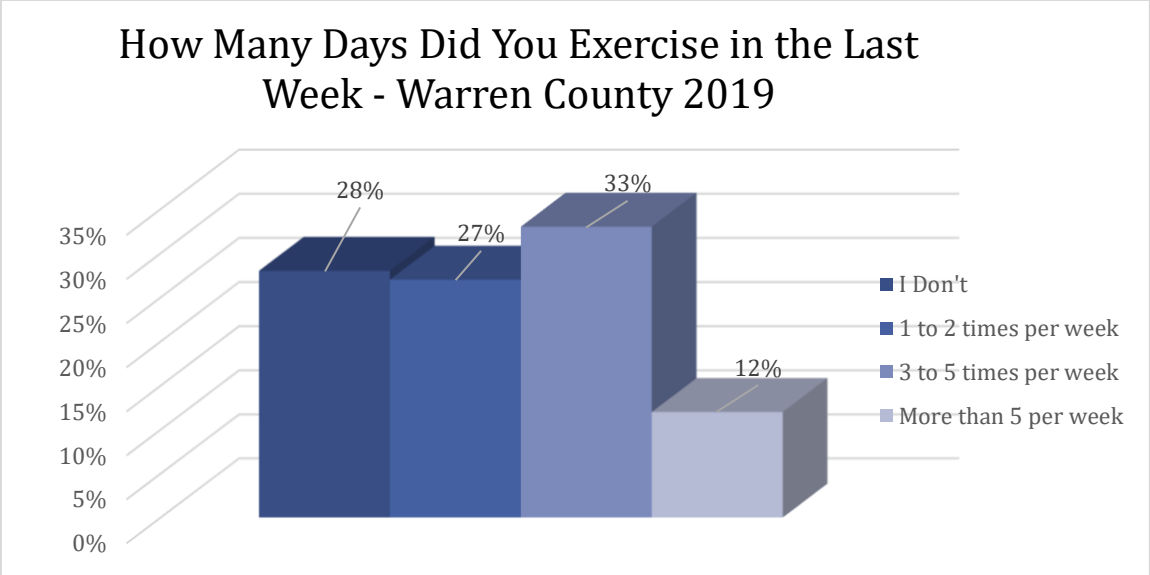
Prostate screening had no significant correlates other than men.

Colorectal screening had no significant correlates other than older people.

Physical Exercise

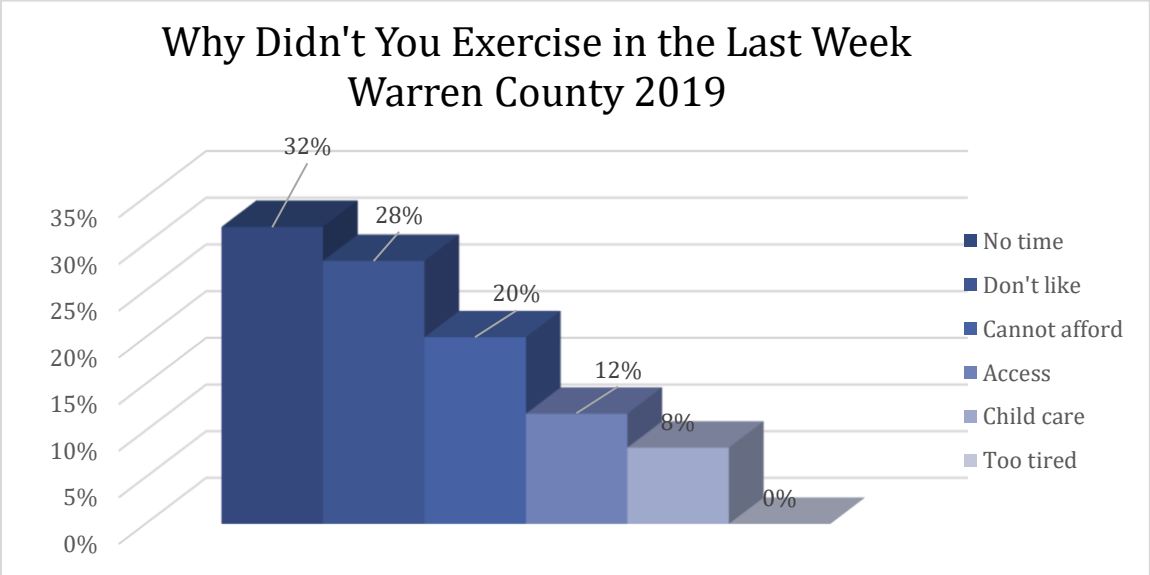
A healthy lifestyle, comprised of regular physical activity, has been shown to increase physical, mental, and emotional well-being.

CHNA survey data allow for a more detailed assessment of exercise. Specifically, 28% of respondents indicated that they do not exercise at all, while the majority (60%) of residents exercise 1-5 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 reasons for not exercising were no time (32%), and don't like to exercise (28%).



Source: CHNA Survey

Comparison to 2016 CHNA

The number of people that do not exercise between 2016 and 2019 has remained the same at 28%.

Social Determinants Related to Exercise

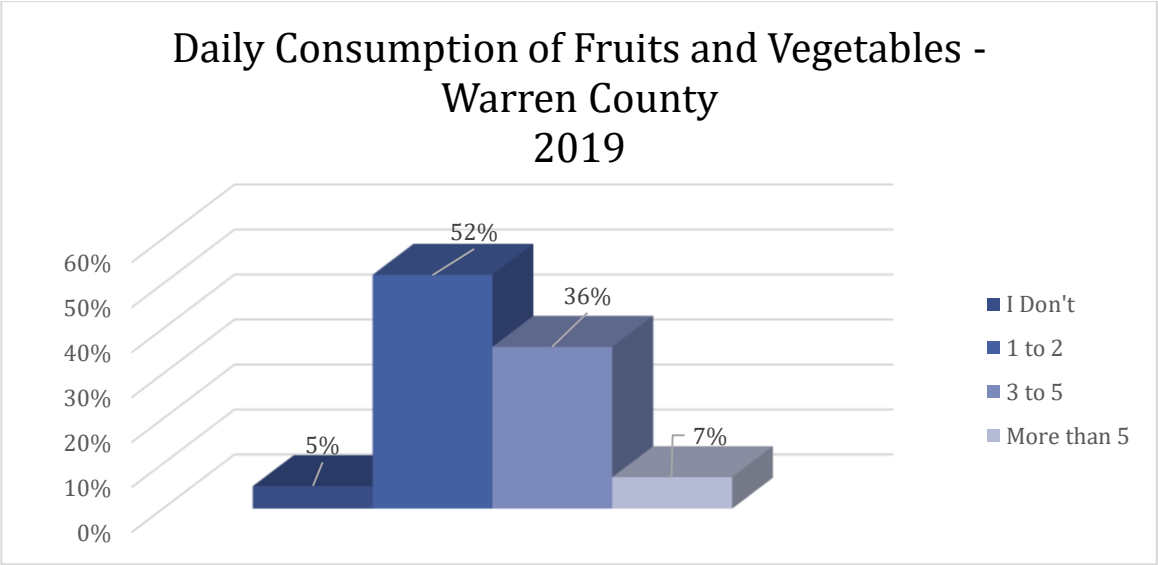
There were no significant relationships with frequency of exercise.

Frequency of exercise had no significant correlates.

Healthy Eating

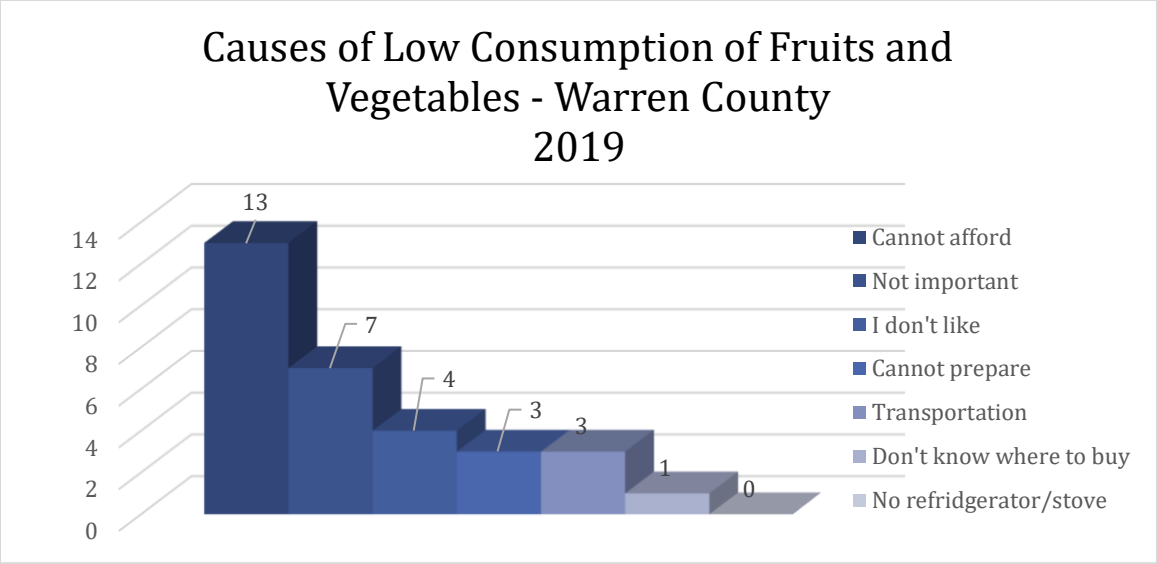
A healthy lifestyle, comprised of a proper diet, has been shown to increase physical, mental, and emotional well-being. Consequently, nutrition and diet are critical to preventative care.

Over half (57%) of residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of residents who consume five or more servings per day is only 7%.



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 affordability (13), and not important (7). Note that these data are displayed in frequencies rather than percentages given the low number of responses.



Source: CHNA Survey

Comparison to 2016 CHNA

Results of the 2019 CHNA show improvement compared to the 2016 CHNA, where 60% of respondents indicated they had two or fewer servings of fruits and vegetables per day compared to 2019 (57%).

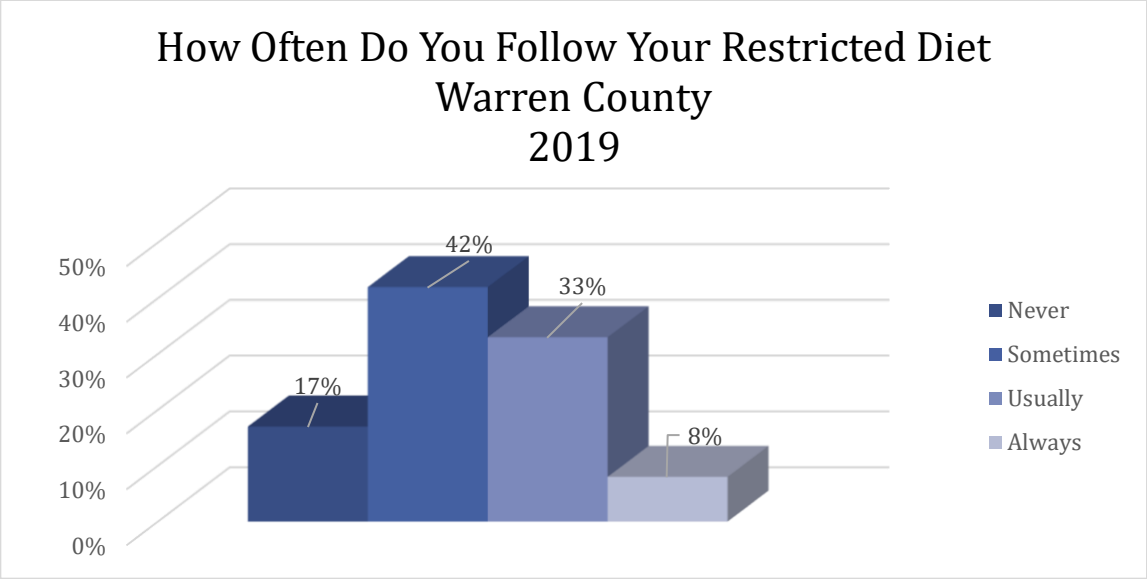
Social Determinants Related to Healthy Eating

Multiple characteristics show significant relationships with healthy eating. The following relationships were found using correlational analyses:

Consumption of fruits and vegetables tends to be more likely for those with higher income and those with a stable housing environment.

Restricted Diet

Respondents were also asked if they followed a restricted diet if recently diagnosed with a morbidity. Of respondents, 41% usually or always follow a restricted diet. **This is a new question to the 2019 CHNA.**



Source: CHNA Survey

Morbidities related to following a restricted diet

Individuals with certain morbidities may show significant relationships with following a restricted diet. However, no relationships were found using correlational analyses:

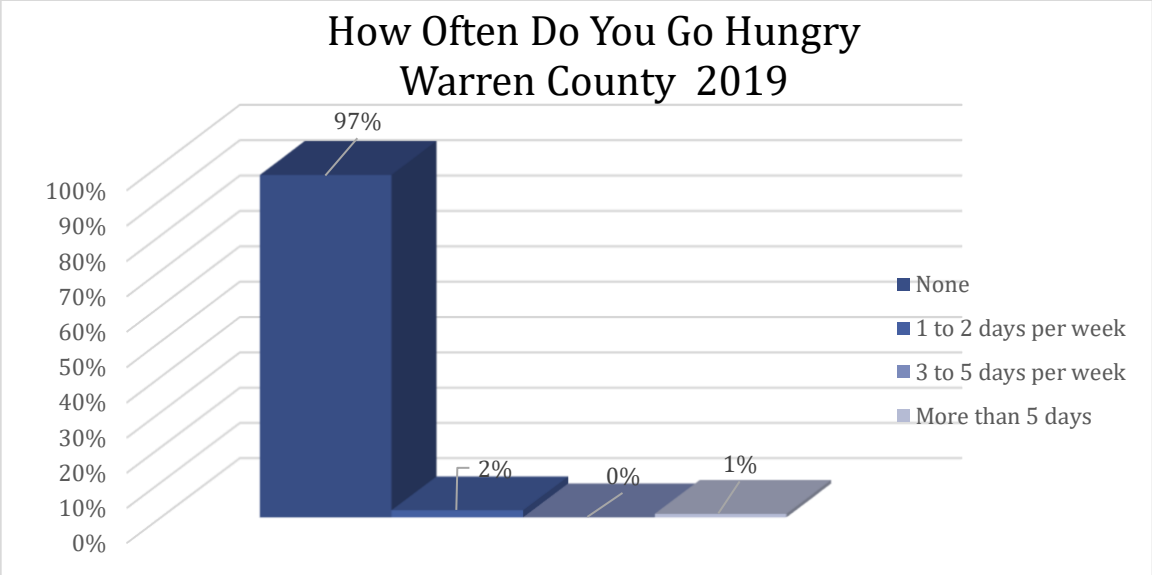
Following a restricted diet showed no significant correlates.

2.3 Understanding Food Insecurity

Importance of the measure: It is essential that everyone has access to food and drink necessary for living healthy lives. Food insecurity exists when people don't have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs for a healthy life. **This is a new section to the 2019 CHNA.**

Prevalence of Hunger

Respondents were asked, "How many days a week do you or your family members go hungry?" The vast majority of respondents indicated they do not go hungry, however, 3% indicated they go hungry.



Source: CHNA Survey

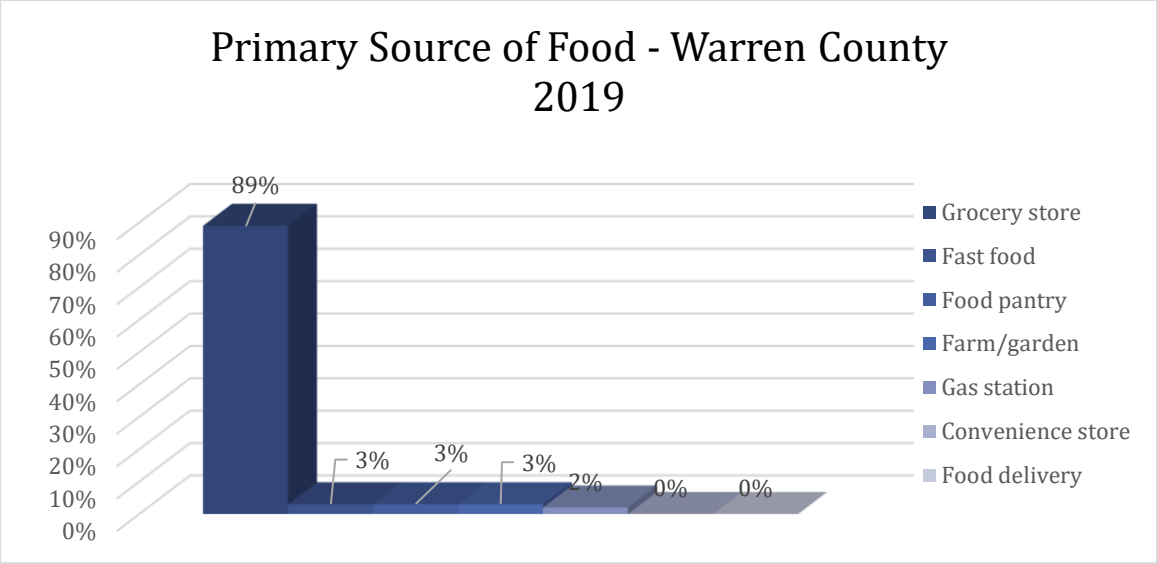
Social Determinants Related to Prevalence of Hunger

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

> **Prevalence of Hunger** tends to be more likely for men, those with lower education, those with less income and those in an unstable (e.g., homeless) housing environment.

