# Community Health Needs Assessment 2016

**OSF ST. FRANCIS HOSPITAL & MEDICAL GROUP**

DELTA COUNTY

## TABLE OF CONTENTS


# Community Health Needs Assessment

July 2016

*Collaboration for sustaining health equity*

# Executive Summary

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

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

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

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

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

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

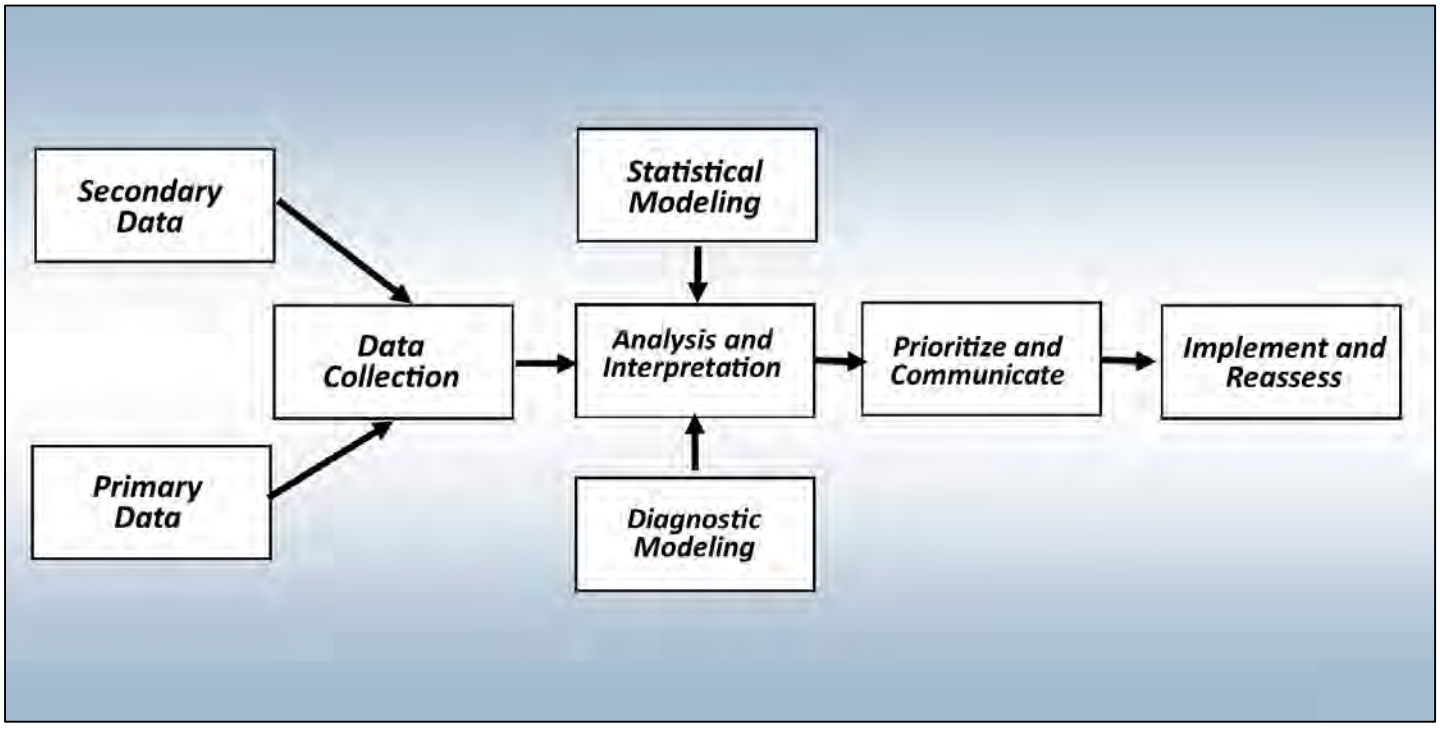
# I. INTRODUCTION

**Background**

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

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

**Figure 1. Community Health Needs Assessment Framework**




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

In order to engage the entire community in the CHNA process, a collaborative team of health-professional experts and key community advocates was created. Members of the collaborative team

were carefully selected to ensure representation of the broad interests of the community. Specifically, team members included representatives from OSF Saint Francis Hospital and Medical Group, members of the Delta County Health Department, and administrators from key community partner organizations. Engagement occurred throughout the entire process, resulting in shared ownership of the assessment. The entire collaborative team met in April and July 2015 and in the first quarter of 2016. Additionally, numerous meetings were held between the facilitators and specific individuals during the process.

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

**Definition of the Community**

In order to determine the geographic boundaries for OSF Saint Francis Hospital and Medical Group, analyses were completed to identify what percentage of inpatient and outpatient activity was represented by Delta County. Data show that Delta County alone represents 87% of all patients for the hospital.

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

**Purpose of the Community Health-Needs Assessment**

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

**Community Feedback from Previous Assessments**

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

**Summary of 2013 CHNA Identified Health Needs and Implementation Plans**

The 2013 CHNA for Delta County identified five significant health needs. These included: community misperceptions, diabetes, mental health, obesity and substance abuse. Specific actions were taken to address these needs. Detailed discussions of goals and strategies to improve these health needs can be seen in Appendix 2.

# II. METHODS

To complete the comprehensive community health-needs assessment, multiple sources were examined. Secondary statistical data were used to assess the community profile, morbidity rates and causes of mortality. Additionally, based on a sample of 726 survey respondents from Delta County, a study was completed to examine perceptions of the community health issues, unhealthy behaviors, issues with quality of life, healthy behaviors and access to healthcare.

## Secondary Data for the Community Health Needs Assessment

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

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

## Primary Data Collection

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

## A. Survey Instrument Design

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

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

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

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

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

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

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

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

## B. Sample Size

In order to identify our potential population, we first identified the percentage of the Delta 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 Delta County was 17.2 percent in 2014. The population used for the calculation was 36,559, yielding a total of 6,295 residents living in poverty in the Delta County area.

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

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

where:

$n$ = the required sample size

N = the population size

$pq$ = population proportions (set at .05)

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

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

For the total Delta County area, the minimum sample size for those living in poverty was 259. Note that for *aggregated* analyses (combination of at-risk and general populations); an additional 269 random surveys were needed from those not living in poverty in order to properly represent the views of the population in Delta County.

The data collection effort for this CHNA yielded a total of 726 usable responses. This met the threshold of the desired 90% confidence interval.

To provide a representative profile when assessing the aggregated population for the Delta County region, the general population was combined with a portion of the at-risk population. To represent the at-risk population as a percentage of the aggregate population, a random-number generator was used to select at-risk cases to include in the general sample. This provided a total usable sample of 528 respondents for analyzing the aggregate population. Sample characteristics can be seen in Appendix 4.

## C. Data Collection

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

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

## D. Data Integrity

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

## E. Analytic Techniques

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

CHAPTER 1 OUTLINE



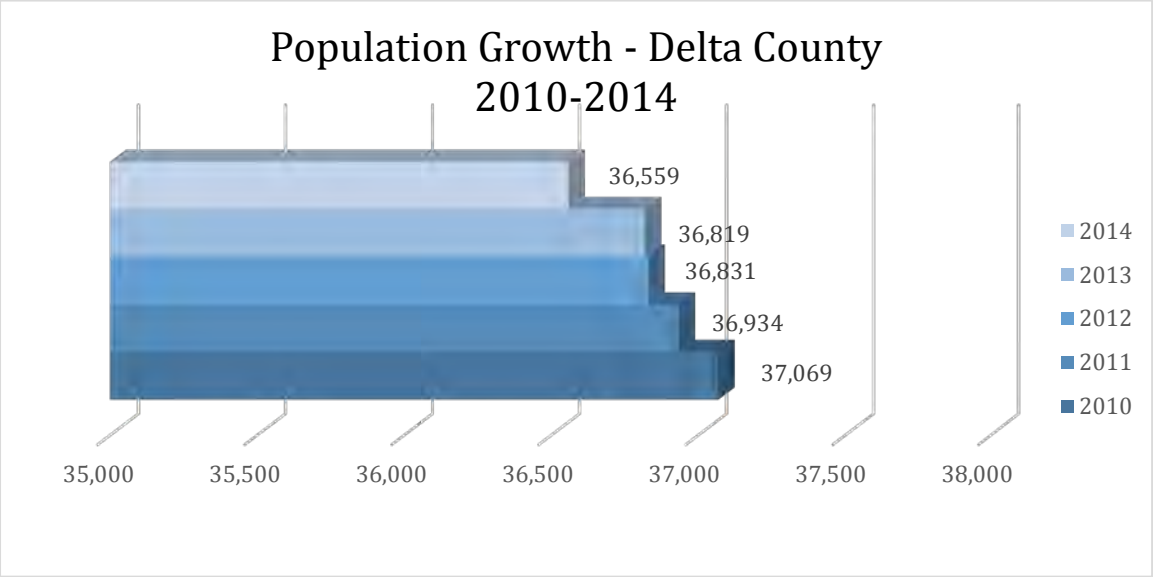
# CHAPTER 1. DEMOGRAPHIC PROFILE

## 1.1 Population

*Importance of the measure:* Population data characterize individuals residing in Delta 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 Delta County has slightly decreased (1.4%) between 2010 and 2014.



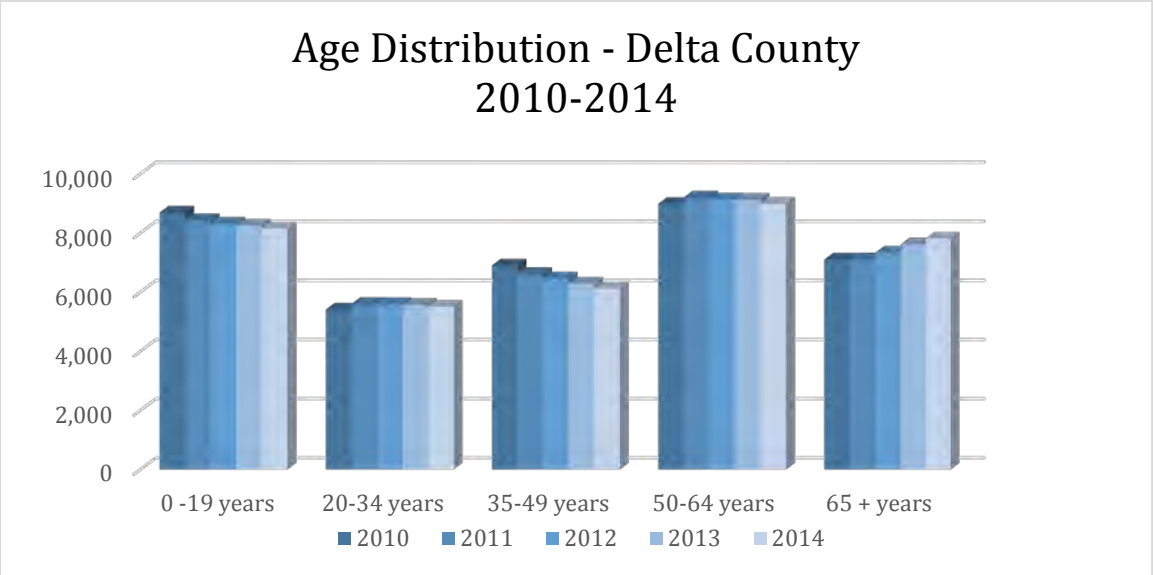

*Source: US Census*

# 1.2 Age, Gender and Race Distribution

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

## Age

As indicated in the graph below, individuals in Delta County aged 50-64 stayed stable between 2010 and 2014, despite a peak in 2011 of 9,200 residents. However, the largest increase has been for the segment of the population 65 years and older, increasing from 7,098 (2010) to 7,806 (2014).

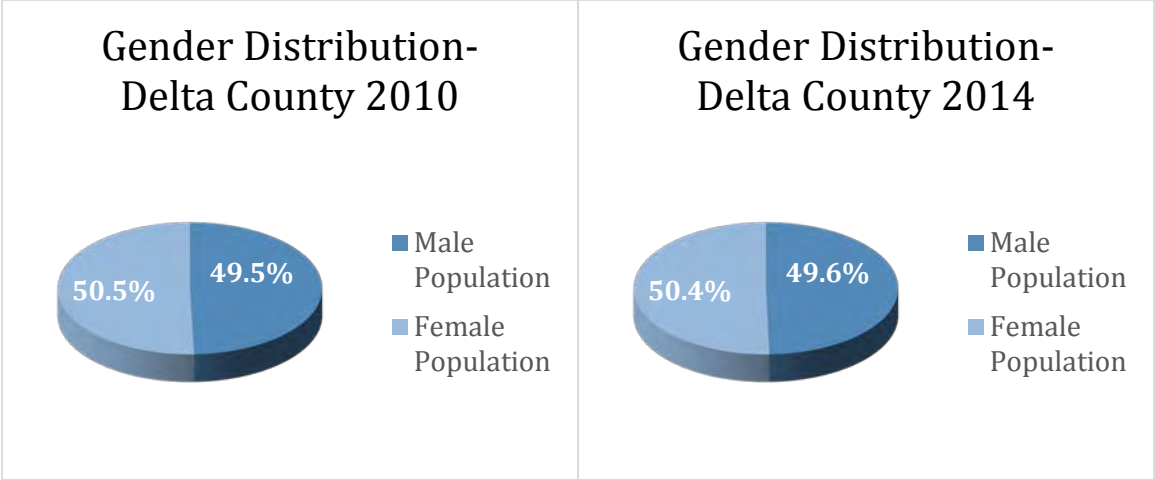



| Age | 2010 | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|---|
| 0 -19 years | 8,687 | 8,428 | 8,315 | 8,247 | 8,146 |
| 20-34 years | 5,406 | 5,595 | 5,592 | 5,561 | 5,499 |
| 35-49 years | 6,897 | 6,610 | 6,460 | 6,287 | 6,122 |
| 50-64 years | 8,981 | 9,200 | 9,133 | 9,118 | 8,986 |
| 65 + years | 7,098 | 7,101 | 7,331 | 7,606 | 7,806 |

*Source: US Census*

## Gender

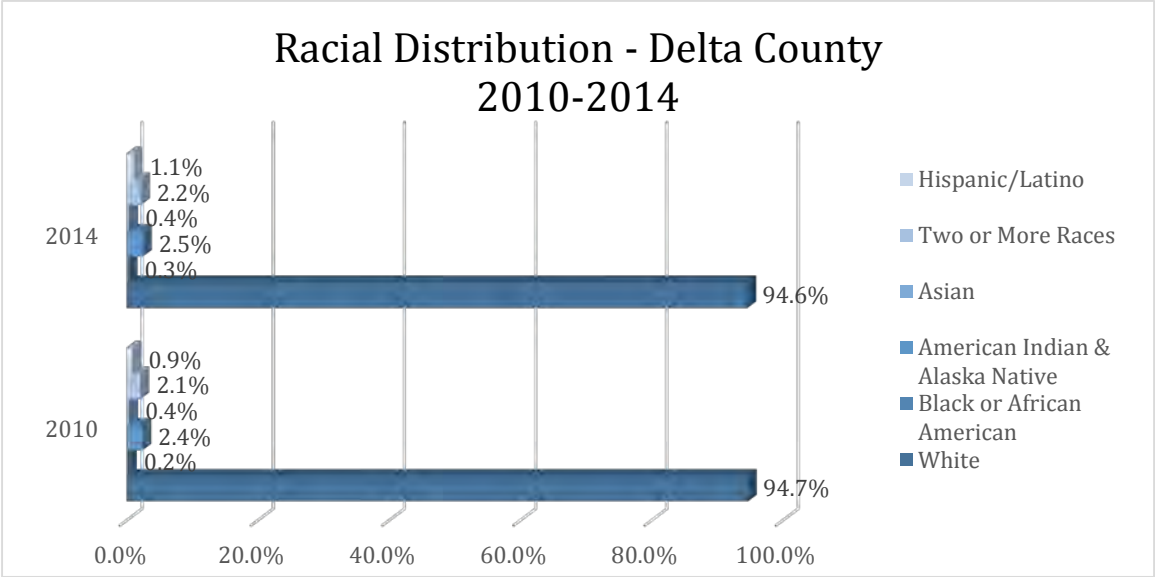
The gender distribution of Delta County residents has remained relatively consistent between 2010 and 2014.




*Source: US Census*

## Race

With regard to race and ethnic background, Delta County is largely homogenous. Data from 2014 suggest that Whites comprise nearly 95% of the population in Delta County. The non-White population of Delta County has stayed quite stable (from 5.3% to 5.4% in 2014), with individuals identifying with American Indian and Alaska Native ethnicity comprising 2.5% of the population, and individuals identifying with Hispanic/Latino ethnicity comprising 1.1% of the population, increasing from 0.9% in 2010.

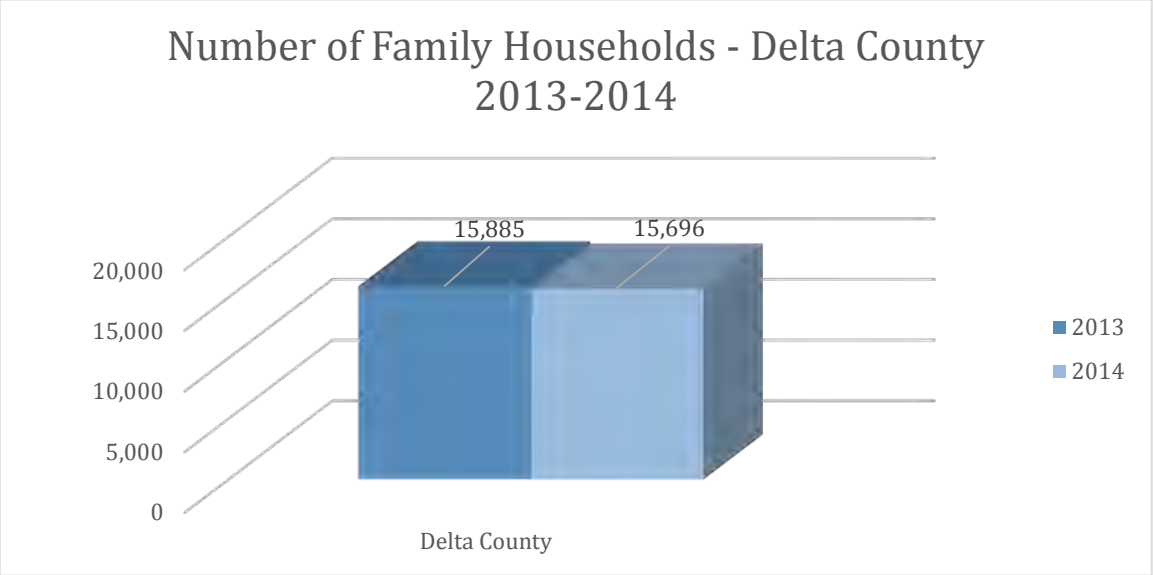



*Source: US Census*

# 1.3 Household/Family

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

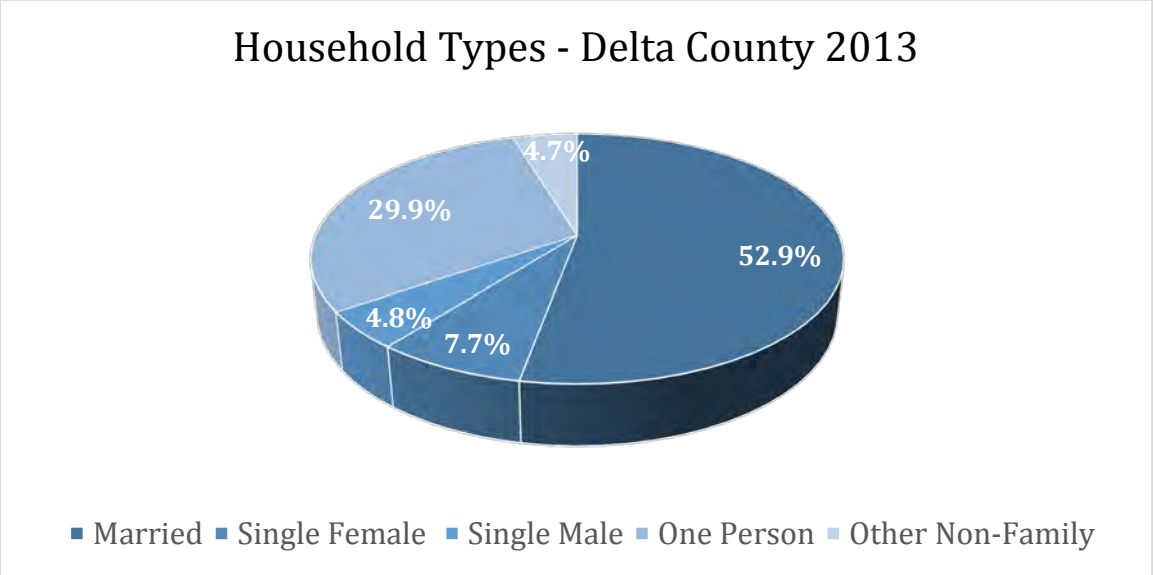
As indicated in the graph below, the number of family households within Delta County decreased by 1.2%.




*Source: US Census*

## Family Composition

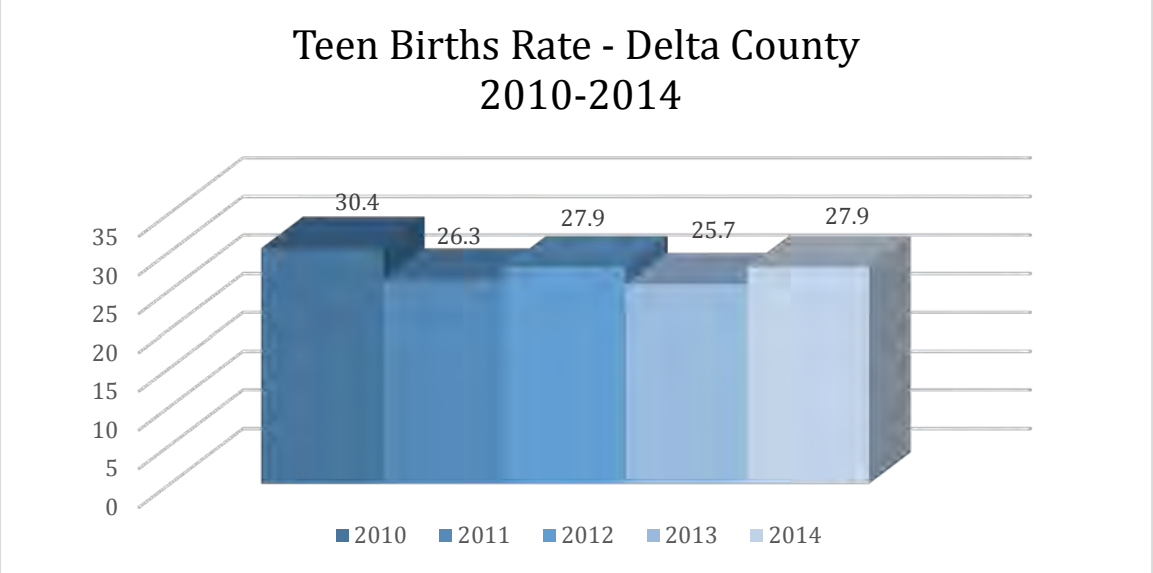
In Delta County, data suggest the percentage of two-parent families in Delta County is over 50%. One-person households represent 29.9% of the county population.




*Source: 2013 Statisticalatlas.com*

## Early Sexual Activity Leading to Births from Teenage Mothers

Delta County experienced a decrease in teenage birth rate per 100,000 women. Teen births are lower than the Michigan State average of 29.2 per 1,000 women.



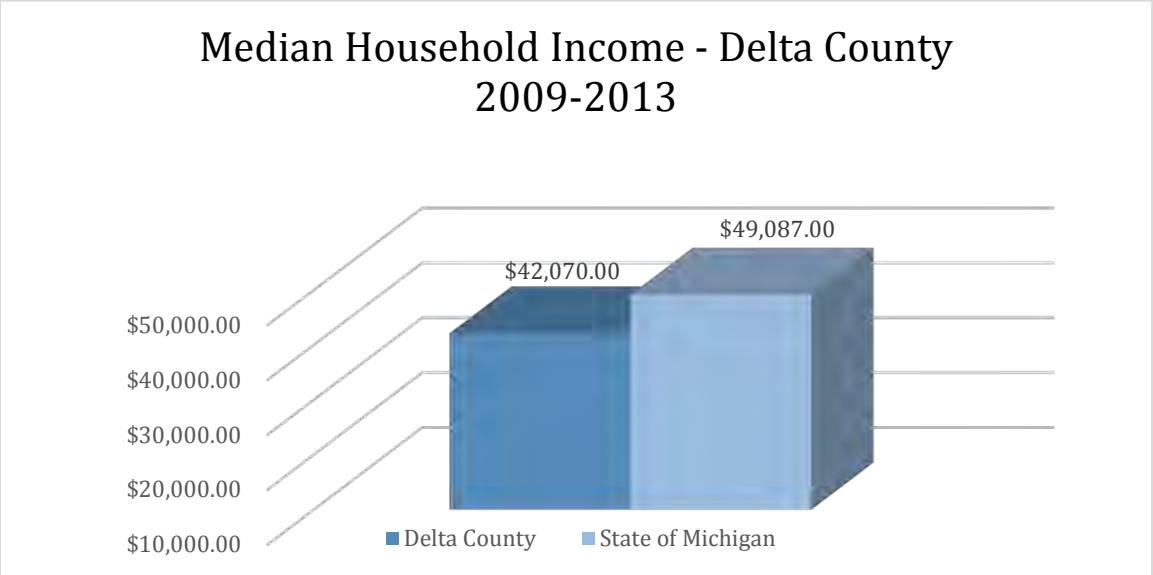

*Source: Michigan Department of Public Health*

# 1.4 Economic Information

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

## Median Income Level

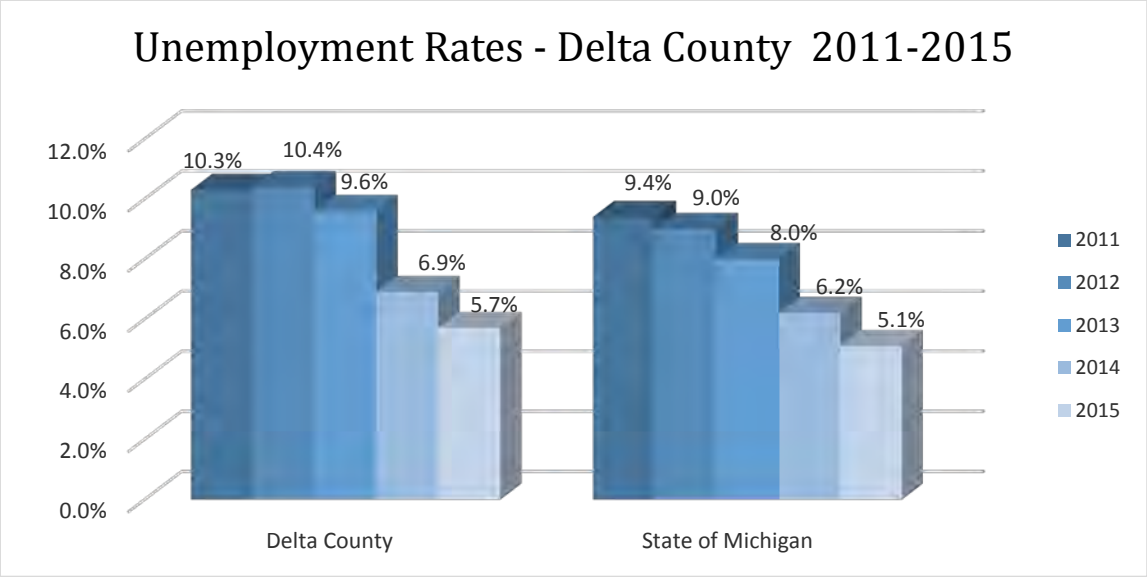
For 2009-2013, the median household income in Delta County was 16.6% lower than the State of Michigan.




*Source: US Census*

## Unemployment

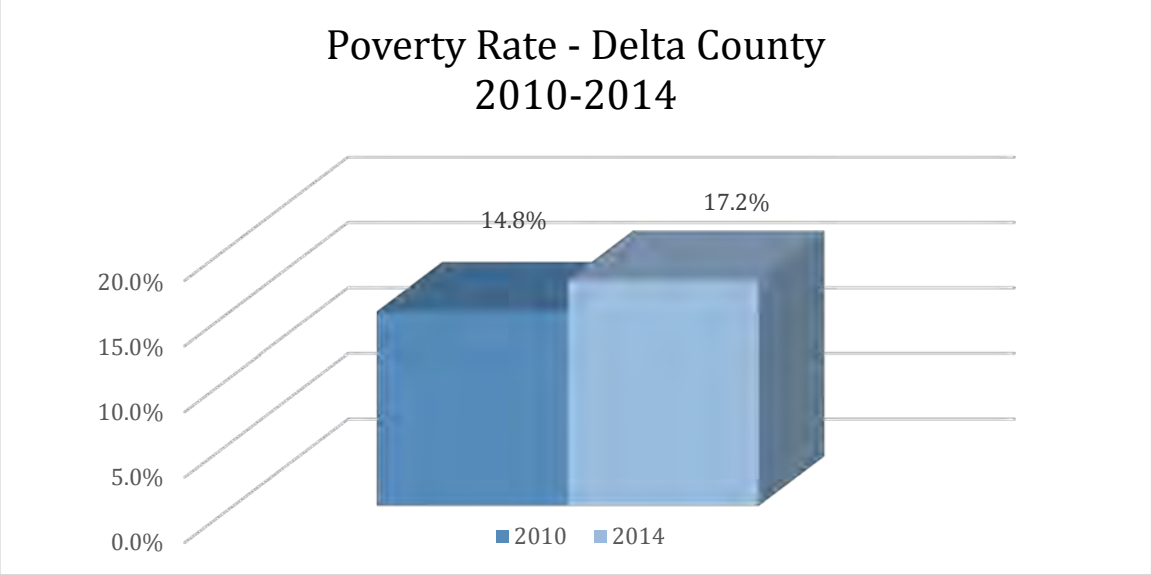
For the years 2011 to 2015, the Delta County unemployment rate has been higher than the State of Michigan unemployment rate. Between 2013 and 2015, unemployment decreased from 9.6% to 5.7%.




