

2022

COMMUNITY HEALTH  
NEEDS ASSESSMENT

OSF Holy Family  
Medical Center

*Warren County*

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# Community Health Needs Assessment

## 2022

*Collaboration for sustaining health equity*

## EXECUTIVE SUMMARY

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

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

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

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

- **Healthy Behaviors – defined as active living and healthy eating, and their impact on obesity**
- **Access to Care – including primary source of healthcare, access medical care, prescription medications, dental care and mental-health counseling**

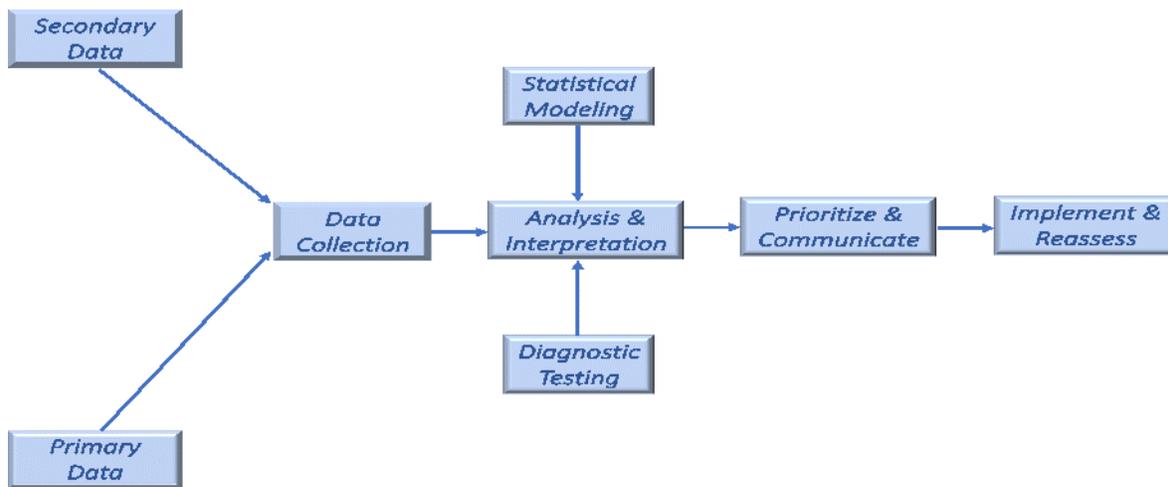
## I. INTRODUCTION

### Background

The Patient Protection and Affordable Care Act (Affordable Care Act), enacted March 23, 2010, added new requirements for tax-exempt charitable hospital organizations to conduct community health needs assessments and to adopt implementation strategies to meet the community health needs identified through the assessments. This community health needs assessment (CHNA) takes into account input from specific individuals who represent the broad interests of the community served by OSF Holy Family Medical Center including those with special knowledge of or expertise in public health. For this study, a community health-needs assessment is defined as a systematic process involving the community, to identify and analyze community health needs and assets in order to prioritize these needs, create a plan, and act upon unmet community health needs. Results from this assessment will be made widely available to the public. This CHNA Report was approved by the OSF HealthCare System’s Board of Directors on July 25, 2022.

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 charitable hospital organizations. The fundamental areas of the community health needs assessment are illustrated in Figure 1.

Figure 1



## Collaborative Team and Community Engagement

In order to engage the entire community in the CHNA process, a collaborative team of health-professional experts and key community advocates was created. Members of the collaborative team were carefully selected to ensure representation of the broad interests of the community. Specifically, team members included representatives from OSF Holy Family Medical Center, members of the Warren County Health Department, and administrators from key community partner organizations. Engagement occurred throughout the entire process, resulting in shared ownership of the assessment. The entire collaborative team met in the first and second quarter of 2022. 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: MEMBERS OF COLLABORATIVE TEAM.

## Definition of the Community

In order to determine the geographic boundaries for OSF Holy Family Medical Center, analyses were completed to identify what percentage of inpatient and outpatient activity was represented by Warren County. Data show that Warren County represent 76% of all patients for the hospital.

In addition to defining the community by geographic boundaries, this study targets the at-risk population as an area of potential opportunity to improve the health of the community. Note that the at-risk population was defined as those individuals who were eligible to receive Medicaid based on the State of Illinois guidelines using household size and income level.

## Purpose of the Community Health Needs Assessment

In the initial meeting, the collaborative committee identified the purpose of this study. Specifically, this study has been designed to provide necessary information to health-care organizations, including hospitals, clinics and health departments, in order to create strategic plans in program design, access and delivery. Results of this study will act as a platform that allows health-care organizations to orchestrate limited resources to improve management of high-priority challenges. By working together, hospitals, clinics, agencies and health departments will use this CHNA to improve the quality of healthcare in Warren County. When feasible, data are assessed longitudinally to identify trends and patterns by comparing with results from the 2019 CHNA and benchmarked with State of Illinois averages.

## Community Feedback from Previous Assessments

The 2019 CHNA and implementation plan were made widely available to the community to allow for feedback. Specifically, the hospital posted both a full version and a summary version of the 2019 CHNA on its website. In order to encourage written feedback, the hospital specifically included a section labeled **Share Your Feedback** and provided instructions regarding how individuals from the community could provide comments to the CHNA. While no written feedback was received by individuals from the community via the available mechanism for the CHNA or implementation plan, verbal feedback was provided by key stakeholders from community-service organizations and incorporated as part of the collaborative process.

## 2019 CHNA Health Needs and Implementation Plans

The 2019 CHNA for Warren County identified two significant health needs. These included: Healthy Behaviors, defined as healthy eating and active living, and their impact on obesity; Behavioral Health, including mental health 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: ACTIVITIES RELATED TO 2019 CHNA PRIORITIZED NEEDS. Note that numerous challenges associated with the COVID-19 pandemic had significant impact on the activities discussed in appendix 2.

## Social Determinants of Health

This CHNA incorporates important factors associated with Social Determinants of Health (SDOH). SDOH are important environmental factors, such as where people are born, live, work and play, that affect people's well-being, physical and mental health, and quality of life. According to research conducted by the U.S. Department of Health and Human Services, *Healthy People 2030* has identified five SDOH that should be included in assessing community health (Figure 2).

Figure 2



*Healthy People 2030, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Retrieved January 15, 2022, from <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>*

Assessment of SDOH is included in the CHNA, as social determinants help contribute to health inequities and disparities. Simply creating interventions without incorporating SDOH will have limited impact on improving community health for people living in underserved or at-risk areas.

## 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, a study was completed to examine perceptions of the community health-related issues, healthy behaviors, behavioral health, food security, social determinants of health and access to healthcare.

## Secondary Data Collection

Existing secondary statistical data were first used 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 COMPdata Informatics (affiliated with Illinois Health and Hospital Association (IHA)) to identify six primary categories of diseases, including: age related, cardiovascular, respiratory, cancer, diabetes and infections. In order to define each disease category, modified definitions developed by Sg2 were used. Sg2 specializes in consulting for health-care organizations. Their team of experts includes MDs, PhDs, RNs and health-care 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, the research design used for this study: survey design, data collection and data integrity.

## Survey Instrument Design

Initially, all publicly available health-needs assessments in the U.S. were assessed to identify common themes and approaches to collecting community health-needs data. By leveraging best practices from these surveys, a new survey in 2021 was designed for use with both the general population and the at-risk community. To ensure that all critical areas were being addressed, the entire collaborative team was involved in survey design/approval through several fact-finding sessions. Additionally, several focus groups were used to collect the qualitative information necessary to design survey items. Specifically, for the community health-needs assessment, eight specific sets of items were included:

- **Ratings of health issues in the community** – to assess the importance of various community health concerns. Survey items included assessments of topics such as cancer, diabetes and obesity.
- **Ratings of unhealthy behaviors in the community** – to assess the importance of various unhealthy behaviors. Survey items included assessments of topics such as violence, drug abuse and smoking.
- **Ratings of issues concerning well-being** – to assess the importance of various issues relating to well-being in the community. Survey items included assessments of topics such as access to healthcare, safer neighborhoods and effective public transportation.
- **Accessibility to healthcare** – to assess the degree to which residents could access healthcare when needed. Survey items included assessments of topics such as access to medical, dental and mental-healthcare, as well as access to prescription medication.

- **Healthy behaviors** – to assess the degree to which residents exhibited healthy behaviors. The survey items included assessments of topics such as exercise, healthy eating habits and cancer screenings.
- **Behavioral health** – to assess community issues related to areas such as anxiety and depression.
- **Food security** – to assess access to healthy food alternatives.
- **Social determinants of health** – to assess the impact that social determinants may have on the above-mentioned areas.

Finally, demographic information was collected to assess background information necessary to segment markets in terms of the eight categories discussed above. A copy of the final survey is included in APPENDIX 3: SURVEY.

## Sample Size

In order to identify our potential population, we first identified the percentage of the Warren County population that was living in poverty. Specifically, we multiplied the population of the county by its respective poverty rate to identify the minimum sample size to study the at-risk population. The poverty rate for Warren County is 10.7 percent. The population used for the calculation was 16,548 yielding a total of 1,771 residents living in poverty in the Warren County area.

A normal approximation to the hypergeometric distribution was assumed 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

z = the value that specified the confidence interval (use 95% CI)

pq = population proportions (set at .05)

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

For the total Warren County area, the minimum sample size for *aggregated* analyses (combination of at-risk and general populations) was 376. The data collection effort for this CHNA yielded a total of 380 usable responses. This exceeded the threshold of the desired 95% confidence interval.

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

## Data Collection

Survey data were collected in the 3rd and 4th quarter of 2021. 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 homeless shelters, food pantries and soup kitchens. Since the at-risk population was specifically targeted as part of the data collection effort, this became a stratified sample, as other groups were not specifically targeted based on their socio-economic status.

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

## Data Integrity

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

## Analytic Techniques

To ensure statistical validity, several different analytic techniques were used. 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, Pearson correlations,  $X^2$  tests and tetrachoric correlations were used 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 Internet Accessibility
- 1.7 Key Takeaways from Chapter 1

## CHAPTER 1: DEMOGRAPHY AND SOCIAL DETERMINANTS

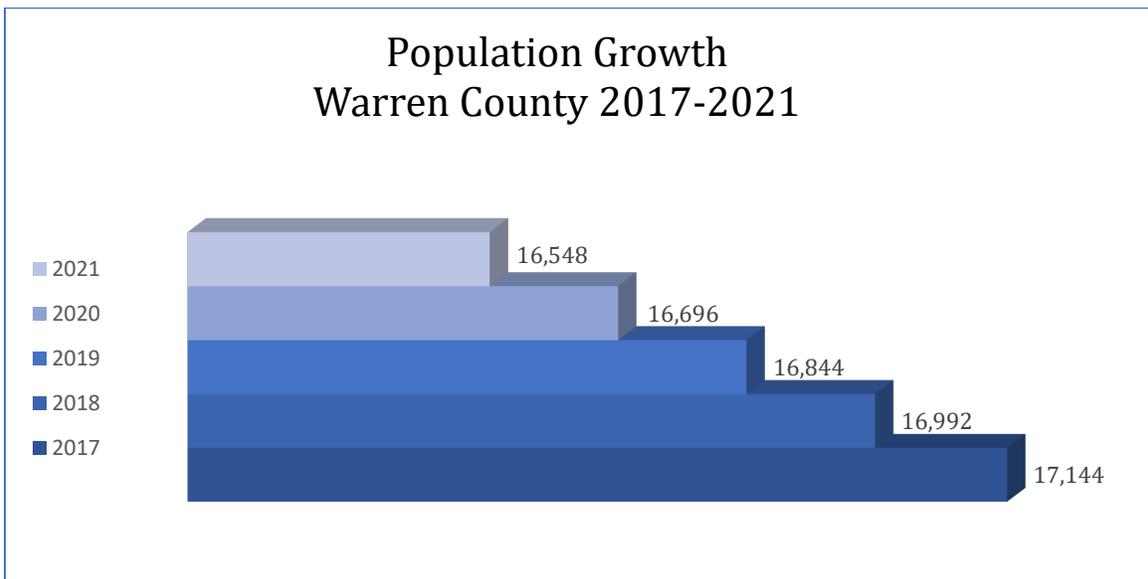
### 1.1 Population

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

#### Population Growth

Data from the last census indicate the population of Warren County has slightly decreased between 2017 and 2021 (Figure 3).

Figure 3



Source: US Census

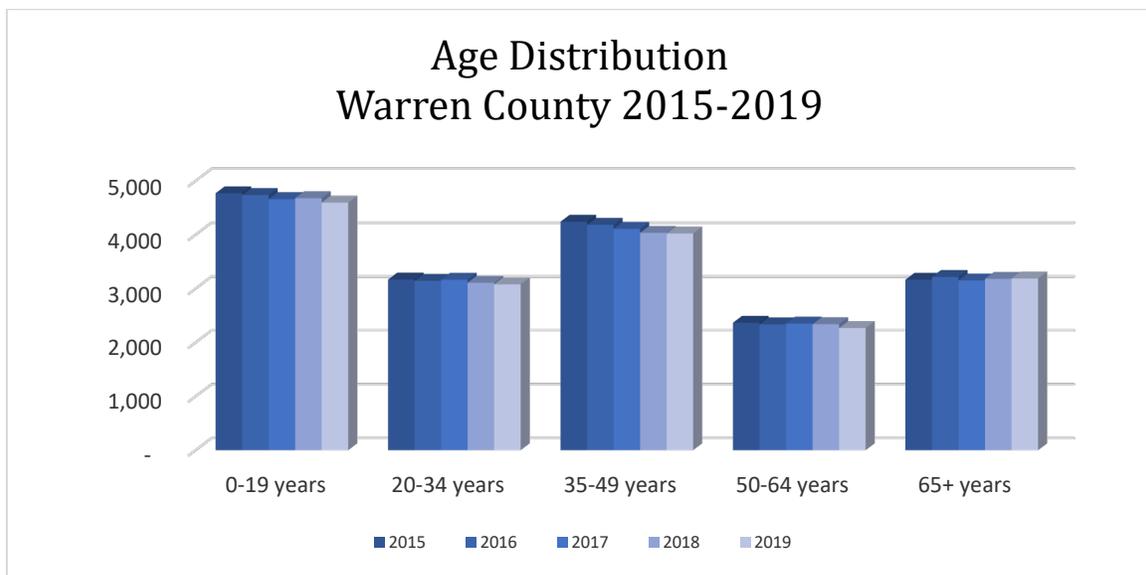
## 1.2 Age, Gender and Race Distribution

*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 health-care infrastructure and service delivery systems.

### Age

Figure 4 illustrates the percentage of individuals in Warren County in each age group. Note the 35-49 years age group in Warren County decreased 5% and the 50-64 years age group decreased 4%. The elderly population (residents aged 65 and older) increased less than 1% in Warren County.

Figure 4

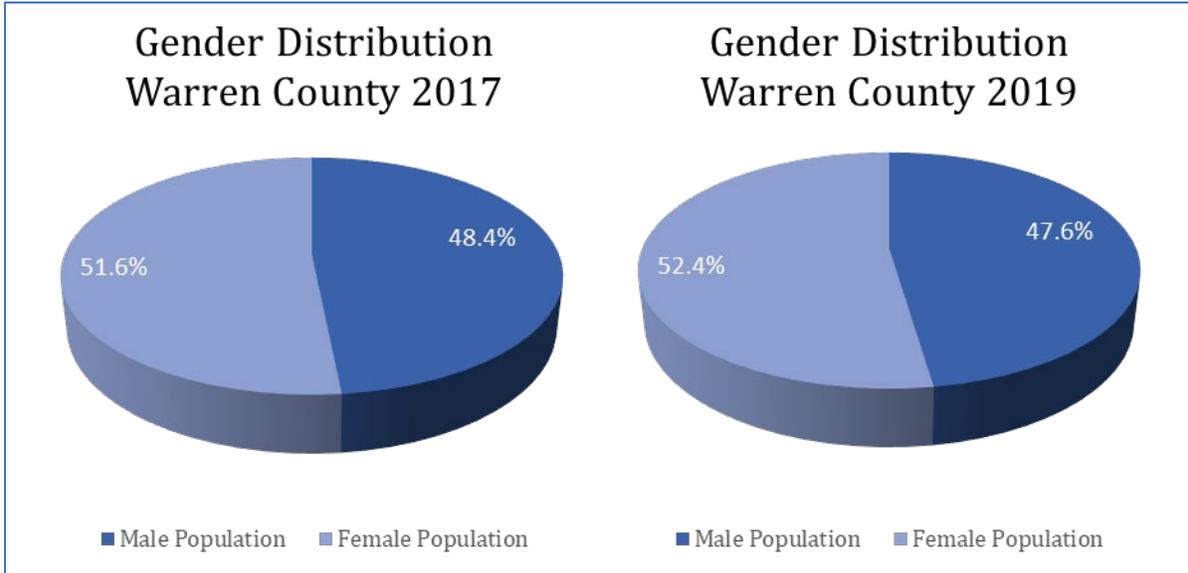


Source: US Census

### Gender

The gender distribution of Warren County (Figure 5) residents has remained relatively consistent between 2017 and 2019.

Figure 5

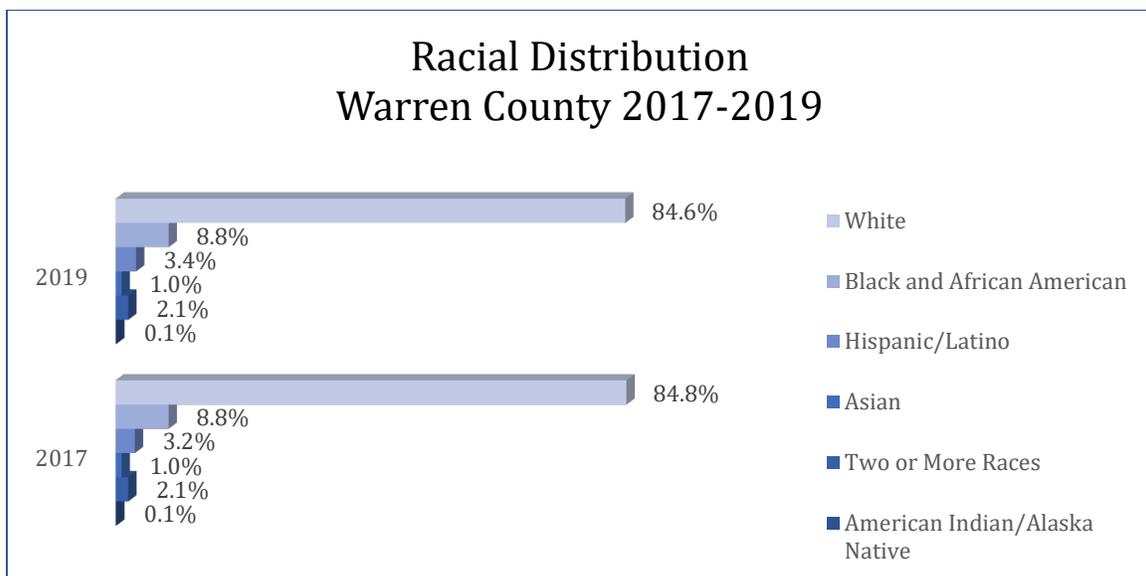


Source: US Census

## Race

With regard to race and ethnic background, Warren County is largely homogenous. Data from 2019 suggest that White ethnicity comprises 84.6% of the population in Warren County. However, the non-White population of Warren County has slightly increased (from 15.2% to 15.4% in 2019), with Black ethnicity comprising 8.8% of the population, multi-racial ethnicity comprising 2.1% of the population, and Hispanic/Latino (LatinX) ethnicity comprising 3.4% of the population in 2019 (Figure 6).

Figure 6



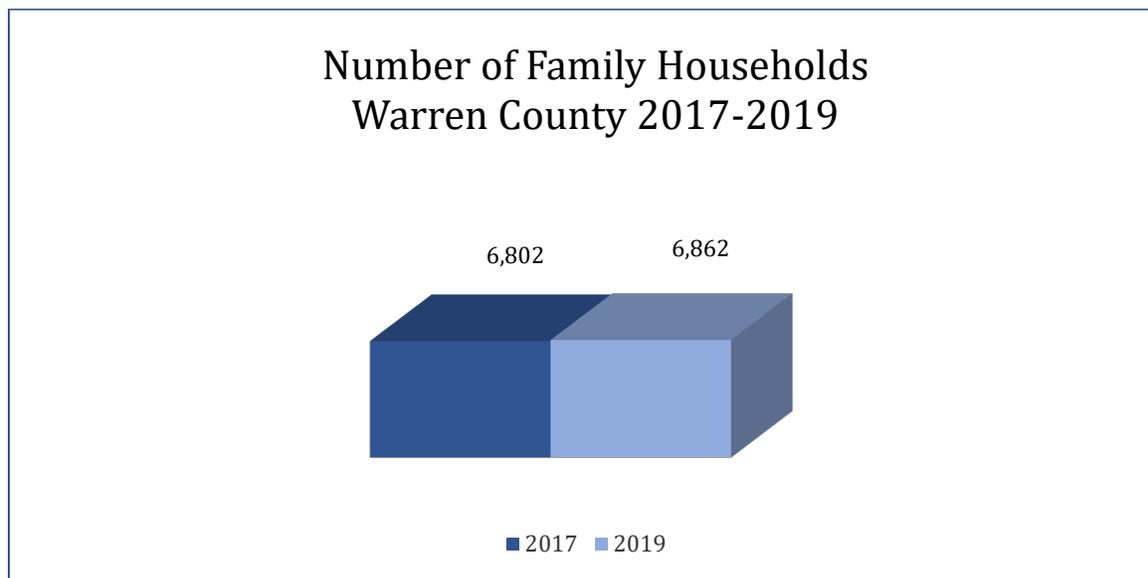
Source: US Census

## 1.3 Household/Family

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

As indicated in Figure 7, the number of family households in Warren County increased slightly from 2017 to 2019.

Figure 7

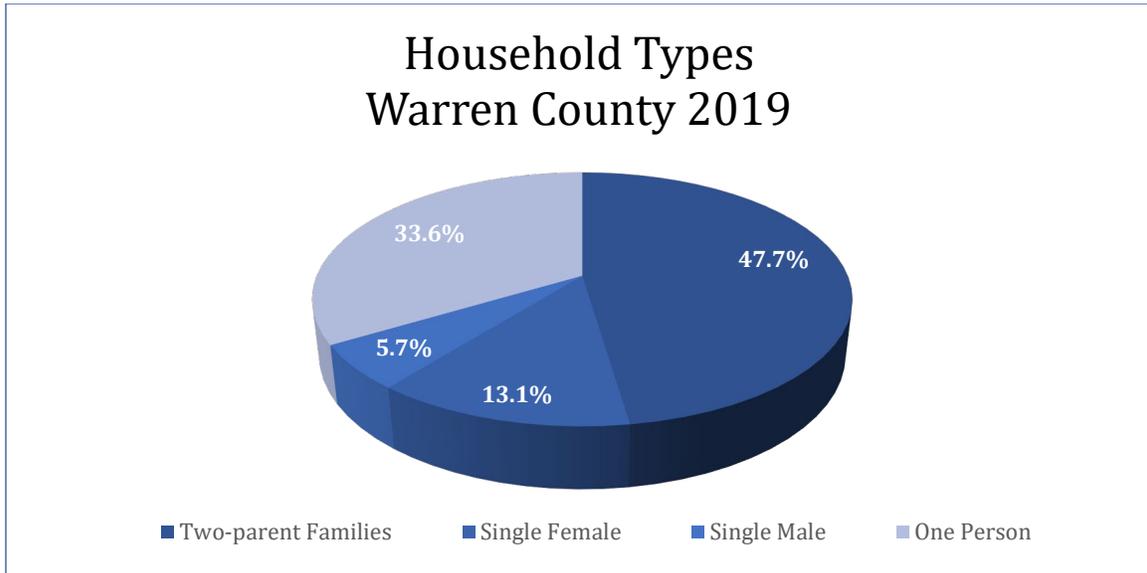


Source: US Census

### Family Composition

In Warren County, data from 2019 suggest the percentage of two-parent families in Warren County is 47.7%. One-person households represent 33.6% of the county population, single female households represent 13.1% and single-male households represent 5.7% (Figure 8).

Figure 8

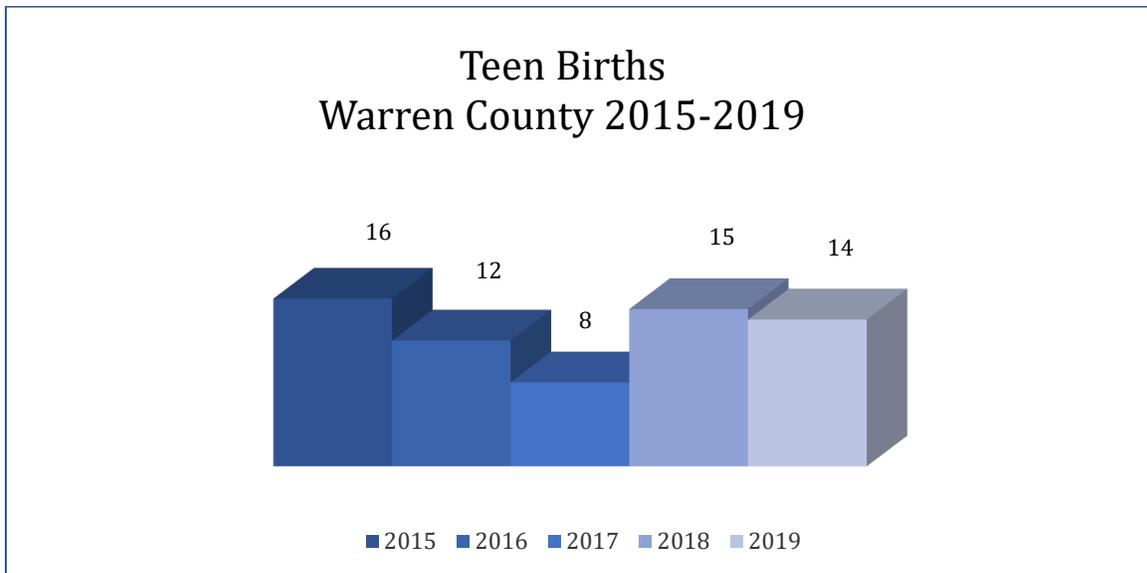


Source: US Census

## Early Sexual Activity Leading to Births from Teenage Mothers

Warren County has experienced a fluctuation in teenage birth count between 2015 and 2019 (Figure 9). Rates dropped in 2016 and 2017 but then increased in 2018, dropping slightly in 2019.

Figure 9



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.

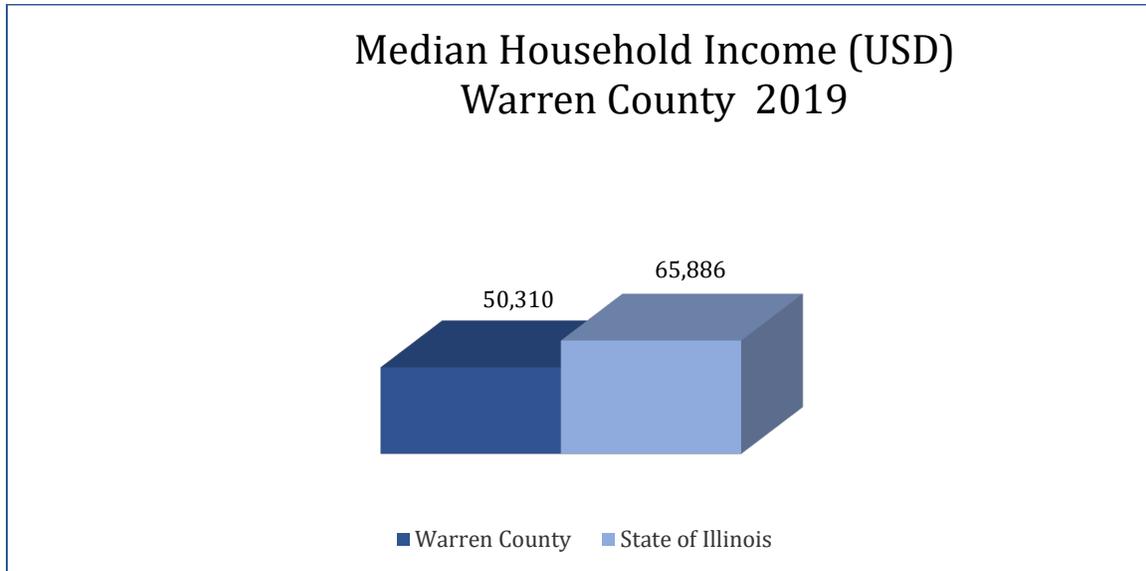
### Economic Climate

Economic climate is a measure of a community’s financial resources and resiliency. Key risk influencers include income, cost of living and opportunity. For Warren County, 31% of the population is at elevated risk for economic climate. This is lower than the State of Illinois average of 35% (SocialScape® powered by SociallyDetermined®, 2022).

### Median Income Level

For 2019, the median household income in Warren County was lower than the State of Illinois (Figure 10).