Primary Source of Food

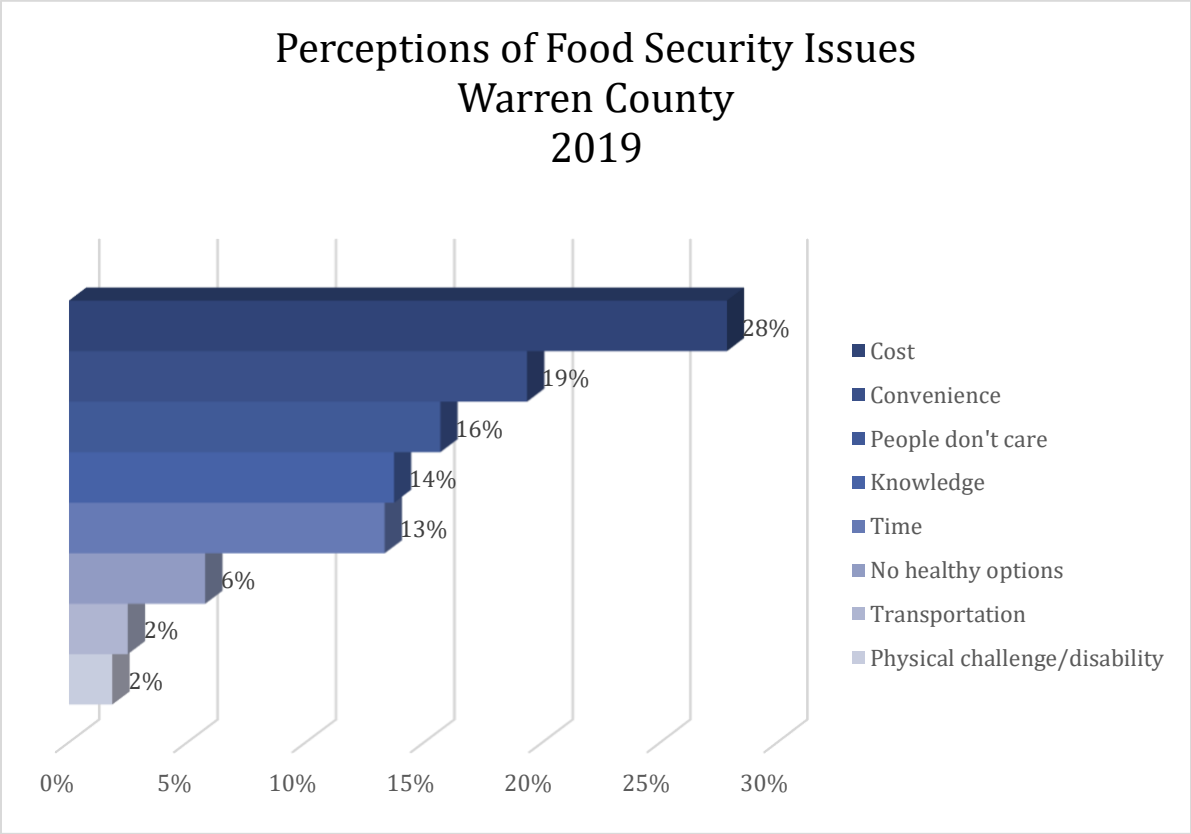
Respondents were asked to identify their primary source of food. It can be seen that the majority (89%) identified a grocery store. **This is a new section in the 2019 CHNA.**



Source: CHNA Survey

Community Perceptions of Causes for Food Insecurity

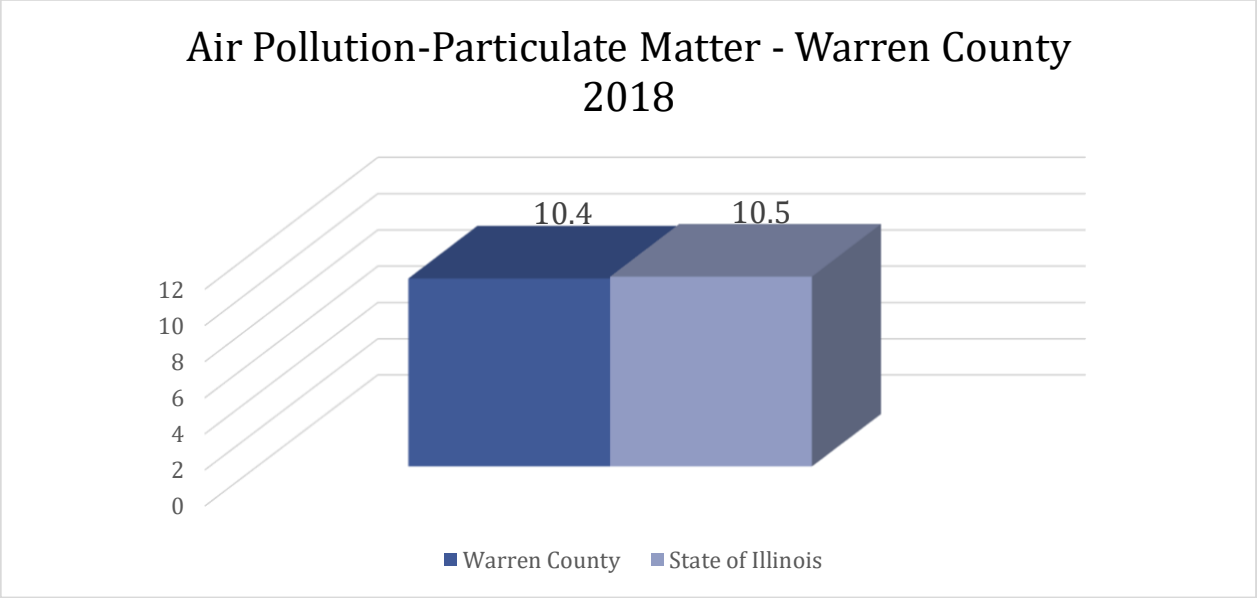
Respondents were asked to identify issues with food insecurity. The most prevalent answer was cost (28%), followed by convenience (19%). **This is a new section to the 2019 CHNA.**



Source: CHNA Survey

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 Warren County (10.4) is slightly lower than the State average of 10.5.



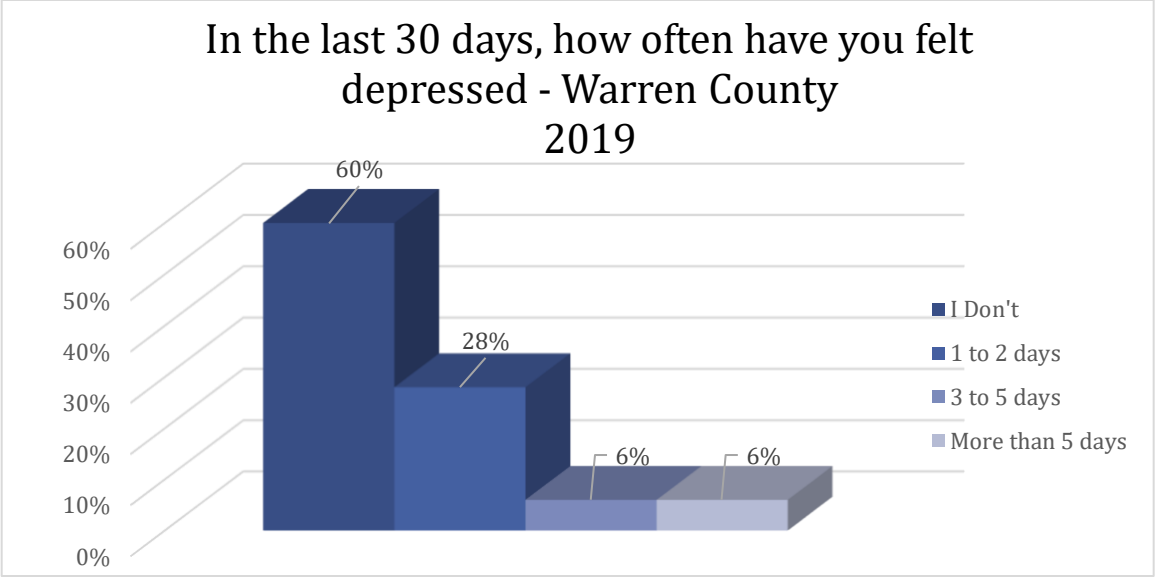
Source: County Health Rankings 2018 Data

2.5 Health Status

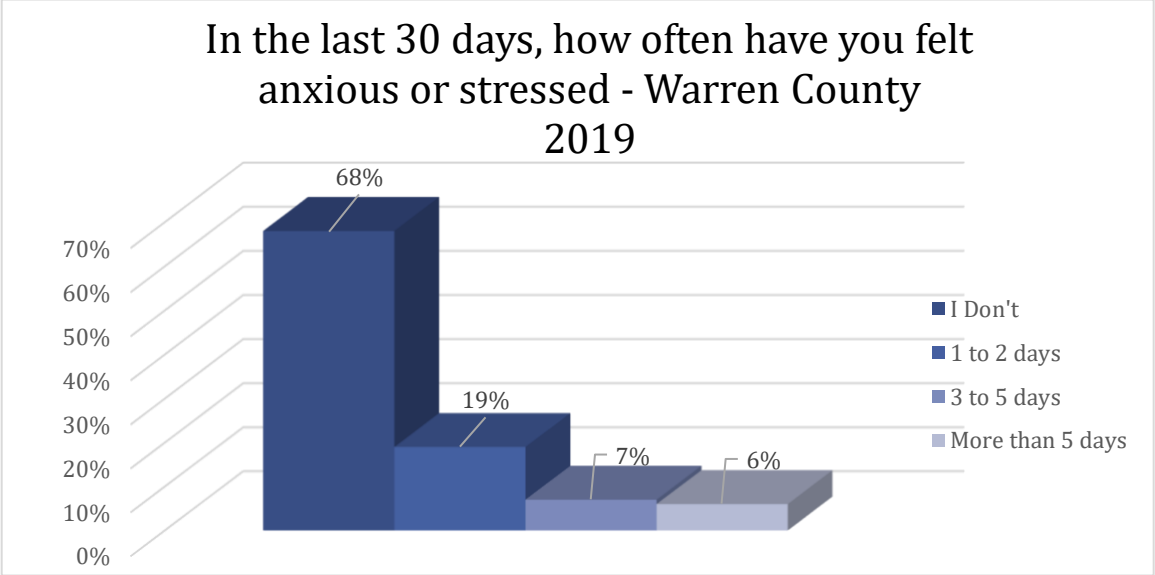
Importance of the measure: Self-perceptions of health can provide important insights to help manage population health. Not only do self-perceptions provide benchmarks regarding health status, but they can also provide insights into how accurately people perceive their own health.

Mental Health

The survey asked respondents to indicate specific issues, such as depression and stress/anxiety. Of respondents, 60% indicated they did not feel depressed in the last 30 days and 68% indicated they did not feel anxious or stressed. **This is a new section to the 2019 CHNA.**



Source: CHNA Survey



Source: CHNA Survey

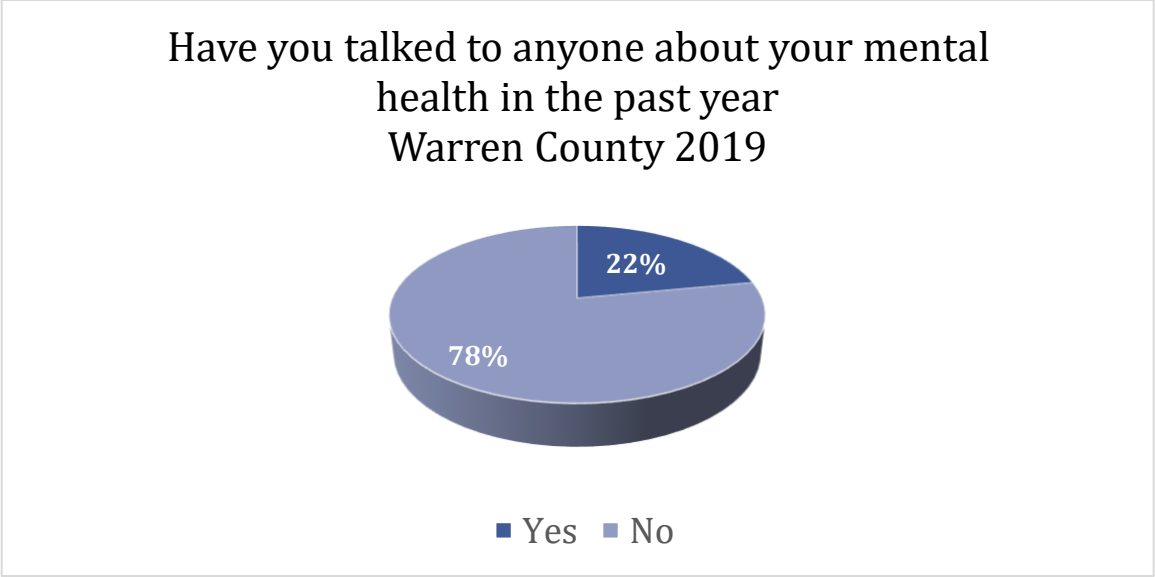
Social Determinants Related to Behavioral Health

Multiple characteristics show significant relationships with behavioral health. The following relationships were found using correlational analyses:

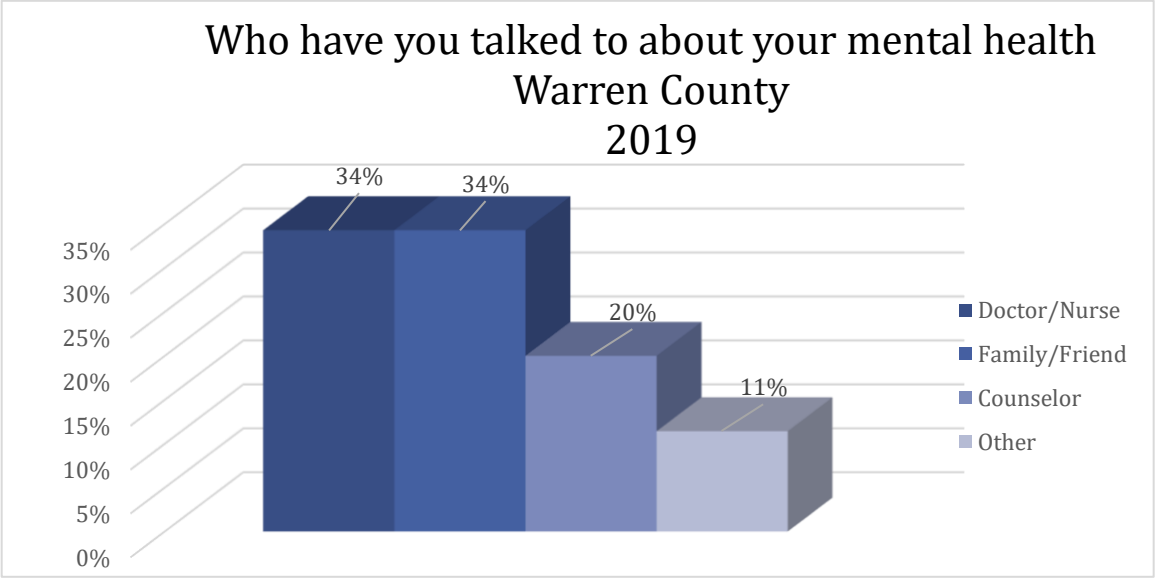
Depression tends to be rated higher for younger people, and those in an unstable (e.g., homeless) housing environment.

Stress and anxiety tend to be rated higher for younger people, and those in an unstable (e.g., homeless) housing environment.

Respondents were also asked if they spoke with anyone about their mental health in the past year. Of respondents 22% indicated that they spoke to someone, the most common responses were doctor/nurse (34%) and friend/family (34%).



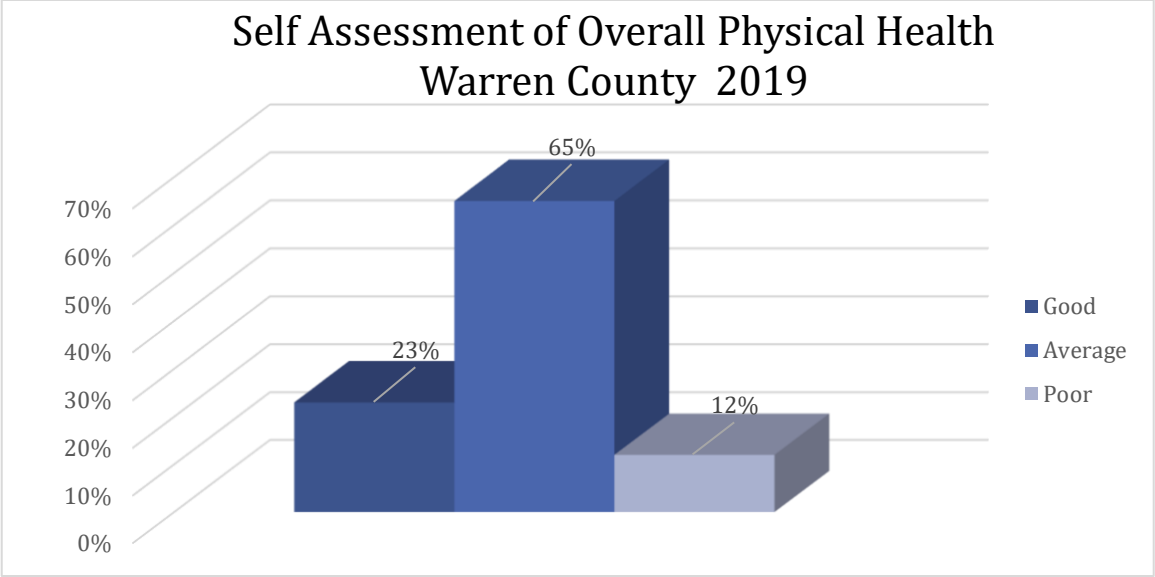
Source: CHNA Survey



Source: CHNA Survey

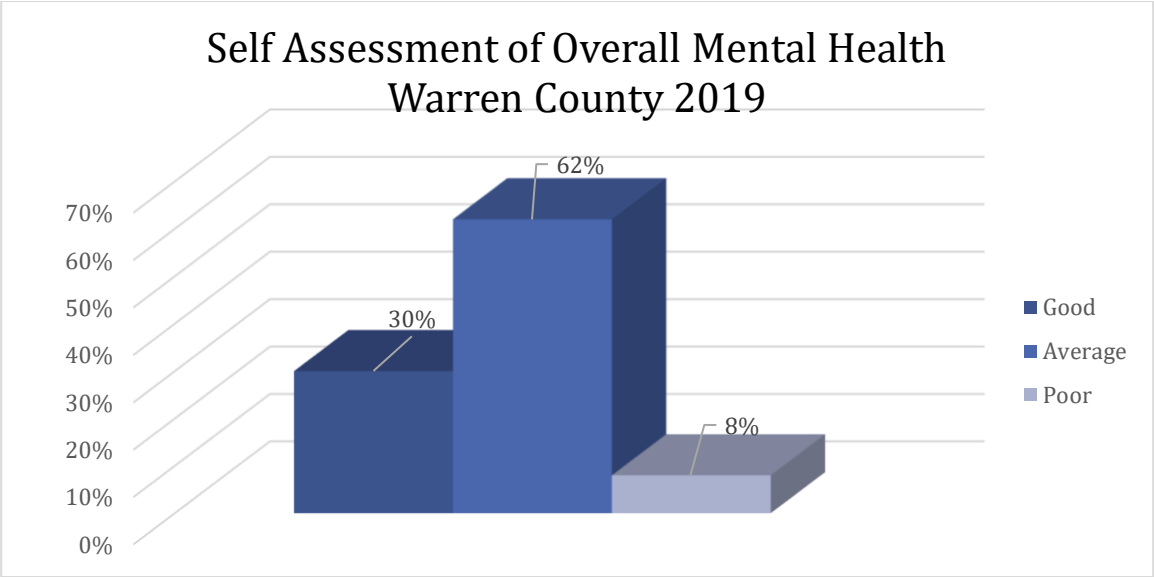
Self-Perceptions of Overall Health

In regard to self-assessment of overall physical health, 12% of respondents report having poor overall physical health.



Source: CHNA Survey

In regard to self-assessment of overall mental health, 8% of respondents stated they have poor overall mental health.



Source: CHNA Survey

Comparison to 2016 CHNA

With regard to physical health, more people see themselves in poor health in 2019 (12%) than 2016 (5%). With regard to mental health, more people see themselves in poor health in 2019 (8%) than 2016 (5%).

Social Determinants Related to Self-Perceptions of Health

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

Perceptions of physical health tend to be higher for older people, those with higher education, and those with a stable housing environment.

Perceptions of mental tend to be higher for older people, men, those with income and those with a stable housing environment.

2.6 Key Takeaways from Chapter 2

- ✓ INCREASED RATE OF PEOPLE THAT DO NOT HAVE ACCESS TO MEDICAL CARE.
- ✓ DECREASED RATE OF PEOPLE THAT DO NOT HAVE ACCESS TO DENTAL CARE.
- ✓ INCREASED NUMBER OF PEOPLE HAVING HEALTH INSURANCE.
- ✓ WHILE IMPROVING, THE MAJORITY OF PEOPLE EXERCISE LESS THAN 2 TIMES PER WEEK AND CONSUME 2 OR FEWER SERVINGS OF FRUITS/VEGETABLES PER DAY.
- ✓ APPROXIMATELY 1/3 OF RESPONDENTS EXPERIENCED DEPRESSION OR STRESS IN THE LAST 30 DAYS.

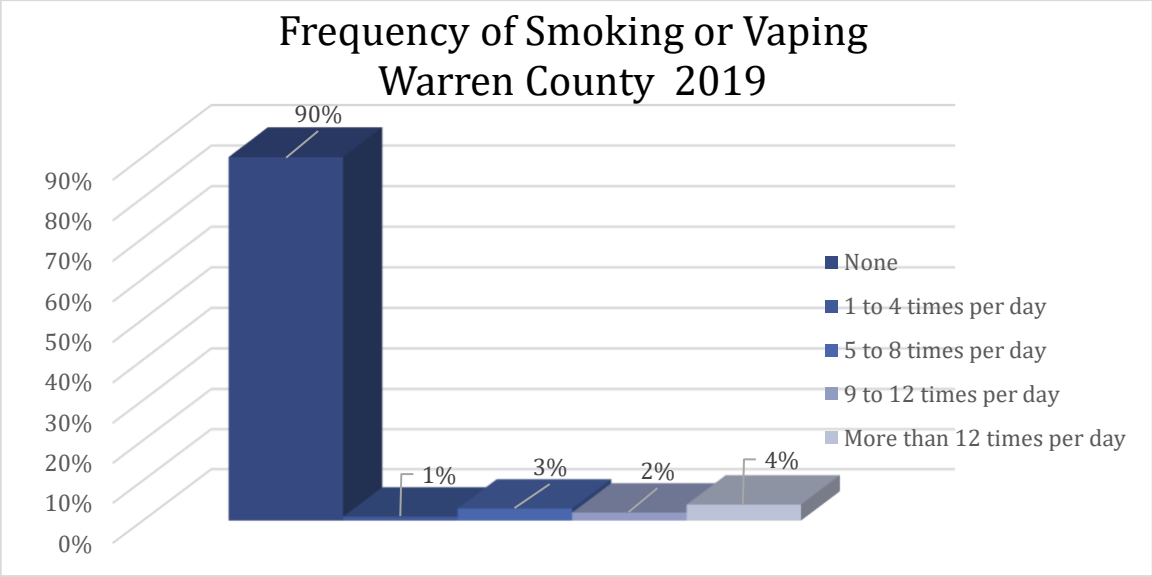
CHAPTER 3 OUTLINE

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.