*Source: Bureau of Labor Statistics*

## Families in Poverty

Poverty has a significant impact on the development of children and youth. In Delta County, the percentage of families living in poverty between 2010 and 2014 increased. In Delta County, the overall poverty rate is 17.2%, which is higher than the State of Michigan poverty rate of 16.9%.



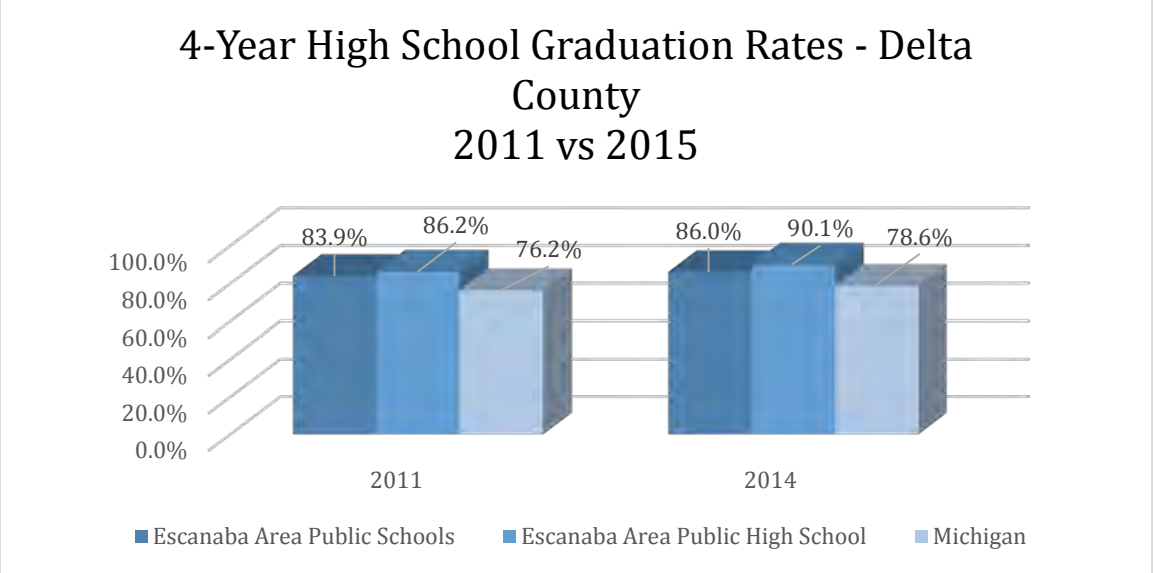

*Source: US Census*

# 1.5 Education

*Importance of the measure:* According to the National Center for Educational Statistics[1], "The better educated a person is, the more likely that person is to report being in 'excellent' or 'very good' health, regardless of income." Research suggests that the higher the level of educational attainment and the more successful one is in school, the better one's health will be and the greater likelihood of one selecting healthy lifestyle choices. Accordingly, years of education is strongly related to an individual's propensity to earn a higher salary, gain better employment, and foster multifaceted success in life.

## High School Graduation Rates

In 2015, both of the districts in Delta County reported high school graduation rates that were above the State average of 78.6%.




*Source: MI School Data*

[1] NCES 2005

## 1.6 Key Takeaways from Chapter 1

- ✓ **Population decreased over the last 5 years.**
- ✓ **Population is aging. The largest percentage increase is in residents over age 65**
- ✓ **Teen Births per 1,000 female population, ages 15-19 have decreased over the last three years and are below the average across the State of Michigan**
- ✓ **Single female head-of-house-household represents 7.7% of the population. Historically, this demographic increases the likelihood of families living in poverty**
- ✓ **Unemployment has decreased, but remains slightly higher than State averages**
- ✓ **Delta County school districts have higher graduation rates than the State average**

CHAPTER 2 OUTLINE



# CHAPTER 2. PREVENTION BEHAVIORS

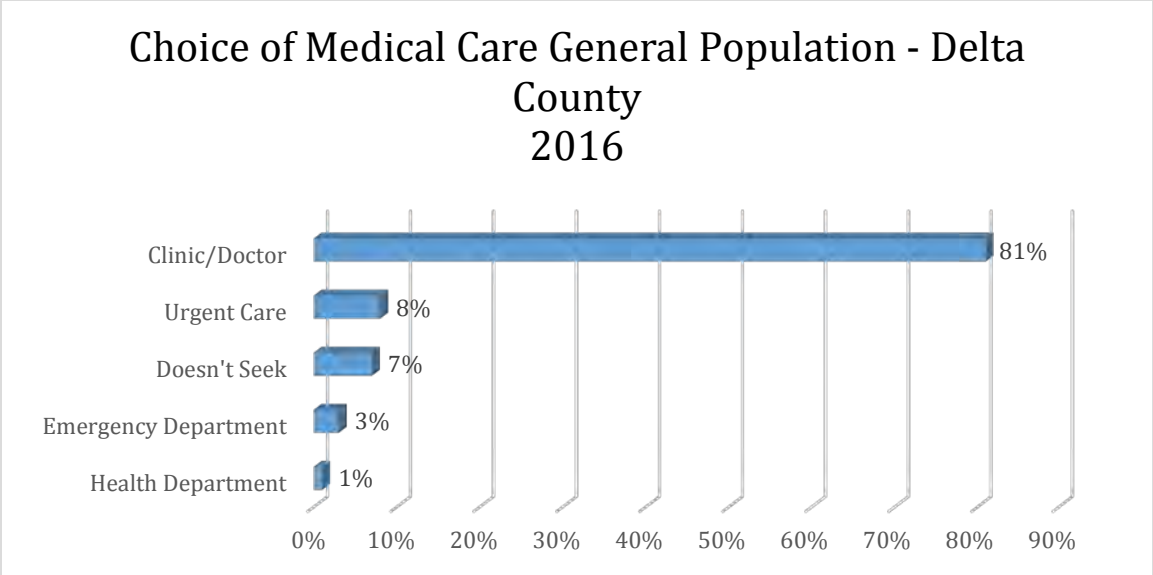
## 2.1 Accessibility

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

### Choice of Medical Care

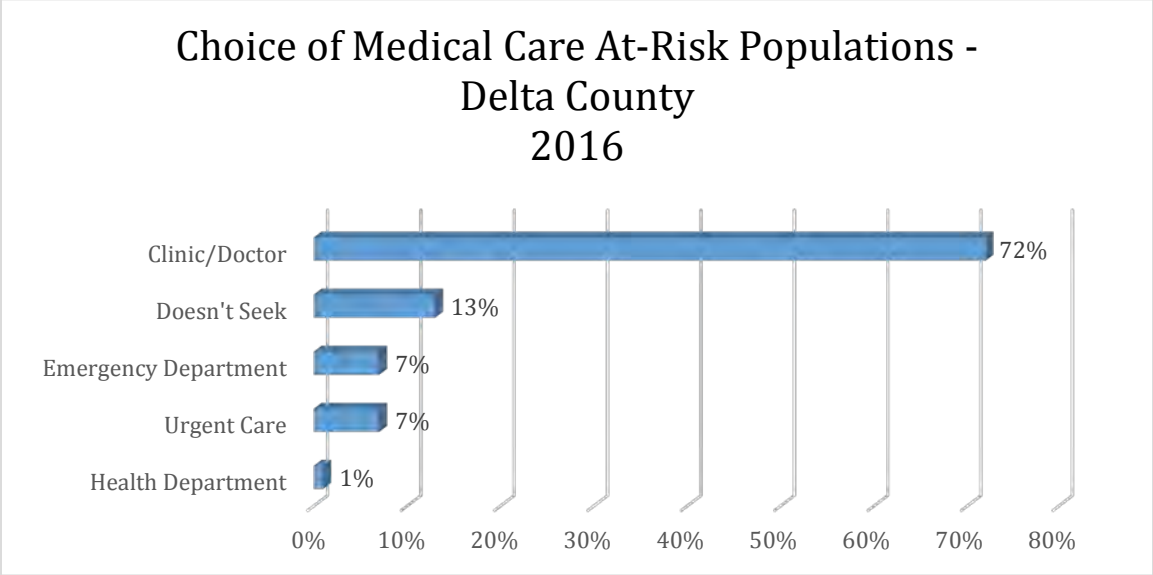
Survey respondents were asked to select the type of healthcare facility used when sick. Six different alternatives were presented, including clinic or doctor's office, emergency department, urgent-care facility, health department, no medical treatment, and other. The modified sample of 528 respondents was used for general population in order to more accurately reflect the demographic characteristics for Delta County.

The most common response for source of medical care was clinic/doctor's office, chosen by 81% of survey respondents. This was followed by urgent care (8%), not seeking medical attention (7%), the emergency department at a hospital (3%), and the health department (1%). This distribution of facility choice is quite different from more urban locations in the OSF system, where there has been more significant usage of urgent care facilities. This may be a result of the relatively small number of urgent care facilities in Delta County.




*Source: CHNA Survey*

For the at-risk population, the most common response for choice of medical care was also clinic/doctor's office (72%). This was followed by not seeking medical attention (13%), the emergency department at a hospital (7%), urgent care facilities (7%), and the health department (1%).




*Source: CHNA Survey*

### Demographic Factors Related to Choice of Medical Care

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

**Clinic/Doctor's Office** tends to be used more often by women, older people and those with White ethnicity and higher income. Clinic/Doctor's Office is chosen less often by Native Americans and homeless people.

**Urgent Care** is used more often by younger people.

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

**Do Not Seek Medical Care** is chosen more often by younger people, those with low income, and homeless people

**Health Department** is chosen most often by the Native American population.

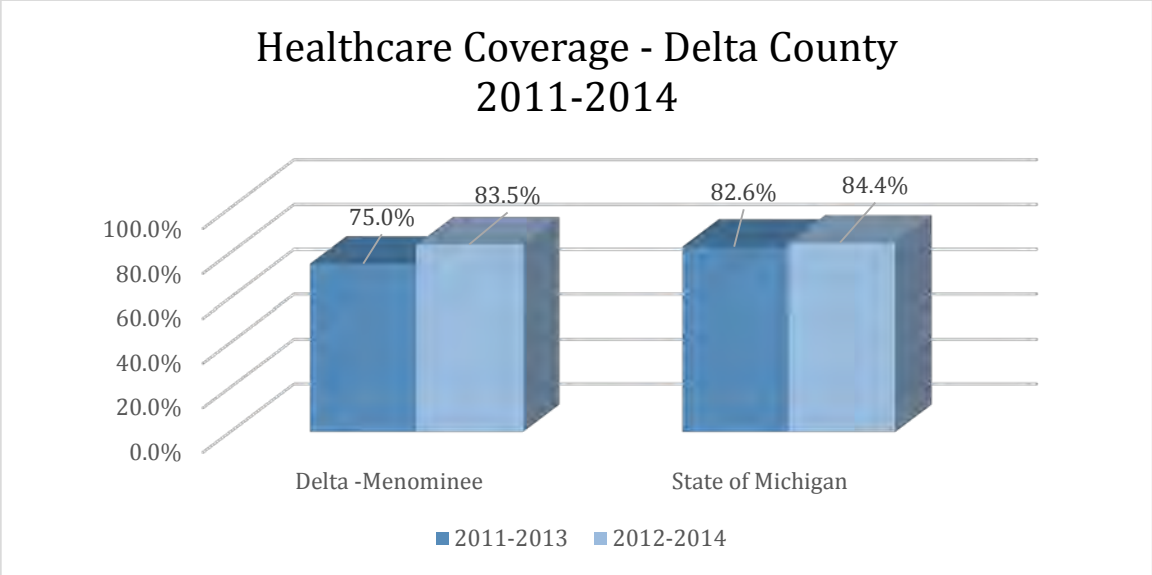
#### *Comparison to 2013 CHNA Data*

Compared to Delta 2013 CHNA survey data, for the general population, there was a significant increase in use of clinic/doctor's office, from 71% to 81%, which resulted in a lower percentage of people choosing not to seek care altogether or choosing to seek care in an emergency department.

For the at-risk population, there was also an increase in use of clinic/doctor's office, from 60% to 72%, with an associated decrease in ED usage from 11% to 7%. However, there was a significant increase in people that did not seek medical attention when needed from 2% in 2013 to 13% in 2016 for the at-risk population.

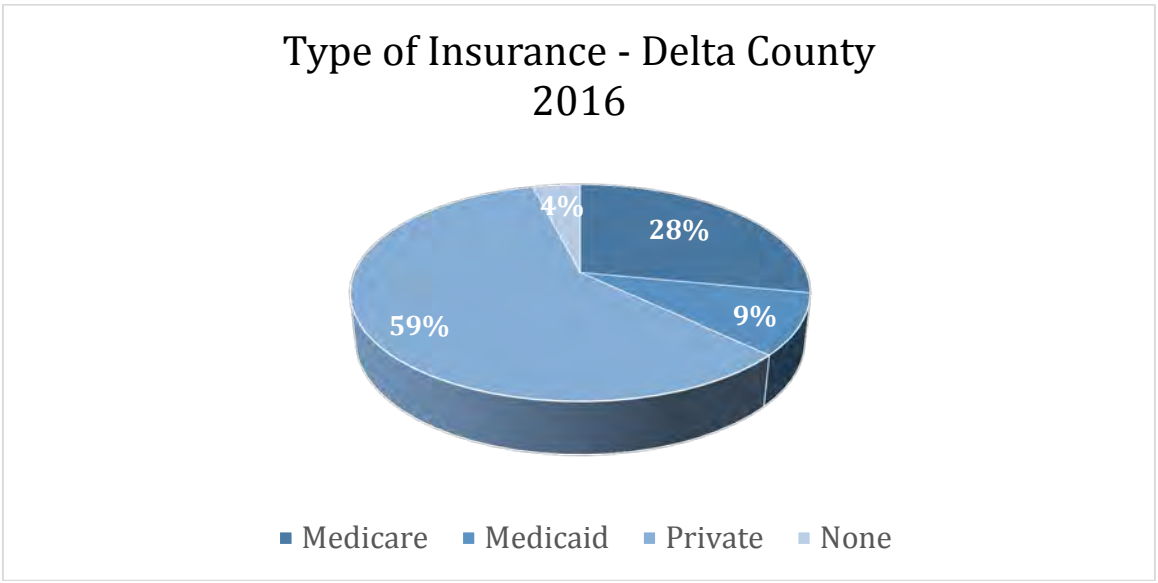
## Insurance Coverage

With regard to medical insurance coverage, data gathered from the Michigan Behavioral Risk Factor Surveillance System show that residents in Delta County possess healthcare coverage at a slightly lower rate (83.5%) compared to the State of Michigan (84.4%).



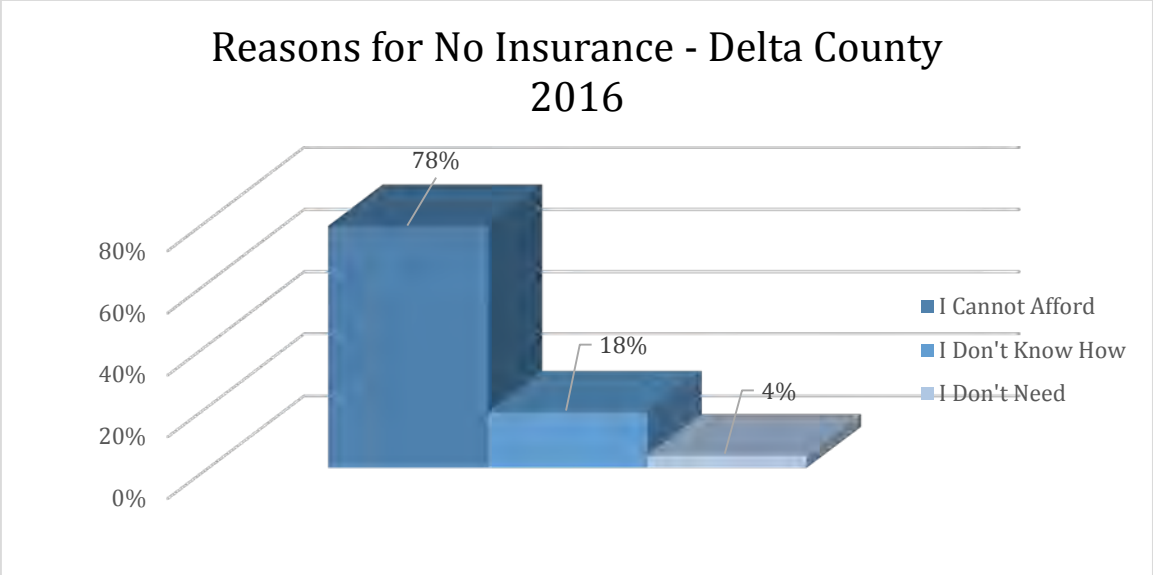

*Source: Michigan Behavioral Risk Factor Surveillance System*

A more precise analysis for insurance coverage is possible with data from the CHNA survey. According to survey data, 59% of the residents in Delta County are covered by private insurance.




*Source: CHNA Survey*

Data from the survey show that for the 4% of individuals who do not have insurance, the most common reason was cost.




*Source: CHNA Survey*

### *Demographic Factors Related to Type of Insurance*

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

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

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

**Private Insurance** is used more often by women, younger people, White people, and those with higher education and income.

**No Insurance** tends to be reported more often by men, younger people, Native American people, and those with lower income.

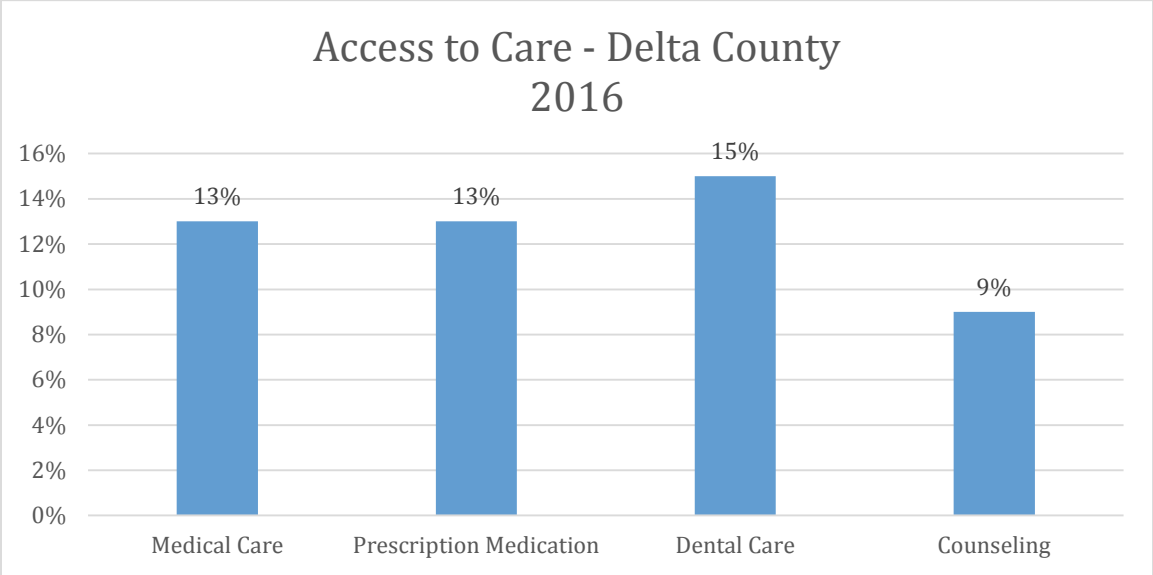
### *Comparison to 2013 CHNA Data*

Compared to survey data from the 2013 CHNA, there has been a significant increase in those with private insurance (45% to 58%), and a slight increase in Medicare (26% to 28%). There has been a marked decrease in those individuals who have no insurance, from 17% to 4%.

## Access to Care

In the CHNA survey, respondents were asked, "Was there a time when you needed care but were not able to get it?" Access to four types of care were assessed: medical care, prescription medications, dental care and counseling. Survey results show that 13% of the population did not have access to

medical care when needed; 13% of the population did not have access to prescription medications when needed; 15% of the population did not have access to dental care when needed; and 9% of the population did not have access to counseling when needed.




*Source: CHNA Survey*

### *Demographic Factors Related to Access to Care*

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

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

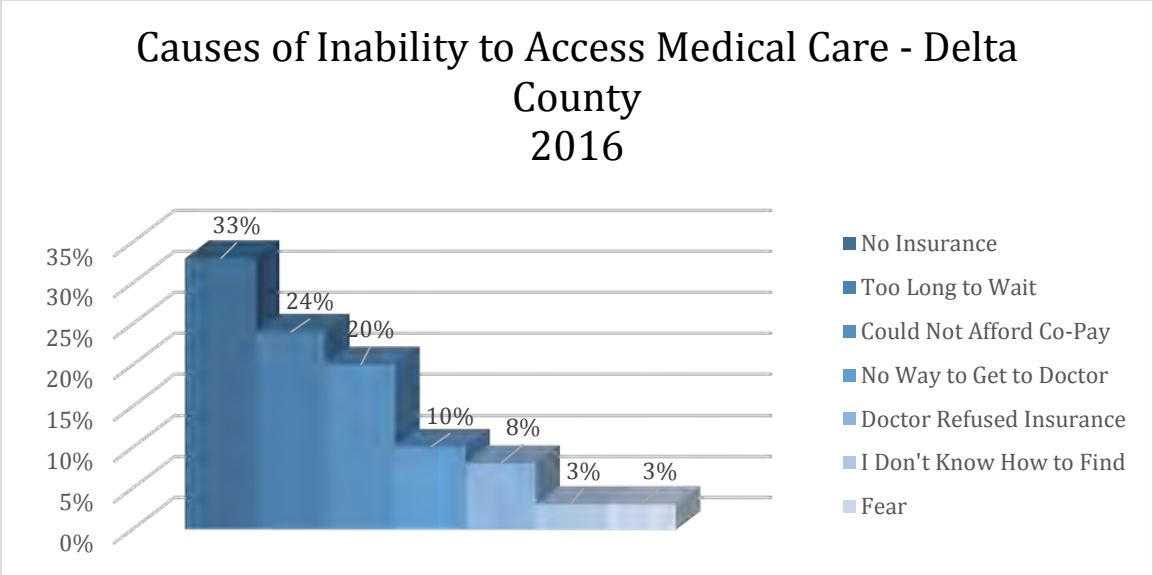
**Access to prescription medications** tends to be higher for people with higher income.

**Access to dental care** tends to be higher for older people, and those with higher education and higher income. Homeless people are less likely to have access to dental care.

**Access to counseling** is reported less often by homeless individuals.

### *Reasons for No Access – Medical Care*

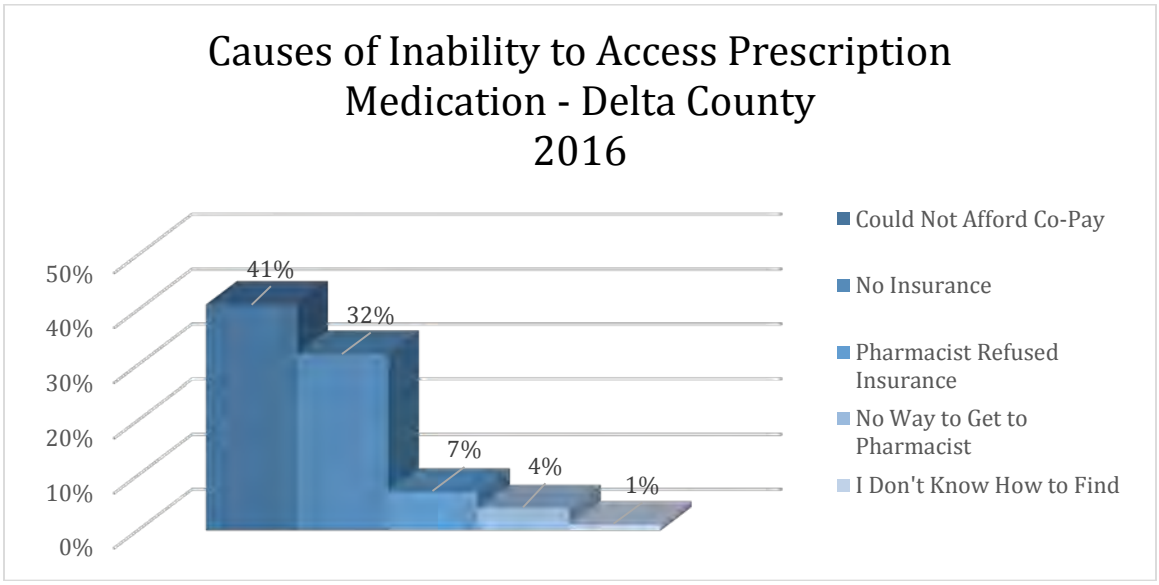
Survey respondents who reported they were not able to get medical care when needed were asked a follow-up question. The leading causes of the inability to gain access to medical care were no insurance (33%), too long to wait for an appointment (24%), and the inability to afford a copay (20%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.




*Source: CHNA Survey*

***Reasons for No Access – Prescription Medication***

Survey respondents who reported they were not able to get prescription medications when needed were asked a follow-up question. In Delta County, the leading causes of the inability to gain access to prescription medicine were the inability to afford copayments or deductibles (41%) and no insurance (32%). Note that total percentages do not equal 100% as respondents could choose more than one answer or did not respond to the question.

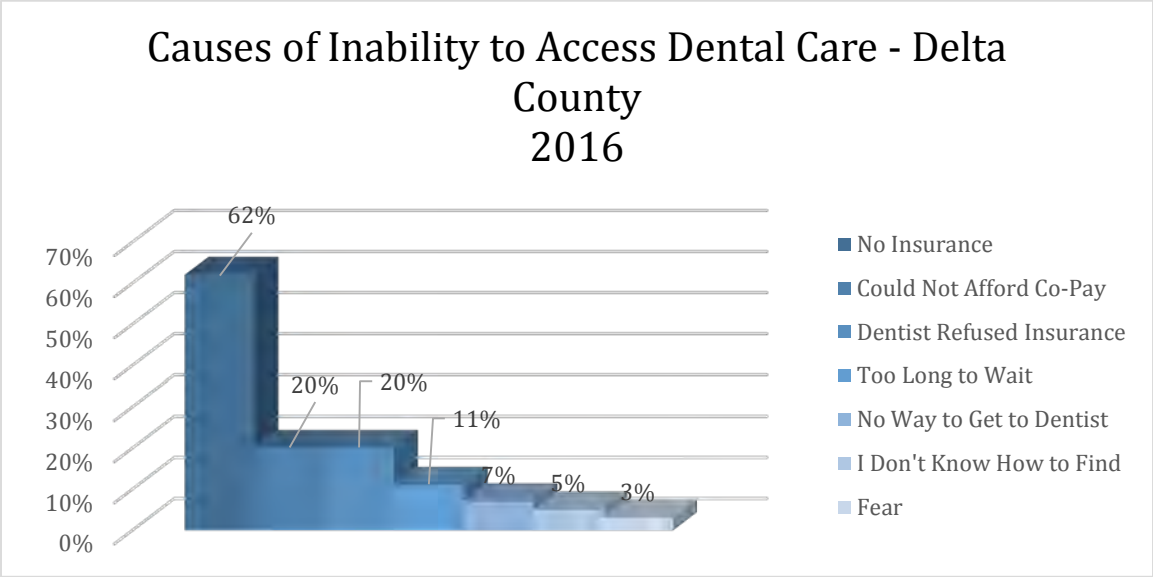



*Source: CHNA Survey*

***Reasons for No Access – Dental Care***

Survey respondents who reported they were not able to get dental care when needed were asked a follow-up question. The leading causes of inability to gain access to dental care were no insurance (62%), and the inability to afford copayments or deductibles (20%) and the dentist's refusal of

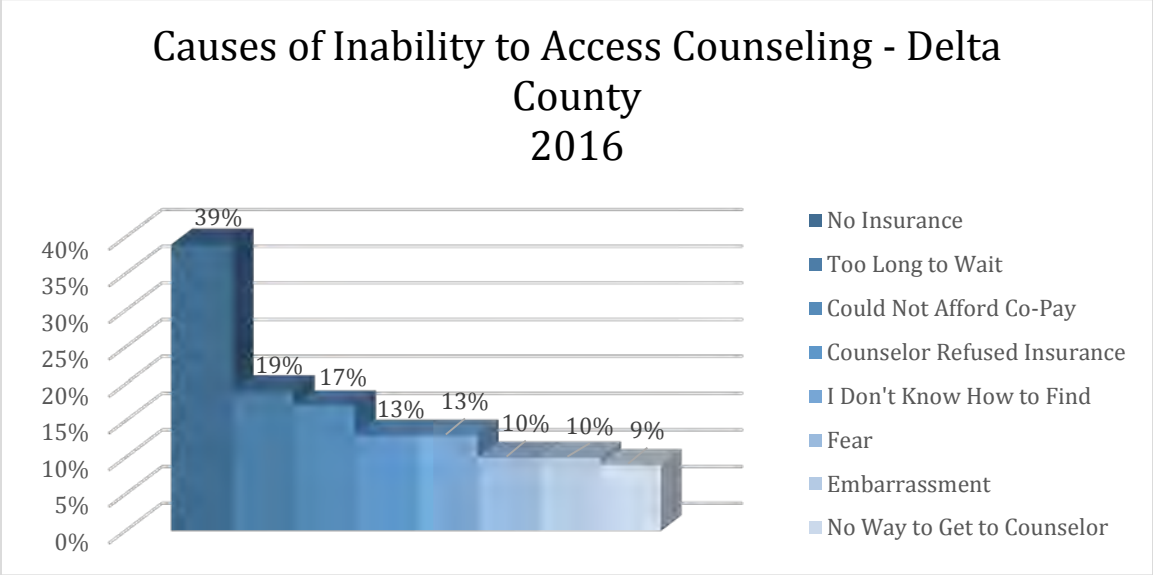
insurance (20%). Note that total percentages do not equal 100% as respondents could choose more than one answer.




