

Community Health Needs Assessment 2016

OSF ST. MARY MEDICAL CENTER

KNOX COUNTY

WARREN COUNTY

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Community Health Needs Assessment

July 2016

Collaboration for sustaining health equity

Executive Summary

The Knox County and Warren County Community Health-Needs Assessment is a collaborative undertaking by OSF St. Mary Medical Center to highlight the health needs and well-being of residents in Knox and Warren Counties. Through this needs assessment, collaborative community partners have identified numerous health issues impacting individuals and families in the Knox and Warren County region. Several themes are prevalent in this health-needs assessment – the demographic composition of the Knox and 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 publically available sources as well as private sources of data. Additionally, primary data were collected for the general population and the at-risk or economically disadvantaged population. Areas of investigation included perceptions of the community health issues, unhealthy behaviors, issues with quality of life, healthy behaviors and access to medical care, dental care, prescription medications and mental-health counseling. Additionally, demographic

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

Ultimately, the identification and prioritization of the most important health-related issues in the Knox and 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, the collaborative team prioritized three significant health needs:

- ***Obesity***
- ***Mental Health***
- ***Access to Health Services***

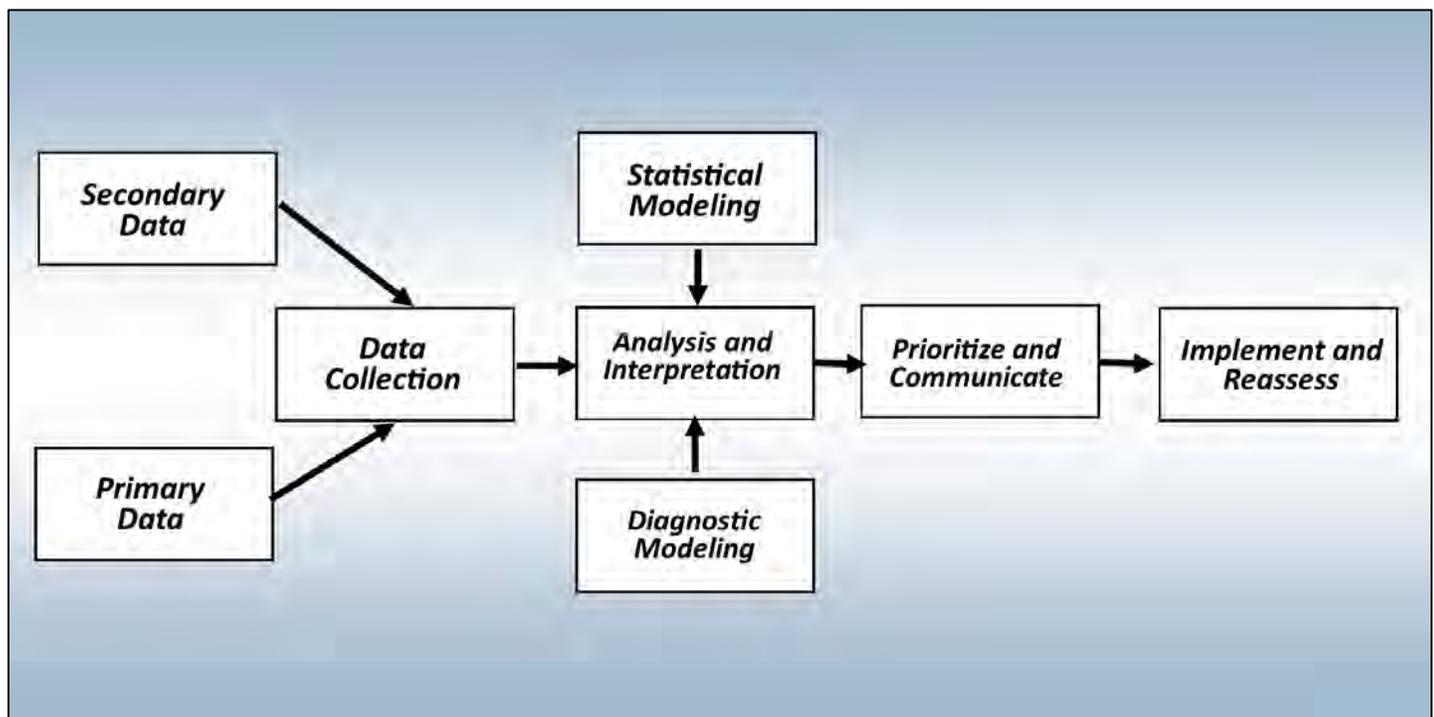
I. INTRODUCTION

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 St. Mary 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.

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

Figure 1. Community Health Needs Assessment Framework



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

In order to engage the entire community in the CHNA process, a collaborative team of health-professional experts and key community advocates was created. Members of the collaborative team were carefully selected to ensure representation of the broad interests of the community. Specifically, team members included representatives from OSF St. Mary Medical Center, members of the Knox County

and Warren County Health Departments, and administrators from key community partner organizations. Engagement occurred throughout the entire process, resulting in shared ownership of the assessment. The entire collaborative team met in April and July 2015 and the in first quarter of 2016. Additionally, numerous meetings were held between the facilitators and specific individuals during the process.

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

Definition of the Community

In order to determine the geographic boundaries for OSF St. Mary Medical Center, analyses were completed to identify what percentage of inpatient and outpatient activity was represented by Knox and Warren Counties. Data show that Knox and Warren Counties represent 83% of all patients for the hospital.

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

Purpose of the Community Health-Needs Assessment

In the initial meeting, the collaborative committee identified the purpose of this study. Specifically, this study has been designed to provide necessary information to health-care organizations, including hospitals, clinics and health departments, in order to create strategic plans in program design, access and delivery. Results of this study will act as a platform that allows health-care organizations to orchestrate limited resources to improve management of high-priority challenges. By working together, hospitals, clinics, agencies and health departments will use this CHNA to improve the quality of healthcare in Knox and Warren Counties. When feasible, data are assessed longitudinally to identify trends and patterns by comparing with results from the 2013 CHNA and benchmarked with State of Illinois averages.

Community Feedback from Previous Assessments

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

Summary of 2013 CHNA Identified Health Needs and Implementation Plans

The 2013 CHNA for Knox and Warren Counties identified seven significant health needs. These included: access to health services, dental health, healthy behaviors, diabetes, healthy behaviors, mental health, obesity and substance abuse. Specific actions were taken to address these needs. Detailed discussions of goals and strategies to improve these health needs can be seen in Appendix 2.

II. METHODS

To complete the comprehensive community health-needs assessment, multiple sources were examined. Secondary statistical data were used to assess the community profile, morbidity rates and causes of mortality. Additionally, based on a sample of 1,170 survey respondents (22 respondents used a version translated into Spanish) from Knox and Warren Counties, a study was completed to examine perceptions of the community health issues, unhealthy behaviors, issues with quality of life, healthy behaviors and access to healthcare.

Secondary Data for the Community Health Needs Assessment

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

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

Primary Data Collection

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

A. Survey Instrument Design

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

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

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

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

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

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

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

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

B. Sample Size

In order to identify our potential population, we first identified the percentage of the Knox County and 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 rates for Knox and Warren County were 17.7 and 15.6 percent, respectively. A total population of 52,069 was used for Knox County; yielding a total of 9,216 residents living in poverty. Likewise, Warren County total population is 17,874; yielding a total of 2,788 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 Knox and Warren County area, the minimum sample size for those living in poverty was 271. Note that for *aggregated* analyses (combination of at-risk and general populations); an additional 286 random surveys were needed from those not living in poverty in order to properly represent the views of the population in Knox and Warren Counties.

The data collection effort for this CHNA yielded a total of 1,170 usable responses. This exceeded the threshold of the desired 90% confidence interval.

To provide a representative profile when assessing the aggregated population for the Knox and Warren Counties region, the general population was combined with a portion of the at-risk population. To represent the at-risk population as a percentage of the aggregate population, a random-number generator was used to select at-risk cases to include in the general sample. This provided a total usable sample of 720 respondents for analyzing the aggregate population. Sample characteristics can be seen in Appendix 4.

C. Data Collection

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

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

D. Data Integrity

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

E. Analytic Techniques

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

CHAPTER 1 OUTLINE

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

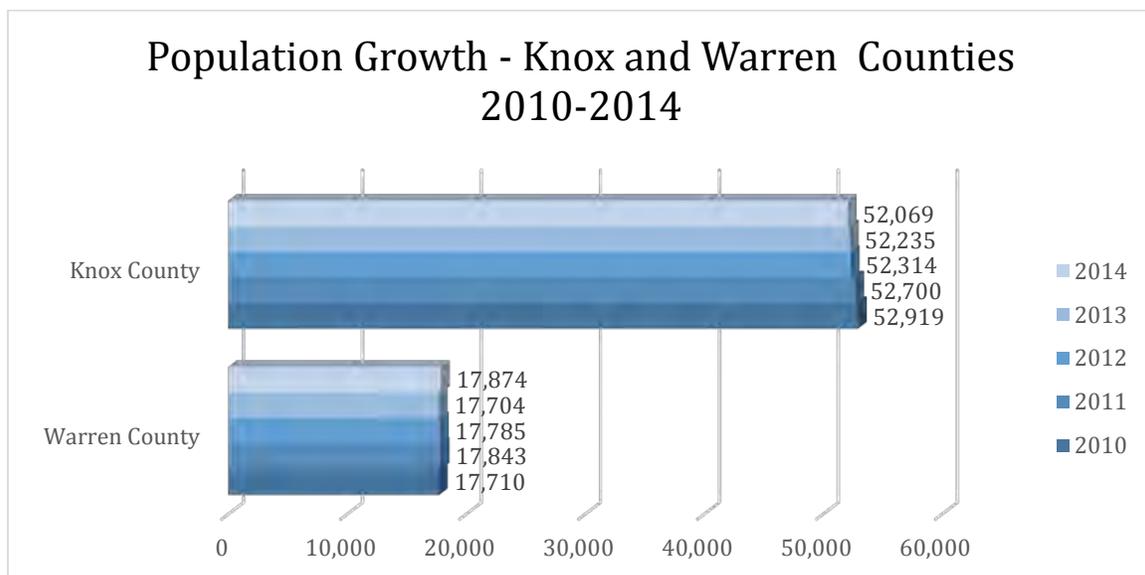
CHAPTER 1. DEMOGRAPHIC PROFILE

1.1 Population

Importance of the measure: Population data characterize individuals residing in Knox and Warren Counties. 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 Knox County has slightly decreased (1.6%) between 2010 and 2014, while Warren County has seen a slight increase (0.9%).



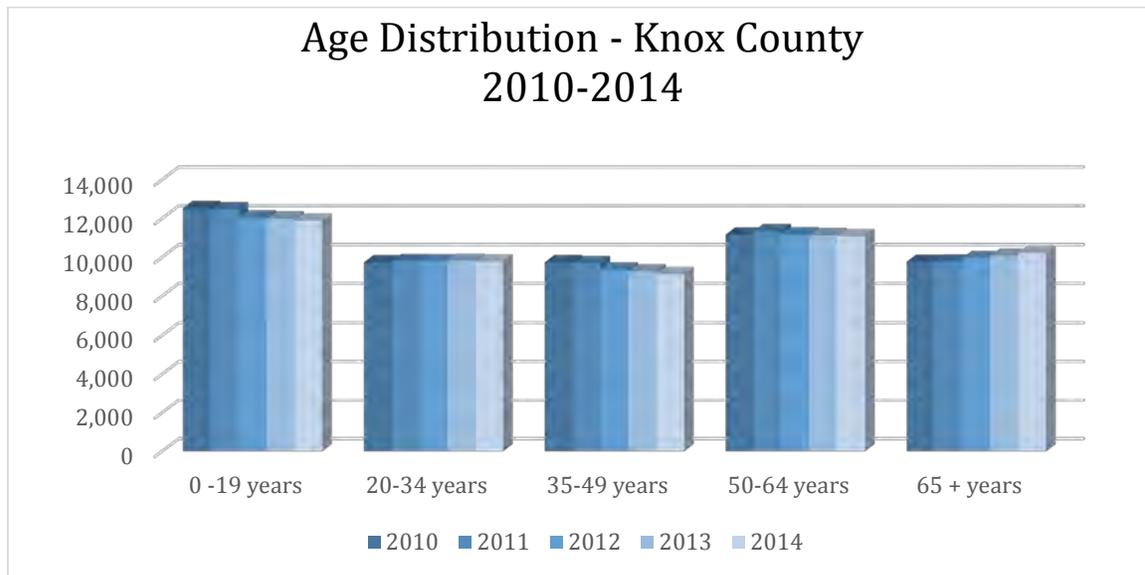
Source: US Census

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.

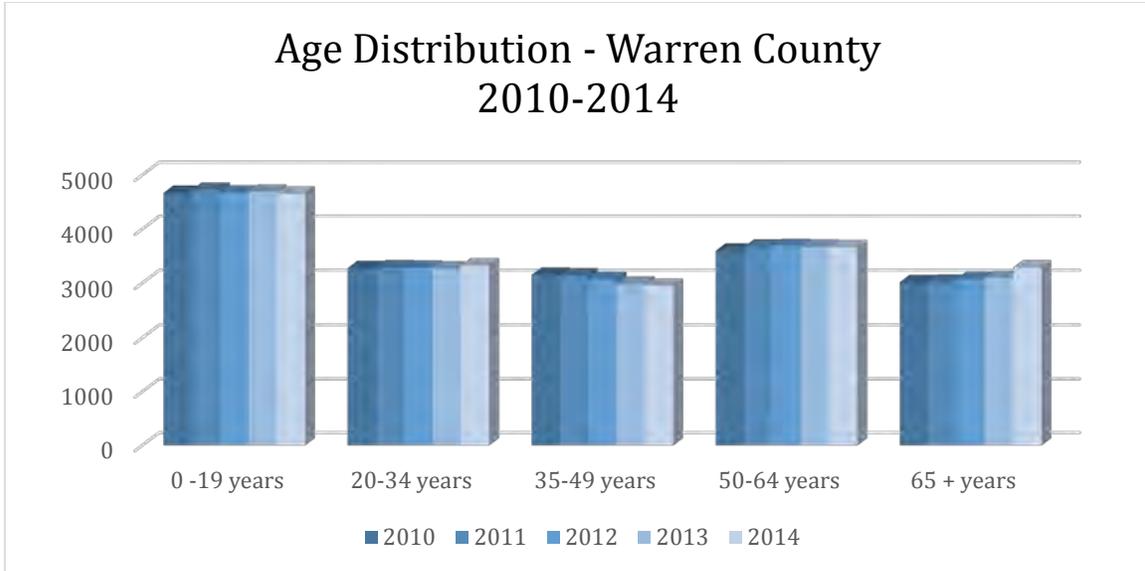
Age

As indicated in the graphs below, the percentage of individuals in Knox County aged 50-64 decreased slightly between 2010 and 2014, while the percentage in Warren County of the same age range increased slightly over the same time period. However, the largest percentage increase in both counties was for those individuals aged 65 and older.



Age	2010	2011	2012	2013	2014
0 -19 years	12,531	12,467	12,041	11,984	11,878
20-34 years	9,730	9,791	9,787	9,799	9,769
35-49 years	9,734	9,681	9,360	9,263	9,127
50-64 years	11,162	11,339	11,175	11,125	11,074
65 + years	9,762	9,768	9,951	10,064	10,221

Source: US Census

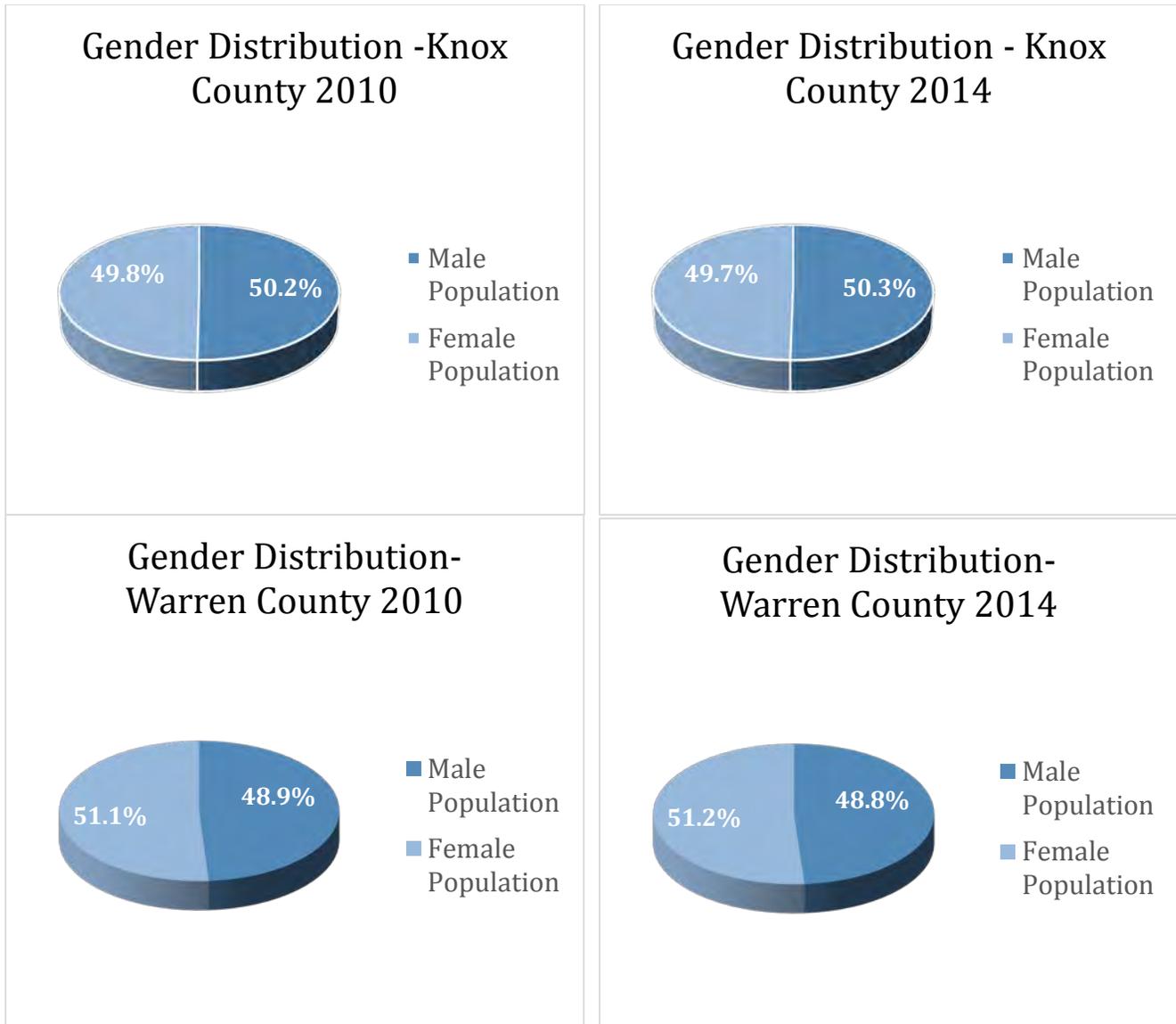


Age	2010	2011	2012	2013	2014
0 -19 years	4667	4723	4674	4687	4653
20-34 years	3275	3289	3281	3265	3324
35-49 years	3153	3140	3074	2984	2948
50-64 years	3596	3670	3680	3672	3661
65 + years	3016	3021	3076	3096	3288

Source: US Census

Gender

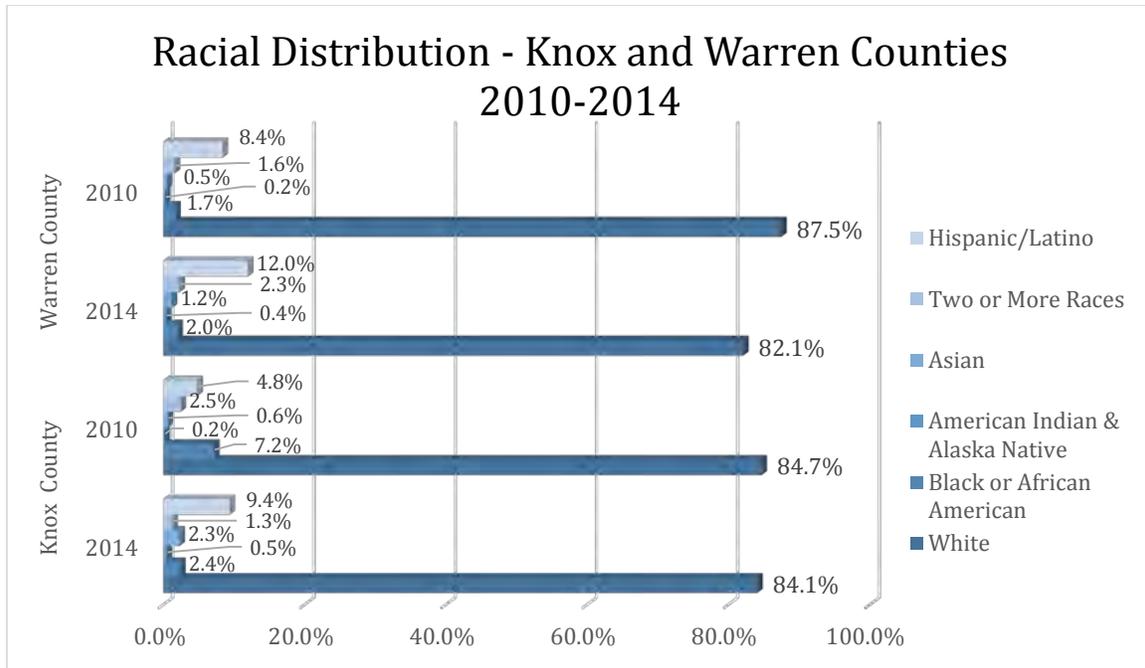
The gender distribution of Knox and Warren County residents has remained relatively consistent between 2010 and 2014.



Source: US Census

Race

With regard to race and ethnic background, Knox and Warren Counties are largely homogenous, yet in recent years, they are becoming more diverse. Data from 2010 suggest that White ethnicity comprises 87.5% of the population in Warren County and 84.7% in Knox County. However, the non-White population of Warren County has been increasing (from 12.5% to 17.9% in 2014), as has the non-White population of Knox County (from 15.3% to 15.9% in 2014). In both counties, those with Latino ethnicity are the largest non-white group (12% in Warren County and 9.4% in Knox County).

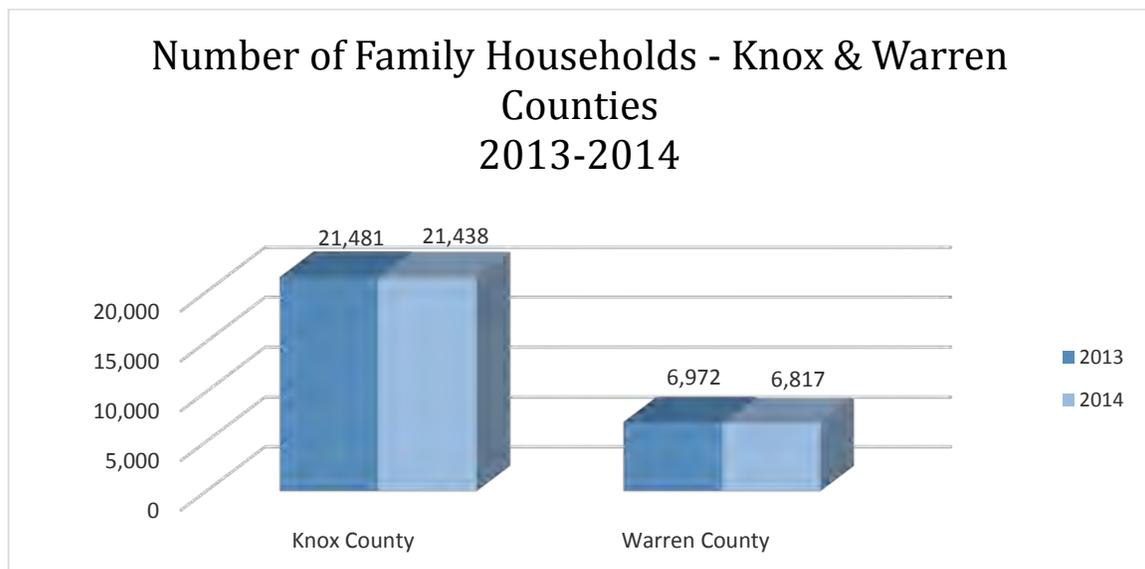


Source: US Census

1.3 Household/Family

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

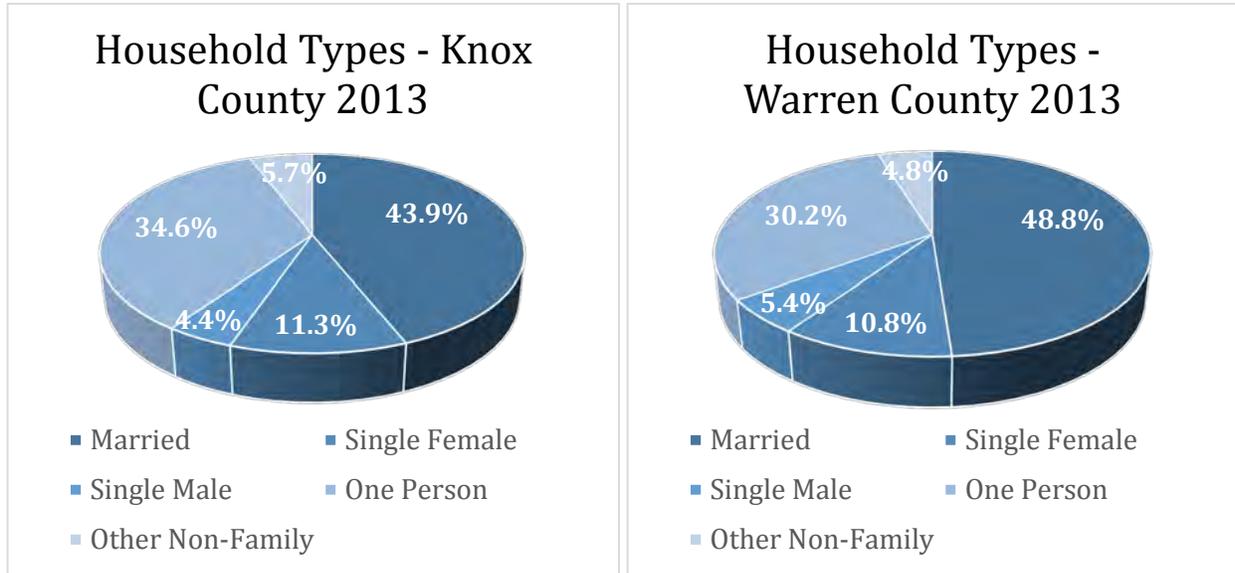
As indicated in the graph below, the number of family households within Knox County decreased by 0.2%, while the number of Warren County family households decreased by 2.2%.



Source: US Census

Family Composition

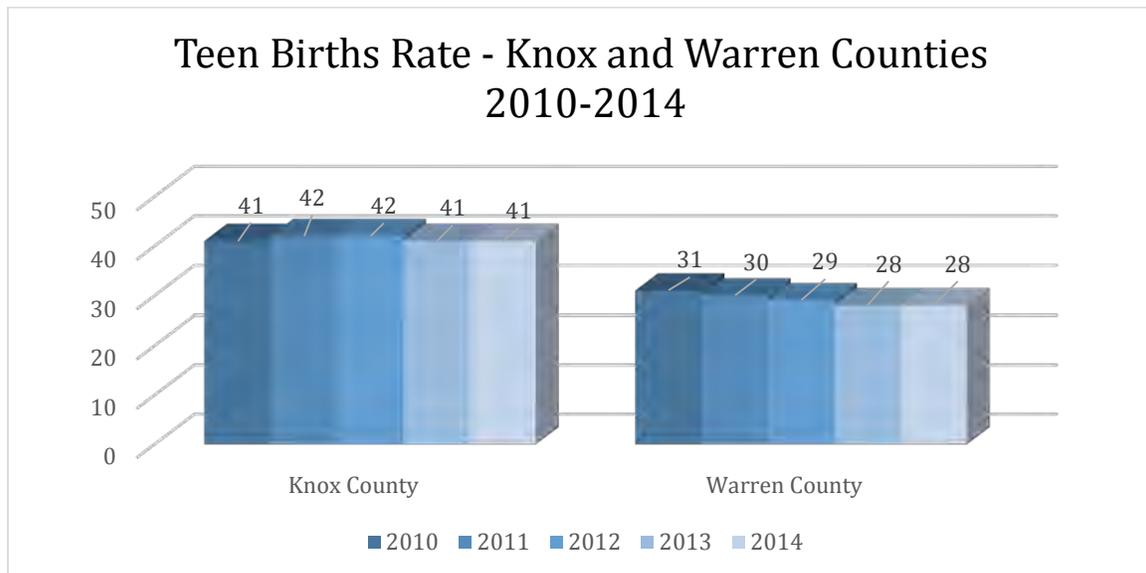
In Knox County, data from 2013 suggest the percentage of two-parent families is over 43.9%. In Warren County, 48.8% of families fall into this category. One-person households represent 34.6% of the Knox County population and 30.2% of the Warren County population.



Source: 2013 Statisticalatlas.com

Early Sexual Activity Leading to Births from Teenage Mothers

Knox and Warren Counties experienced a slight decrease in total teenage birth rate per 100,000 women. However, in Knox County, teen births are significantly higher than the Illinois average of 36 per 1,000 women.