CHNA survey data show 90% of respondents do not smoke and 4% state they smoke or vape more than 12 times per day.



Source: CHNA Survey

Comparison to 2016 CHNA

Results improved between 2016 and 2019, where 77% of people did not smoke/vape in 2016 and 90% do not smoke/vape in 2019

Social Determinants Related to Smoking or Vaping

Multiple characteristics show significant relationships with smoking or vaping. The following relationships were found using correlational analyses:

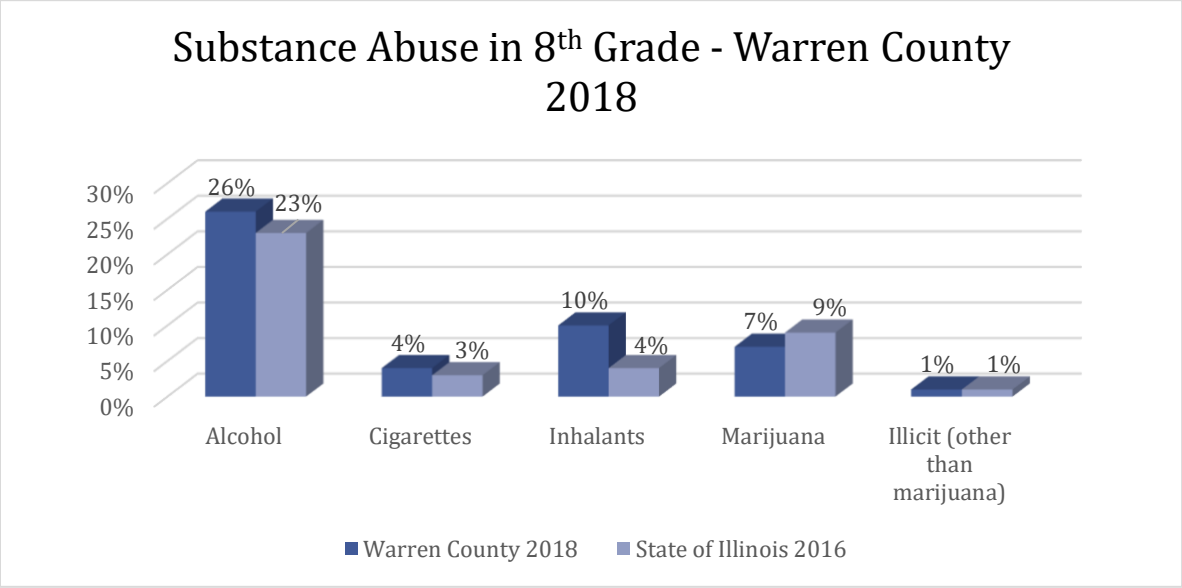
Smoking/vaping tends to be rated higher by younger people.

3.2 Drug and Alcohol Abuse

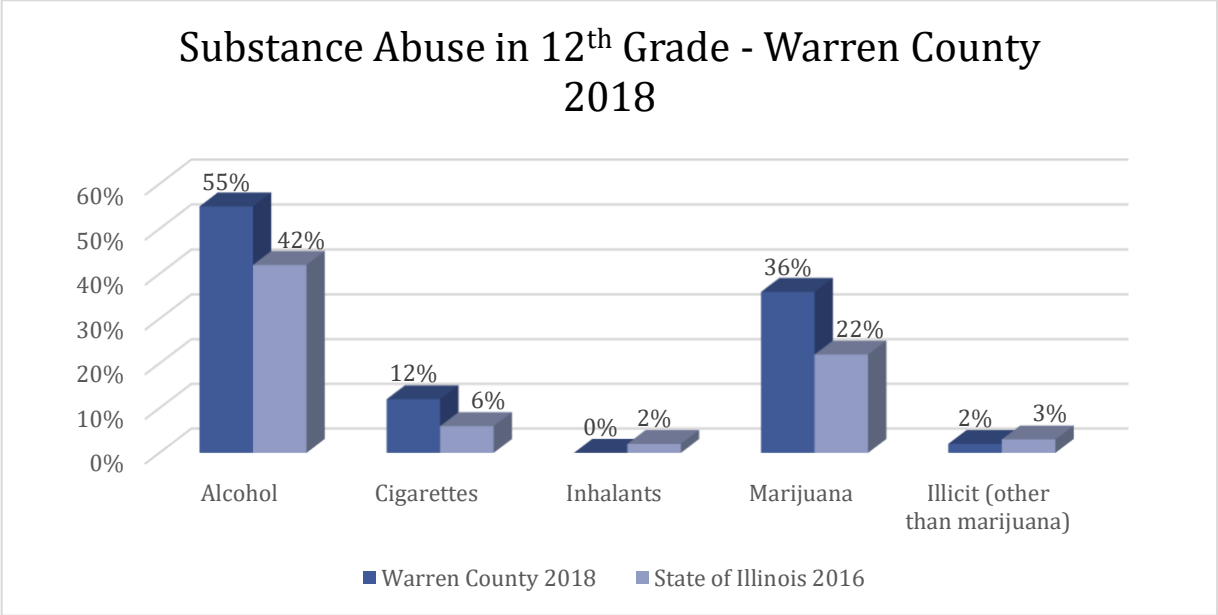
Importance of the measure: Alcohol and drugs impair decision-making, often leading to adverse consequences and outcomes. Research suggests that alcohol is a gateway drug for youth, leading to increased usage of controlled substances in adult years. Accordingly, the substance abuse values and behaviors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

Youth Substance Abuse

Data from the 2018 Illinois Youth Survey measures illegal substance use (alcohol, tobacco, and other drugs – mainly marijuana) among adolescents. Warren County is at or above State averages in all categories among 8th graders except for one category: marijuana. Among 12th graders, Warren County is at or above State averages in all categories except for inhalants and illicit drugs.



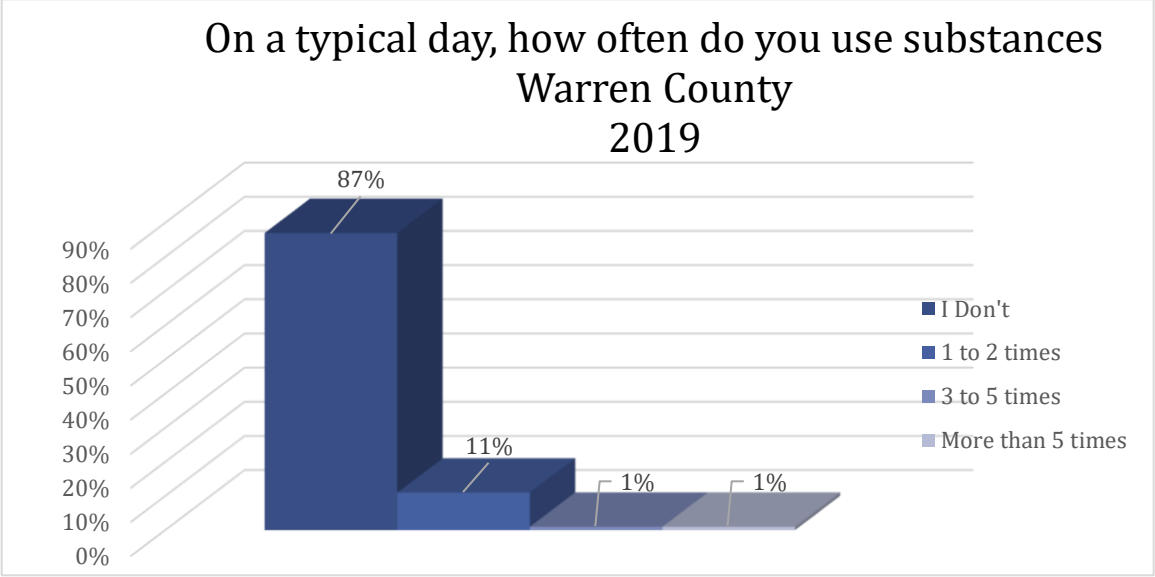
Source: University of Illinois Center for Prevention Research and Development



Source: University of Illinois Center for Prevention Research and Development

Adult Substance Abuse

Respondents were asked "On a typical DAY, how often to do you use substances (either legal or illegal) to make yourself feel better?" Note given the increase in opioid abuse, use of legal drugs was included in the question. Of respondents, 86% indicated they do not use substances to make themselves feel better. **This is a new section to the 2019 CHNA.**



Source: CHNA Survey

Social Determinants Related to Substance Abuse

Multiple characteristics show significant relationships with substance abuse. The following relationships were found using correlational analyses:

> **Use of substances** tends to be rated higher by those in an unstable (e.g., homeless) housing environment.

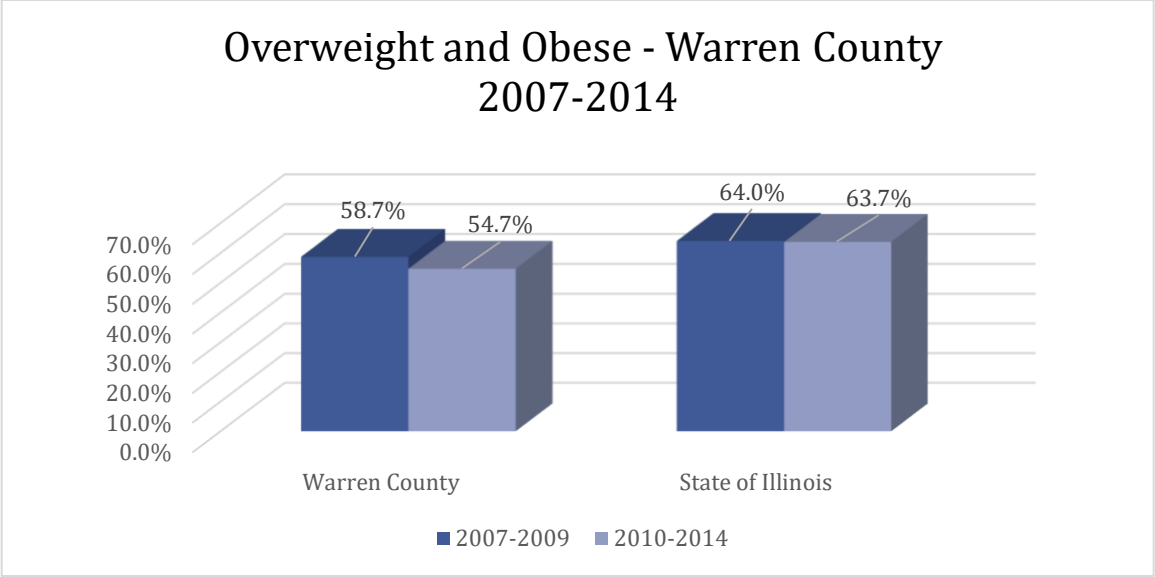
3.3 Overweight and Obesity

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 Warren 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.

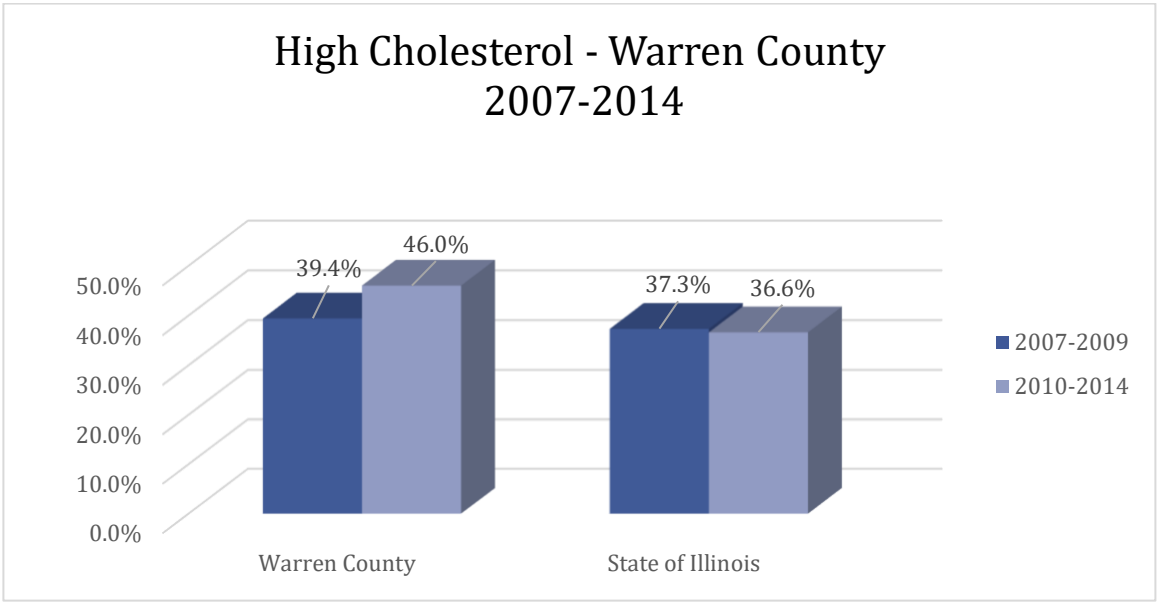
In Warren County, the number of people diagnosed with obesity and being overweight has decreased over the years from 2007-2009 to 2010-2014. Note specifically that the percentage of obese and overweight people has decreased from 58.7% to 54.7%. Overweight and obesity rates in Illinois have decreased from 2009 (64.0%) to 2014 (63.7%). Note that data have not been updated by the Illinois Department of Public Health. However, note in the 2019 CHNA survey, respondents indicated that being overweight was their most prevalently diagnosed health condition.



Source: Illinois Behavioral Risk Factor Surveillance System

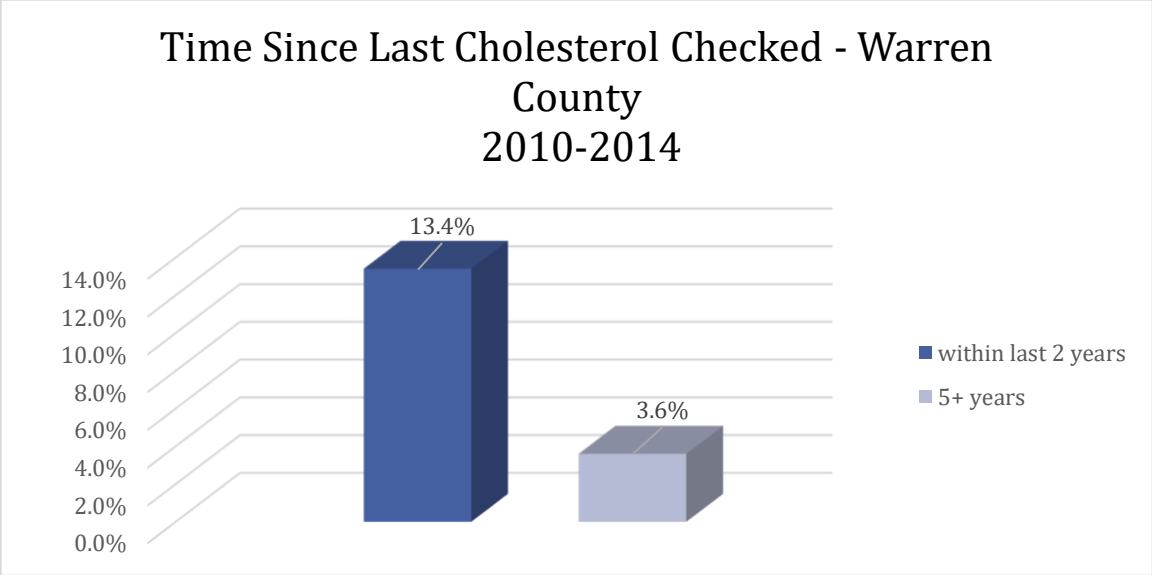
3.4 Predictors of Heart Disease

Residents in Warren County report a higher than State average prevalence of high cholesterol. The percentage of residents who report they have high cholesterol is higher in Warren County (46%) than the State of Illinois average of 36.6%. Note that data have not been updated by the Illinois Department of Public Health.



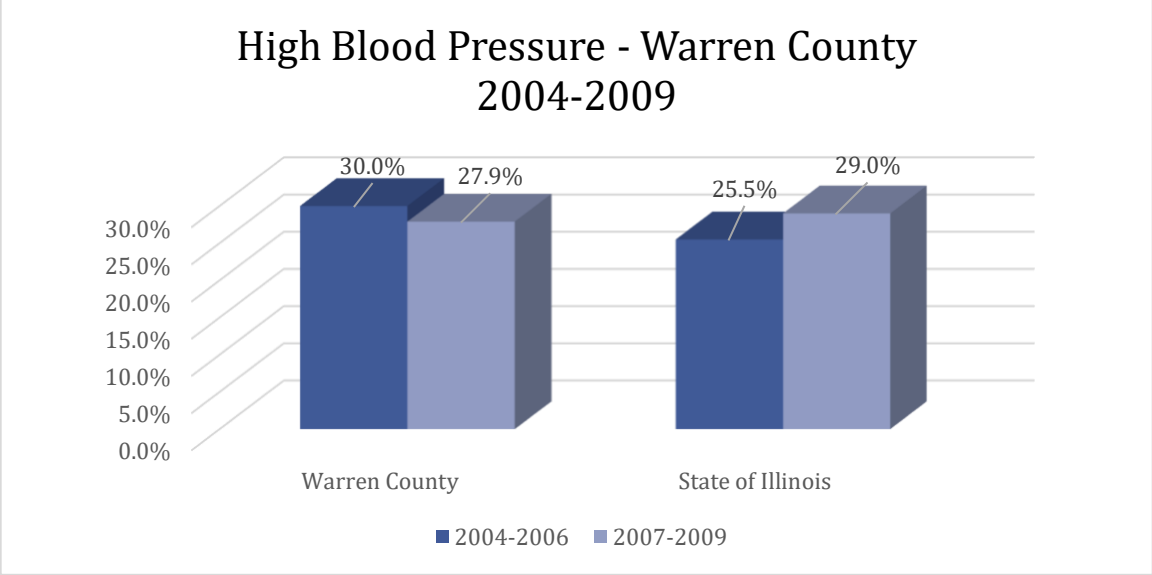
Source: Illinois Behavioral Risk Factor Surveillance System

However, some residents of Warren County report having their cholesterol checked. In 2010-2014, data are only available on residents who have had cholesterol checked between 1-2 years ago (13.4%) and over 5 years ago (3.6%). Note that data have not been updated by the Illinois Department of Public Health.



Source: Illinois Behavioral Risk Factor Surveillance System

With regard to high blood pressure, Warren County has a lower percentage of residents with high blood pressure than residents in the State of Illinois as a whole. The percentage of Warren County residents reporting they have high blood pressure in 2009 decreased from 30% to 27.9%. Note that data have not been updated by the Illinois Department of Public Health.



Source: Illinois Behavioral Risk Factor Surveillance System

3.5 Key Takeaways from Chapter 3

- ✓ Tobacco/vaping usage has decreased significantly in Warren County.
- ✓ Substance use among 8th and 12th graders for most categories is higher than State averages .
- ✓ The percentage of people who are overweight and obese has decreased in Warren County.
- ✓ Risk factors for heart disease are increasing.