*Source: CHNA Survey*

***Reasons for No Access – Counseling***

Survey respondents who reported they were not able to get counseling when needed were asked a follow-up question. In Delta County, the leading causes of the inability to gain access to counseling were the lack of insurance (39%), too long to wait (19%), inability to afford co-pay (17%), the counselor's refusal of insurance (13%), and the inability to find a counselor (13%). Note that total percentages do not equal 100% as respondents could choose more than one answer.




*Source: CHNA Survey*

***Comparisons to 2013 CHNA Data***

**Access to Medical Care** – Compared to 2013, survey results show an increase in those that were able to get medical care when they needed it. In 2013, 81% of residents were able to get medical care when needed. In 2016, the percentage increased to 87%.

**Access to Prescriptions Medication** – Compared to 2013, survey results show an increase in those that were able to get prescription medications when they needed it. In 2013, 79% of residents were able to get prescription medications when needed. In 2016, the percentage increased to 87%.

**Access to Dental Care** – Compared to 2013, results show an increase in those that were able to access dental care when needed. In 2013, 73% of residents were able to get dental care when needed. In 2016, the percentage increased to 85%.

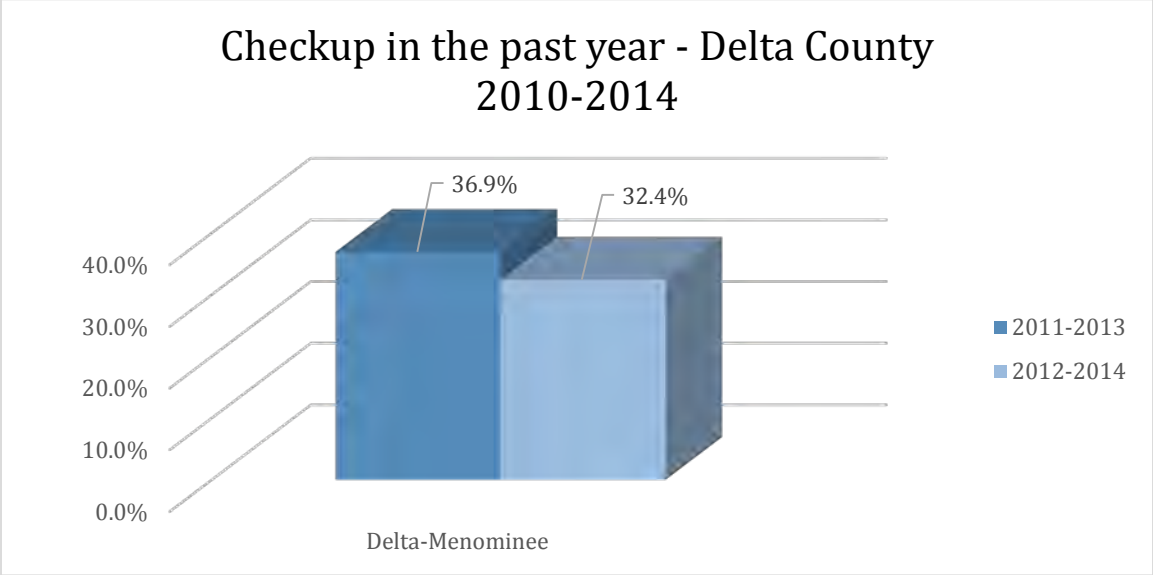
**Access to Counseling** – Compared to 2013, there was an increase in access to counseling. In 2013, 88% of respondents had access to counseling when needed, compared to 91% in 2016.

# 2.2 Wellness

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

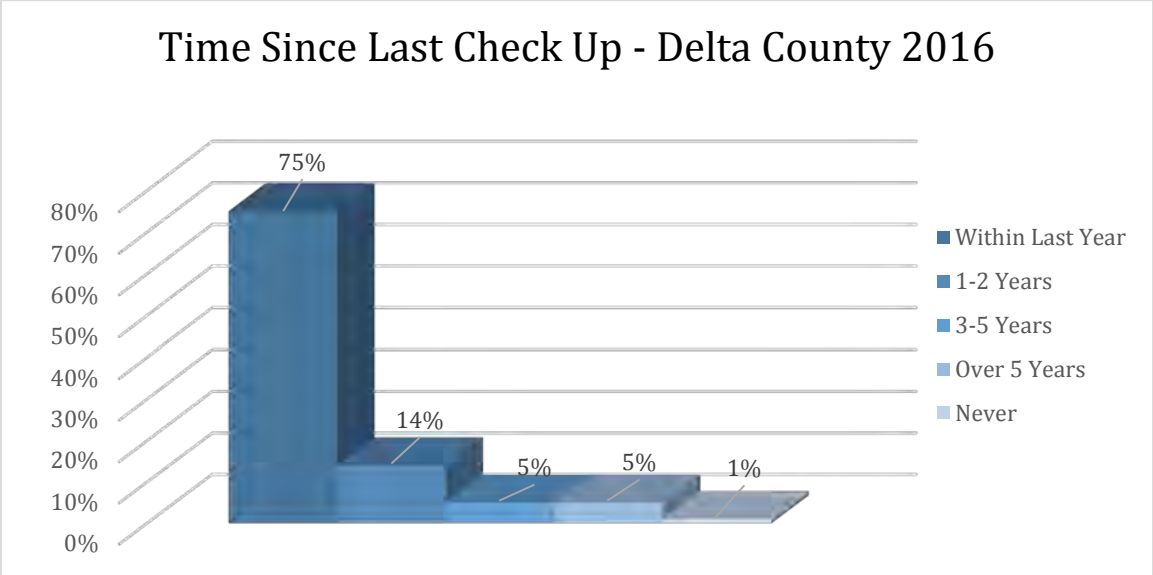
## Frequency of Checkup

Numerous health problems can be minimized when detected early. Therefore, regularly scheduled checkups can be very important. According to the latest data from the Michigan BRFSS, 32.4% of residents in Delta County report having had a routine checkup within the last year.




*Source: Michigan Behavioral Risk Factor Surveillance System*

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



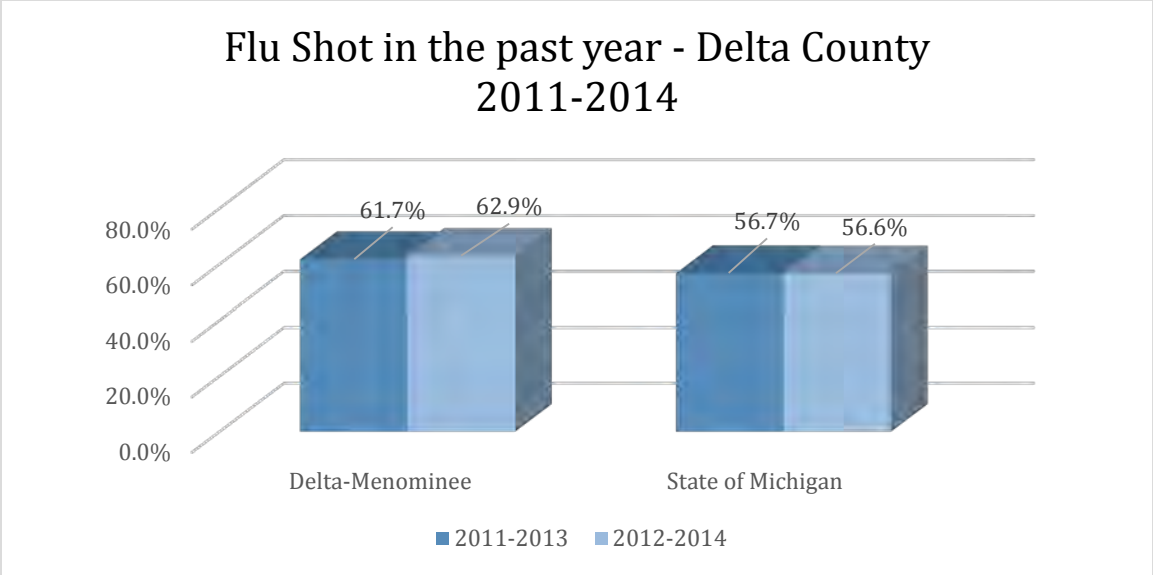

*Source: CHNA Survey Data*

***Comparison to 2013 CHNA Data***

There has been an increase in the percentage of residents who have had a checkup in the past year, from 68% in 2013 to 75% in 2016.

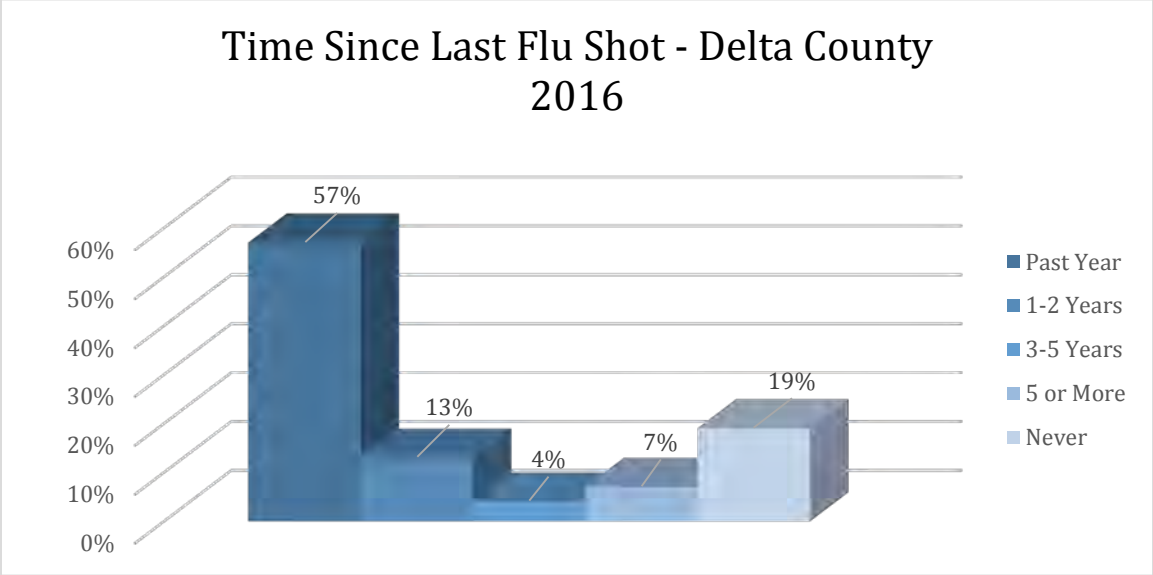
## Frequency of Flu Shots

The overall health of a community is impacted by preventative measures including immunizations and vaccinations. The chart below shows that the percentage of people who have had a flu shot in the past year is 61.7% for Delta County in 2011-2013 compared to 62.9% for 2012-2014. During the same timeframe, the State of Michigan held steady.




*Source: Michigan Behavioral Risk Factor Surveillance System*

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



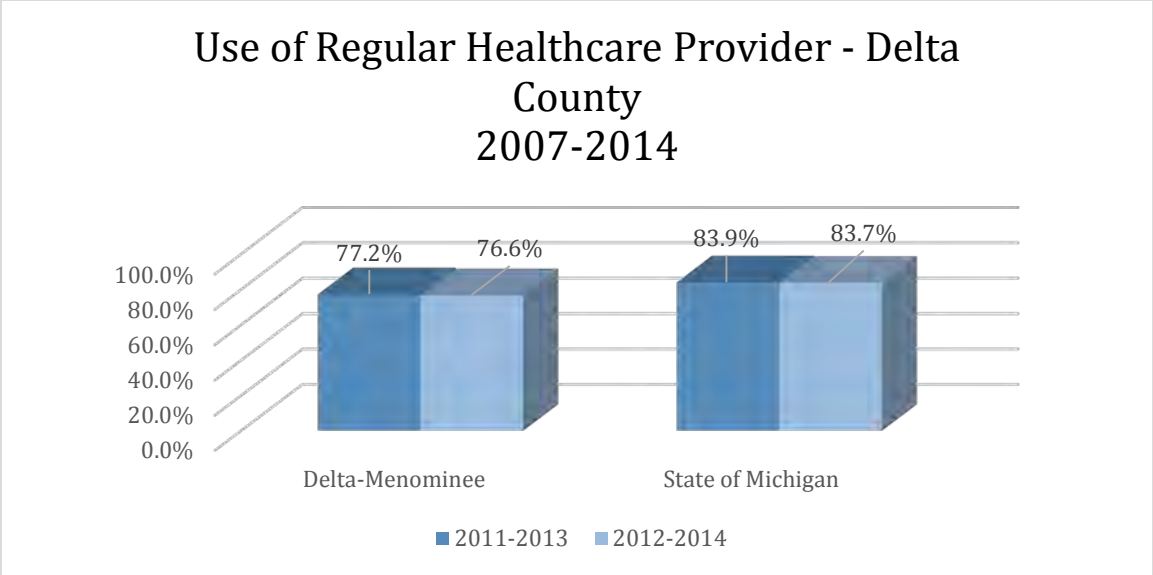

*Source: CHNA Survey*

***Comparison to 2013 CHNA Data***

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

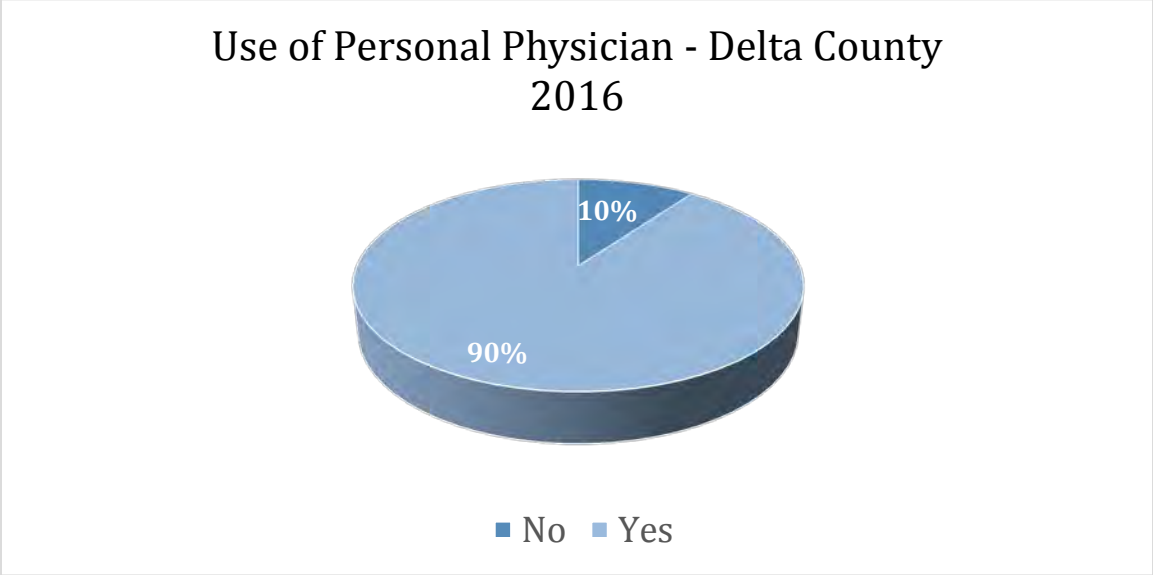
## Usual Healthcare Provider

In Delta County, the most recent secondary data indicate 76.6% of residents utilize a regular healthcare provider, down slightly from 2011-2013. The percentage of residents in Delta County reporting a usual healthcare provider is lower than the State of Michigan average, which fell slightly.




*Source: Michigan Behavioral Risk Factor Surveillance System*

Similarly, the CHNA survey asked respondents if they had a personal physician. Having a personal physician suggests that individuals are more likely to get wellness check-ups and less likely to use an emergency department as a primary healthcare service. According to survey data, 90% of residents have a personal physician.




*Source: CHNA Survey*

### *Comparison to 2013 CHNA Data*

The 2016 CHNA survey results for having a personal physician are higher compared to the 2013 CHNA. Specifically, 83% of residents reported a personal physician in 2013 and 90% report the same in 2016.

### *Demographic Factors Related to Wellness*

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

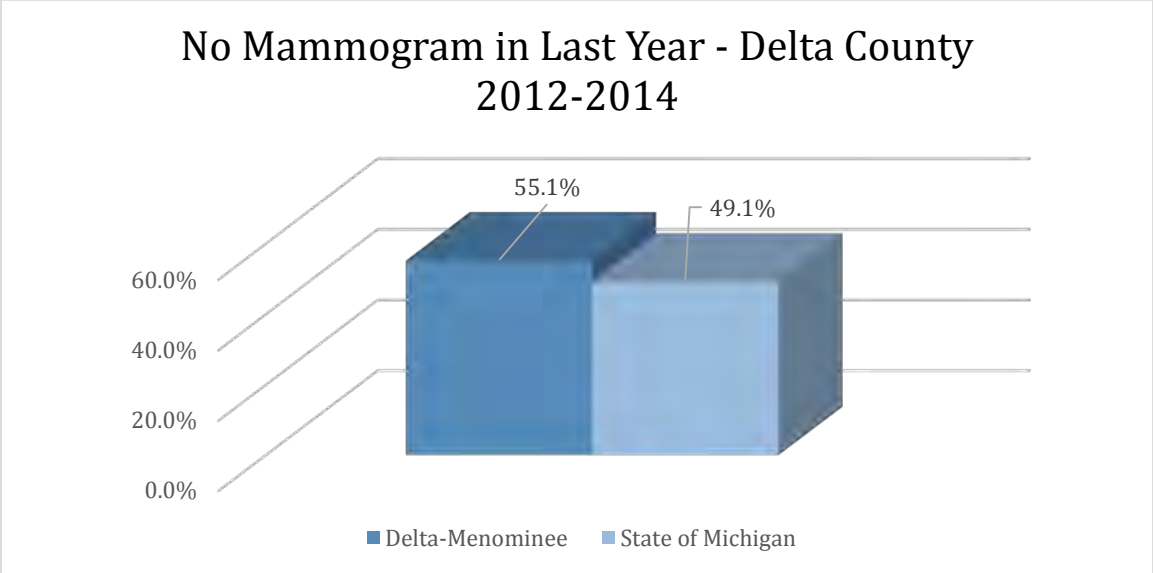
**Frequency of checkup** tends to be higher for older people and lower for homeless people.

**Frequency of flu shot** tends to be higher for older people, and lower for homeless people.

**Having a personal physician** tends to be higher for older people, and lower for homeless people.

## Women's Healthcare

Using the most recent available data from 2012-2014, 55.1% of residents from Delta County reported they had not had a mammogram within the last year.



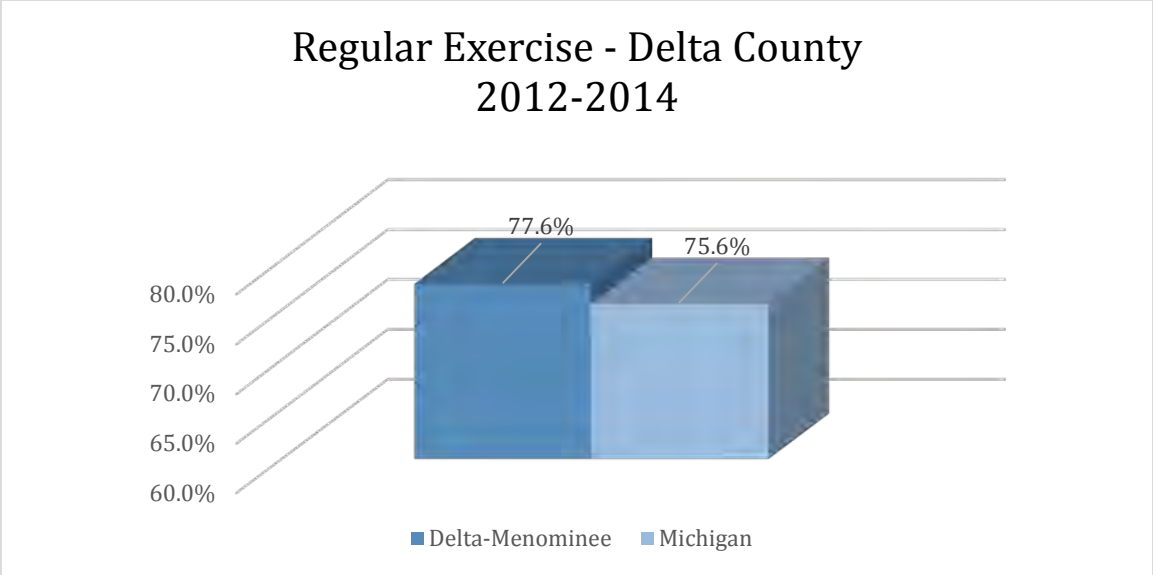

*Source: Michigan Behavioral Risk Factor Surveillance System*

## Healthy Lifestyle

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

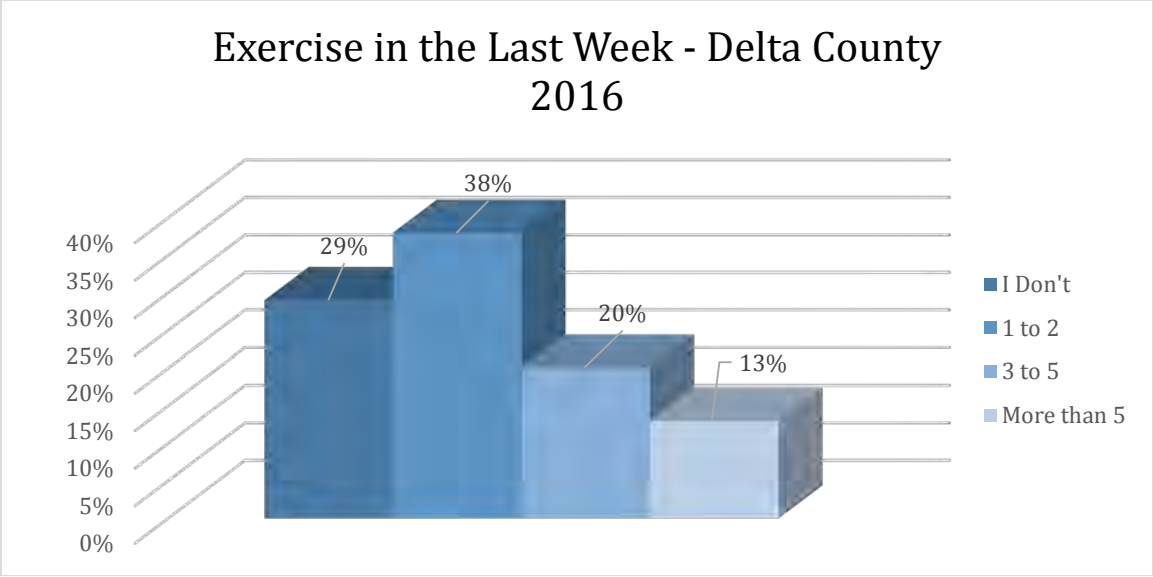
### *Physical Exercise*

According to recent data, 77.6% of the residents in Delta County exercise. The percentage of individuals who exercise in Delta County is higher than the State of Michigan.



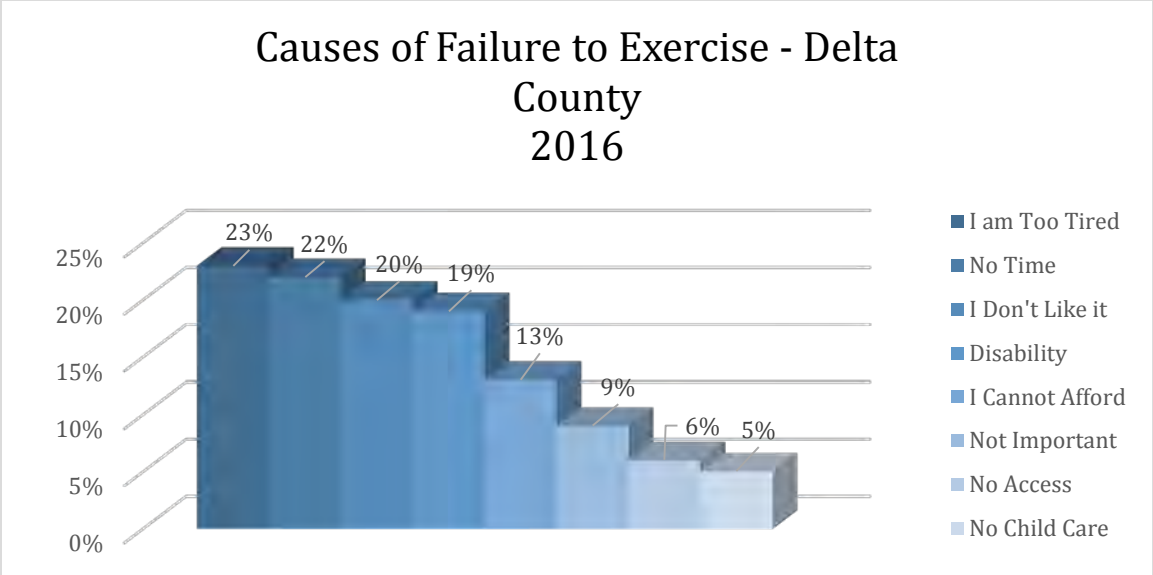

*Source: Michigan Behavioral Risk Factor Surveillance System*

CHNA survey data allow for a more detailed assessment of exercise. Specifically, 29% of respondents indicated that they do not exercise at all, while the largest percentage of residents exercise 1-2 times per week (38%).




*Source: CHNA Survey*

To find out why some residents do not exercise at all, a follow up question was asked. The most common reasons for not exercising are not having enough time or energy, a dislike of exercise, and disability.



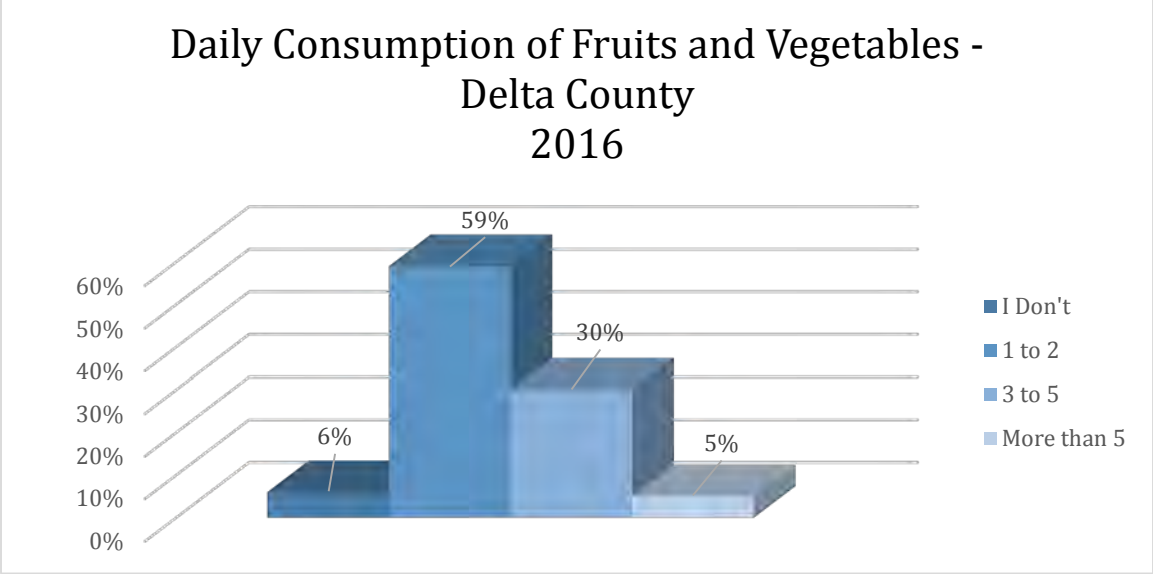

*Source: CHNA Survey*

### *Comparison to 2013 CHNA Data*

Exercise behaviors have improved; data from the 2013 CHNA indicated that 34% of survey respondents did not exercise. In 2016, 29% of respondents indicated they did not exercise.

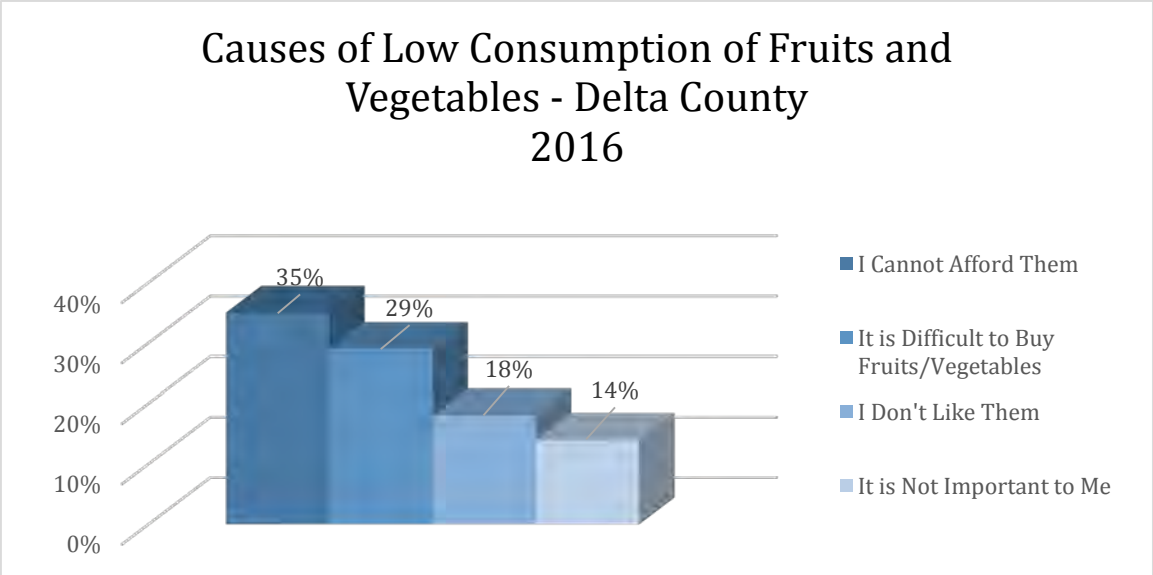
### *Healthy Eating*

Nutrition and diet are critical to preventative care. Well over half (65%) of Delta County residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of Delta County residents who consume five or more servings per day is only 5%.