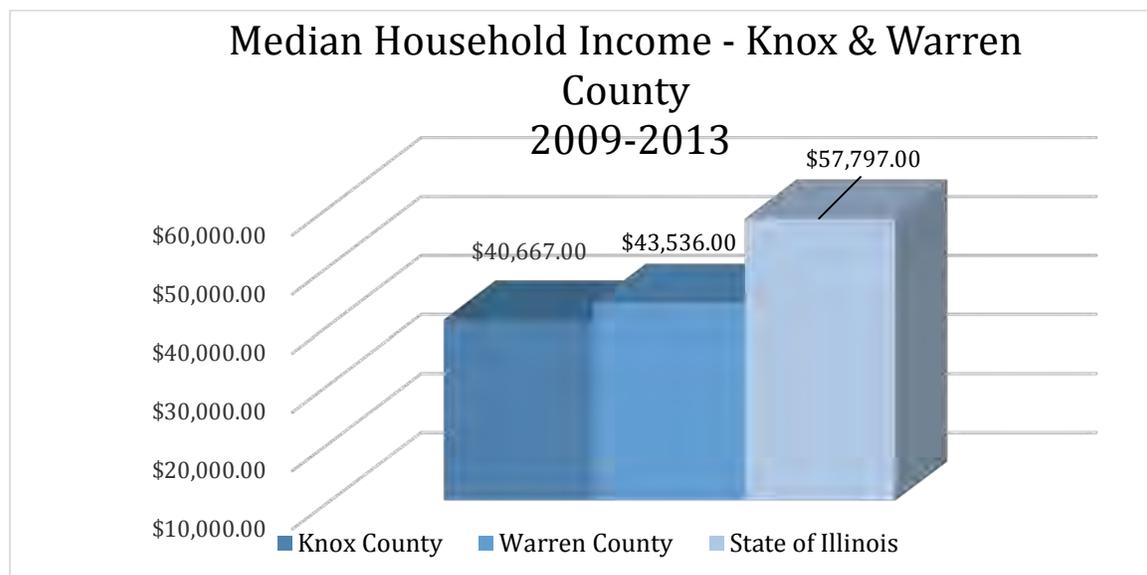
Source: Illinois Department of Public Health

1.4 Economic Information

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

Median Income Level

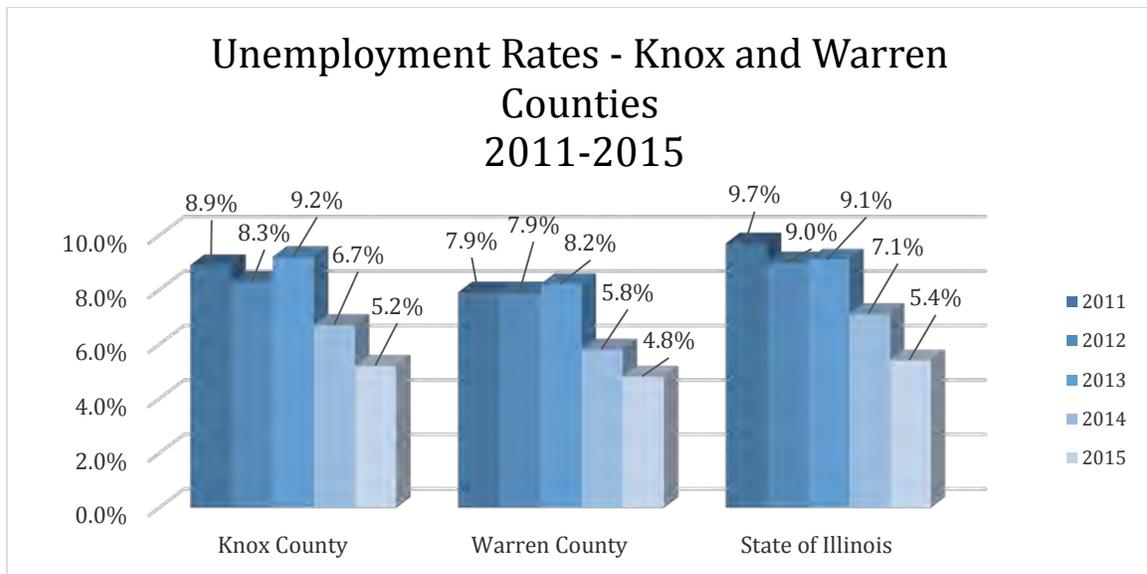
For 2009-2013, the median household incomes in Knox and Warren Counties were lower than the State of Illinois.



Source: US Census

Unemployment

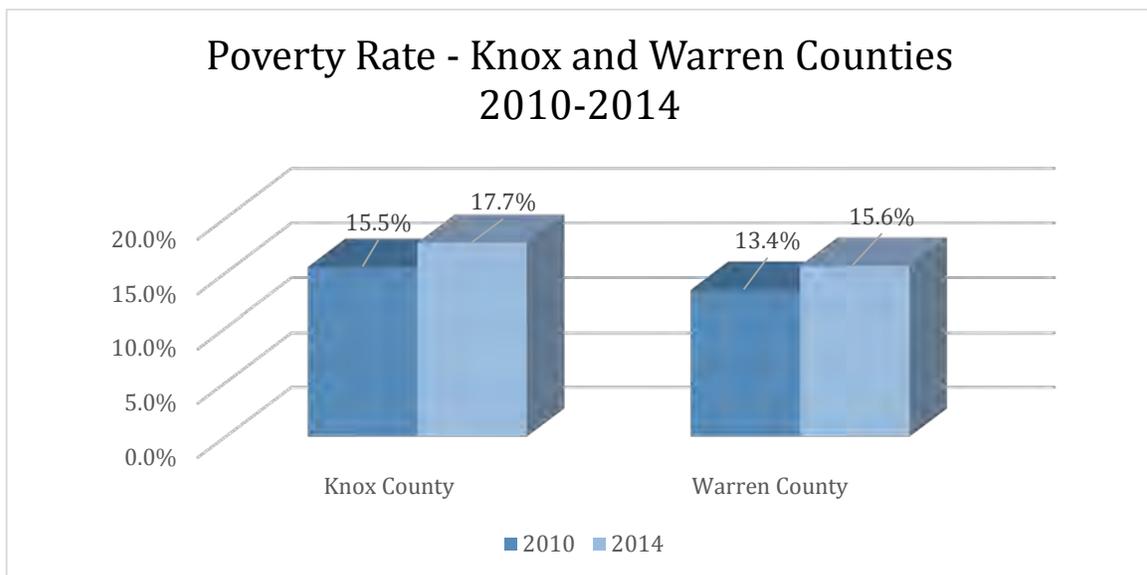
For the years 2011 to 2015, the Knox and Warren County unemployment rate has been near or below the State of Illinois unemployment rate. Between 2013 and 2015, unemployment decreased from 8.9% to 5.2% in Knox County and from 7.9% to 4.8% in Warren County.



Source: Bureau of Labor Statistics

Families in Poverty

Poverty has a significant impact on the development of children and youth. In both Knox and Warren Counties, the percentage of families living in poverty between 2010 and 2014 increased. In Knox County, the poverty rate is 17.7%, while in Warren County the poverty rate is 15.6%. Both are higher than the State of Illinois poverty rate of 14.4%.



Source: US Census

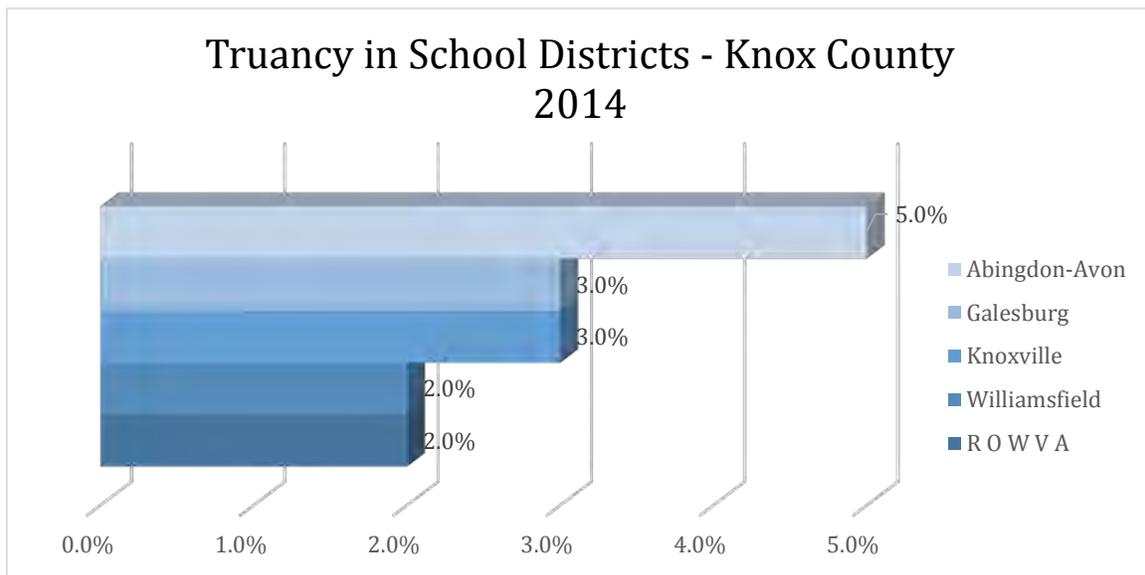
1.5 Education

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

Truancy

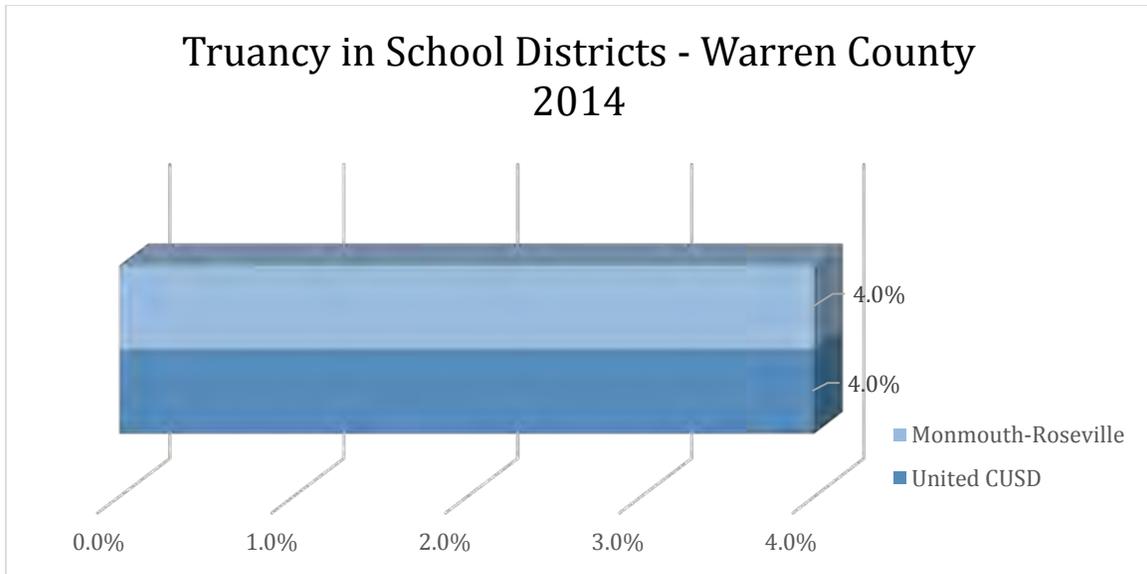
Chronic truancy is a major challenge to the academic progress of children and young adults. The causes of truancy vary considerably for young children. Truancy of middle- and high-school students is more likely a result of the inappropriate behavior and decisions of individual students. Primary school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

As seen below, all truancy rates in both counties are 5% or lower.



Source: Illinois Report Card

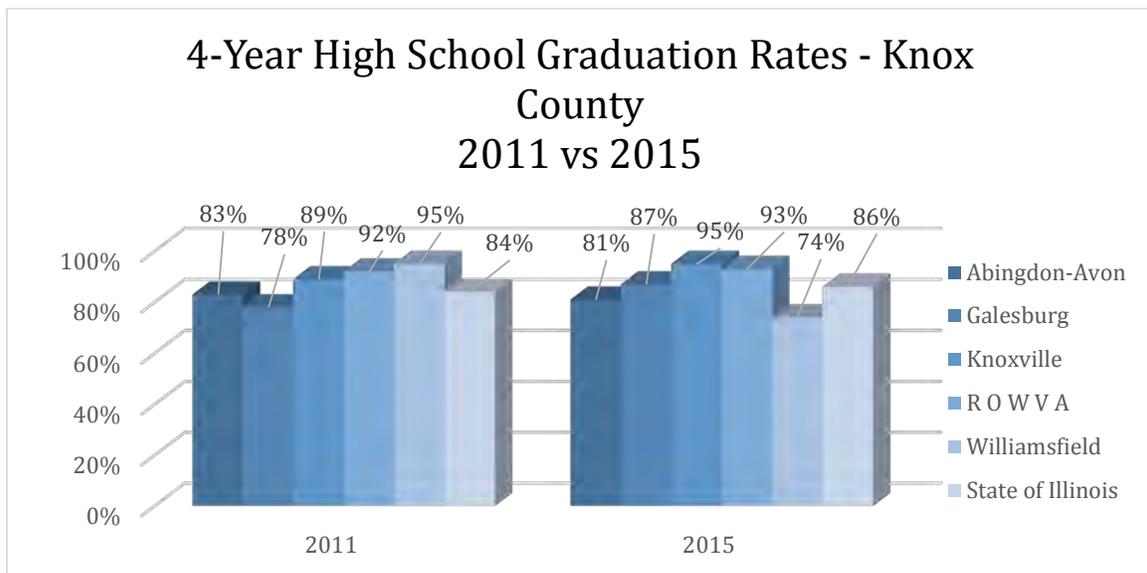
¹ NCES 2005



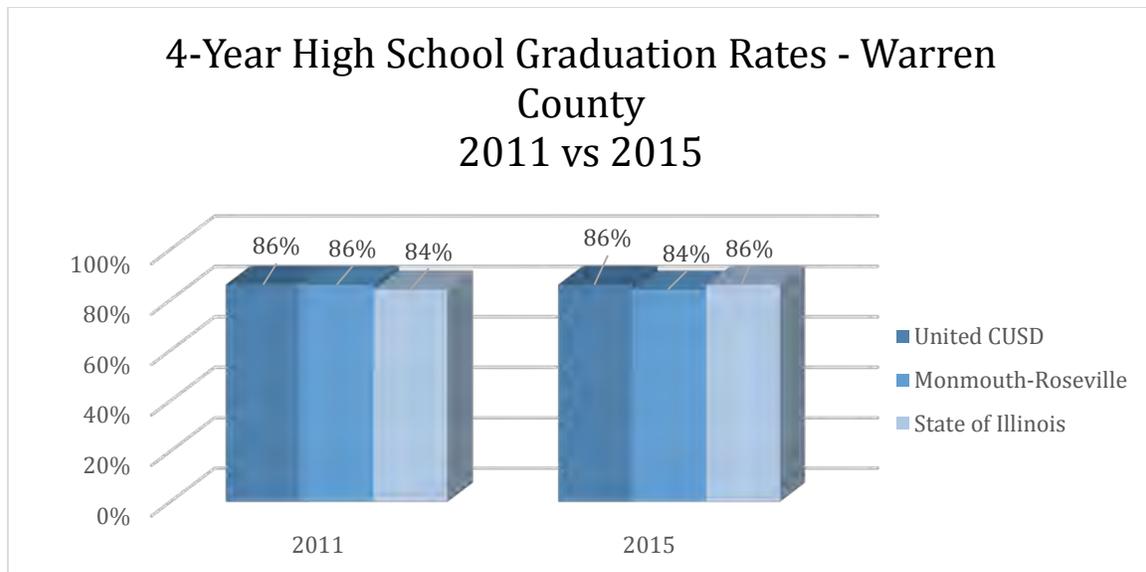
Source: Illinois Report Card

High School Graduation Rates

In 2015, the districts in Knox and Warren Counties reported high school graduation rates that were comparable to the State average of 86%, except for Abingdon-Avon and Williamsfield (both significantly lower) and Knoxville and ROWVA (both significantly higher).



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



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

1.6 Key Takeaways from Chapter 1

- ✓ **OVERALL COMBINED POPULATION HAS DECREASED OVER THE LAST 5 YEARS.**
- ✓ **POPULATION IS AGING. THE LARGEST PERCENTAGE INCREASE IS IN RESIDENTS OVER AGE 65**
- ✓ **DECREASING WHITE POPULATION, INCREASING LATINO POPULATION**
- ✓ **TEEN BIRTHS PER 1,000 FEMALE POPULATION, AGES 15-19 HAVE DECLINED SLIGHTLY OVER THE LAST THREE YEARS, YET KNOX COUNTY RATES ARE STILL SIGNIFICANTLY ABOVE THE AVERAGE ACROSS THE STATE OF ILLINOIS**
- ✓ **SINGLE FEMALE HEAD-OF-HOUSE-HOUSEHOLD REPRESENTS APPROXIMATELY 11% OF THE POPULATION IN BOTH COUNTIES. HISTORICALLY, THIS DEMOGRAPHIC INCREASES THE LIKELIHOOD OF FAMILIES LIVING IN POVERTY**
- ✓ **UNEMPLOYMENT HAS DECREASED AND IS LOWER THAN STATE AVERAGES**
- ✓ **WITH SOME VARIANCE, MOST SCHOOL DISTRICTS IN KNOX AND WARREN COUNTIES HAVE COMPARABLE GRADUATION RATES TO THE STATE AVERAGE**

CHAPTER 2 OUTLINE

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

CHAPTER 2. PREVENTION BEHAVIORS

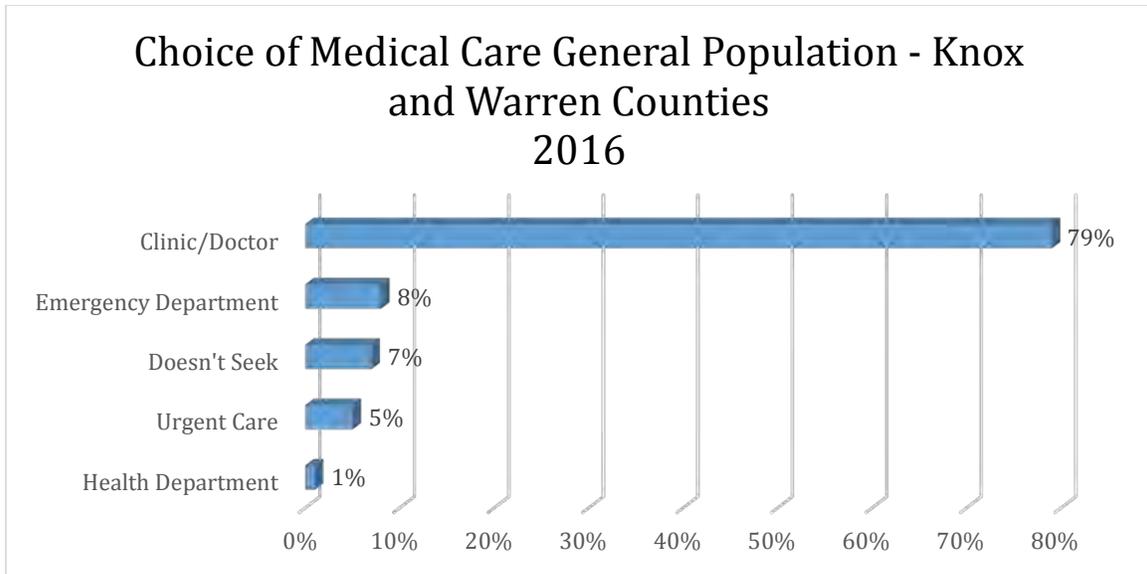
2.1 Accessibility

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

Choice of Medical Care

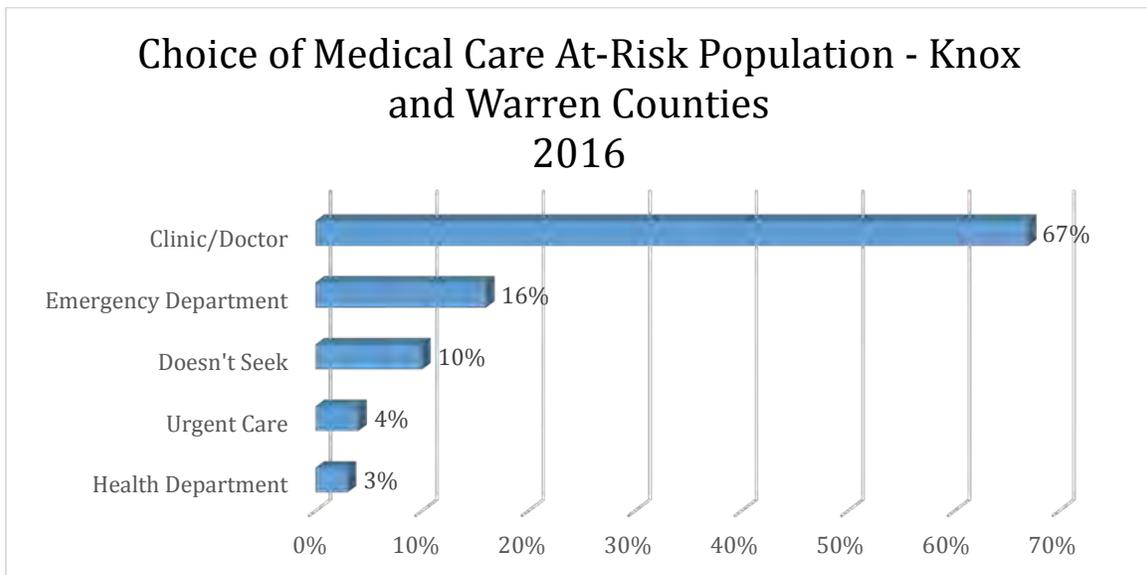
Survey respondents were asked to select the type of healthcare facility used when sick. Six different alternatives were presented, including clinic or doctor's office, emergency department, urgent-care facility, health department, no medical treatment, and other. The modified sample of 720 respondents was used for general population in order to more accurately reflect the demographic characteristics for Knox and Warren Counties.

The most common response for source of medical care was clinic/doctor's office, chosen by 79% of survey respondents. This was followed by the emergency department at a hospital (8%), not seeking medical attention (7%), urgent care facility (5%), and the health department (1%). This distribution of facility choice is quite different from more urban locations in the OSF system, where there has been more significant usage of urgent care facilities. This may be a result of the relatively small number of urgent care facilities in Knox and Warren Counties.



Source: CHNA Survey

For the at-risk population, the most common response for choice of medical care was also clinic/doctor's office (67%). This was followed by the emergency department at a hospital (16%), not seeking medical attention (10%), urgent care facilities (4%), and the health department (3%).



Source: CHNA Survey

Demographic Factors Related to Choice of Medical Care

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

Clinic/Doctor's Office tends to be used more often by women, older people and those with higher education and income. Homeless people receive care less often in clinics/doctor's offices.

Urgent Care is used more often by younger people.

Emergency Department tends to be used more often by men, and those with lower education and income.

Do Not Seek Medical Care tends to be chosen more often by men, younger people, and less often by White people.

Health Department tends to be used more often by men, Latino people, and homeless people, and less often by White people.

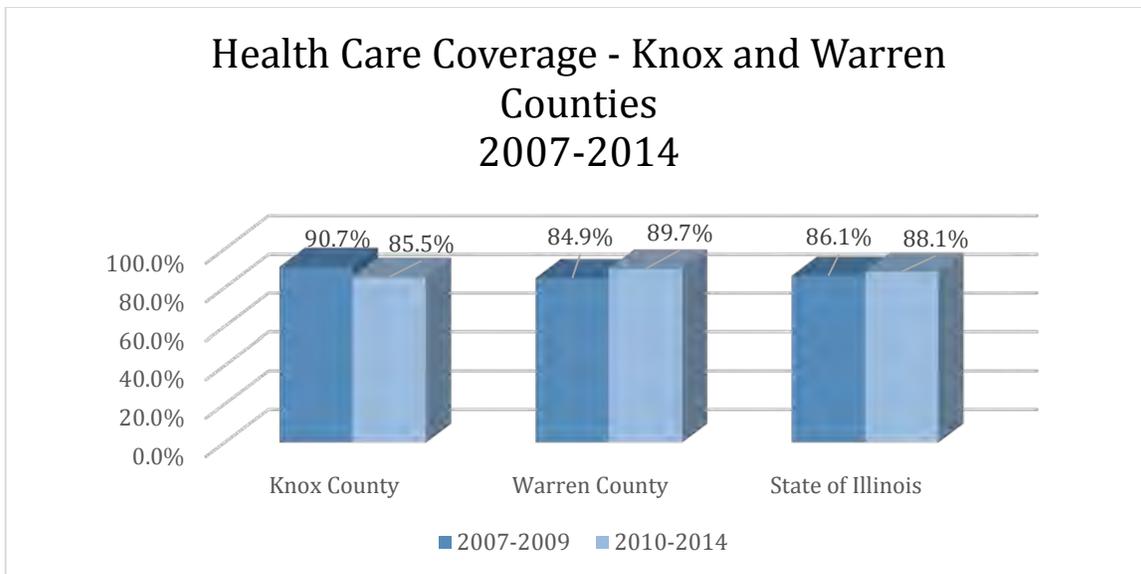
Comparison to 2013 CHNA Data

Compared to Knox and Warren Counties' 2013 CHNA survey data, for the general population, there was a slight decrease in use of clinic/doctor's office, from 80% to 79%, but an increase in urgent care usage, from 2% to 5%. There was also an increase in the percentage of people choosing to seek care in an emergency department (6% to 8%), but a decrease in the percentage of people choosing not to seek care (from 9% to 7%).

For the at-risk population, there was also an increase in urgent care usage (from 2% to 4%). While there was a slight increase in ED usage from 13% to 16%, there was a reduction in the proportion of people who did not seek medical attention when needed. Specifically, choosing not to seek care declined from 13% in 2013 to 10% in 2016 for the at-risk population.

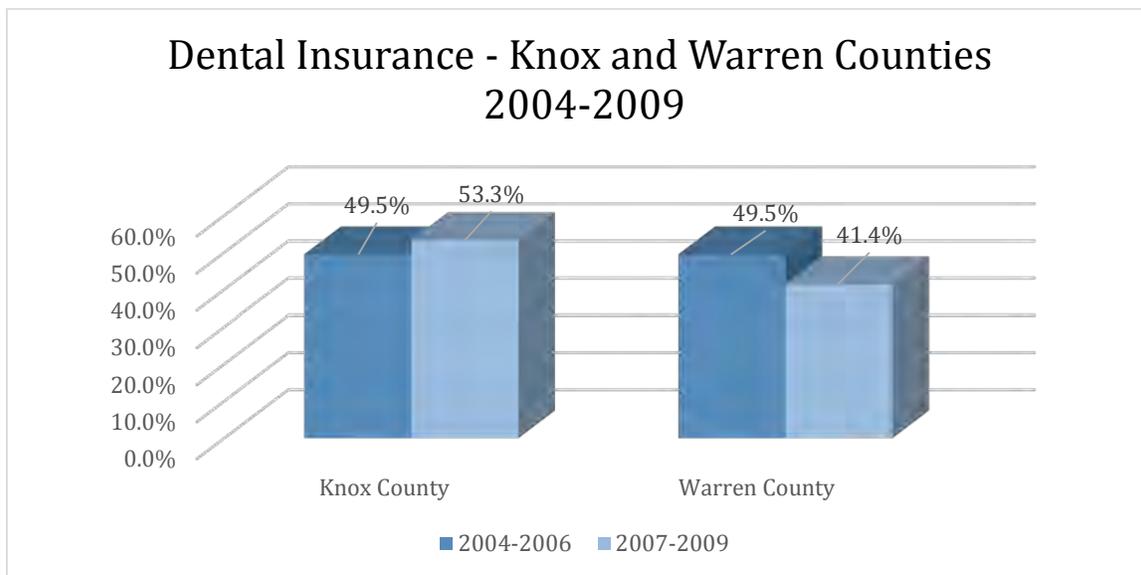
Insurance Coverage

With regard to medical insurance coverage, data gathered from the Illinois Behavioral Risk Factor Surveillance System show that residents in Knox and Warren Counties possess healthcare coverage at a comparable rate to the State of Illinois (87.7%), with Knox County slightly lower (85.5%) and Warren County slightly higher (89.7%).



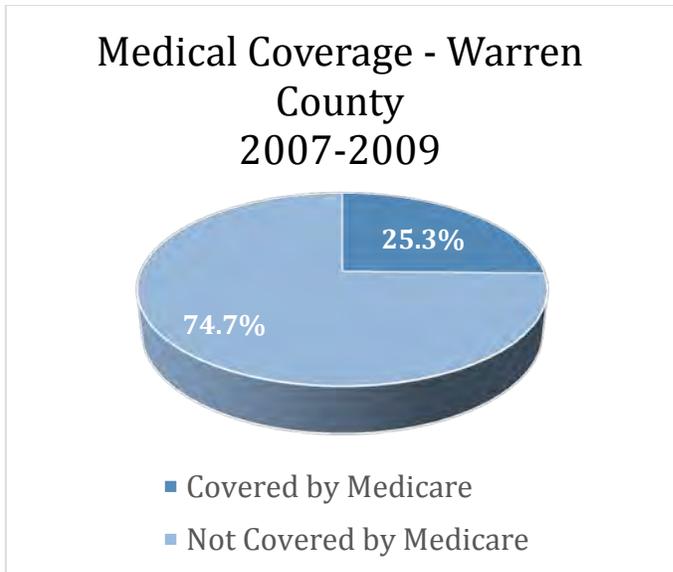
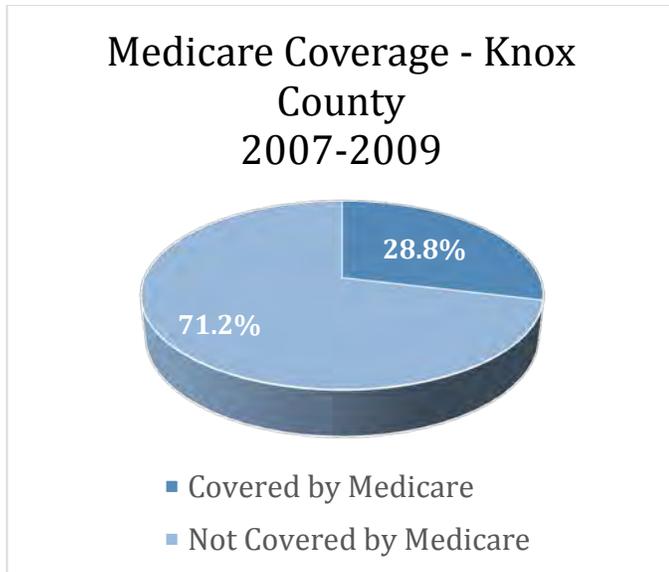
Source: Illinois Behavioral Risk Factor Surveillance System

With regard to dental insurance, 53.3% of Knox County residents and 41.1% of Warren County residents possessed dental insurance coverage in 2007-2009. While coverage has increased in Knox County since 2004-2006, it has declined for Warren County. These are the most recent data, as the BRFSS has not been updated for this metric since 2009.