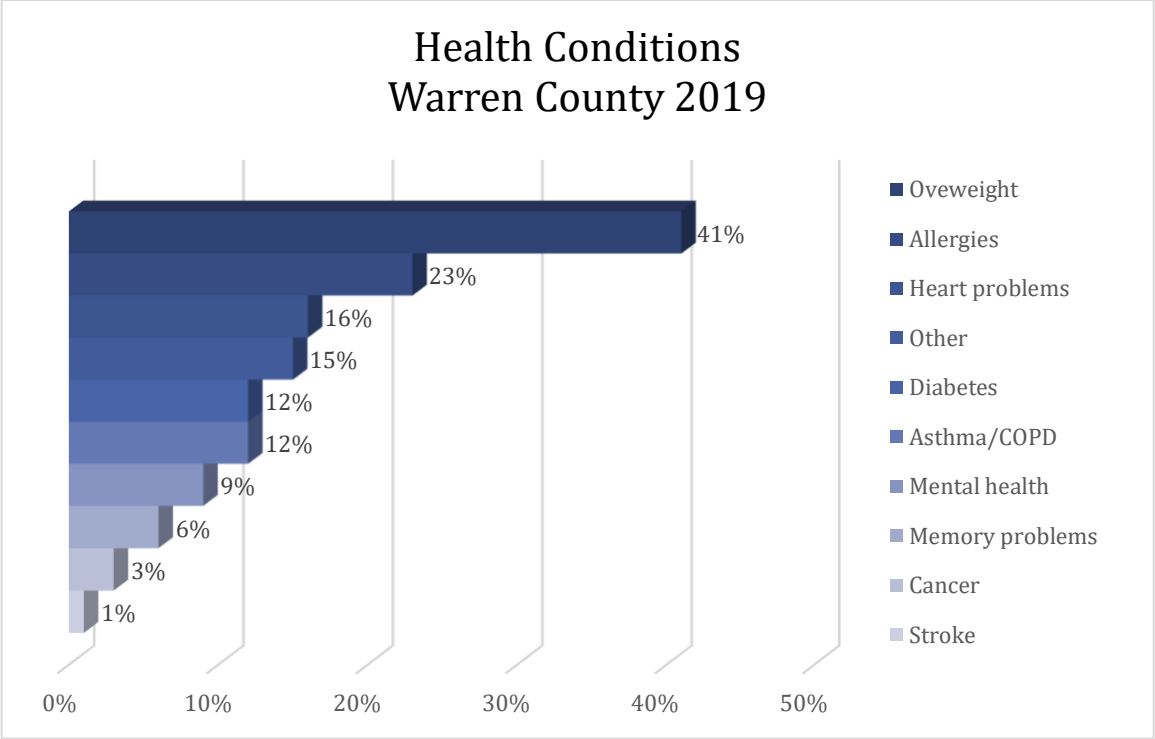
CHAPTER 4 OUTLINE

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 Warren County hospitals using COMP data. Note that hospital-level data only show hospital admissions and do not reflect outpatient treatments and procedures.

4.1 Self-Identified Health Conditions

Survey respondents were asked to self-identify any health conditions. Note that being overweight (41%) was significantly higher than any other health conditions. This percentage is significantly lower than secondary sources. Specifically, BRFSS data indicate that roughly two-thirds of the population is overweight or obese. Most other self-identified morbidities reflected existing sources of secondary data accurately (e.g., diabetes 12%). **This is a new section to the 2019 CHNA.**



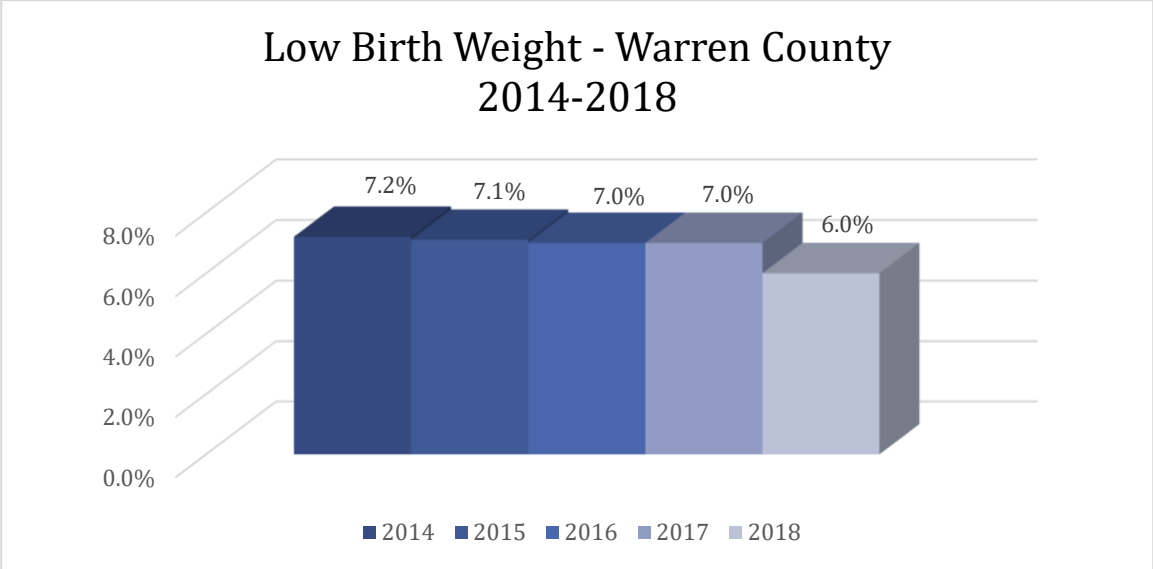
Source: CHNA Survey

4.2 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 healthy babies. 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.

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 Warren County decreased from 2014 (7.2%) to 2018 (6.0%).



Source: http://www.countyhealthrankings.org

4.3 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

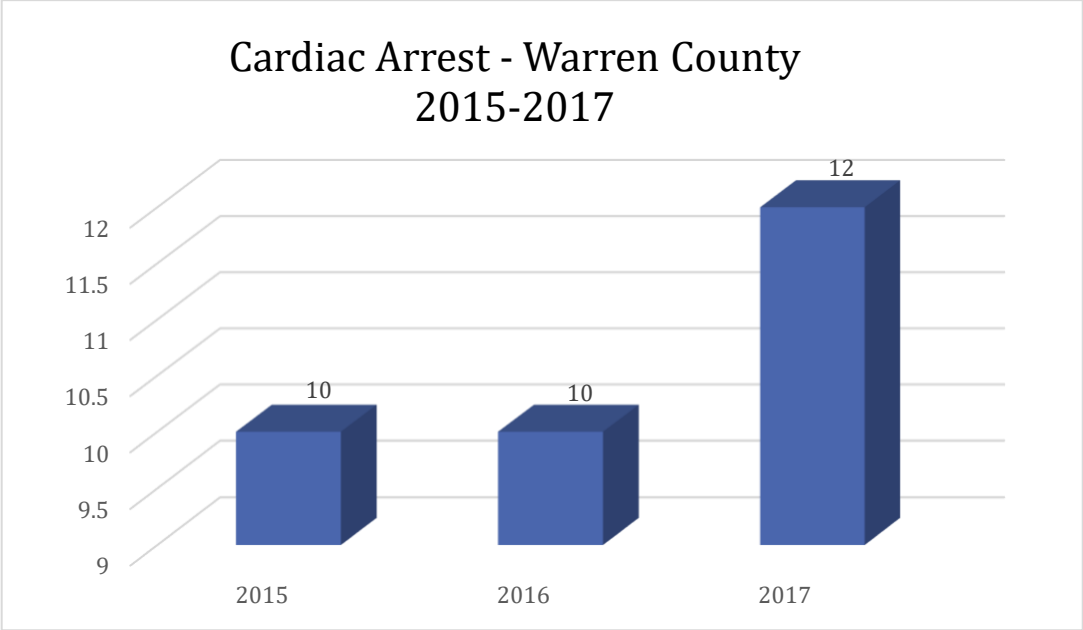
Coronary Atherosclerosis, sometimes-called hardening of the arteries, can slowly narrow and harden the arteries throughout the body. When atherosclerosis affects the arteries of the heart, it is called coronary artery disease.

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 Warren County area hospitals has been low, and 2 cases were reported in 2015. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

Cardiac Arrest

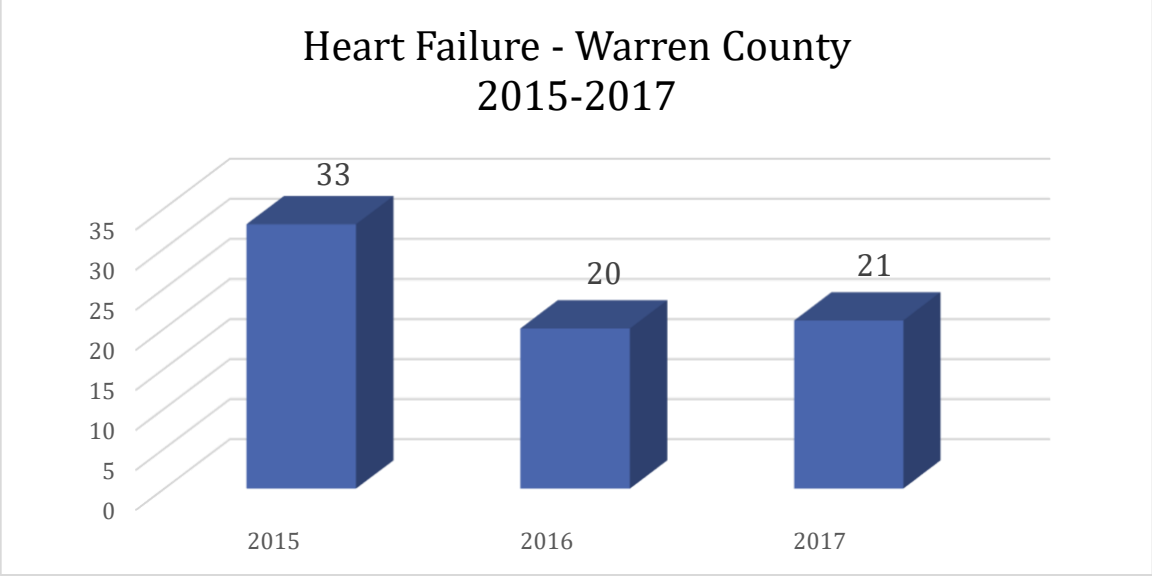
Cases of dysrhythmia and cardiac arrest at Warren County area hospitals increased by 2 cases between FY15 and FY17. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2017

Heart Failure

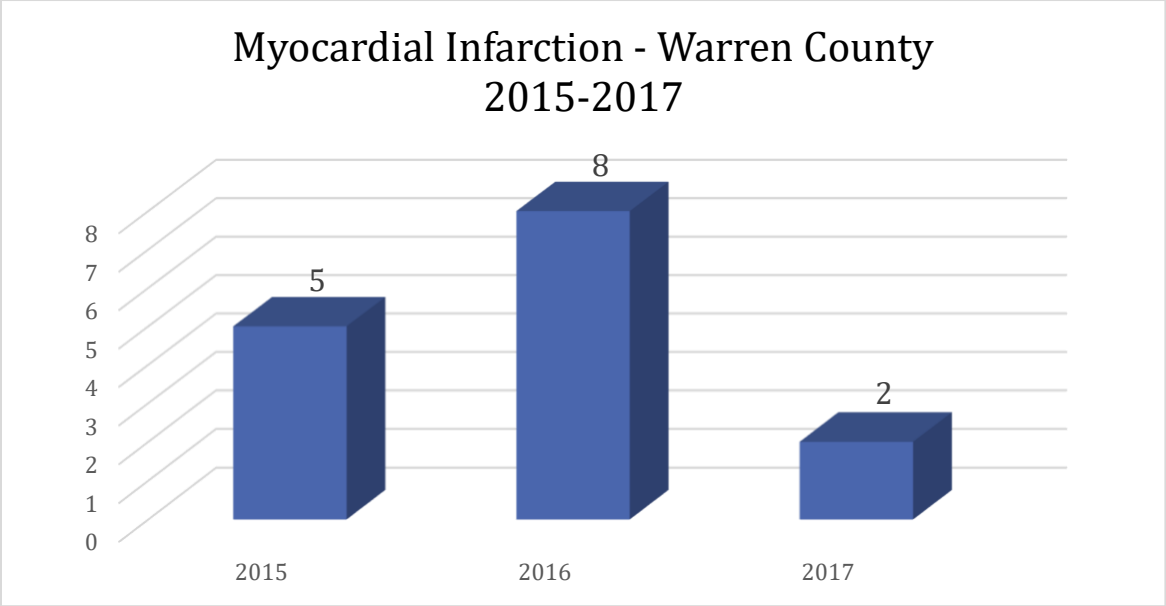
The number of treated cases of heart failure at Warren County area hospitals decreased. In FY 2015, 33 cases were reported, and in FY 2017, there were 21 cases reported. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2017

Myocardial Infarction

The number of treated cases of myocardial infarction at area hospitals in Warren County increased from 5 in 2015 to 8 in 2016. The number of cases of myocardial infarction then decreased to 2 in 2017. Note that hospital-level data only show hospital admissions.



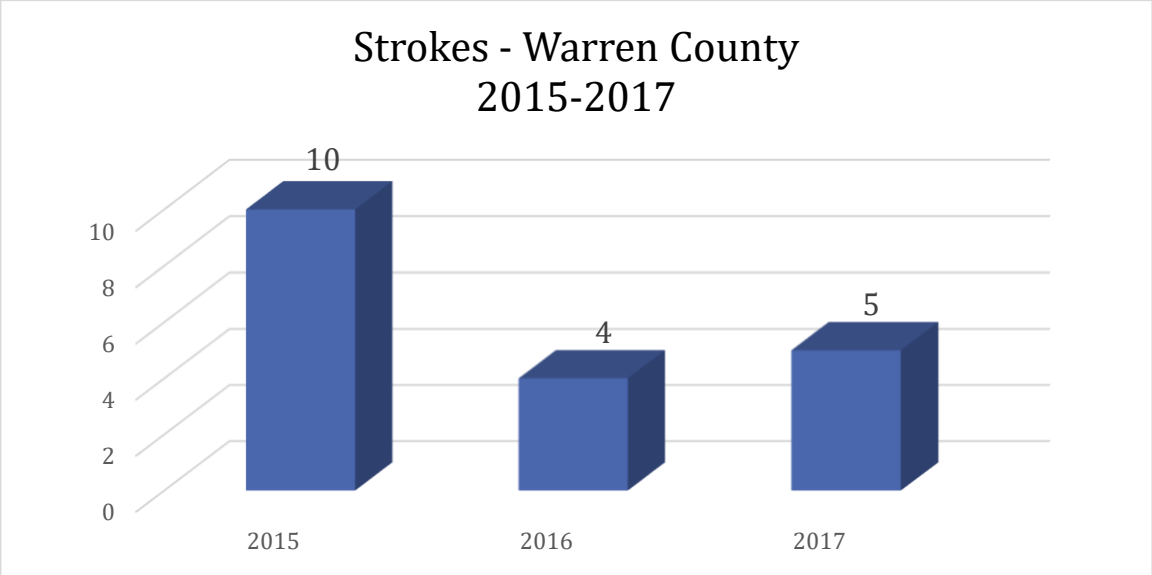
Source: COMPdata 2017

Arterial Embolism

There were no treated cases of arterial embolism at Warren County area hospitals between 2015 and 2017. Note that hospital-level data only show hospital admissions.

Strokes

The number of treated cases of stroke at Warren County area hospitals decreased between FY 2015 and FY 2017. Note that hospital-level data only show hospital admissions and do not reflect outpatient treatments and procedures.



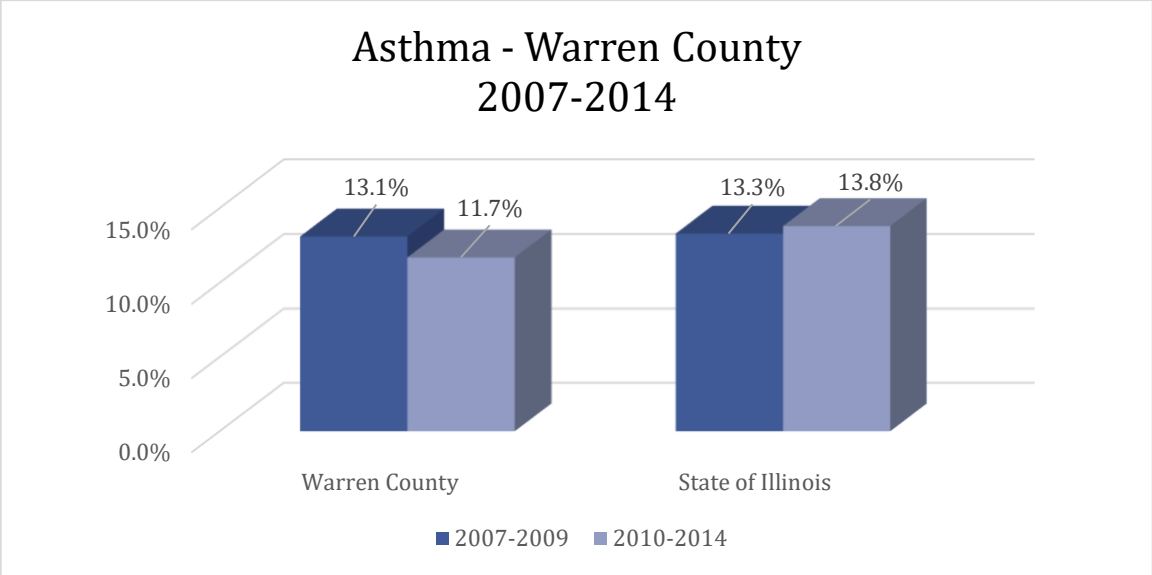
Source: COMPdata 2017

4.4 Respiratory

Importance of the measure: Disease 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.

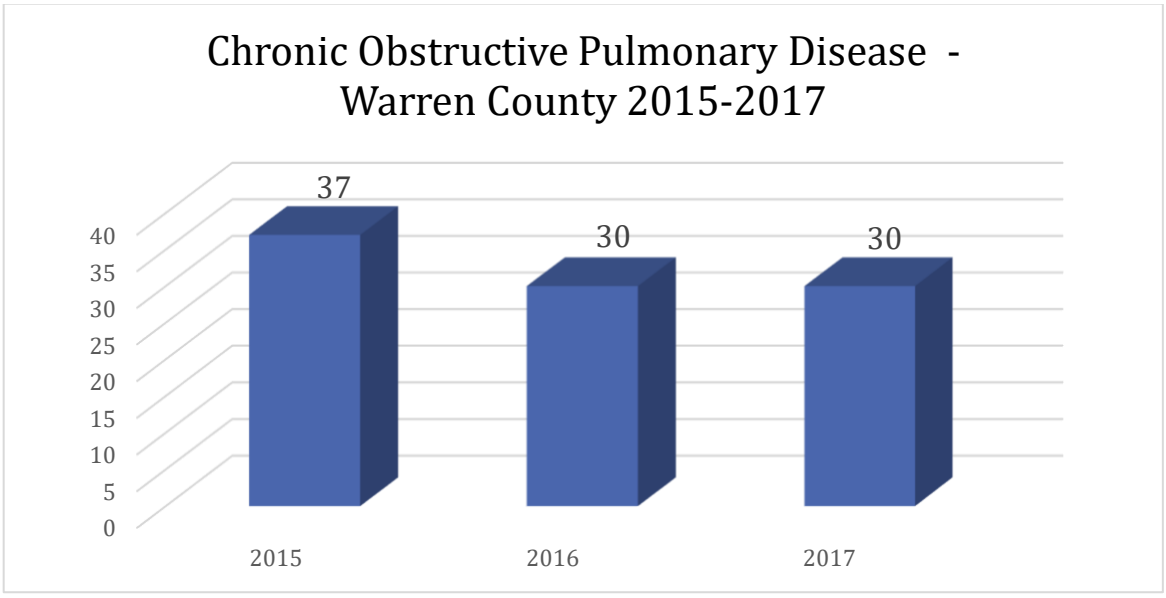
Asthma

The percentage of residents that have asthma in Warren County has decreased between 2007-2009 and 2010-2014, while State averages are increasing slightly. According to the Illinois BRFSS, asthma rates in Warren County (11.7%) are lower than the State of Illinois (13.8%). Note that data have not been updated by the Illinois Department of Public Health.



