SPECTRUM HEALTH

Community Health Needs Assessment for:

Pennock Hospital d/b/a Spectrum Health Pennock

Spectrum Health is a not-for-profit health system, based in West Michigan, offering a full continuum of care through the Spectrum Health Hospital Group, which is comprised of 12 hospitals, including Helen DeVos Children's Hospital; 180 ambulatory and service sites; 3,600 physicians and advanced practice providers, including 1,500 members of the Spectrum Health Medical Group; and Priority Health, a health plan with 779,000 members. Spectrum Health is West Michigan's largest employer, with 26,000 employees. The organization provided $372 million in community benefit during its 2017 fiscal year. Spectrum Health was named one of the nation's 15 Top Health Systems—and in the top five among the largest health systems—in 2017 by Truven Health Analytics®, part of IBM Watson Health™. This is the sixth time the organization has received this recognition.

Community Health Needs Assessment – Exhibit A

The focus of this Community Health Needs Assessment (CHNA) attached in Exhibit A is to identify the community needs as they exist during the assessment period (2017-2018), understanding fully that they will be continually changing in the months and years to come. For purposes of this assessment, "community" is defined as the county in which the hospital facility is located. This definition of community based upon county lines, is similar to the market definition of Primary Service Area (PSA). The target population of the assessment reflects an overall representation of the community served by this hospital facility. The information contained in this report is current as of the date of the CHNA, with updates to the assessment anticipated every three (3) years in accordance with the Patient Protection and Affordable Care Act and Internal Revenue Code 501(r). This CHNA complies with the requirements of the Internal Revenue Code 501(r) regulations either implicitly or explicitly.

Evaluation of Impact of Actions Taken to Address Health Needs in Previous CHNA – Exhibit B

Attached in Exhibit B is an evaluation of the impact of any actions that were taken, since the hospital facility finished conducting its immediately preceding CHNA, to address the significant health needs identified in the hospital facility's prior CHNA.

Exhibit A

SPECTRUM HEALTH PENNOCK HOSPITAL

Community Health Needs Assessment

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February 28, 2018

RESEARCH AND EVALUATION
VISION · INSIGHT · PRAXIS

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INTRODUCTION

Background and Objectives

VIP Research and Evaluation was contracted by the Community Health Needs Assessment (CHNA) team of Spectrum Health to conduct a Community Health Needs Assessment, including a Behavioral Risk Factor Survey (BRFS), for Spectrum Health Pennock Hospital (SHP) in 2017. For the purposes of this assessment, "community" is defined as the county in which the hospital facility is located. This definition of community is based upon county lines, is similar to the market definition of Primary Service Area (PSA). The target population of the assessment reflects the overall representation of the community served by this hospital facility.

The Patient Protection and Affordable Care Act (PPACA) of 2010 set forth additional requirements that hospitals must meet in order to maintain their status as a 501(c)(3) Charitable Hospital Organization. One of the main requirements states that a hospital must conduct a community health needs assessment and must adopt an implementation strategy to meet the community health needs identified through the assessment. The law further states that the assessment must take into account input from persons who represent the broad interests of the community, including those with special knowledge of, or expertise in, public health.

In response to the PPACA requirements, organizations serving both the health needs and broader needs of the SHP communities began meeting to discuss how the community could collectively meet the requirement of a CHNA.

The overall objective of the CHNA is to obtain information and feedback from SHP area residents, health care professionals, and key community leaders in various industries and capacities about a wide range of health and health care topics to gauge the overall health climate of the region covered by SHP.