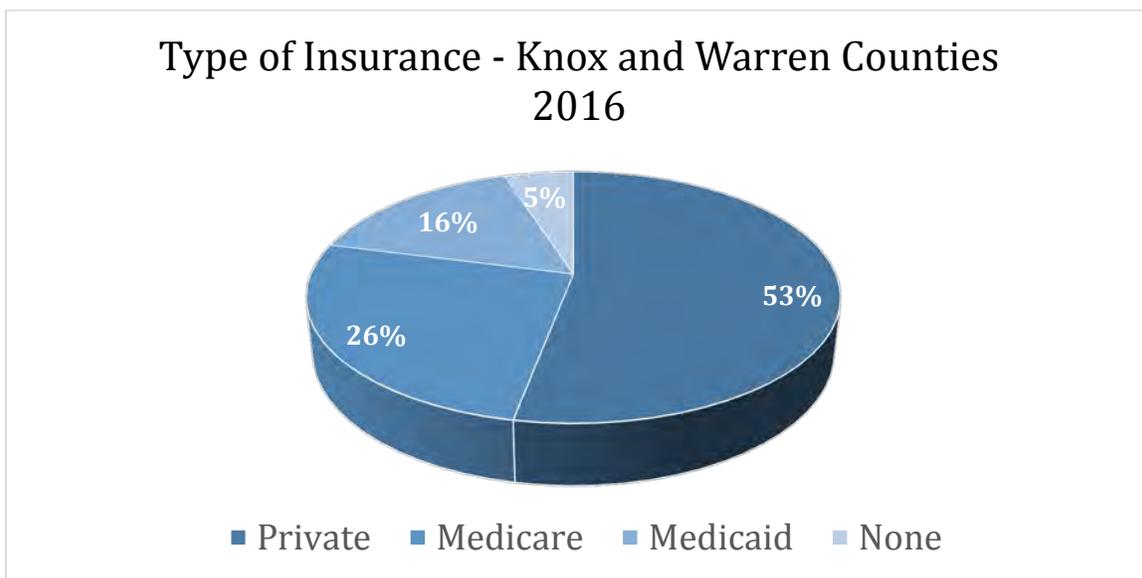
Source: Illinois Behavioral Risk Factor Surveillance System

With regard to Medicare Coverage, approximately 28.8% of Knox County residents and 25.3% of Warren County residents received Medicare coverage between 2007 and 2009. These are the most recent data, as the BRFSS has not been updated for this metric since 2009.



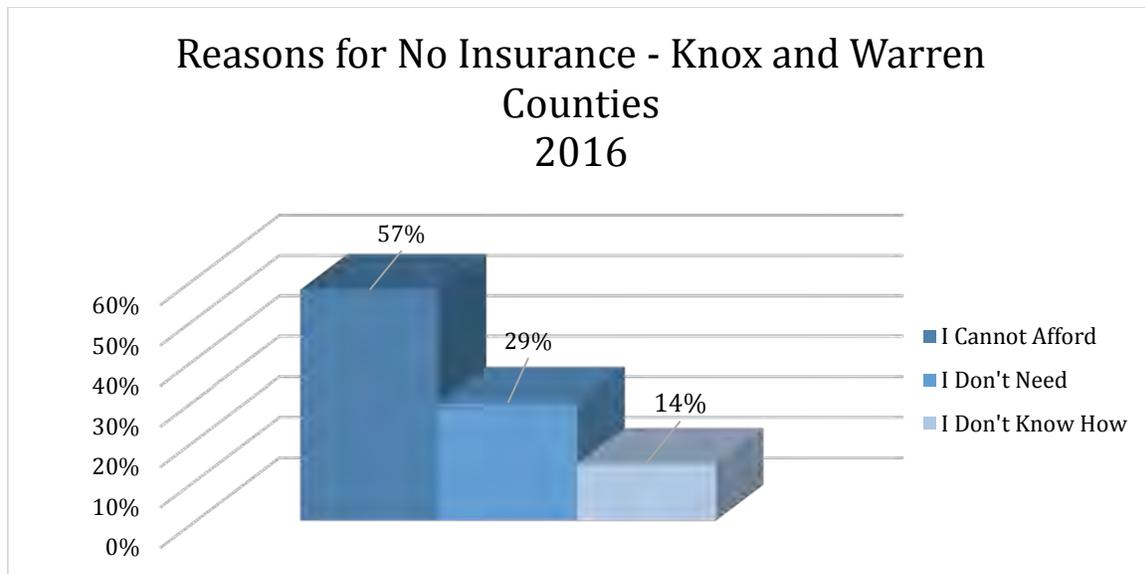
Source: Illinois Behavioral Risk Factor Surveillance System

A more precise analysis for insurance coverage is possible with data from the CHNA survey. According to survey data, 53% of the residents in Knox and Warren Counties are covered by private insurance.



Source: CHNA Survey

Data from the survey show that for the 5% of individuals who do not have insurance, the most common reason was cost.



Source: CHNA Survey

Demographic Factors Related to Type of Insurance

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

Medicare tends to be used more frequently by older people, and those with higher education and income.

Medicaid tends to be utilized at higher rates younger people and people who have lower income and education levels.

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

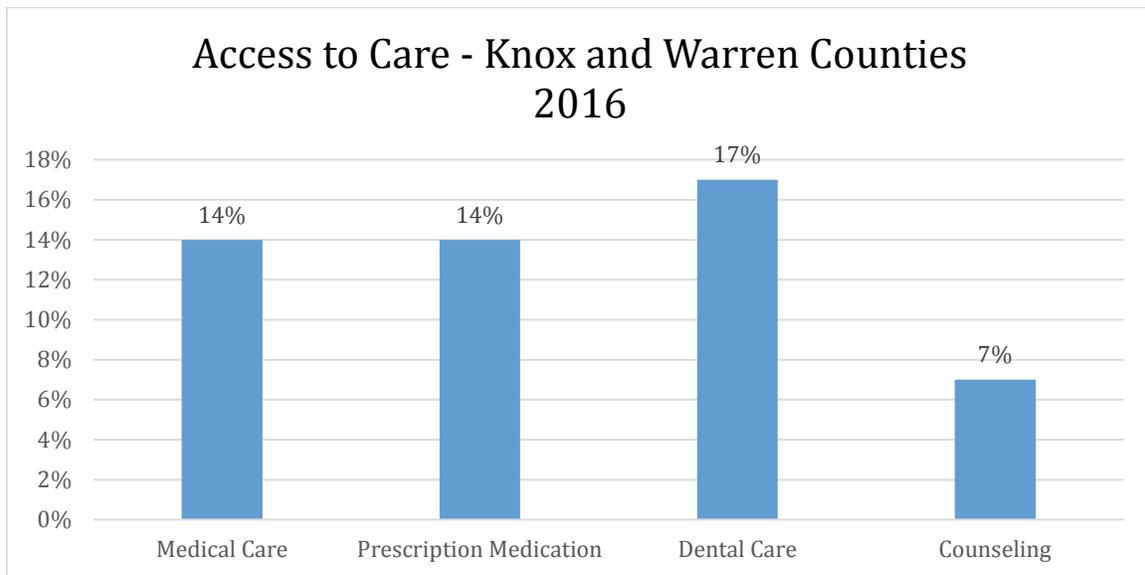
No Insurance tends to be reported more often by Black people, the homeless, and those with lower education and income.

Comparison to 2013 CHNA Data

Compared to survey data from the 2013 CHNA, there has been a significant increase in those with private insurance from 89.5% to 95% in Knox County and from 93.2% to 95% in Warren County, and a decrease in those individuals who have no insurance, from 14% to 5% in Knox and from 10% to 5% in Warren County.

Access to Care

In the CHNA survey, respondents were asked, “Was there a time when you needed care but were not able to get it?” Access to four types of care were assessed: medical care, prescription medications, dental care and counseling. Survey results show that 14% of the population did not have access to medical care when needed; 14% of the population did not have access to prescription medications when needed; 17% of the population did not have access to dental care when needed; and 7% of the population did not have access to counseling when needed.



Source: CHNA Survey

Demographic Factors Related to Access to Care

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

Access to medical care tends to be higher for those with higher education and income.

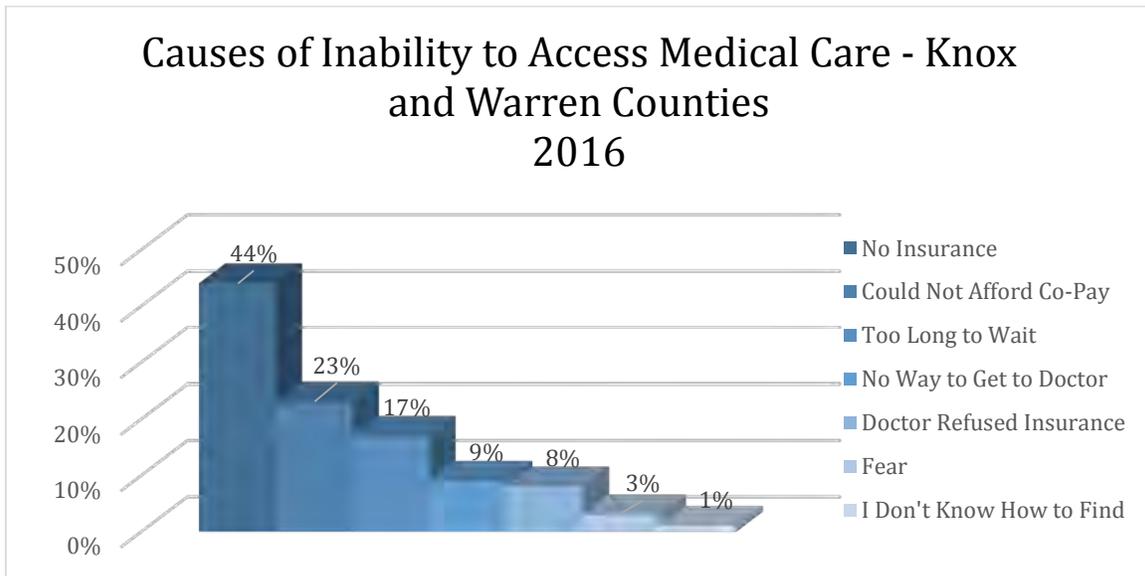
Access to prescription medications tends to be higher for older people, White people, and those with higher education and income.

Access to dental care tends to be higher for older people, White people, and those with higher education and income.

Access to counseling tends to be rated higher by older people, White people, and people with higher income, but access is reported less often by homeless individuals.

Reasons for No Access – Medical Care

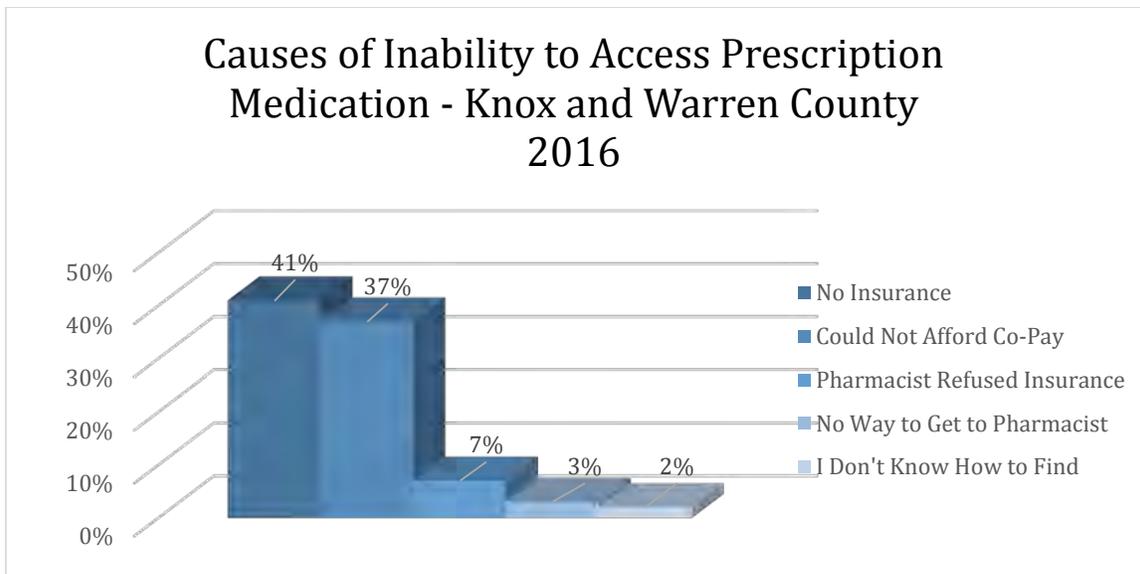
Survey respondents who reported they were not able to get medical care when needed were asked a follow-up question. The leading causes of the inability to gain access to medical care were no insurance (44%), inability to afford copay (23%), too long to wait (17%), no way to get to the doctor, (9%), and refusal of insurance by physician (8%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



Source: CHNA Survey

Reasons for No Access – Prescription Medication

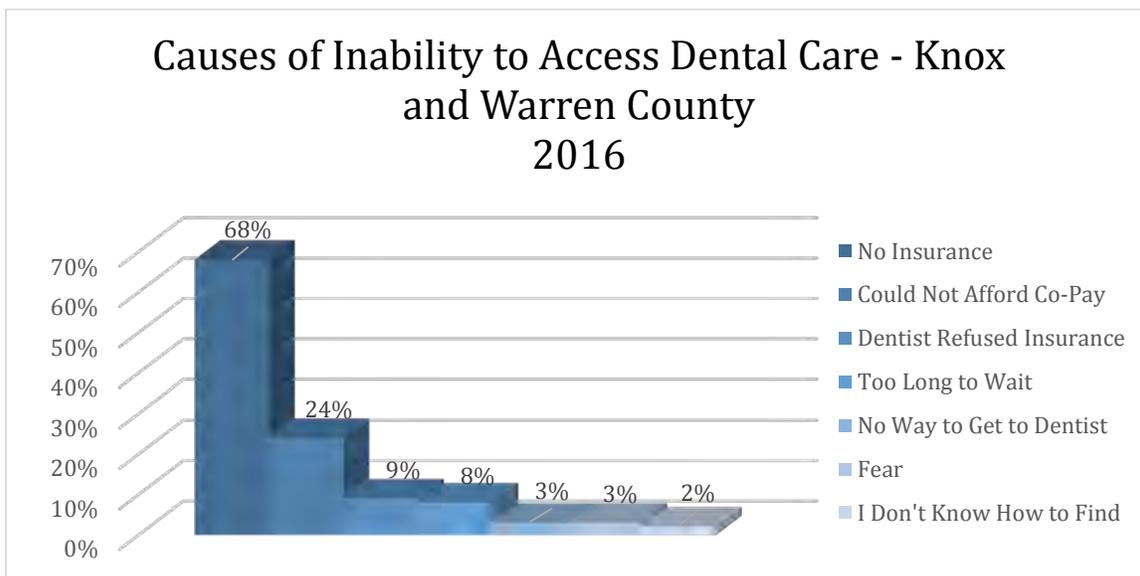
Survey respondents who reported they were not able to get prescription medications when needed were asked a follow-up question. In Knox and Warren Counties, the leading causes of the inability to gain access to prescription medicine were no insurance (41%) and the inability to afford copayments or deductibles (37%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



Source: CHNA Survey

Reasons for No Access – Dental Care

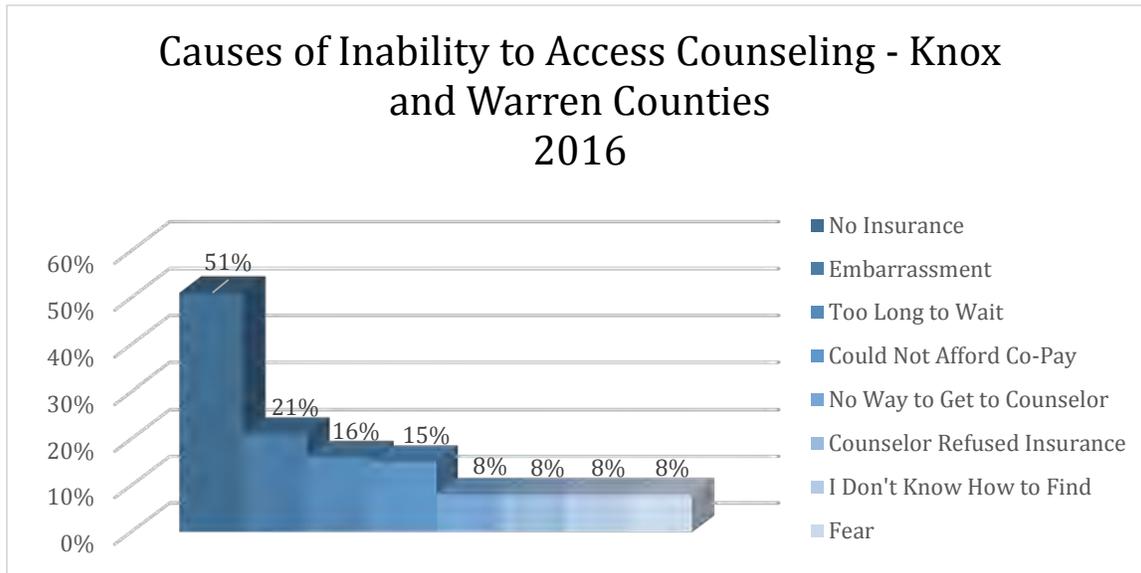
Survey respondents who reported they were not able to get dental care when needed were asked a follow-up question. The leading causes of inability to gain access to dental care were no insurance (68%), and the inability to afford copayments or deductibles (24%). Dentist refused insurance (9%), and too long to wait (8%) were also cited causes. Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



Source: CHNA Survey

Reasons for No Access – Counseling

Survey respondents who reported they were not able to get counseling when needed were asked a follow-up question. In Knox and Warren Counties, the leading causes of the inability to access gain to counseling were no insurance (51%), embarrassment (21%), too long to wait (16%), and the inability to afford co-pay (15%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.



Source: CHNA Survey

Comparisons to 2013 CHNA Data

Access to Medical Care – Compared to 2013, survey results show equal access to medical care when needed. In 2013 and 2016, 86% of residents were able to get medical care when needed.

Access to Prescriptions Medication – Compared to 2013, survey results show an increase in those that were able to get prescription medications when they needed it. In 2013, 83% of residents were able to get prescription medication when needed. In 2016, the percentage increased to 86%.

Access to Dental Care – Compared to 2013, results show an increase in those that were able to access dental care when needed. In 2013, 81% of residents were able to get dental care when needed. In 2016, the percentage increased to 83%.

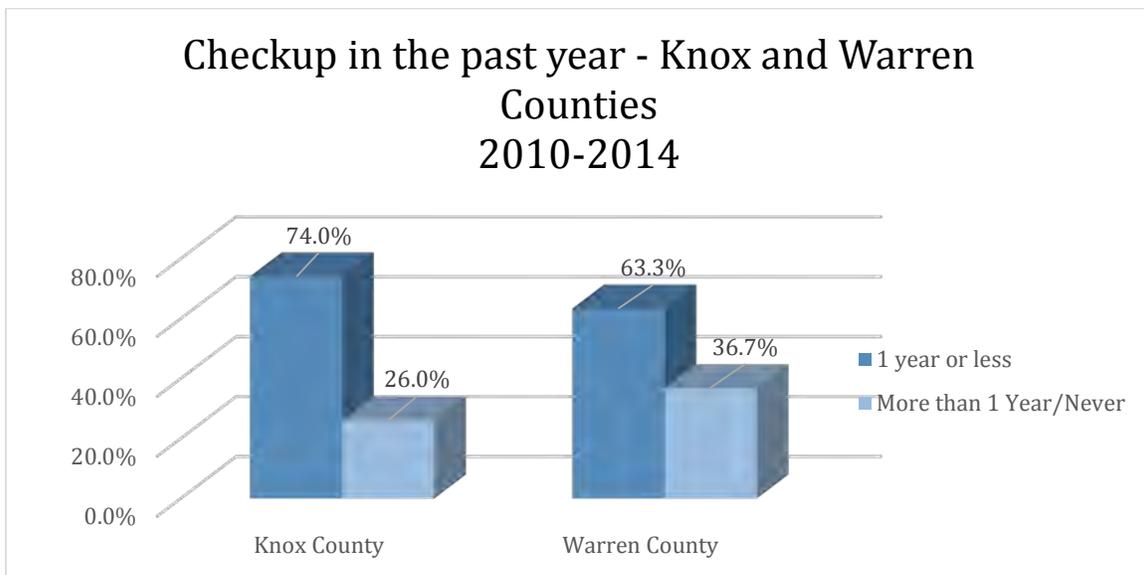
Access to Counseling – Compared to 2013, there was an increase in access to counseling. In 2013, 91% of respondents had access to counseling when needed, compared to 93% in 2016.

2.2 Wellness

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

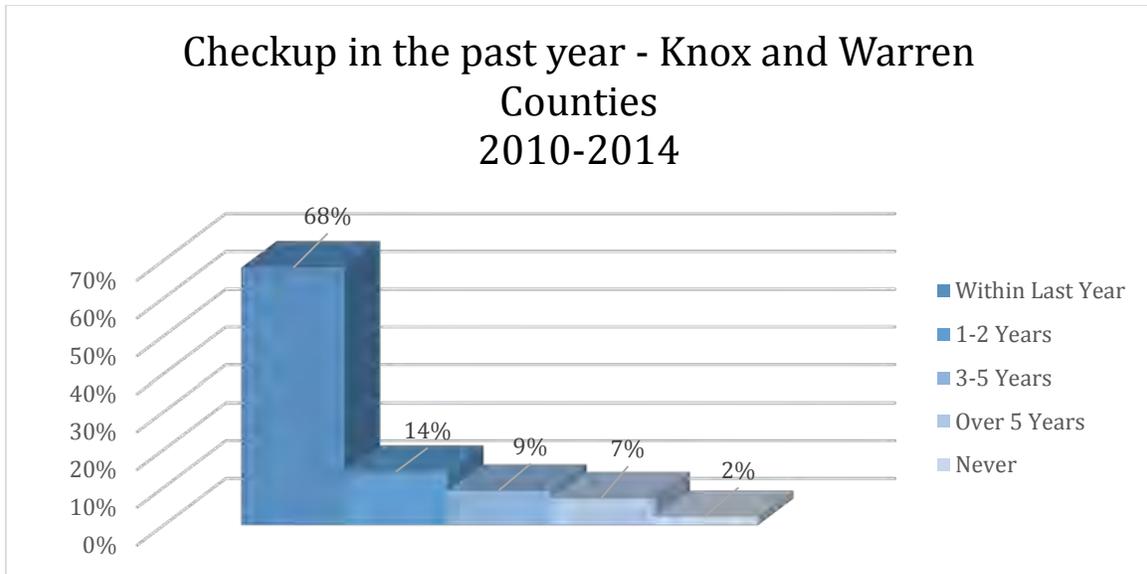
Frequency of Checkup

Numerous health problems can be minimized when detected early. Therefore, regularly scheduled checkups can be very important. According to the latest data from the Illinois BRFSS, 74% of residents in Knox County and 63.3% of residents in Warren County report having had a routine checkup within the last year.



Source: Illinois Behavioral Risk Factor Surveillance System

Results from the CHNA survey show a similar percentage of residents getting a checkup. Survey results show that 68% of Knox and Warren County residents have had a checkup in the last year.



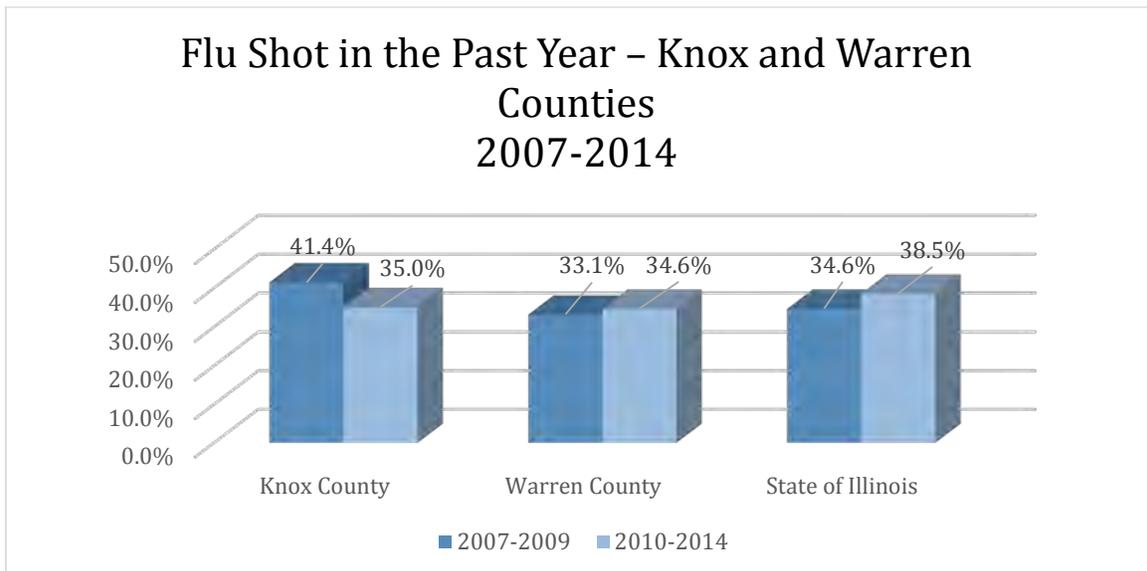
Source: CHNA Survey Data

Comparison to 2013 CHNA Data

There has been a slight increase in the percentage of residents who have had a checkup in the past year, from 64% in 2013 to 68% in 2016.

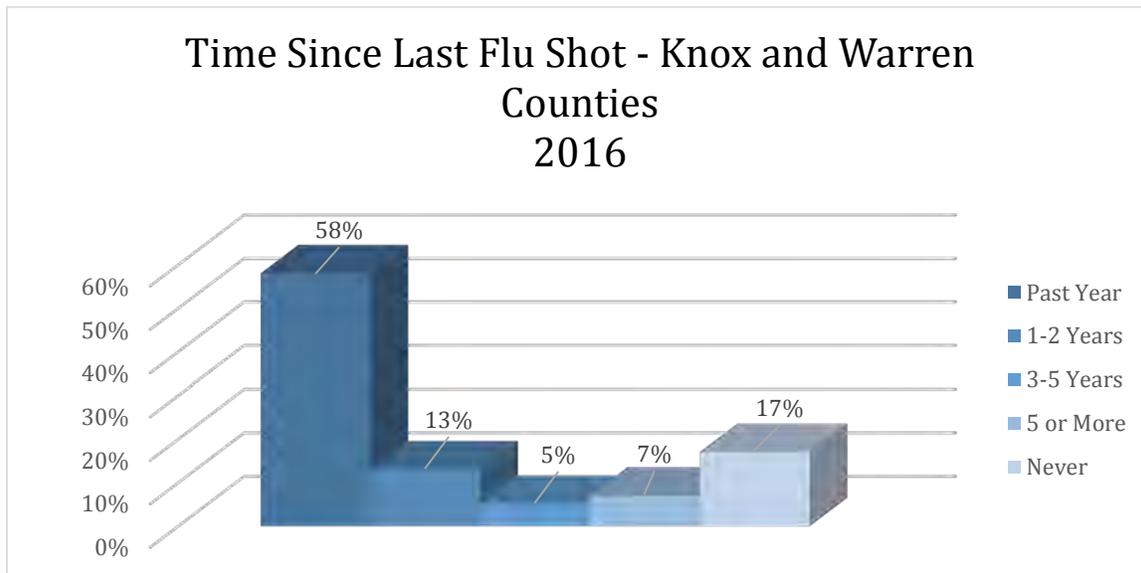
Frequency of Flu Shots

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 35% for Knox County in 2010-2014 compared to 41.4% for 2007-2009. Results are more positive for Warren County, where the percentage increased from 33.1% to 34.6% over the same time period. During the same timeframe, the State of Illinois also realized an increase.



Source: Illinois Behavioral Risk Factor Surveillance System

CHNA survey data provide additional insights into prevalence of flu shots, and a more positive result for Knox and Warren Counties.



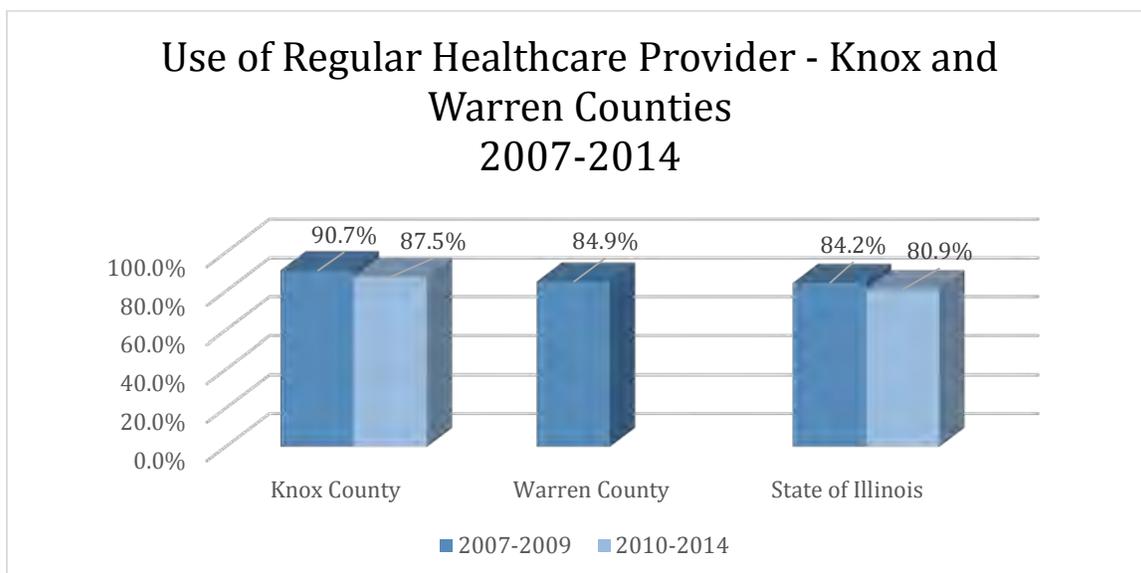
Source: CHNA Survey

Comparison to 2013 CHNA Data

There is no comparison with the 2013 CHNA, as the survey item for flu shot was added to the 2016 CHNA survey.