Figure 10

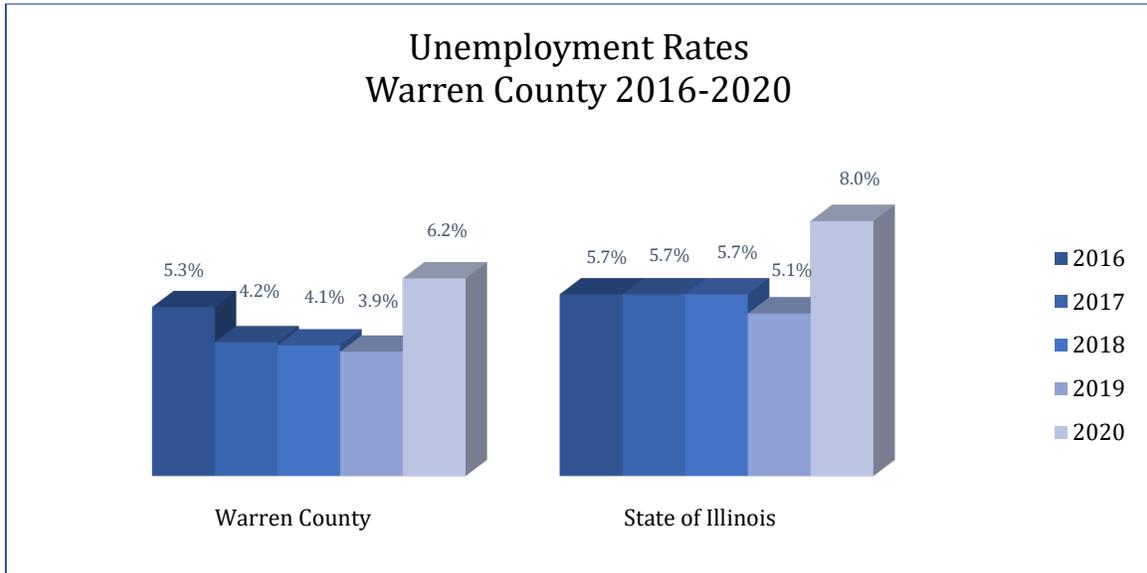


Source: US Census

### Unemployment

For the years 2016 to 2020, the Warren County unemployment rate remained lower than the State of Illinois unemployment rate. However, in 2020 the rate significantly increased but did remain lower than the State of Illinois. Some of the increase in unemployment in 2020 may be attributed to the COVID-19 pandemic (Figure 11).

Figure 11

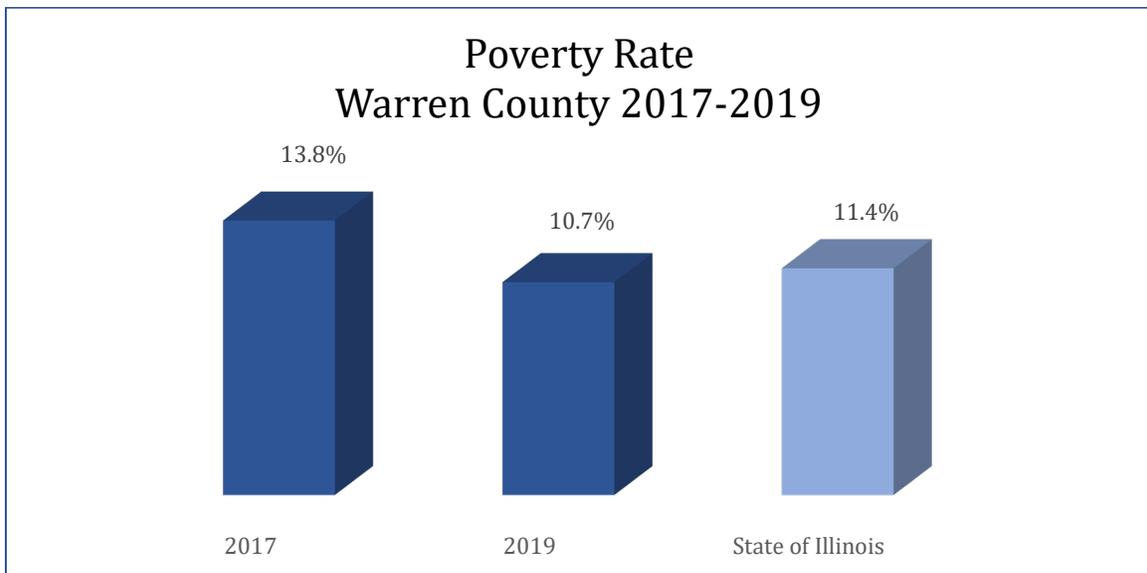


Source: Bureau of Labor Statistics

## Individuals in Poverty

In Warren County, the percentage of individuals living in poverty between 2017 and 2019 decreased by 3%. The poverty rate for individuals is 10.7%, which is slightly lower than the State of Illinois individual poverty rate of 11.4%. The poverty rate has a significant impact on the development of children and youth (Figure 12).

Figure 12



Source: US Census

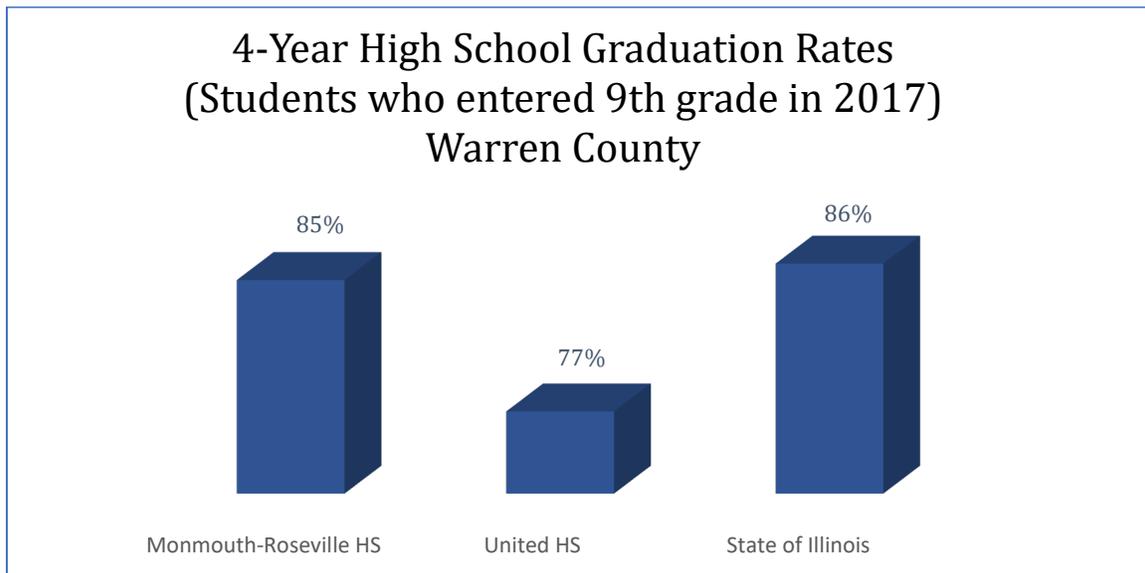
## 1.5 Education

*Importance of the measure:* According to the National Center for Educational Statistics<sup>1</sup>, “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.

### High School Graduation Rates

Students who entered 9<sup>th</sup> grade in 2017 in Warren County school districts reported high school graduation rates that were lower than the State average of 86% (Figure 13).

Figure 13



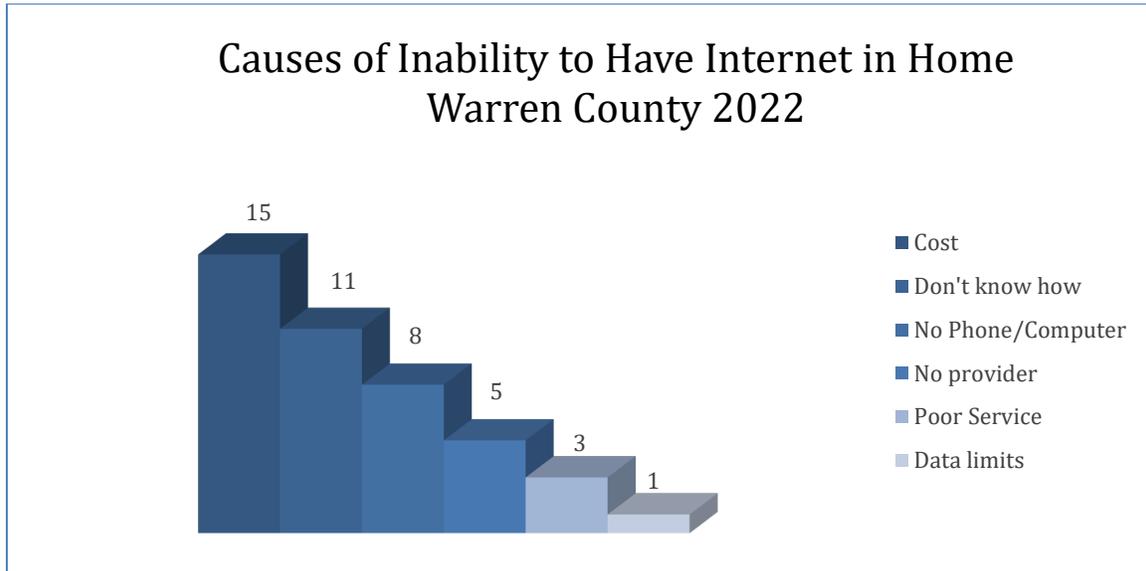
Source: Illinois Report Card

## 1.6 Internet Accessibility

Survey respondents were asked if they had Internet access. Of respondents, 90% indicated they had Internet in their homes. For those who did not have Internet in their home, cost was the most frequently cited reason (Figure 14). Note that these data are displayed in frequencies rather than percentages given the low number of responses.

<sup>1</sup> NCES 2005

Figure 14



Source: CHNA Survey

## Digital Landscape

Digital landscape is a community's access to digital tools and the digital literacy to use them. Key risk influencers include affordability, accessibility and digital literacy. For Warren County, 17% of the population is at elevated risk for digital landscape. This is higher than the State of Illinois average of 9% (SocialScape® powered by SociallyDetermined®, 2022).



### Social Determinants Related to Internet Access

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

- **Access to Internet** tends to be rated higher for younger people, those with higher education and those with higher income. Access to Internet tends to be rated lower for Black people.

## 1.7 Key Takeaways from Chapter 1

- ✓ POPULATION DECREASED OVER THE LAST 5 YEARS.
- ✓ POPULATION OVER AGE 65 IS INCREASING.
- ✓ SINGLE FEMALE HEAD-OF-HOUSE-HOUSEHOLD REPRESENTS 13.1% OF THE POPULATION. THIS DEMOGRAPHIC INCREASES THE LIKELIHOOD OF FAMILIES LIVING IN POVERTY.

## 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

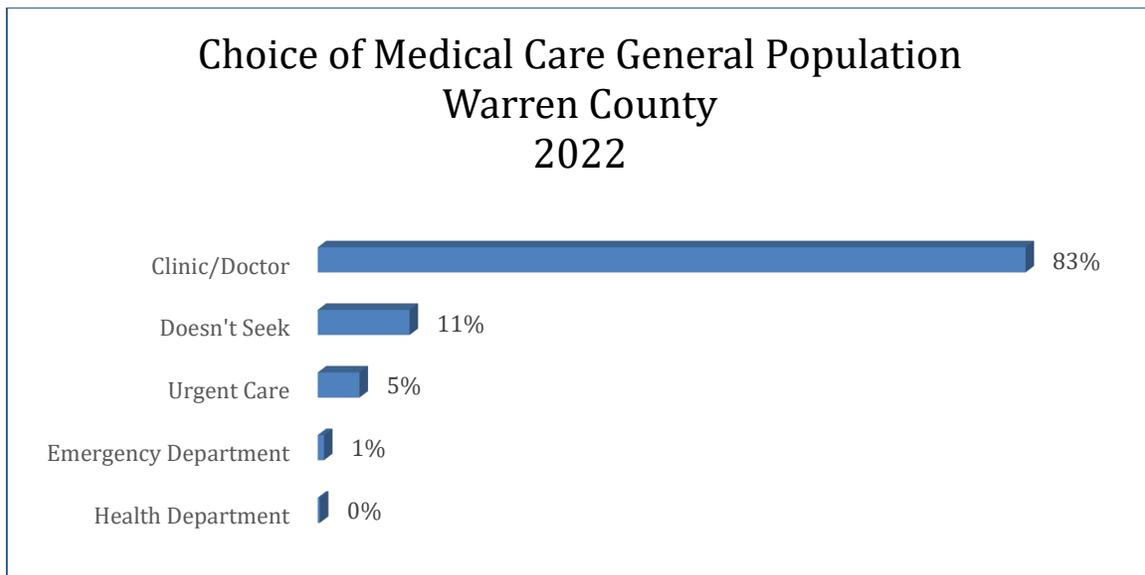
## 2.1 Accessibility

*Importance of the measure:* It is critical for health-care 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 health-care facility used when sick. Six different alternatives were presented, including clinic or doctor's office, emergency department, urgent-care facility, health department, no medical treatment and other. The most common response for source of medical care was clinic/doctor's office, chosen by 83% of survey respondents. This was followed by, not seeking medical attention (11%), urgent care (5%), the emergency department at a hospital (1%), and the health department (0%) (Figure 15).

Figure 15



Source: CHNA Survey

### Comparison to 2019 CHNA

*While most choices for medical care were similar to 2019 results those that do not seek medical care when needed increased 6%.*



## Social Determinants Related to Choice of Medical Care

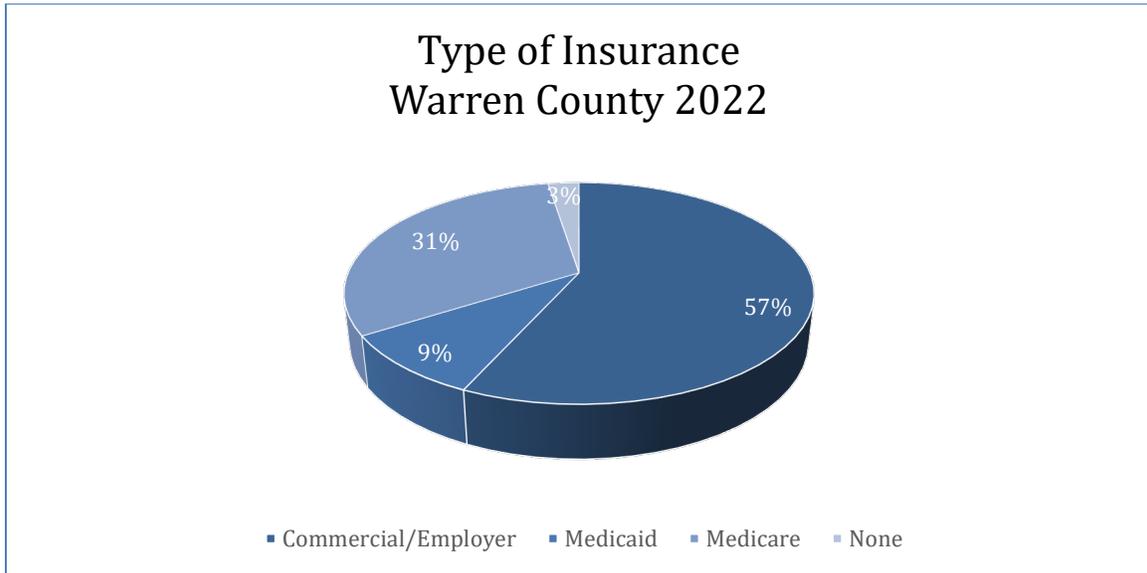
Several factors show significant relationships with an individual's choice of medical care. The following relationships were found using correlational analyses:

- **Clinic/Doctor's Office** tends to be used more often by women and older people. Clinic/doctor's office tends to be used less by Black people.
- **Urgent Care** tends to be used more by younger people.
- **Emergency Department** did not have any significant correlates.
- **Do Not Seek Medical Care** is more common for younger people and Black people.
- **Health Department** did not have any significant correlates.

## Insurance Coverage

According to survey data, 57% of the residents are covered by commercial/employer insurance, followed by Medicare (31%), and Medicaid (9%). Only 3% of respondents indicated they did not have any health insurance (Figure 16).

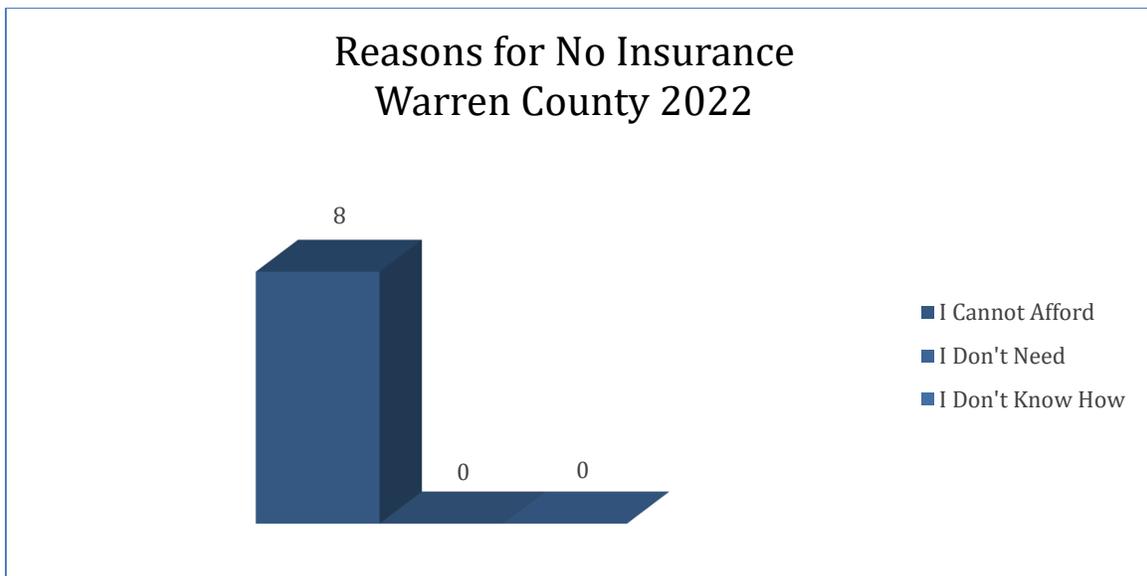
Figure 16



Source: CHNA Survey

Data from the survey show that for 3% individuals who do not have insurance, the most prevalent reason was cost (Figure 17). Note that these data are displayed in frequencies rather than percentages given the low number of responses.

Figure 17



Source: CHNA Survey

## Comparison to 2019 CHNA

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*Compared to survey data from the 2019 CHNA, those using Medicaid decreased by 2% and people with no insurance remained the same.*

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## Social Determinants Related to Type of Insurance

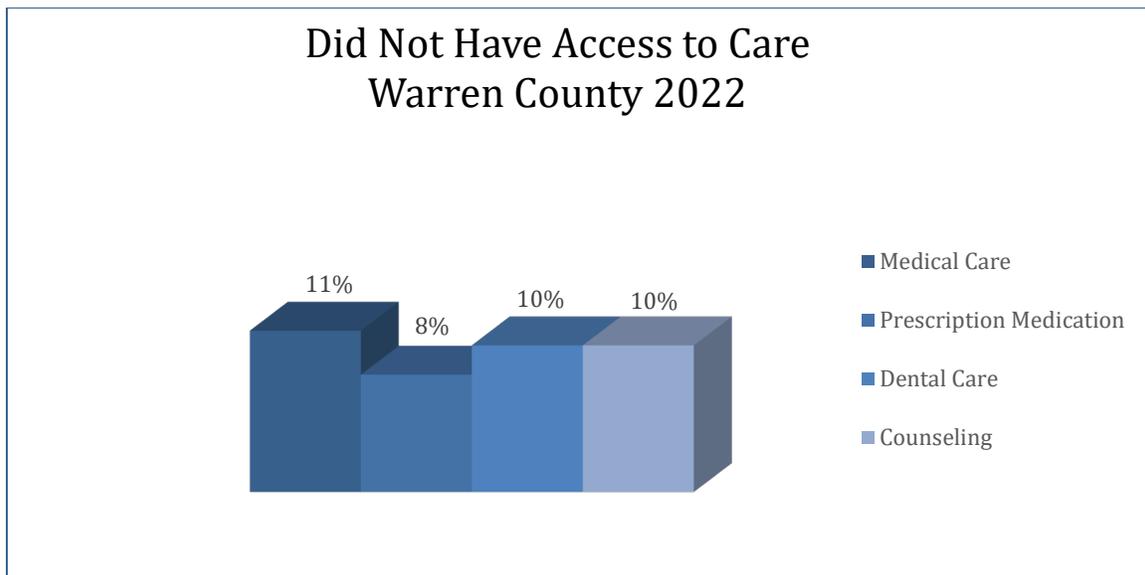
Several characteristics show significant relationships with an individual's type of insurance. The following relationships were found using correlational analyses:

- **Medicare** tends to be used more frequently by older people and those with lower income.
- **Medicaid** tends to be used more frequently by younger people, Black people, those with lower education and those with lower income.
- **Private Insurance** is used more often by younger people, those with higher education and those with higher income.
- **No Insurance** tends to be reported more often by younger people, LatinX people and those with lower education. No insurance tends to be reported less often by White people.

## Access to Care

In the CHNA survey, respondents were asked, "Was there a time when you needed care but were not able to get it?" Access to four types of care were assessed: medical care, prescription medication, dental care and counseling. Survey results show that 11% of the population did not have access to medical care when needed; 8% of the population did not have access to prescription medication when needed; 10% of the population did not have access to dental care when needed; and 10% of the population did not have access to counseling when needed (Figure 18).

Figure 18



Source: CHNA Survey



## Social Determinants Related to Access to Care

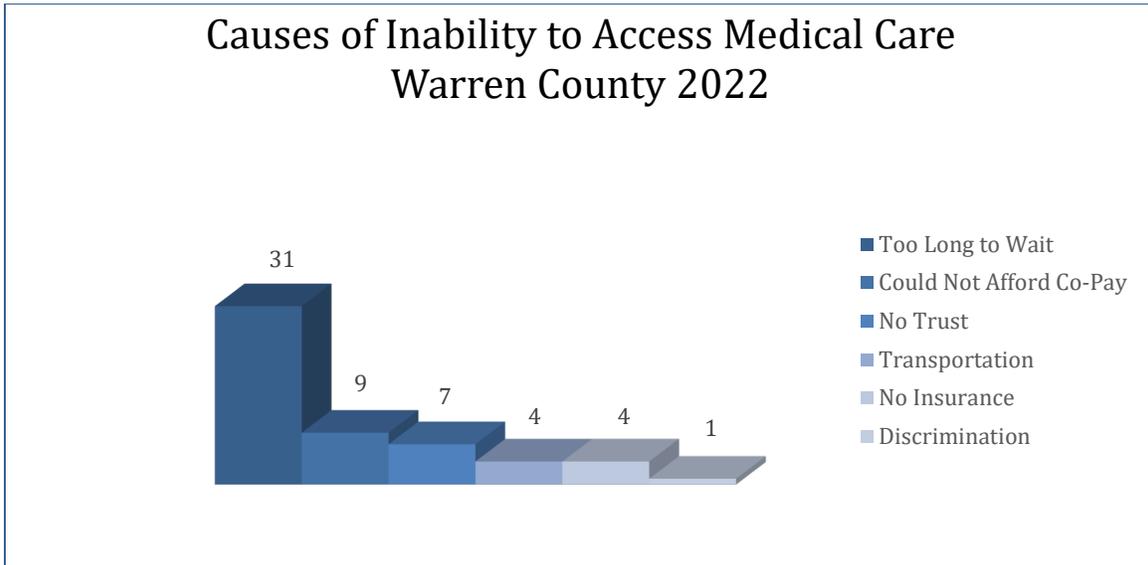
Several characteristics show a significant relationship with an individual's ability to access care when needed. The following relationships were found using correlational analyses:

- **Access to medical care** had no significant correlates.
- **Access to prescription medications** tends to be higher for older people and those with higher income. Access to prescription medications tends to be lower for Black people.
- **Access to dental care** tends to be higher for older people, White people and those with higher income. Access to dental care tends to be lower for Black people.
- **Access to counseling** tends to be higher for older people.

## 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 cause of the inability to gain access to medical care was too long to wait for an appointment (31) (Figure 19). Note that these data are displayed in frequencies rather than percentages given the low number of responses.

Figure 19

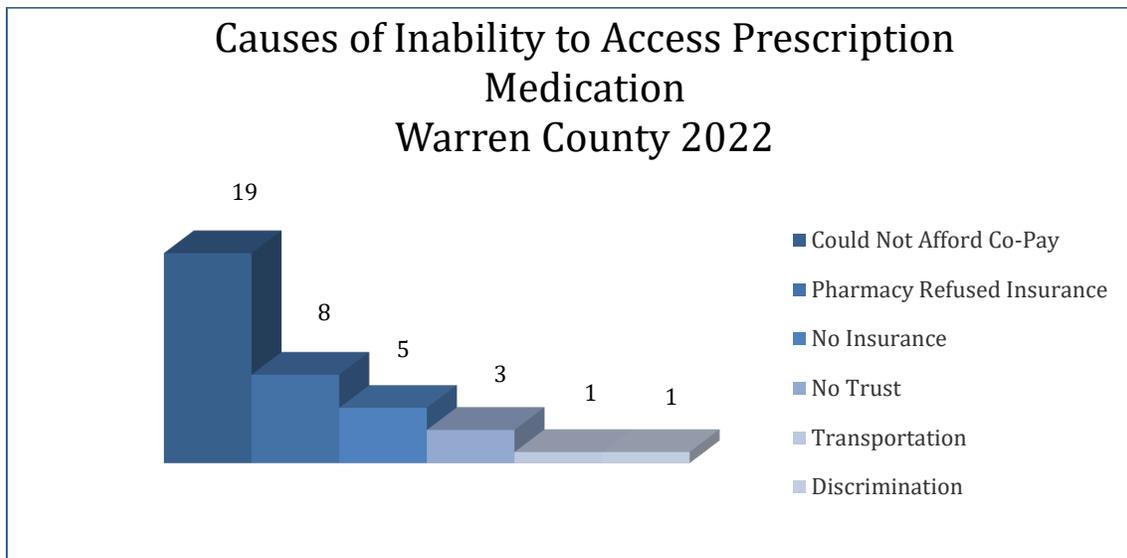


Source: CHNA Survey

## Reasons for No Access – Prescription Medication

Survey respondents who reported they were not able to get prescription medication when needed were asked a follow-up question. The leading causes of the inability to gain access to prescription medicine were the inability to afford copayments or deductibles (19). Note that these data are displayed in frequencies rather than percentages given the low number of responses (Figure 20).

Figure 20

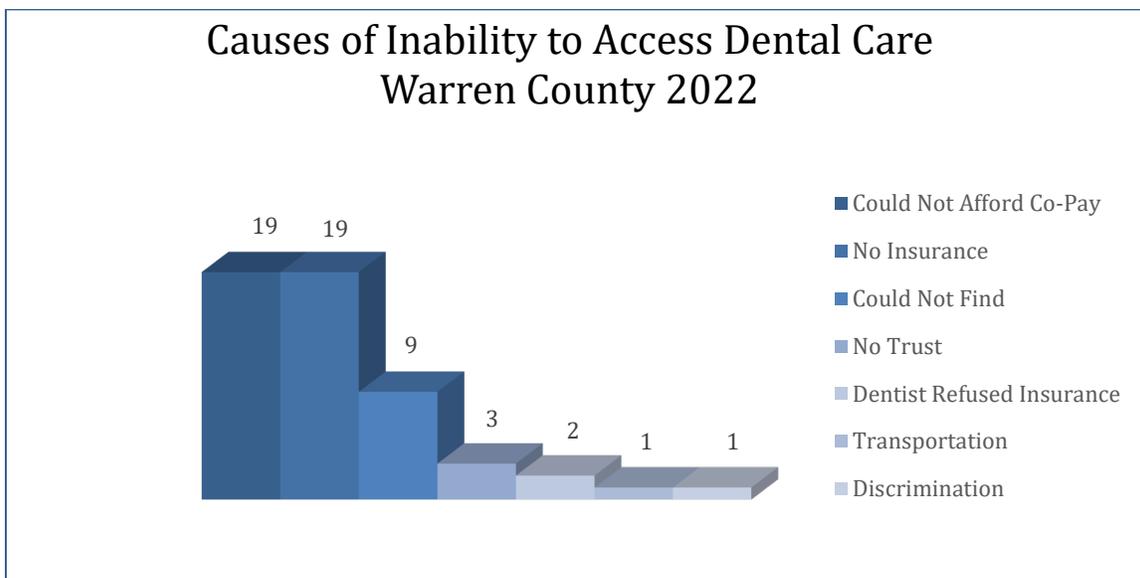


Source: CHNA Survey

## 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 were the inability to afford copayments or deductibles (19) and no insurance (19) (Figure 21). Note that these data are displayed in frequencies rather than percentages given the low number of responses.