*Source: CHNA Survey*

Those individuals who indicated they do not eat any fruits or vegetables were asked a follow up question. Reasons most frequently given for failing to eat more fruits and vegetables are the expense involved (35%), the difficulty to buy fruits and vegetables (29%), and a dislike of fruits and vegetables (18%).




*Source: CHNA Survey*

### *Comparison to 2013 CHNA Data*

Compared to the 2013 CHNA, healthy eating is improving. Specifically, in 2013, 72% of survey respondents ate two or fewer servings of fruits and vegetables per day. In 2016, 65% eat two or fewer servings of fruits and vegetables per day.

### *Demographic Factors Related to Healthy Lifestyle*

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

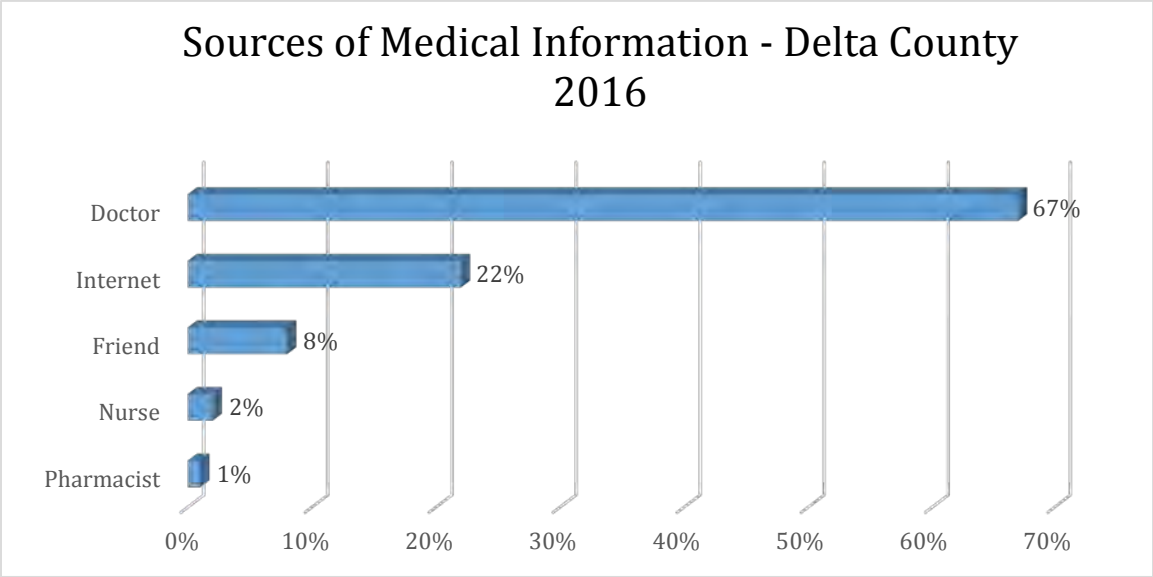
**Frequency of exercise** tends to be higher for Native American people, and people with higher education and income.

**Frequency of fruit and vegetable consumption** tends to be higher for women and people with higher education and higher income.

# 2.3 Access to Information

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

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




*Source: CHNA Survey*

### *Demographic Factors Related to Access to Information*

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

**Access to Information from a Doctor** tends to be higher for older people and White people. It is lower for homeless people.

**Access to Information from a Friend** does not show significant correlations.

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

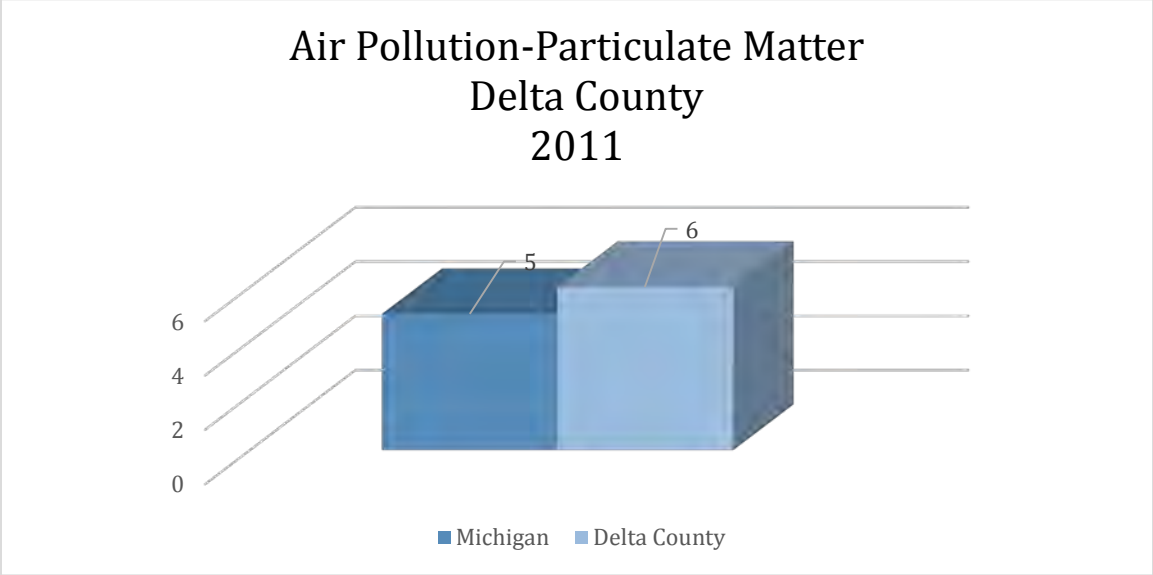
**Access to Information from a Pharmacy** does not show significant correlations.

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

# 2.4 Physical Environment

*Importance of the measure:*
According to the County Health Rankings, Air Pollution - Particulate Matter (APPM) is the average daily density of fine particulate matter in micrograms per cubic meter (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 Delta County (5) is lower than the State average of 6.



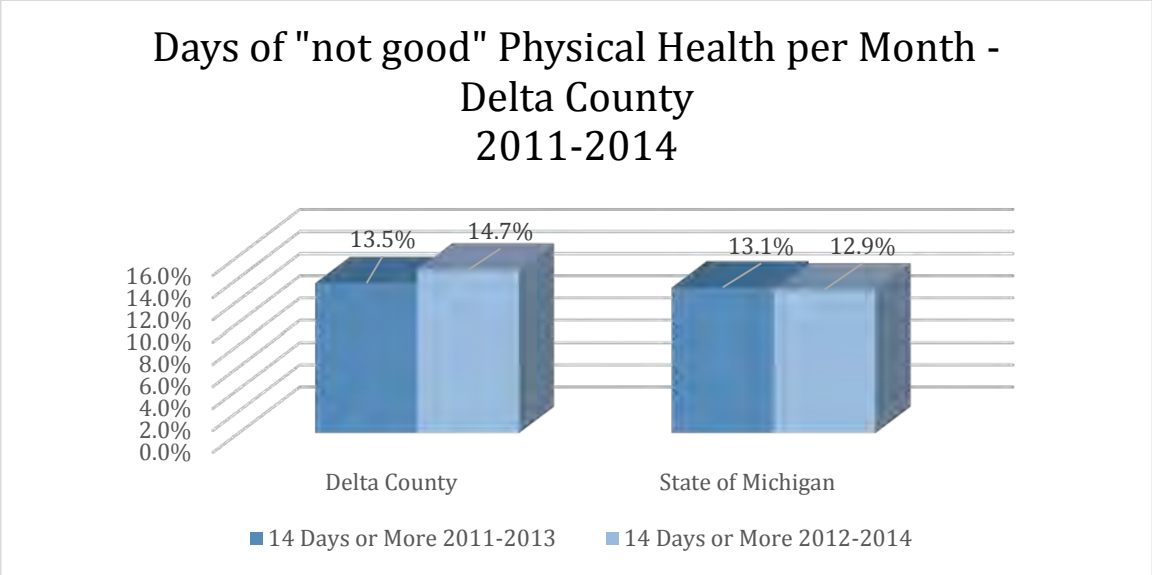

*Source: County Health Rankings 2011 Data*

# 2.5 Health Status

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

## Physical Health

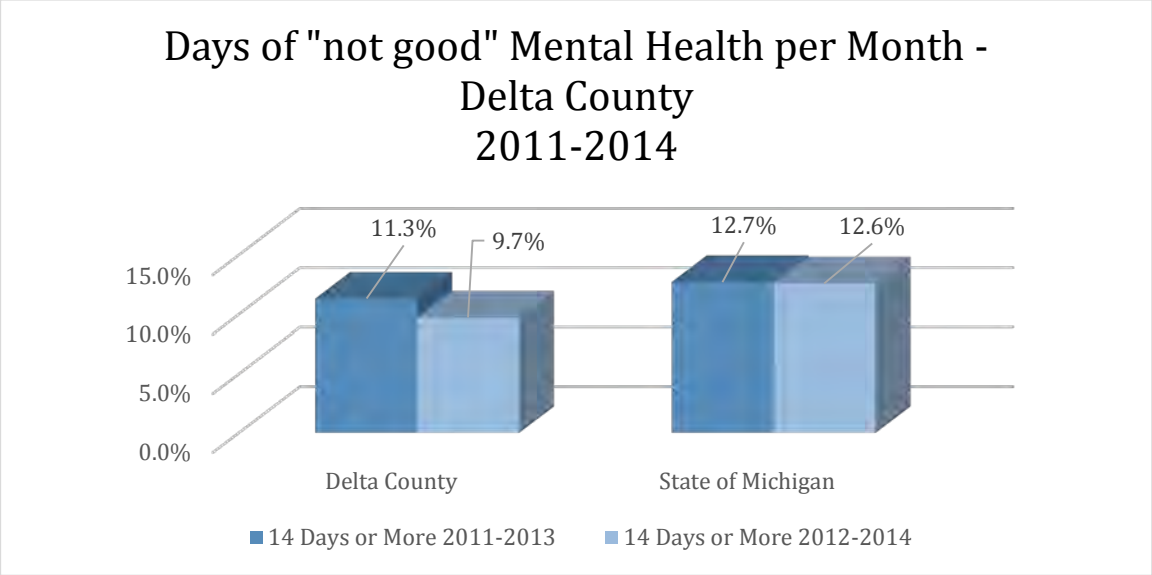
There was an increase of Delta County residents reporting they felt physically unhealthy on 14 or more days per month in 2013 (13.5%) versus 2014 (14.7%). This is higher than the State average of 12.9%.




*Source: Michigan Behavioral Risk Factor Surveillance System*

## Mental Health

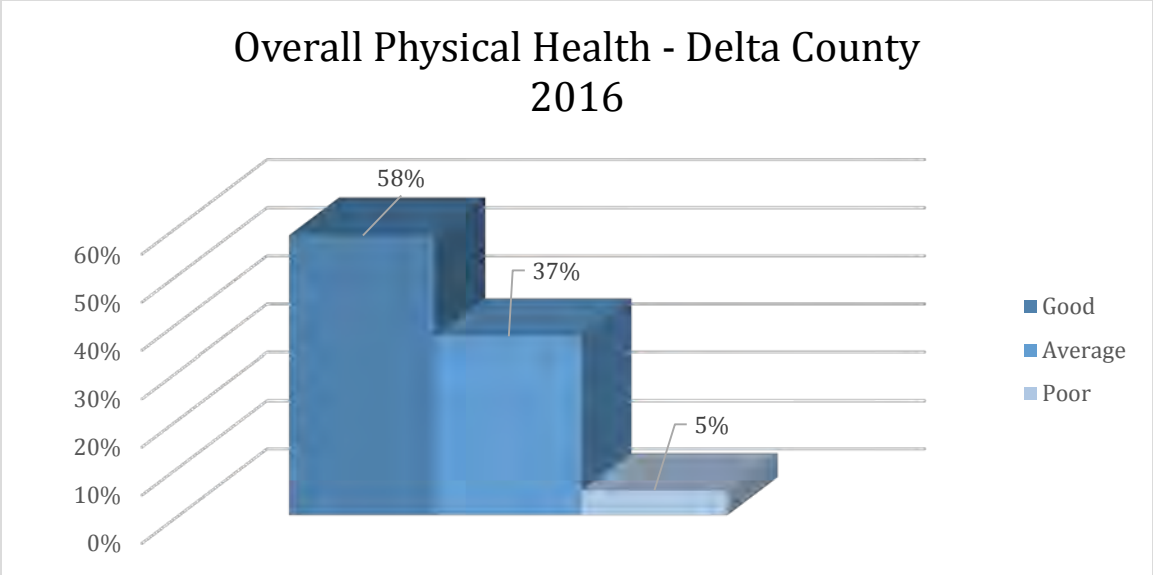
Approximately 9.7% of residents in Delta County reported they had experienced 14 days with poor mental health per month in 2012-2014, as compared to 12.6% feeling the same across the State. Fewer Delta County residents felt their mental health was "not good" in 2012-2014 as compared to 2011-2013.




*Source: Michigan Behavioral Risk Factor Surveillance System*

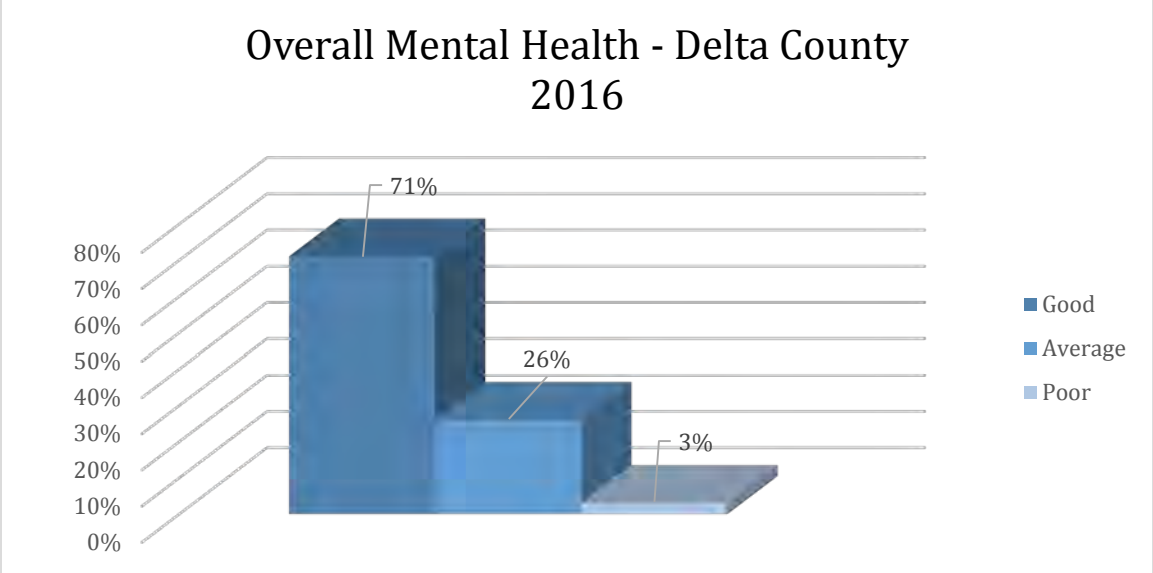
## Self Perceptions of Overall Health

Over half (58%) of Delta County Residents report having good overall physical health, while 5% rated themselves as having poor physical health.




*Source: CHNA Survey*

In regard to overall mental health, 71% of respondents stated they have good overall mental health and 3% stated it is poor.




*Source: CHNA Survey*

### *Comparison to 2013 CHNA Data*

With regard to physical health, there was a slight improvement in people who saw themselves in good health in 2016 (58%) and 2013 (56%). With regard to mental health, a slightly higher percentage report having good mental health in 2016 (71%) than 2013 (69%).

### Demographic Factors Related to Self Perceptions of Health

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

***Perceptions of physical health*** tend to be higher for those with higher education and income.

***Perceptions of mental health*** tend to be higher for older people, and those with higher income. Homeless people are less likely to perceive themselves in good mental health.

## 2.6 Key Takeaways from Chapter 2

- ✓ **ED IS CHOSEN BY 7% OF THE AT-RISK POPULATION AS THE PRIMARY SOURCE OF HEALTHCARE**
- ✓ **FOR THE AT-RISK POPULATION, 13% CHOOSE NOT TO RECEIVE MEDICAL CARE**
- ✓ **ACCESS TO MEDICAL CARE, PRESCRIPTION MEDICATIONS, DENTAL CARE AND COUNSELING ALL IMPROVED FROM THE 2013 CHNA**
- ✓ **WHILE IMPROVING, THE MAJORITY OF THE POPULATION EXERCISES TWO OR FEWER TIMES PER WEEK.**
- ✓ **WHILE DELTA RESIDENTS ARE EATING MORE FRUITS AND VEGETABLES COMPARED TO THE 2013 CHNA, THE MAJORITY OF RESIDENTS STILL EAT 2 OR FEWER SERVINGS OF FRUITS AND VEGETABLES PER DAY**
- ✓ **MOST RESIDENTS HAVE HIGH SELF-PERCEPTIONS OF BOTH PHYSICAL AND MENTAL HEALTH**

CHAPTER 3 OUTLINE

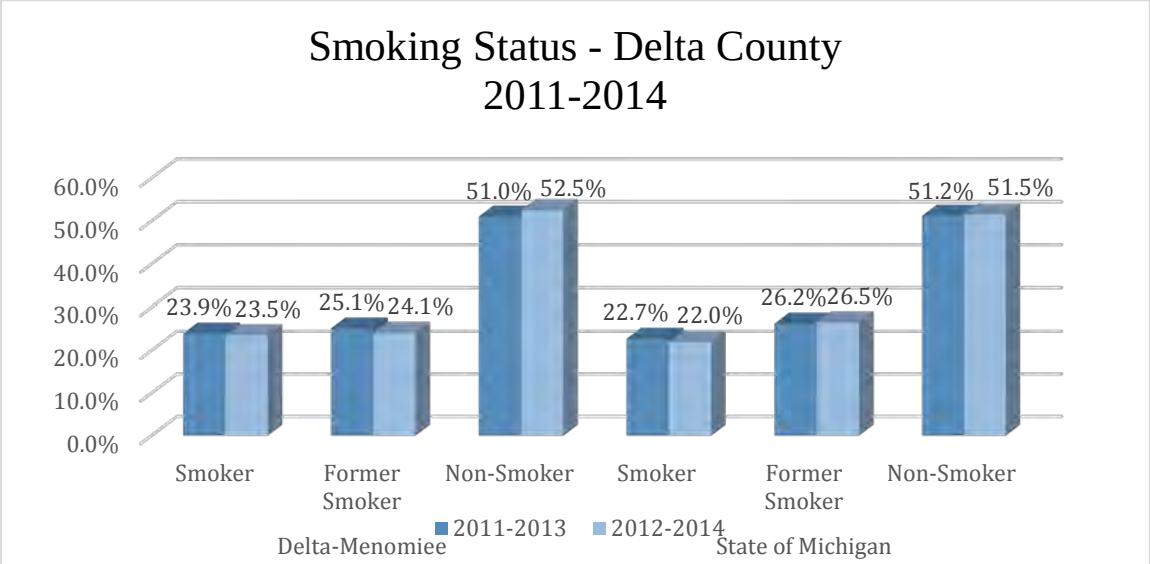


# CHAPTER 3. SYMPTOMS AND PREDICTORS

## 3.1 Tobacco Use

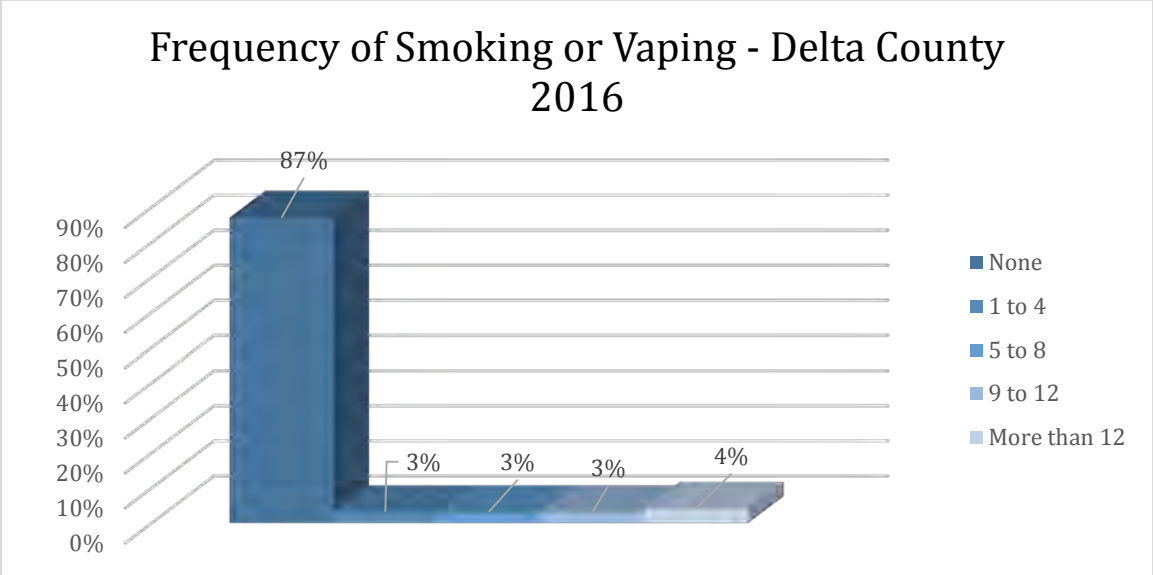
*Importance of the measure:* In order to appropriately allocate healthcare resources, a thorough analysis of the leading indicators regarding morbidity and disease must be conducted. In this way, healthcare organizations can target affected populations more effectively. Research suggests tobacco use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

Smoking rates have held steady in Delta County, slightly above the State of Michigan averages. There was a nominal decrease in the percentage of Delta County residents reporting they were current smokers between 2011-2012 (23.9%) and 2013-2014 (23.5%). There was an increase in the percentage of Delta County residents reporting they were current non-smokers between 2011-2013 (51%) and 2012-2014 (52.5%).




*Source: Michigan Behavioral Risk Factor Surveillance System*

CHNA survey data show 87% of Delta County Respondents do not smoke and only 4% state they smoke more than 12 cigarettes (or vape) per day.




*Source: CHNA Survey*

***Comparison to 2013 CHNA Data***

Compared to data from the 2013 CHNA, the percentage of smokers has decreased. Specifically, in 2013, 76% of people indicated they didn't smoke. In 2016, 87% of people indicated they did not smoke.

### Demographic Factors Related to Smoking

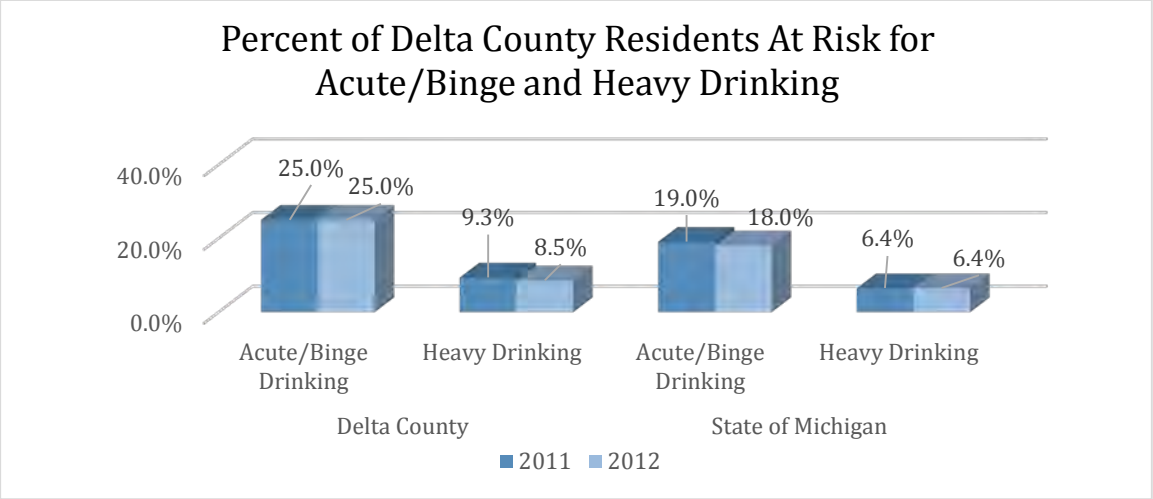
Several demographic characteristics show significant relationships with incidence of smoking or vaping. The following relationships were found using correlational analyses:

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

## 3.2 Drug and Alcohol Abuse

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

Compared to the State of Michigan average (18.0%), Delta County has a much higher percentage of residents at risk for acute or binge drinking (25%). Heavy drinking among all adults, defined as the proportion who reported consuming an average three or more alcoholic drinks per day for men or two or more alcoholic drinks for women in the previous month is also higher for Delta County (8.5%) compared to State averages (6.4%).




*Source: Michigan Behavioral Risk Factor Surveillance System*

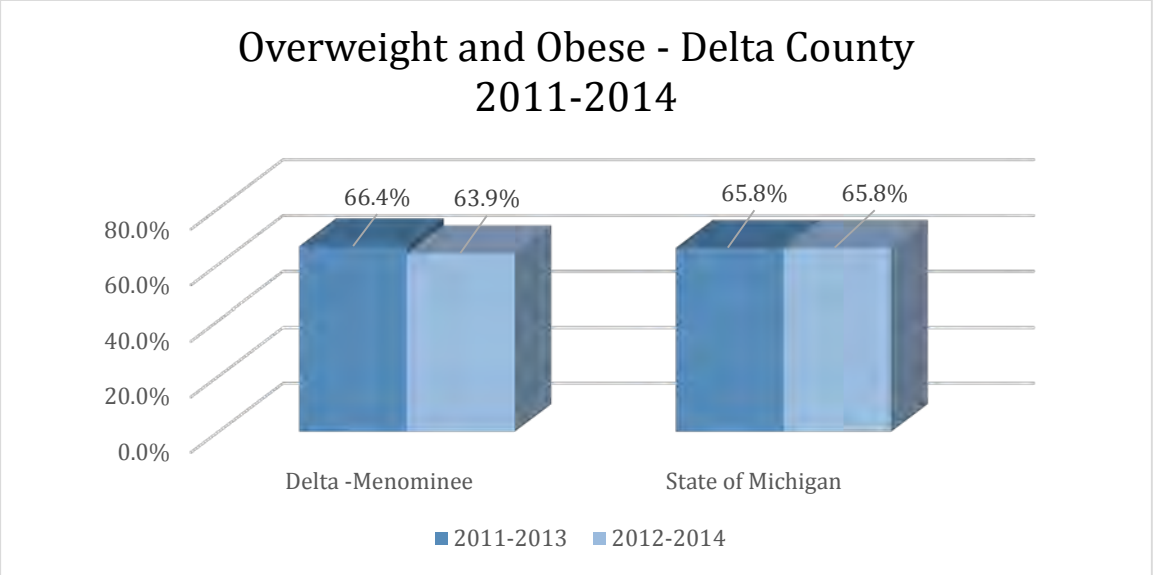
## 3.3 Overweight and Obesity

*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 Michigan, and within Delta County. The US Surgeon General has characterized obesity as "the fastest-growing, most threatening disease in America today."

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. 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.

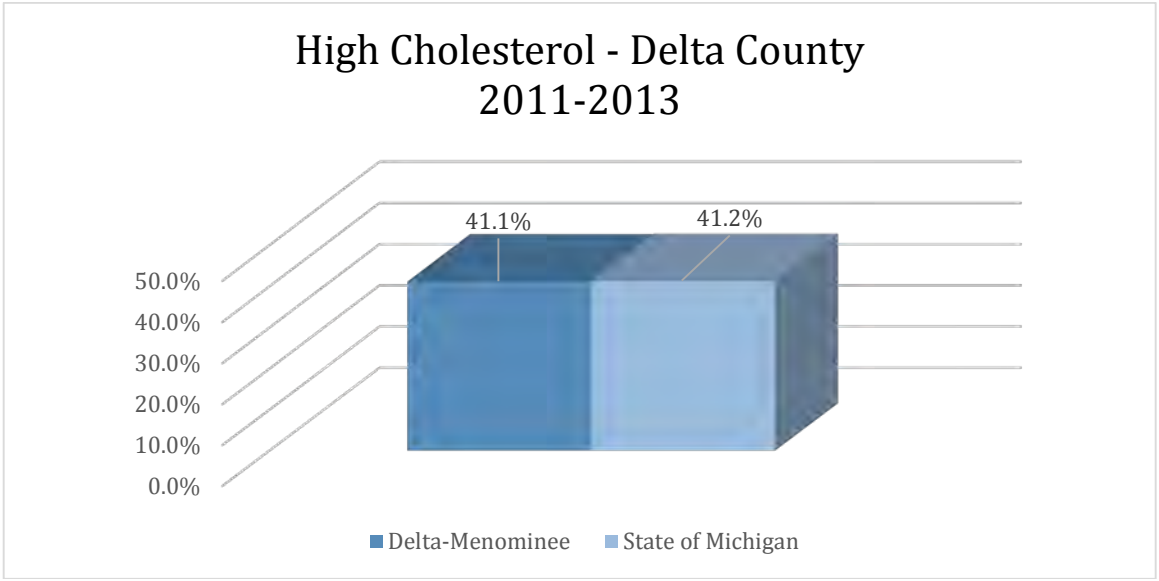
In Delta County, the number of people diagnosed with obesity and being overweight has decreased from 2011-2013 to 2012-2014. Note specifically that the percentage of obese and overweight people has decreased from 66.4% in 2013 to 63.9% in 2014. Overweight and obesity rates in Michigan have remained consistent from 2011-2013 to 2012-2014 (65.8%).