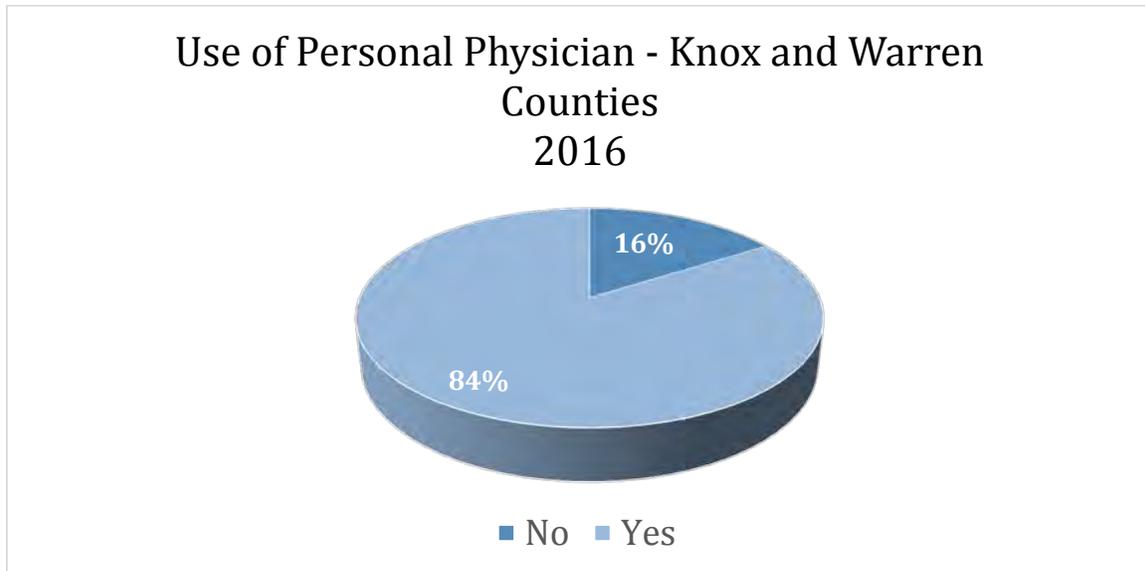
Usual Healthcare Provider

In Knox County, the most recent secondary data indicate 87.5% of residents utilize a regular healthcare provider, down slightly from 2007-2009. The latest data available for Warren County shows 84.9% of residents having a regular provider. The percentage of residents in both Knox and Warren Counties reporting a usual healthcare provider is higher than the State of Illinois average, which fell slightly.



Source: Illinois Behavioral Risk Factor Surveillance System

Similarly, the CHNA survey asked respondents if they had a personal physician. Having a personal physician suggests that individuals are more likely to get wellness check-ups and less likely to use an emergency department as a primary healthcare service. According to survey data, 84% of residents have a personal physician.



Source: CHNA Survey

Comparison to 2013 CHNA Data

The 2016 CHNA survey results for having a personal physician are slightly higher compared to the 2013 CHNA. Specifically, 83% of residents reported a personal physician in 2013 and 84% report the same in 2016.

Demographic Factors Related to Wellness

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

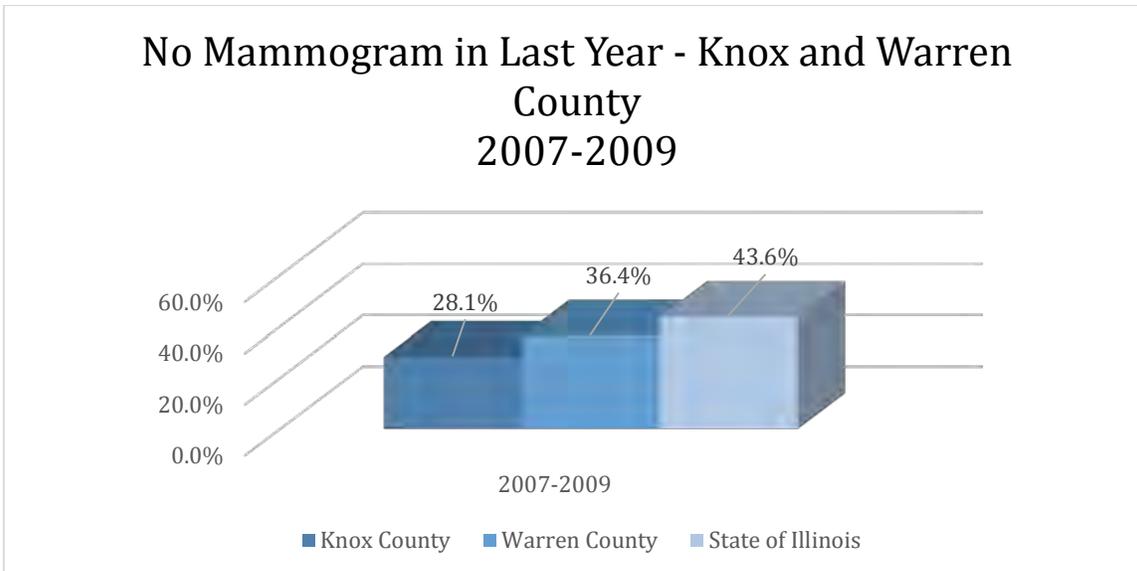
Frequency of checkup tends to be higher for women, older people and White people.

Frequency of flu shot tends to be higher for those with higher income.

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

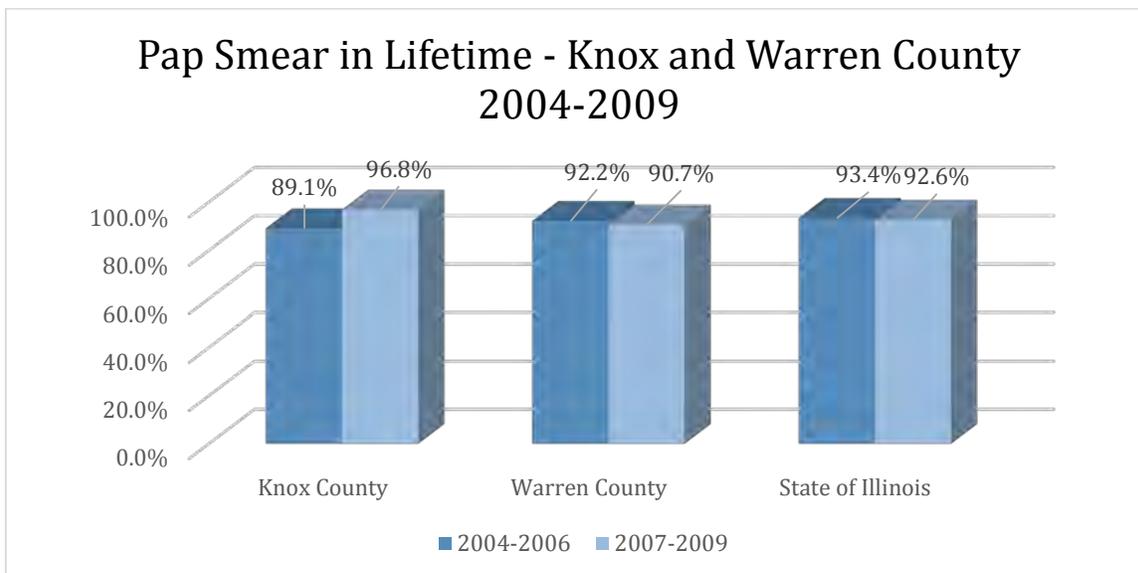
Women's Healthcare

Using the most recent available data from 2007-2009, 28.1% of residents from Knox and 36.4% of residents from Warren County reported they had not had a mammogram within the last year.



Source: Illinois Behavioral Risk Factor Surveillance System

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



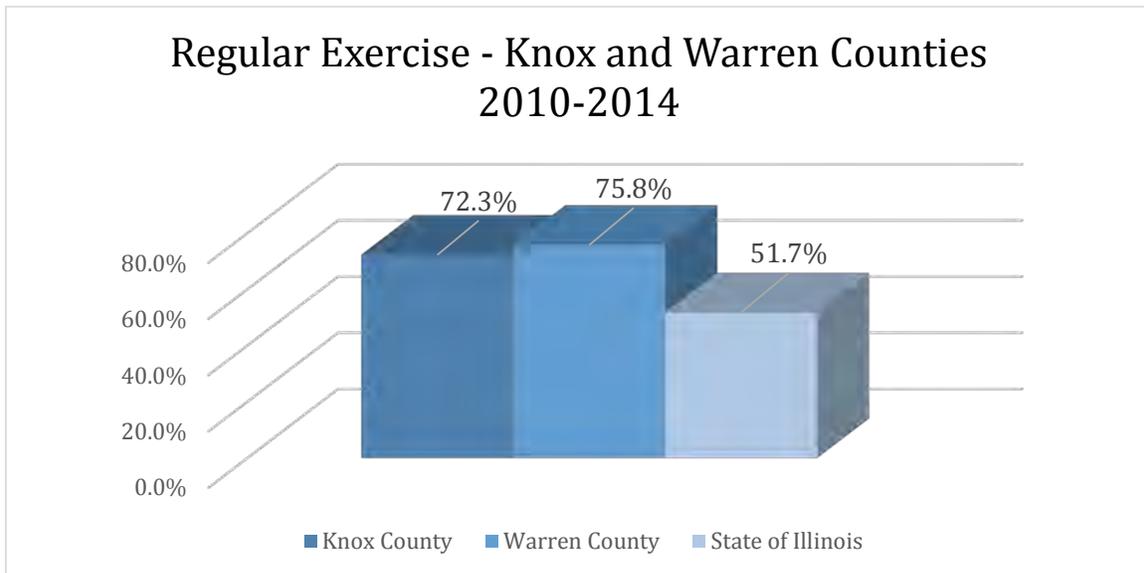
Source: Illinois Behavioral Risk Factor Surveillance System

Healthy Lifestyle

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

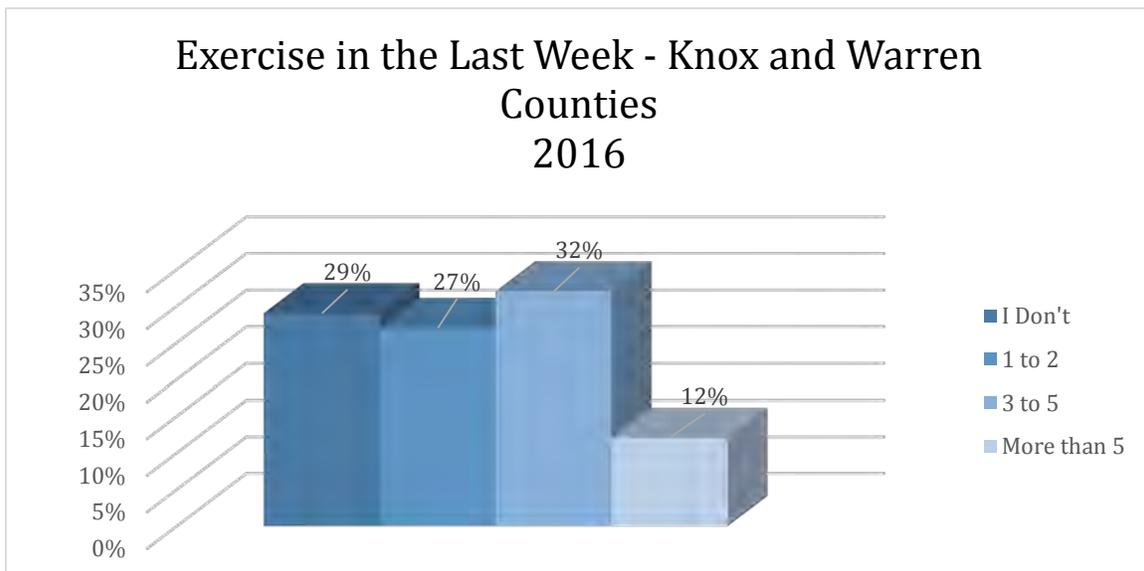
Physical Exercise

According to recent data, approximately 75% of the residents in Knox and Warren Counties exercise. The percentage of individuals who exercise in Knox and Warren Counties is higher than the State of Illinois.



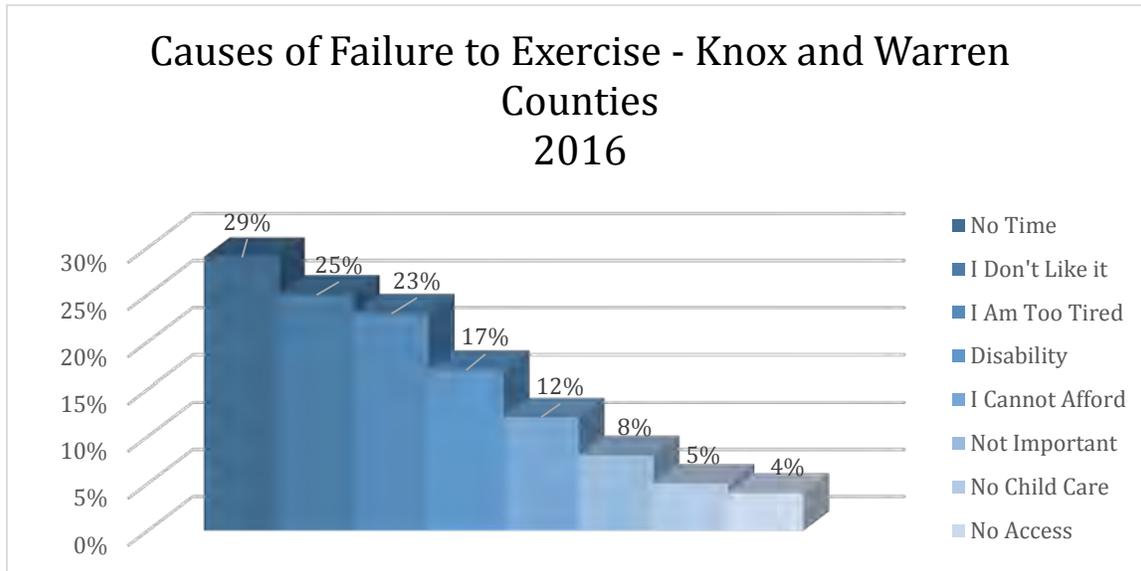
Source: Illinois Behavioral Risk Factor Surveillance System

CHNA survey data allow for a more detailed assessment of exercise. Specifically, 29% of respondents indicated that they do not exercise at all, while 27% of residents exercise 1-2 times per week.



Source: CHNA Survey

To find out why some residents do not exercise at all, a follow up question was asked. The most common reasons for not exercising are not having enough time, disliking exercise, and being too tired.



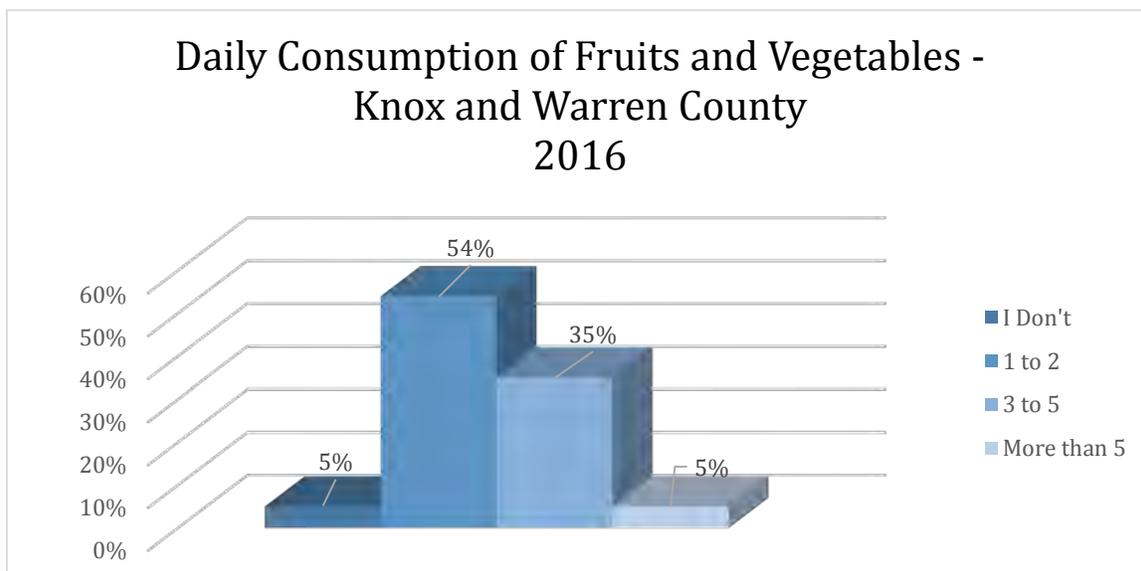
Source: CHNA Survey

Comparison to 2013 CHNA Data

Exercise behaviors have improved; data from the 2016 CHNA survey indicate that in 2013, 47% of survey respondents indicated they did not exercise. In 2016, 29% of respondents indicated they did not exercise.

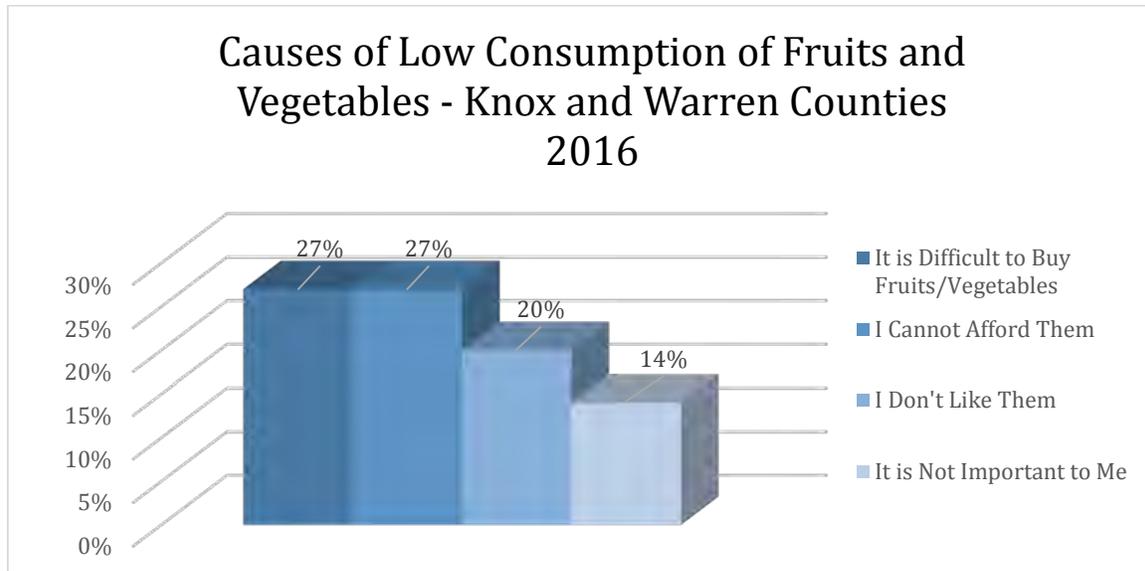
Healthy Eating

Nutrition and diet are critical to preventative care. Well over half (59%) of Knox and Warren County residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of Knox and Warren Counties residents who consume five or more servings per day is only 5%.



Source: CHNA Survey

Those individuals who indicated they do not eat any fruits or vegetables were asked a follow up question. Reasons most frequently given for failing to eat more fruits and vegetables are the difficulty to buy fruits and vegetables (27%), the expense involved (27%), and a dislike of fruits and vegetables (20%).



Source: CHNA Survey

Comparison to 2013 CHNA Data

Compared to the 2013 CHNA, healthy eating is improving. Specifically, in 2013, 76% of survey respondents ate two or fewer servings of fruits and vegetables per day. In 2016, 59% eat two or fewer servings of fruits and vegetables per day.

Demographic Factors Related to Healthy Lifestyle

There are multiple demographic characteristics showing significant relationships with healthy lifestyle.

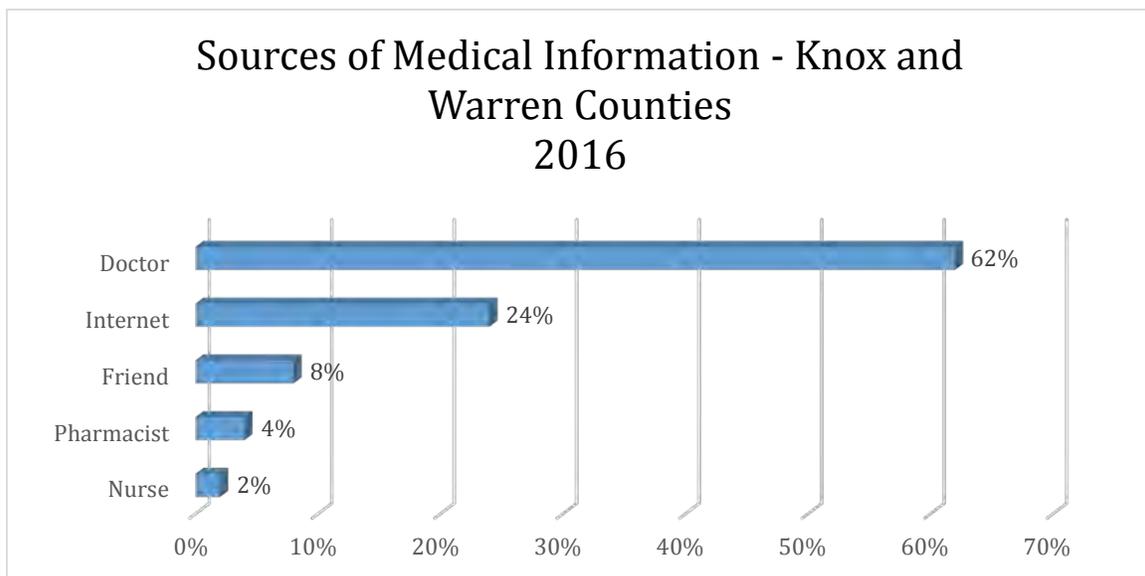
Frequency of exercise tends to be higher for men, older people, and those with higher education.

Frequency of fruit and vegetable consumption tends to be higher for older people.

2.3 Access to Information

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

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



Source: CHNA Survey

Demographic Factors Related to Access to Information

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

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

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

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

Access to Information from a Pharmacy tends to be higher for those with lower education and income.

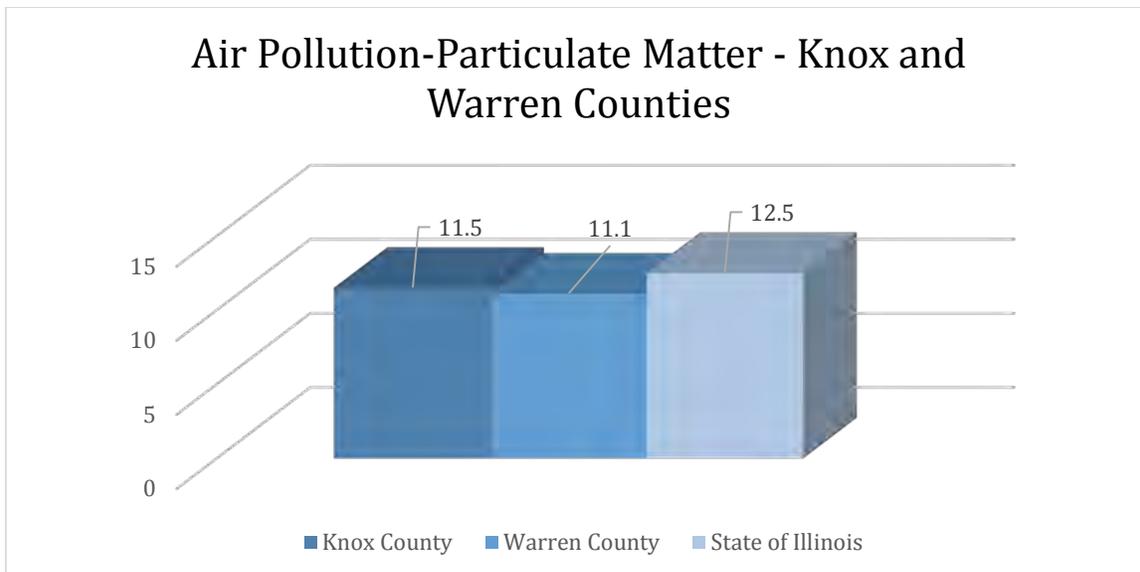
Access to Information from a Church Nurse does not show significant relationships.

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 (PM_{2.5}) 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 APPMs for Knox County (11.5) and Warren County (11.1) are slightly lower than the State average of 12.5%.



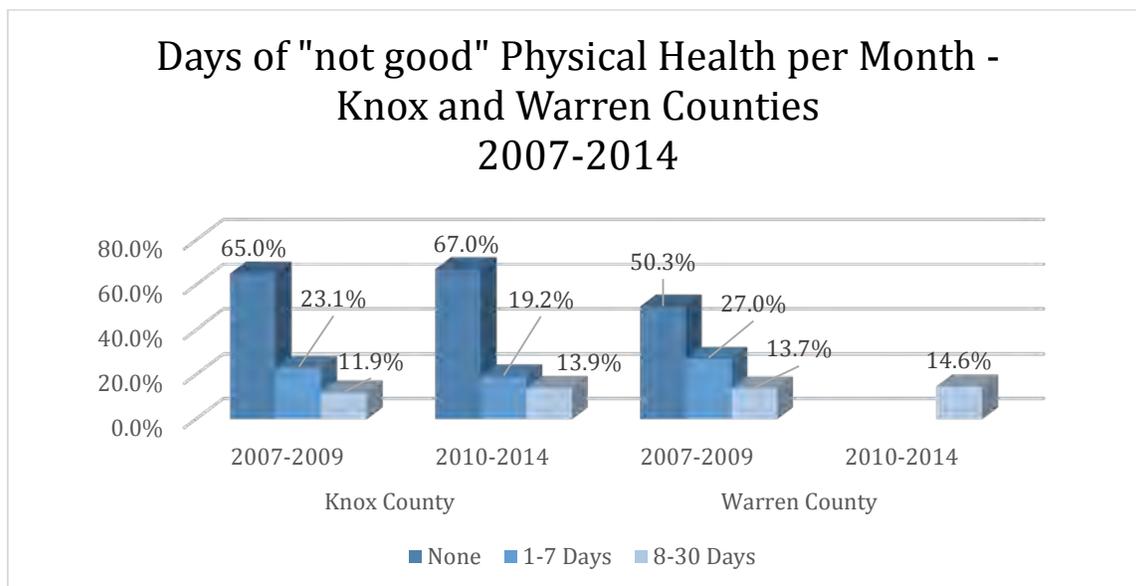
Source: County Health Rankings 2011 Data

2.5 Health Status

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

Physical Health

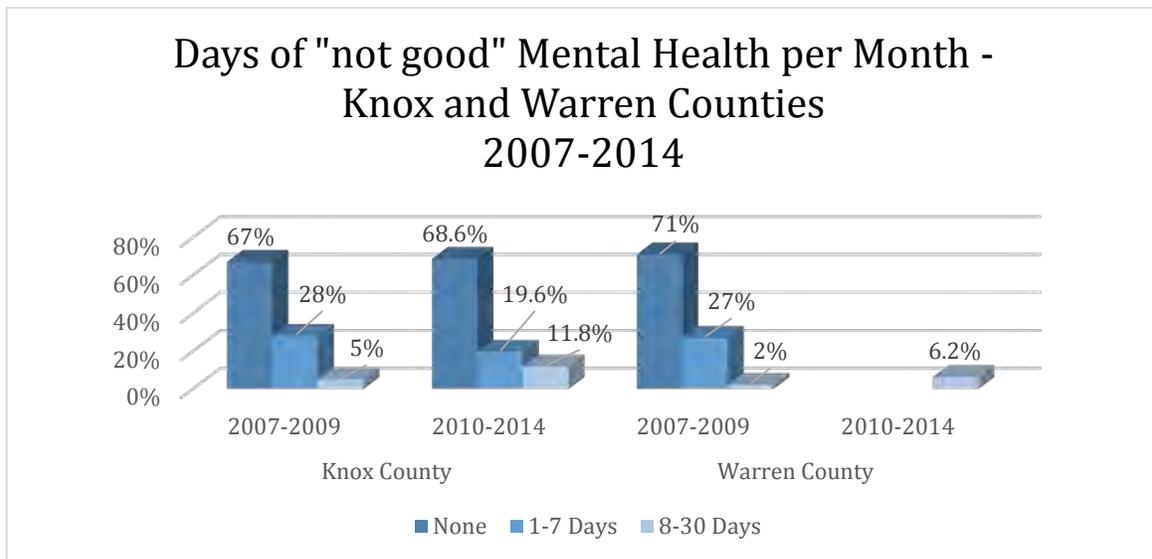
There was an increase in the percentages of Knox County (11.9% to 13.9%) and Warren County (13.7% to 14.6%) residents reporting they felt physically unhealthy on 8 or more days per month in 2009 versus 2014.