Figure 21

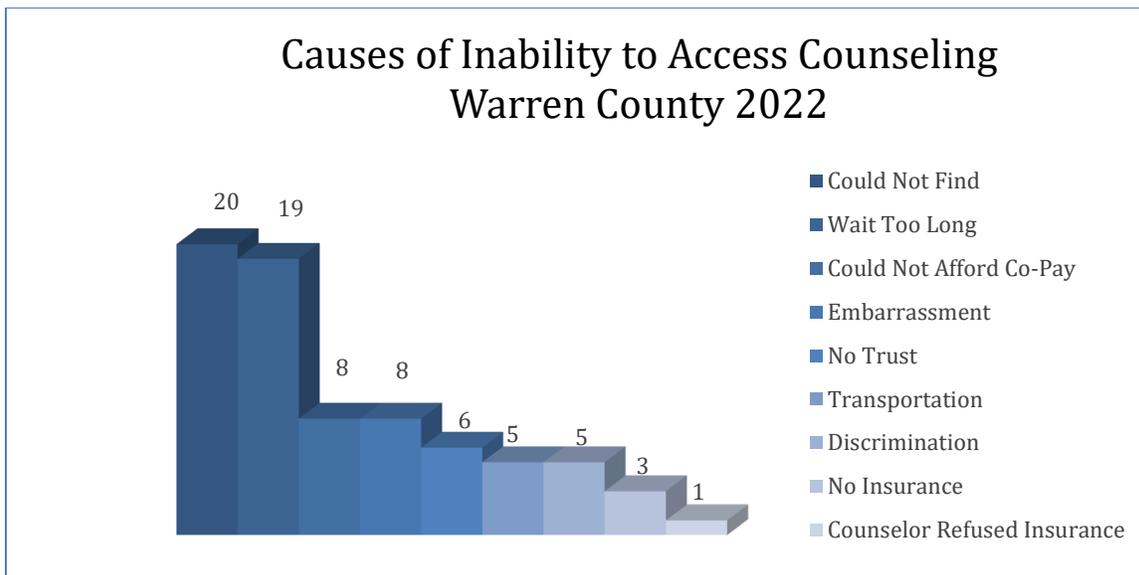


Source: CHNA Survey

## Reasons for No Access – Counseling

Survey respondents who reported they were not able to get counseling when needed were asked a follow-up question. The leading causes of the inability to gain access to counseling were could not find a counselor (20) and wait too long (19) (Figure 22). Note that these data are displayed in frequencies rather than percentages given the low number of responses.

Figure 22



Source: CHNA Survey

### Comparison to 2019 CHNA

*Access to Medical Care – results show an increase of 5% for those that were able to get medical care when needed.*

*Access to Prescription Medication – results show an increase of 5% for those that were able to get prescription medication when needed.*

*Access to Dental Care – results show an increase of 1% in those that were able to get dental care when needed.*

*Access to Counseling – results show a decrease of 1% in those that were able to get counseling when needed.*

## Transportation Network

Transportation network is a measure of the adequacy of the transportation network to facilitate access to care. Key risk influencers include access and proximity to resources. While survey data indicate transportation was not a leading cause of inaccessibility, for Warren County, 23% of the population is at elevated risk for transportation network. This is higher than the State of Illinois average of 6% (SocialScape® powered by SociallyDetermined®, 2022).

## 2.2 Wellness

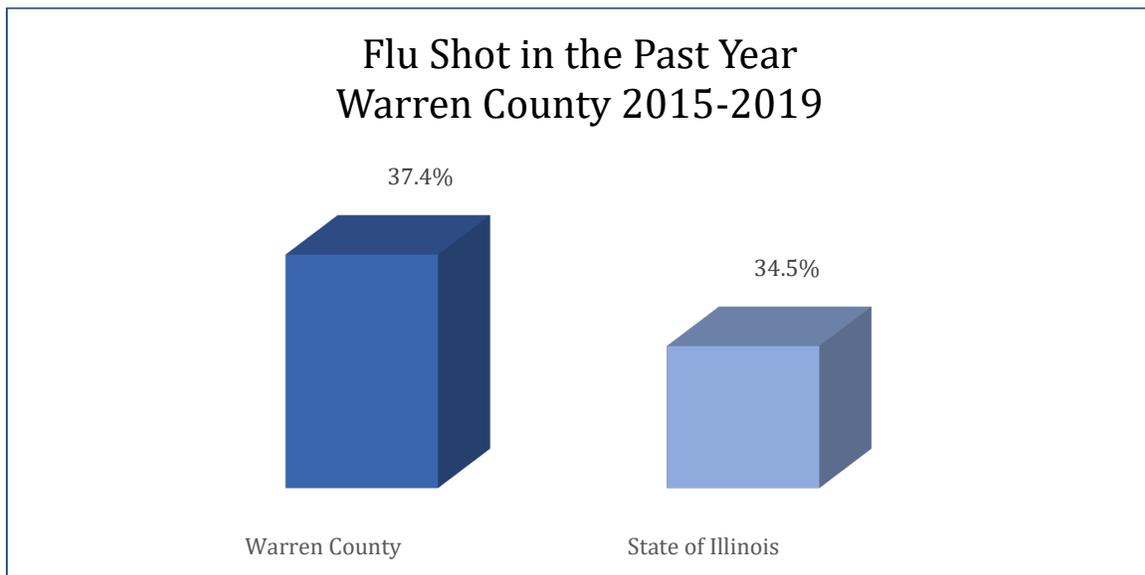
*Importance of the measure:* Preventative health-care measures, including getting a flu shot, engaging in a healthy lifestyle and undertaking screenings for diseases are essential to combating morbidity and

mortality while reducing health-care costs. The overall health of a community is impacted by preventative measures including immunizations and vaccinations.

## Frequency of Flu Shots

Figure 23 shows that the percentage of people who have had a flu shot in the past year is 37.4% for Warren County in 2015-2019, compared to the State of Illinois average (34.5%). During this timeframe, the State of Illinois realized an increase in the number of people who have had flu shots. Note that data have not been updated by the Illinois Department of Public Health.

Figure 23

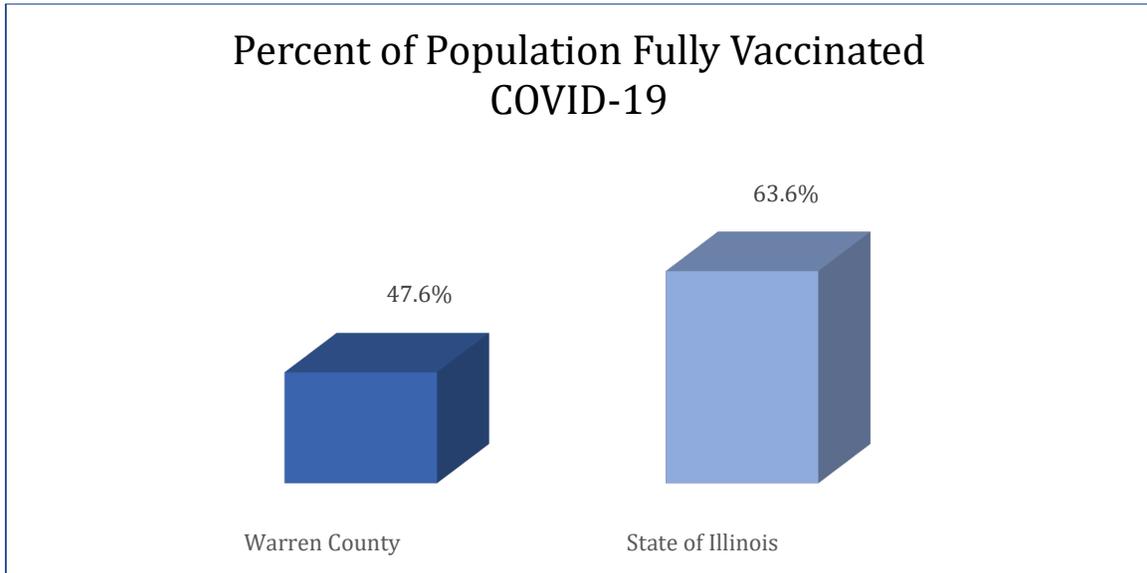


Source: Illinois Behavioral Risk Factor Surveillance System

## COVID-19 Vaccinations

Figure 24 shows that the percentage of people who have been fully vaccinated from the COVID-19 virus. Although Warren County remains below half at 47.6%, while the State of Illinois is at 63.6%. Additionally, given the recency of the COVID-19 virus, no historical comparisons are made at this time.

Figure 24

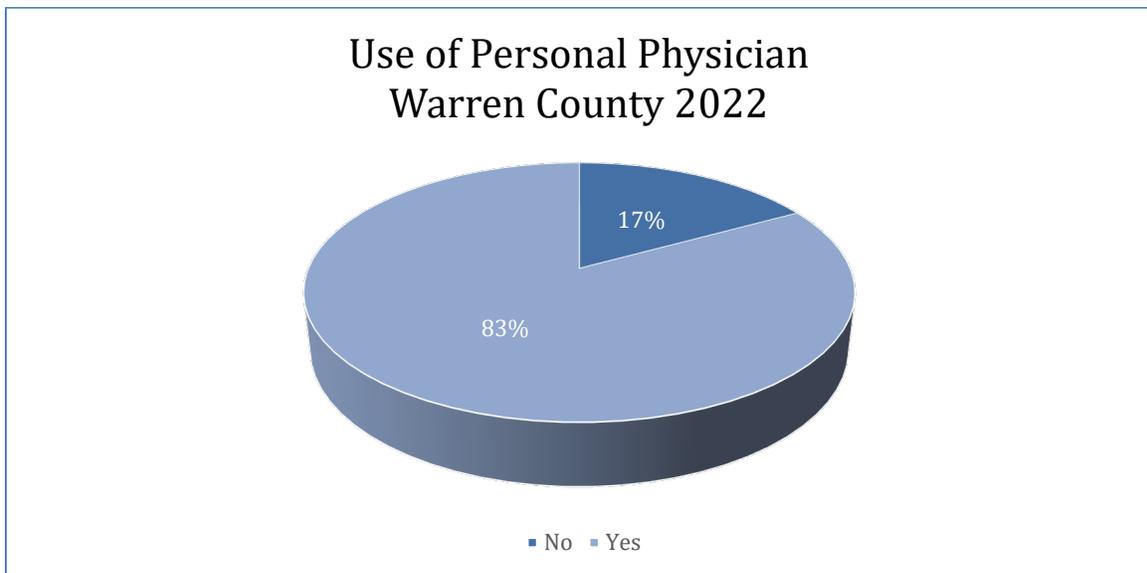


Source: Illinois Department of Public Health (02-27-22)

## Personal Physician

The CHNA survey asked respondents if they had a personal physician. Having a personal physician suggests that individuals are more likely to get wellness check-ups and less likely to use an emergency department as a primary healthcare service. According to survey data, 83% of residents have a personal physician (Figure 25).

Figure 25



Source: CHNA Survey

## Comparison to 2019 CHNA

Results for having a personal physician decreased by 3% compared to the 2019 CHNA.



## Social Determinants Related to Having a Personal Physician

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

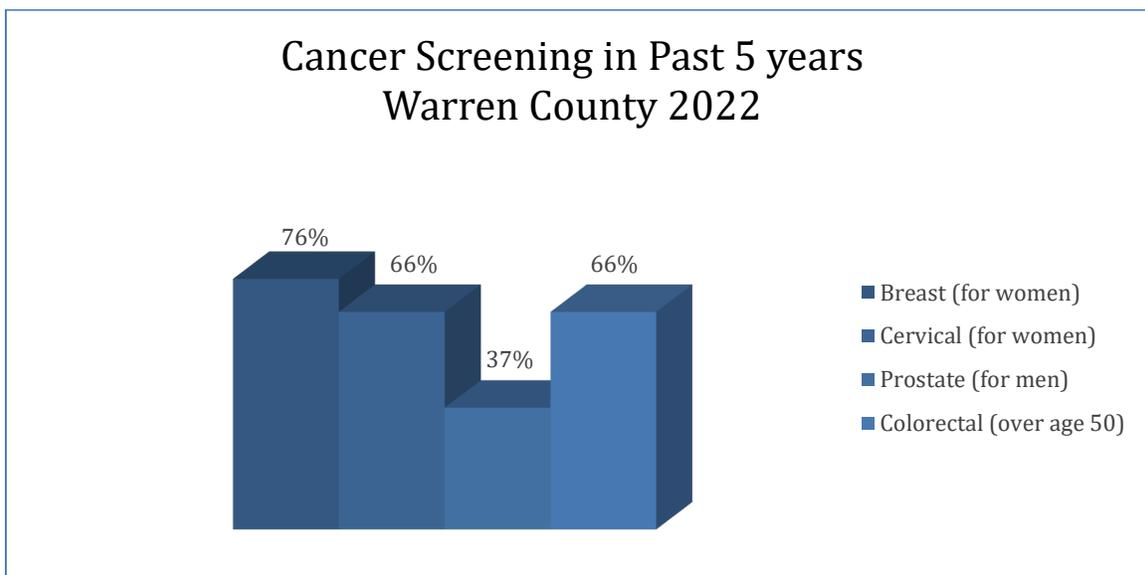
- **Having a personal physician** tends to be more likely for older people, women and White people. Having a personal physician tends to be lower for Black people.

## Cancer Screening

Early detection of cancer may greatly improve the probability of successful treatment. In the case of colorectal cancer, early detection of precancerous polyps can prevent cancer. Specifically, four types of cancer screening were measured: breast, cervical, prostate and colorectal.

Results from the CHNA survey show that 76% of women had a breast screening in the past five years and 66% of women had a cervical screening. For men, 37% had a prostate screening in the past five years. For women and men over the age of 50, 66% had a colorectal screening in the last five years (Figure 26).

Figure 26



Source: CHNA Survey

## Social Determinants Related to Cancer Screenings

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

- **Breast screening** tends to be more likely for women, and those with higher income.
- **Cervical screening** tends to be more likely for younger women.
- **Prostate screening** tend to be more likely for older men.
- **Colorectal screening** tends to be higher for older people, those with higher education and those with higher income.

### *Comparison to 2019 CHNA*

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*Survey results for having an increase for breast screening (7%), and a decrease for prostate screening (17%) and an increase for colorectal screening (6%). This is the first year the CHNA collected data for cervical screening so no comparison was possible.*

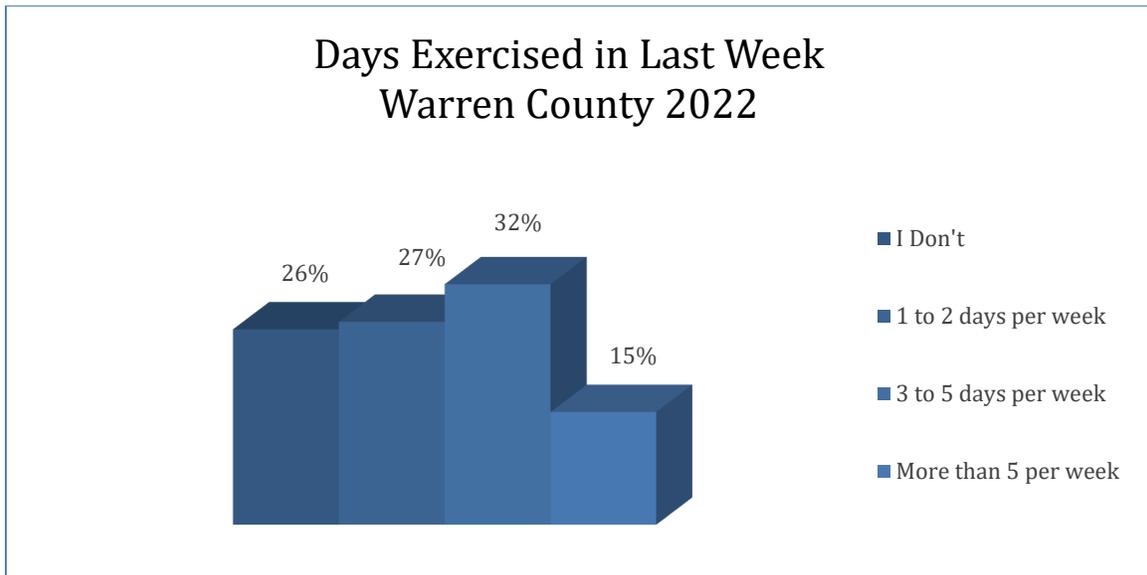
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## Physical Exercise

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

CHNA survey data allow for a more detailed assessment of exercise. Specifically, 26% of respondents indicated that they do not exercise at all, while the majority (59%) of residents exercise 1-5 times per week (Figure 27).

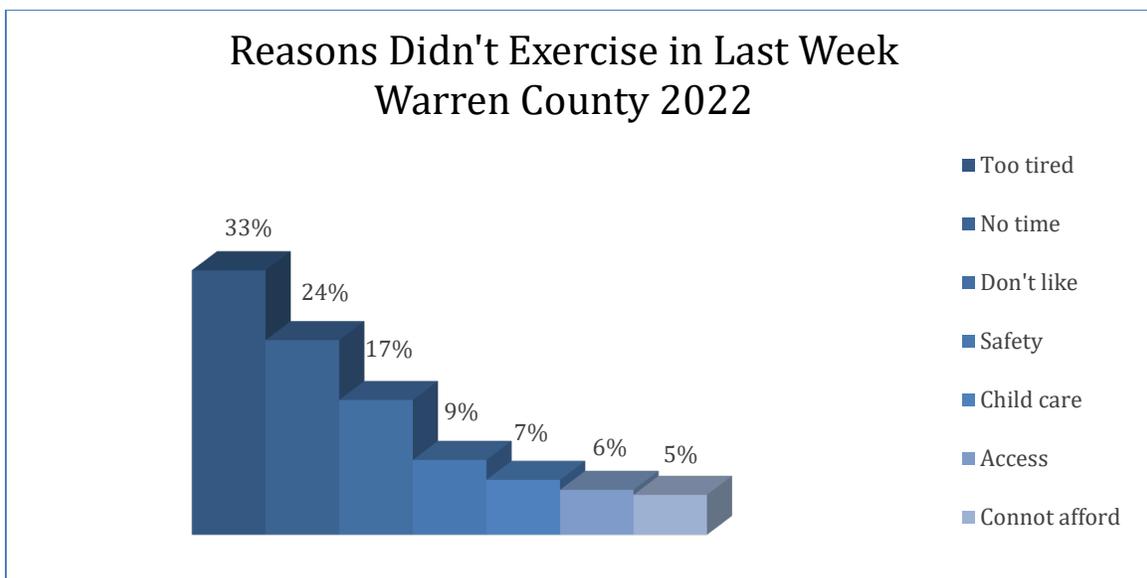
Figure 27



Source: CHNA Survey

To find out why some residents do not exercise at all, a follow up question was asked. The most common reasons for not exercising were too tired (33%), not enough time (24%) and a dislike of exercise (17%) (Figure 28).

Figure 28



Source: CHNA Survey

**Comparison to 2019 CHNA**

*The number of people who do not exercise decreased by 2% compared to 2019.*



## Social Determinants Related to Exercise

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

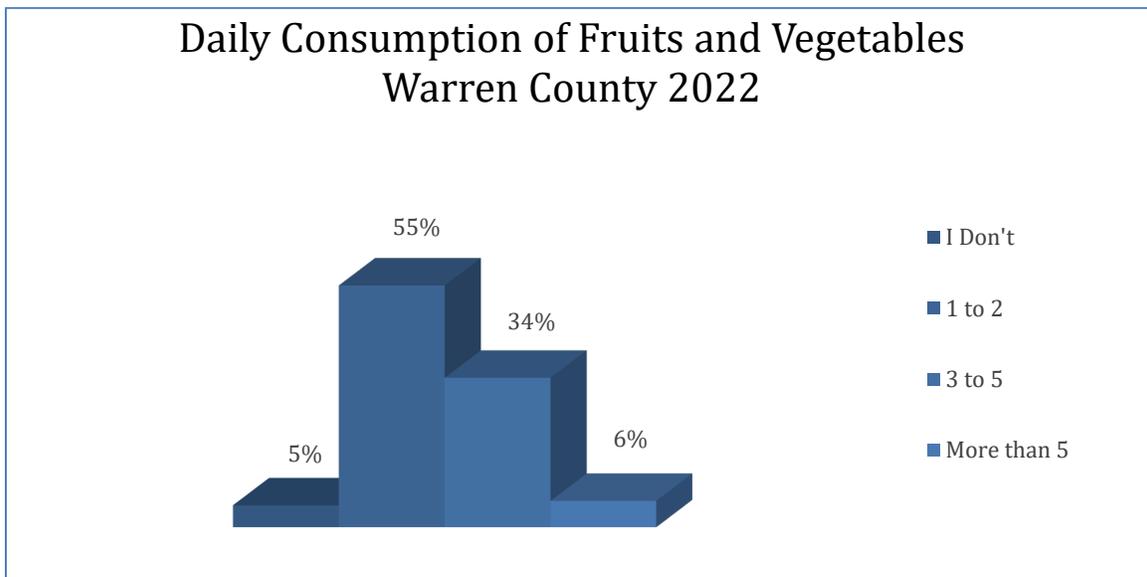
- **Frequency of exercise** tends to be rated higher for those with a higher level of education and those with higher income.

## Healthy Eating

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

Over half (60%) of residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of residents who consume five or more servings per day is only 6% (Figure 29).

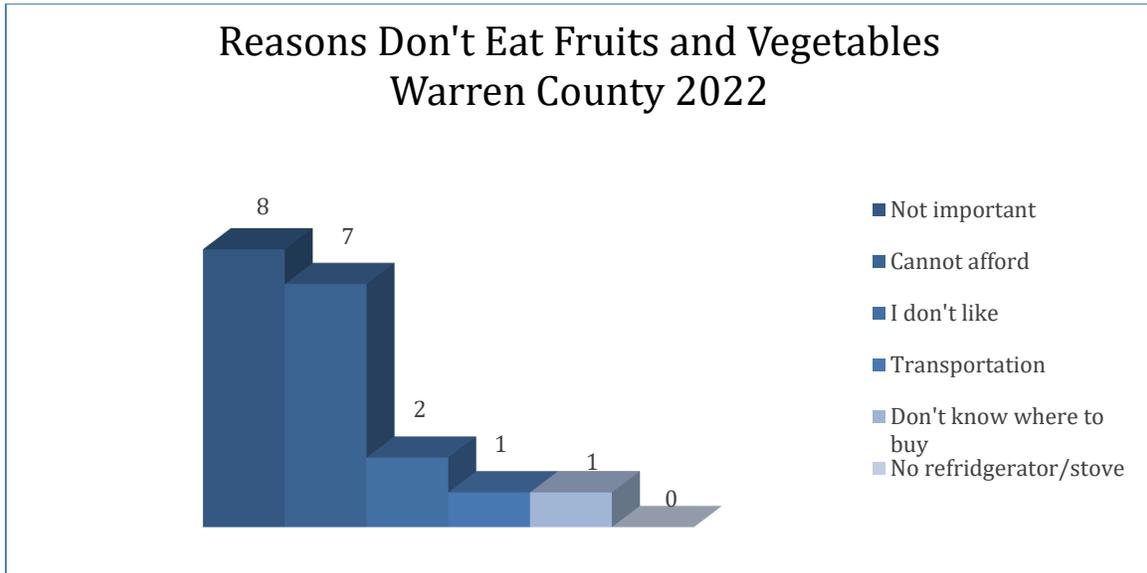
Figure 29



Source: CHNA Survey

Those individuals who indicated they do not eat any fruits or vegetables were asked a follow up question. The most common reasons for failing to eat more fruits and vegetables are that vegetables are not important (8) and cannot afford (7) (Figure 30). Note that these data are displayed in frequencies rather than percentages given the low number of responses.

Figure 30



Source: CHNA Survey

### Comparison to 2019 CHNA

Results were similar to the 2019 CHNA.



## Social Determinants Related to Healthy Eating

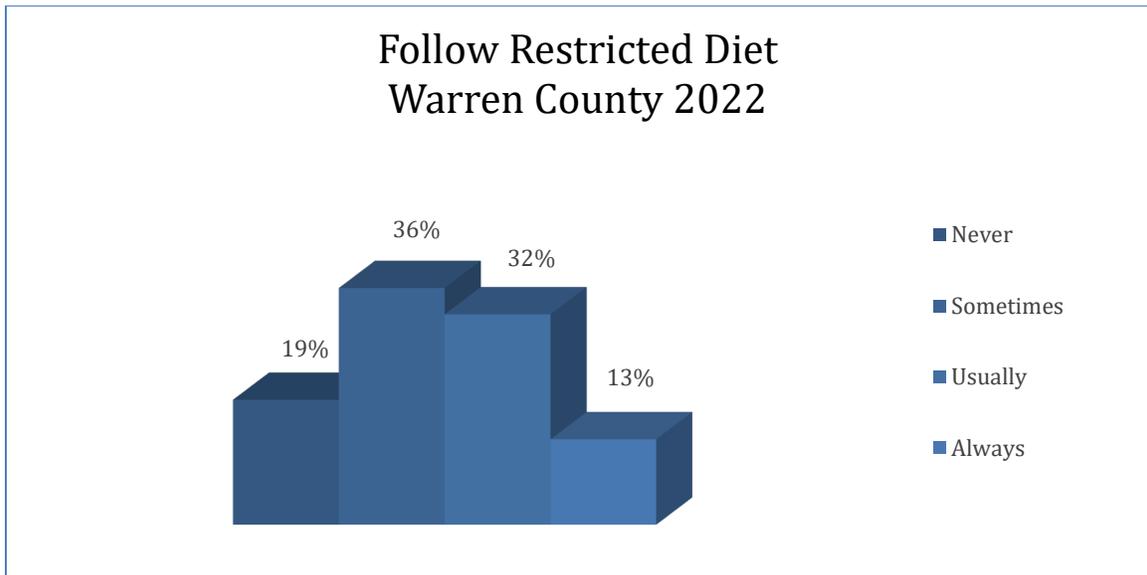
Multiple characteristics show significant relationships with healthy eating. The following relationships were found using correlational analyses:

- **Consumption of fruits and vegetables** tends to be more likely for women, those with a higher level of education and those with higher income.

## Restricted Diet

Respondents were also asked if they followed a restricted diet if recently diagnosed with a morbidity. Of respondents, 45% usually or always follow a restricted diet (Figure 31).

Figure 31



Source: CHNA Survey

## Health Literacy

Health literacy is a measure of factors in the community that impact healthcare access, navigation and adherence. Key risk influencers include culture, demographics and education. For Warren County, 32% of the population is at elevated risk for health literacy. This is lower than the State of Illinois average of 34% (SocialScape® powered by SociallyDetermined®, 2022).

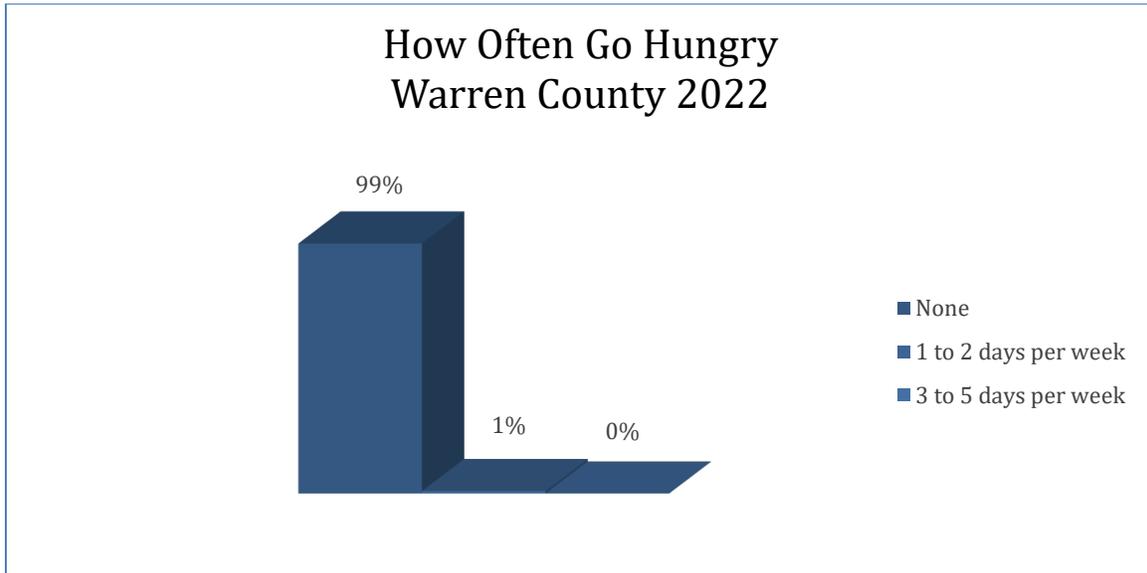
## 2.3 Understanding Food Insecurity

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

### Prevalence of Hunger

Respondents were asked, “How many days a week do you or your family members go hungry?” The vast majority of respondents indicated they do not go hungry, however, 1% indicated they go hungry 1 to 2 days per week (Figure 32).

Figure 32



Source: CHNA Survey

### Comparison to 2019 CHNA

Results indicate there was a 2% decrease in those that go hungry compared to the 2019 CHNA.