More specific objectives include measuring:

- The overall health climate, or landscape, of the regions served by SHP, including, primarily, Barry County, but also portions of Eaton and Ionia counties
- Social indicators, such as crime rates, education, poverty rates, and adverse childhood experiences
- Community characteristics, such as available resources, collaboration, and volunteerism
- Physical health status indicators, such as life expectancy, mortality, physical health, chronic conditions, chronic pain, and weight status
- Mental health status indicators, such as psychological distress and suicide
- Health risk behaviors, such as smoking and tobacco use, alcohol use, diet, and physical activity
- Clinical preventive practices, such as hypertension awareness, cholesterol awareness, and oral health
- Disparities in health
- Accessibility of health care
- Barriers to healthy living and health care access
- Positive and negative health indicators
- Gaps in health care services or programs

Background and Objectives (Continued)

Information collected from this research will be utilized by the Community Health Needs Assessment team of SHP to:

- Prioritize health issues and develop strategic plans
- Monitor the effectiveness of intervention measures
- Examine the achievement of prevention program goals
- Support appropriate public health policy
- Educate the public about disease prevention through dissemination of information

Methodology

This research involved the collection of primary and secondary data. The table below shows the breakdown of primary data collected, including the target audience, method of data collection, and number of completes:

	Data Collection Methodology	Target Audience	Number Completed
Key Stakeholders	**In-Depth Telephone Interviews**	**Hospital Directors, Clinic Executive Directors**	**5**
Key Informants	**Online Survey**	**Physicians, Nurses, Dentists, Pharmacists, Social Workers**	**49**
Community Residents (Underserved)	**Self-Administered (Paper) Survey**	**Vulnerable and underserved sub-populations**	**61**
Community Residents	**Telephone Survey (BRFS)**	**SHP area adults (18+)**	**594**

Secondary data was derived from various government and health sources such as the U.S. Census, Michigan Department of Health and Human Services, County Health Rankings, Youth Risk Behavior Survey, and Kids Count Database.

Of the 5 Key Stakeholders invited to participate, all 5 completed an in-depth interview (100% response rate). Key Stakeholders are defined as executive-level community leaders who:

- Have extensive knowledge and expertise on public health and/or human service issues
- Can provide a "50,000-foot perspective" of the health and health care landscape of the region
- Are often involved in policy decision-making
- Examples include hospital administrators and clinic executive directors

The number of Key Informants participating in this iteration increased 55.1% from 27 in 2014 to 49 in 2017. Key Informants are also community leaders who:

- Have extensive knowledge and expertise on public health issues, or
- Have experience with subpopulations impacted most by issues in health/health care
- Examples include health care professionals (e.g., physicians, nurses, dentists, pharmacists, social workers) or directors of non-profit organizations

There were 61 self-administered surveys completed by targeted sub-populations considered to be vulnerable and/or underserved, such as single mothers with children, senior adults, and those who are uninsured, underinsured, or have Medicaid as their health insurance. This number is down slightly from the 69 completed in 2014.

Methodology (Continued)

A Behavioral Risk Factor Survey was conducted among 594 SHP area adults (age 18+) via telephone. The response rate was 34%.

Disproportionate stratified random sampling (DSS) was used to ensure results could be generalized to the larger SHP patient population. DSS utilizes both listed and unlisted landline sample, allowing everyone with a landline telephone the chance of being selected to participate.

In addition to landline telephone numbers, the design also targeted cell phone users. Of the 594 completed surveys:

- 185 are cell phone completes (31.1%), and 409 are landline phone completes (68.9%)
- 135 are cell-phone-only households (22.8%)
- 174 are landline-only households (29.3%)
- 284 have both cell and landline numbers (47.9%)

For landline numbers, households were selected to participate subsequent to determining that the number was that of a residence within the zip codes of the primary or secondary SHP service areas (PSA/SSA). Vacation homes, group homes, institutions, and businesses were excluded. All respondents were screened to ensure they were at least 18 years of age and resided in the SHP PSA/SSA zip codes.

In households with more than one adult, interviewers randomly selected one adult to participate based on which adult had the nearest birthday. In these cases, every attempt was made to speak with the randomly chosen adult; interviewers were instructed to not simply interview the person who answered the phone or wanted to complete the interview.