Source: Illinois Behavioral Risk Factor Surveillance System

Mental Health

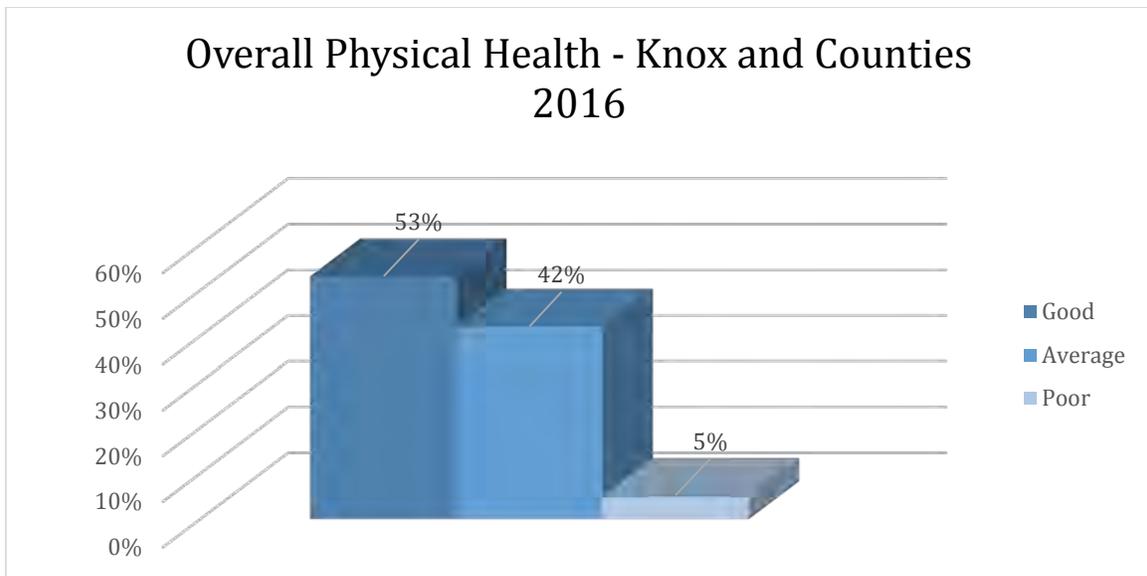
Approximately 28% of residents in Knox County reported they had experienced 1-7 days with poor mental health per month in 2007-2009, and 5% felt mentally unhealthy on eight or more days per month for 2009. In 2010-2014, there was a moderate decrease in the number of people that reported poor mental health for 1-7 days; however, there was a significant increase in people that reported poor mental health 8 or more days per month to 11.8%. In Warren County, for 2010-2014, data are only available for feeling mentally unhealthy 8 or more days per month. Available data show an increase from 2% in 2009 to 6.2% in 2014.



Source: Illinois Behavioral Risk Factor Surveillance System

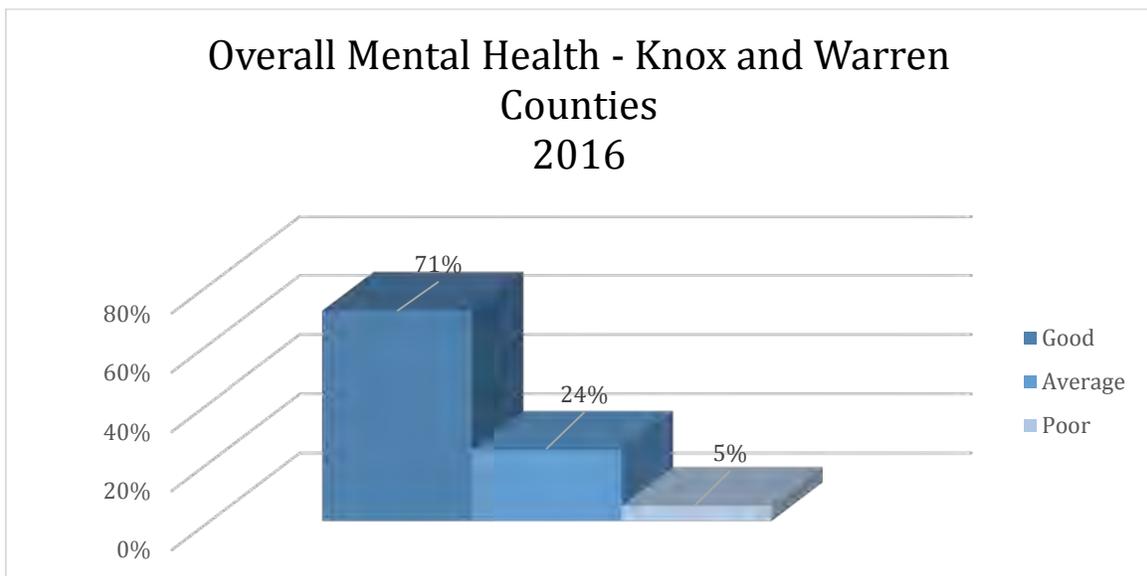
Self Perceptions of Overall Health

Over half (53%) of Knox and Warren County residents report having good overall physical health, while 5% rated themselves as having poor physical health.



Source: CHNA Survey

In regard to overall mental health, 71% of respondents stated they have good overall mental health and 5% stated it is poor.



Source: CHNA Survey

Comparison to 2013 CHNA Data

With regard to physical and mental health, results are similar between 2013 and 2016.

Demographic Factors Related to Self Perceptions of Health

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

Perceptions of physical health tend to be higher for those with higher education and income and lower for Black residents and homeless people.

Perceptions of mental health tend to be higher for older people and those with higher education and income and lower for Black residents and homeless people.

2.6 Key Takeaways from Chapter 2

- ✓ **ED IS CHOSEN BY 16% OF THE AT-RISK POPULATION AS THE PRIMARY SOURCE OF HEALTHCARE**
- ✓ **FOR THE AT-RISK POPULATION, 10% CHOOSE NOT TO RECEIVE MEDICAL CARE**
- ✓ **ACCESS TO MEDICAL CARE, PRESCRIPTION MEDICATIONS, DENTAL CARE AND COUNSELING ALL HELD STEADY OR IMPROVED COMPARED TO THE 2013 CHNA**
- ✓ **MORE PEOPLE REPORT “NOT GOOD” MENTAL HEALTH ON 8 OR MORE DAYS PER MONTH**
- ✓ **WHILE IMPROVING, THE MAJORITY OF THE POPULATION EXERCISES TWO OR FEWER TIMES PER WEEK**
- ✓ **WHILE KNOX AND WARREN COUNTY RESIDENTS ARE EATING MORE FRUITS AND VEGETABLES COMPARED TO THE 2013 CHNA, THE MAJORITY OF RESIDENTS STILL EAT 2 OR FEWER SERVINGS OF FRUITS AND VEGETABLES PER DAY**
- ✓ **MOST RESIDENTS HAVE HIGH SELF-PERCEPTIONS OF BOTH PHYSICAL AND MENTAL HEALTH**

CHAPTER 3 OUTLINE

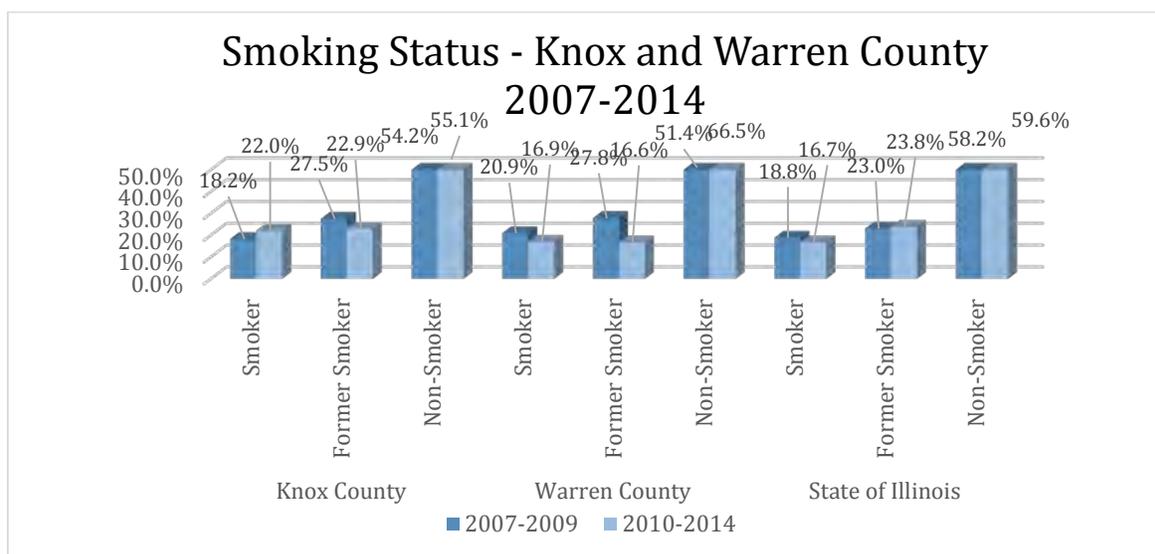
- 3.1 Tobacco Use
- 3.2 Drug and Alcohol Use
- 3.3 Overweight and Obesity
- 3.4 Predictors of Heart Disease
- 3.5 Key Takeaways from Chapter 3

CHAPTER 3. SYMPTOMS AND PREDICTORS

3.1 Tobacco Use

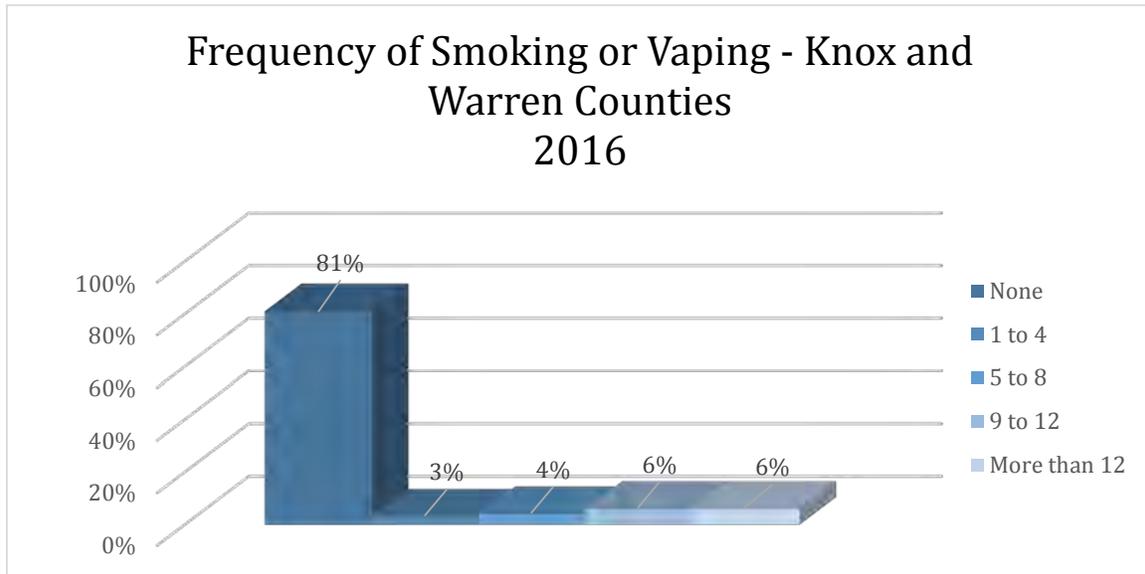
Importance of the measure: In order to appropriately allocate healthcare resources, a thorough analysis of the leading indicators regarding morbidity and disease must be conducted. In this way, healthcare organizations can target affected populations more effectively. Research suggests tobacco use facilitates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

Smoking rates have increased in Knox County, but decreased in Warren County; both counties have smoking rates above State of Illinois averages. There was an increase in the percentage of Knox County residents reporting they were current smokers between 2007-2009 (18.2%) and 2010-2014 (22%). There was a decrease in the percentage of Warren County residents reporting they were current smokers between 2007-2009 (20.9%) and 2010-2014 (16.9%). Both counties show a slight increase in the percentage residents reporting they were current non-smokers between 2007-2009 and 2010-2014.



Source: Illinois Behavioral Risk Factor Surveillance System

CHNA survey data show 81% of Knox and Warren County respondents do not smoke and only 6% state they smoke more than 12 cigarettes (or vape) per day.



Source: CHNA Survey

Comparison to 2013 CHNA Data

Across both counties, tobacco usage has held relatively steady when comparing data from the 2013 CHNA and the 2016 CHNA.

Demographic Factors Related to Smoking

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

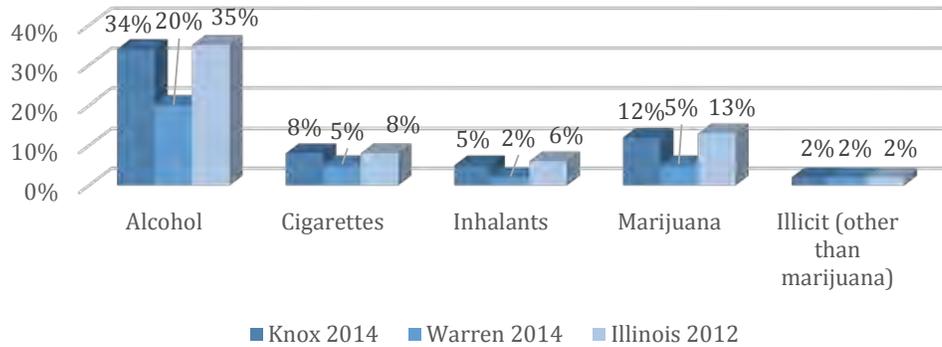
Frequency of smoking or vaping was higher among younger people, Black people, those with lower education and income.

3.2 Drug and Alcohol Abuse

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

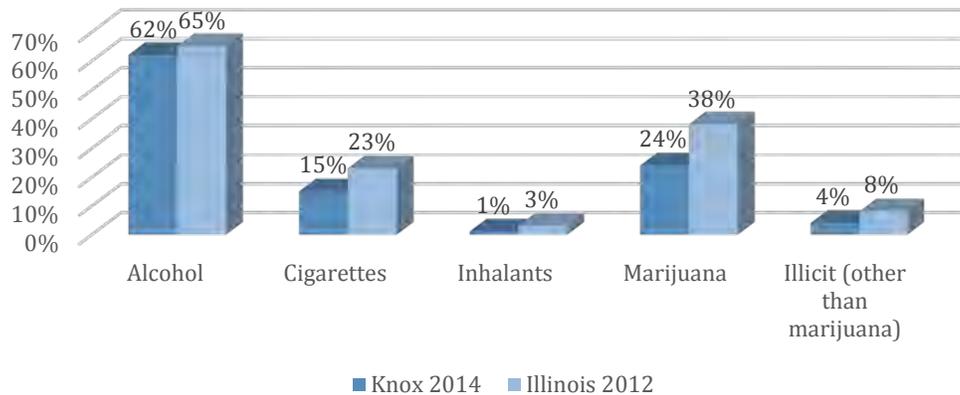
Data from the 2014 Illinois Youth Survey measures illegal substance use (alcohol, tobacco, and other drugs – mainly marijuana) among adolescents. Both Knox and Warren Counties are at or below State averages in all categories among 8th graders. This trend continues for Knox County teens in 12th grade, but data are not available in Warren County for 12th graders. Note that data are also unavailable for Illinois in 2014; therefore, 2012 benchmarks are used.

Substance Abuse in 8th Grade - Knox and Warren Counties 2014



Source: https://iys.cprd.illinois.edu/UserFiles/Servers/Server_178052/File/2014/cnty14_knox.pdf

Substance Abuse in 12th Grade - Knox County 2014



Source: https://iys.cprd.illinois.edu/UserFiles/Servers/Server_178052/File/2014/cnty14_knox.pdf

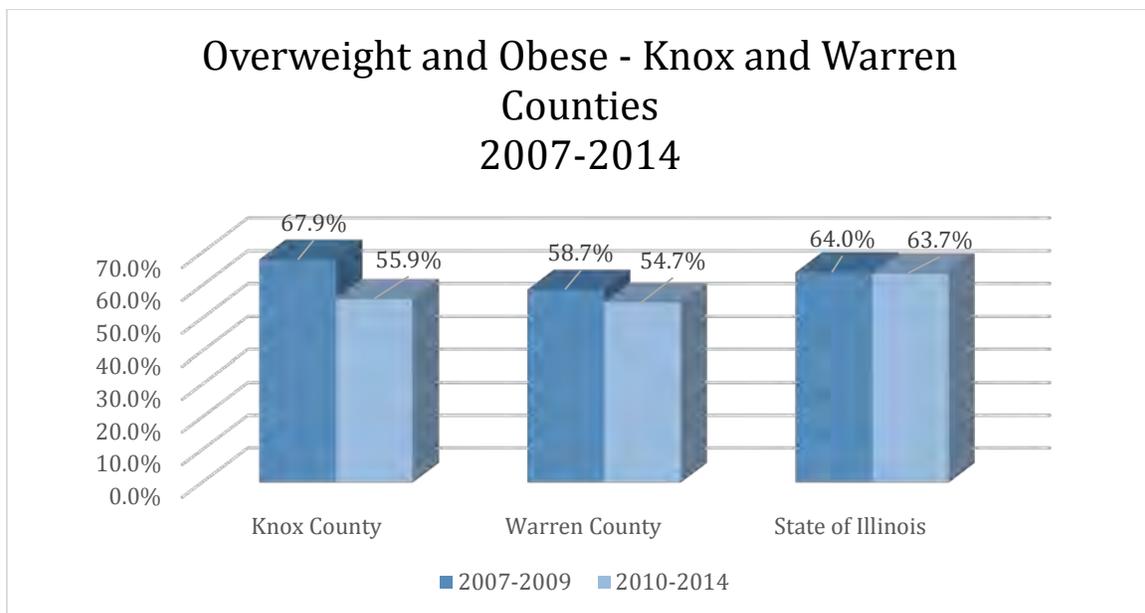
3.3 Overweight and Obesity

Importance of the measure: Individuals who are overweight and obese place greater stress on their internal organs, thus increasing the propensity to utilize health services. Research strongly suggests that obesity is a significant problem facing youth and adults nationally, in Illinois, and within Knox and Warren Counties. 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.

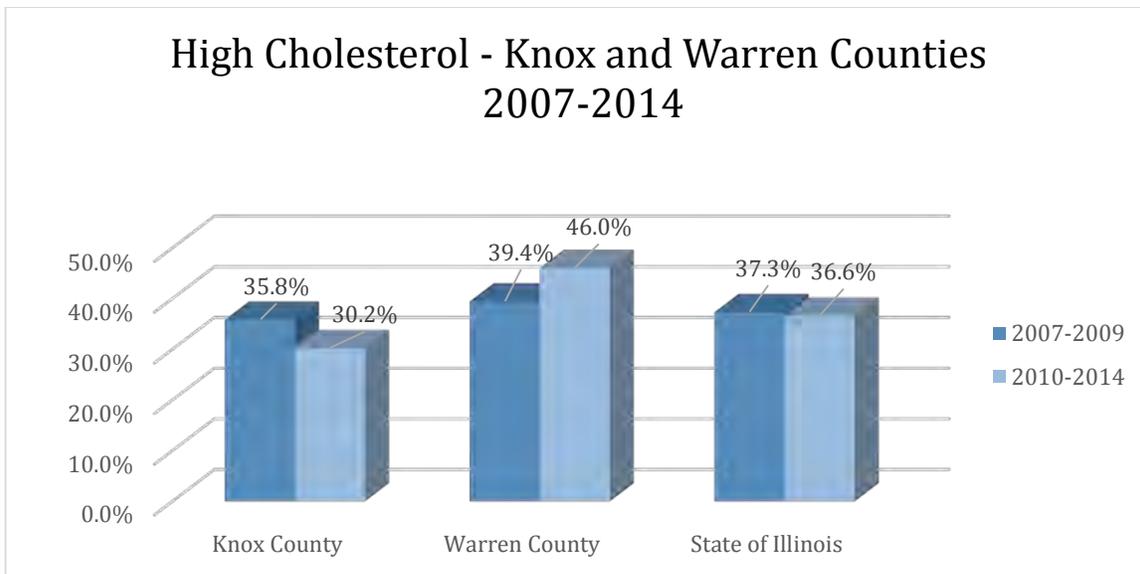
In both Knox and Warren County, the number of people diagnosed with obesity and being overweight has decreased from 2007-2009 to 2010-2014. Note specifically that the percentage of obese and overweight people in Knox County has decreased from 67.9% to 55.9% and the percentage of obese and overweight people in Warren County has decreased from 58.7% to 54.7%. Overweight and obesity rates in Illinois has also decreased from 2009 (64.0%) to 2014 (63.7%).



Source: Illinois Behavioral Risk Factor Surveillance System

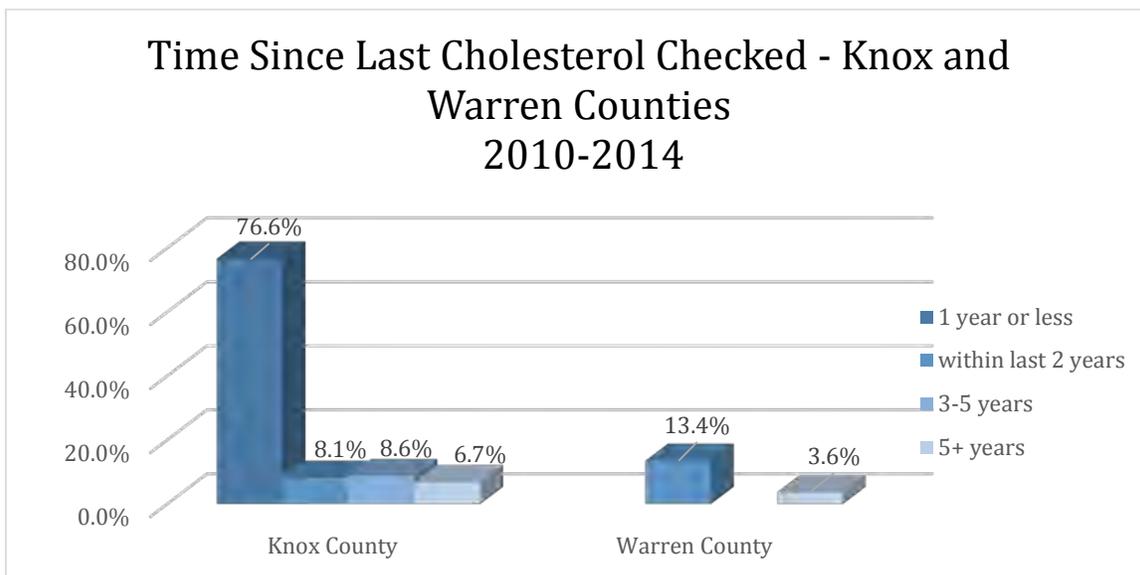
3.4 Predictors of Heart Disease

The percentage of residents who report they have high cholesterol is higher in Warren County (46%) than the State of Illinois average of 36.6%. Residents in Knox County were significantly lower (30.2%).



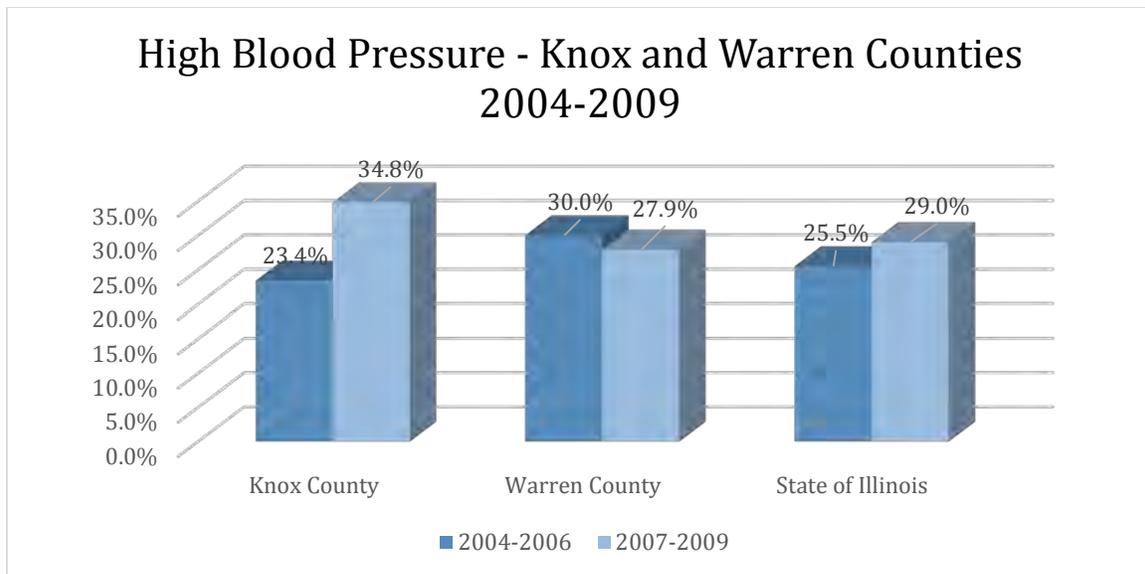
Source: Illinois Behavioral Risk Factor Surveillance System

However, most residents of Knox County report having their cholesterol checked within the past year. Complete data is not available for Warren County.



Source: Illinois Behavioral Risk Factor Surveillance System

With regard to high blood pressure, Knox County has a higher percentage of residents with high blood pressure than residents in the State of Illinois as a whole. The percentage of Knox County residents reporting they have high blood pressure in 2014 increased from 23.4% to 34.8%. In Warren County, the percentage of residents with high blood pressure has fallen from 30% to 27.9% over the same time period, now below the State of Illinois average.



Source: Illinois Behavioral Risk Factor Surveillance System

3.5 Key Takeaways from Chapter 3

- ✓ **SMOKING HAS DECREASED IN WARREN COUNTY BUT THERE HAS BEEN A SIGNIFICANT INCREASE IN KNOX COUNTY AND RATES ARE NOW HIGHER THAN STATE AVERAGES**
- ✓ **THE PERCENTAGE OF PEOPLE WHO ARE OVERWEIGHT AND OBESE HAS DECREASED IN BOTH KNOX AND WARREN COUNTY AND IS LOWER THAN THE STATE AVERAGE**
- ✓ **RISK FACTORS FOR HEART DISEASE ARE INCREASING IN WARREN COUNTY IN TERMS OF CHOLESTEROL AND IN KNOX COUNTY IN TERMS OF HIGH BLOOD PRESSURE**

CHAPTER 4 OUTLINE

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

CHAPTER 4. MORBIDITY AND MORTALITY

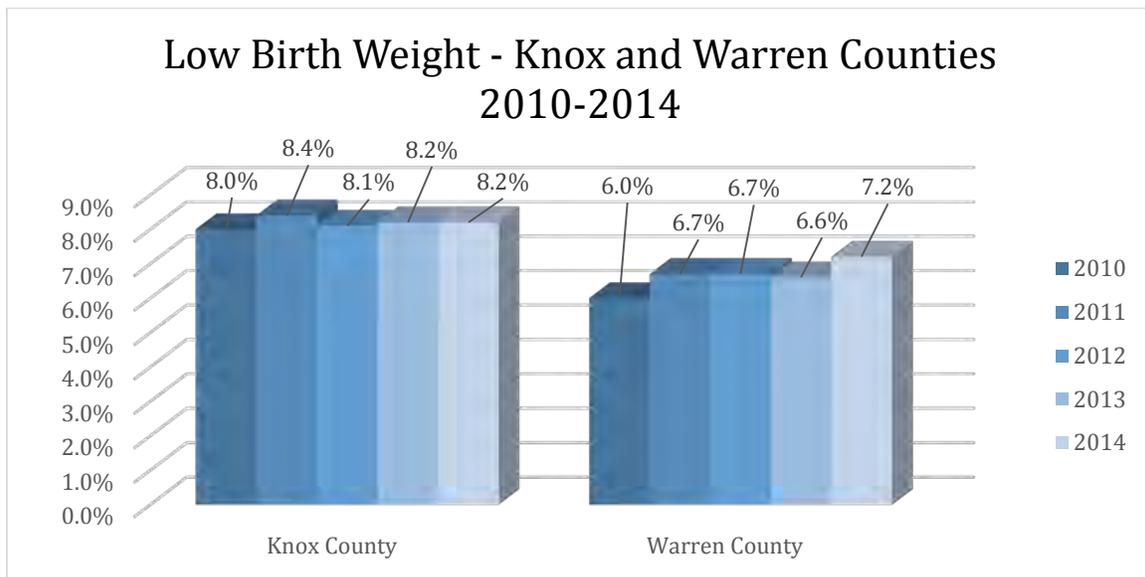
Given the lack of recent disease/morbidity data from existing secondary data sources, much of the data used in this chapter was manually gathered from Knox and Warren County hospitals using COMP data. Note that hospital-level data only show hospital admissions and do not reflect outpatient treatments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

4.1 Healthy Babies

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

Low Birth Weight Rates

Low birth weight rate is defined as the percentage of infants born below 2,500 grams or 5.5 pounds. Very low birth weight rate is defined as the percentage of infants born below 1,500 grams or 3.3 pounds. In contrast, the average newborn weighs about 7 pounds. The percentage of babies born with low birth weight in both Knox and Warren County increased slightly from 2010 (8% in Knox County and 6% in Warren County) to 2014 (8.2% in Knox County and 7.2% in Warren County).

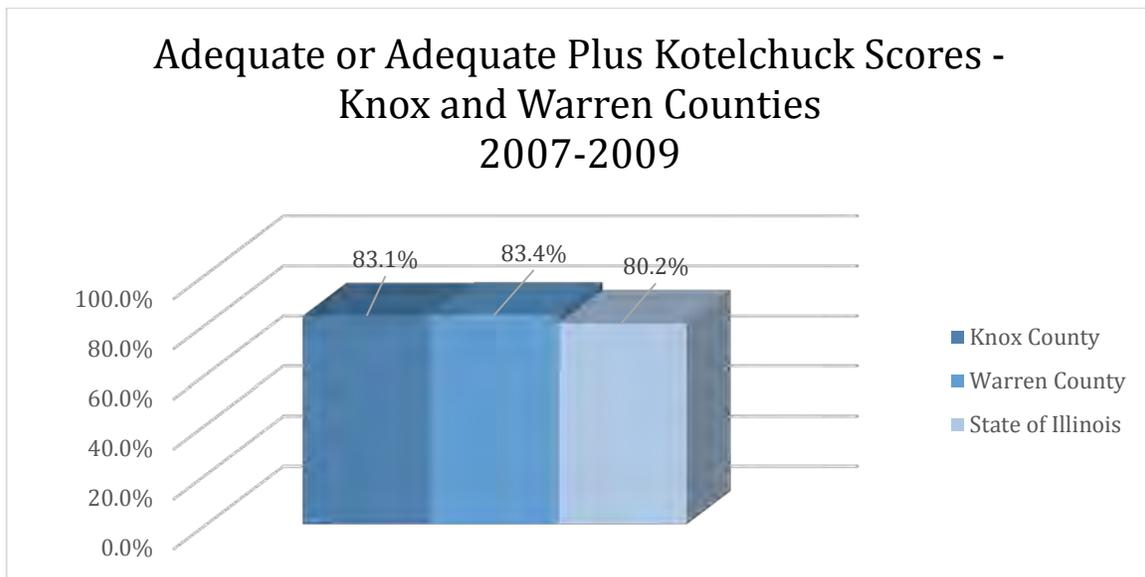


Source: <http://www.countyhealthrankings.org>

Initiation of Prenatal Care

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

Of the babies born in 2009 in Knox and Warren Counties, rates were slightly higher than 83% for each county that babies were born with “Adequate” or “Adequate Plus” prenatal care. This figure is higher than the State of Illinois average of 80.2% of babies born with similar prenatal care. These are the most recent data, and have not been updated since 2009.