## Social Determinants Related to Prevalence of Hunger

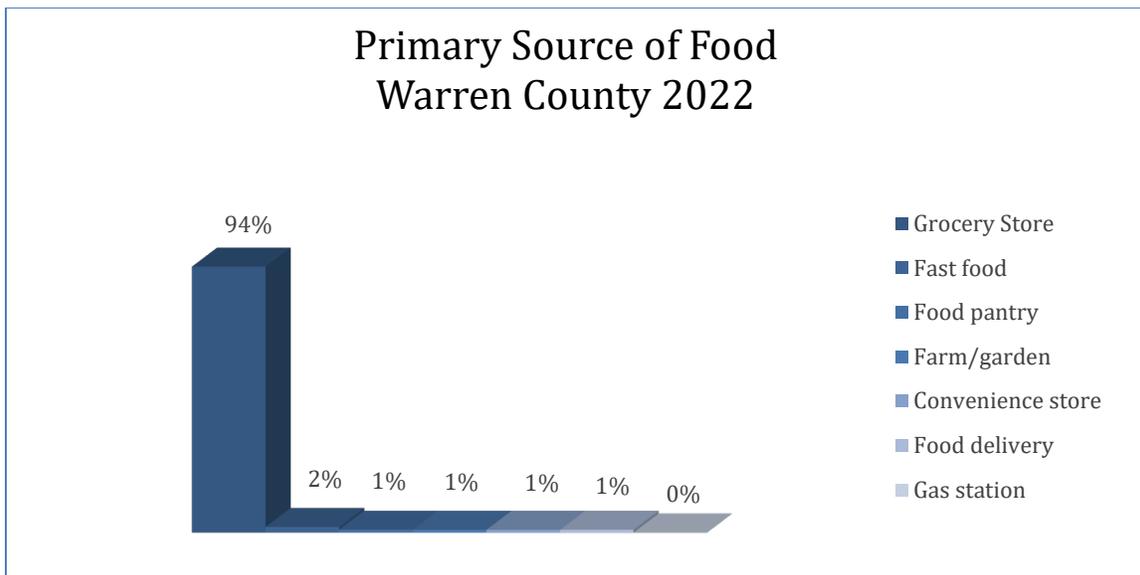
Multiple characteristics show significant relationships with hunger. The following relationships were found using correlational analyses:

- **Prevalence of Hunger** tends to be more likely for those with lower education and those with less income.

## Primary Source of Food

Respondents were asked to identify their primary source of food. It can be seen that the majority (94%) identified a grocery store (Figure 33).

Figure 33



Source: CHNA Survey

## Food Landscape

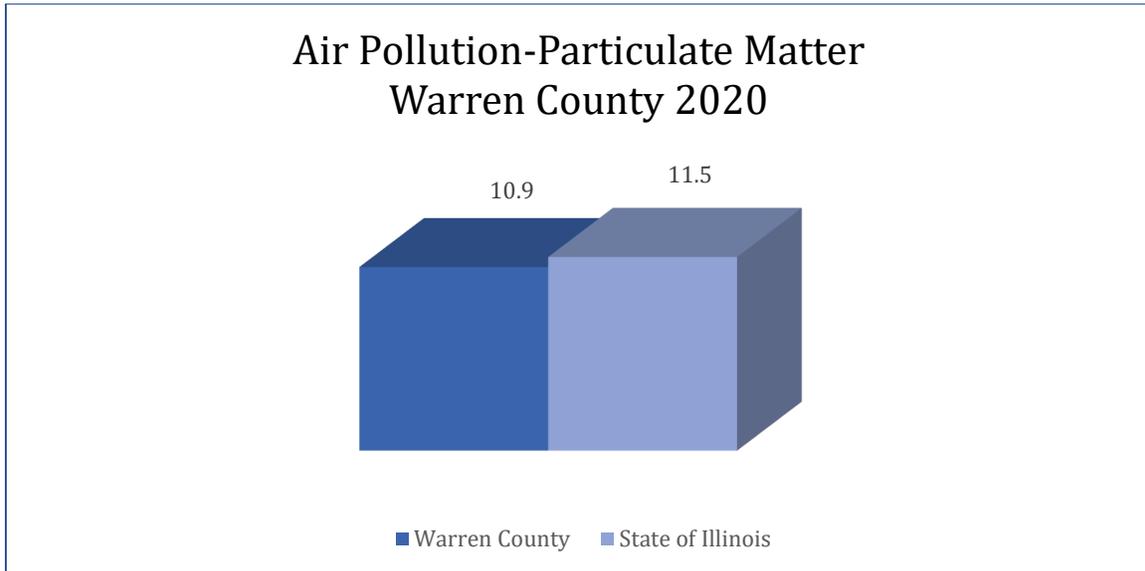
Food landscape is a measure of the conditions that affect the ability of residents to access health, affordable nutrition. Key risk influencers include accessibility, affordability and literacy. For Warren County, 17% of the population is at elevated risk for food landscape. This is lower than the State of Illinois average of 25%. (SocialScape® powered by SociallyDetermined®, 2022).

## 2.4 Physical Environment

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

The relationship between elevated air pollution, particularly fine particulate matter and ozone, and compromised health has been well documented. Negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma and other adverse pulmonary effects. The APPM for Warren County (10.9) is slightly lower than the State average of 11.5 (Figure 34).

Figure 34



Source: County Health Rankings 2021

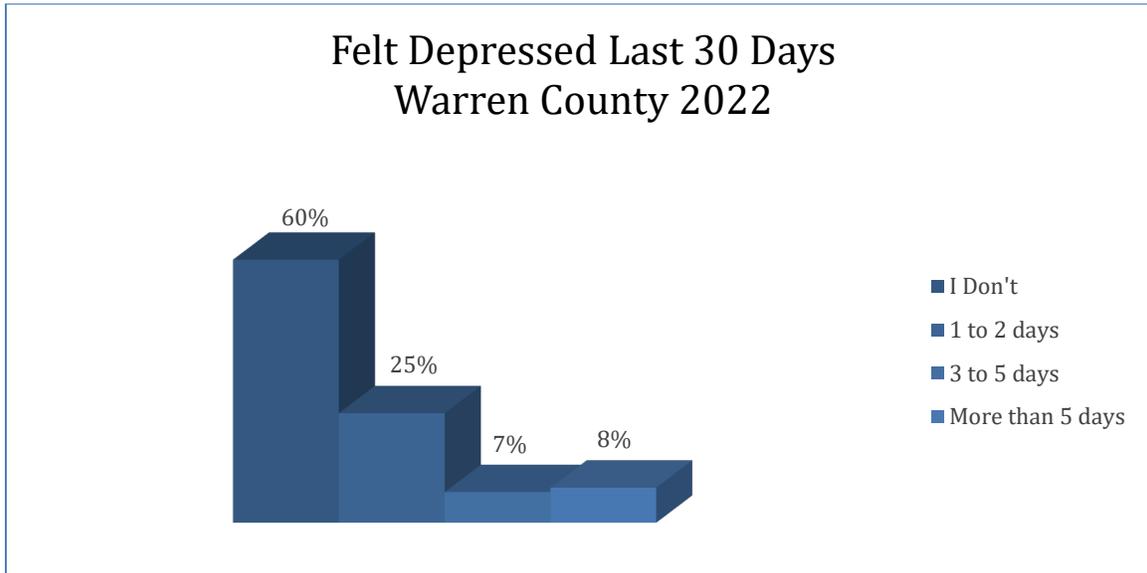
## 2.5 Health Status

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

### Mental Health

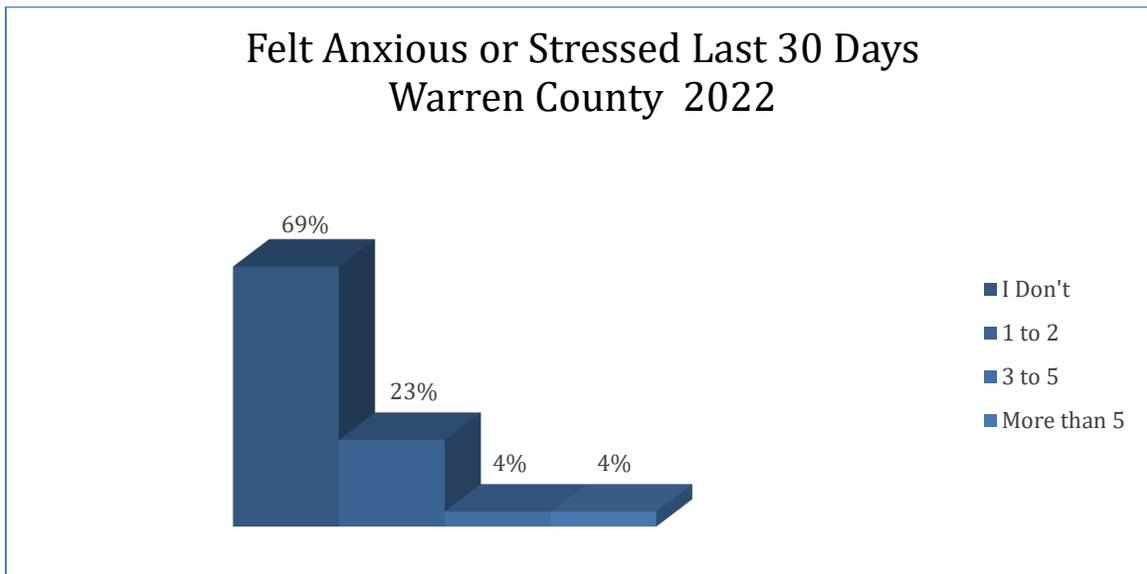
The survey asked respondents to indicate specific issues, such as depression and stress/anxiety. Of respondents, 60% indicated they did not feel depressed in the last 30 days (Figure 35) and 69% indicated they did not feel anxious or stressed (Figure 36).

Figure 35



Source: CHNA Survey

Figure 36



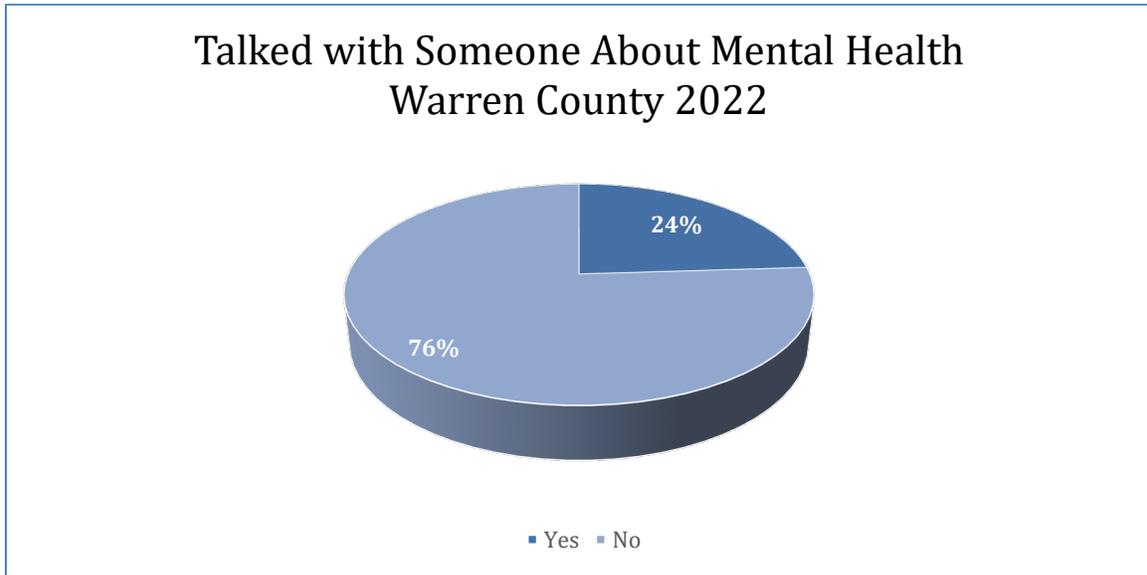
Source: CHNA Survey

### Comparison to 2019 CHNA

*Results are similar to the 2019 CHNA. Note most other OSF communities experienced an increase in both categories.*

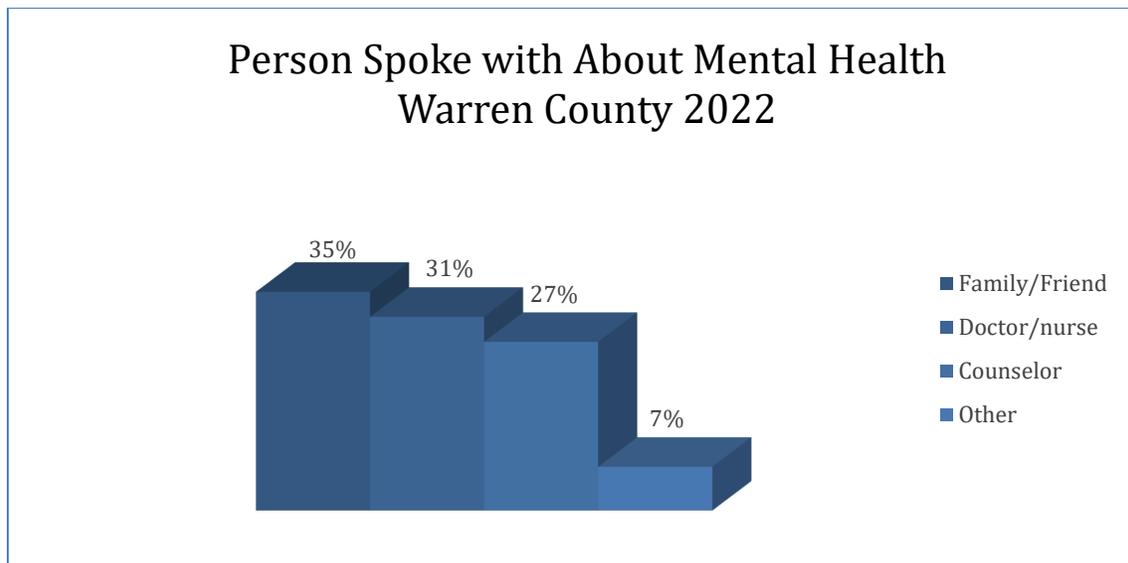
Respondents were also asked if they spoke with anyone about their mental health in the past year. Of respondents, 24% indicated that they spoke to someone (Figure 37), the most common response was a Family/Friend (35%) (Figure 38).

Figure 37



Source: CHNA Survey

Figure 38



Source: CHNA Survey

## Social Determinants Related to Behavioral Health

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

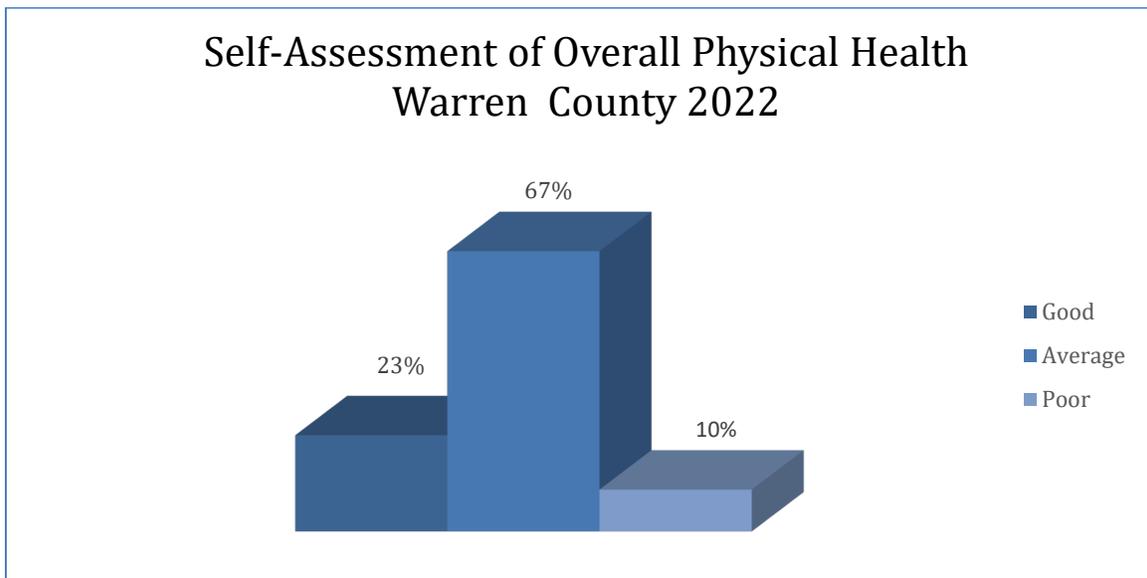
- **Depression** tends to be rated higher for younger people and those with lower income.

➤ **Stress and anxiety** tends to be rated higher for younger people and those with lower income.

## Self-Perceptions of Overall Health

In regard to self-assessment of overall physical health, 10% of respondents reported having poor overall physical health (Figure 39).

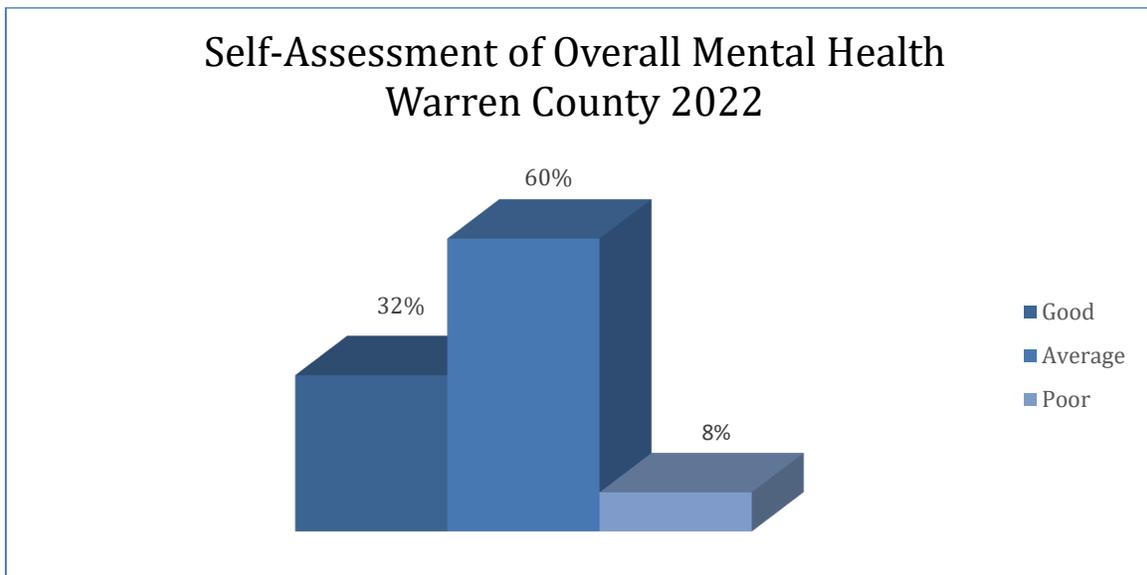
Figure 39



Source: CHNA Survey

In regard to self-assessment of overall mental health, 8% of respondents stated they have poor overall mental health (Figure 40).

Figure 40



Source: CHNA Survey

## Comparison to 2019 CHNA

*With regard to physical health, there was a decrease (2%) for people who see themselves in poor health. With regard to mental health, results were the same as 2019.*



## Social Determinants Related to Self-Perceptions of Health

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

- **Perceptions of physical health** tend to be higher for those with higher income.
- **Perceptions of mental health** tend to be higher for older people and those with higher income.

## 2.6 Key Takeaways from Chapter 2

- ✓ INCREASED RATE OF PEOPLE WHO HAVE ACCESS TO MEDICAL CARE.
- ✓ COVID-19 VACCINATION RATE.
- ✓ THERE WAS A DECREASE IN THE NUMBER OF MEN THAT HAD A PROSTATE SCREENING.
- ✓ THE MAJORITY OF PEOPLE EXERCISE LESS THAN 2 TIMES PER WEEK AND CONSUME 2 OR FEWER SERVINGS OF FRUITS/VEGETABLES PER DAY.
- ✓ ALMOST HALF OF RESPONDENTS EXPERIENCED DEPRESSION AND/OR STRESS IN THE LAST 30 DAYS.
- ✓ ALMOST A THIRD OF THE POPULATION IS AT ELEVATED RISK FOR HEALTH LITERACY.

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

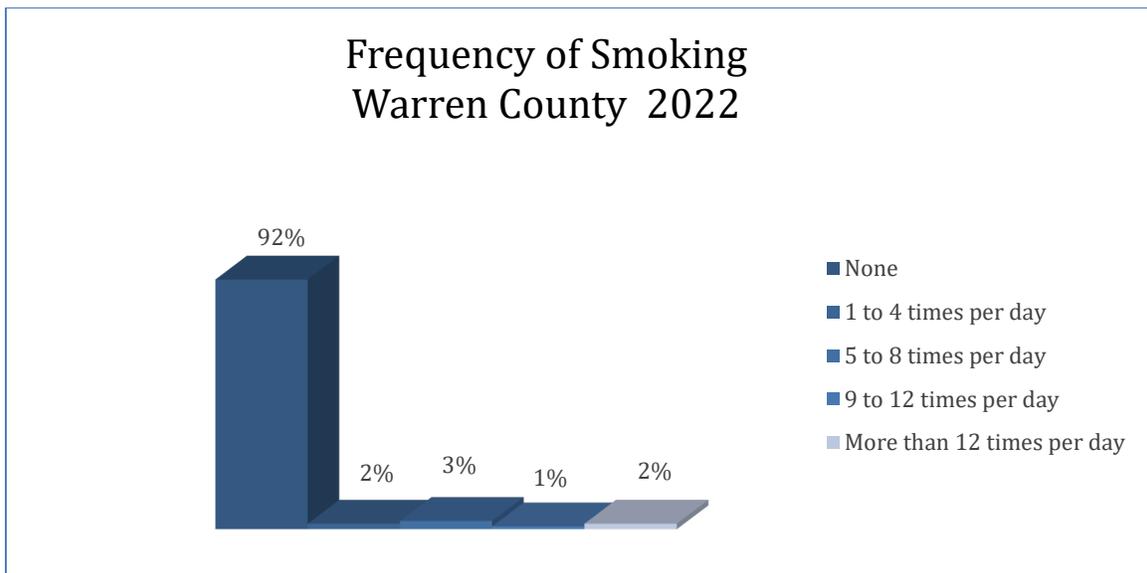
## CHAPTER 3: SYMPTOMS AND PREDICTORS

### 3.1 Tobacco Use

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

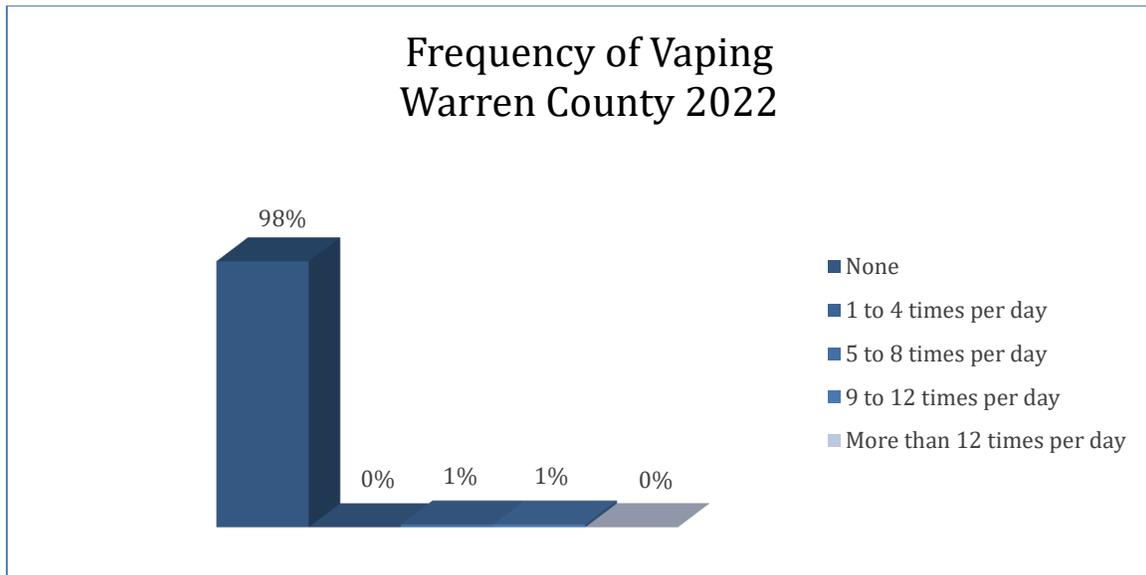
CHNA survey data show 92% of respondents do not smoke (Figure 41) and 98% of respondents do not vape (Figure 42).

Figure 41



Source: CHNA Survey

Figure 42



Source: CHNA Survey

### Comparison to 2019 CHNA

*Results show a 2% decrease for respondents who smoke.*



## Social Determinants Related to Smoking or Vaping

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

- **Smoking** tends to be rated higher by those with less education.
- **Vaping** tends to be rated higher by younger people.

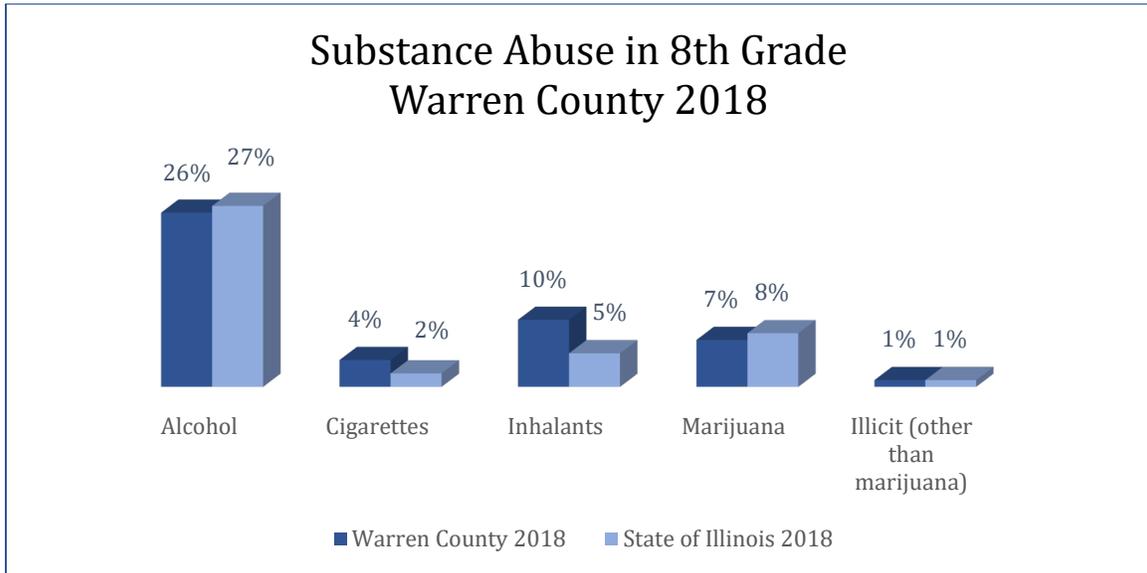
## 3.2 Drug and Alcohol Abuse

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

### Youth Substance Abuse

Data from the 2020 Illinois Youth Survey measures illegal substance use (alcohol, tobacco, and other drugs – mainly marijuana) among adolescents. Warren County data reported for 2020, State of Illinois reporting 2018 data. Among 8th graders in Warren County, all categories of substance abuse are at or higher than the State of Illinois averages except for alcohol and marijuana (Figure 43).

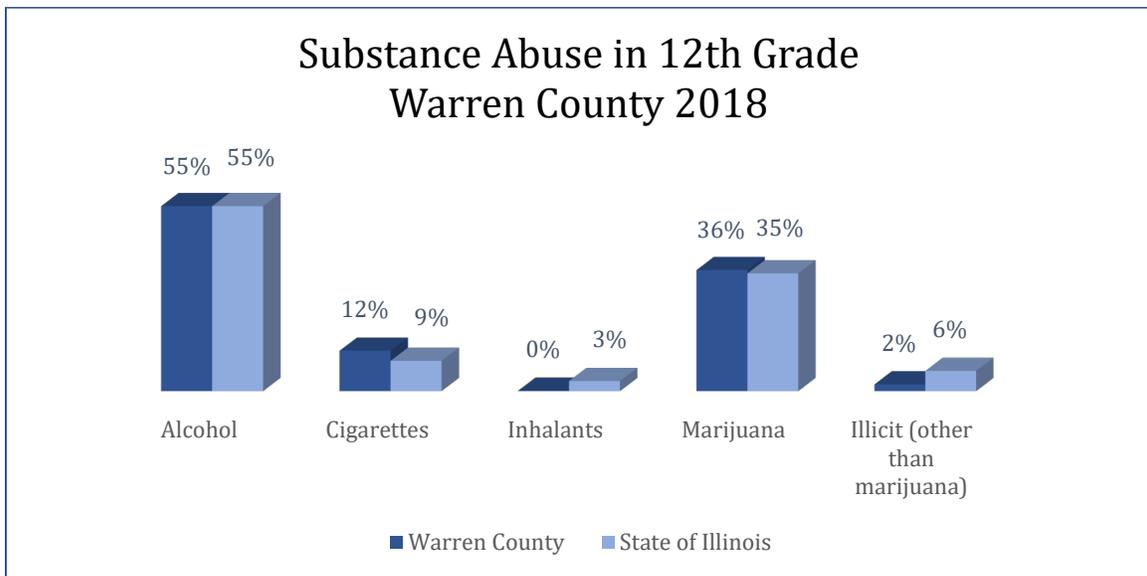
Figure 43



Source: University of Illinois Center for Prevention Research and Development

Among 12<sup>th</sup> graders, Warren County is at or above State of Illinois averages in all categories except inhalants and illicit drugs (Figure 44).