Source: Illinois Behavioral Risk Factor Surveillance System

Treated cases of COPD at Warren County area hospitals slightly decreased between FY 2015 and FY 2017. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

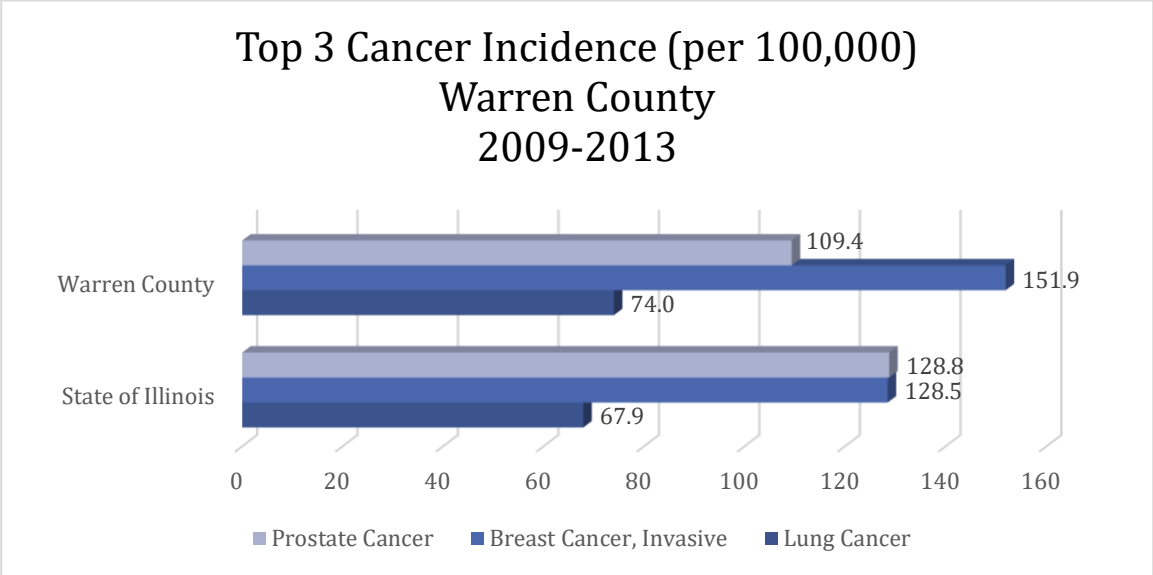


Source: COMPdata 2017

4.5 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 Warren County.

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

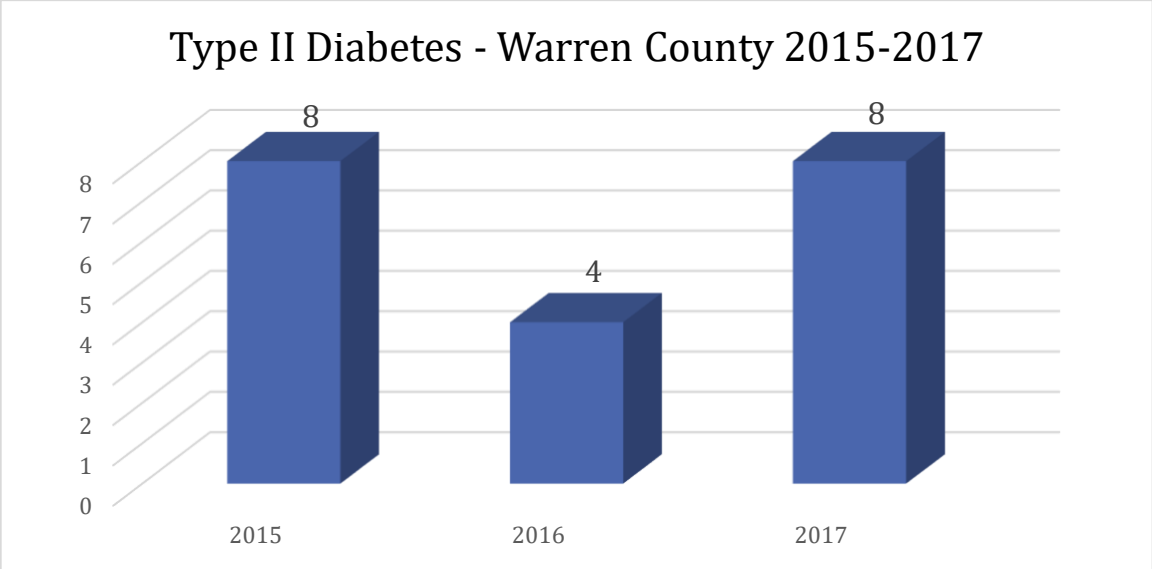


Source: http://dph.illinois.gov/sites/default/files/publications/County-Sec1-Site-Specific-Cancer-Incdence-ers1605.pdf

4.6 Diabetes

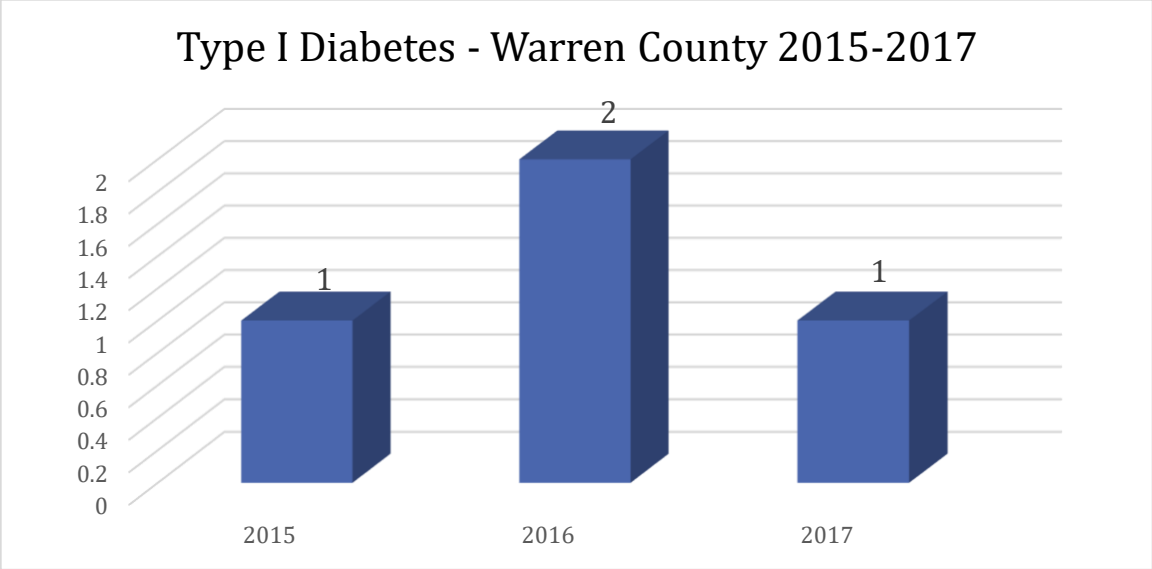
Importance of the measure: Diabetes is the leading cause of kidney failure, adult blindness and amputations and is a leading contributor to strokes and heart attacks. It is estimated that 90-95% of individuals with diabetes have Type II diabetes (previously known as adult-onset diabetes). Only 5-10%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

Inpatient cases of Type II diabetes from Warren County decreased between FY 2015 (8 cases) and FY 2016 (4 cases) and then experienced an increase in FY 2017 (8 cases). Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



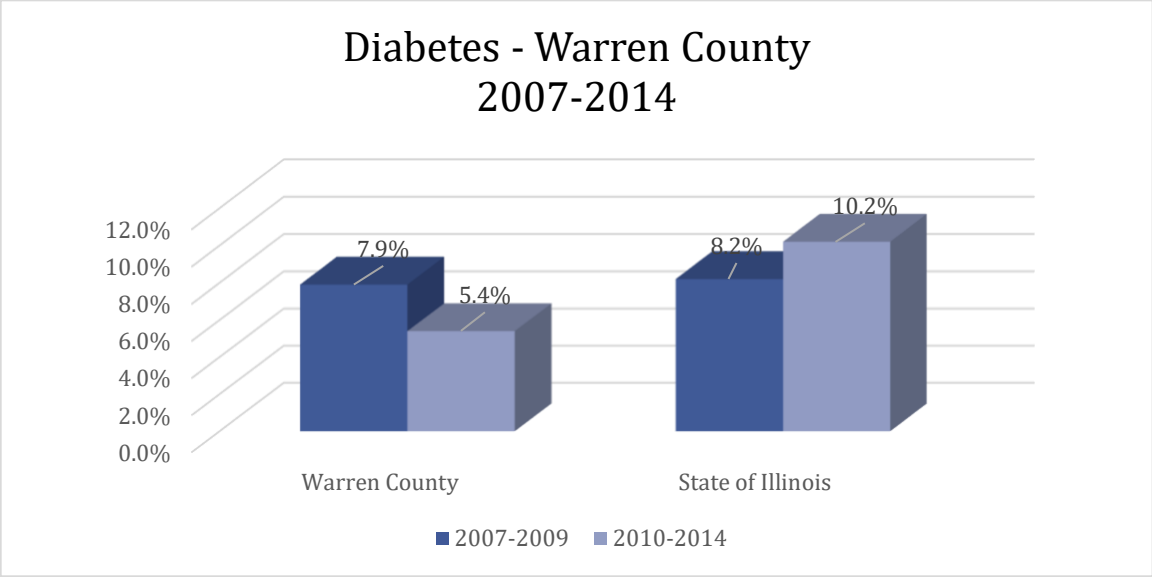
Source: COMPdata 2017

Inpatient cases of Type I diabetes show a slight increase from 2015 (1) to 2016 (2) followed by a decrease in 2017 (1) for Warren County. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



Source: COMPdata 2017

Data from the Illinois BRFSS indicate that 5.4% of Warren County residents have diabetes. Trends are encouraging, as the prevalence of diabetes is decreasing and lower in Warren County compared to data from the State of Illinois. Note that data have not been updated by the Illinois Department of Public Health.



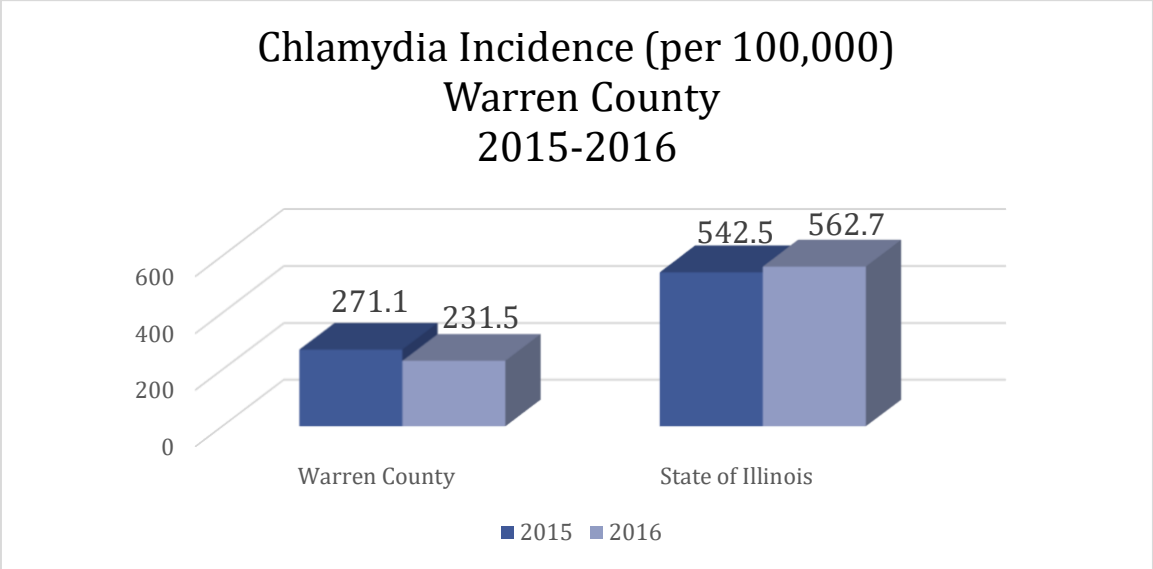
Source: Illinois Behavioral Risk Factor Surveillance System

4.7 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.

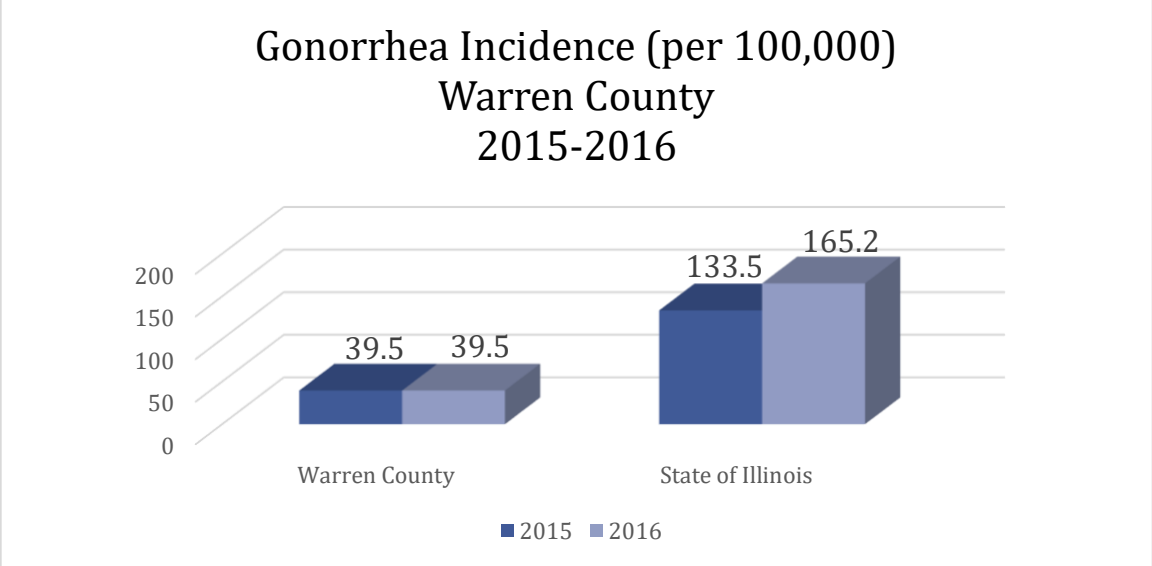
Chlamydia and Gonorrhea Cases

The data for the number of infections of chlamydia in Warren County from 2015-2016 indicate a significant decrease. However, there is an increase of incidence of chlamydia across the State of Illinois. Rates of chlamydia in Warren County are lower than State averages.



Source: Illinois Department of Public Health

The data for the number of infections of gonorrhea in Warren County indicate no change from 2015-2016, while the State of Illinois experienced a significant increase from 2015-2016.



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 (Rubeola), 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. Warren County has shown no significant outbreaks compared to state statistics, but there are limited data available.[2]

Vaccine Preventable Diseases 2006-2016 Warren County Region

Mumps	N/A	N/A	2006	2011
Warren County	N/A	N/A	1	1
State of Illinois	N/A	N/A	798	78

Pertussis	2010	2011	2012	2013
Warren County	2	1	1	1
State of Illinois	1057	1509	2026	785

Varicella	2012	2013	2015	2016
Warren County	5	1	1	2
State of Illinois	898	731	443	469

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

Tuberculosis 2017-2018 Warren County Region

Tuberculosis	2017	2018
Warren County	1	1
State of Illinois	336	319

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

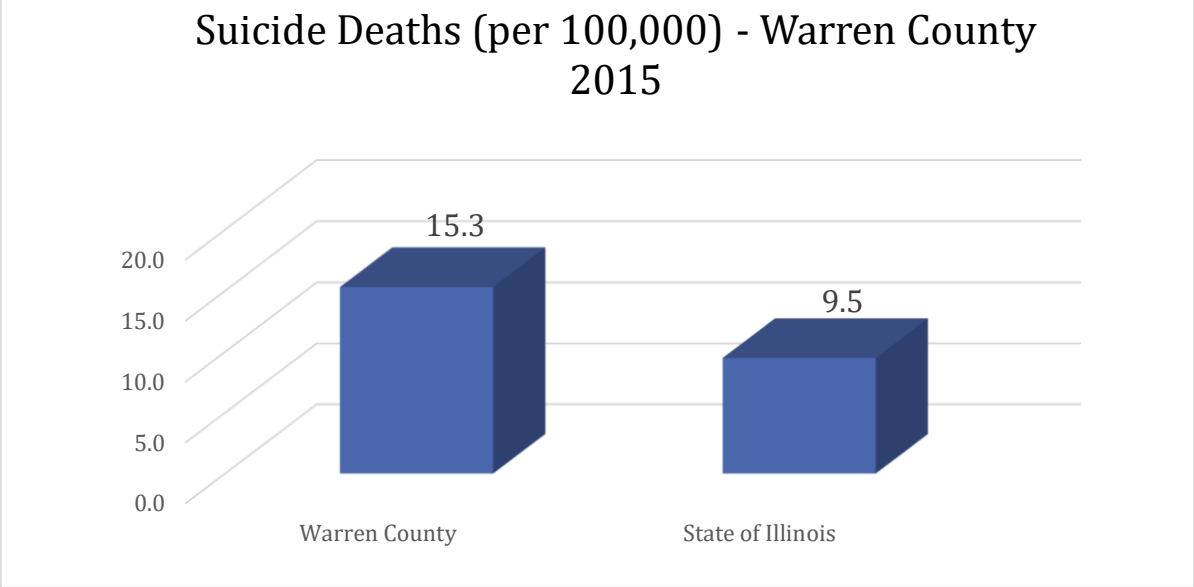
2 *Source: http://www.idph.state.il.us/about/vpcd.htm*

4.8 Injuries

Importance of the measure: 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. Unintentional injuries can occur, in part, from violent crimes.

Suicide

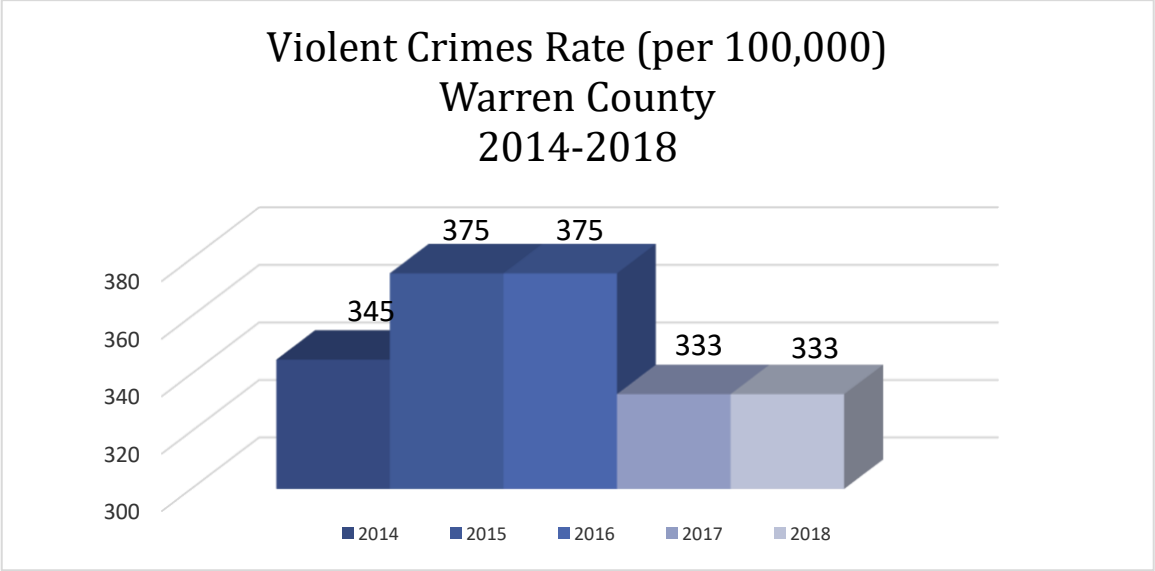
The number of suicides in Warren County indicate higher incidence than State of Illinois averages, as there were approximately 15.3 per 100,000 people in Warren County in 2015.



Source: Illinois Department of Public Health

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 fluctuated for 2014-2018 in Warren County.



Source: Illinois County Health Rankings and Roadmaps

4.9 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 Warren County are similar as a percentage of total deaths in 2017. Diseases of the Heart are the cause of 28.1% of deaths and Cancer is the cause of 19.1% of deaths in Warren County.