Source: Illinois Department of Public Health

4.2 Cardiovascular Disease

Importance of the measure:

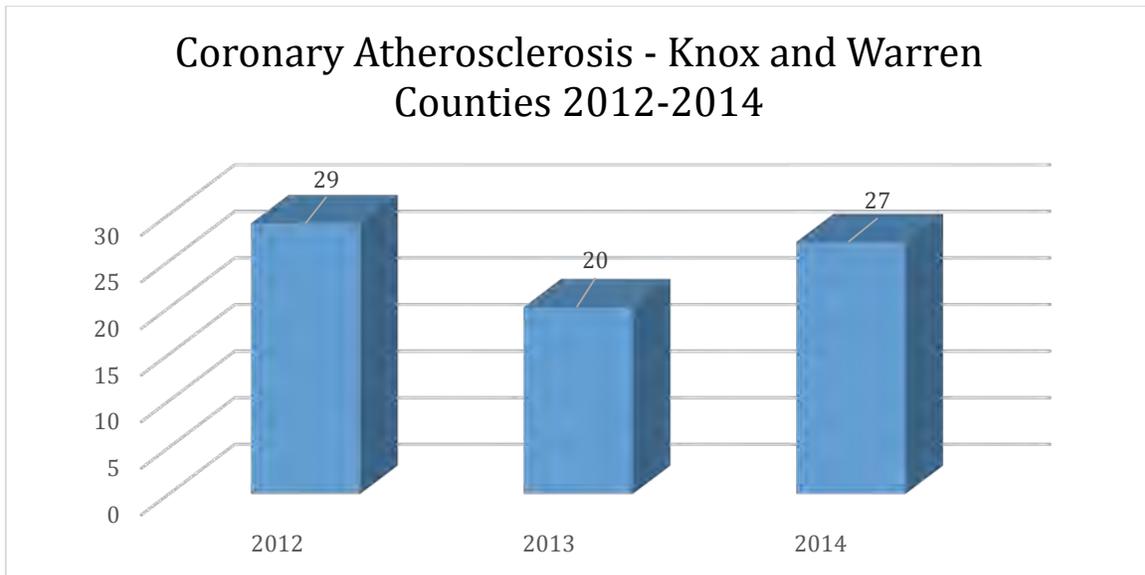
Cardiovascular disease is defined as all diseases of the heart and blood vessels, including ischemic (also known as coronary) heart disease, cerebrovascular disease, congestive heart failure, hypertensive disease, and atherosclerosis.

Coronary Atherosclerosis

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

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

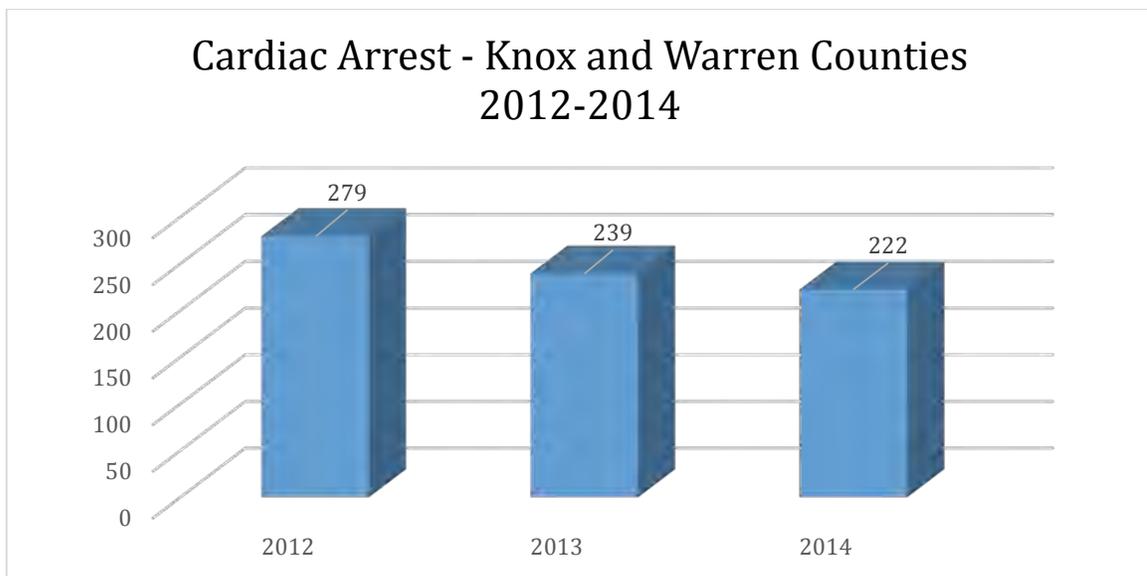
The number of cases of coronary atherosclerosis complication at Knox and Warren area hospitals has decreased from 29 cases in 2012 to 20 cases in 2013, back to 27 cases in 2014. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



Source: COMPdata 2015

Cardiac Arrest

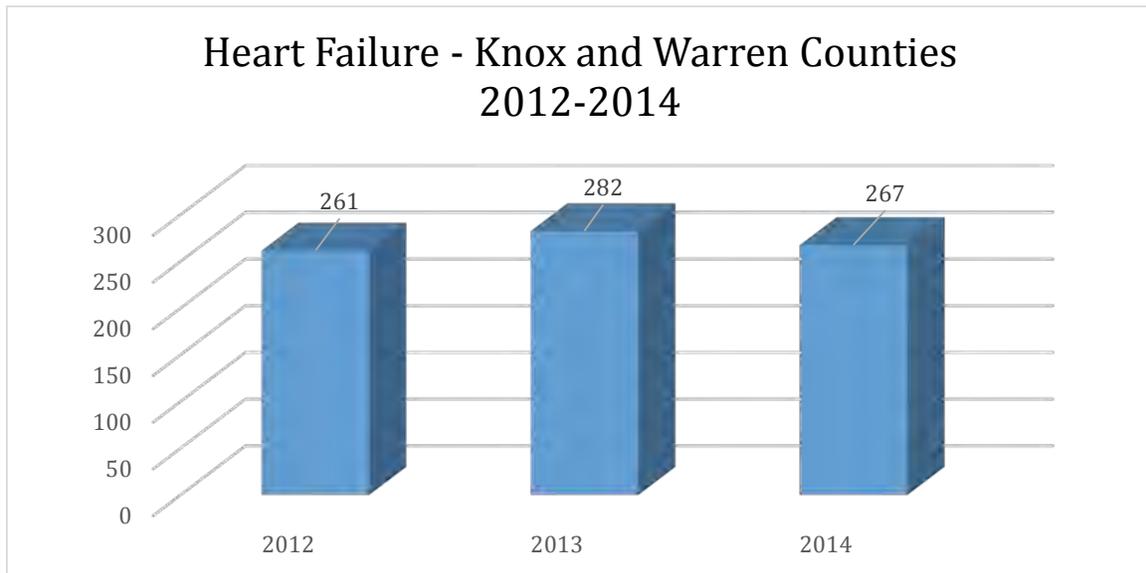
Cases of dysthymia and cardiac arrest at Knox and Warren area hospitals has decreased by 55 cases between FY12 and FY14. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2015

Heart Failure

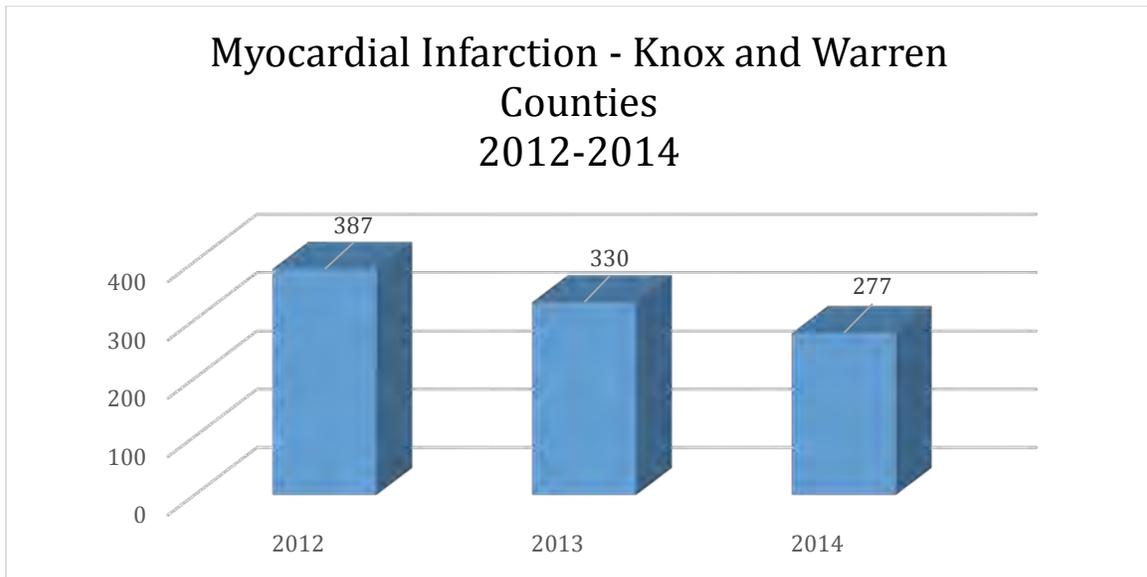
The number of treated cases of heart failure at Knox and Warren area hospitals have increased slightly. In FY 2012, 261 cases were reported, and in FY 2014, there were 267 cases reported. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2015

Myocardial Infarction

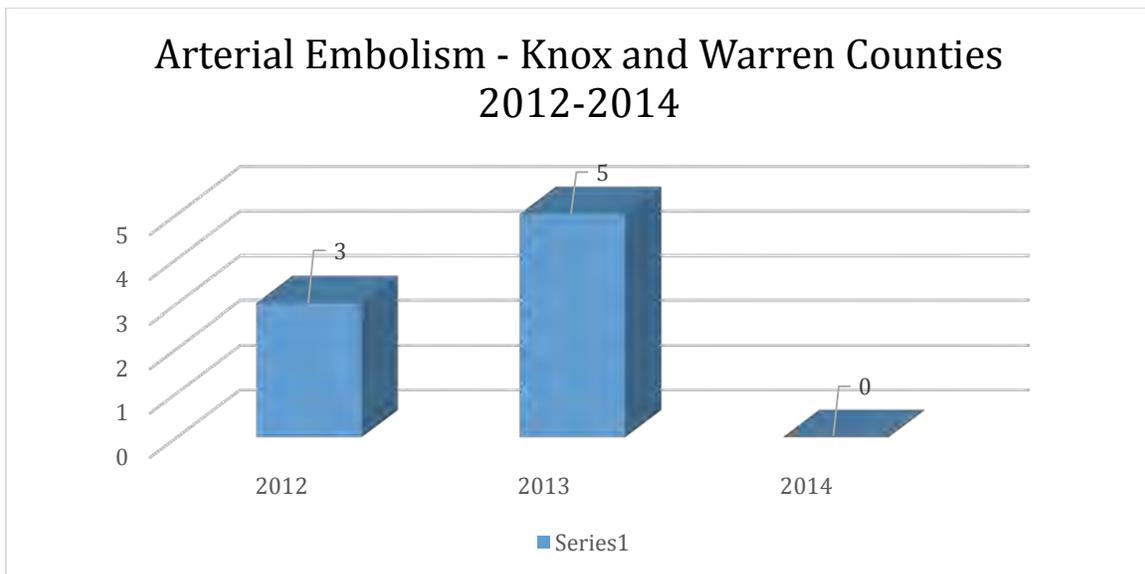
The number of treated cases of myocardial infarction at area hospitals in Knox and Warren Counties have decreased from 387 in 2012 to 277 in 2014. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2015

Arterial Embolism

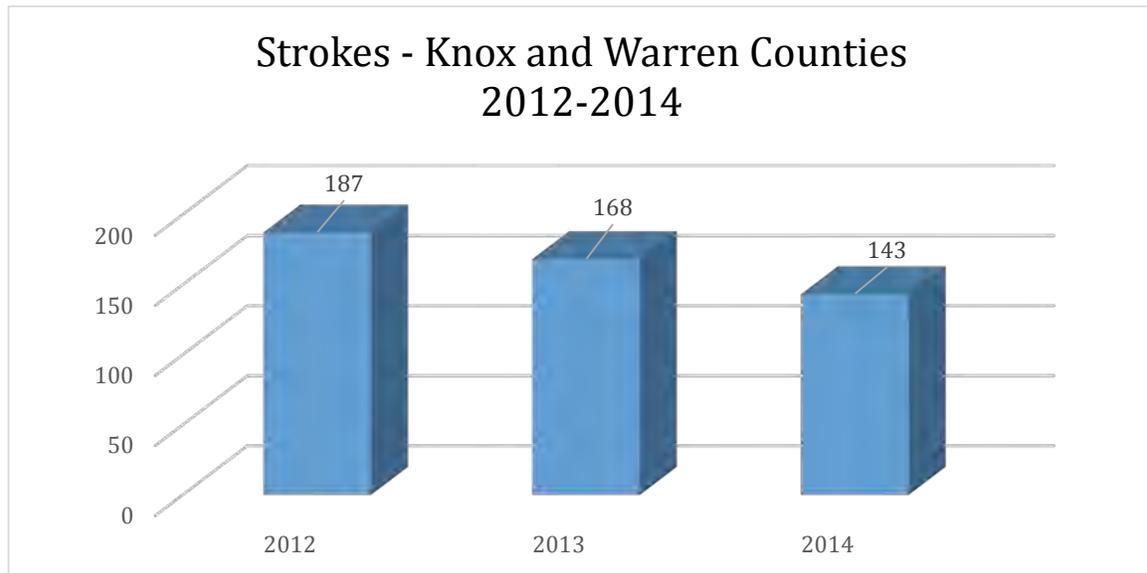
Eight treated cases of arterial embolism at Knox and Warren area hospitals was reported in 2012-13, and no cases were reported in 2014. Note that hospital-level data only show hospital admissions.



Source: COMPdata 2015

Strokes

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



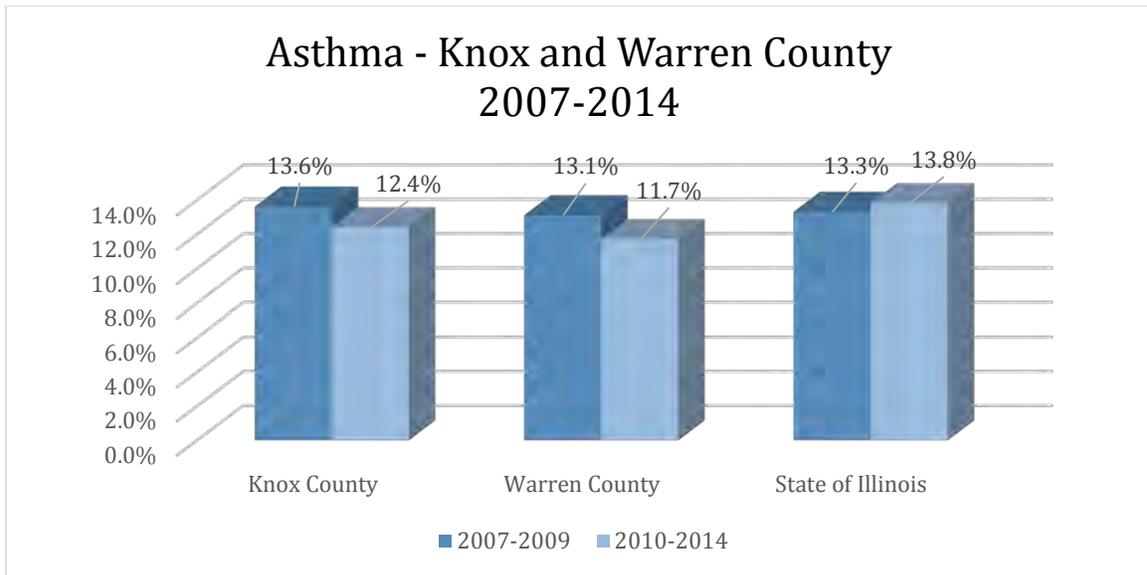
Source: COMPdata 2015

4.3 Respiratory

Importance of the measure: 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.

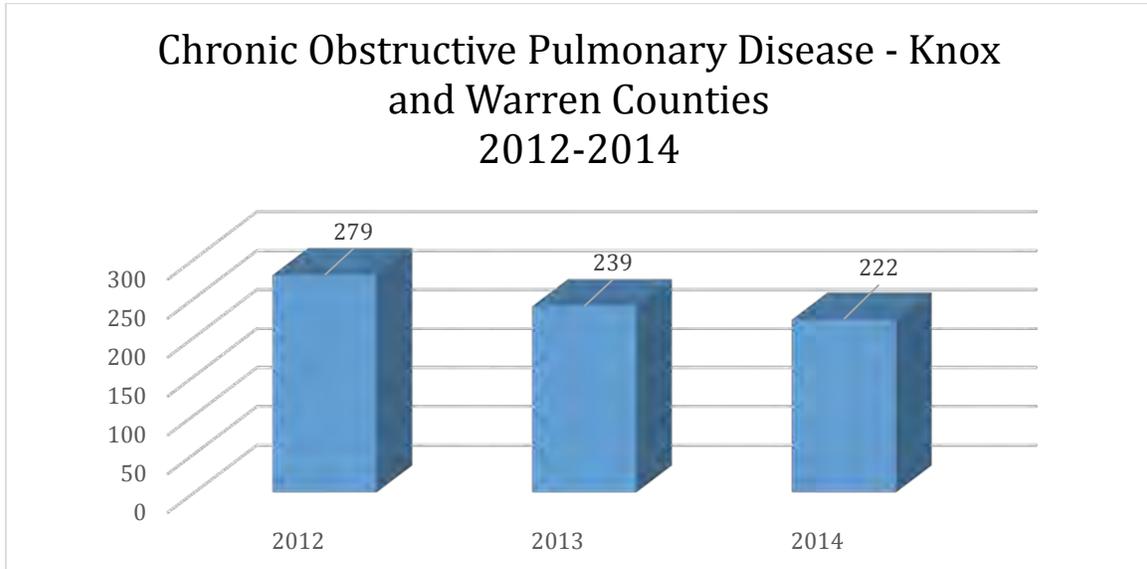
Asthma

The percentage of residents that have been diagnosed with asthma in Knox and Warren Counties have decreased between 2007-2009 and 2010-2014, while State averages are increasing slightly. According to the Illinois BRFSS, asthma rates in both Knox County (12.4%) and Warren County (11.7%) are lower than the State of Illinois (13.8%).



Source: Illinois Behavioral Risk Factor Surveillance System

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

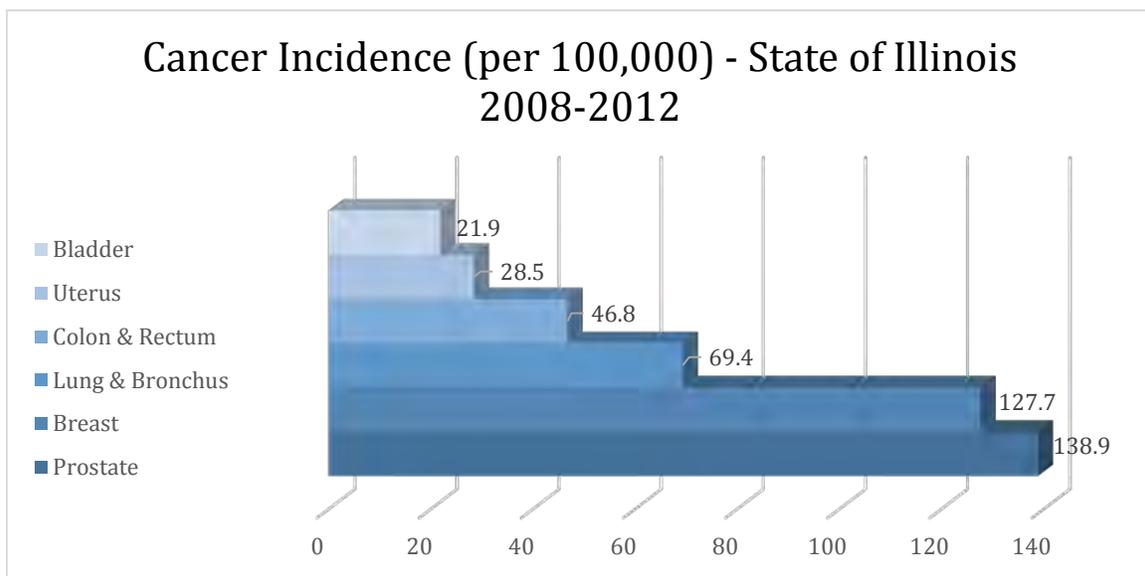


Source: COMPdata 2015

4.4 Cancer

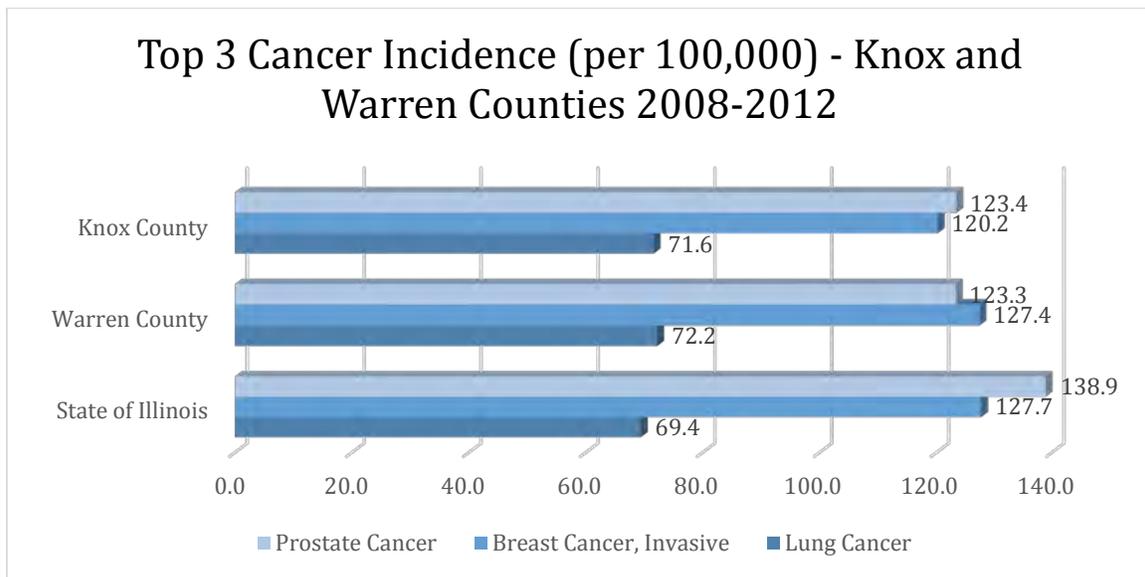
Importance of the measure: Cancer is caused by the abnormal growth of cells in the body and many causes of cancer have been identified. Generally, each type of cancer has its own symptoms, outlook for cure, and methods for treatment. Cancer is one of the leading causes of death in Knox and Warren Counties.

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



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

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



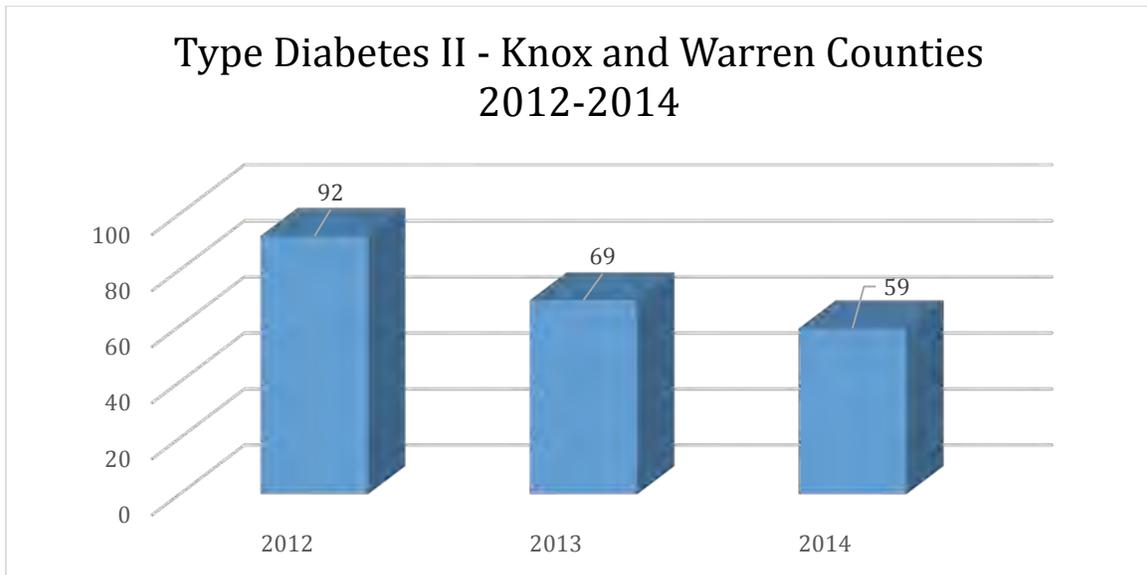
Source: http://www.idph.state.il.us/cancer/15/county_rpt/County_Section_I_Site_Specific_Cancer_Incidence.pdf

4.5 Diabetes

Importance of the measure:

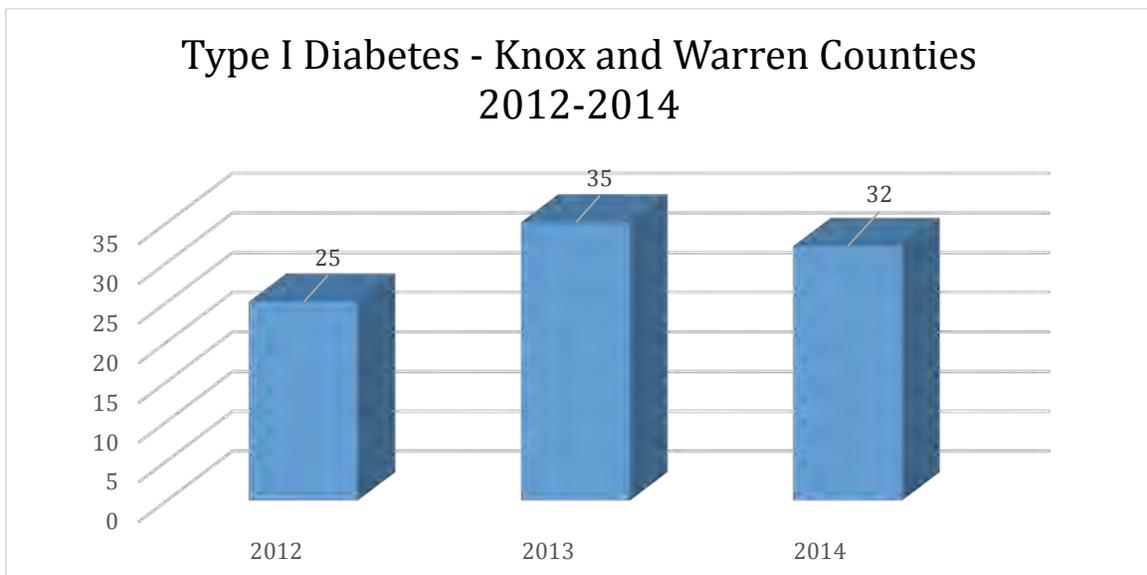
Diabetes is the leading cause of kidney failure, adult blindness and amputations and is a leading contributor to strokes and heart attacks. It is estimated that 90-95% of individuals with diabetes have Type II diabetes (previously known as adult-onset diabetes). Only 5-10% of individuals with diabetes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

Inpatient cases of Type II diabetes from Knox and Warren Counties have decreased between FY 2012 (92 cases) and FY 2014 (59 cases). Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



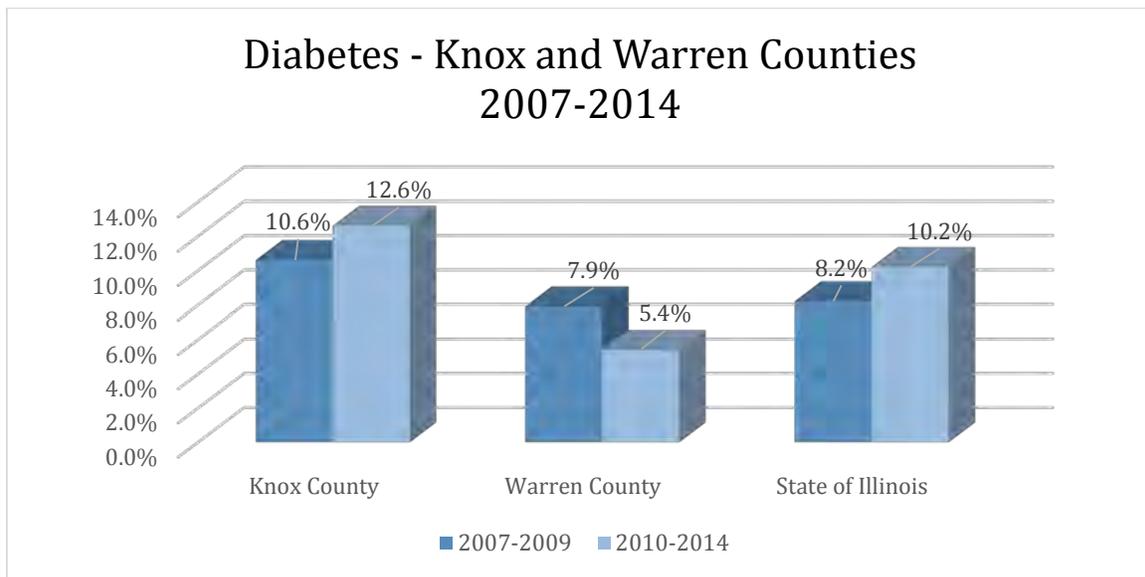
Source: COMPdata 2015

Inpatient cases of Type I diabetes show an increase from 2012 (25 cases) to 2014 (32 cases) for Knox and Warren Counties. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



Source: COMPdata 2015

Data from the Illinois BRFSS indicate that 12.6% of Knox County residents and 5.4% of Warren County residents have diabetes. Trends in Knox County are concerning, as the prevalence of diabetes is increasing and higher in Knox County compared to data from the State of Illinois.