Figure 44



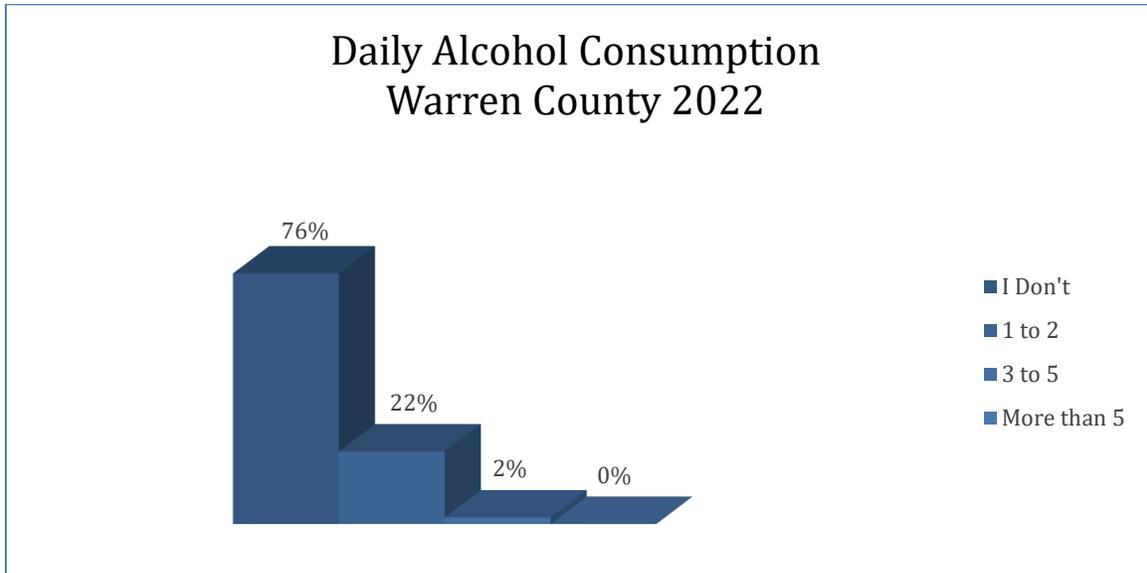
Source: University of Illinois Center for Prevention Research and Development

## Adult Substance Use

The CHNA survey asked respondents to indicate usage of several substances. Of respondents, 76% indicated they did not consume alcohol on a typical day, 88% indicated they do not take prescription medication improperly (e.g., opioid abuse) on a typical day, 97% indicated they do not use marijuana on a typical day and 99% indicated they do not use illegal substances on a typical day. Note this is the first

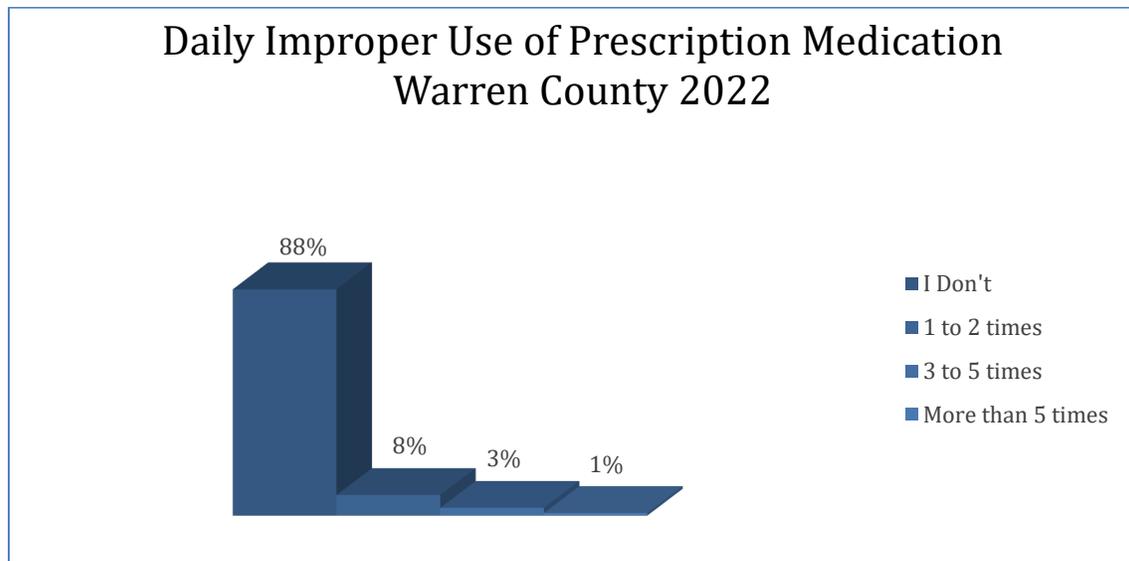
year that the CHNA has measured separated categories of substance use, so there is no comparison to the 2019 CHNA.

Figure 45



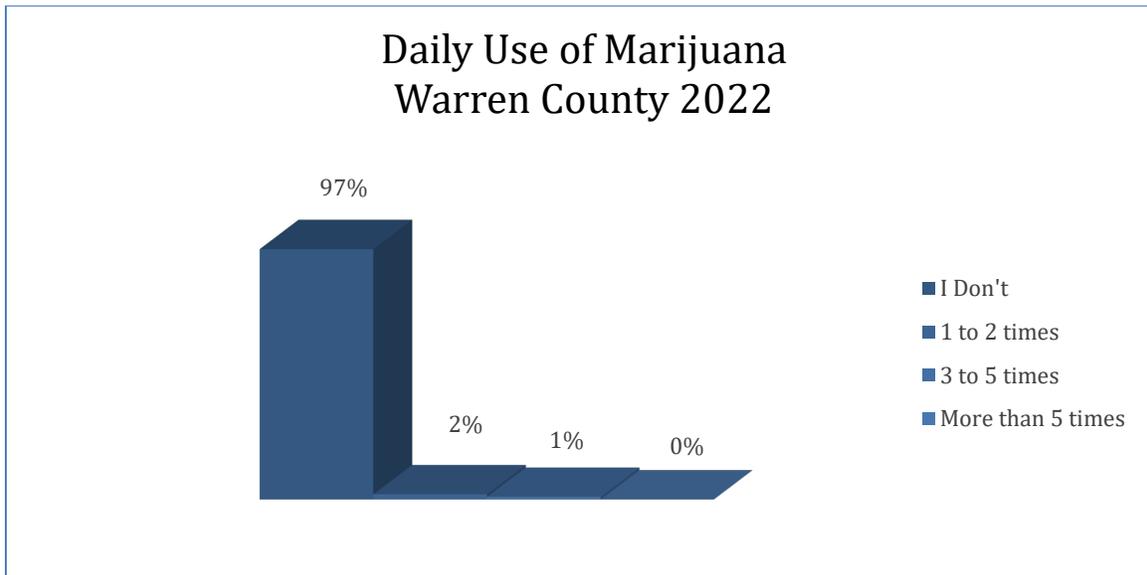
Source: CHNA Survey

Figure 46



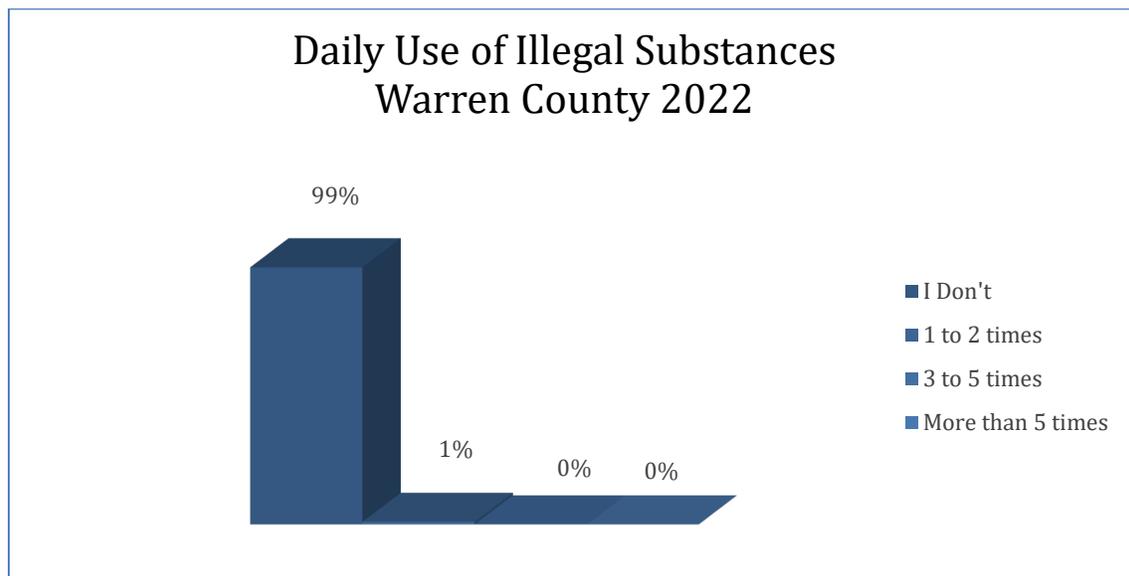
Source: CHNA Survey

Figure 47



Source: CHNA Survey

Figure 48



Source: CHNA Survey



## Social Determinants Related to Substance Use

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

- **Alcohol consumption** tends to be rated higher by men, those with higher education and those with higher income.

- **Misuse of prescription medication** tends to be rated higher by older people, those with lower income and those in an unstable (e.g., homeless) housing environment.
- **Marijuana use** tends to be rated higher by younger people, those with lower education and those with lower income.
- **Use of illegal substances** tends to be rated lower by White people.

### 3.3 Overweight and Obesity

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

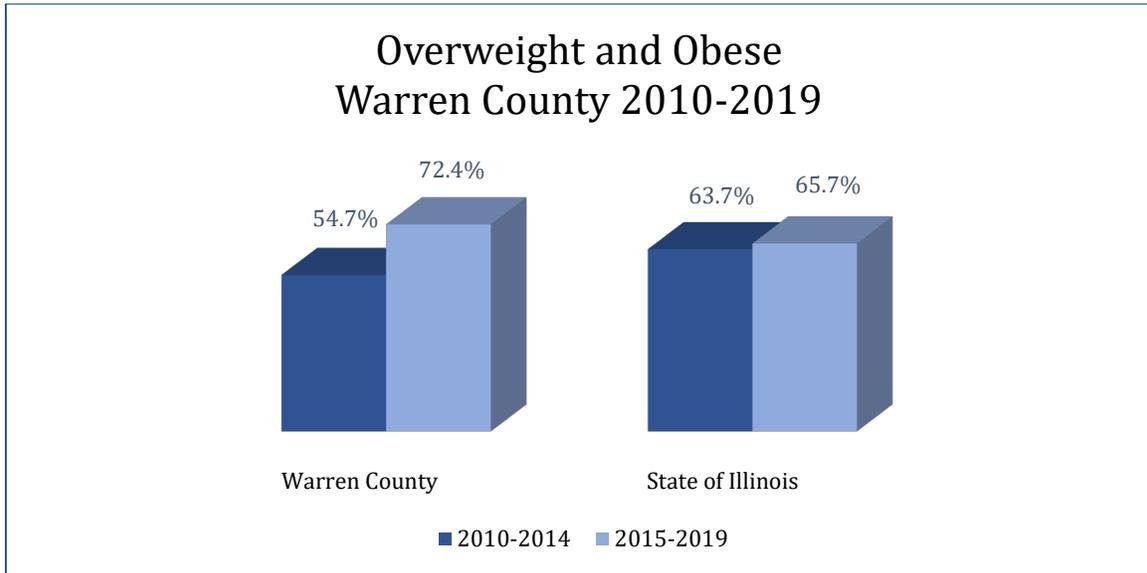
With children, research has linked obesity to numerous chronic diseases including Type II diabetes, hypertension, high blood pressure, and asthma. Adverse physical health side effects of obesity include orthopedic problems due to weakened joints and lower bone density. Detrimental mental health side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

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

In Warren County, the number of people diagnosed with obesity and being overweight has increased from 2010-2014 to 2015-2019. Note specifically that the percentage of obese and overweight people has increased from 54.7% to 72.4%. Overweight and obesity rates in Illinois have increased from 2014 (63.7%) to 2019 (65.7%). Note that data have not been updated by the Illinois Department of Public Health.

Additionally, note in the 2019 CHNA survey, respondents indicated that being overweight was their most prevalently diagnosed health condition.

Figure 49

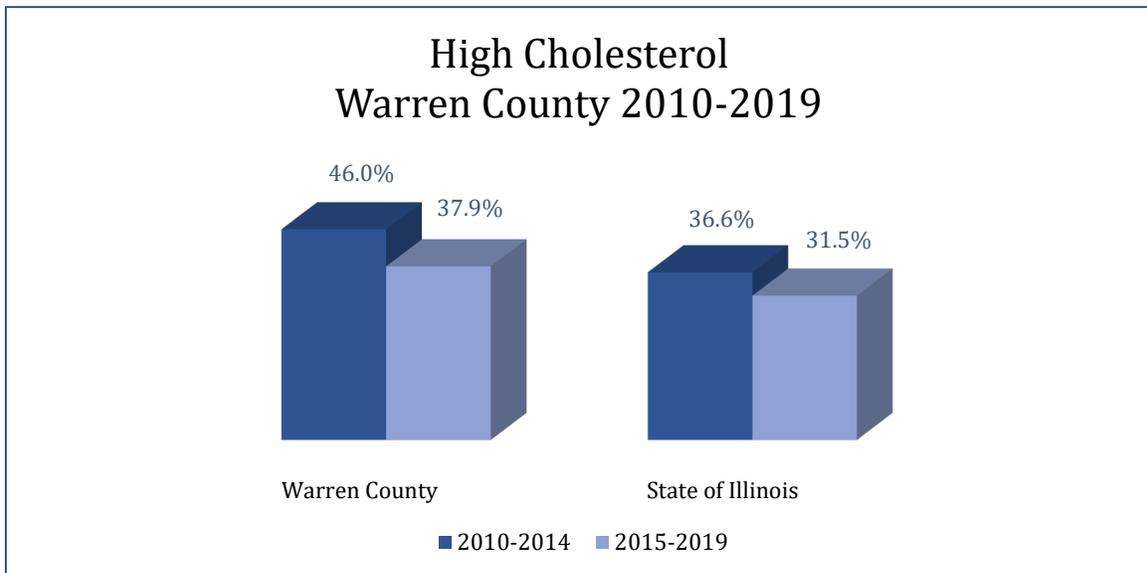


Source: Illinois Behavioral Risk Factor Surveillance System

### 3.4 Predictors of Heart Disease

Residents in Warren County report a higher than State average prevalence of high cholesterol. The percentage of residents who report they have high cholesterol is higher in Warren County (37.9%) than the State of Illinois average of 31.5%. Note that data have not been updated past 2019 by the Illinois Department of Public Health (Figure 50).

Figure 50

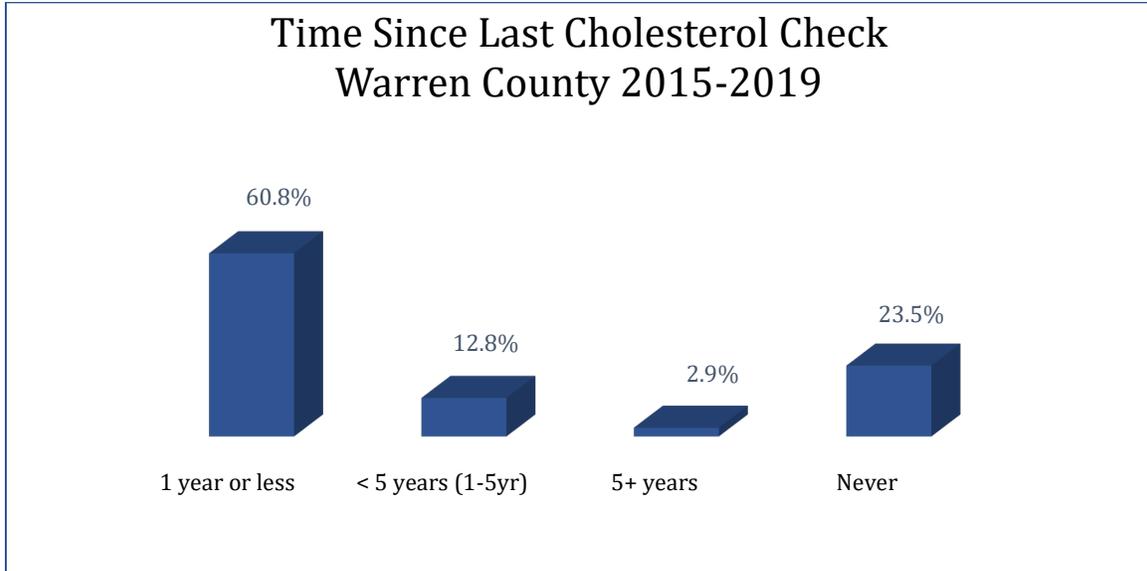


Source: Illinois Behavioral Risk Factor Surveillance System

Most (60.8%) residents of Warren County report having their cholesterol checked recently, whereas 23.5% report never having their cholesterol checked (Figure 51). In 2015-2019, data are only available

on residents who have had cholesterol checked between 1-2 years ago (12.8%) and over 5 years ago (2.9%). Note that data have not been updated by the Illinois Department of Public Health.

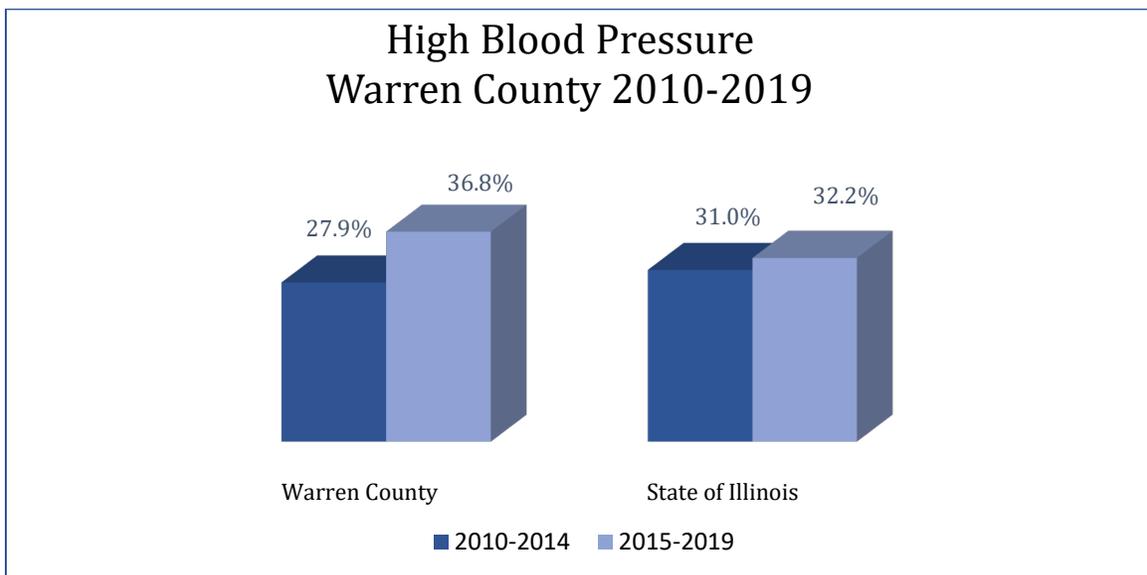
Figure 51



Source: Illinois Behavioral Risk Factor Surveillance System

With regard to high blood pressure, Warren County has a higher percentage of residents with high blood pressure than residents in the State of Illinois as a whole. The percentage of Warren County residents reporting they have high blood pressure from 2015-2019 increased to 36.8% which is higher than the State average of 32.2% (Figure 52). Note that data have not been updated by the Illinois Department of Public Health.

Figure 52



Source: Source: Illinois Behavioral Risk Factor Surveillance System

## 3.5 Key Takeaways from Chapter 3

- ✓ SUBSTANCE USE AMONG 8<sup>TH</sup> GRADERS AND 12<sup>TH</sup> GRADERS FOR MOST CATEGORIES IS HIGHER THAN STATE AVERAGES.
- ✓ THE PERCENTAGE OF PEOPLE WHO ARE OVERWEIGHT AND OBESE HAS INCREASED SIGNIFICANTLY IN WARREN COUNTY.
- ✓ 12% OF RESPONDENTS INDICATED MISUSE OF PRESCRIPTION MEDICATION (OPIOID ABUSE).

**CHAPTER 4 OUTLINE**

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

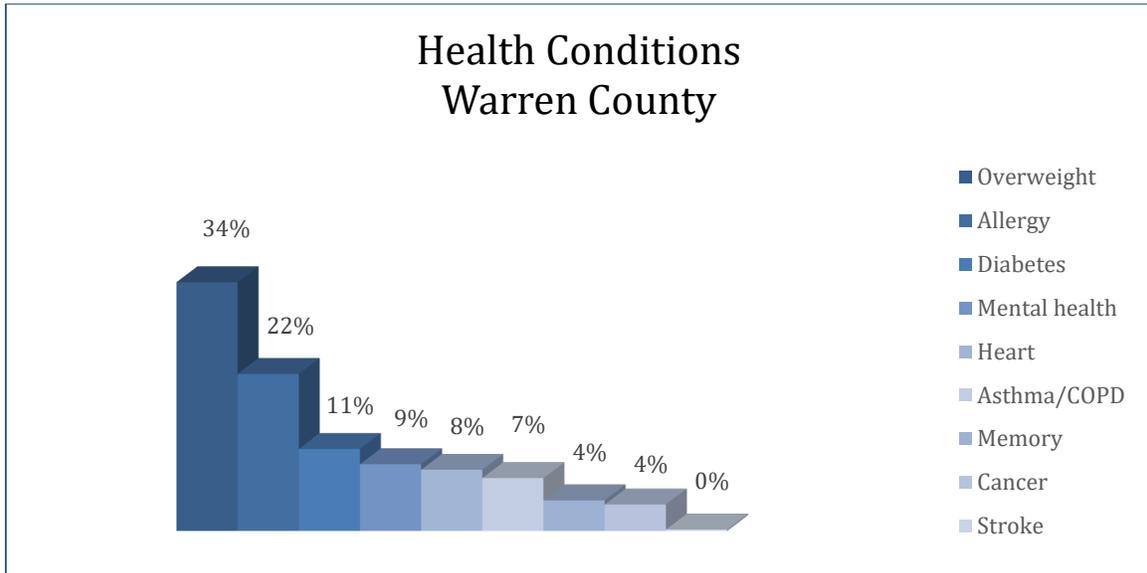
## **CHAPTER 4: MORBIDITY AND MORTALITY**

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

### **4.1 Self-Identified Health Conditions**

Survey respondents were asked to self-identify any health conditions. Note that being overweight (34%) was significantly higher than any other health conditions. This percentage is significantly lower than secondary sources. Specifically, BRFSS data indicate that roughly two-thirds of the population is overweight or obese (Figure 53).

Figure 53



Source: CHNA Survey

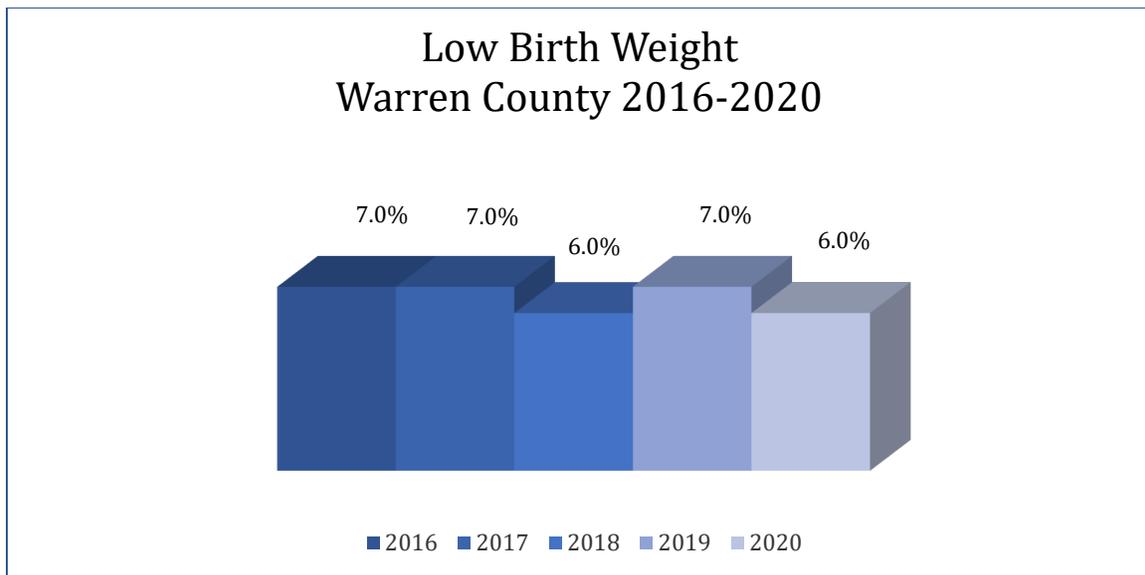
## 4.2 Healthy Babies

*Importance of the measure:* Regular prenatal care is a vital aspect in producing healthy babies and children. Screening and treatment for medical conditions as well as identification and interventions for behavioral risk factors associated with poor birth outcomes are important aspects of healthy babies. Research suggests that women who receive adequate prenatal care are more likely to have better birth outcomes, such as full term and normal weight babies.

### Low Birth Weight Rates

Low birth weight rate is defined as the percentage of infants born below 2,500 grams or 5.5 pounds. Very low birth weight rate is defined as the percentage of infants born below 1,500 grams or 3.3 pounds. In contrast, the average newborn weighs about 7 pounds. The percentage of babies born with low birth weight in Warren County fluctuated between 6% and 7%, ending with 6% in 2020 (Figure 54).

Figure 54



Source: County Health Rankings

## 4.3 Cardiovascular Disease

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

### Coronary Atherosclerosis

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

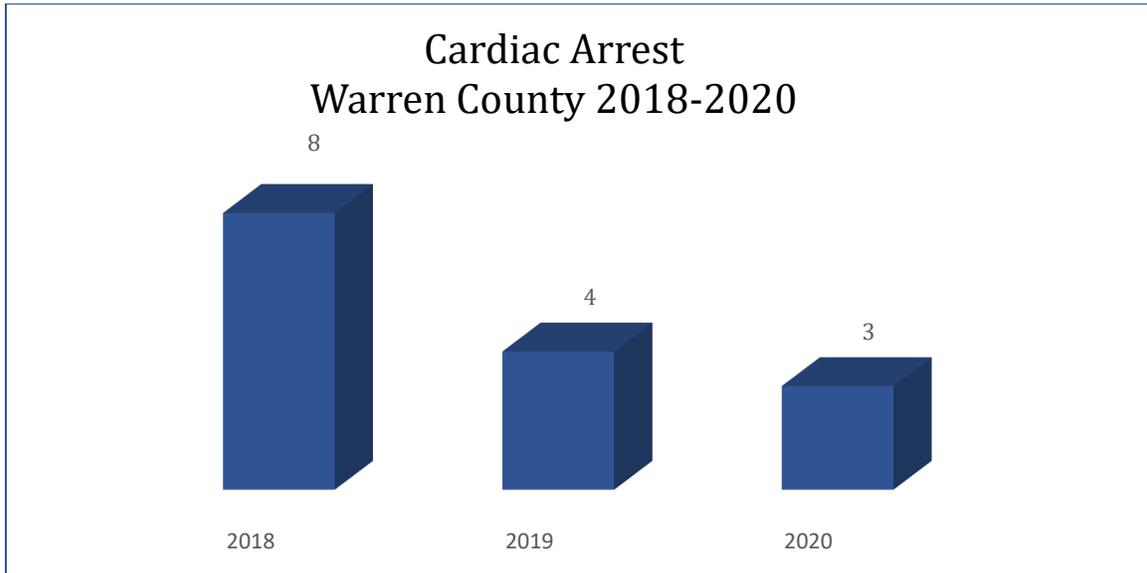
Coronary artery disease is a leading cause of death for Americans. Most of these deaths are from heart attacks caused by sudden blood clots in the heart's arteries.

The number of cases of coronary atherosclerosis complication at Warren County area hospitals has been low, and 1 case was reported in 2019. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

### Cardiac Arrest

Cases of dysrhythmia and cardiac arrest at Warren County area hospitals decreased from 8 in 2018 to 3 in 2020 (Figure 55). Note that hospital-level data only show hospital admissions.