Top 5 Leading Causes of Death for all Races by County, 2017		
Rank	**Warren County**	**State of Illinois**
1	Diseases of Heart (28.1%)	Diseases of Heart
2	Malignant Neoplasm (19.1%)	Malignant Neoplasm
3	Chronic Lower Respiratory Disease (9.0%)	Cerebrovascular Disease
4	Stroke (7.3%)	Accidents
5	Accidents (3.9%)	Chronic Lower Respiratory Disease

Source: Illinois Department of Public Health

4.10 Key Takeaways from Chapter 4

- ✓ **Breast cancer rates in Warren County are significantly higher than State averages.**
- ✓ **Asthma has seen a reduction in Warren County and is lower than State averages.**
- ✓ **Cancer and heart disease are the leading causes of mortality in Warren County.**

CHAPTER 5 OUTLINE

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.

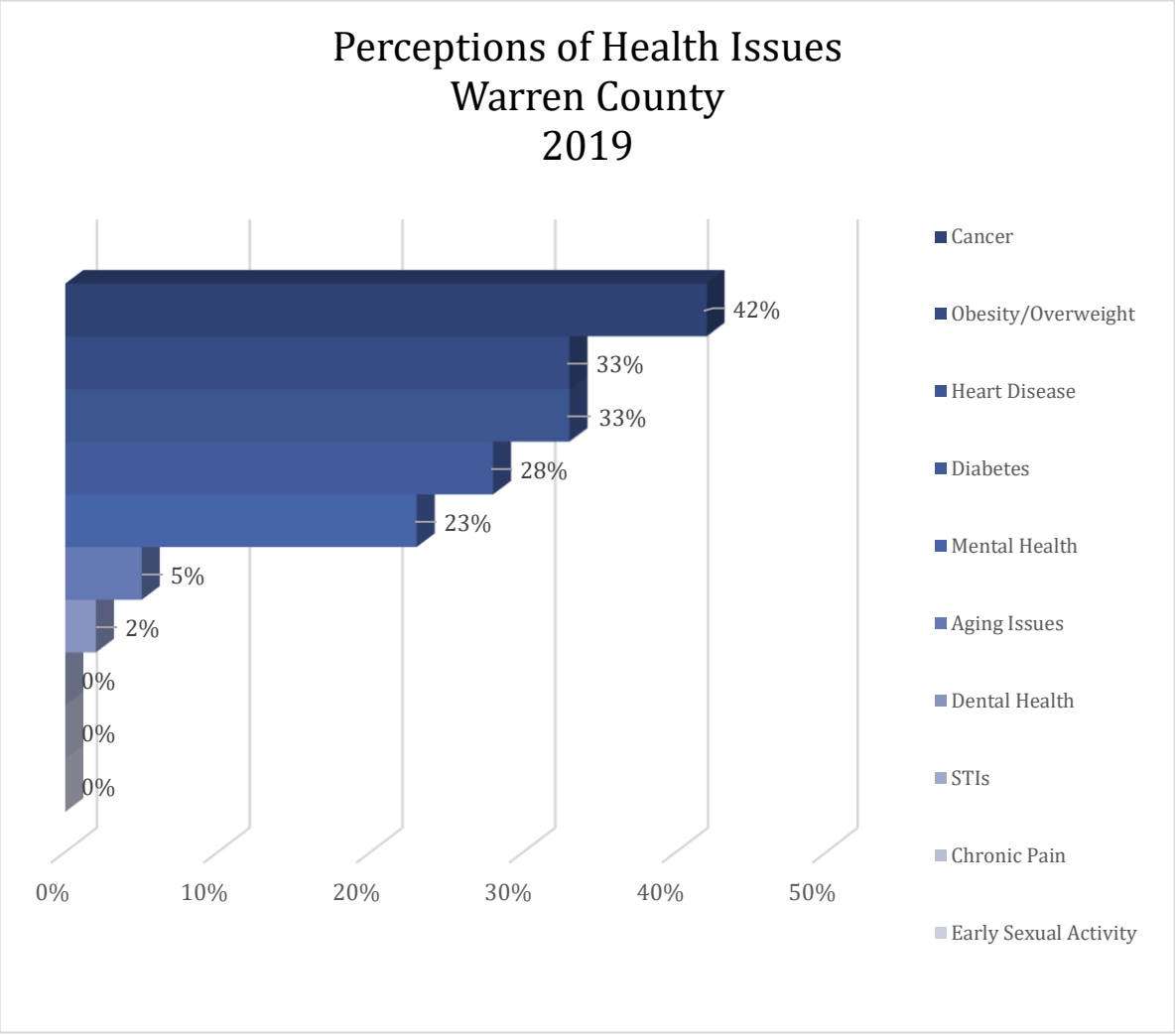
Specific criteria used to identify these issues included: (1) magnitude in the community; (2) severity in the community; (3) potential for impact to the community.

5.1 Perceptions of Health Issues

Respondents were presented with an open-ended question for this item, which focused on the three most important health issues in the community. Note that respondents could list up to three health issues, so total percentages are greater than 100.

The health issue that rated highest was cancer (42%), followed by obesity/overweight (33%), heart disease (33%), diabetes (28%) and mental health (23%). These four factors were significantly higher than other categories based on *t-tests* between sample means.

Other open-ended responses that were identified by at least 10% of the population included opioids (20%). Note that the identification of opioids supports the findings of opioids reported in section 5.2.

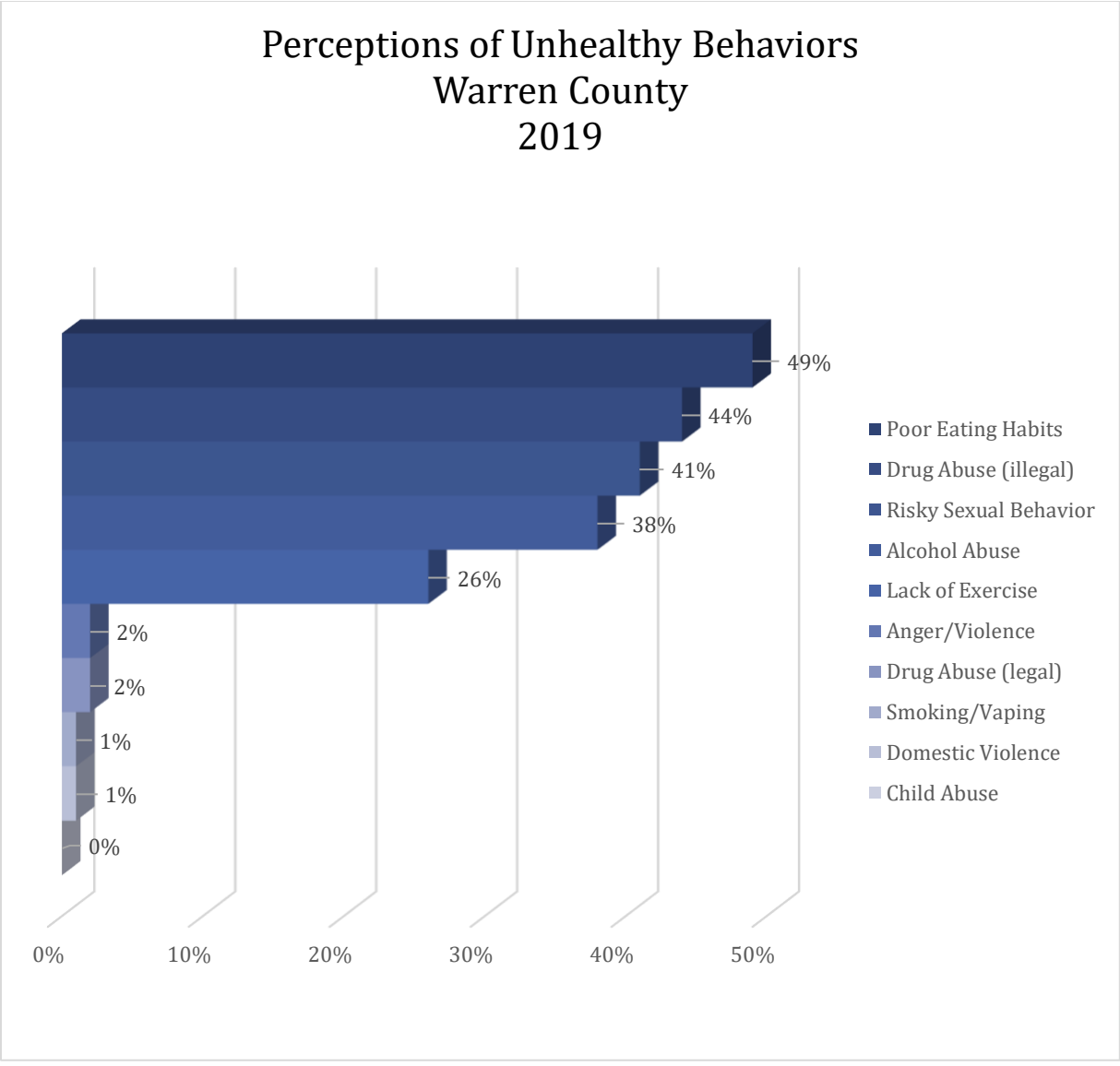


Source: CHNA Survey

5.2 Perceptions of Unhealthy Behaviors

Respondents had an open-ended question for this item, which focused on the three most important unhealthy behaviors in the community. The five unhealthy behaviors that rated highest were poor eating habits (49%), drug abuse (illegal) at 44%, risky sexual behavior (41%), alcohol abuse (38%) and lack of exercise (26%). These five factors were significantly higher than other categories based on *t-tests* between sample means.

No other open-ended responses were identified by at least 10% of the population.



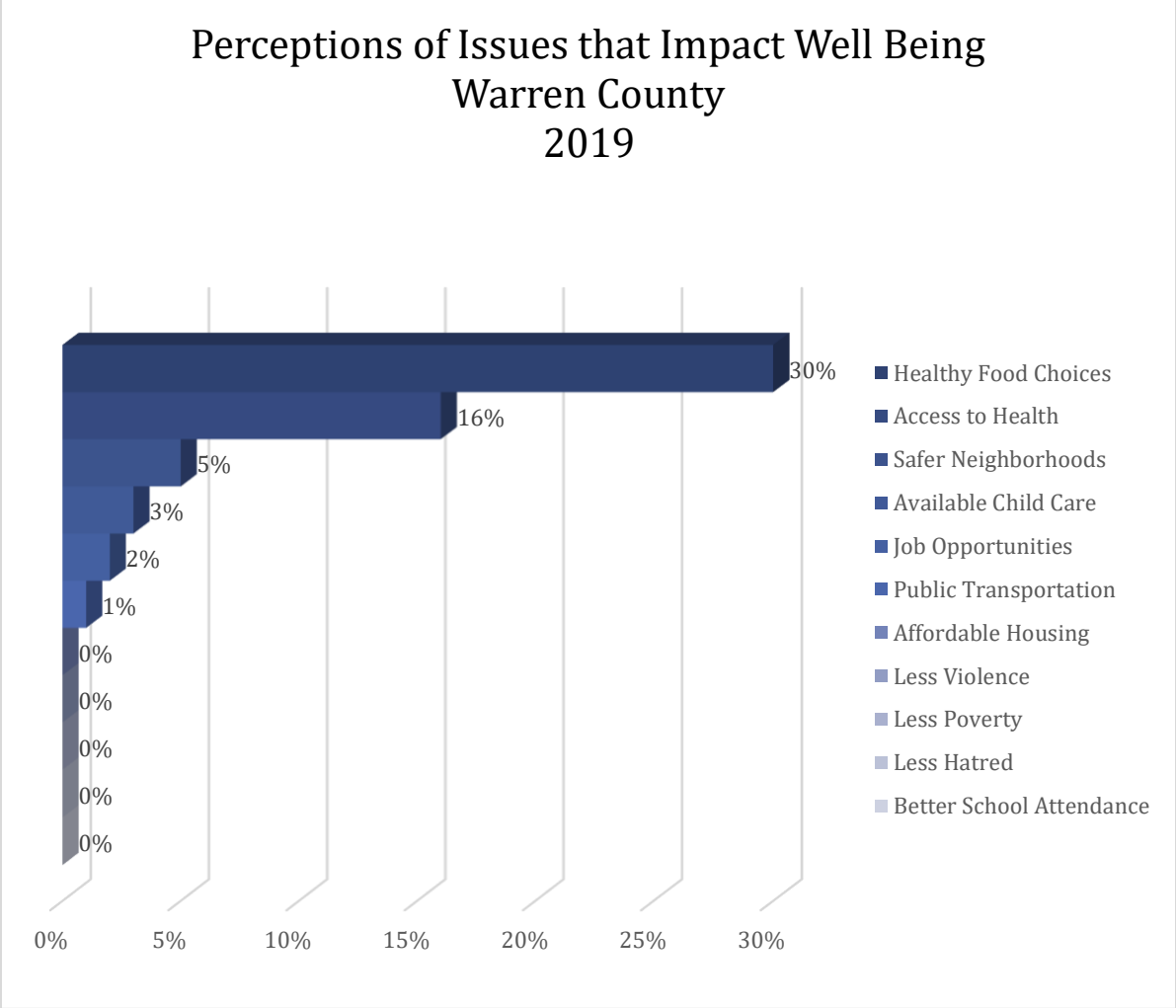
Source: CHNA Survey

5.3 Perceptions of Issues Impacting Well Being

Respondents had an open-ended question for this item, which focused on the three most important issues impacting well-being in the community. The issue impacting well-being that rated highest was exercise (33%), followed by healthy food choices (30%), and access to health (16%). These three factors were significantly higher than other categories based on *t-tests* between sample means.

Note that exercise supports the finding regarding lack of exercise reported in section 5.2.

Other than educational programs (14%), no additional responses were identified by at least 10% of the population.



Source: CHNA Survey

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:

- Population decreased
- Population over age 65 increased
- Single female head-of-house-household represents 12% of the population
- Telehealth

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

- Access to medical care
- Health insurance
- Exercise and healthy eating behaviors
- Depression and stress/anxiety

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

- Tobacco/vaping usage decrease
- Substance abuse
- Overweight and obesity
- Risk factors for heart disease

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

- Breast cancer
- Cancer and heart disease are the leading causes of mortality

Potential Health-Related Needs Considered for Prioritization

Before the prioritization of significant community health-related needs was performed, results were aggregated into 7 potential categories. Based on similarities and duplication, the 7 potential areas considered are:

- **Aging issues**
- **Healthy behaviors – nutrition & exercise**
- **Behavioral health**
- **Overweight/Obesity**
- **Substance abuse**
- **Access – medical**
- **Cancer – breast**

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 7 health-related areas were being addressed. A resource matrix can be seen in Appendix 5 relating to the 7 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 health needs and considered them equal priorities:

- **Healthy Behaviors –** ***defined as active living and healthy eating, and their impact on obesity***
- **Behavioral Health –** ***including mental health and substance abuse***

HEALTHY BEHAVIORS – ACTIVE LIVING, HEALTHY EATING AND SUBSEQUENT OBESITY

ACTIVE LIVING. A healthy lifestyle, comprised of regular physical activity and balanced diet, has been shown to increase physical, mental, and emotional well-being. Note that 28% of respondents indicated that they do not exercise at all, while the majority (60%) of residents exercise 1-5 times per week. The most common reasons for not exercising are not having enough time (49%) and a dislike of exercise (28%).

HEALTHY EATING. Over half (57%) of residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of residents who consume five or more servings per day is only 7%. The most prevalent reason for failing to eat more fruits and vegetables was the lack of importance and expense involved according to survey respondents.

OBESITY. In Warren County, over half (54.7%) of residents were diagnosed with obesity and being overweight. In the 2019 CHNA survey, respondents indicated that being overweight was the second most important health issue and was rated as the most prevalently diagnosed health condition. Research strongly suggests that obesity is a significant problem facing youth and adults nationally, in Illinois, and within Warren County. The U.S. 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.

BEHAVIORAL HEALTH – MENTAL HEALTH AND SUBSTANCE ABUSE

MENTAL HEALTH. The CHNA survey asked respondents to indicate prevalence of specific issues, namely depression and stress/anxiety. Of respondents, 40% indicated they felt depressed in the last 30 days and 32% indicated they felt anxious or stressed. Respondents were also asked if they spoke with anyone about their mental health in the last 30 days. Of respondents 22% indicated that they spoke to someone, the most common response was to a doctor/nurse (34%). In regard to self-assessment of overall mental health, 8% of respondents stated they have poor overall mental health. In the 2019 CHNA survey, respondents indicated that mental health was the 5th most important health issue.

SUBSTANCE ABUSE. Survey respondents were asked "On a typical DAY, how often to do you use substances (either legal or illegal) to make yourself feel better?" Of respondents, 14% indicated they use substances to make themselves feel better. Substance abuse values and behaviors of students is a leading indicator of adult substance abuse in later years. Data from the 2018 Illinois Youth Survey measures illegal substance use (alcohol, tobacco, and other drugs – mainly marijuana) among adolescents. Warren County is at or above State averages in all categories among 8th graders except for one category: marijuana. Among 12th graders, Warren County is at or above State averages in all categories except for inhalants and illicit drugs.

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:

Jenna Link is a graduate of Culver Stockton College with a BS in biology and psychology. After teaching two years at the Quincy Public Schools, she joined the Henderson County Health Department as the Director of Environmental Health. In 2007 she became the administrator for Warren County Health Department. Throughout her 21 years of experience in public health, she has participated in five community assessments and plans. In addition, she is an IEPA certified water operator for both Oquawka and Gladstone Public Water Supplies.

Patricia Luker, M.H.A. graduated from Indiana University with a Bachelor of Science degree in Business Administration and a Master of Science degree in Health Care Administration. Ms. Luker is the President for OSF Holy Family in Monmouth, Illinois. She has served in that capacity since July 2009. She previously served as CEO of Dr. John Warner Hospital in Clinton, Illinois for six years and prior to that, she was employed by Quorum Health Resources, first as Assistant Administrator of Defiance Hospital in Defiance, Ohio, and then as CEO of Franklin Foundation Hospital in Franklin, Louisiana. Ms. Luker is a member of the American College of healthcare Executives and Illinois Critical Access Hospital Network (ICAHN). She served as 2008 President of ICAHN. Ms. Luker also serves as the chair of their External Peer Review Committee. Ms. Luker was elected to CIMRO Board of Directors in 2005. She was elected as the Board's Secretary-Treasurer in 2007 and has served as the Chair of the Finance Committee since 2007.

Angie Stewart currently serves as the Financial Analyst for OSF Holy Family Medical Center. She received her Bachelor of Arts degree from Monmouth College in 2002. She has been with OSF in the Accounting department since 2009. She has been working with the Community Health Needs Assessment team since the first survey in 2013.

Shelley Wiborg, MS RN graduated in 1989 with a B.S.N. from Northeast Missouri State University and in 2005 with a Master of Science in Health Services Administration from the University of St. Francis, Joliet. Throughout her nursing career she has primarily worked in critical care including the role of Trauma Coordinator and later advancing into Nursing Management. She has held the position as the Chief Nursing Officer at two Critical Access Hospitals and has been at OSF Holy Family Medical Center, Monmouth since 2013. As of April, 2018, she is a shared CNO with OSF HealthCare Saint Luke Medical Center in Kewanee**.**

Jadyn Dwyer serves as the Executive Assistant for OSF HealthCare Holy Family Medical Center, providing support to the Administrators since July 2017. She received her Bachelor of Arts degree from Western Illinois University in 2005. Previously, she worked in sales and has always enjoyed volunteering for a local school district, church events, American Cancer Society fundraisers, and more. She joined the Community Health Needs Assessment Team in 2018.

William Bradford is the current principal at Monmouth-Roseville High School. He has been a resident of Monmouth for the past 15 years. Prior to becoming Principal, he was the Assistant Principal at Galesburg High School and Dean of Students at United Township High School in East Moline. He taught Social Studies at Davenport Central High school as well as at Kelly High School located in Chicago. He received his Bachelors of Arts in Communication-Broadcasting and History at WIU. He also has a Masters of Arts in History and a Masters in Education with the emphasis on Administration also at WIU.