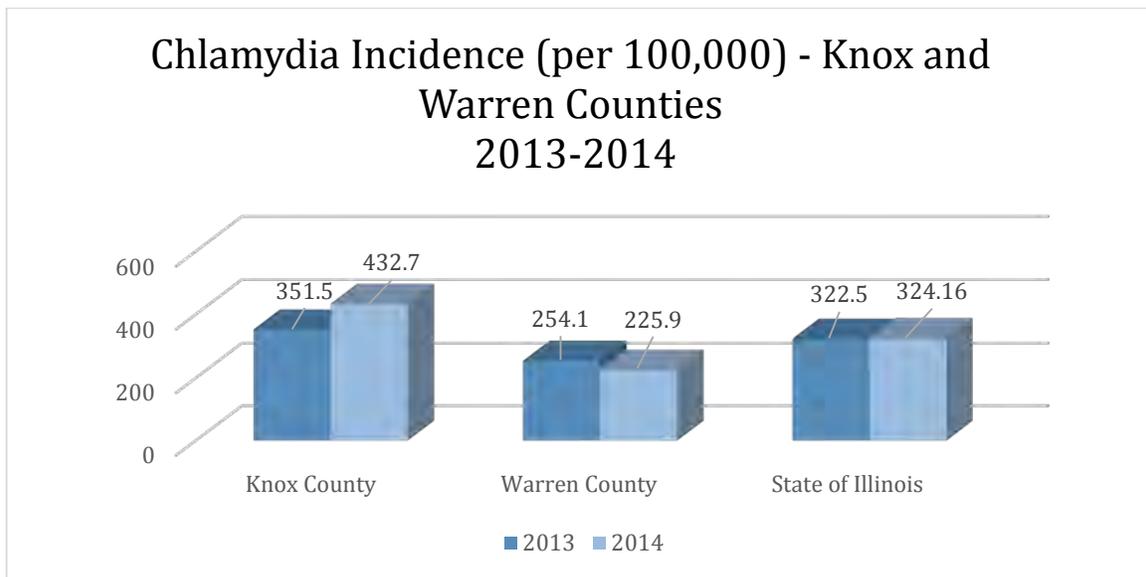
Source: Illinois Behavioral Risk Factor Surveillance System

4.6 Infectious Diseases

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

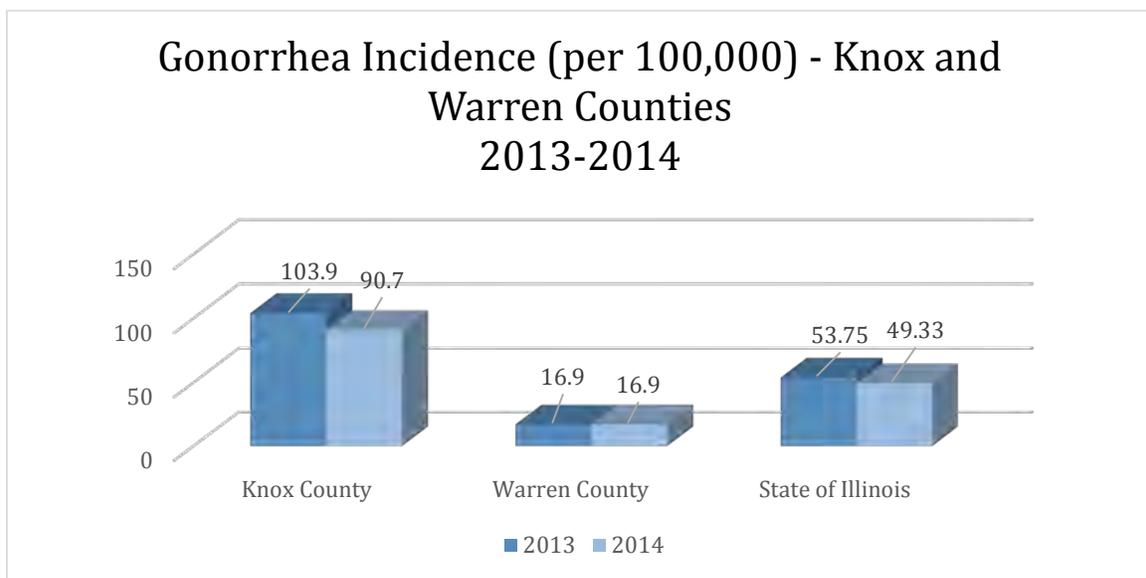
Chlamydia and Gonorrhea Cases

The data for the number of infections of chlamydia in Knox County from 2013-2014 indicate a significant increase, while incidence in Warren County decreased. There is a slight increase of incidence of chlamydia across the State of Illinois. Rates of chlamydia in Warren County are considerably lower than State averages, while the opposite is true of Knox County.



Source: Illinois Department of Public Health

The data for the number of infections of gonorrhea in Knox County indicate a decrease from 2013-2014, and incidence in Warren County holds steady compared to decrease across the State of Illinois from 2013-2014. Knox County is still significantly above State averages.



Source: Illinois Department of Public Health

Vaccine preventable diseases

A vaccine-preventable disease is an infectious disease for which an effective preventive vaccine exists. If a person acquires a vaccine-preventable disease and dies, the death is considered a vaccine-preventable

death. According to the Illinois Public Health Department, the most common and serious vaccine-preventable diseases are: Varicella (chickenpox), Tetanus (lockjaw), Pertussis (whooping cough), Poliomyelitis (Polio), Measles (Rubella), Mumps, Rubella (German measles), Diphtheria, Hepatitis B, and Hemophilic Influenza Type B (HIB) Infections. These diseases used to strike thousands of children each year. Today there are relatively few cases, but outbreaks still occur each year because some babies are not immunized. Knox and Warren Counties have shown no significant outbreaks compared to state statistics, but there are limited data available.²

Vaccine Preventable Diseases 2011-2014 Knox and Warren Counties Region

Mumps	2011	2012	2013	2014
Knox County	0	0	0	0
Warren County	1	0	0	0
State of Illinois	78	32	26	142
Pertussis	2011	2012	2013	2014
Knox County	0	4	4	0
Warren County	1	1	1	0
State of Illinois	1509	2026	785	764
Varicella	2011	2012	2013	2014
Knox County	6	2	13	4
Warren County	3	5	1	0
State of Illinois	881	898	731	598

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

Tuberculosis 2011-2014 Knox and Warren Counties Region

Tuberculosis	2011	2012	2013	2014
Knox County	1	0	1	2
Warren County	0	0	0	0
State of Illinois	358	347	327	320

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

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

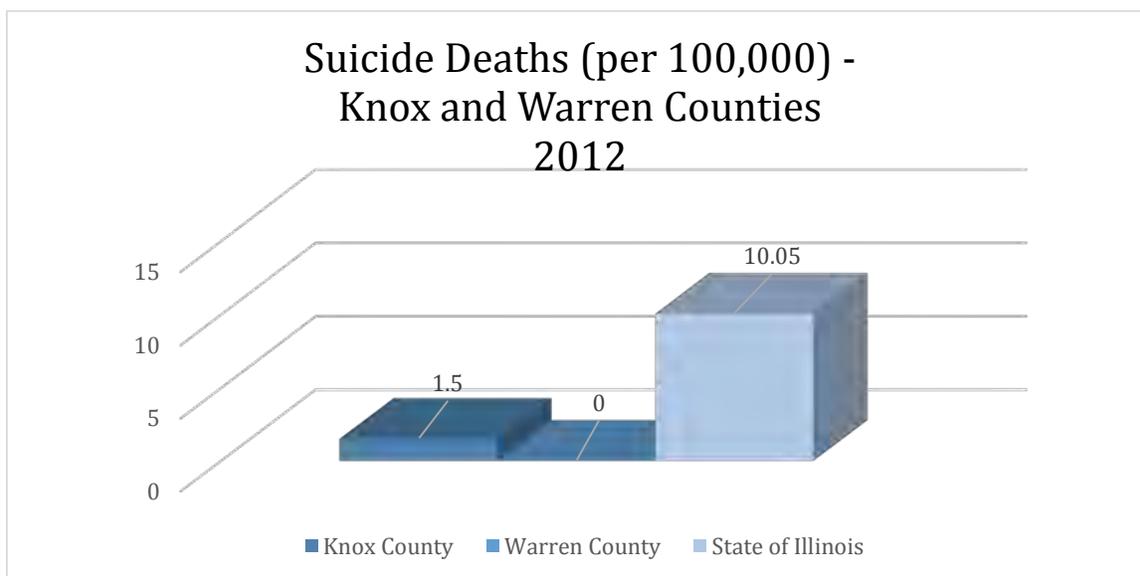
4.7 Injuries

Importance of the measure:

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

Intentional – suicide

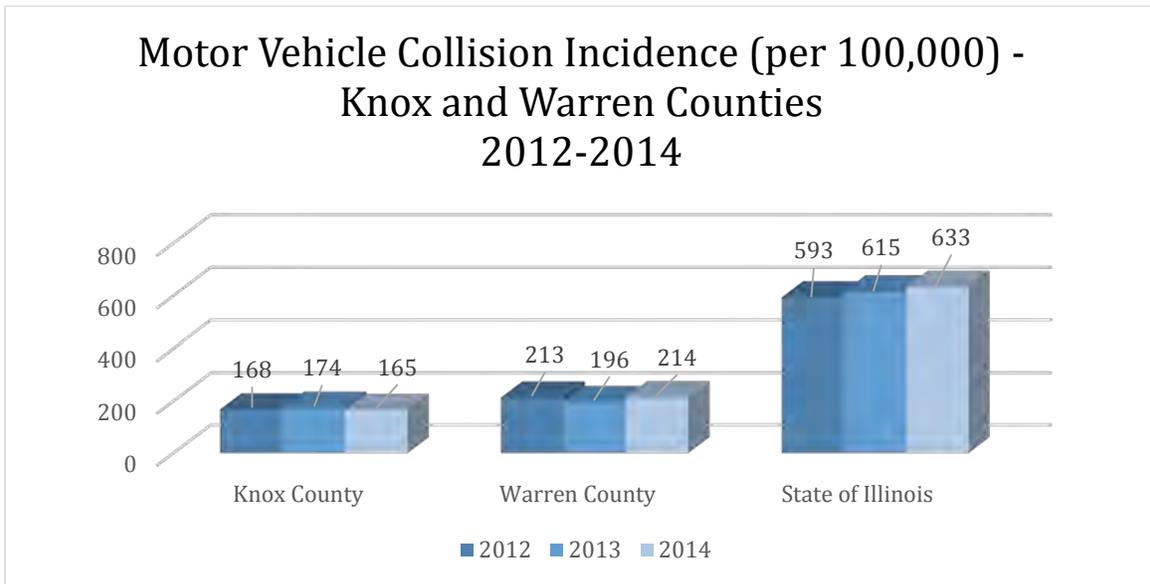
The number of suicides in Knox and Warren Counties indicate lower incidence than State of Illinois averages, as there were approximately 1.5 per 100,000 people in Knox County in 2012 and none in Warren County.



Source: Illinois Department of Public Health

Unintentional – motor vehicle

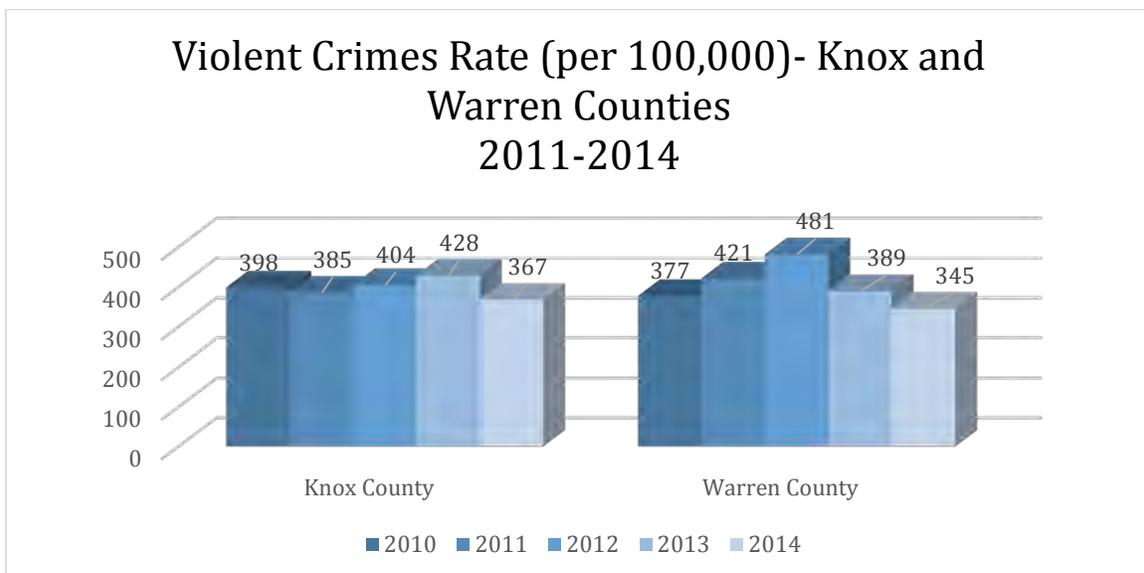
Research suggests that car accidents are a leading cause of unintentional injuries. In Knox and Warren Counties, the number of incidents between 2012 and 2014 for several types of motor vehicle collisions including vehicle overturn, railroad train, sideswipe, angle, parked motor vehicle, turning, and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



Source: Illinois Department of Transportation

Violent Crimes

Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault. Violent crime is represented as an annual rate per 100,000 people. The number of violent crimes has decreased in the past three years in Knox and Warren Counties.



Source: Illinois County Health Rankings and Roadmaps

4.8 Mortality

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

The top two leading causes of death in the State of Illinois and Knox and Warren Counties are similar as a percentage of total deaths in 2013. Diseases of the Heart are the cause of 21% of deaths in Knox County and 31.3% of deaths in Warren County and Cancer is the cause of 20% of deaths in Knox County and 28% of deaths in Warren County.

Top 5 Leading Causes of Death for all Races by County, 2013			
Rank	Knox County	Warren County	State of Illinois
1	Diseases of Heart (21.0%)	Diseases of Heart (31.3%)	Diseases of Heart
2	Malignant Neoplasm (20%)	Malignant Neoplasm (28%)	Malignant Neoplasm
3	Chronic Lower Respiratory Disease (8.6%)	Cerebrovascular Disease (7.4%)	Cerebrovascular Disease
4	Alzheimer's Disease (6.1%)	Accidents (6.0%)	Chronic Lower Respiratory Disease
5	Accidents (6.0%)	Chronic Lower Respiratory Disease (3.8%)	Accidents

Source: Illinois Department of Public Health

4.9 Key Takeaways from Chapter 4

- ✓ **LOW BIRTH WEIGHTS HAVE BEEN INCREASING SLIGHTLY IN KNOX AND WARREN COUNTIES**
- ✓ **MOST VARIATIONS OF CARDIAC DISEASE HAVE SEEN A DECREASE SINCE 2012**
- ✓ **CANCER RATES FOR LUNG CANCER IN KNOX AND WARREN COUNTIES ARE HIGHER THAN STATE AVERAGES**
- ✓ **ASTHMA HAS SEEN A SIGNIFICANT REDUCTION IN KNOX AND WARREN COUNTIES AND IS LOWER THAN STATE AVERAGES**
- ✓ **DIABETES IS TRENDING UPWARD SIGNIFICANTLY IN KNOX COUNTY AND HIGHER THAN STATE AVERAGES**
- ✓ **STI RATES ARE SIGNIFICANTLY HIGHER THAN STATE AVERAGES FOR KNOX COUNTY**
- ✓ **HEART DISEASE AND CANCER ARE THE LEADING CAUSES OF MORTALITY IN KNOX AND WARREN COUNTIES**

CHAPTER 5 OUTLINE

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

CHAPTER 5. PRIORITIZATION OF HEALTH-RELATED ISSUES

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

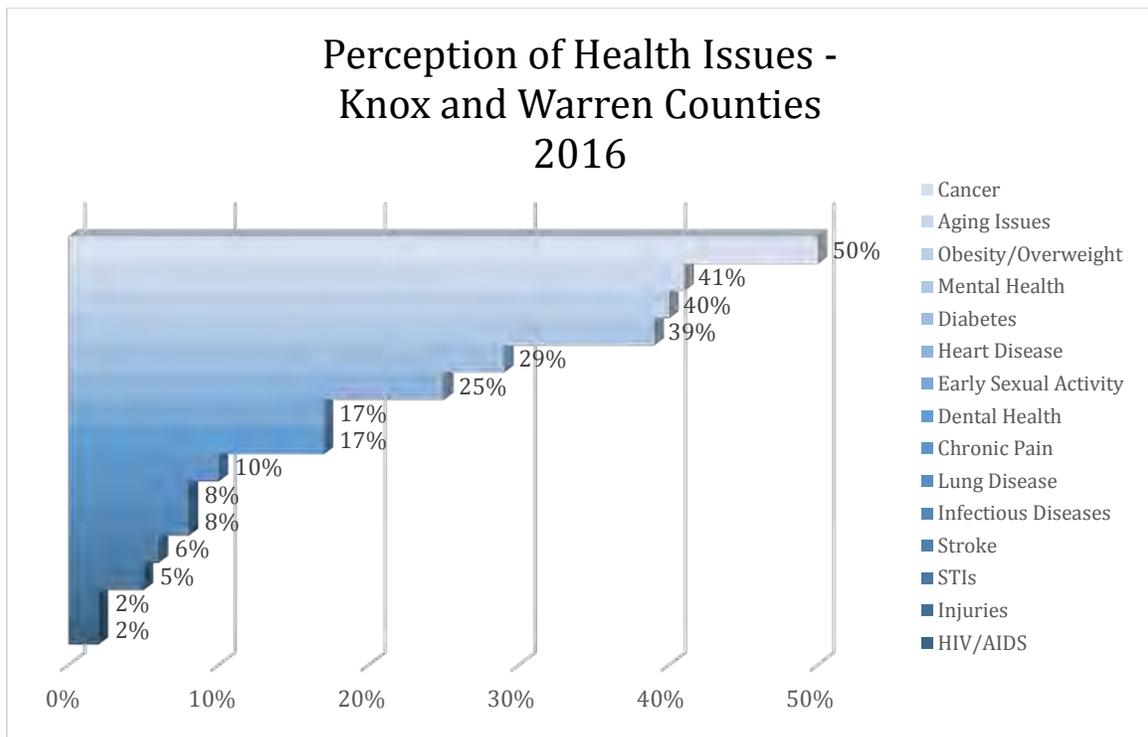
Specific criteria used to identify these issues included: (1) magnitude in the community; (2) severity in the community; (3) potential for impact to the community.

5.1 Perceptions of Health Issues

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

The health issue that rated highest was cancer. It was identified 50% of the time and was significantly higher than other categories based on *t-tests* between sample means. This was followed by aging issues, obesity, and mental health.

Note that perceptions of the community were accurate in some cases, but inaccurate in others. For example, cancer is the second leading cause of mortality in Knox and Warren Counties. Also, obesity is an important concern and the survey respondents accurately identified these as important health issues. However, heart disease is rated relatively low, even though it is the leading cause of mortality in Knox and Warren Counties.



Source: CHNA Survey

Demographic Factors Related to Perceptions of Health Issues

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

Aging issues tend to be rated higher by older people and those with high education.

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

Chronic Pain does not show significant correlations.

Dental health does not show significant correlations.

Diabetes is of more concern to Latino people

Heart disease tends to be rated higher by older people.

HIV does not show significant correlations.

Early sexual activity tends to be rated higher by women, younger people, and homeless people.

Infectious disease is of more concern to younger people.

Injury does not show significant correlations.

Lung disease does not show significant correlations.

Mental health tends to be rated higher by younger people and those with higher education.

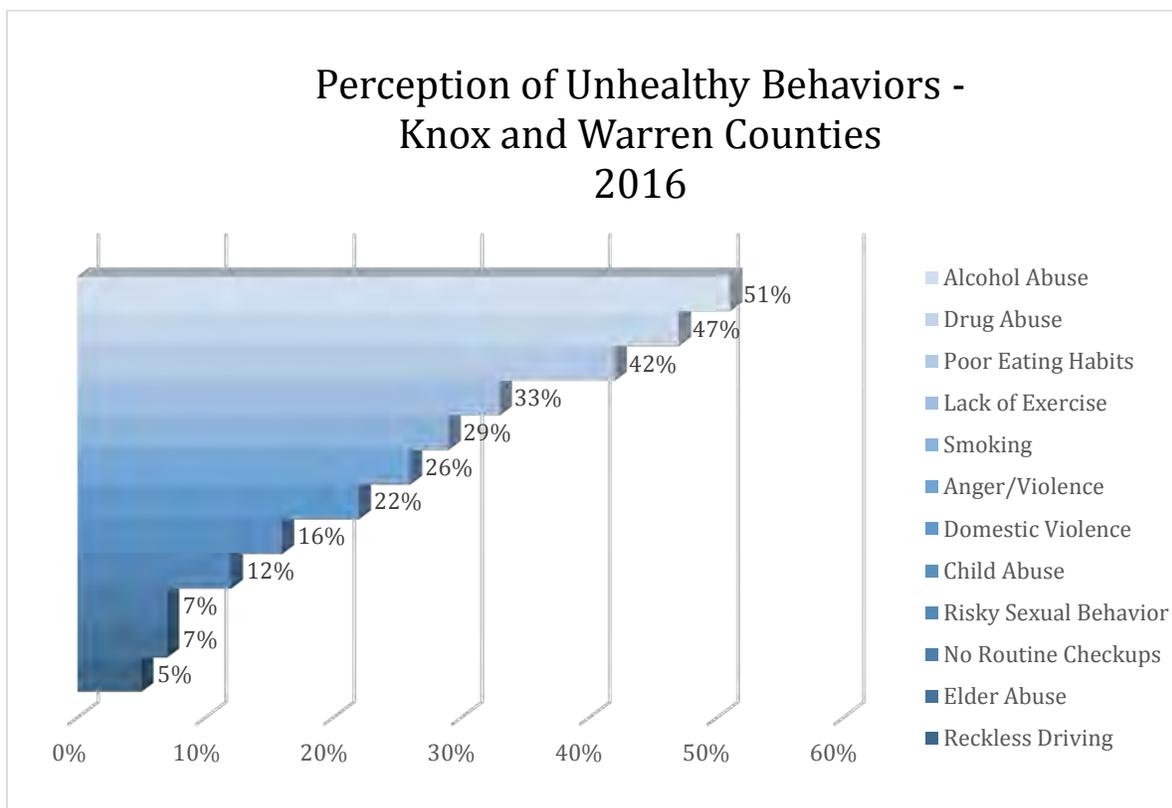
Obesity tends to be rated higher by people with higher education and income.

STIs tend to be rated higher by younger people, those with lower education and income, and the homeless.

Stroke does not show significant correlations.

5.2 Perceptions of Unhealthy Behaviors

Respondents were asked to select the three most important unhealthy behaviors in the community out of a total of 12 choices. The two unhealthy behaviors that rated highest were alcohol abuse and drug abuse, followed closely by poor eating habits.



Source: CHNA Survey

Demographic Factors Related to Perceptions of Unhealthy Issues

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

Anger/Violence does not show significant correlations.

Alcohol Abuse is rated higher by those with lower education and income.

Child abuse tends to be rated higher by those with low education.

Domestic Violence is rated higher by women.

Drug abuse tends to be rated higher by those with low education.

Elder abuse does not show significant correlations.

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

No check-ups does not show significant correlations.

Poor eating habits tends to be rated lower by those with high education and income.

Reckless driving is rated higher by men and those with low income.

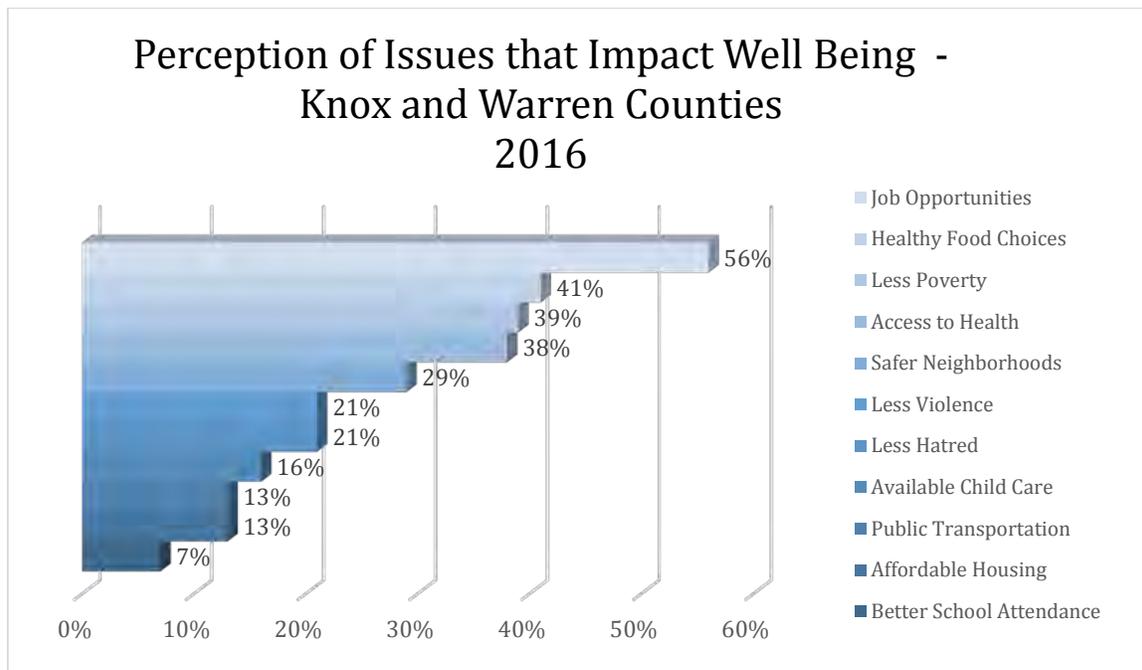
Smoking does not show significant correlations.

Risky Sex Behavior does not show significant correlations.

5.3 Perceptions of Issues Impacting Well Being

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

The issue impacting well being that rated highest was job opportunities. It is not surprising that job opportunities was rated high given unemployment rates in recent years. Job opportunities was followed by healthy food choices, less poverty, and access to health services.



Source: CHNA Survey

Demographic Factors Related to Perceptions of Well Being

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

Access to health services tends to be rated higher by older individuals and lower by homeless people.

Affordable housing does not show significant correlations.

Availability of childcare tends to be rated higher by younger individuals and those with low education.

Better schools is chosen more often by women.

Job opportunities does not show significant correlations.

Public transportation tends to be rated higher by older people.

Access to healthy food does not show significant correlations.

Less poverty is rated higher by older people, White people, and those with higher education.

Safer neighborhoods does not show significant correlations.

Less hatred is rated lower by White people.

Less violence does not show significant correlations.

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) – Three factors were identified as the most important areas of impact from the demographic analyses:

- Aging population
- Early sexual activity- teen births above State averages in Knox County
- Changing population – increasing Latino ethnicity

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

- ED usage, particularly among the low-income population
- Low income population that does not seek medical attention
- Overall, access has improved for medical care, prescription medicine, dental care and counseling
- Lack of exercise
- Mental health
- Lack of healthy eating

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

- Smoking
- Substance abuse
- Obesity
- Risk factors for heart disease

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

- Low birth weights
- Cancer –lung
- Diabetes
- STIs in Knox County
- Heart Disease

Identification of 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:

- **Poor healthy behaviors – healthy eating & exercise**
- **Access to health services**
- **Mental health**
- **Obesity**
- **Diabetes**
- **Dental health**
- **Risky sexual behaviors – STIs**

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 three significant community health needs and considered them priorities:

- ***Obesity***
- ***Mental Health***
- ***Access to Health Services***

OBESITY

In Knox and Warren Counties, the number of people diagnosed with obesity and being overweight has decreased from 2007-2009 to 2010-2014. Note specifically that the percentage of obese and overweight people in Knox County has decreased from 67.9% to 55.9% and the percentage of obese and overweight people in Warren County has decreased from 58.7% to 54.7%. Overweight and obesity rates in Illinois have also decreased from 2009 (64.0%) to 2014 (63.7%). While county rates are slightly below State averages, note that Illinois has historically been one of the 10 worst states in the U.S. in terms of obesity rates and being overweight.

MENTAL HEALTH

Approximately 28% of residents in Knox County reported they had experienced 1-7 days with poor mental health per month in 2007-2009, and 5% felt mentally unhealthy on eight or more days per month for 2009. In 2010-2014, there was a moderate decrease in the number of people that reported poor mental health for 1-7 days; however, there was a significant increase in people that reported poor mental health 8 or more days per month to 11.8%. In Warren County, for 2010-2014, data are only available for feeling mentally unhealthy 8 or more days per month. Available data show an increase from 2% in 2009 to 6.2% in 2014.