The margin of error for the entire sample of 594, at a 95% confidence level, is +/- 5.0% or better. This calculation is based on a population of roughly 45,733 Barry County residents alone who are 18 years or older, according to the 2016 U.S. Census estimate. The population of SHP's service area is even larger when areas of Eaton and Ionia counties were included.

Unless noted, consistent with the Michigan BRFS, respondents who refused to answer a question or did not know the answer to a specific question were excluded from analysis. Thus, the base sizes vary throughout the report.

Data weighting is an important statistical process that was used to remove bias from the BRFS sample. The formula consists of both design weighting and iterative proportional fitting, also known as "raking" weighting. The purposes of weighting the data are to:

- Correct for differences in the probability of selection due to non-response and non-coverage errors
- Adjust variables of age, gender, race/ethnicity, marital status, education, and home ownership to ensure the proportions in the sample match the proportions in the larger adult population of the county in which the respondent lived
- Allow the generalization of findings to the larger adult population of each county

The formula used for the final weight is: Design Weight X Raking Adjustment

Methodology (Continued)

Adverse Childhood Experiences (ACEs) data were collected using the CDC-Kaiser 10-item version. The 10 items measure the following adverse groups and subgroups:

- Abuse:
  - Emotional abuse
  - Physical abuse
  - Sexual abuse
- Household Challenges:
  - Intimate partner violence
  - Household substance abuse
  - Household mental illness
  - Parental separation or divorce
  - Incarcerated household member
- Neglect:
  - Emotional neglect
  - Physical neglect

All of the 10 questions have "yes" or "no" response categories. Respondents scored a "0" for each "no" and a "1" for each "yes." Total ACEs scores were computed by adding the sum of the scores across the 10 items. The total ACEs scores were segmented into three groups according to the number of adverse childhood experiences respondents had: none, 1 to 3, and 4 or more.

It should be noted that if the respondent said "don't know" or refused to answer any of the ACEs items then they were not included in the ACEs analyses by groups. This decision was made because the researchers believe that coding "don't know" or "refused" answers as zero and then including them in one of the three groups could possibly create an inaccurate picture of the extent to which adverse childhood experiences exist in the population of SHP area residents. As an example, if someone refused to answer all 10 ACEs questions, rather than coding them as a none (zero), it was determined best to exclude them from the analyses.

In the Executive Summary, VIP Research and Evaluation has identified several key findings, or significant health needs, which we have determined to be the most critical areas of need, derived from primary and secondary data. The process for making such determinations involved analyzing quantitative and qualitative feedback from Key Stakeholders, Key Informants, SHP area adults, and SHP area underserved residents to gain a better understanding of what they deem to be the most important health and health care issues in the community. Information needed to identify and determine the community's significant health needs was obtained by conducting telephone surveys with adult residents, sending out additional community health (paper) surveys to underserved adult residents, and conducting telephone interviews and online surveys with community healthcare professionals and community leaders. This question was asked explicitly of three of these four respondent groups, and additional information was gleaned from all groups via their responses to various questions throughout the surveys or discussion guides. Secondary data was then used to complement the findings from the primary data analyses. The result is a robust process that we are confident depicts an accurate assessment of the most critical health or health care issues in the SHP area.

EXECUTIVE SUMMARY & KEY FINDINGS

Executive Summary & Key Findings

In general, the findings from the 2017 Community Health Needs Assessment portray the SHP area as one of the healthier Spectrum communities. It is not faced with some of the same economic, social, and health challenges of other Spectrum hospital areas. Further, community members see improvement in many areas over the past several years from prior CHNAs and subsequent strategic plans that have been implemented.

The SHP area is considered to be a caring, connected, giving, and philanthropic community where community foundations provide resources that help alleviate some of the social issues. Although resources are more limited compared to other areas (e.g., Ottawa County), the community connectedness and strong collaborative spirit among people and organizations have made up for many resource shortcomings.

It is a very safe community with low levels of violent crime and homicide. Poverty levels and the unemployment rate are lower compared to the state and the nation and the latter has decreased substantially over the past several years. That said, poverty can be an enormous barrier to a healthy life for those who endure it. The community could also benefit from a boost in the educational pursuits and achievement of its residents as these indicators lag behind the state and the nation.