Tina Canada BSN RN CDE graduated from Southern Illinois University-Edwardsville School of Nursing in 1983. She has worked in a variety of clinical settings including PICU, newborn nursery, surgery, recovery room, medical-surgical, wound care, infusion clinic and as education facilitator at two facilities. Tina is certified in both Wound Care and Diabetes Education. She currently serves as Coordinator Diabetes Education at OSF HealthCare Holy Family Medical Center, where she has been employed since 2015. Tina is also a Lifestyle Coach for the National Diabetes Prevention Program and a Matter of Balance Coach.

Amber Wood joined OSF HealthCare in June 2018 as Community Relations Coordinator serving OSF Holy Family Medical Center in Monmouth, Illinois. In addition to being the local point of contact, she serves as the spokesperson and public information officer for the hospital. Wood works closely with the Monmouth community and other partners to continue the mission OSF HealthCare: to serve the community with the greatest care and love. With more than 15 years of experience in health care, community relations, marketing and communications, non-profit management, partnership development, fundraising, volunteer management & community relations; donor development & management, grant writing, community involvement, public & media relations, Wood leads marketing and communication efforts for OSF HealthCare Holy Family Medical Center.
Prior to joining OSF HealthCare, Wood was the Executive Director for the American Red Cross serving the Quad Cities and West Central Illinois. She has served on a number of boards of directors including the Rotary Club of Clinton, Iowa, Council of Social Agencies in Clinton County (Iowa), and United Way of Knox County. She has been an active volunteer with a number of organizations including various United Ways and has been a Rotarian, serving in a number of leadership roles as committee chair. Her educational background is a Bachelor of Science in Communication Technologies from the University of Wisconsin – Platteville and Masters of Arts in Organizational Management from Ashford University.

Jeannie Weber has served as Executive Director of Warren County United Way for close to 5 years. Prior to returning to this area, she lived and worked in the Quad Cities, where she was involved in local leadership, academic, and nonprofit programming. This includes serving as a member and officer of several nonprofit boards. Weber's undergraduate degree in psychology is from Augustana College. Her graduate studies were focused on a masters in organizational leadership from St. Ambrose University. Her background includes grant writing, nonprofit and academic leadership, corporate, small business, and individual public relations, and marketing design and consulting for national and international businesses.

Candy Conard attended Western IL. University, Monmouth College, and Cornell College and serves as the Associate Executive Director at the Warren County YMCA since 2002. She has been with the Warren County YMCA since 1992 starting as a Bookkeeper and Fitness Director. She specializes in fundraising

for large events, Human Resources, Health and Wellness for Communities along with Families, Seniors, Adults with disabilities and Parkinson's Disease.

Jodi Scott graduated from Western Illinois University with a Bachelor of Science degree in Elementary Education and a Master degree in Early Childhood Education and Education Administration. Mrs. Scott is the Regional Superintendent of Schools for Henderson, Knox, Mercer and Warren Counties. She has served in that capacity since June of 2007. She previously served as Assistant Regional Superintendent of Schools, was an education consultant for three Regional Offices and prior to that was and elementary school teacher. , Mrs. Scott belongs to the Monmouth Rotary club, where she is a Paul Harris Fellow, she belongs to the Monmouth Kiwanis club and is on the CEO board. She also serves as chairman of IARSS area 3, co-chair of IARSS licensure committee and is an appointed member to PEAC. Mrs. Scott is a recipient of IASA's Superintendent of Distinction and was appointed by the Governor to serve on the Illinois School Funding Commission.

Susan M. Buck, MSN, RN has been the Education Coordinator for OSF HealthCare Holy Family Medical Center since 2016. She earned her Master of Science in Nursing from Walden University in 2015 and completed her Associate Degree in Nursing in 2012 from Carl Sandburg College where she is adjunct faculty with the College of Nursing & Health Professions Department.

Terri Springer is the Director of Entity Finance of OSF Healthcare Holy Family Medical Center in Monmouth, Illinois. She received her bachelor's degree from St. Ambrose University in Davenport, Iowa. She has been with the hospital for 18 years and has been part of the OSF Ministry for 12 years. Terri has resided in Monmouth for 17 years and has been involved with community health projects since 2012.

Tessa Hobbs-Curely is the Family Life Educator for Unit 10, serving Henderson, Knox, McDonough, and Warren counties. Tessa provides community based training and education on life issues affecting families, adults, and individuals as they age. Tessa has worked the past 17 years as a 4-H youth development educator, where she has networked with many community groups and organizations. She focuses on leadership development, collaboration and partnership building, youth issue education, decision making, money management, health, and communications. Hobbs-Curley emphasizes high-impact, quality programs. Hobbs-Curley graduated from Ashford University with a Bachelor's Degree in Liberal Arts with an emphasis in Social Science and a Master's Degree in Human Development Counseling from University of Illinois Springfield. She also has a certificate as a Licensed Clinical Professional Counselor. In addition, Hobbs-Curley is a COLORS matrix instructor in which she helps individuals assess their own personalities and improve their communication skills. She has been instrumental in the development of youth development resources including: Terrific Teachable Moments: Pre-K–2nd Grades; Terrific Teachable Moments: 3rd–6th Grades; Terrific Teachable Moments: 7th–12th Grades; Terrific Teachable Moments: Family Version; and Breaking the Code: Bullying Simulation. The Terrific Teachable Moments are quick lessons that teachers and child care providers can use to address a positive and negative behavior. The lessons address Social Emotional Learning Standards and character-building in youth.

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 35 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 Tuley (Coordinator) is a Strategic Reimbursement Senior Analyst at OSF Healthcare System. She has worked for OSF Healthcare System since 2004 and has acted as the coordinator for 13 Hospital Community Health Need 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 served as the Vice President, President-Elect and two terms as a Chapter President on the board of Directors with the McMahon-Illini HFMA Chapter. She currently serves as a Director on the board.

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 principal 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 2016 CHNA PRIORITIZED NEEDS

Three major health needs were identified and prioritized in the Warren County 2016 CHNA. Below are examples of the activities, measures and impact during the last three years to address these needs.

1. Healthy Behaviors defined as - Active Living, Healthy Eating and Obesity

Goal: *Provide educational opportunities within the community to instill the importance of health and wellness.*

Healthy Behaviors Measurement and Impact

Provided the Discover Wellness to teens/preteens.

- Offered the Discover Wellness program to almost 300 high school age kids in local school districts

Provided a Diabetic Prevention Program.

- Provided the Diabetic Prevention Program to six community members each year, this is an intensive program to offer preventative education.

Offered Health and Wellness Education.

- Provided Health and Wellness education to Monmouth College

Participated in area health fairs each year.

- Annually joined two health fairs within the county.

Offered Kids' Health and Safety Day's.

- Held a Kids' Health and Safety day with over 250 children participating.

Offered Diabetic Support Groups.

- The Diabetic Support Group met eleven times each year with participation of 10 to 22 members per occurrence.

Offered A1c screenings at least four local events.

- Increased participation by offering six A1c screenings each year.

Provided a Men's Health Event.

- A Men's Health Event was created to educate men on heathy behaviors including blood screenings.

Provided a Women's Health Event.

- A Women's Health Event was held to educate women on heathy behaviors.

Installed a Drug Take-Back Receptacle.

- Collected 85 pounds from March – September 2018.

Held a Senior Health Fair in conjunction with the Strom Center.

- Coordinated a Senior Health Fair partnering with the Strom Center annually.

Sponsored Healthy meals option at local food pantry.

- A Healthy Meal option presentation was given to a local food pantry twice annually.

Prepared and published a diabetes blog on the OSF website.

- Published the Diabetes blogs on the OSF website, blog was read by 224 users in FY18.

Participated in local radio spots focusing on healthy eating and diabetes prevention annually.

- Nine local radio spots were completed on diabetes education annually.

Participated in the local Ag Breakfast by providing a presentation on healthy eating.

- Member of OSF attended and presented to the group.

2. Use of Emergency Department as Primary Source of Medical Care

Goal: *Provide care to patients in the appropriate location, decrease non-emergent care in the Emergency Department.*

Emergency Department as Primary Source of Medical Care Measurement and Impact

Education given at Monmouth College on OSF on-call.

- Offered education at Monmouth College regarding OSF on-call during Freshman Orientation and Family Weekend annually.

A work group was developed in the Emergency Department to identify the top 30 Emergency Department users and drop their Emergency Department usage by 20%.

- The patients were identified as the "top 30 users." The work group had the patient work directly with Case Management to decrease the utilization of those patients resulting in a decrease of 43% in the number of visits for those 30 patients in just one year.

Complex Case Management will contact 50 Warren County residents annually to educate them.

- Complex Case Management contacted more than the required 50 Warren County Residents annually.

OSF Holy Family Medical Center believes the Complex Case Management department within OSF has helped with the education of many patients on the proper place to seek care. These Case Managers have been working with patients, reminding them of appointments, fielding calls about on-going care and taking care of the whole patient. This program has aided in the decrease of the over-utilization within our Emergency Room.

In addition, the Emergency Department Utilization Team will continue to meet and discuss strategies for helping patients make the proper choice for their level of medical care needed. They continue to work together to identify the "at-risk" patients and get them enrolled with Complex Case Management when necessary.

3. Heart Disease

Goal: *Create an awareness of Cardiac related health issues within the community.*

Heart Disease Measurement and Impact

Provided blood pressure screenings within the community each year.

- Offered three blood pressure screenings to the community each year.

Featured Women's Heart Health at the Women's Health Event.

- Provided education on Women's Heart Health at the annual Women's event. The emphasis was on heart health and cardiology.

Offered education on how sleep habits impact heart health.

- At the Women's Health event included presentations on the effects sleep has on the heart.
- See Health Behaviors above for additional programs on this prioritized need.

APPENDIX 3. SURVEY

OSF HEALTHCARE

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 about community health needs. Your opinions are important! This survey will take about 10 minutes to complete. All of your individual responses are confidential. We will use the survey results to better understand and address health needs in our community.

This survey was reviewed by the Committee on the Use of Human Subjects and Research, Bradley University Institutional Review Board (IRB) in June, 2018

COMMUNITY PERCEPTIONS

1. What would you say are the three (3) biggest **HEALTH ISSUES** in our community?
   These could be different diseases or health conditions.

2. What would you say are the three (3) most **UNHEALTHY BEHAVIORS** in our community?
   These are behaviors that are NOT good for people's health.

3. What would you say are the three (3) most important factors that would improve your **WELL-BEING**?
These could be types of resources, attitudes or social factors.

ACCESS TO CARE

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

Medical Care

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

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

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

☐ Yes (please answer #3) ☐ No (please go to #4: Prescription Medicine)

3. If you were not able to get medical care, why not? (Please choose all that apply).

☐ Didn't have health insurance. ☐ Too long to wait for appointment.
☐ Couldn't afford to pay my co-pay or deductible. ☐ Didn't have a way to get to the doctor. .
Are there any other reasons why you could not access medical care?

Prescription Medicine

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

☐ Yes (please answer #5) ☐ No (please go to #6: Dental Care)

5. If you were not able to get prescription medicine, why not? (Please choose all that apply).

☐ Didn't have health insurance. ☐ The pharmacy refused to take my insurance or Medicaid.
☐ Couldn't afford to pay my co-pay or deductible. ☐ Didn't have a way to get to the pharmacy.
Are there any other reasons why you could not access prescription medicine?

Dental Care

6. In the last YEAR, was there a time when you needed dental care but were not able to get it?

☐ Yes (please answer #7) ☐ No (please go to #8: Mental-Health Counseling)

7. If you were not able to get dental care, why not? (Please choose all that apply).

☐ Didn't have dental insurance. ☐ The dentist refused my insurance/Medicaid
☐ Couldn't afford to pay my co-pay or deductible. ☐ Didn't have a way to get to the dentist.
Are there any other reasons why you could not access a dentist?

Mental-Health Counseling

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

☐ Yes (please answer #9) ☐ No (please go to next section – HEALTHY BEHAVIORS)

9. If you were not able to get mental-health counseling, why not? (Please choose all that apply).

☐ Didn't have insurance. ☐ The counselor refused to take my insurance/Medicaid
☐ Couldn't afford to pay my co-pay or deductible. ☐ Embarrassment.
☐ Didn't have a way to get to a counselor.
Are there any other reasons why you could not access a mental-health counselor?

HEALTHY BEHAVIORS

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

Exercise

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

☐ None (please answer #2) ☐ 1 – 2 times ☐ 3 - 5 times ☐ More than 5 times

2. If you answered "none" to the question about exercise, why didn't you exercise in the past week? (Please choose all that apply).

☐ Don't have any time to exercise. ☐ Don't like to exercise.
☐ Can't afford the fees to exercise. ☐ Don't have child care while I exercise.
☐ Don't have access to an exercise facility. ☐ Too tired.
Are there any other reasons why you could not exercise in the last week?

Healthy Eating

3. On a typical DAY, how many **servings/separate portions** of fruits and/or vegetables did you have? An example would be a banana (but not banana flavored pudding).

☐ None (please answer #4) ☐ 1 – 2 ☐ 3 - 5 ☐ More than 5

4. If you answered "none" to the questions about fruits and vegetables, why didn't you eat fruits/vegetables? (Please choose all that apply).

☐ Don't have transportation to get fruits/vegetables ☐ Don't like fruits/vegetables
☐ It is not important to me ☐ Can't afford fruits/vegetables
☐ Don't know how to prepare fruits/vegetables ☐ Don't have a refrigerator/stove
☐ Don't know where to buy fruits/vegetables
Are there any other reasons why you do not eat fruits/vegetables?

5. Where is your primary source of food? (Please choose only one answer).

☐ Grocery store ☐ Fast food ☐ Gas station ☐ Food delivery program
☐ Food pantry ☐ Farm/garden ☐ Convenience store ☐ Other_____

6. What are the biggest challenges to eating healthy in our community? (Please choose all that apply).

☐ Knowledge ☐ Convenience ☐ People don't care ☐ Physical challenge/Disability
☐ Cost ☐ Time ☐ No healthy options ☐ Transportation ☐ Other

7. Please check the box next to any of the health conditions that you have. (Please choose all that apply).
If you don't have any health conditions, please check the first box and go to question #9: Smoking.

☐ I do not have any health conditions ☐ Diabetes ☐ Mental-health conditions
☐ Allergy ☐ Heart problems ☐ Stroke
☐ Asthma/COPD ☐ Overweight ☐ Other _____
☐ Cancer ☐ Memory problems

8. If you identified any conditions in Question #7, how often do you follow an eating plan to manage your condition(s)? ☐ Never ☐ Sometimes ☐ Usually ☐ Always ☐ Not applicable

Smoking

9. On a typical DAY, how many cigarettes do you smoke, or how many times do you use electronic vaping?

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

General Health

10. Where do you get most of your medical information? (Please choose only one answer).

☐ Doctor ☐ Friends/family ☐ Internet ☐ Pharmacy ☐ Nurse at my church

11. Do you have a personal physician/doctor? ☐ Yes ☐ No

12. How many days a week do you or your family members go hungry?

☐ None ☐ 1–2 days ☐ 3-5 days ☐ More than 5 days

13. In the last 30 DAYS, how many days have you felt depressed, down, hopeless?

☐ None ☐ 1–2 days ☐ 3 – 5 days ☐ More than 5 days

14. In the last 30 DAYS, how often has your stress and/or anxiety stopped you from your normal daily activities?

☐ None ☐ 1–2 days ☐ 3 - 5 days ☐ More than 5 days

15. In the last YEAR have you talked with anyone about your mental health?

☐ Yes (please answer #16) ☐ No (please go to #17)

16. If you talked to anyone about your mental health, who was it?

☐ Doctor/nurse ☐ Counselor ☐ Family/friend ☐ Other _____

17. On a typical DAY, how often to do you use substances (either legal or illegal) to make yourself feel better?

☐ None ☐ 1–2 times ☐ 3-5 times ☐ More than 5 times

18. When you were a child, did a parent or other adult often swear at you, insult you or make you feel afraid?

☐ Yes ☐ No

19. Do you feel safe where you live? ☐ Yes ☐ No

20. In the past 5 years, have you had a:

Breast/mammography exam	☐ Yes	☐ No	☐ Not applicable
Prostate exam	☐ Yes	☐ No	☐ Not applicable
Colonoscopy/colorectal cancer screening	☐ Yes	☐ No	☐ Not applicable

Overall Health Ratings

21. My overall physical health is: ☐ Below average ☐ Average ☐ Above average
22. My overall mental health is: ☐ Below average ☐ Average ☐ Above average

INTERNET

1. How interested would you be in health services provided through Internet or phone?

☐ 1	☐ 2	☐ 3
Not interested	Somewhat interested	Extremely interested

2. Can you get free wi-fi in public locations? ☐ Yes ☐ No

3. Do you have Internet in your home (or where you live)? For example, can you watch Youtube?
☐ Yes (please go to next section – BACKGROUND INFORMATION) ☐ No (please answer #4)

4. If don't have Internet, why not? ☐ Cost ☐ No available Internet provider ☐ Data limits
☐ I don't know how ☐ Other _____

BACKGROUND INFORMATION

1. What county do you live in?

☐ Warren ☐ Other

2. What is your Zip Code? _____

3. What type of health insurance do you have? (Please choose all that apply).

☐ Medicare ☐ Medicaid ☐ Private/Commercial ☐ None (Please answer #4)

4. If you answered "none" to the question about health insurance, why **don't** you have insurance? (Please choose all that apply).

☐ Can't afford health insurance ☐ Don't need health insurance
☐ Don't know how to get health insurance ☐ Other _____

5. What is your gender? ☐ Male ☐ Female

6. What is your age? ☐ Under 20 ☐ 21-35 ☐ 36-50 ☐ 51-65 ☐ Over 65

7. What is your racial or ethnic identification? (Please choose only one answer).

☐ White/Caucasian ☐ Black/African American ☐ Hispanic/Latino
☐ Pacific Islander ☐ Native American ☐ Asian/South Asian
☐ Multiracial ☐ Other: _____

8. What is your highest level of education? (Please choose only one answer).

☐ Grade/Junior high school ☐ Some high school ☐ High school degree (or GED)
☐ Some college (no degree) ☐ Associate's degree ☐ Bachelor's degree
☐ Graduate or professional degree ☐ Other: _____

9. What was your household/total income last year, before taxes? (Please choose only one answer).

☐ Less than $20,000 ☐ $20,001 to $40,000 ☐ $40,001 to $60,000
☐ $60,001 to $80,000 ☐ $80,001 to $100,000 ☐ More than $100,000

10. What is your housing status?

☐ Do not have ☐ Have housing, but worried about losing it ☐ Have housing, **NOT** worried about losing it

11. How many people live with you? _____

12. What is your job status? (Please choose only one answer).

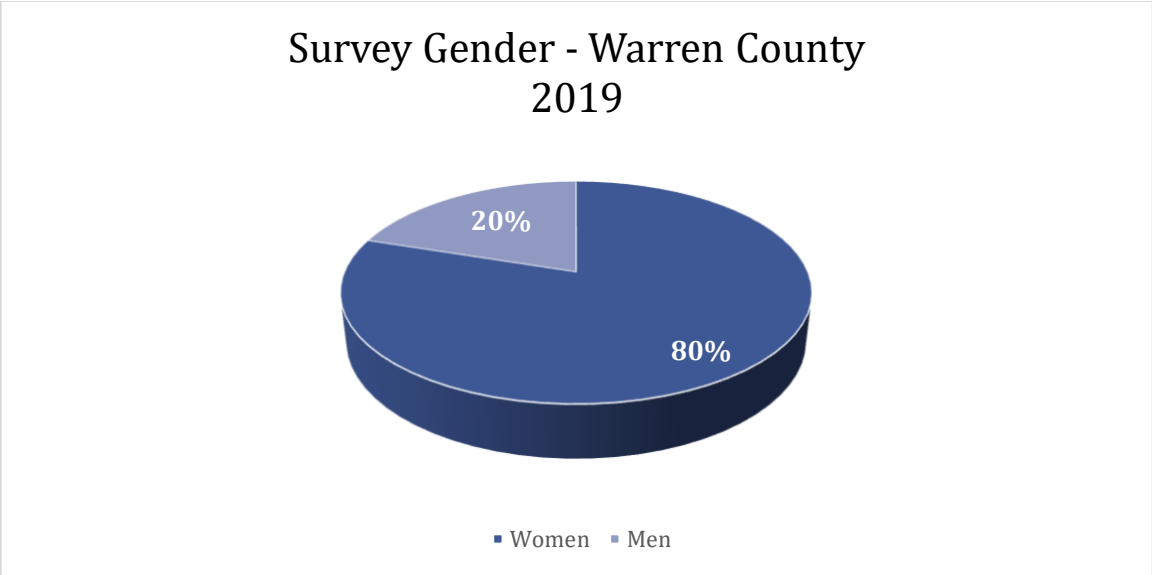
☐ Full-time ☐ Part-time ☐ Unemployed ☐ Homemaker
☐ Retired ☐ Disabled ☐ Student ☐ Armed Forces

Is there anything else you'd like to share about your own health goals or health issues in our community?