*Source: Michigan Behavioral Risk Factor Surveillance System*

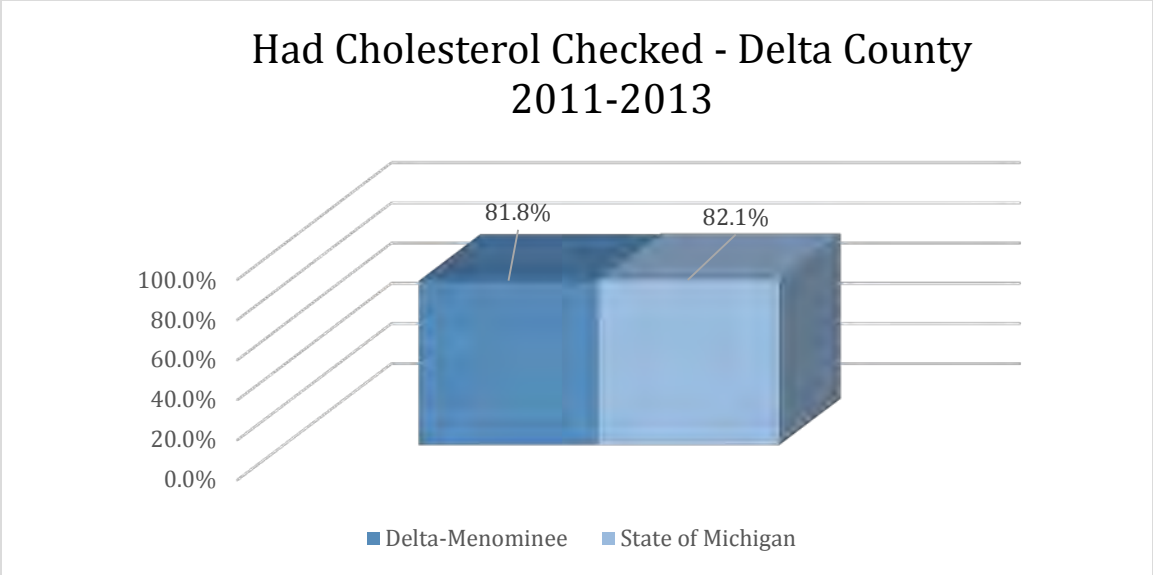
## 3.4 Predictors of Heart Disease

Residents in Delta County report a prevalence of high cholesterol equal to the State average. The percentage of residents who report they have high cholesterol is relatively equal in Delta County (41.1%) to the State of Michigan average of 41.2%.



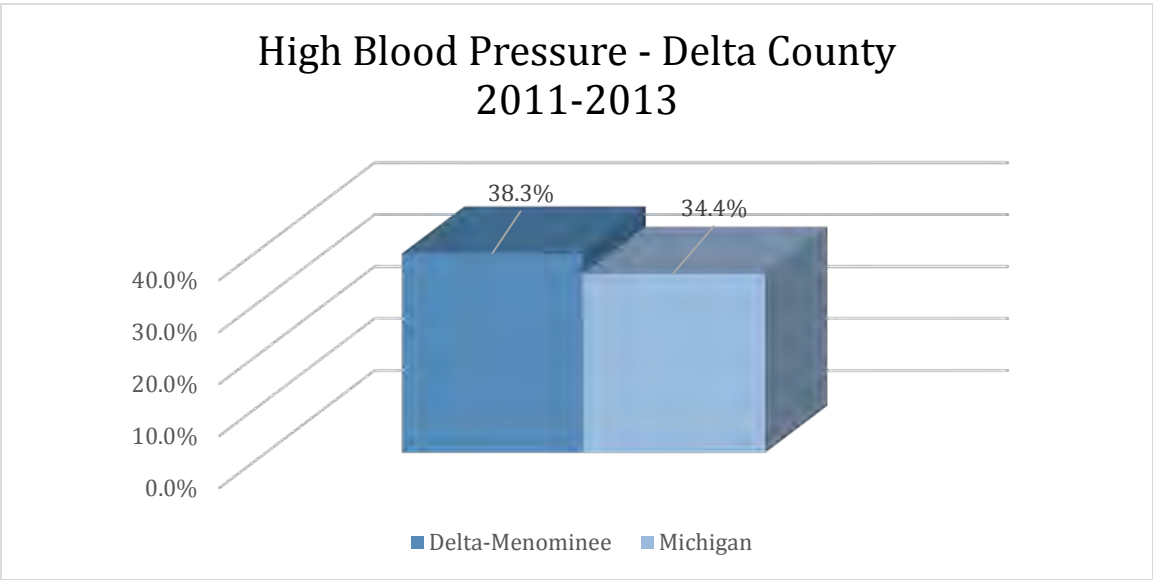

*Source: Michigan Behavioral Risk Factor Surveillance System*

However, most residents of Delta County report having their cholesterol checked within the past year.




*Source: Michigan Behavioral Risk Factor Surveillance System*

With regard to high blood pressure, Delta County has a higher percentage of residents with high blood pressure than residents do in the State of Michigan as a whole. The percentage of Delta County residents reporting they have high blood pressure in 2013 was 38.3%.




*Source: Michigan Behavioral Risk Factor Surveillance System*

## 3.5 Key Takeaways from Chapter 3

- ✓ **Tobacco usage has decreased in Delta County but remains higher than the state average**
- ✓ **The percentage of people who are overweight and obese has decreased in Delta County, however approximately two-thirds of residents still remain in the category**
- ✓ **Certain risk factors for heart disease (high blood pressure) are higher than state averages**

CHAPTER 4 OUTLINE



# CHAPTER 4. MORBIDITY AND MORTALITY

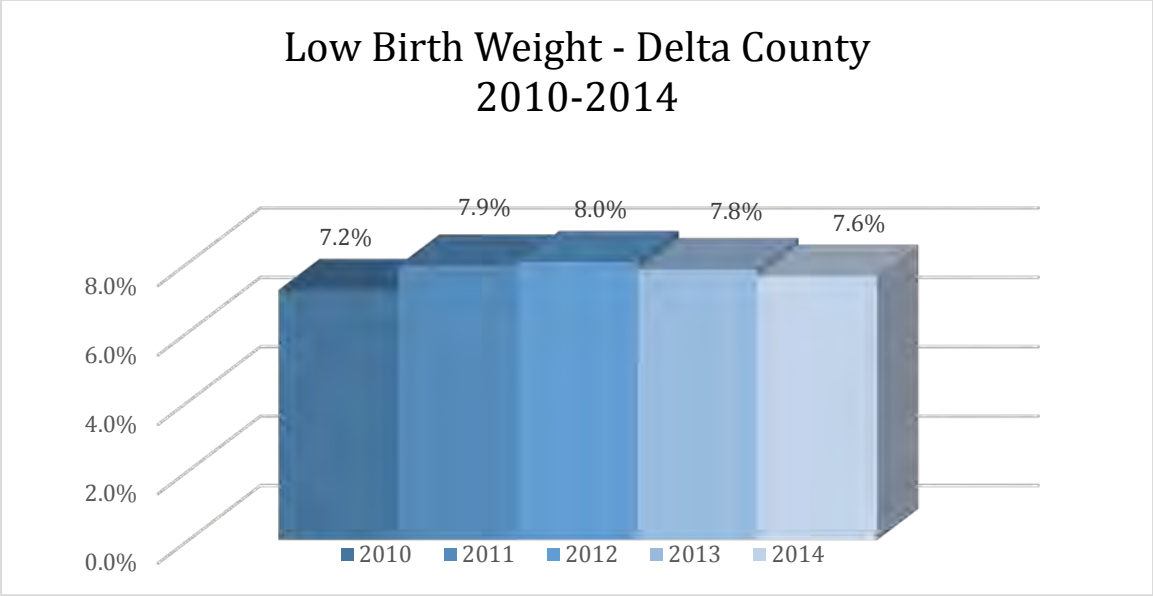
Given the lack of recent disease/morbidity data from existing secondary data sources, much of the data used in this chapter was manually gathered from Delta County hospitals.

## 4.1 Healthy Babies

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

### Low Birth Weight Rates

Low birth weight rate is defined as the percentage of infants born below 2,500 grams or 5.5 pounds. Very low birth weight rate is defined as the percentage of infants born below 1,500 grams or 3.3 pounds. In contrast, the average newborn weighs about 7 pounds. The percentage of babies born with low birth weight in Delta County increased from 2010 (7.2%) to 2014 (7.6%).

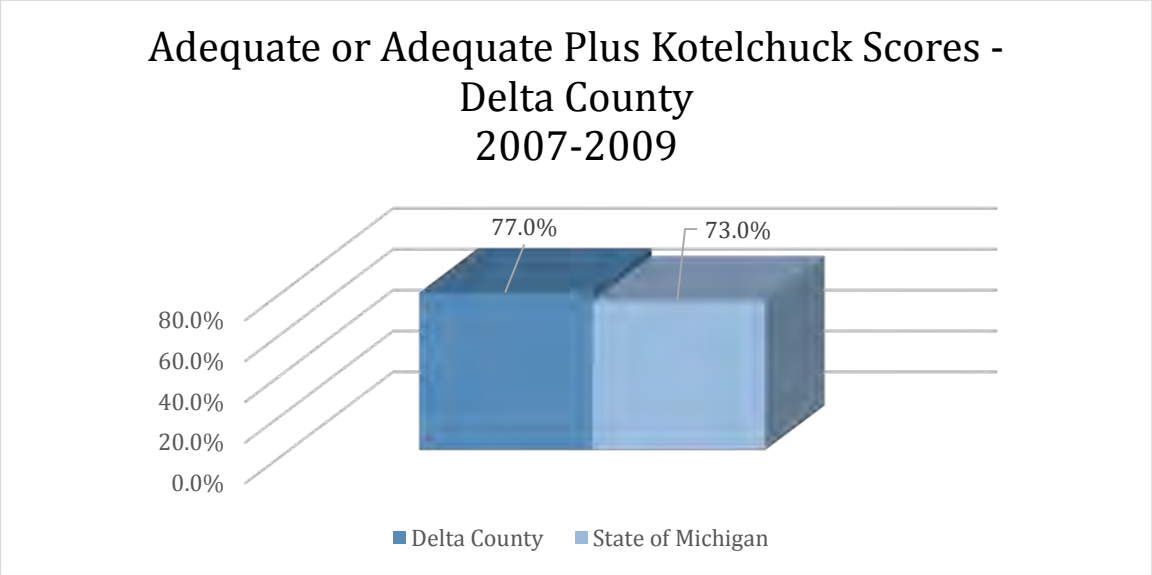



*Source: http://www.countyhealthrankings.org*

## Initiation of Prenatal Care

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

Of the babies born in 2009 in Delta County, 77% were born with "Adequate" or "Adequate Plus" prenatal care. This figure is higher than the State of Michigan average of 73.0% of babies born with similar prenatal care. These are the most recent data, and have not been updated since 2009.




*Source: Michigan Department of Public Health*

# 4.2 Cardiovascular Disease

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

## Coronary Atherosclerosis

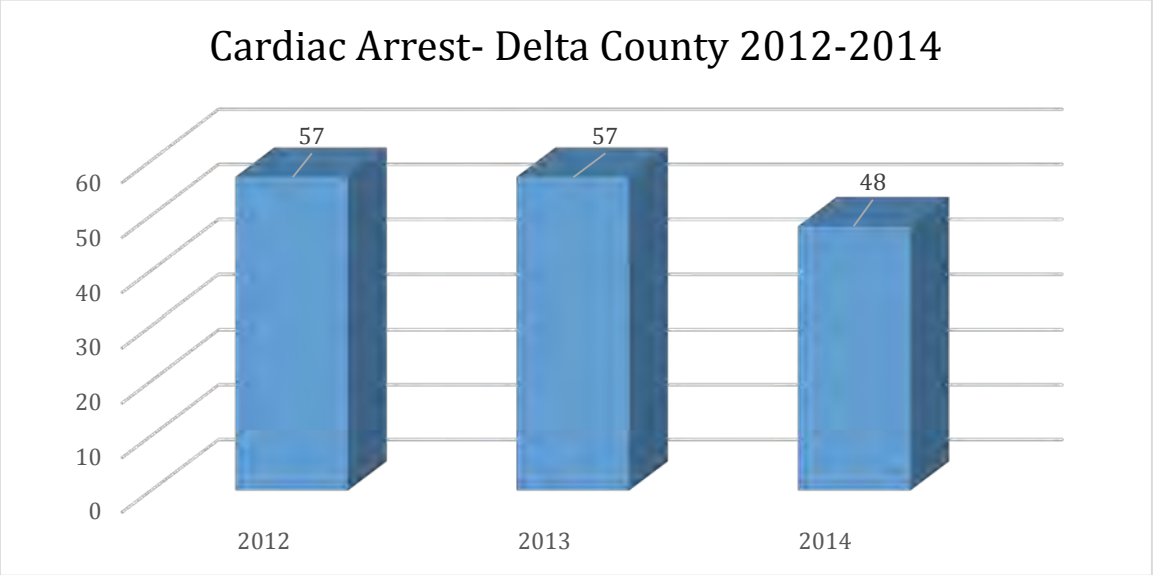
Coronary Atherosclerosis, sometimes-called hardening of the arteries, can slowly narrow and harden the arteries throughout the body. When atherosclerosis affects the arteries of the heart, it is called coronary artery disease.

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

The number of cases of coronary atherosclerosis complication at Delta County area hospitals has decreased from 2 cases in 2012 to 7 cases in 2013, back to 1 case in 2014. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

## Cardiac Arrest

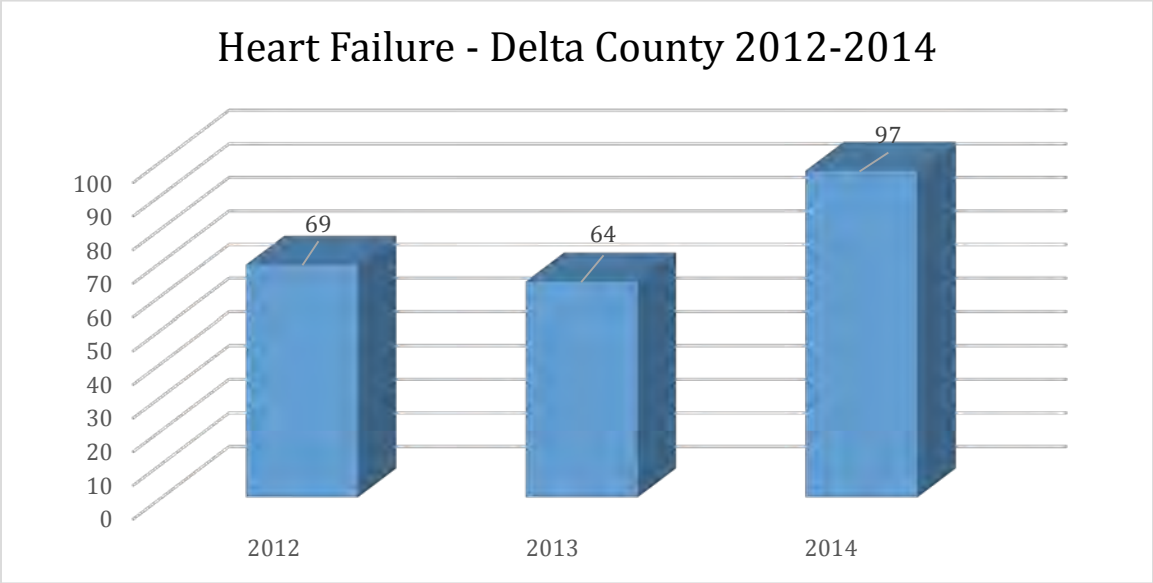
Cases of dysthymia and cardiac arrest at Delta County area hospitals has decreased by 9 cases between FY12 and FY14. Note that hospital-level data only show hospital admissions.




*Source: COMPdata 2015*

## Heart Failure

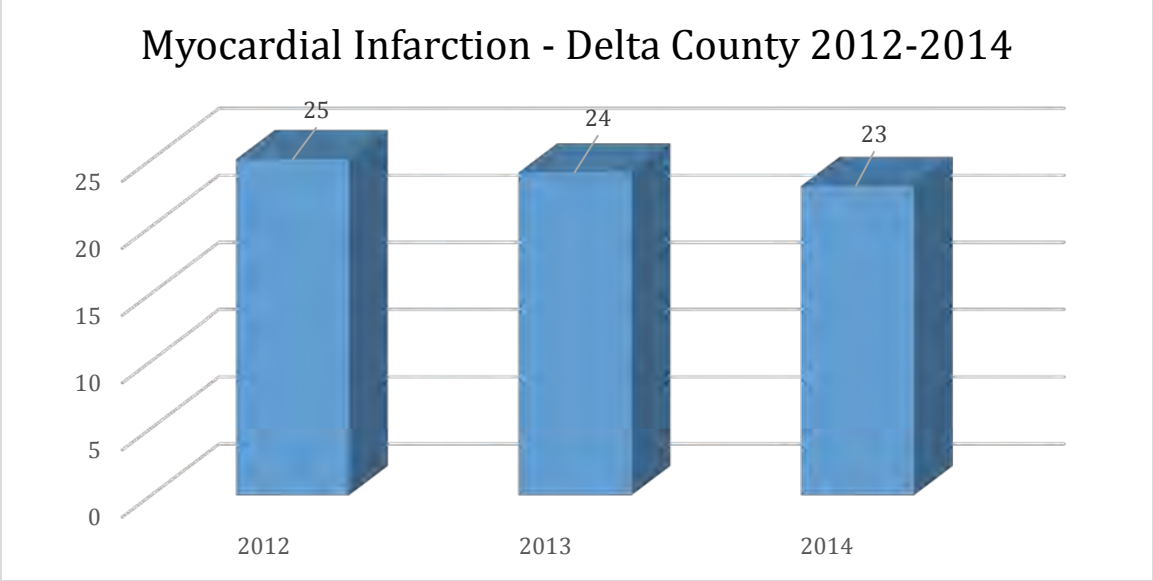
The number of treated cases of heart failure at Delta County area hospitals have increased. In FY 2012, 69 cases were reported, and in FY 2014, there were 97 cases reported. Note that hospital-level data only show hospital admissions.




*Source: COMPdata 2015*

## Myocardial Infarction

The number of treated cases of myocardial infarction at area hospitals in Delta County have increased slightly, moving from 23 in 2012 to 25 in 2014. Note that hospital-level data only show hospital admissions.



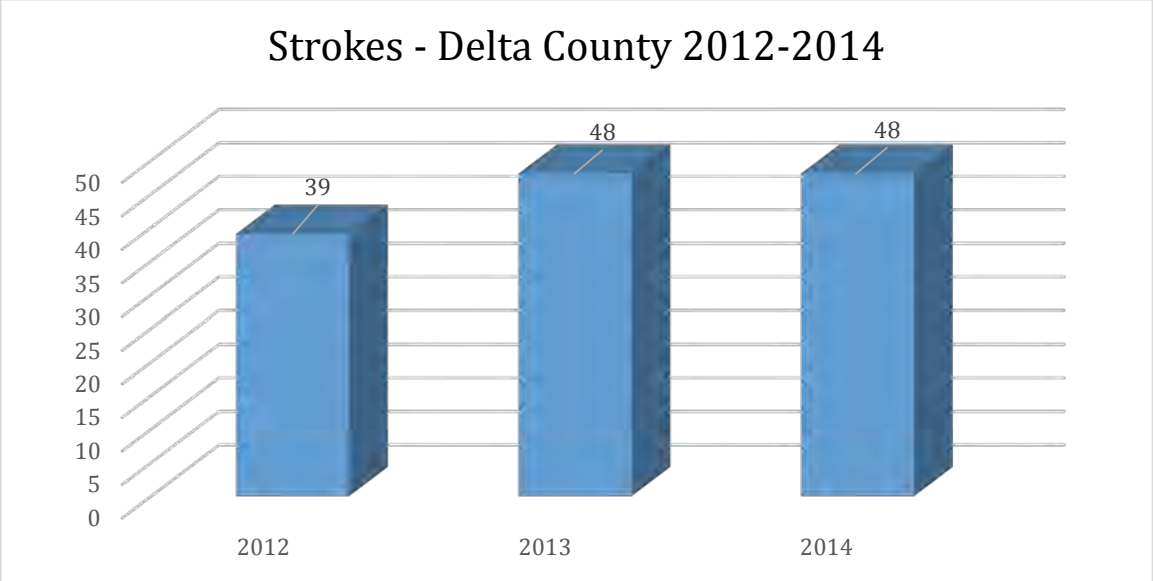

*Source: COMPdata 2015*

### Arterial Embolism

One treated case of arterial embolism at Delta County area hospitals was reported in 2014. Note that hospital-level data only show hospital admissions.

### Strokes

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



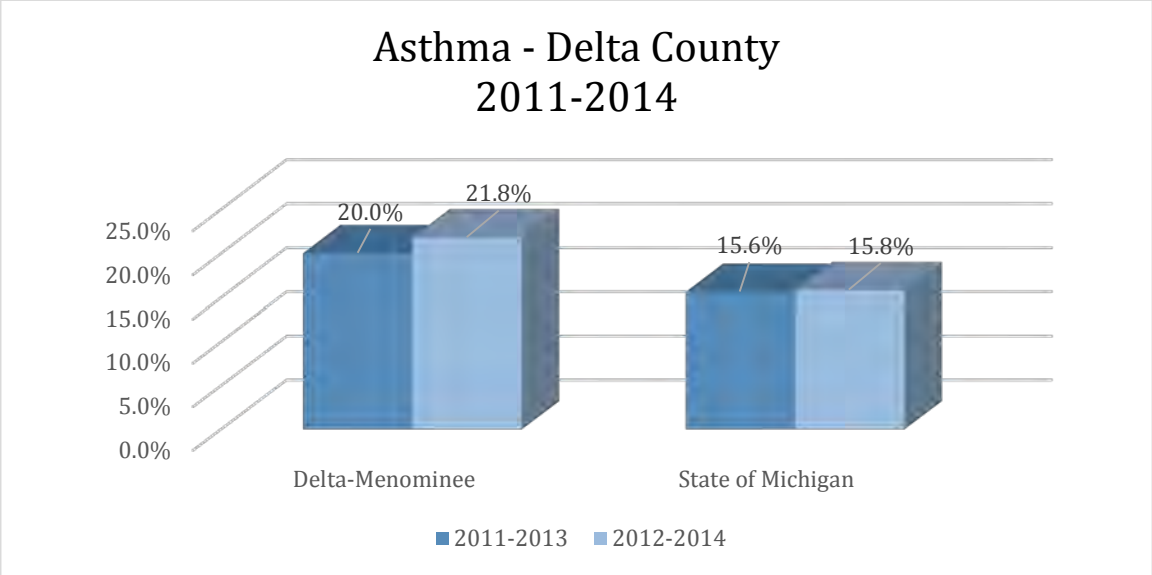

*Source: COMPdata 2015*

## 4.3 Respiratory

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

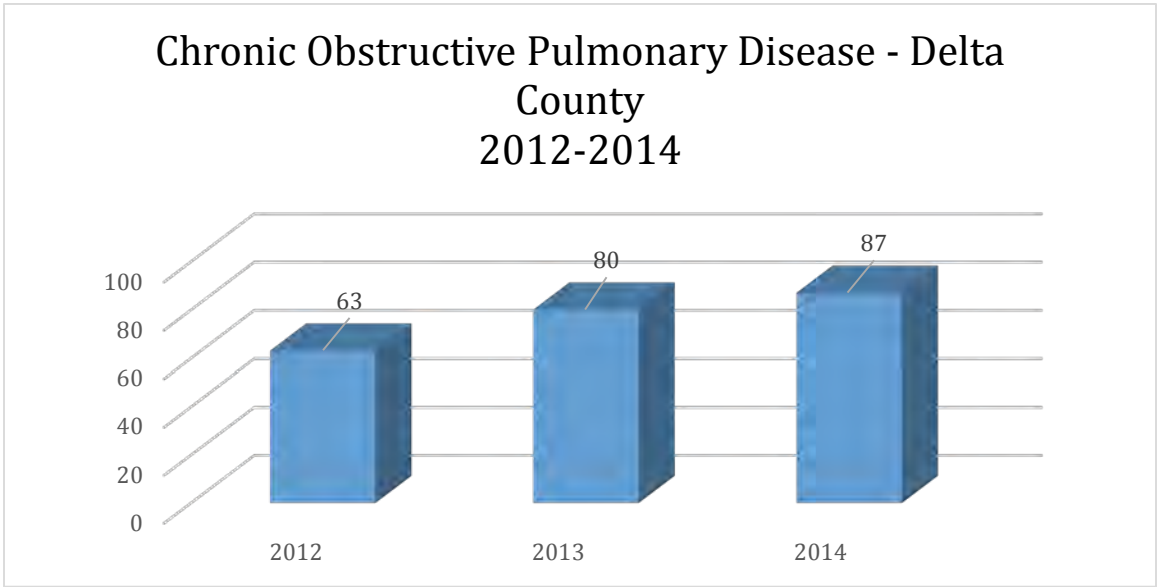
### Asthma

The percentage of residents that have asthma in Delta County has increased between 2011-2013 and 2012-2014, while State averages have held steady. According to the Michigan BRFSS, asthma rates in Delta County (21.8%) are significantly higher than the State of Michigan (15.8%).




*Source: Michigan.gov*

Treated cases of COPD at Delta County area hospitals have increased by 25 cases per year between FY 2012 and FY 2014. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.

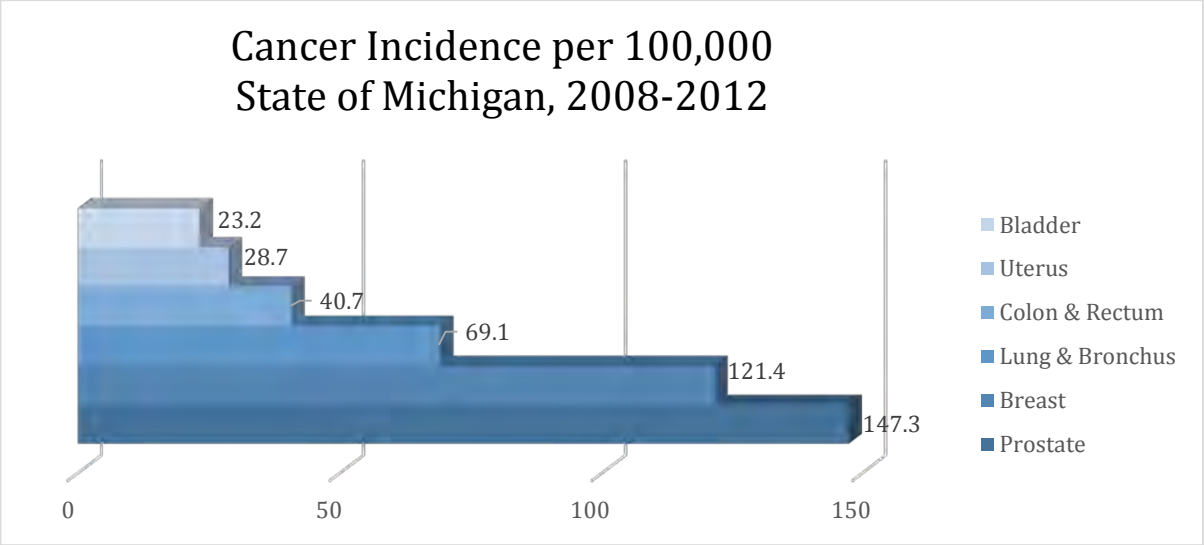



*Source: COMPdata 2015*

# 4.4 Cancer

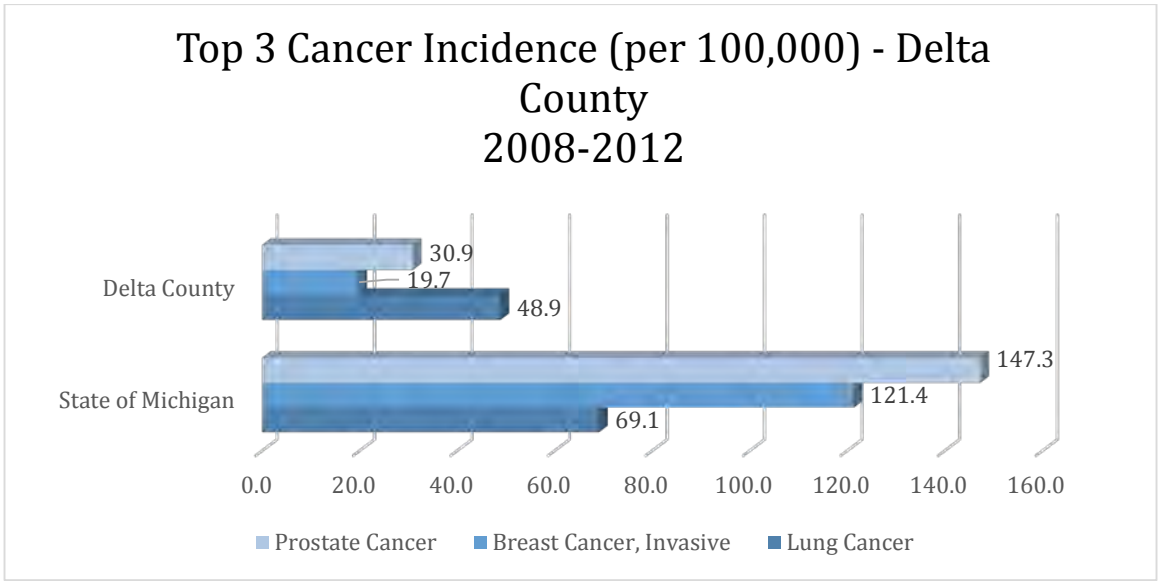
*Importance of the measure:* Cancer is caused by the abnormal growth of cells in the body and many causes of cancer have been identified. Generally, each type of cancer has its own symptoms, outlook for cure, and methods for treatment. Cancer is one of the leading causes of death in Delta County.