Figure 55

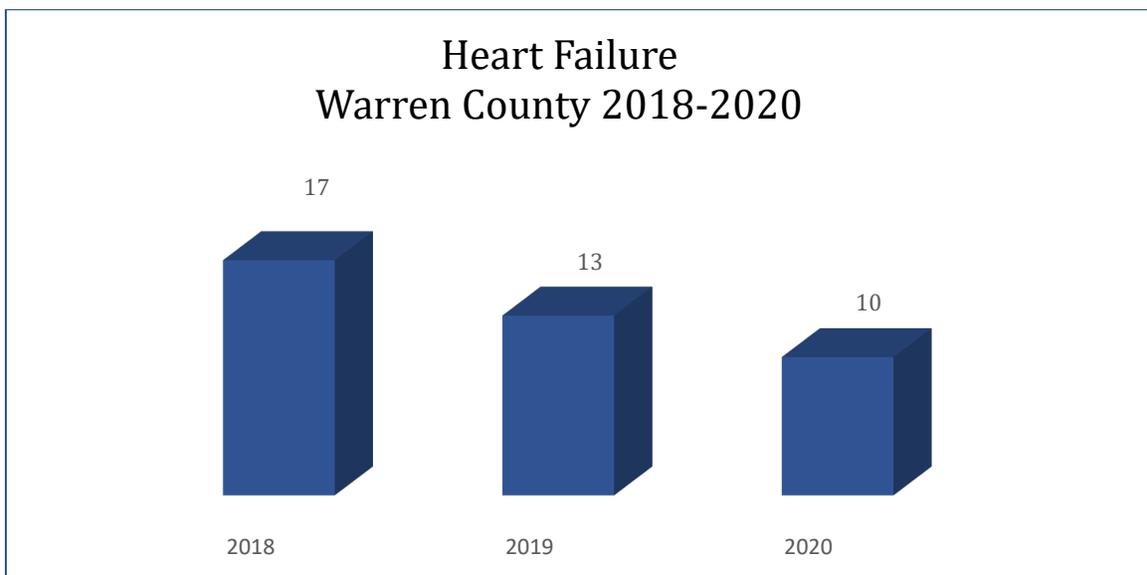


Source: COMPdata Informatics 2021

## Heart Failure

The number of treated cases of heart failure in Warren County decreased in 2020. In 2019, 13 cases were reported and then in 2020 there were 10 cases reported (Figure 56). Note that hospital-level data only show hospital admissions.

Figure 56

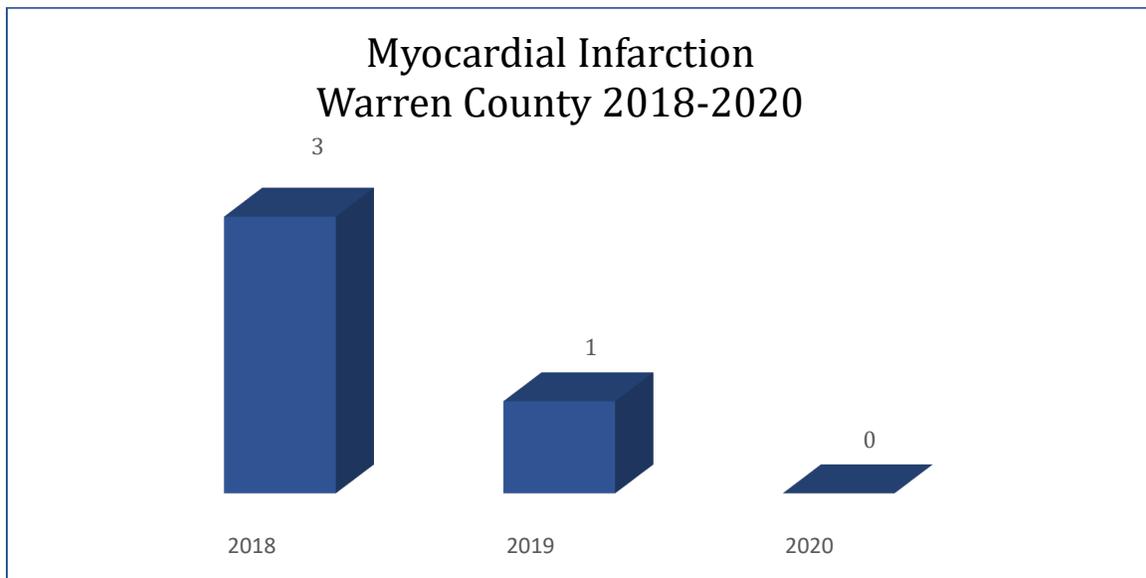


Source: COMPdata Informatics 2021

## Myocardial Infarction

The number of treated cases of myocardial infarction at area hospitals in Warren County decreased from 3 in 2018 to 0 in 2020. Note that hospital-level data only show hospital admissions.

Figure 57



Source: COMPdata Informatics 2021

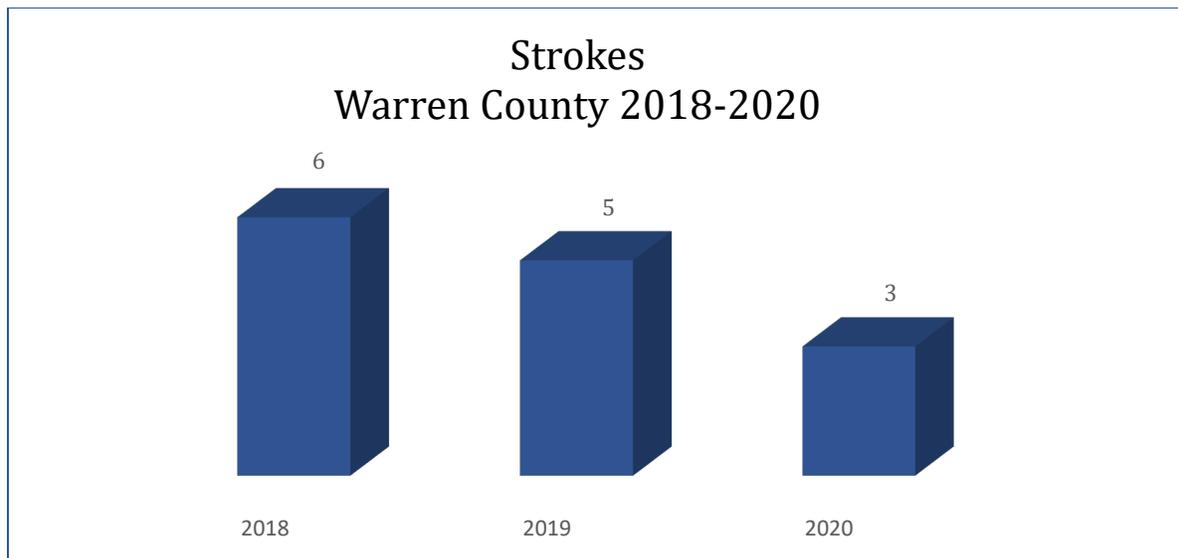
## Arterial Embolism

There were no treated cases of arterial embolism at Warren County area hospitals between 2018 and 2020. Note that hospital-level data only show hospital admissions.

## Strokes

The number of treated cases of stroke at Warren County area hospitals decreased between 2018 (6) and 2020 (3) (Figure 58). Note that hospital-level data only show hospital admissions and do not reflect outpatient treatments and procedures.

Figure 58



Source: COMPdata Informatics 2021

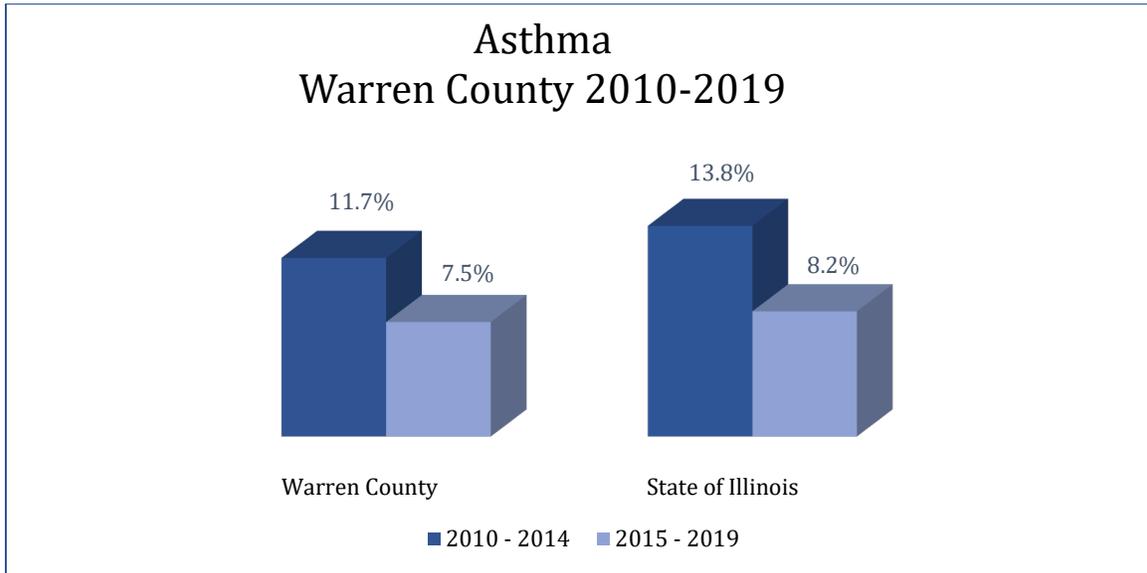
## 4.4 Respiratory

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

### Asthma

The percentage of residents who have asthma in Warren County and the State of Illinois have decreased between 2010-2014 and 2015-2019. According to the Illinois BRFSS, asthma rates in Warren County (7.5%) are lower than the State of Illinois (8.2%) (Figure 59). Note that data have not been updated by the Illinois Department of Public Health.

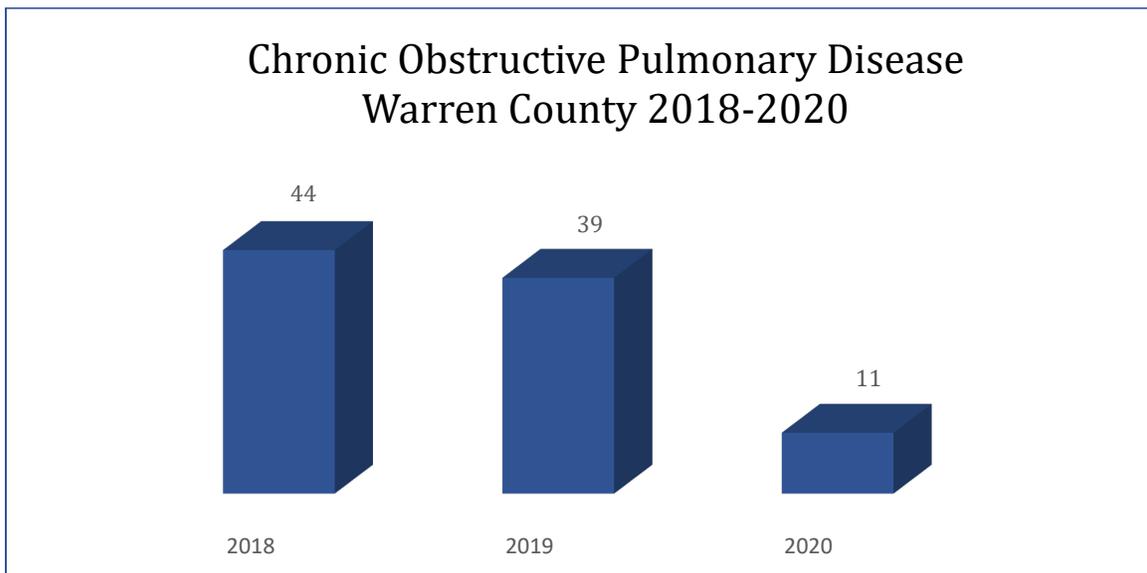
Figure 59



Source: Illinois Behavioral Risk Factor Surveillance System

Treated cases of COPD at Warren County area hospitals decreased between 2018 and 2020. The significant decrease between 2019 and 2020 could be because of the COVID-19 pandemic (Figure 60). Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

Figure 60



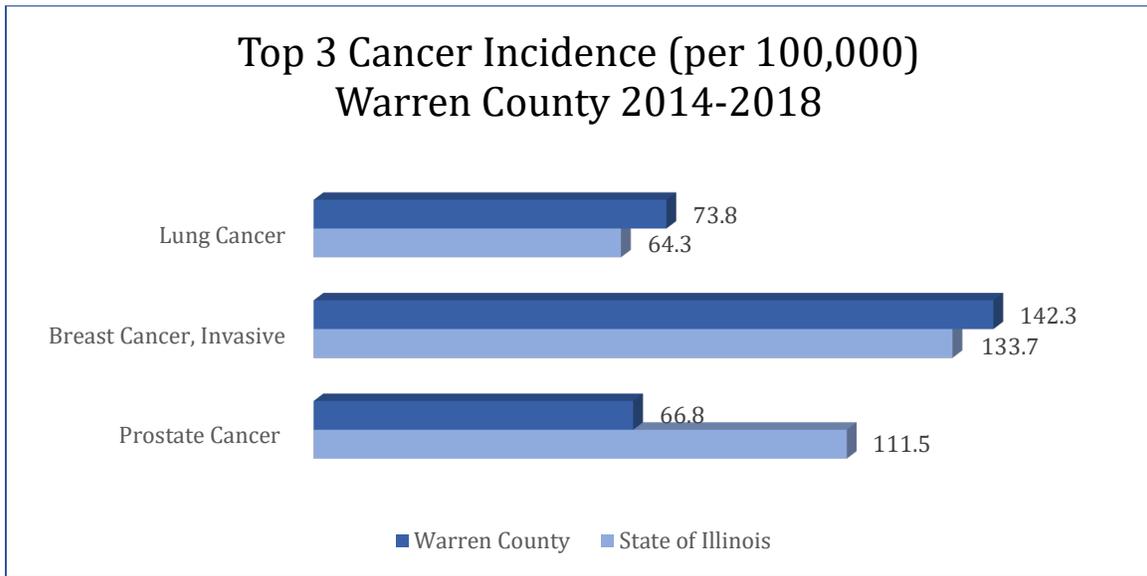
Source: COMPdata Informatics 2021

## 4.5 Cancer

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

The top three prevalent cancers in Warren County are illustrated in Figure 61. Specifically, prostate cancer is lower than the State of Illinois average, while breast and lung cancer rates are higher than the State average.

Figure 61



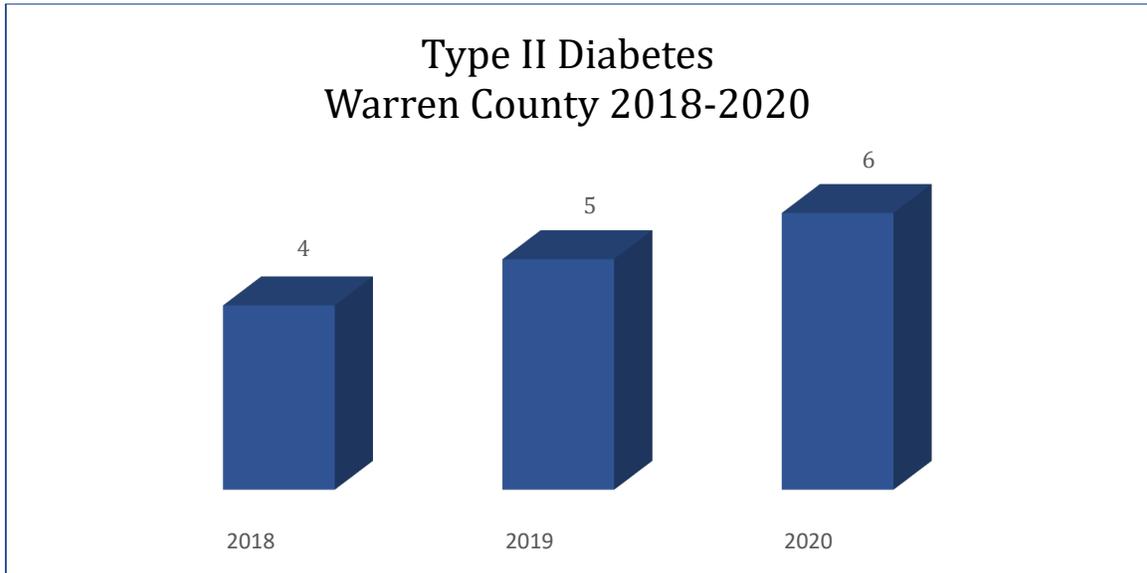
Source: Illinois Department of Public Health – Cancer in Illinois

## 4.6 Diabetes

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

Inpatient cases of Type II diabetes from Warren County increased between 2018 (4 cases) and 2019 (5 cases) and then another increase in 2020 (6 cases) (Figure 62). Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

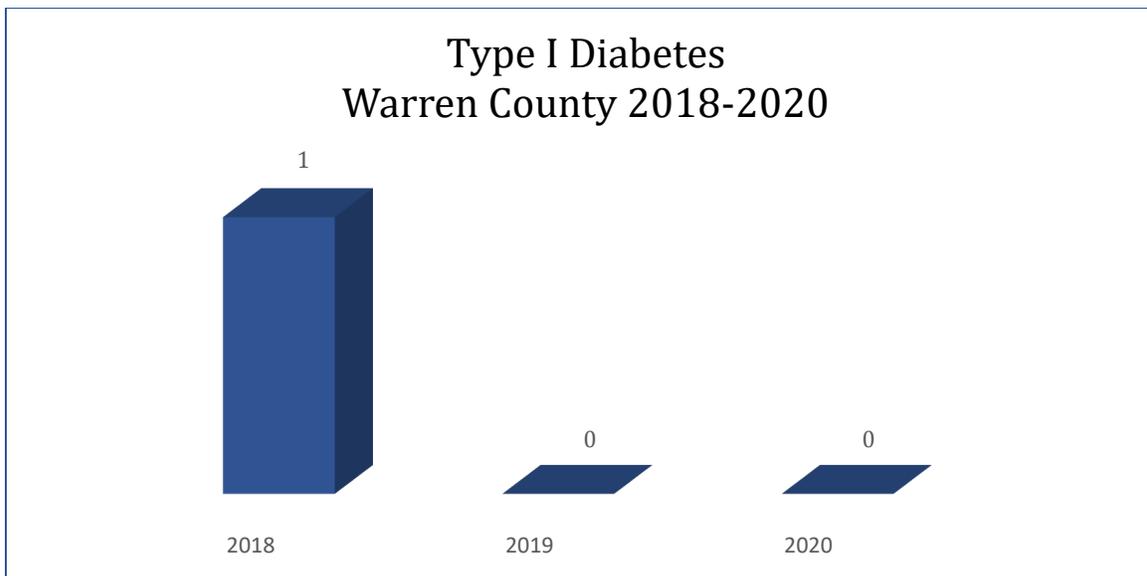
Figure 62



Source: COMPdata Informatics 2021

Inpatient cases of Type I diabetes in Warren County show a decrease from 2018 (1) to 2020 (0) (Figure 63). Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

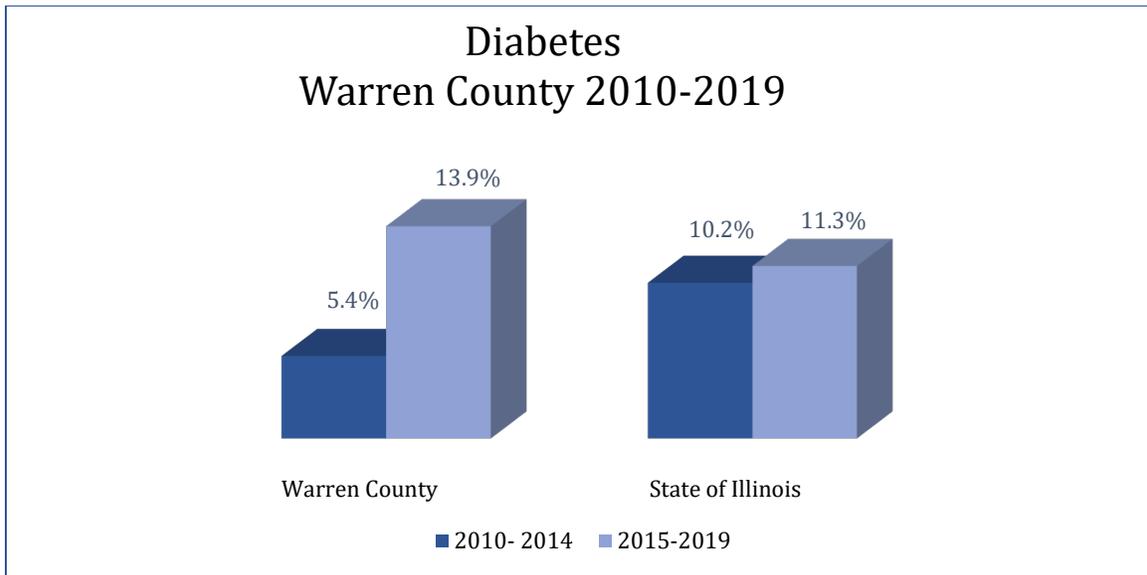
Figure 63



Source: COMPdata Informatics 2021

Data from the Illinois BRFSS indicate that 13.9% of Warren County residents have diabetes (Figure 64). Trends are concerning, as the prevalence of diabetes is increasing in Warren County and is higher than the State of Illinois averages. Note that data have not been updated past 2019 by the Illinois Department of Public Health.

Figure 64



Source: Illinois Behavioral Risk Factor Surveillance System

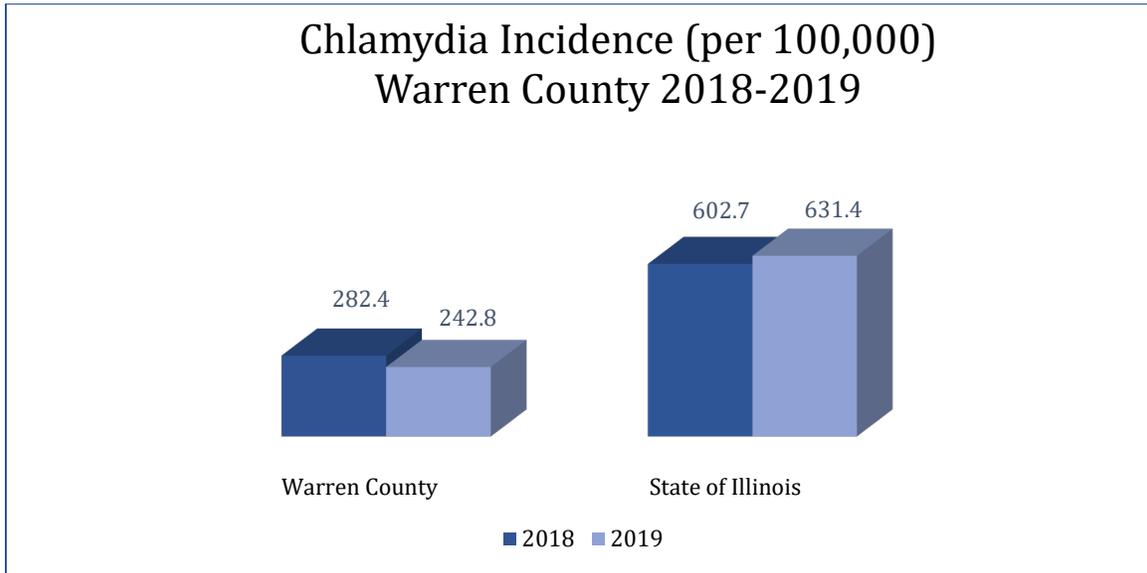
## 4.7 Infectious Diseases

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

### Chlamydia and Gonorrhea Cases

The data for the number of infections of chlamydia in Warren County from 2018-2019 indicate a significant decrease. However, there is an increase of chlamydia across the State of Illinois (Figure 65). Rates of chlamydia in Warren County are lower than State averages.

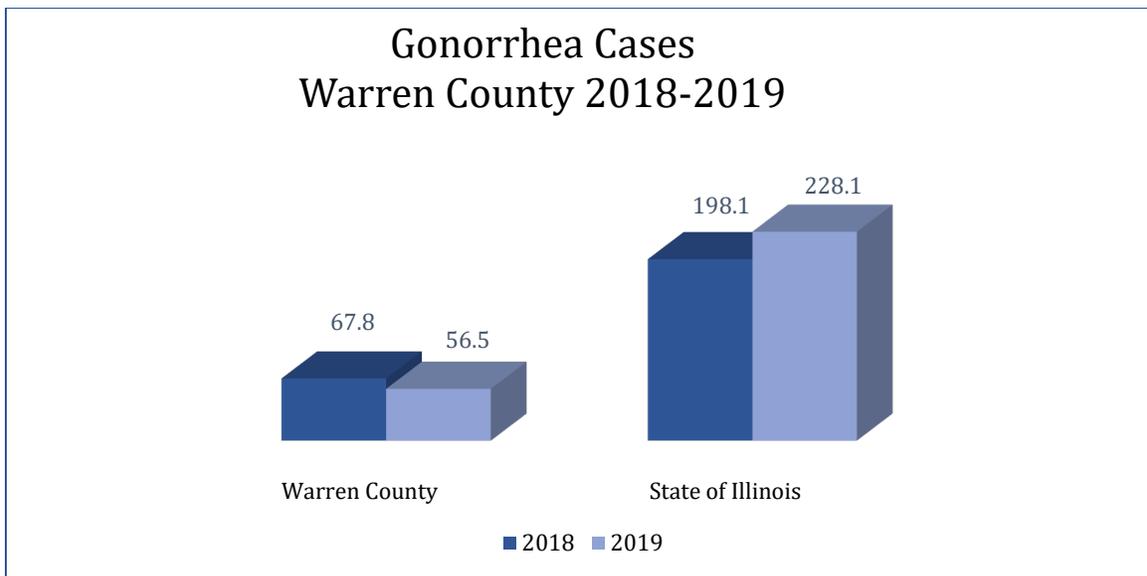
Figure 65



Source: Illinois Department of Public Health

The data for the number of infections of gonorrhea in Warren County indicate a decrease from 2018-2019, while the State of Illinois experienced an increase from 2018-2019. (Figure 66). Warren County is significantly lower than the State of Illinois.

Figure 66



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 Michigan Public Health Department, the most common and serious vaccine-

preventable diseases are: Varicella (chickenpox), Tetanus (lockjaw), Pertussis (whooping cough), Poliomyelitis (Polio), Measles (Rubeola), Mumps, Rubella (German measles), Diphtheria, Hepatitis B and Hemophilic Influenza Type B (HIB) Infections. These diseases used to strike thousands of children each year. Today there are relatively few cases, but outbreaks still occur each year because some babies are not immunized. Warren County has shown no significant outbreaks compared to state statistics, but there are limited data available (Table 1 and Table 2).<sup>2</sup> Note data has not been updated by the State beyond years displayed in table. Also note that COVID-19 vaccine rates are presented in Chapter 2.

*Table 1  
Vaccine Preventable Diseases 2006-2016 Warren County Region*

Mumps	N/A	N/A	2006	2001
Warren County	N/A	N/A	1	1
State of Illinois	N/A	N/A	798	78

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

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

*Source: Illinois Department of Public Health Query*

*Table 2  
Tuberculosis 2017-2018 Warren County Region*

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

*Source: Illinois Department of Public Health Query*

## 4.8 Injuries

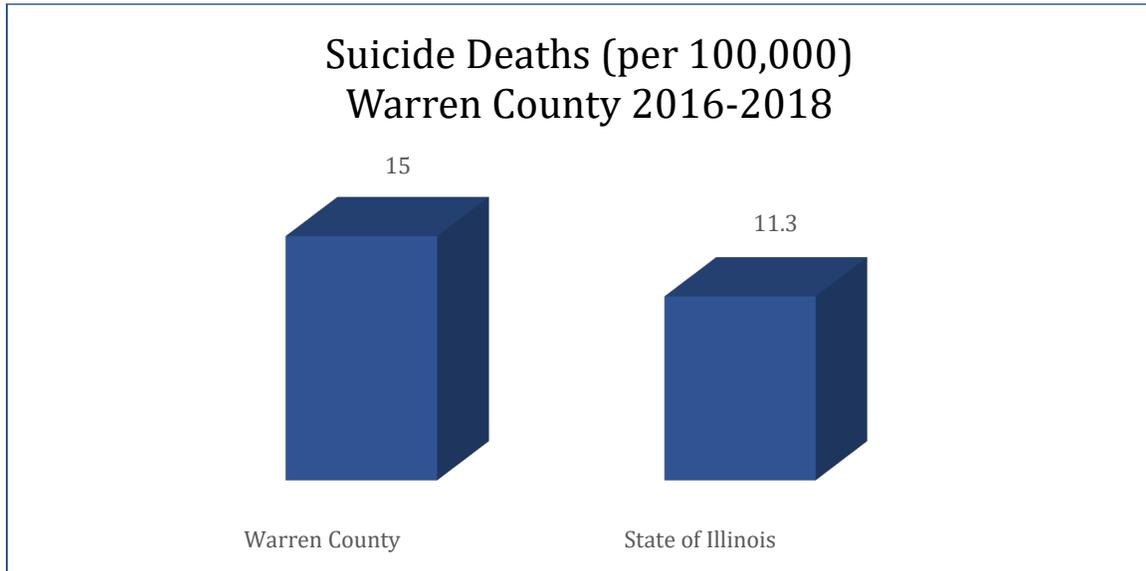
*Importance of the measure:* Suicide is intentional self-harm resulting in death. These injuries are often indicative of serious mental health problems requiring the treatment of other trauma-inducing issues. Unintentional injuries can occur, in part, from violent crimes.

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

## Suicide

The number of suicides in Warren County indicate higher incidence than State of Illinois averages, as there were approximately 15 per 100,000 people in Warren County in 2018 (Figure 67).