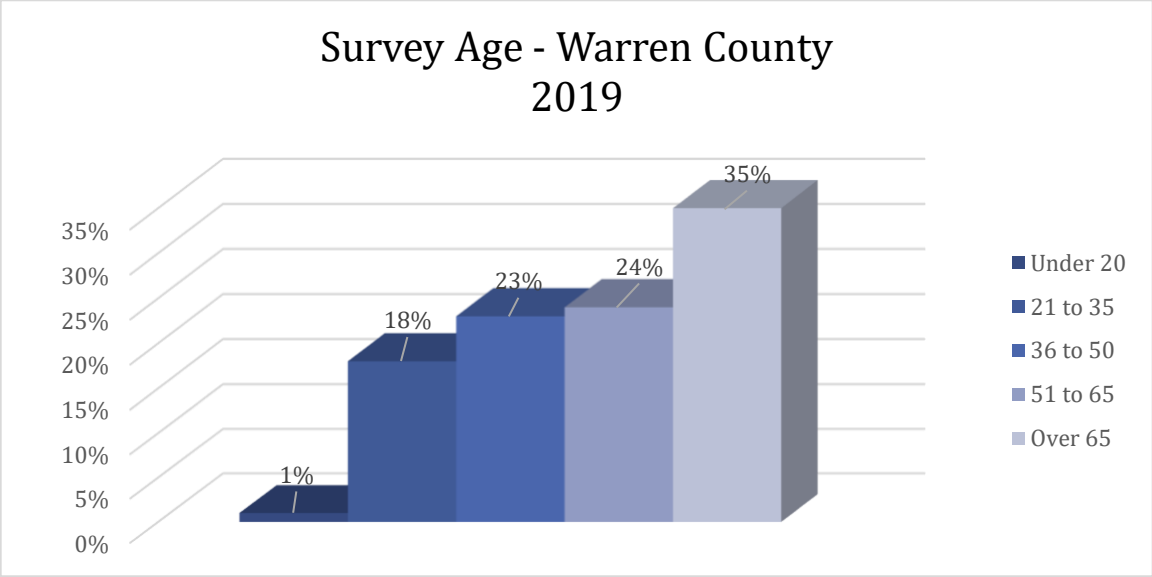
_____

Thank you very much for sharing your views with us!

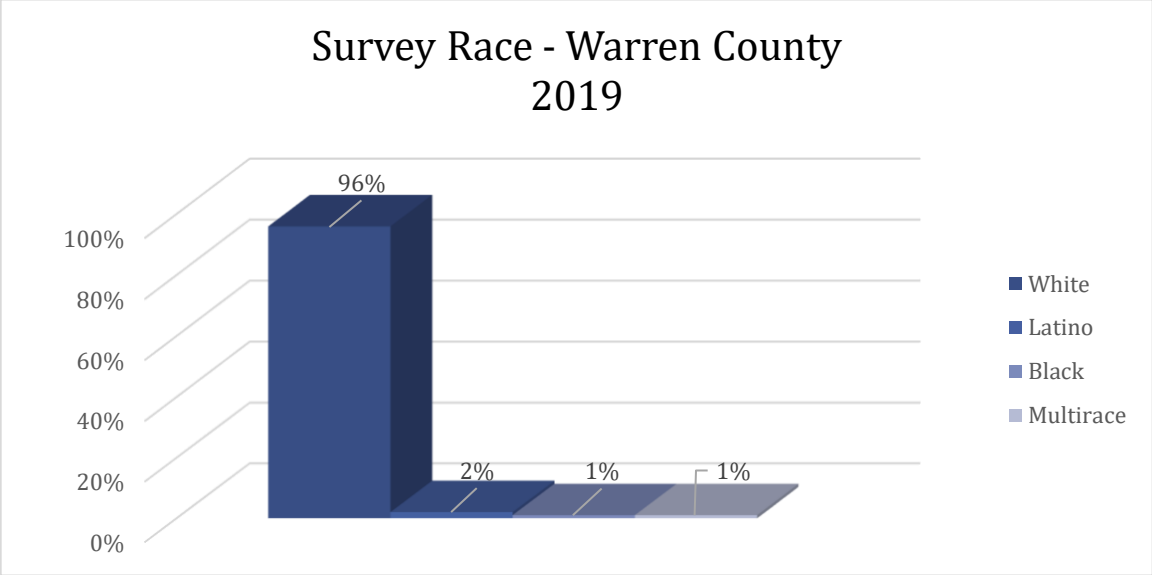
APPENDIX 4. CHARACTERISTICS OF SURVEY RESPONDENTS



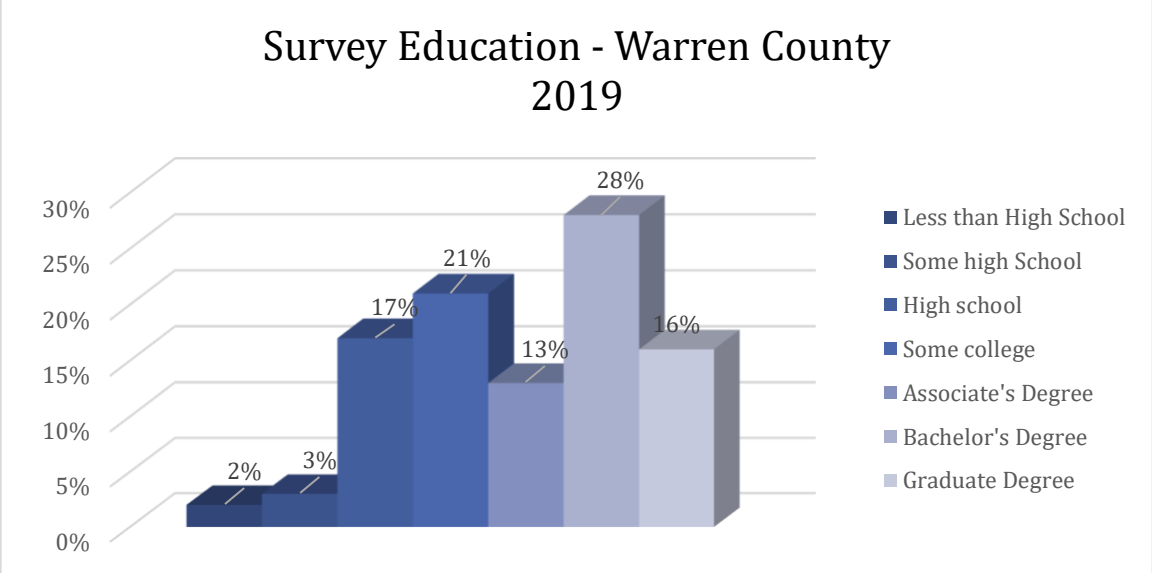
Source: CHNA Survey



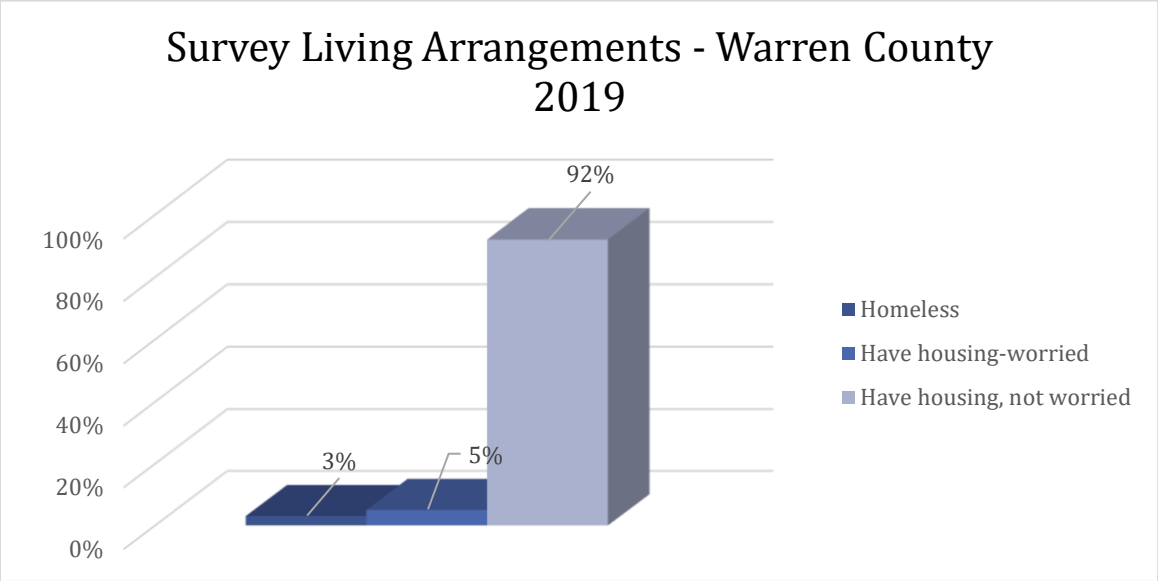
Source: CHNA Survey



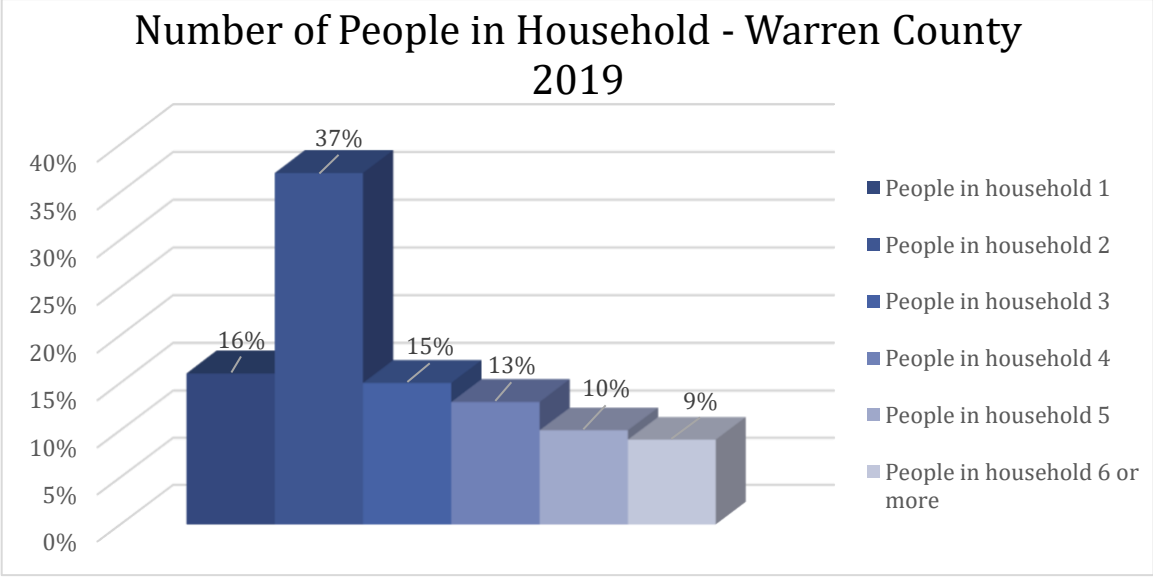
Source: CHNA Survey
Note: Survey included 3 Black people and 6 Latino people.



Source: CHNA Survey



Source: CHNA Survey



Source: CHNA Survey

APPENDIX 5. RESOURCE MATRIX*

	Aging Issues	Medical Access	Breast Cancer	Healthy Behaviors	Obesity	Behavioral Health	Substance Abuse
Recreational Facilities							
Warren County YMCA	1	1	1	3	3	1	
City of Monmouth - Parks Department				3	3		
Health Departments							
Warren County Health Department	3	3	3	3	3	3	2
Community Agencies							
Jamieson Center	1	3	2	2	3	2	1
Bridgeway		3	1	2		3	3
First Christian Church-Food Pantry				3	1		
Helping Hands- Food Pantry		1		3	1		
Warren DHS Family Community Resource Center	1	1	1	3	1	3	1
Illinois Tobacco Quit Line	1	1	1	3		3	3
United Way of Warren County- resource 211	3	3	3	3	3	3	3
University of Illinois Warren County Extension	1	1	2	3	1	3	1
Women, Infants and Children Nutritional Program	1			2	1	1	
Western Illinois Area Agency on Aging - RSVP	3			2			
Strom Center	1	1	1	2	1	1	1
Western Illinois Head Start		1		2		1	
Warren County Housing Authority	2			2		1	

	Aging Issues	Medical Access	Breast Cancer	Healthy Behaviors	Obesity	Behavioral Health	Substance Abuse
Al Anon- (Drug and Alcohol Addiction)		3		3		3	3
Hospitals / Clinics							
OSF Medical Group Monmouth	3	3	3	3	3	3	3
OSF St. Mary Medical Center	3	3	3	3	3	1	2
OSF Multi-Specialty Group	3	3	3	3	3	2	2
Cottage Hospital	3	3	3	3	3	2	2

***(1)= low; (2)= moderate; (3) = high, in terms of degree to which the need is being addressed**

APPENDIX 6. DESCRIPTION OF COMMUNITY RESOURCES

Recreational Facilities (2)

Warren County YMCA
Healthy Behaviors
The Warren County YMCA offers high quality after school programs, swimming and gymnastics instruction, youth sports, teen programs, Day Camp and a variety of recreational experiences for children and adults of all ages. The workout facilities are available 24 hours a day to accommodate any schedule.

Monmouth Parks and Recreation
Healthy Behaviors
The Monmouth Parks and Recreation Department maintains nine parks, the Gibson Woods golf course and the Municipal Pool.

Health Departments (1)

Warren County Health Department
Healthy Behaviors, Behavioral Health
The Warren County Health Department enhances the health and safety of the community by promoting public health education and awareness, providing essential health services, and encouraging collaborative efforts throughout Warren County.

Community Agencies (12)

Jamieson Center
Healthy Behaviors, Behavioral Health
Jamieson Community Center is a 501(c)3 non-profit primarily serving residents of Warren County. Their programs are designed to increase food security and help people with essential services. More than 2,000 people receive some type of assistance from JCC each year. Some receive meals on a daily basis through the Senior Nutrition or Summer Meals programs, some are guests each month at our pantry, some receive seasonal help with school supplies or at Christmas, and some receive help on an annual basis through our Jingle Bills fund. Many more shop at the thrift store to buy clothing or household items at affordable prices. We are also an application site for WIRC's energy assistance program and administer Warm Neighbors Cool Friends energy assistance program.

Bridgeway Mental Health and Family Services
Access to Behavioral Health Services,
Bridgeway is a comprehensive human services organization providing services to persons with disabilities and their families in order to create stronger communities as well as improving quality of life for the individuals we serve.

Illinois Tobacco Quit Line
Healthy Behaviors
Illinois Tobacco Quit Line provides free telephone counseling to assist individuals in quitting tobacco use. ITQL provides Nicotine Replacement Therapy in the form of patches, lozenges, and gum for qualified individuals (those that do not have access to those products thru insurance or Medicaid) for 8 weeks per 12-month period.

First Christion Church- Food Pantry
Healthy Behaviors
The First Christian Church offers a food bank to assist families in need in addition to their many programs built to strengthen families and individuals.

Helping Hands- Food Pantry
Healthy Behaviors
The Helping Hands Food Pantry of Roseville exists to improve quality of life for Warren County, IL residents by providing assistance to families in need and by developing programs to strengthen families and individuals.

United Way of Warren County
Healthy Behaviors
The United Way is a recognized leader in helping solve community problems by gathering and distributing, in an efficient and accountable manner, community resources which respond to priority health and human service needs. Sponsor of the 211 resource center.

University of Illinois Warren County Extension
Healthy Behaviors
Warren County Extension office provides educational programs to the community on numerous subjects including health and nutrition to both youth and adult audiences.

Women, Infants, and Children's Nutrition Program
Healthy Behaviors
Women, Infants, and Children's (WIC) supplemental nutrition program is conducted by the Warren County Health Department. WIC encourages breastfeeding, proper nutrition during pregnancy; and nutrition for children from birth through age 5 for qualified women and children.

Western Illinois Area Agency on Aging – RSVP
Healthy Behaviors
Western Illinois Area Agency on Aging is an Aging and Disability Resource Center. They serve a 10-county area that includes: Bureau, Henderson, Henry, Knox, LaSalle, McDonough, Mercer, Putnam, Rock Island and Warren County. They ensure coordinated, accessible services for older persons to live independent, meaningful and dignified lives. The community focal points in each county that are senior centers serve as congregate meal sites as well as areas for seniors to go for activities and socialization. They advocate at local, state, and federal levels for seniors and adults with disabilities. WIAAA also funds Home Delivered Meal programs, transportation as well as respite for caregivers. Retired and Senior

Volunteer Program is located in the building and is a great volunteer resource. WIAAA is a certified SHIP site and counselors are available to provide information and direct assistance regarding Medicare, Medicare D plans, Medicare supplements, Medicare Advantage plans, Medicaid, etc.

West Central Community Services Head Start
Healthy Behaviors
West Central Community Services, Inc. is the grantee for a federally funded preschool program called Head Start. We provide children with a center-based school readiness program. Head Start experience has shown that the needs of children vary considerably from community to community and that to serve those needs effectively, programs should be individualized. Head Start is successful in providing children and families with high-quality school readiness programs because it follows very specific guidance from the Office of Head Start.

Warren County Housing Authority
Healthy Behaviors, Behavioral Health,
There are several services provided at Warren County Housing Authority including administer federal rental assistance programs and provide affordable apartments for low income families, elderly residents and persons with disabilities. HUD assists the housing authority by providing Housing Choice Vouchers, aka Section 8 vouchers and low income rent assistance.

AL-Anon
Behavioral Health
Al-Anon is a mutual support group of peers who share their experience in applying the Al-Anon principles to problems related to the effects of a problem drinker in their lives. Meetings offered at Roseville Christian Church.

Hospitals / Clinics (5)

OSF Medical Group Monmouth
Healthy Behaviors, Behavioral Health
The OSF Medical Group Clinic in Monmouth provides a wide range of medical care to the community focusing mainly on primary care. There are 4 Physicians, 6 Advanced Practice Professionals and 2 Licensed Clinical Social Workers on staff. The facility is open 7 days a week and offers many same-day appointments to community members.

OSF Multi-Specialty Group
Healthy Behaviors, Behavioral Health
OSF Multi-Specialty Group offers a wide range of medical and surgical care, as well as other specialty and prompt care services, through provider offices located throughout Warren County.

OSF St. Mary Medical Center
Healthy Behaviors
OSF St. Mary Medical Center (SMMC) is located in Galesburg, Illinois, approximately 17 miles from Monmouth. There are many collaborative efforts between SMMC and HFMC due to the proximity of the

locations. There are opportunities for resource sharing including personnel. SMMC is larger than HFMC, allowing us to send higher acuity there for more advanced care.

OSF Home Care and Hospice

Cancer, Heart Disease, Access to Health Services, Emergency Department Misuse, Mental Health, Seeking healthcare

OSF Home Care and Hospice offer health care and services to home bound individuals as well as services at end of life through Hospice.

Galesburg Cottage Hospital

Healthy Behaviors, Behavioral Health

Galesburg Cottage Hospital is a 173 bed facility located in Galesburg, Illinois. Skilled staff, more than 70 active medical staff members practiced in a variety of specialties, and technology come together at Galesburg Cottage to provide residents of West Central Illinois with compassionate, customer-focused care. Comprehensive services include inpatient and outpatient care; diagnostic imaging; medical and surgical care, including minimally-invasive surgery. The hospital also includes an Older Adult Behavioral Health Unit, a Wound Healing Center, a Surgical Weight Loss Center, and a renal dialysis center.

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 Method[3]
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)