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




*Source: http://statecancerprofiles.cancer.gov/*

For the top three prevalent cancers in Delta County, comparisons can be seen below. Specifically, prostate cancer, breast cancer, and lung and bronchus cancer are all lower than the State of Michigan.

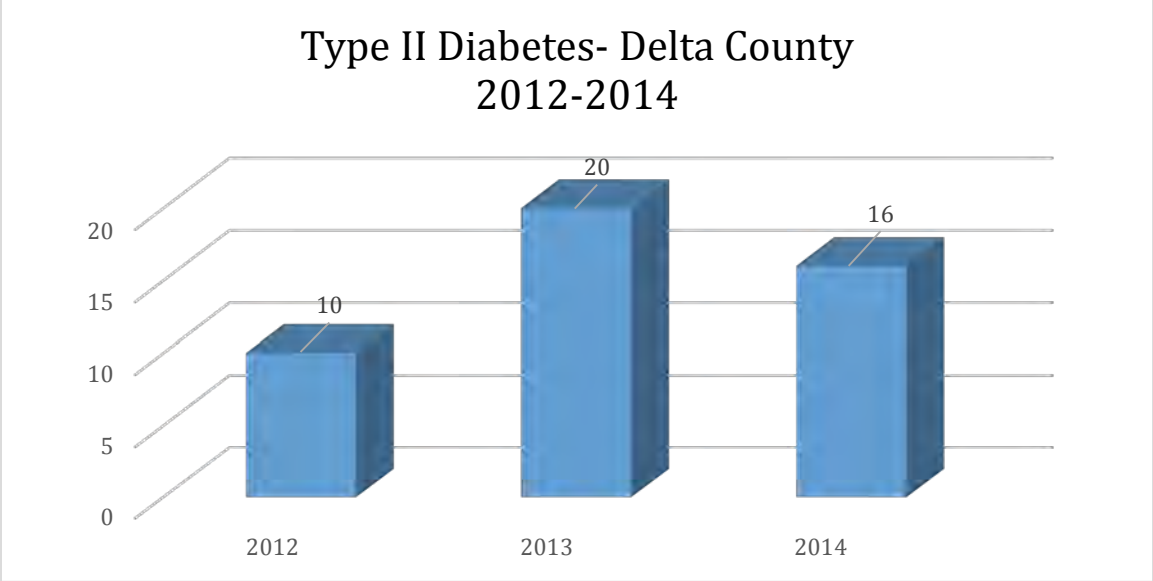



*Source: Michigan Department of Health & Human Services, Michigan State Cancer Registry*

# 4.5 Diabetes

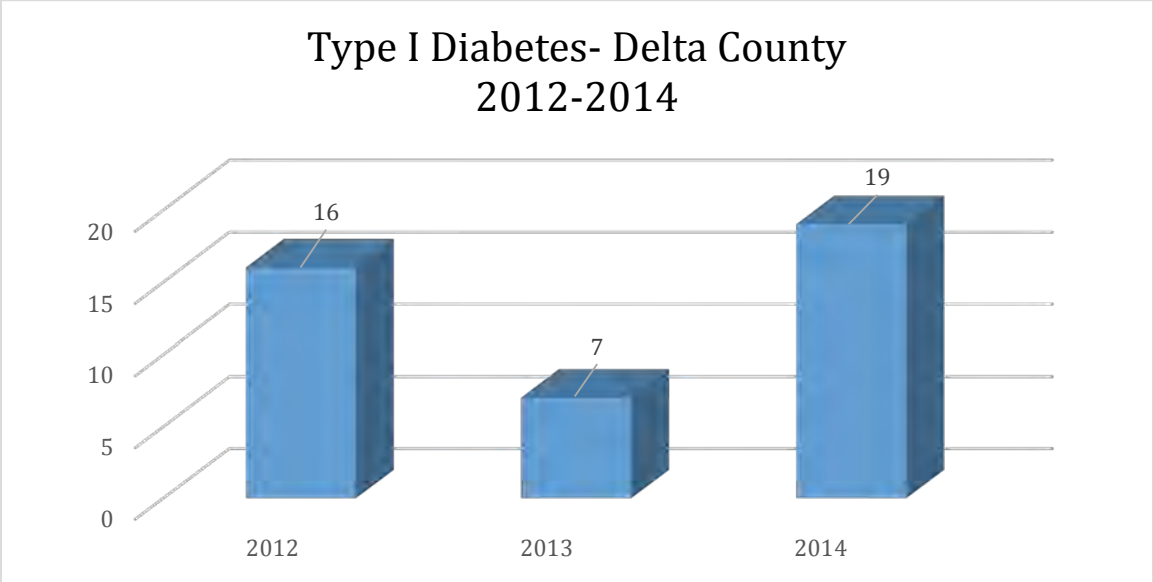
*Importance of the measure:*
Diabetes is the leading cause of kidney failure, adult blindness and amputations and is a leading contributor to strokes and heart attacks. It is estimated that 90-95% of individuals with diabetes have Type II diabetes (previously known as adult-onset diabetes). Only 5-10%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

Inpatient cases of Type II diabetes from Delta County have slightly increased between FY 2012 (10 cases) and FY 2014 (16 cases). Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.



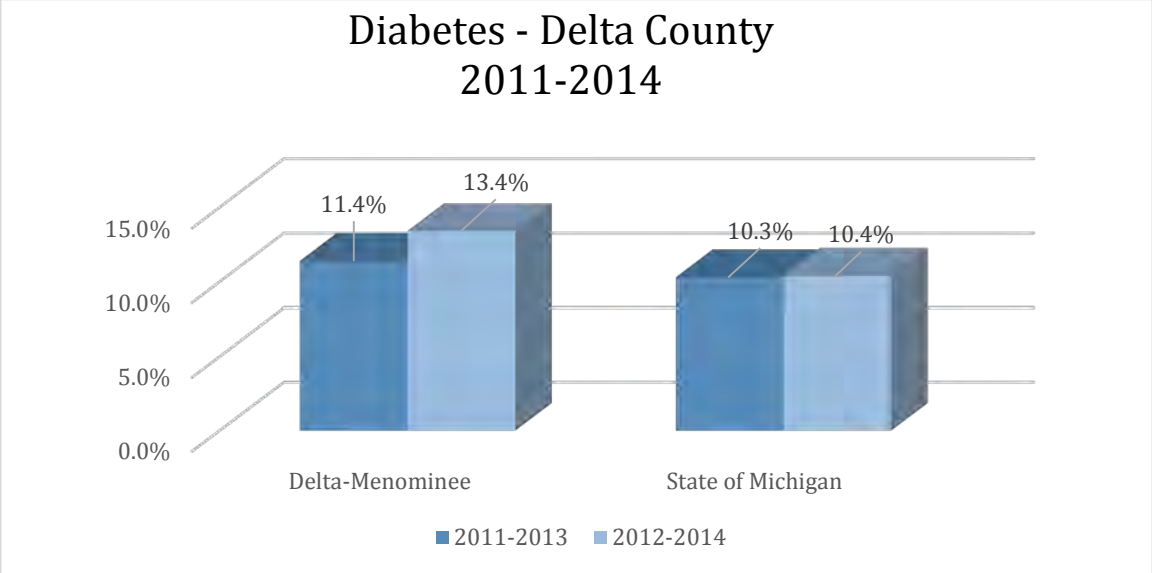

*Source: COMPdata 2015*

Despite a decline in 2013, inpatient cases of Type I diabetes show an increase from 2012 (16) to 2014 (19) for Delta County. Note that hospital-level data only show hospital admissions and do not reflect out-patient treatments and procedures.




*Source: COMPdata 2015*

Data from the Michigan BRFSS indicate that 13.4% of Delta County residents have diabetes. Delta County has higher rates of diabetes than the State of Michigan (10.4%).



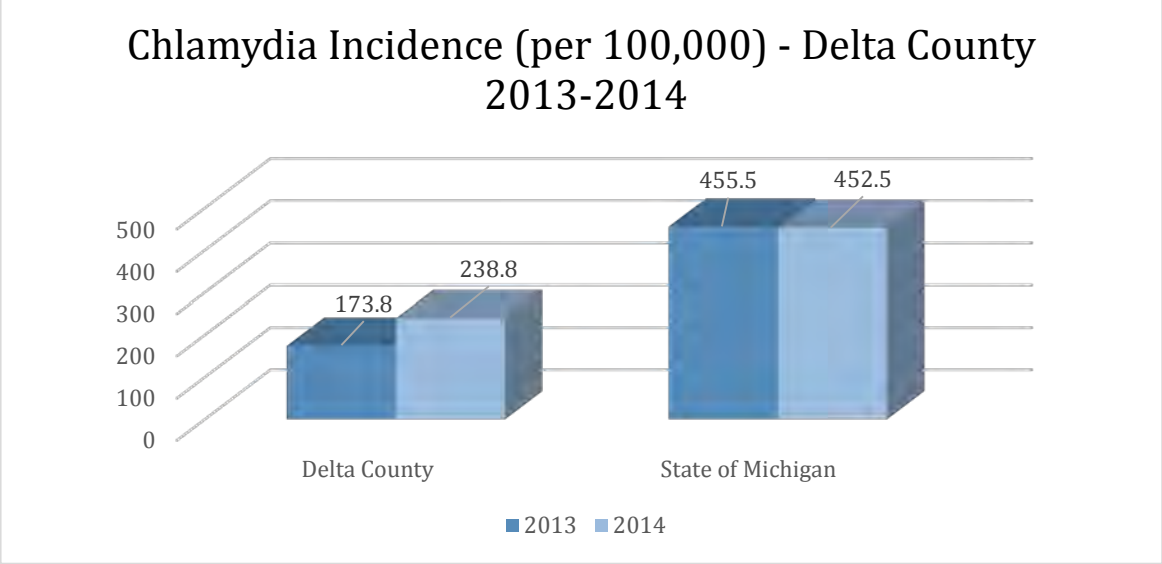

*Source: Michigan Behavioral Risk Factor Surveillance System*

# 4.6 Infectious Diseases

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

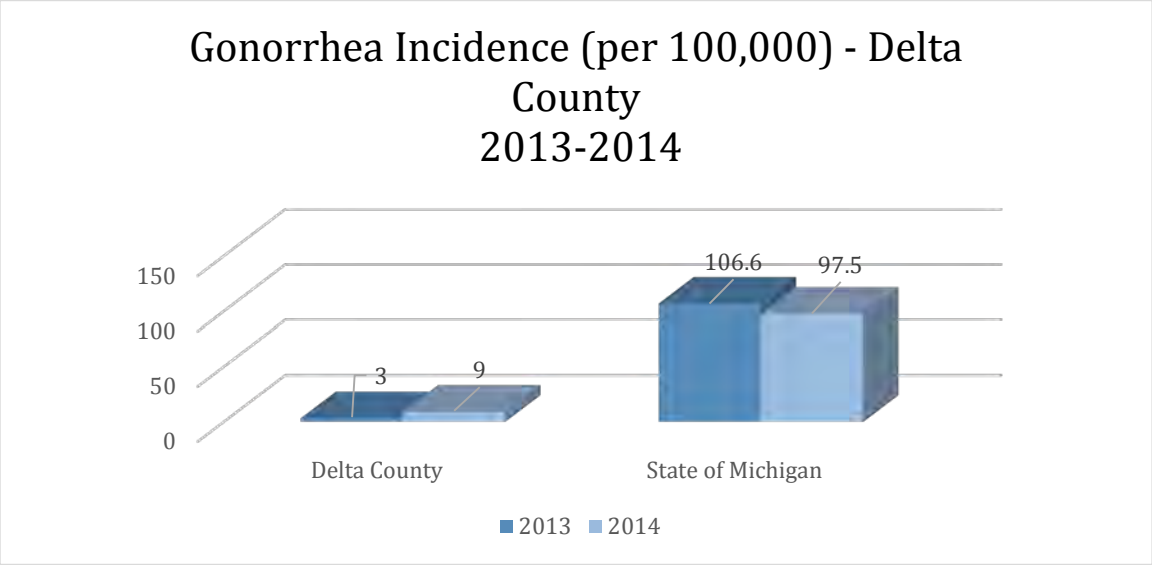
## Chlamydia and Gonorrhea Cases

The data for the number of infections of chlamydia in Delta County from 2013-2014 indicate a significant increase. There is little change in incidence of chlamydia across the State of Michigan. However, rates of chlamydia in Delta County are considerably lower than State averages.




*Source: Michigan Department of Public Health*

The data for the number of infections of gonorrhea in Delta County show incidence of gonorrhea is much lower than State averages. The data indicate a slight decrease across the State of Michigan from 2013-2014.




*Source: Michigan 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 (Rubella), Mumps, Rubella (German measles), Diphtheria, Hepatitis B, and Hemophilic Influenza Type B (HIB) Infections. These diseases used to strike thousands of children each year. Today there are relatively few cases, but outbreaks still occur each year because some babies are not immunized. Delta County has shown no significant outbreaks compared to state statistics, but there are limited data available.[2] Note that there were 45 cases of varicella reported in Delta County in 2010; however, recent data are not available.

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

**Vaccine Preventable Diseases 2011-2014 Delta County Region**

| Mumps | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| Delta County | 0 | 0 | 0 | 0 |
| State of Michigan | 21 | 23 | 15 | 42 |

| Pertussis | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| Delta County | 4 | 26 | 1 | 0 |
| State of Michigan | 691 | 845 | 995 | 1424 |

| Varicella | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| Delta County | N/A | N/A | N/A | N/A |
| State of Michigan | 1,036 | 972 | 719 | 726 |

*Source: http://www.michigan.gov/mdhhs/0,5885,7-339-73971_4911_4914_6385-47024--,00.html*

**Tuberculosis 2011-2014 Delta County Region**

| Tuberculosis | 2011 | 2012 | 2013 | 2014 |
|---|---|---|---|---|
| Delta County | 0 | 0 | 0 | 0 |
| State of Michigan | 9 | 15 | 10 | 11 |

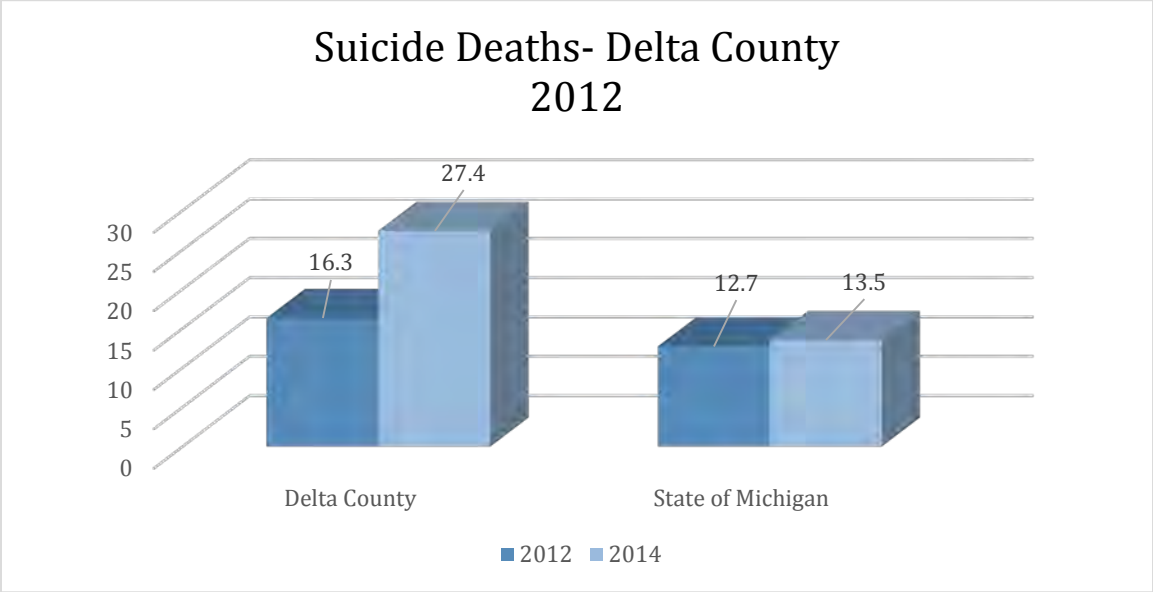
*Source:* Michigan Disease Surveillance System (MDSS).

# 4.7 Injuries

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

## Intentional – suicide

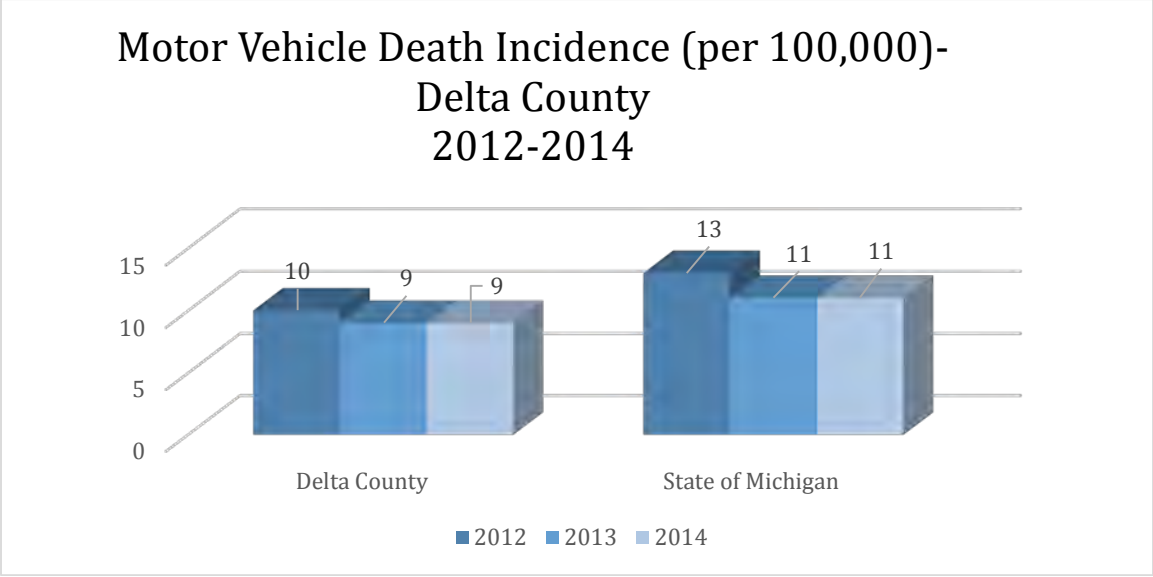
Suicide rates per 100,000 residents in Delta County increased between 2012 and 2014. Moreover, the suicide rates in Delta County are significantly higher than the State of Michigan.




*Source: Michigan Department of Public Health*

## Unintentional – motor vehicle

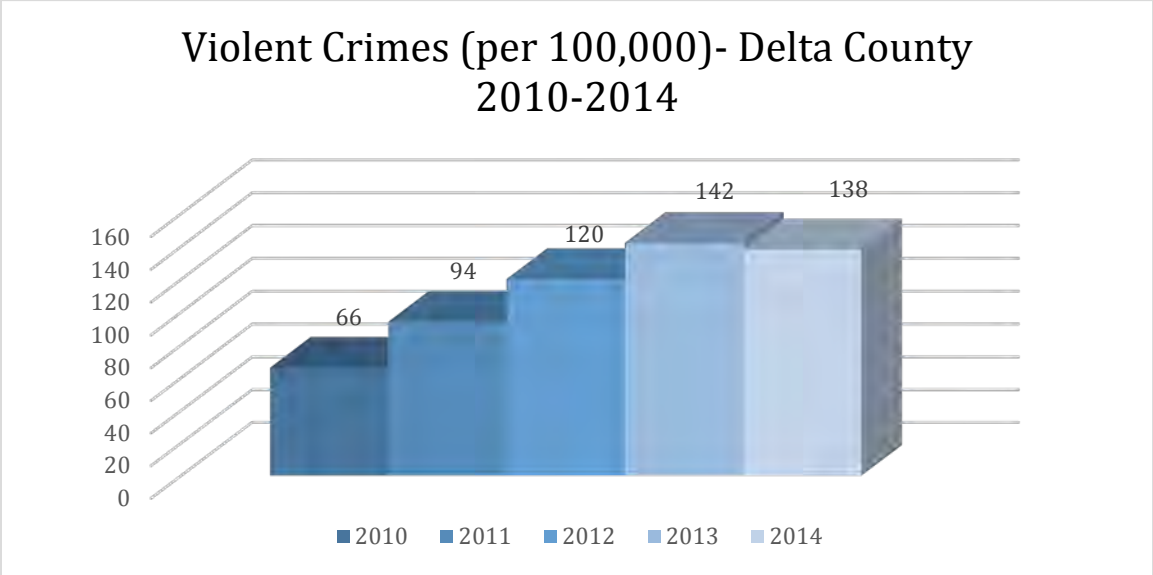
Research suggests that car accidents are a leading cause of unintentional injuries and death. In Delta County, the number of incidents of motor-vehicle deaths between 2012 and 2014 remains lower than State of Michigan averages.




*Source: Michigan.gov*

### 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 increased significantly for 2010-2014 in Delta County.




*Source: County Health Rankings.org*

## 4.8 Mortality

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

The top two leading causes of death in the State of Michigan and Delta County are similar as a percentage of total deaths in 2013. Diseases of the Heart are the cause of 26.5% of deaths in Delta County and Cancer is the cause of 22.6% of deaths in Delta County.

| Top 5 Leading Causes of Death for all Races by County, 2013 | | |
|---|---|---|
| **Rank** | **Delta County** | **State of Michigan** |
| **1** | Diseases of Heart (26.5%) | Diseases of Heart |
| **2** | Malignant Neoplasm (22.6%) | Malignant Neoplasm |
| **3** | All Other Diseases (Residual) (14.87%) | Stroke |
| **4** | Chronic Lower Respitory Disease (8.92%) | Accidents |
| **5** | Alzheimer's Disease (5.03%) | Diabetes |

*Source: Michigan Department of Health & Human Services*

# 4.9 Key Takeaways from Chapter 4

- ✓ **MANY VARIATIONS OF CARDIAC DISEASE HAVE SEEN A DECREASE SINCE 2012, WITH THE EXCEPTION OF HEART FAILURE**
- ✓ **CANCER RATES ARE LOWER THAN STATE LEVELS**
- ✓ **ASTHMA HAS SEEN AN INCREASE AND IS HIGHER THAN STATE AVERAGES**
- ✓ **DIABETES IS TRENDING UPWARD IN DELTA COUNTY AND IS HIGHER THAN STATE AVERAGES**
- ✓ **HEART DISEASE AND CANCER ARE THE LEADING CAUSES OF MORTALITY IN DELTA COUNTY**

CHAPTER 5 OUTLINE



# CHAPTER 5. PRIORITIZATION OF HEALTH-RELATED ISSUES

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

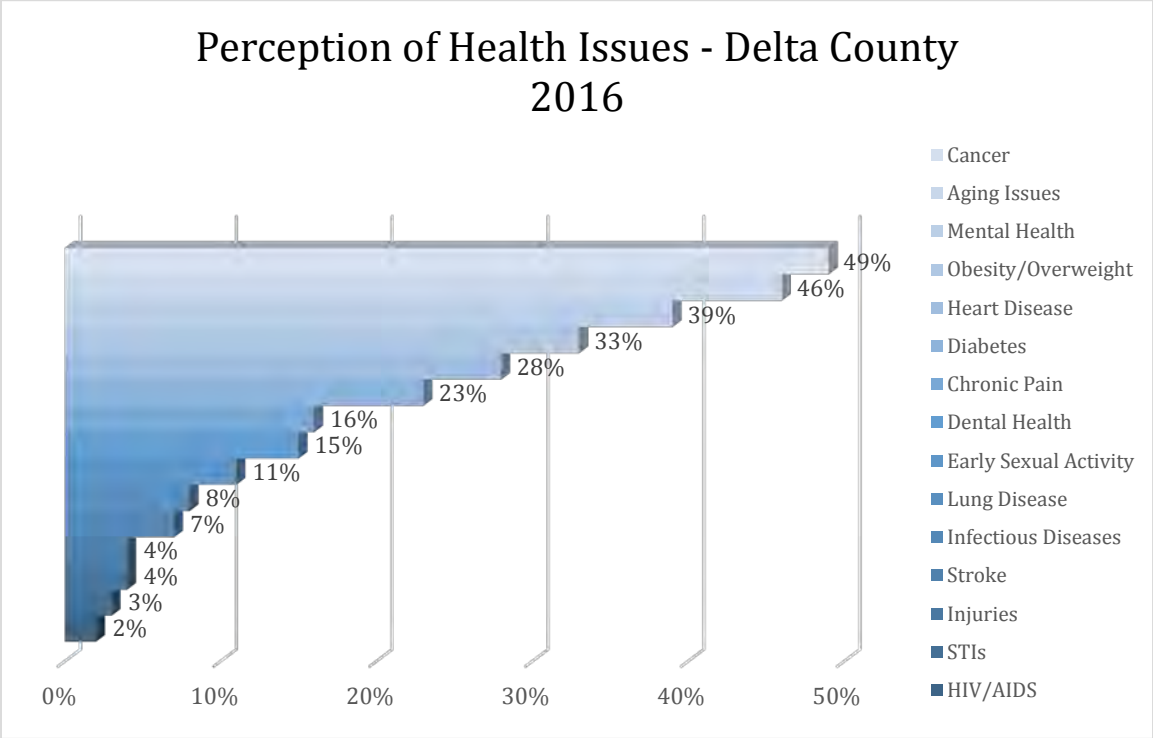
Specific criteria used to identify these issues included: (1) magnitude in the community; (2) severity in the community; (3) potential for impact to the community.

## 5.1 Perceptions of Health Issues

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

The health issue that rated highest was cancer. This was followed by aging issues, mental health, and obesity.

Note that perceptions of the community were accurate in some cases, but inaccurate in others. For example, cancer is the second leading cause of mortality in Delta County. Also, obesity is an important concern and the survey respondents accurately identified these as important health issues. However, heart disease is not among the top 3, even though it is the leading cause of mortality in Delta County.




*Source: CHNA Survey*

## Demographic Factors Related to Perceptions of Health Issues

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

***Aging issues*** tend to be rated higher by older people.

***Cancer*** does not show significant correlations.

***Chronic Pain*** does not show significant correlations.

***Dental health*** tends to be rated higher by Native American residents and those with lower education and income.

***Diabetes*** does not show significant correlations.

***Heart disease*** tends to be rated higher by older people.

***HIV*** tends to be rated higher by younger people.

***Early sexual activity*** tends to be rated higher by younger people and those with low income.

***Infectious disease*** does not show significant correlations.

***Injury*** does not show significant correlations.

***Lung disease*** does not show significant correlations.

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

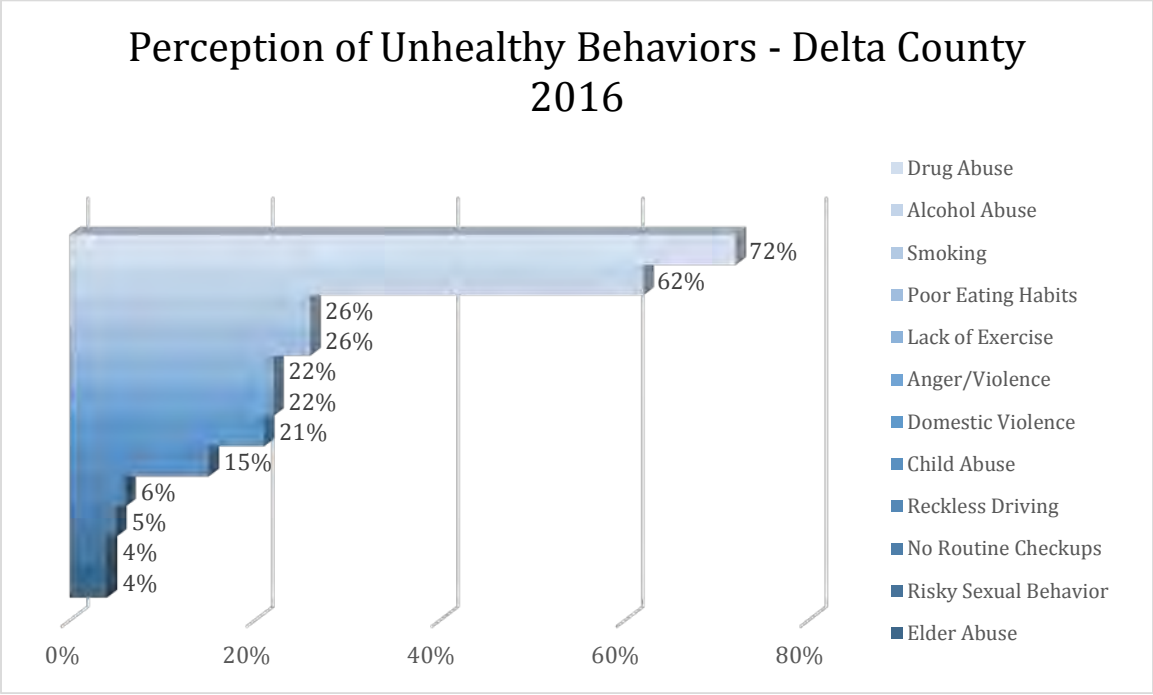
***Obesity*** tends to be rated higher by people with higher education and income. Native American people are less likely to be concerned.