Figure 67



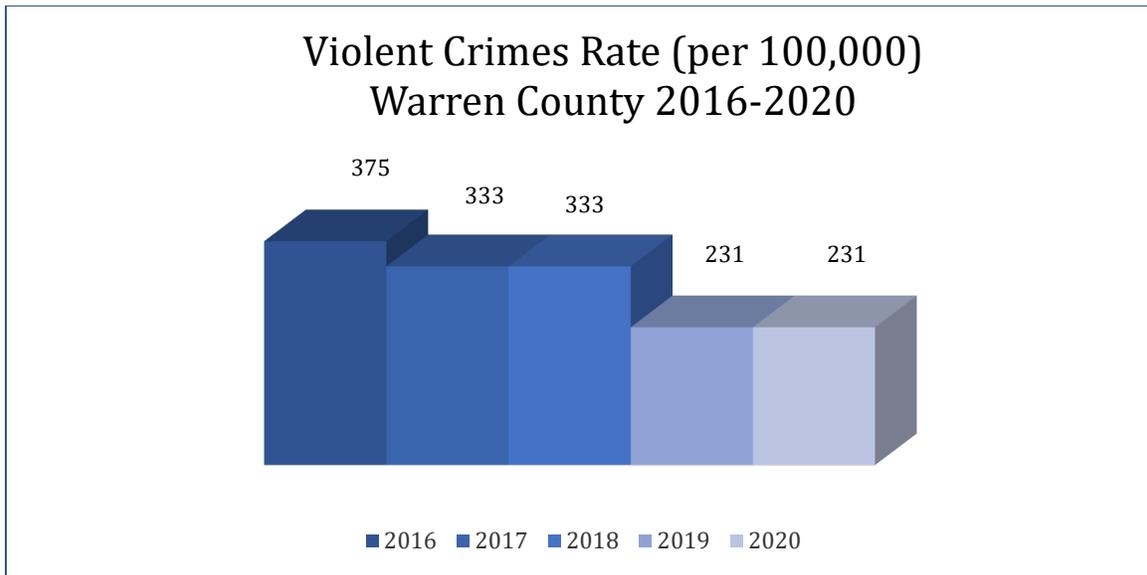
Source: Illinois Department of Public Health

## Violent Crimes

Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery and aggravated assault. Violent crime is represented as an annual rate per 100,000 people.

The number of violent crimes has significantly decreased overall for 2016-2020 in Warren County (Figure 68).

Figure 68



Source: Illinois County Health Rankings 2021

## 4.9 Mortality

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

The top three leading causes of death in the State of Illinois and Warren County are similar as a percentage of total deaths in 2020. Diseases of the Heart are the cause of 27.3% of deaths, cancer is the cause of 20.3% of deaths and COVID-19 is the cause of 12.1% of deaths in Warren County (Table 3).

Table 3

Top 5 Leading Causes of Death for all Races by County & State 2020		
Rank	Warren County	State of Illinois
1	Diseases of Heart (27.3%)	Diseases of Heart (20.7%)
2	Malignant Neoplasm (20.3%)	Malignant Neoplasm (18.1%)
3	COVID-19 (12.1%)	COVID-19 (11.8%)
4	Cerebrovascular Disease (3.5%)	Accidents (5.4%)
5	Accidents (3.1%)	Cerebrovascular Disease (5.1%)

Source: Illinois Department of Public Health

## 4.10 Key Takeaways from Chapter 4

- ✓ BREAST AND LUNG CANCER RATES IN WARREN COUNTY ARE HIGHER THAN STATE AVERAGES.
- ✓ ASTHMA HAS SEEN A REDUCTION IN WARREN COUNTY AND IS LOWER THAN STATE AVERAGES.
- ✓ CANCER, HEART DISEASE AND COVID-19 ARE THE LEADING CAUSES OF MORTALITY IN WARREN COUNTY.
- ✓ THERE HAS BEEN A SIGNIFICANT INCREASE IN DIABETES.
- ✓ SUICIDE RATES ARE HIGHER THAN STATE AVERAGES.

## 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, the most critical health-related needs in the community are identified. To accomplish this, community perceptions of health issues, unhealthy behaviors and issues related to well-being were first considered. Key takeaways from each chapter were then used to identify important health-related issues in the community. Next, a comprehensive inventory of community resources was completed; and finally, the most significant health needs in the community are prioritized.

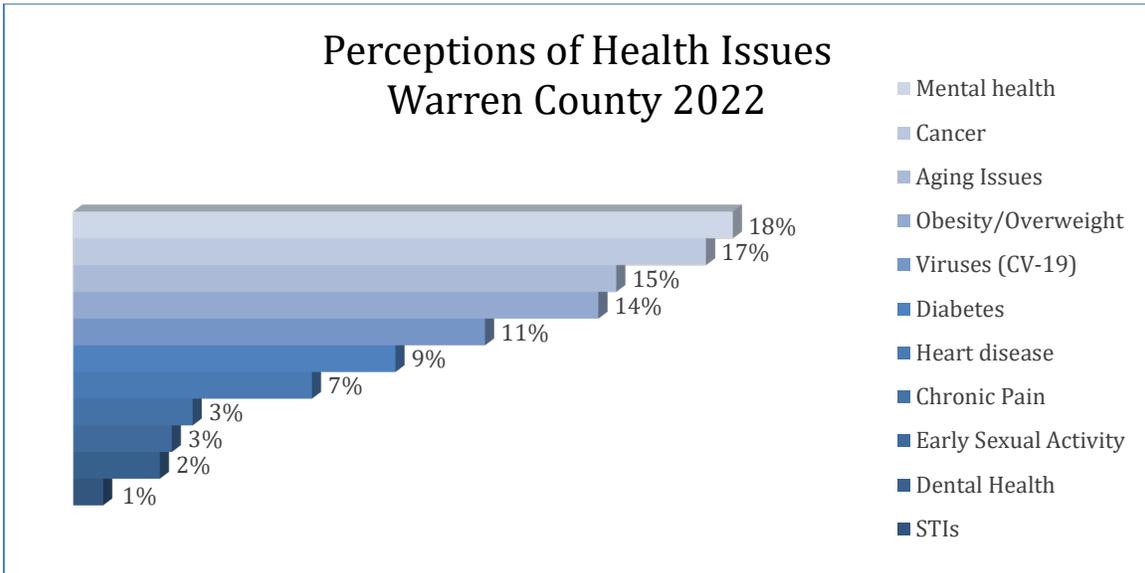
Specific criteria used to identify these issues included: (1) magnitude in the community; (2) severity in the community; (3) potential for impact to the community.

## 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 11 different options.

The health issue that rated highest was mental health (18%), followed by cancer (17%), aging issues (15%) and obesity (14%). These four factors were significantly higher than other categories based on t-tests between sample means (Figure 69).

Figure 69

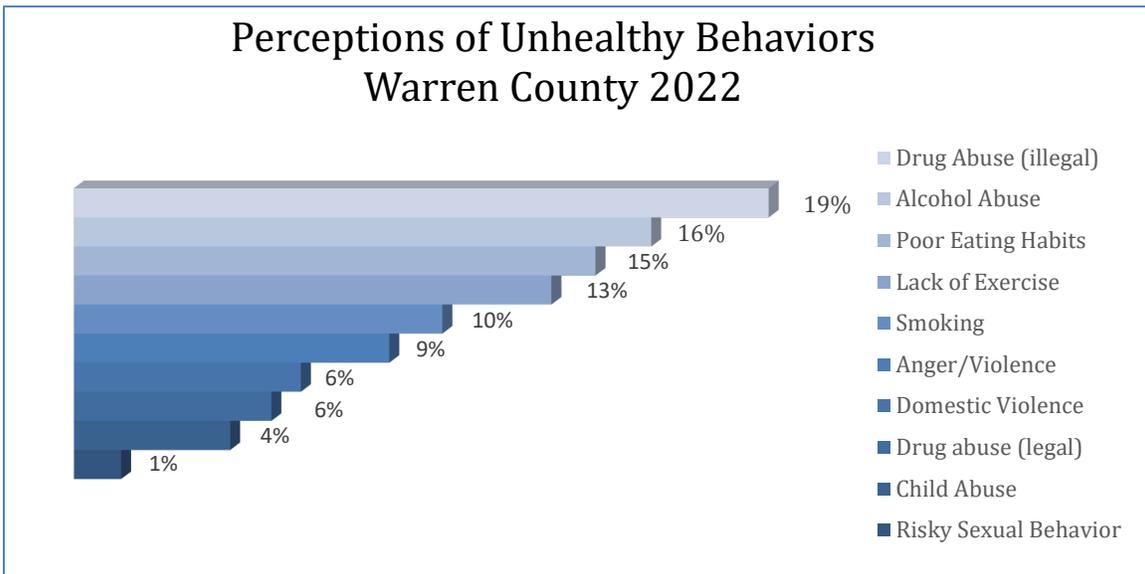


Source: CHNA Survey

## 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 10 choices. The highest rated unhealthy behavior was drug abuse (illegal) at 19% (Figure 70).

Figure 70



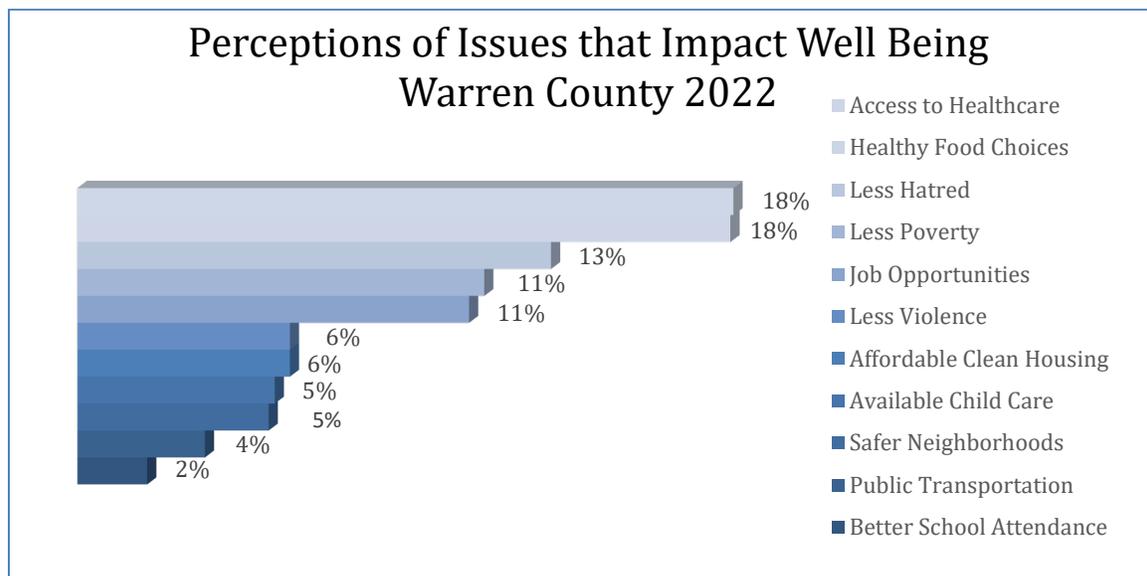
Source: CHNA Survey

## 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 issues impacting well-being that rated highest were access to health (18%) and healthy food choices (18%) (Figure 71). These factors were significantly higher than other categories based on *t-tests* between sample means.

Figure 71



Source: CHNA Survey

## 5.4 Summary of Community Health Issues

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

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

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

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

- Access to medical care
- COVID-19 vaccination rates
- Prostate screening
- Health literacy

- Exercise and healthy eating behaviors
- Depression and stress/anxiety

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

- Substance abuse among youth
- Overweight and obesity
- Opioid abuse

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

- Breast and lung cancer
- Cancer, heart disease and COVID-19 are the leading causes of mortality
- Diabetes is trending upward
- Suicide rates

## Potential Health-Related Needs Considered for Prioritization

Before the prioritization of significant community health-related needs was performed, results were aggregated into 9 potential categories. Based on similarities and duplication, the 9 potential areas considered are:

- **Aging issues**
- **Healthy behaviors – nutrition & exercise**
- **Behavioral health**
- **Overweight/Obesity**
- **Substance abuse**
- **Access to healthcare**
- **Diabetes**
- **Cancer – breast and lung**
- **Health literacy**

## 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 9 health-related areas were being addressed. A resource matrix can be seen in APPENDIX 5: RESOURCE MATRIX relating to the 9 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: DESCRIPTION OF COMMUNITY RESOURCES.

## 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: PRIORITIZATION METHODOLOGY), the collaborative team identified two significant health needs and considered them equal priorities:

- **Healthy Behaviors – defined as active living and healthy eating, and their impact on obesity**
- **Access to Care – including primary source of healthcare, access medical care, prescription medication, dental care and mental-health counseling**

## HEALTHY BEHAVIORS – ACTIVE LIVING, HEALTHY EATING AND SUBSEQUENT OBESITY

**ACTIVE LIVING.** A healthy lifestyle, comprised of regular physical activity and balanced diet, has been shown to increase physical, mental and emotional well-being. Note that 26% of respondents indicated that they do not exercise at all, while the majority (59%) of residents exercise 1-5 times per week. The most common reasons for not exercising are not having enough energy (33%), no time (24%) or a dislike of exercise (17%).

**HEALTHY EATING.** Nearly two-thirds (60%) of residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of residents who consume five or more servings per day is only 6%. The most prevalent reasons for failing to eat more fruits and vegetables were the lack of desire and affordability.

**OBESITY.** In Warren County, almost three-quarters (72.4%) of residents were diagnosed with obesity and being overweight. In the 2022 CHNA survey, respondents indicated that being overweight was the fourth most important health issue and was rated as the most prevalently diagnosed health condition. Research strongly suggests that obesity is a significant problem facing youth and adults nationally, in Illinois, and within Warren County. The U.S. Surgeon General has characterized obesity as “the fastest-growing, most threatening disease in America today.” According to the Obesity Prevention Initiative from the Illinois General Assembly, 20% of Illinois children are obese. 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.

## ACCESS TO CARE

**PRIMARY SOURCE OF HEALTHCARE.** The CHNA survey asked respondents to identify their primary source of healthcare. While 83% of respondents identified clinic/doctor's office as the primary source of care and 5% of respondents identified urgent care as the primary source of care, 11% of respondents indicated they do not seek healthcare when needed and 1% indicated the emergency department as the primary source of healthcare. Those choosing not to seek healthcare increased by 6% compared to results from the 2019 CHNA survey. Note that not seeking healthcare when needed is more likely to be selected by younger people and Black people. Selection of an emergency department as the primary source of healthcare did not have any statistically significant correlates.

**ACCESS TO MEDICAL CARE, PRESCRIPTION MEDICATION, DENTAL CARE AND MENTAL-HEALTH COUNSELING.** Additionally, survey results show that 11% of the population did not have access to medical care when needed; 8% of the population did not have access to prescription medication when needed; 10% of the population did not have access to dental care when needed; and 10% of the population did not have access to counseling when needed. The leading causes of not getting access to care when needed were no insurance, inability to afford a co-pay, the wait was too long, and inability to find a provider.

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## III. APPENDICES

## 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:

**Lisa DeKezel** serves as President of OSF HealthCare St. Mary Medical Center in Galesburg, Illinois and President of OSF HealthCare Holy Family Medical Center in Monmouth, Illinois, directing all internal operations and the development of short-term tactics within long-term strategy to provide high quality, cost-effective health care for the communities they serve. Prior to joining OSF, Lisa has served as Vice President of Hammond-Henry Hospital in Geneseo, Illinois and as an independent health care consultant in the development of various hospital systems and ambulatory settings across multiple states. Lisa is a Registered Nurse by background and is passionate about ensuring access to local, quality healthcare services for rural health populations. Lisa received her Bachelor of Science in Nursing from Grand Canyon University in Phoenix, Arizona. She went on to earn her Master of Jurisprudence in Health Law and Policy from Loyola University Chicago. Lisa was born and raised locally in the rural communities she serves. She and her husband, Damian, have a blended family of eight children and 12 grandchildren. Lisa enjoys spending time with her family and friends and working outdoors. She is actively involved with her church and community, as well as missions work with youth both local and abroad.

**Dana Adcock** is the Vice President of Support Services at OSF Healthcare Holy Family Medical Center in Monmouth. She received her Master's and Bachelor's degrees from Western Illinois University in Macomb, Ill. She has been with the Medical Center for 11 years and part of OSF Healthcare for 22 years. Dana was born and raised in Monmouth and has been involved with community health projects since 2010.

**Tina Canada** earned her BSN from SIU-E in 1983. She has worked in various nursing fields including pediatrics, PICU, surgery, home health, medical-surgical, education, infusion, wound care and diabetes. Tina currently holds two certifications, Wound Care Certified through NAWCO and Certified Diabetes Care and Education Specialist through CBDCE. Currently Tina serves as Coordinator for Diabetes Education at OSF HealthCare Holy Family and Quality Coordinator for the ADA Education Recognized Diabetes Services at OSF HealthCare Holy Family and OSF MG Galesburg Endocrinology. Tina was a poster presenter at ADCES national convention in Houston in 2019. She is a certified insulin pump trainer with Medtronic and Insulet. Tina facilitates a monthly diabetes support group in Monmouth. Tina completed Faith Community Nursing courses through Westburg Institute in 2021. She is an Illinois Poison Center educator as well as a Lifestyle Coach for National Diabetes Prevention Program. Tina serves on the Upper Western Region Employer Relations Council at OSF as well as Mission Integration Team for OSF HFMC/SMC. Tina is a member of the Illinois Great Rivers Conference Early Response Team. Tina serves on the Illinois Coordinating Body of ADCES as part of the Education Committee and Awards Committee. She is currently working with ICAHN to plan the 2022 Diabetes Symposium. Tina is participating in Prevent Blindness's ASPECT advocacy training program, working on a transportation advocacy project. Tina is active in her local church, Operation Christmas Child, Community Cares as well as volunteering regularly at Loving Bottoms Diaper Bank and Midwest Mission Distribution Center.

**Jayden Dwyer** serves as the Executive Assistant for OSF Healthcare Family Medical Center, providing support to the Senior Leadership team since July 2017. She received her Bachelor of Arts degree from Western Illinois University in 2005. Previously, she worked in sales and has always enjoyed volunteering

for a local school district, church events, American Cancer Society fundraisers and more. She joined the Community Health Needs Assessment team in 2018.

**Susan Campbell** attended Western Illinois University and was an elementary school teacher at Union and West Central school districts from 1978-2010. She is now retired and enjoys being active in the community. She is a volunteer at OSF and has been on various boards in Warren and Henderson counties.

**Karen Gibson** is a graduate of Illinois Wesleyan University with a Bachelor of Science in Nursing. She worked for one year at Louis A. Weiss Hospital in Chicago and 40 years at OSF St. Mary Medical Center in Galesburg. She currently serves on the board for the Warren County Health Department and is active in the OSF Holy Family Medical Center Auxiliary.

**Connie Wessels** is the Program Manager, Community Health for the Upper Western Region. She has served in that role since November 2020. Previously she served as the Director of Education Resources, which included Community Health and Wellness. Prior to that Connie was the Director of Pediatrics. She has been with OSF St. Mary Medical Center over 44 years. She received her RN from Rockford Memorial School of Nursing and her BSN from the University of Illinois-Chicago. Connie has been involved with many community groups including the Human Service Council, Leadership Greater Galesburg and WIN. Currently she serves on the Galesburg Public Schools Foundation and the Workforce Innovation boards. She is a Relay for Life team member and serves on the outreach committee at First Lutheran church.

**Jenna Link** is a graduate of Culver Stockton College with a BS in biology and psychology. After teaching two years at the Quincy Public Schools, she joined the Henderson County Health Department as the Director of Environmental Health. In 2007, she became the administrator for Warren County Health Department. Throughout her 24 years of experience in public health, she has participated in many community assessments and plans. In addition, Jenna is an IPEA certified water operator for both Oquawka and Gladstone Public Water supplies.

**Roxanna Crosser** earned her Bachelor of Science degree in Medical Terminology from Western Illinois University in Macomb and was introduced to OSF HealthCare during her clinical internship at OSF St. Francis Medical Center. She received her Master of Hospital Administration from Governors State University. 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 Assistant Administrator for Human Resources and Special Projects, Senior Assistant Administrator for Staff Services, Vice President for Operations, President, and most recently CEO, Western Region. She serves on many OSF committees and boards as the organization defines and plans for strategic direction in the ever-changing healthcare environment. She serves as 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. She has served as an Illinois Performance for Excellence examiner. She was on the Board of Directors of Bridgeway. On a personal note, family and giving back to the community are extremely important to Roxanna. She is married to Paul; they have three grown children and beautiful grandchildren. She is an active member of her church and participates in many charity and service events offered in the community.

**Joan Wertz Ph.D.** is a Professor of Psychology and Associate Dean for Student Success at Monmouth College. She is also a Coordinator of the Global Public Health Studies minor. She received a Bachelor of

Science degree in Psychology from Allegheny College and Ph.D. in Psychology at the University of Pittsburgh. She joined the faculty at Monmouth College in 2001 and has served on the OSF Holy Family Community Council since 2020.

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

**Michelle A. Carrothers (Coordinator)** is currently the Vice President of Strategic Reimbursement for OSF Healthcare System, a position she has served in since 2014. She serves as a Business Leader for the Ministry Community Health Needs Assessment process. Michelle has over 35 years of health care experience. Michelle obtained both a Bachelor of Science Degree and Masters of Business Administration Degree from Bradley University in Peoria, IL. She attained her CPA in 1984 and has earned her Fellow of the Healthcare Financial Management Association Certification in 2011. Currently she serves on the National Board of Examiners for HFMA. Michelle serves on various Peoria Community Board of Directors and Illinois Hospital Association committees.

**Dawn Tuley (Coordinator)** is a Strategic Reimbursement Senior Analyst at OSF Healthcare System. She has worked for OSF Healthcare System since 2004 and acts as the coordinator for 15 Hospital Community Health Need Assessments. In addition, she coordinates the submission of the Community Benefit Attorney General report and the filing of the IRS Form 990 Schedule H since 2008. Dawn holds a Master's in Healthcare Administration from Purdue University and is certified in Community Benefit. Dawn has been a member of the McMahan-Illini Chapter of Healthcare Financial Management Association for over twelve years. She has served as the Vice President, President-Elect and two terms as the Chapter President on the board of Directors. She has earned a silver, bronze, gold and Metal of Honor from her work with the McMahan-Illini HFMA Chapter. She is currently serving as a Director on the board.

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

## APPENDIX 2: ACTIVITIES RELATED TO 2019 CHNA PRIORITIZED NEEDS

Two major health needs were identified and prioritized in Warren County 2019 CHNA. Below are examples of the activities, measures and impact during the last three years to address these needs.

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

**Goal 1:** Increase the percent of Warren County residents who consume 3 or more servings of fruits and vegetables per day to over 50%.

- 1) Increase knowledge and awareness of healthy behaviors with traditional and social media.
  - a) Provided 7 Eat Well and 1 Healthy Dinner Prep thru Facebook Live reaching 400 attendees. 9/30/21 Healthy Behaviors continue to be posted on social media with an increase in engagement activity.
- 1) Increase community knowledge and effective self-management of diabetes through education.
  - b) Diabetes Services for 2020 = 124 Patients Served. 9/30/21 Diabetes individual education continues with a decreased number of visits. Attendance at the Diabetes support group has also decreased.
- 2) Be Well – Women Enjoying Living and Learning - A women’s healthy living program focusing on healthy behaviors and diabetes prevention.
  - c) Provided 45 weekly sessions of Be-Well program. Attendance was up to 22 at 8 weeks prior to program cancellation due to pandemic. No Be-Well programs were held (9/30/21). This program was led by OSF at the YMCA location.
- 2) Healthy Meals on a Budget - This was a program in partnership with Jamieson Community Center where participants gathered to eat a healthy meal, were provided with the recipe and the ingredients to prepare this meal in their own home. OSF provided the recipes, groceries, portion plates, helped prepare and serve the meal to participants and provided nutritional education on healthy eating.
  - a) The program lasted for 7 months but did not restart due to COVID. The venue size limited the number of participants to 25; however, there were 22-25 participants in attendance each month.
- 3) Partner with Warren County YMCA to implement Healthy Kids U, a childhood wellness initiative that combines exercise with education and behavior modification.

b) Programming placed on hold. 9/30/21 No Healthy Kids U Programs were scheduled.

4) Kids Health and Safety Event

c) 2020 event cancelled due to pandemic. 9/18/21 An outdoor living well program was held for children with 11 kids and parents attending.

**Goal 2:** *Increase the number of Warren County Residents who report receiving screening exams for diabetes, breast cancer and colon cancer within the last five years.*

1) Increase the number of A1C screenings performed to identify individuals unaware of diabetes and pre-diabetes health issue.

a) Was able to provide A1C screenings to 135 Smithfield employees. 9/30/21 the number of Community A1C screenings was decreased because of the pandemic. Screenings were offered at the Strom Center, Smithfield Health Fair and Biggsville school staff.

5) Promote health screenings through social media, education, radio spots and social connections with minority groups to increase priority and outcomes of early detection of cancer and diabetes.

b) Produced 11 health screening radio service announcements. Posted 6 free on-line health assessment links to Facebook. 9/30/21 Tina Canada continues to provide health information via radio-diabetes, COVID, breast cancer, nutrition. A virtual wellness fair was held on 6/12/21 with 71 participating. On 7/18 the virtual Wellness fair was offered in Spanish with 7 participating. Participated in Freezing for Food in June and Dec 2021.

## 2. Behavioral Health - Defined as Mental Health and Substance Abuse Goal

**Goal 1:** *Increase the number of individuals accessing mental health services.*

1) Provide 3 blood pressure screenings to the community.

a) Provided the Women's Health Event while including education on Women's Heart Health.

2) Feature Women's Heart Health in the Women's Health Event to be developed and provided. (See Poor Healthy Behaviors – nutrition & exercise)

a) Included a presentation on the effects of sleep on heart health as part of the Diabetes support group.

3) Offer education on how sleep habits impact heart health.

a) Included a presentation on the effects of sleep on heart health as part of the Women's Health Event.

---

4) Increase community awareness of RX Disposal Program through advertising.

a) Over 150 lbs. of drugs collected. 4/23/21 A Drive thru Prescription drug take back event was held with Bridgeway at Save-A-Lot parking area. 58lbs of drugs collected.

## APPENDIX 3: SURVEY

# Warren County 2021 COMMUNITY HEALTH-NEEDS ASSESSMENT SURVEY

### INSTRUCTIONS

We want to know how you view our community, and other factors that may impact your health. We are inviting you to participate in a research study about community health needs. Your opinions are important! This survey will take about 12 minutes to complete. All of your individual responses are anonymous and confidential. We will use the survey results to better understand and address health needs in our community.

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**COMMUNITY PERCEPTIONS**

1. What would you say are the three (3) biggest **HEALTH ISSUES** in our community?

- Aging issues, such as Alzheimer’s disease, hearing loss, memory loss, arthritis, falls
- Cancer
- Chronic pain
- Dental health (including tooth pain)
- Diabetes
- Early sexual activity
- Heart disease/heart attack
- Mental health issues (including depression, anger)
- Obesity/overweight
- Sexually transmitted infections
- Viruses (including COVID-19)

2. What would you say are the three (3) most **UNHEALTHY BEHAVIORS** in our community?

- Angry behavior/violence
- Alcohol abuse
- Child abuse
- Domestic violence
- Drug abuse (illegal drugs)
- Drug abuse (legal drugs)
- Lack of exercise
- Poor eating habits
- Risky sexual behavior
- Smoking/vaping (tobacco use)

3. What would you say are the three (3) most important factors that would improve your **WELL-BEING**?

- Access to health services
- Affordable healthy housing
- Availability of child care
- Better school attendance
- Good public transportation
- Healthy food choices
- Job opportunities
- Less hatred & more social acceptance
- Less poverty
- Less violence
- Safer neighborhoods/schools

**ACCESS TO CARE**

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

**Medical Care**

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

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

If you don't seek medical attention, why not?

- Fear of Discrimination
- Lack of trust
- Cost
- I have experienced bias
- Do not need

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

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

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

- Didn't have health insurance.  Too long to wait for appointment.  
 Couldn't afford to pay my co-pay or deductible.  Didn't have a way to get to the doctor.  
 Fear of discrimination.  Lack of trust.

### Prescription Medicine

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

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

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

- Didn't have health insurance.  Pharmacy refused to take my insurance or Medicaid.  
 Couldn't afford to pay my co-pay or deductible.  Didn't have a way to get to the pharmacy.  
 Fear of discrimination.  Lack of trust.

### Dental Care

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

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

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

- Didn't have dental insurance.  The dentist refused my insurance/Medicaid  
 Couldn't afford to pay my co-pay or deductible.  Didn't have a way to get to the dentist.  
 Fear of discrimination.  Lack of trust.  
 Not sure where to find available dentist

### Mental-Health Counseling

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

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

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

- Didn't have insurance.  The counselor refused to take insurance/Medicaid.  
 Couldn't afford to pay my co-pay or deductible  Embarrassment.  
 Didn't have a way to get to a counselor.  Cannot find counselor.  
 Fear of discrimination.  Lack of trust.  
 Long wait time.

## HEALTHY BEHAVIORS

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

### Exercise

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

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

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

- Don’t have any time to exercise.
- Don’t like to exercise.
- Can’t afford the fees to exercise.
- Don’t have child care while I exercise.
- Don’t have access to an exercise facility.
- Too tired.
- Safety issues.

**Healthy Eating**

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

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

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

- Don’t have transportation to get fruits/vegetables
- Don’t like fruits/vegetables
- It is not important to me
- Can’t afford fruits/vegetables
- Don’t know how to prepare fruits/vegetables
- Don’t have a refrigerator/stove
- Don’t know where to buy fruits/vegetables

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

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

6. Please check the box next to any health conditions that you have. (Please choose all that apply).

If you don’t have any health conditions, please check the first box and go to question #8: Smoking.