ACCESS TO HEALTH SERVICES

For the at-risk population, the emergency department was chosen 16% of the time as a primary source of medical care. Not seeking medical attention was chosen by 10% of the at-risk population. Emergency departments tend to be used more often by men, and those with lower education and income. Not seeking medical care is more likely chosen by men and younger people.

Additionally, survey results show that 14% of the population did not have access to medical care when needed; 14% of the population did not have access to prescription medications when needed; 17% of the population did not have access to dental care when needed; and 7% of the population did not have access to counseling when needed. The leading causes of not getting access to medical care when needed were no insurance or inability to afford a co-pay.

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:

Roxanna Crosser, MHA, is the President of OSF St. Mary Medical Center since 2013. She earned her Bachelor of Science degree in Medical Technology and was introduced to OSF during her clinical internship at OSF St. Francis Medical Center. She also has a Master of Hospital Administration.

Roxanna started her career with OSF in 1985 as a Laboratory Supervisor at OSF St. Mary Medical Center. She has held numerous positions with OSF St. Mary including as Assistant Administrator for Human Resources and Special Projects, Senior Assistant Administrator for Staff Services, Vice President for Operations and now the President. She serves on many OSF committees and boards within OSF as the organization defines and plans for strategic direction in the ever changing healthcare environment. She serves as a facilitator for the OSF Ministry Development Program and is a mentor for several aspiring leaders within the Ministry.

She is active in many professional organizations including the American College of Healthcare Executives, and the Central Illinois Society for Healthcare Human Resources Administration. She has served as an Illinois Performance for Excellence examiner. She currently is on the board of directors of Bridgeway. She is an active member of her church and participates in many charity and service events offered in the community.

Michele (Fishburn) Gabriel is Public Health Administrator for the Knox County Health Department, and serves as CEO for the Knox Community Health Center. She has been with the Health Department since 2000 and has served in various roles throughout her tenure. Michele maintains a broad business background, strong communication skills, both with staff and the public, a solid customer service background, experience in marketing and, public and media relations. She is additionally responsible for grant-writing, program development and evaluation, marketing, and performance improvement activities. Beginning at a lower level and working her way up has provided her with an expansive public health background working in areas such as; administration, emergency preparedness, IPLAN (community Health Improvement), quality improvement, and strategic planning.

Michele received her bachelor's degree in Business Administration from Monmouth College in 2000, and Master's in Public Health from the University of Illinois, College of Medicine at Peoria in August 2009. Michele has broad experience in working within a community, both as a volunteer and as an employee. She believes that it is only through community collaboration that public health can achieve its goal of Healthy People in a Healthy Community. Additionally, she has experience in both working for a Board of Directors and well as serving on a Board of Directors; therefore, understands both the dynamics of Boards, as well as how important it is to make tough decisions.

Michele has a true belief about what public health truly is and what our responsibilities are to the communities we serve. It is population-based, and ever changing; public health has to be continuously responsive to what the community needs are and work to be able to meet those needs. Ms. Gabriel

believes it is in the best interest of Knox County to have a strong public health department guiding an even stronger public health system.

Josh Gibb has been the Executive Director of the Galesburg Community Foundation (GCF) since 2008. The Galesburg Community Foundation is a collection of permanently endowed funds that support philanthropic work in communities of Knox and Warren counties. Currently Josh serves on the Public Policy Committee for the Council on Foundations – the national association for foundations. He is very active in his community through various other organizations including the Galesburg Lions club. Josh has an Associate's Degree from Carl Sandburg College, where he was honored as the 2009 distinguished Alumnus and degree in Political Science from Western Illinois University. Recently he earned his Certificate in Strategic Management from the Association of Strategic Planners. Before coming to the GCF, Joshua worked for the Knox County Farm Bureau.

Sam Jarvis is the Division Director of Health Protection at the Knox County Health Department. He has lived in Knox County for 28 years and is a graduate of Knox College and Western Illinois University.

Ann Tucker Lockhart has been the executive director of the United Way of Knox County for the past 10 years. In this position, Ann oversees and conducts an annual fundraising campaign. The proceeds of this campaign are allocated to area non –profits who have been vetted through an internal United Way application and site visit. As part of the campaign, Ann visits local businesses to speak with employees about donating to the campaign. Fundraising events are another staple of this position with two major events conducted every year (Second Chance Prom and Beer & Wine Tasting). Ann is also the President of the Kiwanis Club and serves as Chair of the Emergency Food and Shelter Program and makes decisions along with a local board on how best to allocate funds for emergency food and shelter. Fundraising events are another staple of this position with two major events conducted every year (Second Chance Prom and Beer & Wine Tasting). Ann lives in Henderson, Illinois with her husband James, three kids Katie (15), Kate (11), and Tyler (10) and her dogs Oliver and Bob.

Rhonda Nelson, M.S.Ed., LCPC, received a degree in Counseling from Western Illinois University in 1988. Nelson is a Licensed Clinical Professional Counselor (LCPC) Rhonda achieved national certification as a Mental Health First Aid USA Instructor (Adult Population) in 2009 through the National Council for Community Behavioral Healthcare and is an active Mental Health First Aid Trainer. She achieved MHFA Instructor status for the Youth Population in April 2013. Rhonda served in a variety of positions before becoming the Vice President of Behavioral Health Services for Bridgeway Inc. in 2005.

Adam Sampson served as the CEO of the Knox County YMCA for three years. He has worked for the YMCA for over 12 years in many leadership capacities. He graduated from Saint Ambrose University for his undergraduate studies and Western Illinois University for graduate studies.

Alice Snyder graduated from the Medical College of Georgia (now the Georgia Regents University) with her BSN in 1985. She obtained her MSN and her MBA from Georgia College and State University in 1988 and 1990, respectively. She is currently finishing her work toward a DHA at A. T. Still University {DHA (abd)}. Alice serves as the Chief Nursing Officer at OSF St. Mary Medical Center. She has served in various nursing leadership roles since 1988 and the executive nursing role at various organizations since 2002. Membership of professional organizations include:

- Texas Organization of Nurse Executives – 2002-2007
- American College of HealthCare Executives – 2004 – present
- Texas Hospital Association Leadership Development Council – 2003-2006
- American Organization of Nurse Executives – 2004-present
- Illinois Organization of Nurse Leaders – June 2012 – present
- American College of Healthcare Executives – 2002 – present

Current certifications include:

- Nurse Executive, Advanced - Board Certified (NEA – BC)
- National Managed Care Certification (NMCC)
- Fellow, American Academy of Healthcare Executives (FACHE)

Community involvement and experience include:

- United Way Campaign Coordinator – 1994-1999
- United Way Campaign Coordinator of the Year Heart of Georgia United Way Chairman’s Award – 1997
- HCA Georgia Federal Credit Union Supervisory Committee Member – 1992-1996
- The Stepping Stone (Child Advocacy Center) Board member (Treasurer, Chairman Finance Committee and member of fundraising committees)
- United Way Campaign Corporate Cabinet – 1999 to 2002
- United Way of Plainview Budget and Finance Committee – 2003-2004; 2004-2005; 2005-2006; 2006-2007
- Area Health Education Center Advisory Committee – 2002-2004; 2004 – 2006
- Member, Rotary of Plainview/Rotary International – 2002 – 2006
- Rotary of Plainview, Board of Directors – 2003-2004; 2004 – 2006
- United Way Campaign Coordinator – 2005-2006
- Member, Rotary of Fort Smith – 2007-2012
- Relay for Life, OSF St. Mary Scrubs Team – 2013 – present
- Galesburg Sunrise Rotary – 2014 – present

Alice has served as a consultant, speaker, and author as a healthcare consultant with expertise in leadership, as well.

Jennifer Talbert is the Coordinator of Decision Support at OSF St. Mary Medical Center. She has been with OSF St. Mary Medical Center for 16 years and has served in various leadership roles. She completed her undergraduate degree in Technical Management from DeVry University in 2009, and her Graduate in Healthcare Management from Western Governors University in 2014. She is very active in the community through various organizations including serving on the Board for United Way of Knox County for the past four years.

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

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

Dawn Irion (Coordinator) is a Strategic Reimbursement Analyst at OSF Healthcare System. She has worked for OSF Healthcare System since 2004 and has acted as the coordinator for 11 Hospital Community Health 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 McMahan-Illini Chapter of Healthcare Financial Management Association for over ten years. Dawn will assume the responsibilities of President-Elect on the board of the McMahan-Illini HFMA Chapter starting in June of 2016.

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

APPENDIX 2. ACTIVITIES RELATED TO 2013 CHNA PRIORITIZED NEEDS

Seven needs were identified in the Knox/Warren County 2013 CHNA. Below are examples of activities implemented during the last three years to address these needs:

Access to Health Services: Identified as Prioritized Health Need

- Provided language assistance and taxi vouchers to community members. Education provided in the workplace with screenings. Supplies were handed out at local events to help community members.

Dental Health: Identified as Prioritized Health Need

- Built relationship with local dental providers to provide resources to the community.

Diabetes: Identified as Prioritized Health Need

- Provided educational events and classes on the management and prevention of diabetes.

Healthy Behaviors: Identified as Prioritized Health Need

- Held various healthy behavior related screenings and education programs. Participated in local events to provide resources and education.

Mental Health: Identified as Prioritized Health Need

- Added mental health resources to community guide for distribution. Partnered with local mental health resources to provide education.

Obesity: Identified as Prioritized Health Need

- Worked with local agency to provide educational classes to the community on nutrition and exercise. Held several educational sessions at a local exercise facility.

Substance Abuse: Identified as Prioritized Health Need

- Partnered with local resources. Participating in local events to provide resources and information.

APPENDIX 3. SURVEY

COMMUNITY HEALTH-NEEDS ASSESSMENT SURVEY

INSTRUCTIONS

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

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

I. IMPORTANT HEALTH ISSUES IN OUR COMMUNITY

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

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

II. UNHEALTHY BEHAVIORS

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

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

III. ISSUES WITH YOUR WELL BEING

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

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

IV. ACCESS TO HEALTH CARE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

10. In the last year, was there a time when you needed mental-health counseling but could not get it?
 No (please go to question 12) Yes (please go to the next question)

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

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

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

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

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

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

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

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

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

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

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

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

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

- Doctor Friends/family Internet Pharmacy Nurse at my church

18. Do you have a personal physician? No Yes

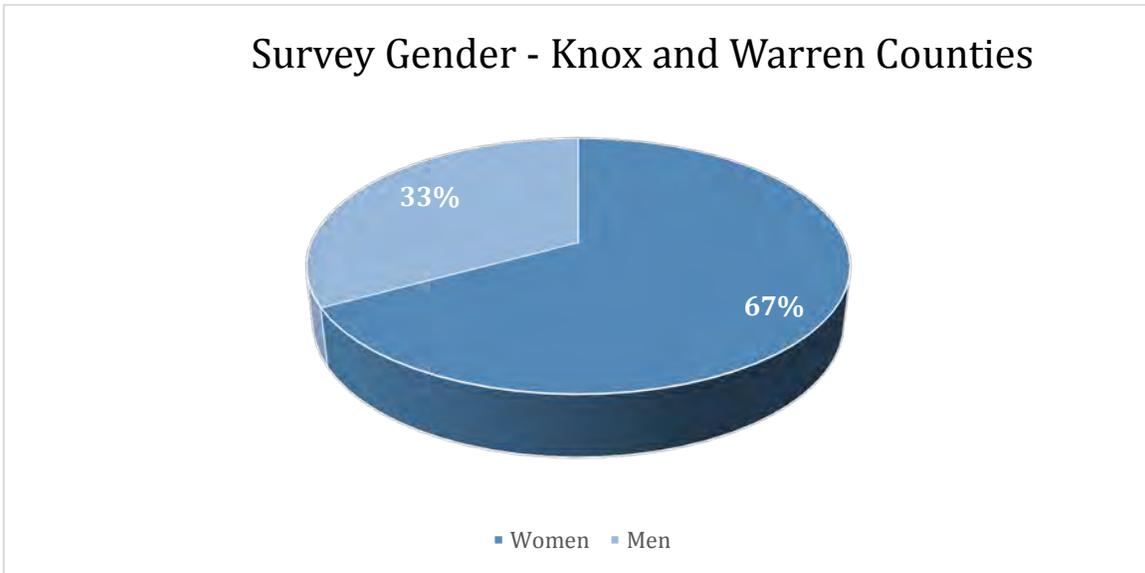
19. Overall, my physical health is: Good Average Poor

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

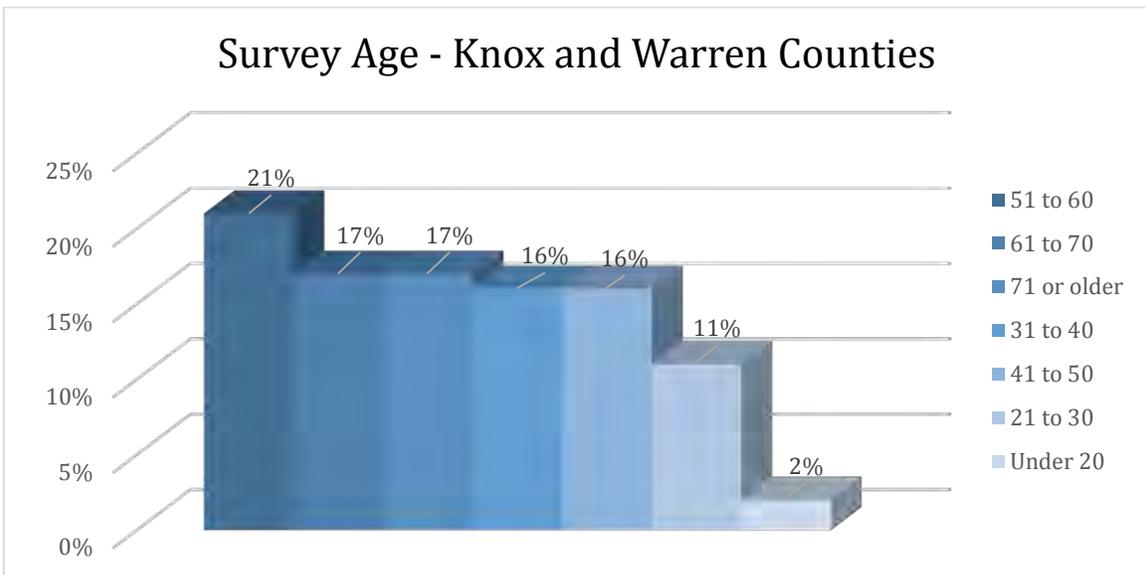
21. How long has it been since you have had a flu shot?

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

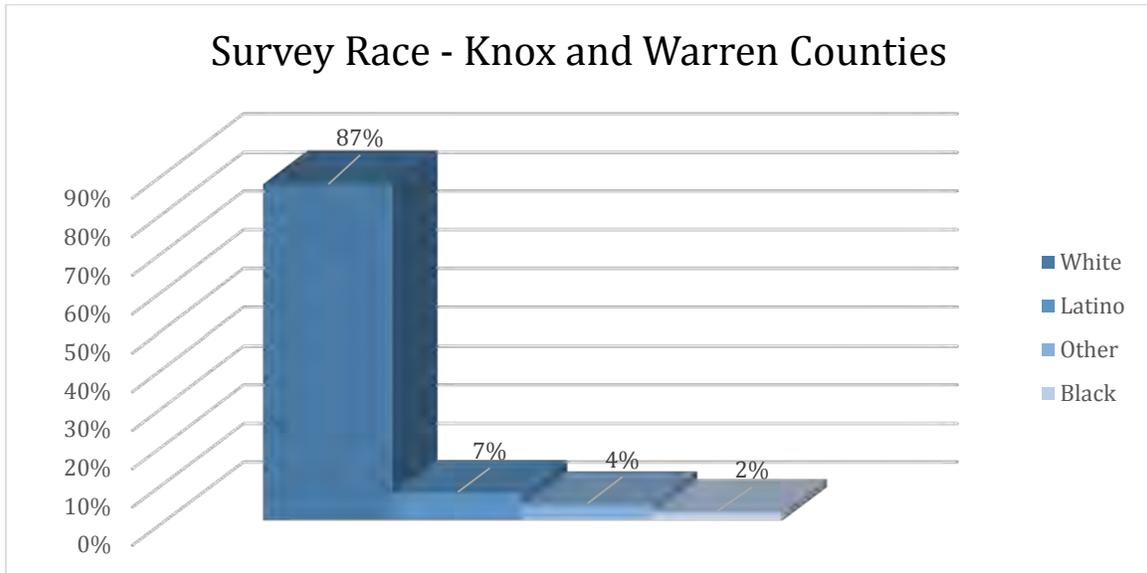
APPENDIX 4. CHARACTERISTICS OF SURVEY RESPONDENTS FOR GENERAL SAMPLE



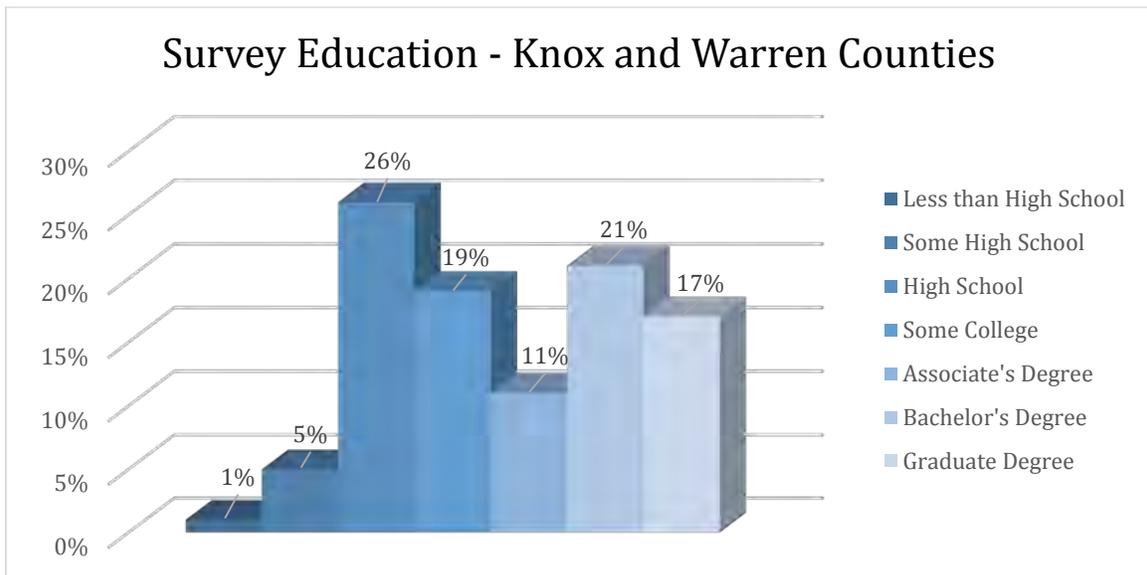
Source: CHNA Survey



Source: CHNA Survey

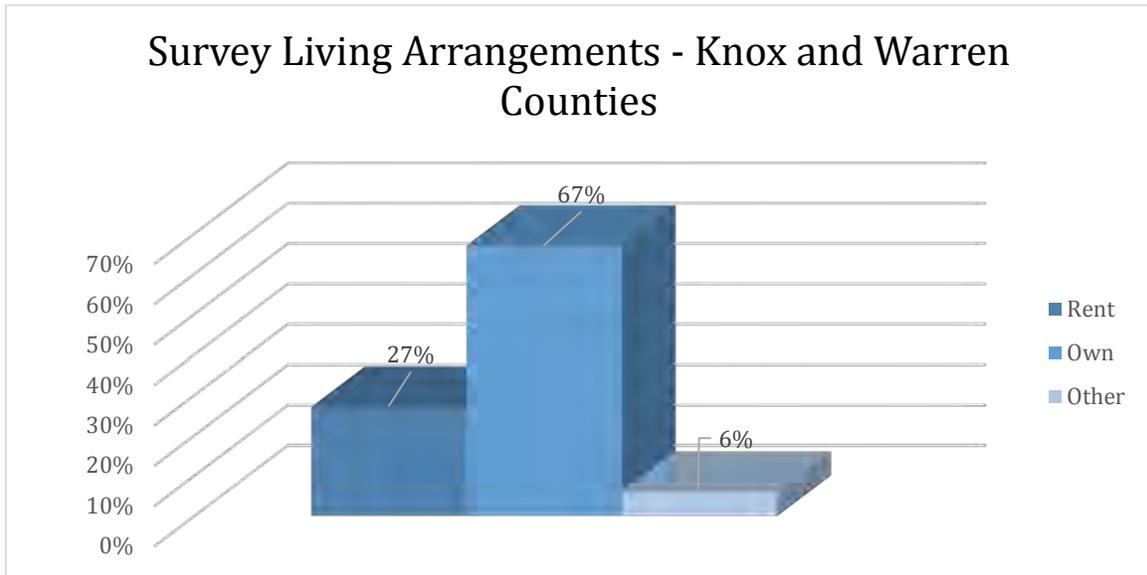


Source: CHNA Survey

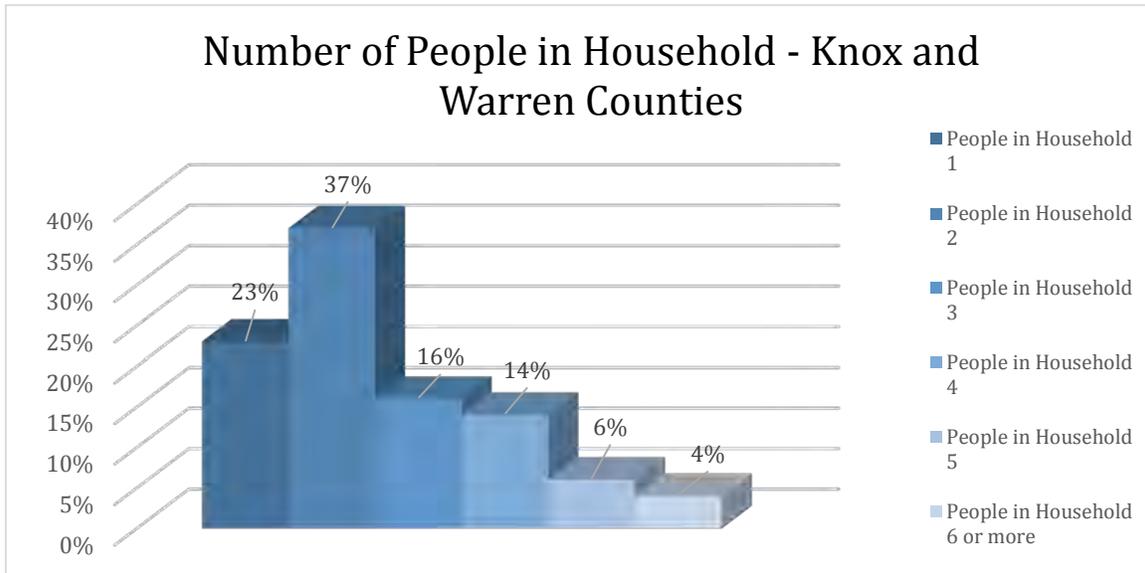


Source: CHNA Survey

Income: Mean income for sample was \$42,777.00



Source: CHNA Survey



Source: CHNA Survey

APPENDIX 5. RESOURCE MATRIX

	Organization name	Access to Health Services	Dental Health	Diabetes	Healthy Behaviors/ Nutrition & Exercise	Mental Health	Obesity	Risky sexual behavior STIs
Recreational Facilities								
	Lakeside Recreation Facility				X		X	
	Northgate Racquetball & Health Club				X		X	
	Hawthorne Center				X		X	
	YMCA of Knox County				X		X	
	YMCA of Warren County				X		X	
Health		X	X	X	X	X	X	X
	Knox County Health Department	X	X	X	X	X	X	X
	Warren County Health Department	X	X	X	X	X	X	X
Community Agencies								
	United Way of Knox County	X						
	Carver Community Action Agency	X			X		X	
	Center for Youth & Family Solutions	X				X		
	FISH				X		X	
	Gordon Behrents Senior Center/KCCDD	X			X	X		
	VNA Community Services	X	X	X		X		
	YMCA of Knox County				X		X	
	LaGrace Hall of Hope	X			X	X		
	Bridgeway	X				X		
	Jamieson Community Center	X						
Hospitals / Clinics		X						
	OSF St Mary Medical Center	X		X	X	X	X	X
	OSF Medical Group- Galesburg	X		X	X	X	X	X
	OSF Medical Group- Knoxville	X		X	X	X	X	X
	OSF Medical Group- Abingdon	X		X	X	X	X	X
	OSF Medical Group- Woodhull	X		X	X	X	X	X
	OSF Medical Group- Williamsfield	X		X	X	X	X	X
	OSF Medical Group- Roseville	X		X	X	X	X	X
	OSF Medical Group- Galva	X		X	X	X	X	X
	OSF Prompt Care- Galesburg	X		X	X	X	X	X
	OSF Galesburg Clinic	X		X	X	X	X	X
	The Galesburg OP VA Clinic	X	X	X	X	X	X	X
	Illinois Cancer Care Clinic	X			X			
	Knox County Community Health Clinic	X	X	X	X	X	X	X
	Soderstrom Skin Institute	X						
	Heartcare Midwest- Galesburg	X						
	Galesburg Cottage Hospital/CHS	X		X	X	X	X	X
	Cottage Clinic of Monmouth	X		X	X	X	X	X
	Cottage Professional Clinics	X		X	X	X	X	X
	OSF Holy Family Medical Center	X		X	X	X	X	X
	OSF Rural Health Clinic- Monmouth	X		X	X	X	X	X
	Fresenius Medical Care- Maple City (dialysis)	X			X		X	

APPENDIX 6. DESCRIPTION OF COMMUNITY RESOURCES

Recreational Facilities (4)

Galesburg Parks and Recreation

Obesity, Healthy Behaviors, Heart Disease

The Galesburg Parks and Recreation district offers a variety of year-round programs for infants, toddlers, early childhood, youth, adults, and seniors.

Knox County YMCA

Obesity, Healthy Behaviors, Heart Disease, Women's Health

The Illinois Valley YMCA is a community based service organization dedicated to building the mind, body and spirit for members of the Galesburg area communities. By offering value-based programs emphasizing education, health and recreation for individuals regardless of sex, race or socio-economic status the YMCA is increasing the quality of life in Knox County.

Monmouth Parks and Recreation

Obesity, Healthy Behaviors, Heart Disease

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

Warren County YMCA

Obesity, Healthy Behaviors, Heart Disease, Women's Health

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 experience for children and adults of all ages.

Health Departments (2)

Knox County Health Department

Obesity, Addiction/Substance Abuse, Mental Health, Healthy Behaviors, Access to Health Services, Respiratory Issues, Community Health Misperceptions, Diabetes, Cancer, Dental, Women's Health

The Knox County Health Department serves Knox County by assessing health and environmental needs, developing policies, and assuring those needs are effectively addressed.

Warren County Health Department

Obesity, Addiction/Substance Abuse, Mental Health, Healthy Behaviors, Access to Health Services, Respiratory Issues, Community Health Misperceptions, Diabetes, Cancer, Dental, Women's 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/Private Practices (4)

Bridgeway Mental Health and Family Services

Addiction/Substance Abuse, Mental Health, Access to 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.

Crossroads Counseling and Life Coaching

Addiction/Substance Abuse, Mental Health

Crossroads Counseling and Life Coaching is dedicated to improving the health and well-being of clients through individual, marital/family, and group counseling.

United Way of Knox County

Warren County United Way

Access to Health Services, Community Health Misperceptions

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.

Various private practice clinicians

Addiction/Substance Abuse, Mental Health, Dental

Several private practice clinicians offer services to address addiction/substance abuse, mental health, and dental needs.

Hospitals/Clinics (4)

Galesburg Cottage Hospital

Obesity, Addiction/Substance Abuse, Mental Health, Healthy Behaviors, Access to Health Services, Respiratory Issues, Heart Disease, Cancer, Diabetes, Community Health Misperceptions, Women's Health
Galesburg Cottage Hospital is a 173-bed hospital. 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; and a Level II Trauma Center. The hospital is also proud to offer a Wound Healing Center, a Surgical Weight Loss Center, and a renal dialysis center.

OSF Holy Family Medical Center

Obesity, Addiction/Substance Abuse, Mental Health, Healthy Behaviors, Access to Health Services, Respiratory Issues, Heart Disease, Cancer, Diabetes, Community Health Misperceptions, Women's Health

OSF Holy Family Medical Center is a 23-bed acute/intermediate care, critical access hospital. OSF Holy Family provides a broad range of acute care and outpatient services including a variety of specialist, emergency, rehabilitation, and diagnostic imaging services. Through Holy Family Clinics, primary, pediatric, and surgical medical care is provided for patients of all ages. The Clinics are staffed by several physicians, physician assistants, advanced practice nurses and support staff. A variety of different services are provided through the Clinics including women's health, podiatry, cardiology, and neurology.

OSF St. Mary Medical Center

Obesity, Addiction/Substance Abuse, Mental Health, Healthy Behaviors, Access to Health Services, Respiratory Issues, Heart Disease, Cancer, Diabetes, Community Health Misperceptions, Women's Health

OSF St. Mary Medical Center is a 99-bed acute care facility in Galesburg. The medical center provides state-of-the art therapeutic, diagnostic, medical and surgical services for our patients and medical staff. A strong, specialized nursing and technical staff is maintained by the hospital. Professional health educators are the nucleus of the in-house and outreach health screening, information and education programs. Supported by certified social workers, nutritionists and therapists, this team insures the ability to provide high quality patient care and education in the pre- and post- medical center experiences.

Illinois Cancer Care*Cancer*

Illinois Cancer Care offers radiation therapy, external beam therapy, and high dose rate.

APPENDIX 7. PRIORITIZATION METHODOLOGY

5-STEP PRIORITIZATION OF COMMUNITY HEALTH ISSUES

Step 1. Review Data for Potential Health Issues

Step 2. Briefly Discuss Relationships Among Issues

Step 3. Apply “PEARL” Test from Hanlon Method³

Screen out health problems based on the following feasibility factors:

Propriety – Is a program for the health problem appropriate?

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

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

Resources – Is funding available for a program?

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

Step 4. Use Voting Technique to Narrow Potential Issues

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

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

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

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

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

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

Considerations include, but are not limited to:

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

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