***STIs*** tend to be rated higher by younger people.

***Stroke*** does not show significant correlations.

## 5.2 Perceptions of Unhealthy Behaviors

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




*Source: CHNA Survey*

### Demographic Factors Related to Perceptions of Unhealthy Issues

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

***Anger/Violence*** is rated higher by those with low education and income.

***Alcohol Abuse*** is rated higher by White people.

***Child abuse*** tends to be rated higher by younger people and Native Americans.

***Domestic Violence*** does not show significant correlations.

***Drug abuse*** tends to be rated higher by White individuals and those with high education.

***Elder abuse*** is rated higher by Native Americans.

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

***No check-ups*** is rated higher by homeless people.

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

***Reckless driving*** does not show significant correlations.

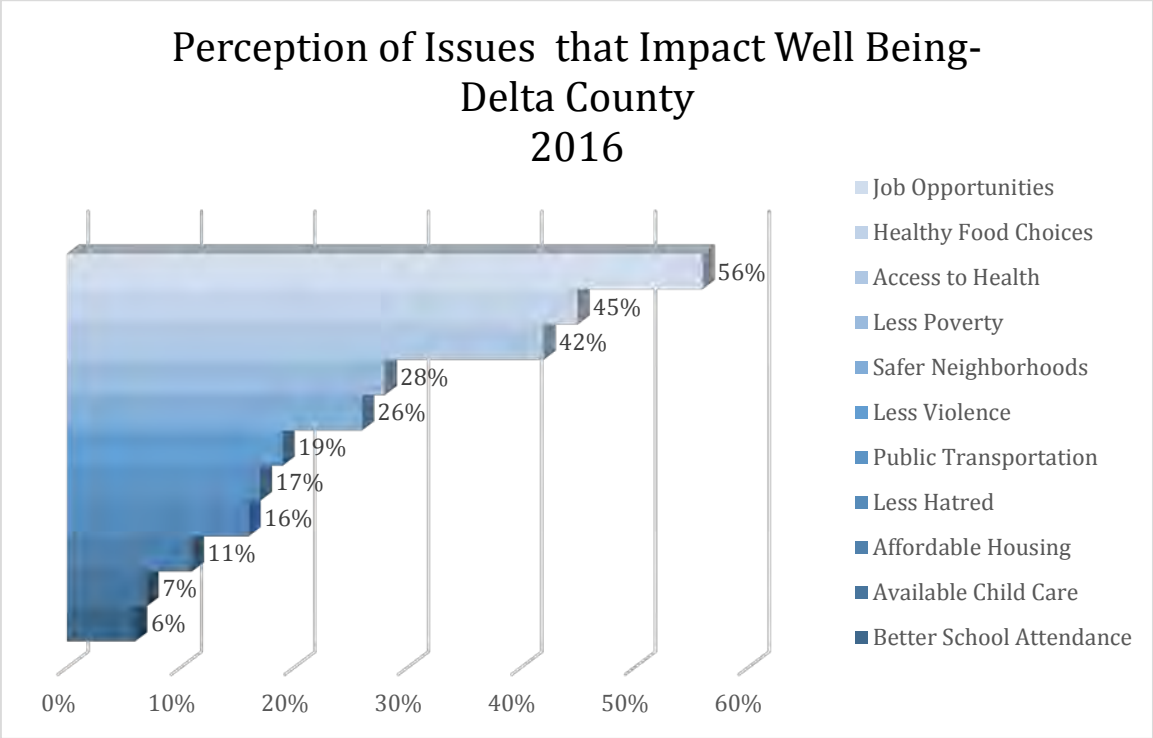
***Smoking*** tends to be rated higher by White residents.

***Risky Sex Behavior*** is rated higher by younger people.

## 5.3 Perceptions of Issues Impacting Well Being

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

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




*Source: CHNA Survey*

## Demographic Factors Related to Perceptions of Well Being Issues

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

***Access to health services*** tends to be rated higher by older individuals.

***Affordable housing*** is rated higher by women and those with low income.

***Availability of childcare*** tends to be rated higher by younger individuals.

***Better schools*** does not show significant correlations.

***Job opportunities*** tend to be rated lower by White individuals.

***Public transportation*** tends to be rated higher by younger people and those with low income.

***Access to healthy food*** is rated higher by younger people.

***Less poverty*** is rated higher by White people.

***Safer neighborhoods*** does not show significant correlations.

***Less hatred*** does not show significant correlations.

***Less violence*** tends to be rated higher by White people and those with low education.

## 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:

- Total population is decreasing
- Aging population
- Early sexual activity- teen births are slightly below State averages

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

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

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

- Tobacco usage
- Substance abuse – alcohol
- Obesity

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

- Asthma
- Cancer
- Diabetes
- Heart Disease

**Identification of Potential Health-Related Needs Considered for Prioritization**

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

- **Use of ED as primary source of medical care**
- **Not seeking healthcare when needed**
- **Poor healthy behaviors – healthy eating & exercise**
- **Mental health**
- **Obesity**
- **Tobacco use**
- **Asthma**
- **Diabetes**
- **Substance abuse – alcohol**
- **Heart disease**
- **Cancer**

# 5.5 Community Resources

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

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

# 5.6 Significant Needs Identified and Prioritized

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

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

## Healthy Behaviors – Active Living, Healthy Eating and Subsequent Obesity

**Active Living.** A healthy lifestyle, comprised of regular physical activity and balanced diet, has been shown to increase physical, mental, and emotional well-being. Note that 29% of respondents in Delta County indicated that they do not exercise at all, while the largest percentage of residents exercise 1-2 times per week (38%). Consequently, over two-thirds of residents exercise 2 or fewer times per week.

**Healthy Eating.** Nearly two-thirds (65%) of Delta County residents report no consumption or low consumption (1-2 servings per day) of fruits and vegetables per day. Note that the percentage of Delta County residents who consume five or more servings per day is only 5%.

**Obesity**. In Delta County, the number of people diagnosed with obesity and being overweight has decreased slightly from 2009 to 2014. Note specifically that the percentage of obese and overweight people has decreased from 66.2% to 63.9%. Overweight and obesity rates in Michigan remained stable at 65.8% during the same time period.

## Behavioral Health – Mental Health and Substance Abuse

**Mental Health.** Self-perceptions of mental health can provide important insights to help manage population health. Not only do self-perceptions provide benchmarks regarding mental-health status, but they can also provide insights into how accurately people perceive their own health. Approximately 9.7% of residents in Delta County reported they had experienced 14 days or more with poor mental health per month in 2012-2014.

**Substance Abuse.** Alcohol and drugs impair decision-making, often leading to adverse consequences and outcomes. Research suggests that alcohol is a gateway drug for youth, leading to increased usage of substances in adult years. Compared to the State of Michigan average (18.0%), Delta County has a higher percentage of residents at risk for acute or binge drinking, as 2011 and 2012 rates suggest 25% of residents engage in binge drinking.

Additionally, research suggests tobacco use facilitates a wide variety of adverse medical conditions. Smoking rates have held steady in Delta County at 23.9%, above the State of Michigan averages (22%).

# 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:

**Gail Brazeau** is the Health and Disabilities Manager for the Menominee, Delta, Schoolcraft Early Childhood Program. She oversees the health, nutrition, and disability services for the program. She received her bachelor's degree in Social Work from Northern Michigan University and began working with Early Head Start in 1999 as a Home Visitor serving pregnant women, infants and toddlers and their families. She also serves on a Parent Advisory Board for Patient and Family Centered Care for Mott Children's Hospital at the University of Michigan.

**Sarah Cantrell** is the new Menominee, Delta and Schoolcraft Community Action Agency and Human Resources Authority, Inc. Retired and Senior Volunteer Program Director. She replaces Theresa Nelson, who's retiring in May after 39 years with the agency.

Cantrell joins the MDS Community Action Agency after spending 3 ½ years as Assistant Manager at the Goodwill Store in Escanaba. RSVP recruits residents 55 years old and older in Menominee, Delta and Schoolcraft counties, along with Marinette County in Wisconsin, to provide a host of volunteer activities, including but not limited to, Reading Buddies in local schools, medical rides, medical facilities, and bloodmobiles. The program's goal is "to improve lives, strengthen communities, and foster civic engagement through service and volunteering. RSVP Volunteers share their life experiences and skills." Cantrell received an Associate's Degree from Bay College after studying Business Administration. She also received a Certificate in Accounting. She went on to receive her Bachelor's Degree in Business Administrative – Management and Marketing. She also received a Certificate in Photography from Bay College's M-TEC.

**Lynn A. Erickson,** Executive Director, Tri-County Safe Harbor, Inc. Human Services. We serve men women and children who are victims of intimate partner domestic violence. We also serve victims of sexual assault and stalking by strangers or people who are known to the victim. Our shelter home is located in Delta County and we have outreach offices in Manistique, and Menominee Counties.

**Sandra L. Guenette,** SW, OSF Saint Francis Hospital, is the Lead Social Worker/Case Manager at OSF St. Francis Hospital. She received her Bachelor's degree in Social Work from Northern Michigan University in 1980. She began her medical social work career in skilled nursing facilities. She became employed by OSF St. Francis Hospital in 1983 and in March of 2015 her employment was transitioned into the Case Management Division of OSF Health Care System, Peoria, Ill. Her main areas of focus in case management is assisting patients through the continuum of care which includes: assessment of needs, information and referral, financial assistance, palliative care, and discharge coordination. She works closely with physicians and other interdisciplinary team members in all units of the hospital, with community physicians groups, home health care agencies and other local service agencies to aid the patient's hospital experience and transition of care.

**Kacie Hanchek,** Manager of community relations and development for OSF St. Francis Hospital & Medical Group. She received her bachelor's degree in Business Administration Management with a minor in Marketing from Lake Superior State University in Sault Ste. Marie, MI and her associate's degree in Accounting from Bay College in Escanaba, MI. She has been with OSF since 2015, overseeing community relations, Foundation and philanthropic support as well as events and volunteer engagement. She is a member of Delta Force and is a member of the Bay College Advisory Board for Business Marketing degree programs.

**Joy Hopkins** is OSF Saint Francis Hospital Vice President Patient Care Services-Chief Nursing Officer, serving in this role since 2012. Joy has a Masters in Health Administration from Eastern Michigan University and a Bachelors in Nursing from George Mason University. She serves on many OSF Saint Francis and OSF Healthcare System Committees and projects.

**Kelly Jefferson**, Vice President, Chief Operating Officer OSF Saint Francis Hospital. Kelly has worked for OSF Healthcare since 1998, progressing from a registered nurse at the bedside to vice president of operations. Kelly has worked in several areas across the OSF Healthcare System including OSF Saint Francis Medical Center in Peoria, IL as a registered nurse on general pediatrics and in neonatal intensive care and as a registered nurse and 6-sigma black belt for OSF Medical Group in Peoria, IL. In 2007, Kelly accepted a master black belt position at St. Francis Hospital & Medical Group and moved her family to Escanaba, MI. "Prior to moving here, my family and I had vacationed in the Upper Peninsula for many years and had fallen in love with the area. When the opportunity presented itself, we jumped at the chance to make the move. We consider it a tremendous blessing to live here." A native of Canton, Ill., she received her nursing diploma from Graham Hospital School of Nursing in Canton, IL. After working several years in healthcare, Kelly recognized the importance of obtaining an advanced degree to continue her professional development. In 2011, she received her Master of Science in Nursing from Walden University. Experience in working in clinical care and performance improvement has enabled her to develop an in-depth understanding of many aspects of the healthcare delivery system. This knowledge has contributed to her ability to plan and effectively execute on key systems and processes. "I enjoy learning new things and taking on new challenges. This job provides endless opportunities for both. I love what I do and consider it a privilege to serve with the Sisters in providing healthcare in our community." Kelly lives in Gladstone, MI with her husband, Brett, daughter, Olivia, and two dogs. When not working, she enjoys engaging in outdoor recreations with her family including hiking, backpacking, kayaking, biking and snowshoeing. Kelly is also active in her local church and enjoys volunteering at various fund raising events and local charities.

**Linda Klope** is the Registered Dietitian/Certified Diabetic Educator at OSF St. Francis Hospital and Medical Group. She received her Bachelor's degree from Michigan State University in 1976, worked with Kraft Foods and at St. Francis Hospital in Waterloo, IA before coming to OSF in 1981. She received her Master's degree from Northern Michigan University in Community College Education in 1981. Since that time Linda has worked both with in- and out-patients at the hospital providing nutrition education as needed, especially with the pregnant women with diabetes. For the past four years she has worked with several of the local schools as a Fuel Up to Play 60 program coordinator and as the outreach coordinator for health fairs where she provides glucose and cholesterol testing. She has also been involved with the Central Partnership Council since its beginning seven years ago. Her hobbies include being a Swim

Official for the YMCA, sewing, knitting, swimming, walking and taking care of her chickens. Her husband is employed as an engineer. Both of her daughters are also in the health care field.

**Connie LeBoeuf,** Senior Financial Analyst, OSF St. Francis Hospital & Medical Group. She received her bachelor's degree in Business Administration Management with a minor in Accounting from Lake Superior State University in Sault Ste. Marie, MI and her associate's degree in Business Administration from Bay College in Escanaba, MI. She has been with OSF since 1990 having working in various positions within Finance & Accounting and IT both Escanaba and Peoria.

**Dave Lord** assumed the role of President for OSF St. Francis Hospital & Medical Group in 2013.Born at OSF St. Francis Hospital and raised in Escanaba, he is a graduate of Escanaba Area High School. He received his undergraduate degree from Northern Michigan University, where he also has completed coursework toward a Master of Public Administration degree. Dave began his career in 1996 in the Information Technology Department. He later served as manager of planning and decision support before being named vice president of operations in 2004, overseeing laboratory, medical imaging, respiratory therapy, rehabilitation services, dietary services, plant operations, community relations, development and IT. He is a member of the board of directors for Catholic Social Services of the Upper Peninsula, the Delta County Economic Development Alliance and the Northern Lights YMCA. He is a founding member of the Bay College Technology Degree Program and serves as a volunteer for various youth sports.

**Julie Mallard,** Executive Director, United Way of Delta County. Julie received her Bachelor's Degree in Public Relations from the University of Florida in 1988. She began her career with Suncoast Girl Scout Council in Tampa, Florida. In 1994 she moved to Michigan and spent the next 11 years with North Woods Home Nursing and Hospice, where she was responsible for marketing and volunteer coordination for a four-county area. During that time, she moved from Manistique to Escanaba, where her role with North Woods expanded to include sales, activities and tenant relations at North Woods Assisted Living. In 2005 she became the Executive Director of the United Way of Delta County. Her work includes fundraising, special events, marketing, volunteer coordination, administration, community collaboration and working with local nonprofit agencies. She is co-chair of the Substance Abuse and Violence Education (SAVE) Council, co-chair of the Family Community Collaborative, serves on the Healthy Communities Coalition, Delta County Coalition Against Homelessness and Human Services Advisory Board at Bay College and is secretary of the newly formed Targeted Restart, Inc. (TRI). She also is secretary of the Escanaba Noon Kiwanis Club.

**Amber Mayers,** RN, CPHRM-Patient Safety Officer/Risk Manager, OSF St. Francis Hospital & Medical Group. Amber has a background in Nursing, Patient Safety, Quality and Risk Management. Also a TeamSTEPPS Master Trainer, she has participated in several patient care and service related program/collaborative. Amber has been with SFH for 8 years, holding membership on hospital and ministry committees, and is a liaison with many organizations on behalf of OSF. In 2010, Amber was sponsored for the Delta Force Community Leadership program. During her free time she was also a MDS Headstart Policy Council Member, ABATE member, a current Team 906 Wellness Advocate. She enjoys spending time with her family, camping, nature, traveling and riding motorcycle.

**Anne Shishkovsky Milne,** MS/MUP, Community Planner, Central Upper Peninsula Planning and Development Regional Commission (CUPPAD). Anne supports team planning efforts and assists local units of government on a variety of Commission related initiatives including grant writing, recreation plans, hazard mitigation, transportation plans, economic development, coastal management, strategic plans, and specialized studies. Anne is also the lead on the Regional Prosperity Initiative. Anne holds a Dual Master of Science & Master of Urban Planning from the University of Michigan and a Bachelor of Science, Architecture, from Lawrence Technological University.

**Micki Murray** is the Director, Employee Relations at OSF St. Francis Hospital and Medical Group. She received her Bachelor's degree from Northern Michigan University and her Master's in Education, Human Resources Performance and Change Management, from Colorado State University. She was hired into Human Resources in 1995 and was promoted to her current position in the fall of 2014.

**Mark A. Povich,** DO-Director of Physician Practices, OSF Medical Group & Family Physician. Dr. Mark Povich has a B.S. degree in Biology, a M.S. in Fisheries and Wildlife, and attended Michigan State University College of Osteopathic Medicine. He also served in the USAF 1987-1994. Dr. Povich has been the active Medical Director for OSF St. Francis Hospital Medical group since 2004. He has been board certified in Family Medicine since 1988 and Diplomat-Anti-Aging/Regenerative Medicine 2010, also a member of the Michigan Association of Osteopathic Family Physicians and the Institute of Functional Medicine. He is married to Carol, and they have nine children together.

**Amy Racine,** Health & Wellness Coordinator, Northern Lights YMCA Delta Center

**Kyle Rambo,** Executive Director of Catholic Social Services of the Upper Peninsula (CSSUP) since August of 2013. Rambo has been married to the former Kay Young for the past 22 years. Together they have two teenage sons, Lance and Luke, and are active members of St. Michael Parish in Marquette. A native of Essexville, Michigan, Rambo earned his undergraduate degree from the University of Tennessee and has a master's of public administration from Ball State University. Rambo retired from military service as a Lieutenant Colonel in 2013 with 24 years as an Airborne, Ranger, Infantry Officer in the United States Army, including four combat tours. Rambo's military education includes basic and advanced officer courses and the Command and General Staff College. His awards and decorations include the Bronze Star and numerous awards for meritorious service and achievement. Prior to joining CSSUP, Rambo served as a professor of military science at Northern Michigan University and at Michigan Technological University. Rambo enjoys competing in ski marathons, running, and biking. He also enjoys bow hunting and watching his sons compete in athletics. He has significant experience in coaching track and field and cross country, and finds it personally rewarding to encourage others to reach their fitness potential. Rambo volunteers at Saint Michael's Catholic Church as an usher. He also serves as an advisor or board member for several non-profit organizations including the KeenAger Corporation, the Michigan Federation for Children and Families, the Michigan Catholic Conference Policy Committee, the Marquette County Mental Health Advisory Committee, and Targeted Restart Incorporated.

**Kathy Ryno,** MSN, BSN, RN Delta-Schoolcraft Intermediate School district. Health Occupation Instructor 1993-Present, HOSA Advisor, CNA Instructor, Learning Center School Nurse, BLS and Heartsaver CPR/First Aid Instructor, as well as a YMCA Volunteer and Fitness Instructor 2003-Present. Kathy also

is a Bay College, Allied Health and Nursing Adjunct Faculty member 2003-Present, Nursing Advisory Committee Member, Bay Alumni Board Member with current memberships to the MHOEA Board, YAP Board, Eagles Auxiliary, and the Delta-Menominee Family Planning Advisory.

**Caron Salo,** Senior Program / Fund Development Director for the Northern Lights YMCA – Delta Center. She has worked for the YMCA since 1996. She is responsible for all aspects of program development and administration including budget management, marketing, community partnerships and strategic planning. On the Fund Development side, she is responsible for grant writing and all major fundraising efforts including the YMCA Annual Campaign and special events. Caron is currently a member of the Escanaba Rotary Club, but has been a Jaycee and a past member of the OSF St. Francis Advisory Board member.

**Mike Snyder** RS, Health Officer, Public Health Delta & Menominee Counties, Michael Snyder is the Health Officer for Public Health Delta & Menominee Counties. He received his Bachelor degree in Conservation and Master's Degree in Public Administration from Northern Michigan University. He also received a Certificate in the Foundation of Public Health from the University of Michigan. Michael has been employed at Public Health since 1994 and has been the Health Officer since 2012.

**Elsie Stafford,** Administrator, Bishop Noa Home. Elsie is a Registered Nurse, graduating with an AS degree from Jamestown Community College in New York. She has worked in many capacities over the past 40 years: from hospital pre/post- surgical nursing to nursing home care and for eight years was a Director of Nursing in long term care. In 2001, Elsie became certified in the State of Michigan as a Licensed Nursing Home Administrator and has served in that role ever since. In 2008, she was appointed as the Administrator at Bishop Noa Home; her specialty is skilled care and long term care Medicare certification, and in 2010 Bishop Noa Home became Medicare certified. Elsie and her family moved to the UP in 1994 and have loved being a part of the UP culture. As a Nursing Home Administrator, she is passionate about Resident Rights and providing quality care to our aging population. She hopes that delivery of care at every level continues to meet the need of the patient/resident while encouraging and attracting young professionals to join the health care profession. Elsie serves on the UPCAP ADRC coalition, HCAM member, and is a Certified Dementia Practitioner (CDP). Her husband is retired and most of all, they enjoy four amazing grand- children. Walking and gardening allow her to keep her head clear and also allow her to truly appreciate the beautiful UP.

**Fred Wagner,** Chief Financial Officer, OSF St. Francis Hospital & Medical Group. Fred began his career with OSF St. Francis Hospital & Medical Group in 1989, progressing from manager of accounting to CFO. He developed a passion for numbers and accounting in his first year of college and says he enjoys budgeting and forecasting "more than any sane person should." But the best part of his job, he maintains, is helping others. Born in Lower Michigan, Fred moved to the Upper Peninsula as a senior in high school and graduated from Escanaba Area High School. He attended Bay College before transferring to Northern Michigan University, where he received a Bachelor of Science degree in accounting. He worked in the community mental health field in Monroe and Schoolcraft counties before finding his way to OSF in 1989. His mother, Ruth Wagner, had also worked for OSF, retiring as the manager of surgical services in 1990. The health care industry also led Fred to his wife, Mary, who works at St. Francis as manager of the business office. Together they enjoy traveling, antiquing, watching movies, camping and spending

time with their children, grandchildren and dogs. Fred is active in his church and volunteers his time at various fundraising events that have supported the OSF Foundation, the American Red Cross and other local charities. He said he enjoys working for the Sisters and finds his job as rewarding, challenging and complex as he did 26 years ago.

**Jennifer Ware,** RN, Pathways-Employed with Pathways Mental Health for over 18 years, Infection Control Chair, Integrated Health Care Committee Member. Prior to working at Pathways worked Home Health in Escanaba and Medical/Oncology Unit St. Lawrence Hospital, Lansing. Community involvement includes Youth Group Leader and member of Days River Area Lions Club.

**Kayla West**, Central Upper Peninsula Planning and Development Regional Commission (CUPPAD) has 23 years of executive, program development and consulting experience in population health. Her work engages diverse audiences by sharing research on demographic and population health, convening focus groups, designing and facilitating interactive presentations and summits, and promoting community-based innovations that improve population health. She has worked at the state, national and community level with federally qualified health centers, rural health clinics, hospitals, health departments and clinicians in medicine, oral health and mental health, as well as with civic-minded private citizens. Kayla holds a Bachelor's Degree from Stanford University and an MBA from Cornell University. Kayla is assisting in a project to compare community health needs assessments conducted by nonprofit hospitals across the U.P., identifying common themes, and creating space for regional planning and collaboration on next steps.

**Peggy Weissert,** LPN-Interim Practice Manager OSF Multispecialty Group & Practice Coordinator Suite 200, 203, and HIMS. Peggy has worked with the OSF Medical Group for the last 20 years in various leadership roles. Prior to coming to OSF, Peggy worked for a private practice for 12 years. She has been in the Medical Field for over 30 years. Peggy enjoys crocheting, traveling, outdoors, gardening, and family most of all. Her rescue dog, Gracie, is the light of her life.

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

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

**Dawn Irion (Coordinator)** is a Strategic Reimbursement Analyst at OSF Healthcare System. She has worked for OSF Healthcare System since 2004 and has acted as the coordinator for 11 Hospital Community Health Need Assessments. In addition, she has coordinated the submission of the Community Benefit Attorney General report and the filing of the IRS Form 990 Schedule H since

2008. Dawn has been a member of the McMahon-Illini Chapter of Healthcare Financial Management Association for over ten years. Dawn will assume the responsibilities of President-Elect on the board of the McMahon-Illini HFMA Chapter starting in June of 2016.

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

# APPENDIX 2. ACTIVITIES RELATED TO 2013 CHNA PRIORITIZED NEEDS

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

**Community Misperception:** Identified as Prioritized Health Need

- Provided monthly media announcements on health behaviors and programs. Established a community committee with representatives from local service organizations that meet quarterly.

**Diabetes:** Identified as Prioritized Health Need

- Performed free blood screening at community events, along with providing on-going education and training for the management and prevention of diabetes. Offered free diabetic support group meetings.

**Mental Health:** Identified as Prioritized Health Need

- Provided financial support to a local agency that is a key provider of mental health services.

**Obesity:** Identified as Prioritized Health Need

- Partnered with local schools in the Fuel Up to Play 60 program. Developed medical nutrition education and training on management and prevention of obesity. Supported local community walks and fairs with resources.

**Substance Abuse:** Identified as Prioritized Health Need

- Helped community members with Life rides at different times of the year to have proper transportation. Numerous educational classes offered on the dangers of risky behaviors.

# APPENDIX 3. SURVEY

## COMMUNITY HEALTH-NEEDS ASSESSMENT SURVEY

**INSTRUCTIONS**

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

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

### I. IMPORTANT HEALTH ISSUES IN OUR COMMUNITY

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

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

### II. UNHEALTHY BEHAVIORS

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

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

### III. ISSUES WITH YOUR WELL BEING

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

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

## IV. Access to Health Care

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

1. When you get sick, where do you go? Please choose only one.
☐ Clinic/Doctor's office ☐ Emergency Department ☐ I don't seek medical attention
☐ Urgent Care Center ☐ Health Department ☐ Other _____

2. How long has it been since you have been to the doctor to get a checkup when you were well (not because you were already sick)?
☐ Within the last year ☐ 1-2 years ago ☐ 3-5 years ago
☐ 5 or more years ago ☐ I have never been to a doctor for a checkup.

3. In the last year, was there a time when you needed medical care but were not able to get it?
☐ No (please go to question 5) ☐ Yes (please go to the next question)

4. If you just answered "yes" to question 3, why weren't you able to get medical care? Choose all that apply.
☐ I didn't have health insurance.
☐ I couldn't afford to pay my co-pay or deductible.
☐ I didn't have any way to get to the doctor.
☐ Fear
☐ Other _____
☐ The doctor or clinic refused to take my insurance or Medicaid.
☐ I didn't know how to find a doctor.
☐ Too long to wait for appointment.

5. In the last year, was there a time when you needed prescription medicine but were not able to get it?
☐ No (please go to question 7) ☐ Yes (please go to the next question)

6. If you just answered "yes" to question 5, why weren't you able to get prescription medication? Choose all that apply.
☐ I didn't have health insurance.
☐ I couldn't afford to pay my co-pay or deductible.
☐ I didn't know how to find a pharmacy.
☐ The pharmacy refused to take my insurance or Medicaid.
☐ I didn't have any way to get to the pharmacy.
☐ Other _____

7. About how long has it been since you have been to the dentist to get a checkup (not for an emergency)?
☐ Within the last year ☐ 1-2 years ago ☐ 3-5 years ago
☐ 5 or more years ago ☐ I have never been to a dentist for a checkup.

8. In the last year, was there a time when you needed dental care but could not get it?
☐ No (please go to question 10) ☐ Yes (please go to the next question)

9. If you just answered "yes" to question 8, why weren't you able to get dental care? Choose all that apply.
☐ I didn't have dental insurance.
☐ I couldn't afford to pay my co-pay or deductible.
☐ I didn't have any way to get to the dentist.
☐ Fear.
☐ Other _____
☐ The dentist refused to take my insurance or Medicaid.
☐ I didn't know how to find a dentist.
☐ Too long to wait for appointment.

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

11. If you just answered "yes" to question 10, why weren't you able to get mental-health counseling? Choose all that apply.
☐ I didn't have insurance.
☐ I couldn't afford to pay my co-pay or deductible.
☐ I didn't have any way to get to a counselor.
☐ Fear.
☐ Embarrassment.
☐ The counselor refused to take my insurance or Medicaid.
☐ I didn't know how to find a counselor.
☐ Too long to wait for appointment.
☐ Other _____

12. In the last week how many times did you participate in deliberate exercise, (such as jogging, walking, golf, weight-lifting, fitness classes) that lasted for at least 30 minutes or more?
☐ None (please go to next question) ☐ 1 - 2 ☐ 3 - 5 ☐ More than 5

13. If you answered "none" to the last question, why **didn't** you exercise in the past week? Choose all that apply.
☐ I don't have any time to exercise.
☐ It is not important to me.
☐ I don't have access to an exercise facility.
☐ I don't have child care while I exercise.
☐ Other _____
☐ I don't like to exercise.
☐ I can't afford the fees to exercise.
☐ I am too tired.
☐ I have a physical disability.