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

7. If you identified any conditions in Question #6, how often do you follow an eating plan to manage your condition(s)?

- Never
- Sometimes
- Usually
- Always

**Smoking**

8. On a typical DAY, how many cigarettes do you smoke?

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

**Vaping**

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

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

**GENERAL HEALTH**

10. Where do you get most of your health information and how would you like to get health information in the future? (For example, do you get health information from your doctor, from the Internet, etc.). \_\_\_\_\_

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11. Do you have a personal physician/doctor?  Yes  No
12. How many days a week do you or your family members go hungry?  
 None  1-2 days  3-5 days  More than 5 days
13. In the last 30 DAYS, how many days have you felt depressed, down, hopeless?  
 None  1-2 days  3-5 days  More than 5 days
14. In the last 30 DAYS, how often has your stress and/or anxiety stopped you from your normal daily activities?  
 None  1-2 days  3-5 days  More than 5 days
15. In the last YEAR have you talked with anyone about your mental health?  
 Yes (please answer #16)  No (please go to #17)
16. If you talked to anyone about your mental health, who was it?  
 Doctor/nurse  Counselor  Family/friend  Other \_\_\_\_\_
17. How often do you use prescription medications (not prescribed to you or used differently than how the doctor instructed) on a typical DAY?  
 None  1-2 times  3-5 times  More than 5 times
18. How many alcoholic drinks do you have on a typical DAY?  
 None  1-2 drinks  3-5 drinks  More than 5 drinks
19. How often do you use marijuana on a typical DAY?  
 None  1-2 times  3-5 times  More than 5 times
20. How often do you use substances such as inhalants, ecstasy, cocaine, meth or heroin on a typical DAY?  
 None  1-2 times  3-5 times  More than 5 times
21. Do you feel safe where you live?  Yes  No
22. In the past 5 years, have you had a:
- |   |                              |                             |   |
|---|------------------------------|-----------------------------|---|
| Breast/mammography exam                 | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |
| Prostate exam                           | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |
| Colonoscopy/colorectal cancer screening | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |
| Cervical cancer screening/pap smear     | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> Not applicable |

**Overall Health Ratings**

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

**INTERNET**

1. Do you have Internet at home? For example, can you watch Youtube at home?  
 Yes (please go to next section – BACKGROUND INFORMATION)  No (please answer #2)

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2. If don't have Internet, why not?  Cost  No available Internet provider  I don't know how  
 Data limits  Poor Internet service  No phone or computer

## BACKGROUND INFORMATION

1. What county do you live in?

- Warren  Other

2. What is your Zip Code? \_\_\_\_\_

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

- Medicare  Medicaid/State insurance  Commercial/Employer  
 Don't have (Please answer #4)

4. If you answered "don't have" to the question about health insurance, why **don't** you have insurance? (Please choose all that apply).

- Can't afford health insurance  Don't need health insurance  
 Don't know how to get health insurance  Other \_\_\_\_\_

5. What is your gender?  Male  Female  Non-binary  Transgender  Prefer not to answer

6. What is your sexual orientation?  Heterosexual  Lesbian  Gay  Bisexual  
 Queer  Prefer not to answer

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

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

- White/Caucasian  Black/African American  Hispanic/LatinX  
 Pacific Islander  Native American  Asian/South Asian  
 Multiracial  Other: \_\_\_\_\_

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

- Grade/Junior high school  Some high school  High school degree (or GED)  
 Some college (no degree)  Associate's degree  Certificate/technical degree  
 Bachelor's degree  Graduate degree  Other: \_\_\_\_\_

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

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

11. What is your housing status?

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

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12. If you answered that you have housing, does your house have:

- leaking roof       mold       heat       air conditioning  
 running water       rodents       lead       electricity       Internet

13. How many people live with you? \_\_\_\_\_

14. How often do you communicate with people you care about and feel close to? (For example, talking, texting, meeting with friends/family?)

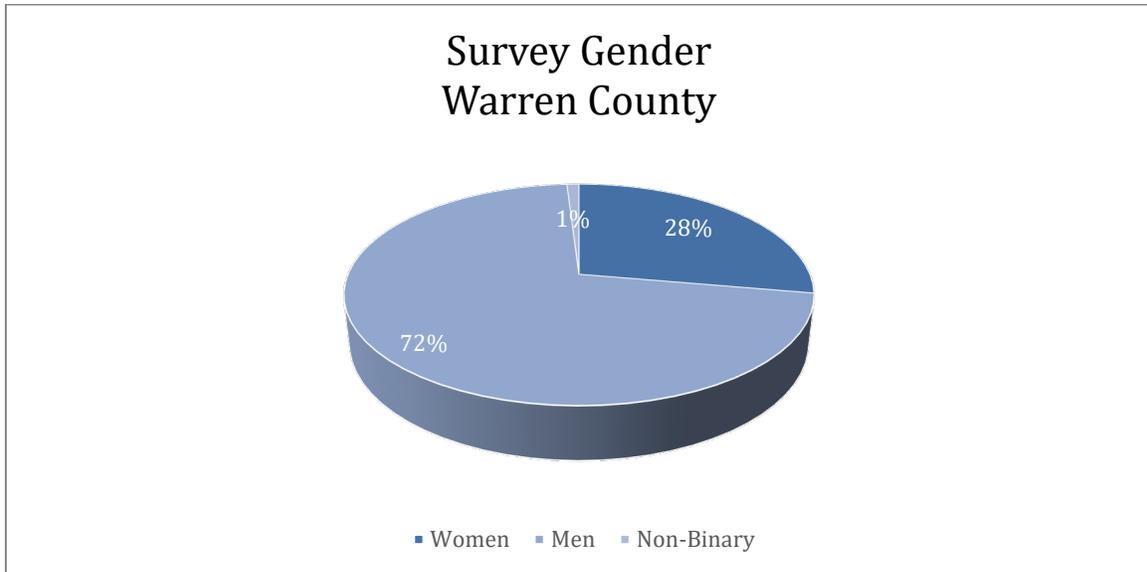
- Less than once per week       1-2 times per week       3 - 5 times per week       More than 5 times per week

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

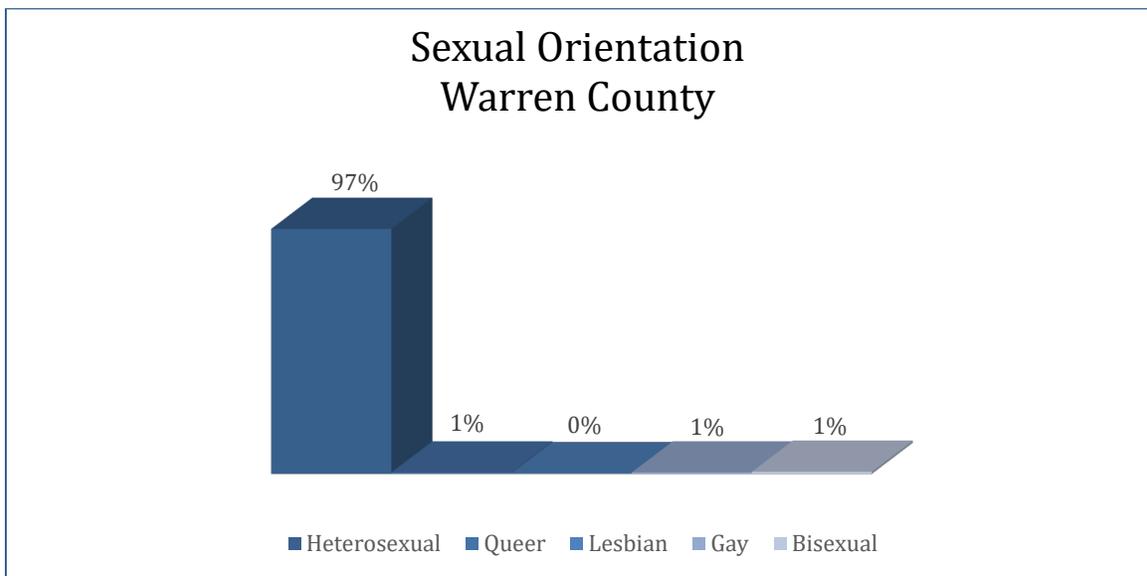
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**Thank you very much for sharing your views with us!**

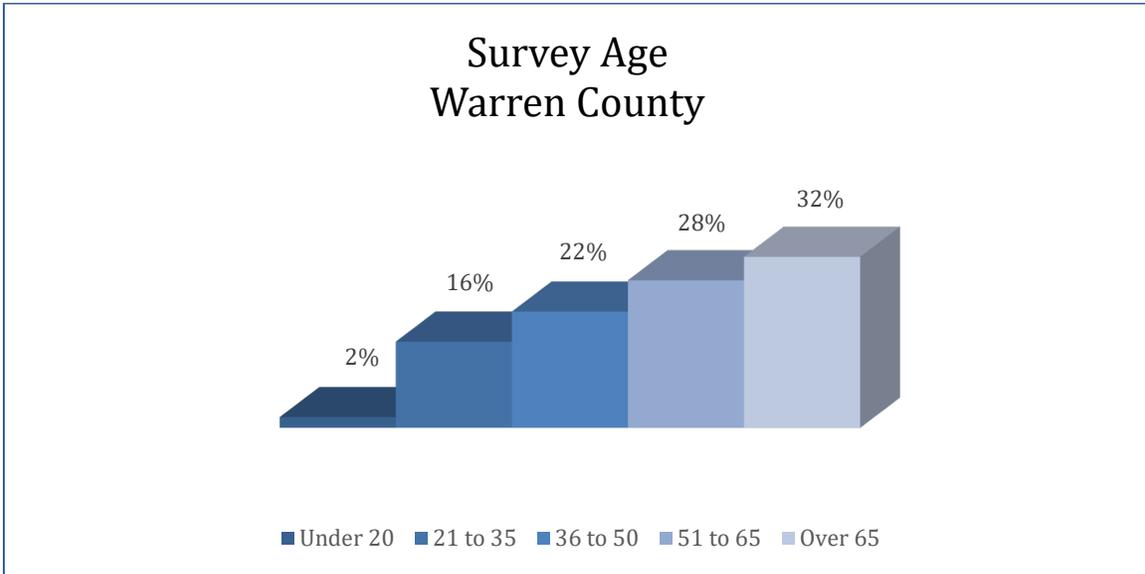
## APPENDIX 4: CHARACTERISTICS OF SURVEY RESPONDENTS



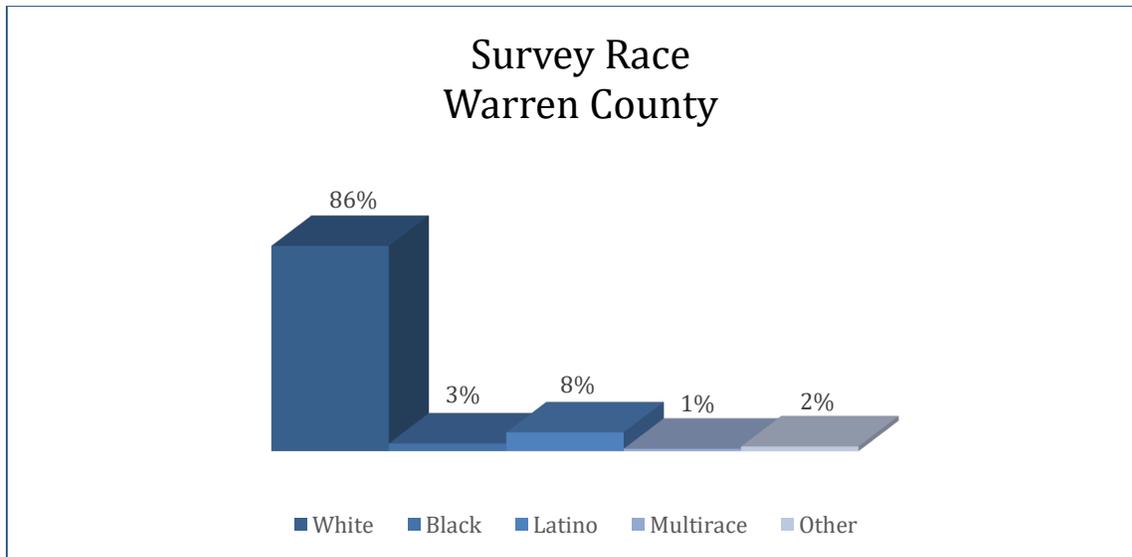
Source: CHNA Survey



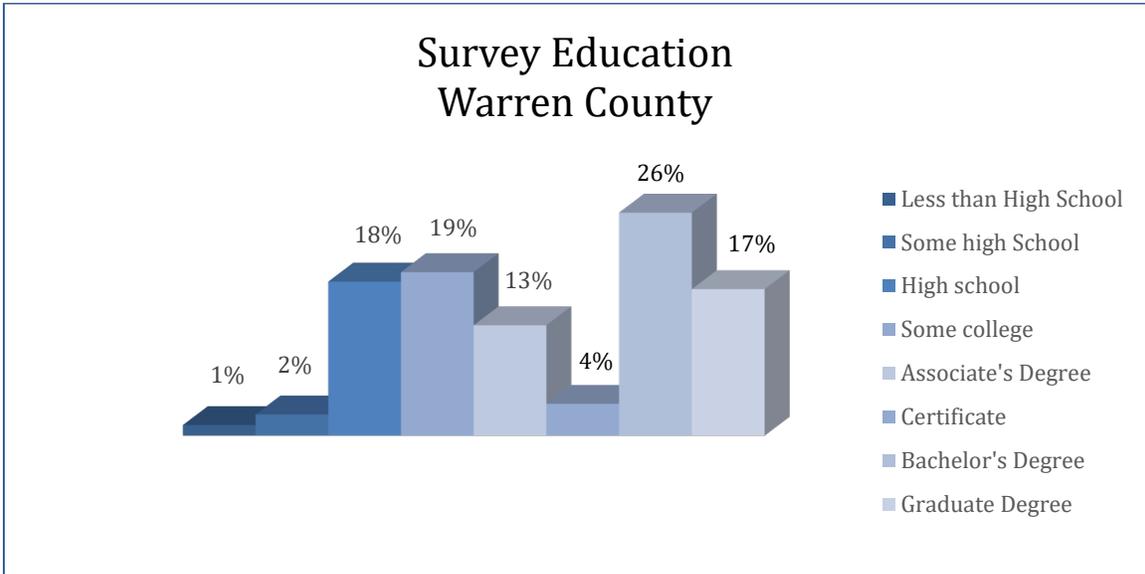
Source: CHNA Survey



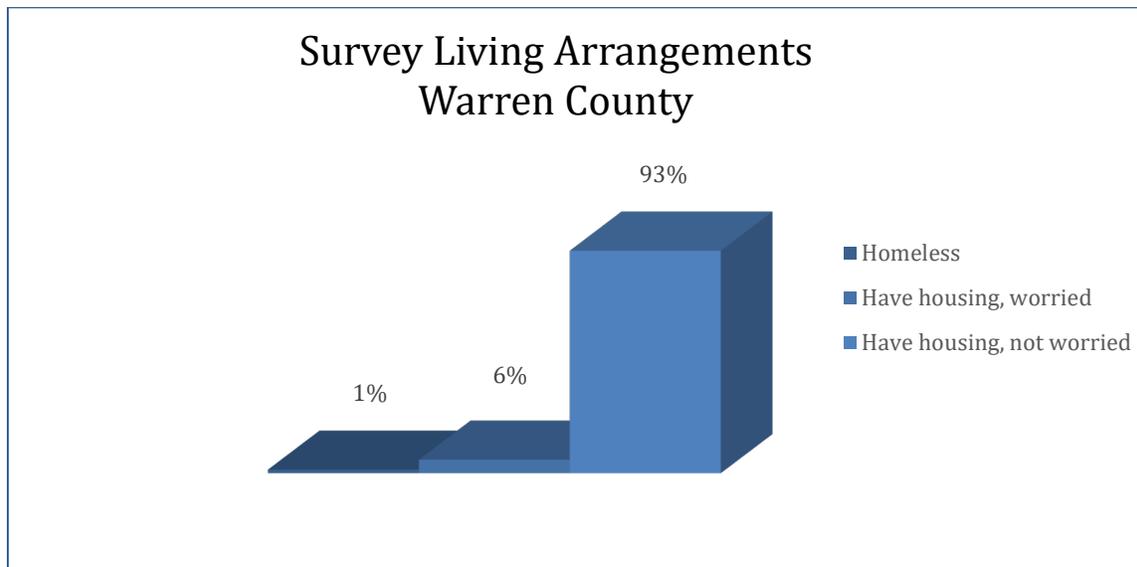
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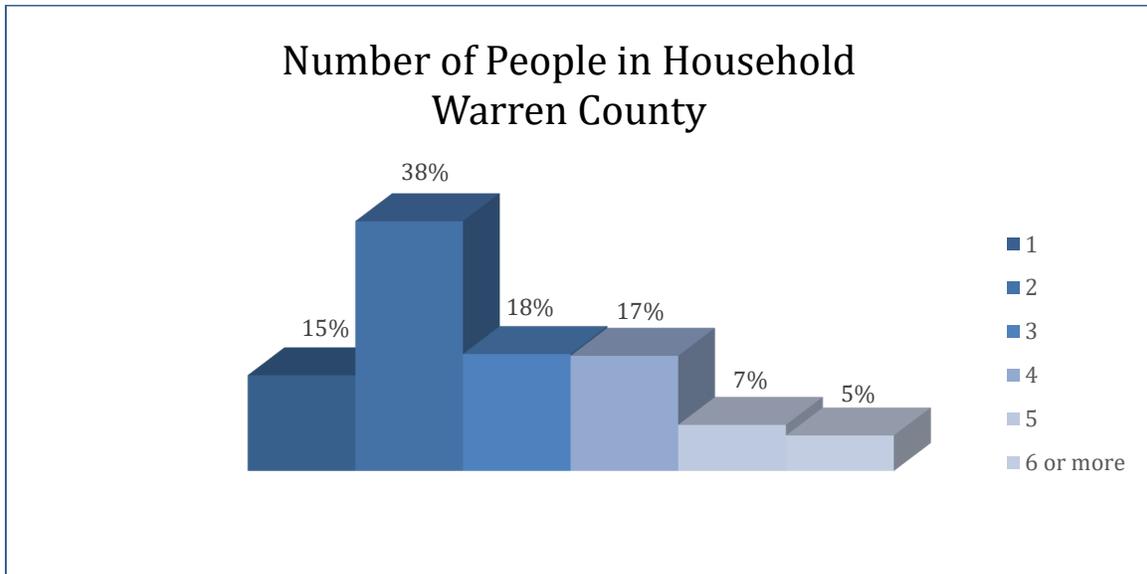
Source: CHNA Survey



Source: CHNA Survey



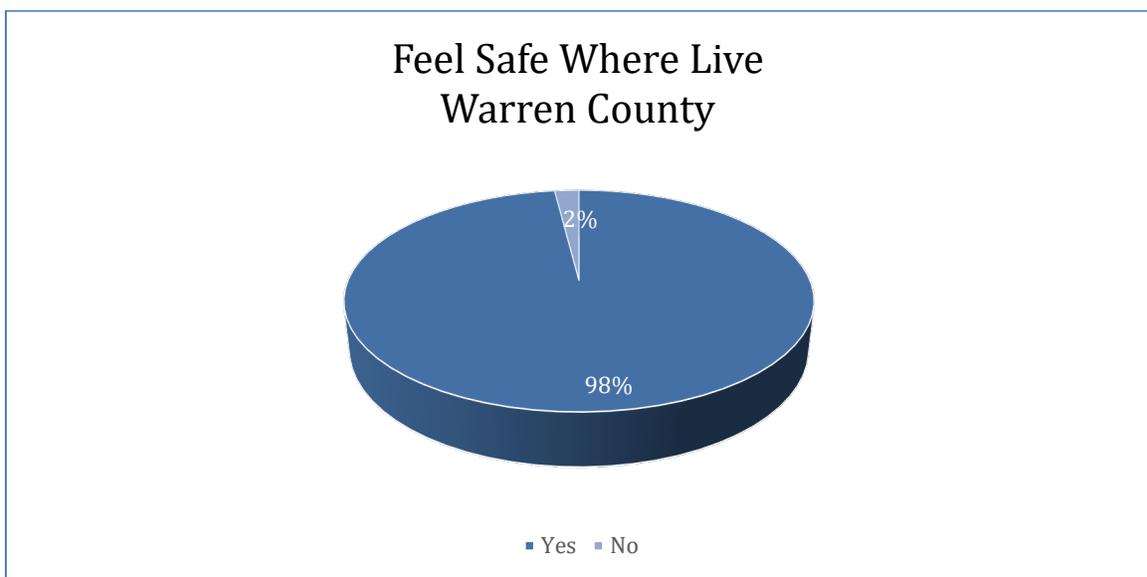
Source: CHNA Survey



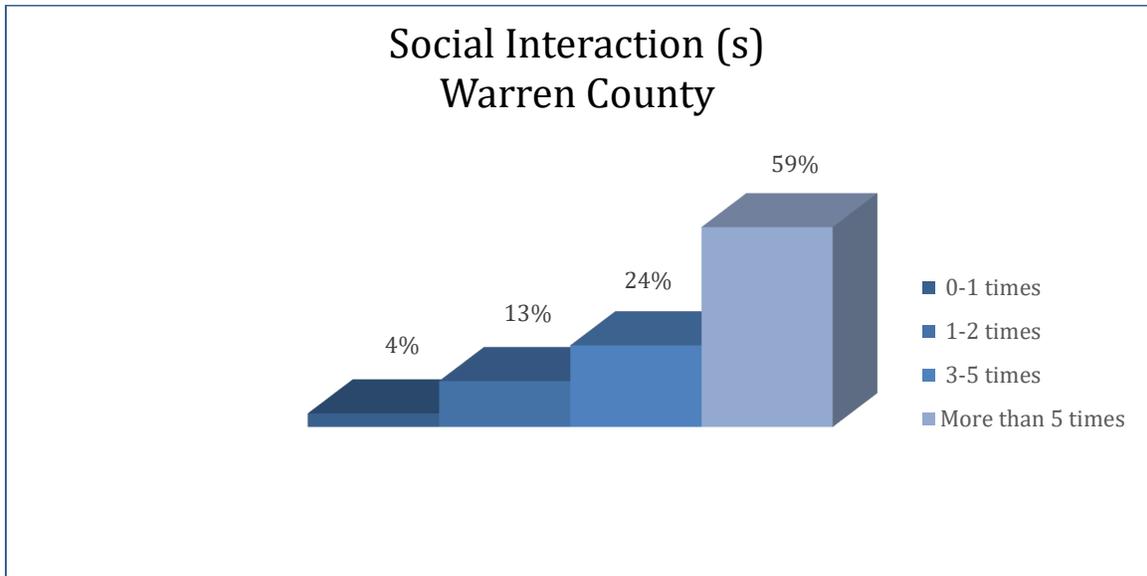
Source: CHNA Survey

## Housing Environment

Housing environment is a measure of the housing-related standard of living in a community. Key risk influencers include affordability, crowding and quality. For Warren County, 46% of the population is at elevated risk for Housing environment. This is higher than the State of Illinois average of 33% (SocialScape® powered by SociallyDetermined®, 2022).



Source: CHNA Survey



Source: CHNA Survey

## APPENDIX 5: RESOURCE MATRIX

	Aging Issues	Healthcare Access	Breast Cancer	Healthy Behaviors	Obesity	Behavioral Health	Substance Abuse	Diabetes	Health Literacy
<b>Recreational Facilities</b>									
Warren County YMCA	1			3	1				
City of Monmouth - Parks Department				2					
<b>Health Departments</b>									
Warren County Health Department	2	2	1	2	1	1	1	1	1
<b>Community Agencies</b>									
Jamieson Community Center	2	1		2		1	1		
Bridgeway		2		2		3	3		
First Christian Church-Food Pantry				3					
Helping Hands- Food Pantry		1		3					
Warren DHS Family Community Resource Center	1	1		3		1	1		1
Illinois Tobacco Quit Line				2			2		
United Way of Warren County- resource 211	1	1		2			1		1
University of Illinois Warren County Extension	1			2					
Women, Infants and Children Nutritional Program				2					
Western Illinois Area Agency on Aging Strom Center	3	1		2					
Strom Center	1	1		2		1		1	
Western Illinois Head Start		1		2		1			
Warren County Housing Authority	2			1		1			
Al Anon- (Drug and Alcohol Addiction)		1		1		1	3		
<b>Hospitals / Clinics</b>									
OSF Medical Group Monmouth/Roseville	3	3	3	3	1	2	1	3	
OSF Healthcare St. Mary Medical Center	3	3	3	3	1	2	1	3	
OSF Multi-Specialty Group	3	3	3	3	1	2	1	3	
OSF Healthcare Holy Family Medical Center	3	3	3	3	1	2	1	3	
OSF Home Care and Hospice	3	3						2	1
Friendship Line 1-800-971-0016									

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

## APPENDIX 6: DESCRIPTION OF COMMUNITY RESOURCES

### RECREATIONAL FACILITIES (2)

#### **Warren County YMCA**

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

#### **Monmouth Parks and Recreation**

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

### HEALTH DEPARTMENTS (1)

#### **Warren County Health Department**

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. The Health Department has three focus areas- Community Health, Environmental Health and Emergency Preparedness.

### COMMUNITY AGENCIES (15)

#### **Friendship Line**

Friendship Line is both a crisis intervention hotline and a warm-line for non-urgent calls. This 24-hour line supports services including suicide intervention, emotional support. Elder abuse prevention and counseling, wellbeing checks, grief support, information and referrals.

#### **Jamieson Community Center**

Jamieson Community Center is a non-profit agency primarily serving residents of Warren County. Their programs are designed to increase food security and help people with essential services. Programs include Senior Nutrition, Food Pantry, Thrift store, weekend meals for elementary students, emergency bill pay, energy assistance and a Learning Center.

#### **Bridgeway Mental Health and Family Services**

Bridgeway is an organization providing community-based health and human services to a wide variety of individuals in need. Bridgeway's three core programs are: Behavioral Health Services, Developmental and Intellectual Disabilities services and Community and Center based employment opportunities for people with disabilities.

#### **Illinois Tobacco Quit Line**

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

**First Christian Church- Food Pantry**

The First Christian Church offers a food bank to assist families in need in addition to their many programs built to strengthen families and individuals.

**Helping Hands- Food Pantry**

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

**Strom Center**

The Strom Center serves seniors and disabled persons in Warren and Henderson counties. Services offered include financial counseling, medical links, healthcare equipment, resource and caregiver information, education and an activity center.

**United Way of Warren County**

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. The United Way and OSF Healthcare Holy Family are sponsors of the 2-1-1 resource center.

**University of Illinois Warren County Extension**

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

**Warren DHS Family Community Resource Center**

The DHS Family center helps families meet basic needs. They offer a range of services to help them become healthy and self-sufficient.

**Women, Infants, and Children's Nutrition Program**

Women, Infants, and Children's (WIC) supplemental nutrition program is a federal assistance program of the Food and Nutrition services of the US Department of Agriculture for healthcare and nutrition of low-income pregnant women, breastfeeding women and infants and children under the age of five. WIC services are provided by the Warren County Health Department.

**Western Illinois Area Agency on Aging**

The Western Illinois Area Agency on Aging was founded under an amendment to the Older American Act to help older Americans live in their homes with safety and dignity as long as possible with support and services. Services include home delivered meals, transportation, legal assistance, outreach, options counseling, senior centers and family caregiver programs.

**West Central Community Services Head Start**

West Central Community Services, Inc. is the grantee for a federally funded preschool program called Head Start. Their Mission is to provide a comprehensive family focused school readiness program where children feel happy, valued, safe and secure.

**Warren County Housing Authority**

There are several services provided at Warren County Housing Authority including administer federal rental assistance programs and provide affordable apartments for low-income families, elderly residents and persons with disabilities. The Housing authority also administers the Section 8 voucher program.

**AL-Anon**

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

**HOSPITALS / CLINICS (5)****OSF Medical Group Monmouth and Roseville**

The OSF Medical Group Clinics in Monmouth and Roseville provide a wide range of medical care to the community focusing mainly on primary care.

**OSF Multi-Specialty Group**

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

**OSF Healthcare St. Mary Medical Center**

OSF Healthcare St. Mary Medical Center has been serving the Galesburg community since 1909. The acute care hospital services patients in a seven-county area including Knox, Warren, Mercer, Henderson, Henry, McDonough and Fulton. Health care services include the Family Birthing Center, cancer, lung, cardiovascular care, behavioral health and specialty services.

**OSF Healthcare Holy Family Medical Center**

OSF Healthcare Holy Family is an acute and outpatient care hospital. The critical care hospital is located in Monmouth and serves patients of Warren, Henderson and Mercer counties. Services include emergency, 24-hour inpatient care, diagnostic imaging, rehabilitation, specialty and ancillary services.

**OSF Home Care and Hospice**

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

## APPENDIX 7: PRIORITIZATION METHODOLOGY

### 5-Step Prioritization of Community Health Issues

**Step 1.** Review Data for Potential Health Issues

**Step 2.** Briefly Discuss Relationships Among Issues

**Step 3.** Apply “PEARL” Test from Hanlon Method<sup>3</sup>

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

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

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