14. On a typical day, how many servings of fruits and/or vegetables do you have?
☐ None (please go to next question) ☐ 1 - 2 ☐ 3 - 5 ☐ More than 5

15. If you answered "none" to the last question, why **didn't** you eat fruits/vegetables? Choose all that apply.
☐ It is difficult to buy fruits and/or vegetables
☐ It is not important to me.
☐ Other _____
☐ I don't like fruits/vegetables
☐ I can't afford fruits/vegetables.

16. On a typical day, how many cigarettes do you smoke (either actual or electronic/vapor)?
☐ None ☐ 1 - 4 ☐ 5 - 8 ☐ 9 - 12 ☐ More than 12

17. Where do you get most of your medical information *(check **only one**)*
☐ Doctor ☐ Friends/family ☐ Internet ☐ Pharmacy ☐ Nurse at my church

18. Do you have a personal physician? ☐ No ☐ Yes

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

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

21. How long has it been since you have had a flu shot?
☐ Within the last year ☐ 1-2 years ago ☐ 3-5 years ago
☐ 5 or more years ago ☐ I have never had a flu shot

## V. Background Information

What county do you live in?

☐ Delta ☐ Other

What type of insurance do you have?

☐ Medicare ☐ Medicaid ☐ Private/commercial ☐ None

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

☐ I cannot afford insurance ☐ I don't need insurance

☐ I don't know how to get insurance ☐ Other _____

What is your gender? ☐ Male ☐ Female

What is your age?

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

What is your race?

☐ White ☐ Black/African American

☐ Hispanic/Latino ☐ Native American/American Indian/Alaska Native

☐ Asian (Indian, Pakistani, Japanese, Chinese, Korean, Vietnamese, Filipino/a)

☐ Pacific Islander (Native Hawaiian, Samoan, Guamanian/Chamorro)

☐ Other race not listed here: _____

What is your highest level of education?

☐ Less than high school ☐ Some high school ☐ High school degree (or GED/equivalent)

☐ Some college (no degree) ☐ Associate's degree ☐ Bachelor's degree

☐ Graduate or professional degree ☐ Other: _____

What was your total income last year, before taxes?

☐ Less than $20,000 ☐ $20,001 to $40,000 ☐ $40,001 to $60,000

☐ $60,001 to $80,000 ☐ $80,001 to $100,000 ☐ over $100,000

Do you: ☐ Rent ☐ Own ☐ Other

How many people live in your home? _____

What is your job status?

☐ Full-time ☐ Part-time ☐ Unemployed ☐ Homemaker

☐ Retired ☐ Disabled ☐ Student ☐ Armed Forces

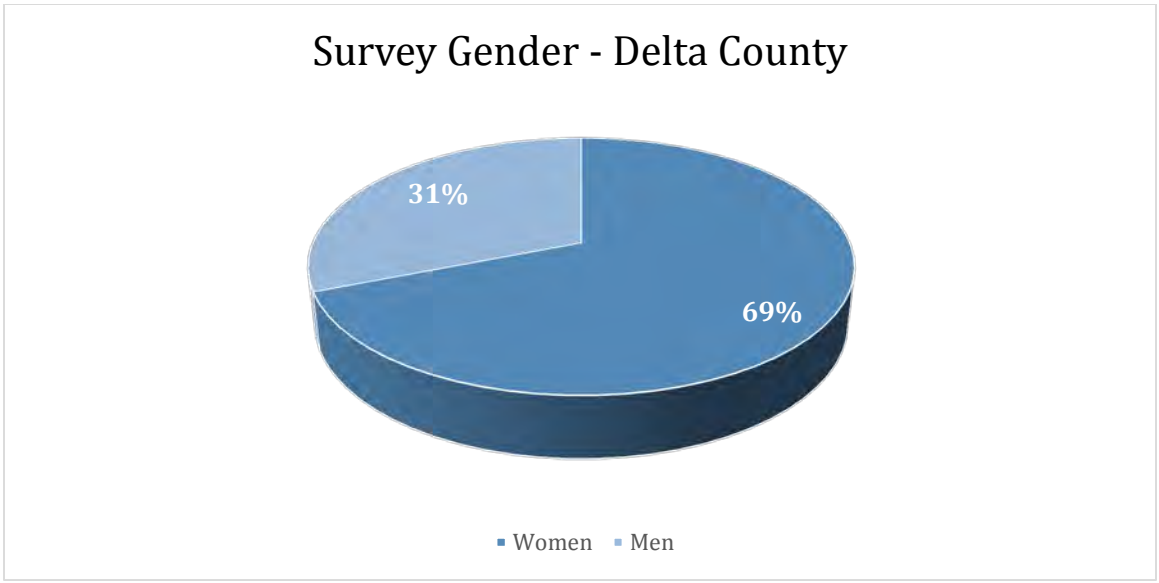
Is there anything else you would like to tell us about community concerns, health problems or services in the community?

_____

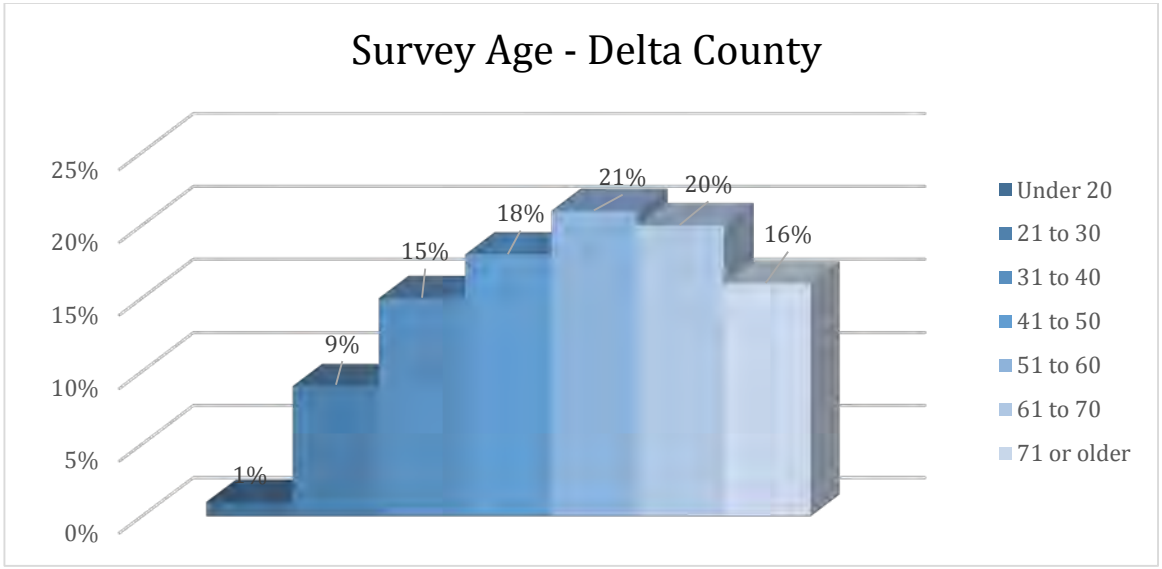
**Thank you very much for sharing your views with us!**

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

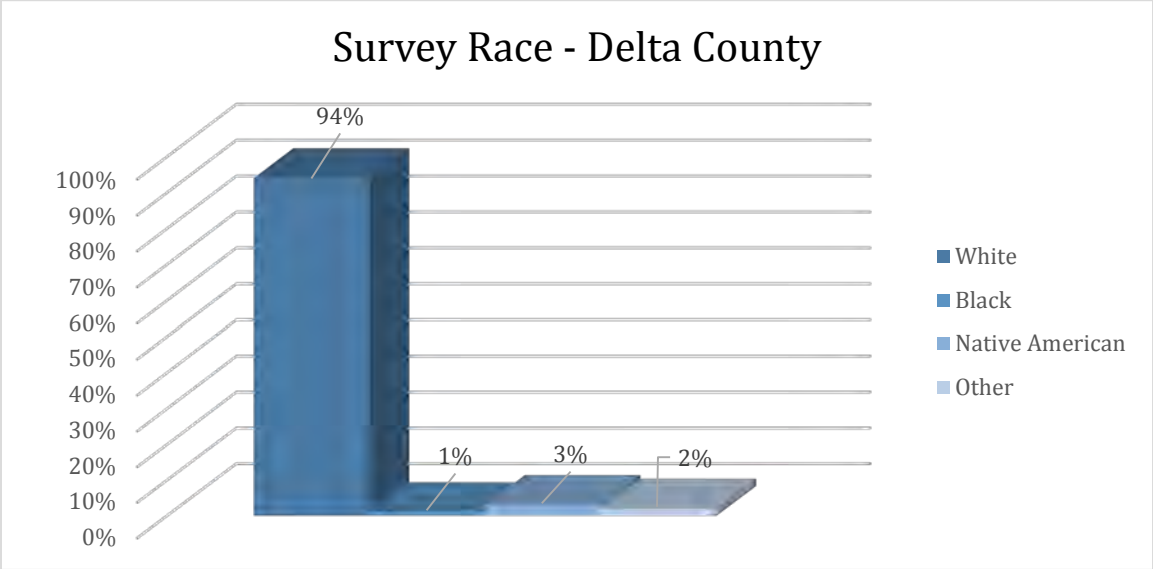
# APPENDIX 4. CHARACTERISTICS OF SURVEY RESPONDENTS FOR GENERAL SAMPLE



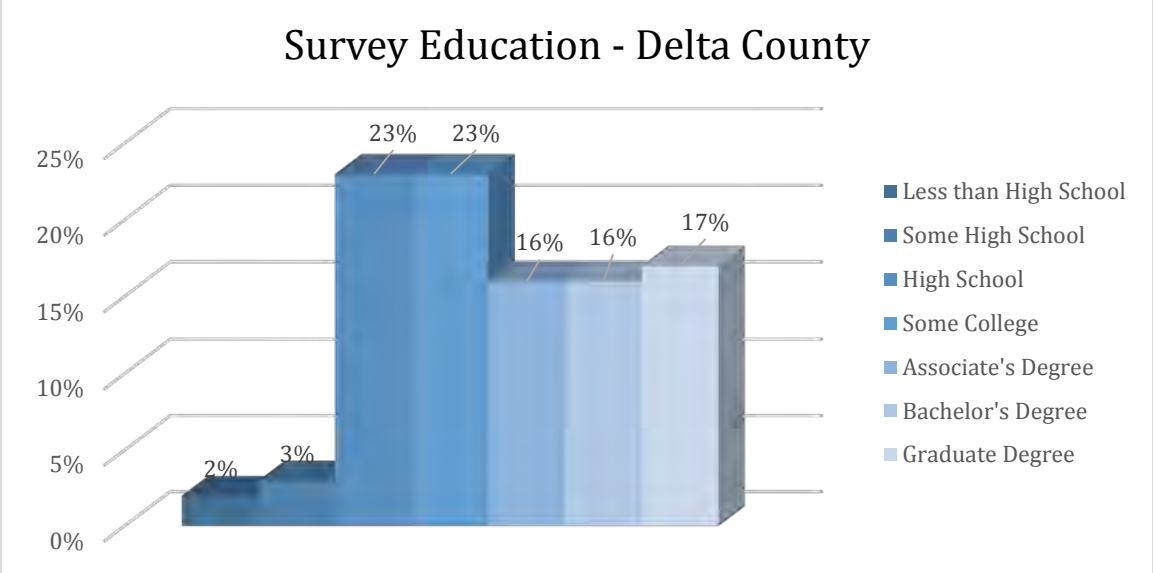

*Source: CHNA Survey*




*Source: CHNA Survey*

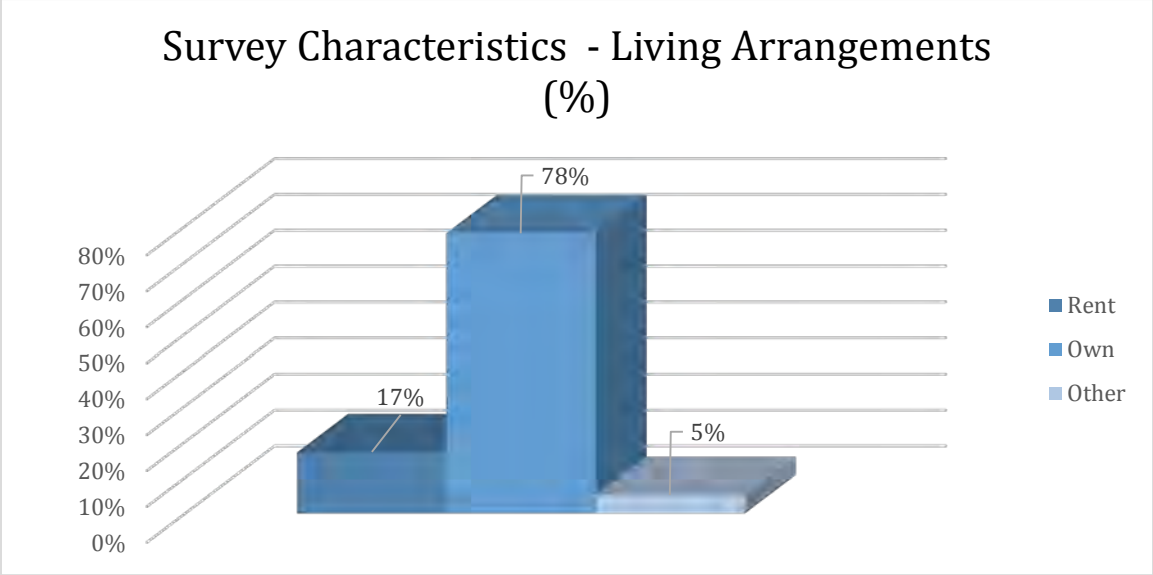



*Source: CHNA Survey*

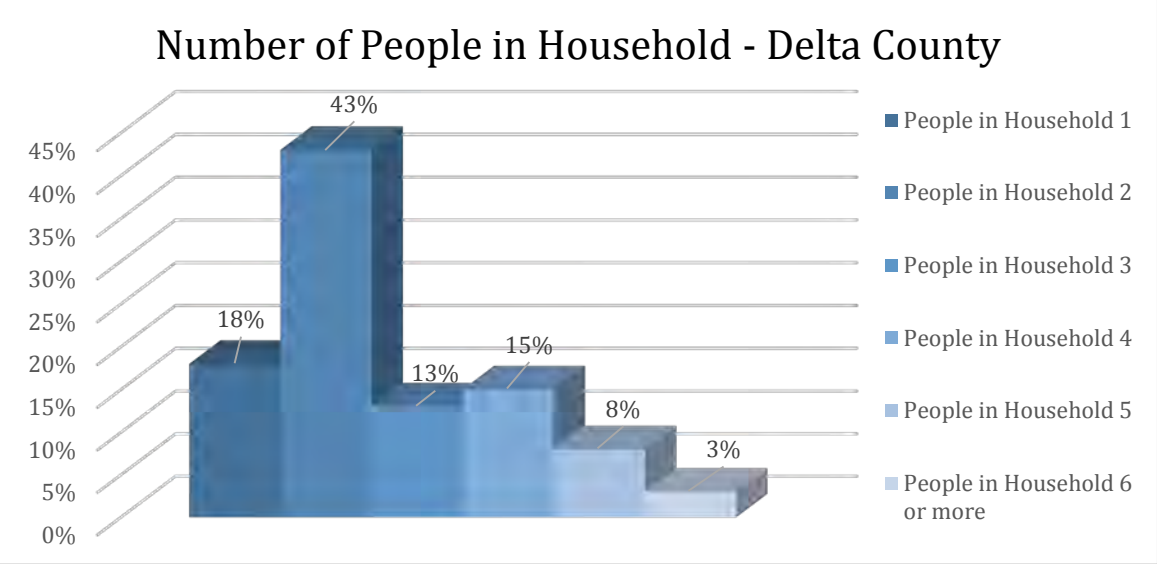



*Source: CHNA Survey*

Income: Mean income for sample was $41,980.00




*Source: CHNA Survey*




*Source: CHNA Survey*

# APPENDIX 5. RESOURCE MATRIX

| | Organization name | Asthma | Cancer | Cardiovascular Disease | Diabetes | Emergency Deptartment Misuse | Healthy Behaviors/ Eating & Exercise | Mental Health | Not Seeking Medical Care | Obesity | Substance Abuse- Alcohol | Tobacco Usage |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Recreational Facilities** | | | | | | | | | | | | |
| | Northern Lights YMCA | | | | x | | x | | | x | | |
| | City of Escanaba Parks and Facilities | | | x | | | x | | | x | | |
| | City of Gladstone Parks and Failities | | | x | | | x | | | x | | |
| | | | | | | | | | | | | |
| **Health Department** | | | | | | | | | | | | |
| | Public Health Delta & Menominee Counties | | x | x | x | | x | | | x | x | x |
| **Community Agencies** | | | | | | | | | | | | |
| | United Way of Delta County | | | | | | x | x | x | x | x | |
| | Pathways Community Mental Health | | | | | x | x | x | x | x | x | x |
| | Central Upper Peninsula Planning & Development | | | x | | | x | x | | x | x | |
| | Tri-County Safe Harbor | | | | | | | x | | | | |
| | MDS Community Action Agency | | | | | | x | | x | x | | |
| | Alcoholics Anonymous | | | | | | | | | | x | |
| | American Red Cross, Superior U.P. Chapter | | | | | | x | | | | | |
| | Bay Cliff Health Camp | | | | | | x | | | | | |
| | Bishop Noa Home for Senior Citizens | x | x | x | x | | | | | | | |
| | Care Free Dental Clinic (Dental Issues) | | | | | | | | x | | | |
| | Catholic Social Services | | | | | | | x | | | x | |
| | Child & Family Services of the Upper Peninsula | | | | | | | x | | | | |
| | Delta County Dept of Human Services | | | | | x | | | x | | | |
| | Family Nutrition and Food Safety Program | | | | | | | | | x | | |
| | Great Lakes Recovery Centers-Outpt Services | | | | | | | | | | x | |
| | Lutheran Social Services of WI and Upper MI | | | | | | | x | | | | |
| | Salvation Army-Escanaba | | | | | | x | x | | | | |
| | Society of St. Vincent de Paul | | | | | | x | x | x | | | |
| | Teaching Family Homes of Upper Michigan | | | | | | x | x | | | x | |
| | Upper Peninsula Commission for Area Progress | | | | x | | x | | x | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| **Hospitals / Clinics** | | | | | | | | | | | | |
| | St. Francis Hospital and Medical Group | x | x | x | x | x | x | x | | x | x | x |
| | UP Health Systems | x | x | x | x | x | x | x | | x | x | x |
| | Bellin Health | x | x | x | x | x | x | x | | x | x | x |
| **Schools** | Delta Schoolcraft Intermediate School District | x | | x | | x | x | x | x | x | x | x |
| | MDS Early Childhood Program | | | | | | x | | x | | | |

# APPENDIX 6. DESCRIPTION OF COMMUNITY RESOURCES

## Recreational Facilities (3)

### City of Escanaba Parks and Facilities
*Obesity, Healthy Behaviors, Heart Disease*
The City of Escanaba offers a variety of programs for infants, toddlers, early childhood, youth, adults, and seniors at the Catherine Bonifas Civic Center.

### City of Gladstone Parks and Facilities
Obesity, Healthy Behaviors, Heart Disease
Provide the best possible quality of life in our community by involving our citizens and maximizing our natural resources. Never settling for past accomplishments, always striving to improve. Resources available to the community include recreational activities and special events, year-long to include: sports-park, ski-park, beach/harbor, bike paths, and a farmer's market.

### Northern Lights YMCA
*Healthy Behaviors, Obesity, Addiction, Access to Health Services*
The Northern Lights YMCA is a community based service organization dedicated to building the mind, body and spirit for members of the Delta County community. By offering value-based programs emphasizing education, health and recreation for individuals regardless of sex, race or socio-economic status the YMCA is increasing the quality of life in Delta County.

## Health Departments (1)

### Public Health, Delta and Menominee Counties
*Obesity, Addiction, Healthy Behaviors, Access to Health Services, Heart Disease, Cancer, Diabetes*
The goal of the Delta-Menominee County Health Department is to protect and promote health and prevent disease, illness and injury. Public health interventions range from preventing diseases to promoting healthy lifestyles and from providing sanitary conditions to ensuring safe food and water. Specific programs of interest include the Wisewoman Program (*Diabetes, Addiction, Healthy Behaviors*).

## Community Agencies/Private Practices (23)

### Tri-County Safe Harbor (formerly Alliance Against Violence and Abuse)
*Mental Health*
The Alliance Against Violence and Abuse offers services for all people who are abused. Services include a 24-hour crisis line, an emergency shelter, support groups, individual counseling, therapy, court advocacy, and referrals for legal, medical, financial, and housing.

**Alcoholics Anonymous**
*Addiction*
Alcoholics Anonymous is a fellowship of men and women who share their experience, strength and hope with each other that they may solve their common problem and help others recover from alcoholism.

**American Red Cross, Superior U.P. Chapter**
*Healthy Behaviors*
The American Red Cross is a humanitarian organization led by volunteers and guided by its Congressional Charter and the Fundamental Principles of the International Red Cross Movement that provides relief to victims of disaster and helps people prevent, prepare for, and respond to emergencies.

**Bay Cliff Health Camp**
*Healthy Behaviors*
Bay Cliff is a year-round, nonprofit therapy and wellness center for children and adults with physical disabilities. Bay Cliff partners with non-profit organizations and schools interested in conducting programs at camp. These guest programs include health and wellness retreats, youth development camps, science and outdoor recreation programs, or volunteer and leadership trainings for people with & without disabilities.

**Bishop Noa Home for Senior Citizens**
*Respiratory Issues, Heart Disease, Cancer, Diabetes*
The Bishop Noa Home for Senior Citizens provides a safe, healthy environment that promotes physical, emotional and spiritual well-being to residents, families and employees.

**Care Free Dental Clinic**
*Dental Issues*
The Care Free Dental Clinic provides free dental care for Delta Country residents on a first come/first serve basis. The clinic specifically serves individuals who do not have any dental or medical insurance coverage.

**Catholic Social Services of the Upper Peninsula**
*Addiction*
Catholic Social Services has a large mental health and substance abuse outpatient-counseling ministry. Last year it served over 2,000 UP residents with 12,000 appointments. Counseling offices are in Marquette, Escanaba, and Iron Mountain. The agency has recently taken over the Keenagers Home in Wakefield. This home is on the site of the former Divine Infant Hospital and is home to 42 residents in either adult foster care, assisted living, or independent living. Catholic Social Services offers a general assessment for substance abuse and assesses the risk factors for the person's involvement in substance abuse, and will make treatment recommendations and/or refer individuals to the inpatient, outpatient or residential treatment services they need.

**Central Upper Peninsula Planning and Development Regional Commission (CUPPAD)**
CUPPAD regularly assists communities with the daunting task of finding sources of funding for projects that do not qualify for a government grant. In addition to regularly notifying local units of government

about funding opportunities, CUPPAD maintains information on various foundations that may provide funds, promotional items for fund-raising activities, and technical assistance. If you are seeking a funding source for a specific project, or would like to be placed, at no cost, on the list of communities receiving grant information as opportunities are announced, contact CUPPAD.

**Child and Family Services of the Upper Peninsula**
*Mental Health*
Child and Family Services is a private, non-profit, non-sectarian agency dedicated to strengthening children and families by providing high-quality programs structured around five major themes: counseling services, child welfare services, home-based services, homeless prevention services, and community-based services.

**Community Action Agency and Human Resource Authority**
*Obesity, Access to Health Services*
The Community Action Agency provides programs to negate the causes and symptoms of poverty. Specific programs of interest include the Senior Nutrition Services (*Obesity*), and RSVP (*Access to Health Services*).

**Delta County Department of Human Services**
*Access to Health Services*
DCDHS provides health care coverage to individuals who meet certain eligibility requirements. All programs have an income test and some look at assets, these tests vary with each program. Some may have a medical spend down amount, where the individual will be required to pay a set amount per month towards medical expenses before the coverage will be available.

**Delta County Cancer Alliance**
*Access to Health Services, Cancer*
DCCA provides wheelchairs, commodes, canes, lift chairs, hospital beds and various other equipment and supplies that are available to cancer patients free of charge.

**Delta Schoolcraft I.S.D. Career Tech Center**
*Mental Health, Healthy Behaviors, Access to Health Services, Community Health Misperceptions*
DSISD provides career technical education courses designed to develop basic skills required for specific vocations, specifically Health Occupations.

**Family Nutrition and Food Safety Program**
*Obesity*
The Family Nutrition and Food Safety program, offered through the Michigan State University Extension provides information concerning the basic principles of healthy eating, food handling, food preparation and shopping skills.

**Great Lakes Recovery Centers – Escanaba Outpatient Services**
*Addictions*
GLRC offers comprehensive outpatient drug abuse treatment services to families and individuals of all ages recovering from substance abuse. These services may include but are not limited to assessment, group therapy and relapse prevention.

**Pathways Community Mental Health**
*Mental Health*
Pathways Community Mental Health primarily addresses mental health care. Pathways provides integrated substance abuse services for those individuals with a primary mental health, development disability, or severe emotional disturbance who also have a secondary substance use disorder. Case management services are provided to eligible consumers who need assistance in gaining access to health and dental services, financial assistance, housing, employment, education, social services, and other services and natural supports.

**United Way of Delta County**
*Access to Health Services, Healthy Behaviors, Addiction, Mental Health*
The United Way of Delta County brings together people from business, labor, government, health and human services to address community's needs. Money raised through the United Way of Delta County campaign stays in community funding programs and services in Delta County.

**Lutheran Social Services of Wisconsin and Upper Michigan**
*Mental Health*
Lutheran Social Services provides behavioral health services (counseling, substance abuse, mental health and developmental disabilities), children's community services (adoption, foster care, pregnancy counseling, residential services and Head Start), nursing and community services (long-term care and rehabilitation, home care services, adult day services, respite services for caregivers and retirement communities), prisoner and family ministry (support for children of incarcerated parents and their caregivers, re-entry programs, on-site prison programs, and justice education), and senior housing services (affordable housing for low-income seniors and people with disabilities).

**Menominee-Delta-Schoolcraft Early Childhood Program**
*Access to Health Care, Healthy Behaviors, Dental Issues*
MDS CAA ECP offers comprehensive preschool services for children ages 3-5 as well as infant/toddler services for pregnant moms and children up to age 3. All services are free of chard. Transportation is provided to classrooms whenever possible.

**Salvation Army – Escanaba**
*Mental Health*
The Salvation Army provides individual and family trauma counseling and emotional support.

**Society of St. Vincent de Paul**
*Mental Health, Healthy Behaviors, Access to Services, Community Health Misperceptions*
The Society of St. Vincent de Paul offers tangible assistance to those in need on a person-to-person basis. It is this personalized involvement that makes the work of the Society unique. This aid may take the form of intervention, consultation, or often through direct dollar or in-kind service.

**Teaching Family Homes of Upper Michigan**
*Addictions, Mental Health, Healthy Behaviors*
Teaching Family Homes offer programs for children and youth including residential care, group homes, foster care and adoption, supervised independent living, private school, crisis intervention, mental health assessment, homeless services, in-home counseling and family preservation.

**Upper Peninsula Commission for Area Progress**
*Healthy Behaviors, Diabetes, Access to Health Services*
The UPCAP is responsible for development, coordination, and provision of human, social, and community resources within the 15 counties of the Upper Peninsula of Michigan. Specific programs of interest include the 2-1-1 Information and Resource Center (*Access to Health Services*) and UP Diabetes Outreach Network (*Diabetes*).

**Welcome Newborns Program**

*Addiction, Healthy Behaviors*
The Welcome Newborn program, offered through the Michigan State University Extension, provides every family with a newborn a tote bag full of information on the development of their baby, the need for immunizations, parenting, the importance of reading to your baby, the affects of second hand smoke on children, and available community resources for the family in Delta County.

**Hospitals/Clinics (2)**

**Marquette General Hospital**
*Obesity, Addiction, Mental Health, Healthy Behaviors, Access to Health Services, Asthma, Heart Disease, Cancer, Diabetes*
Marquette General Hospital is a 315-bed specialty care hospital that provides care in 65 specialties and subspecialties. With a medical staff of more than 200 doctors, the hospital cares for approximately 12,000 inpatients and more than 350,000 outpatients a year.

**OSF Saint Francis Hospital and Medical Group**
*Obesity, Addiction, Mental Health, Healthy Behaviors, Access to Health Services, Asthma, Heart Disease, Cancer, Diabetes*
With a medical staff of more than 100 physician and 700 employees, OSF St. Francis Hospital and Medical Group is a fully integrated health delivery system offering hospital-based, home care, and physician clinical services. Specific centers of interest include the Diabetes and Nutrition Education Center (*Diabetes*) and Cardiac Diagnostic Services (*Heart Disease*).

# APPENDIX 7. PRIORITIZATION METHODOLOGY

## 5-STEP PRIORITIZATION OF COMMUNITY HEALTH ISSUES

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

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

**Step 3. Apply "PEARL" Test from Hanlon Method[3]**
Screen out health problems based on the following feasibility factors:

***Propriety*** – Is a program for the health problem appropriate?
***Economics*** – Does it make economic sense to address the problem?
***Acceptability*** – Will a community accept the program? Is it wanted?
***Resources*** – Is funding available for a program?
***Legality*** – Do current laws allow program activities to be implemented?

**Step 4. Use Voting Technique to Narrow Potential Issues**

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

**1. Magnitude** – size of the issue in the community. Considerations include, but are not limited to:
- *Percentage of general population impacted*
- *Prevalence of issue in low-income communities*
- *Trends and future forecasts*

**2. Severity** – importance of issue in terms of relationships with morbidities, comorbidities and mortality. Considerations include, but are not limited to:
- *Does an issue lead to serious diseases/death*
- *Urgency of issue to improve population health*

**3. Potential for impact through collaboration** – can management of the issue make a difference in the community?
Considerations include, but are not limited to:
- *Availability and efficacy of solutions*
- *Feasibility of success*

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