Environmentally, being a rural area, there is an abundance of natural resources, clean air, and a plethora of outdoor spaces such as lakes, paths for walking/hiking, and biking trails that invite activity. On the other hand, the rural nature of the landscape means the distance to programs, services, and resources can be a barrier for some, and there is a shortage of affordable housing and affordable healthy food. Further, some area lakes have been contaminated with toxic algae and E. coli. In sum, the SHP area possesses some of the social and community characteristics that Key Stakeholders say distinguish a community as "healthy."

Most area residents have health insurance, have a personal health care provider, and are at least somewhat confident they can navigate the health care system and complete medical forms.

Area residents also report good health and relatively low levels of psychological distress. They have slightly higher (or on par) life expectancy and have lower age-adjusted and infant mortality rates compared to rates for Michigan or the U.S.

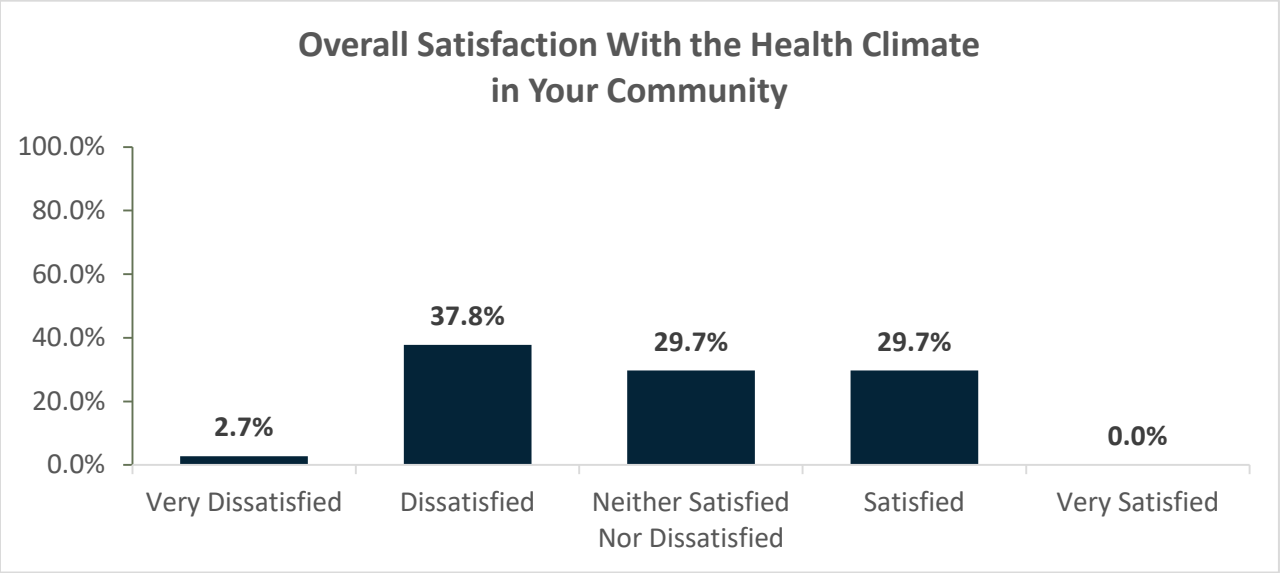
The prevalence of chronic conditions is mixed relative to the state and the nation; diabetes and non-skin cancer rates are higher compared to MI or U.S. rates, while COPD, heart attack, stroke, and skin cancer rates are lower than state or national rates.

The prevalence of risk behaviors is mixed for adults. For example, cigarette smoking is more prevalent among adults in the SHP area compared to the nation, but less prevalent compared to the state, and lack of physical activity is more prevalent among adults in the SHP area vs. the state. On the other hand, the prevalence of alcohol consumed in harmful ways, such as heavy drinking or binge drinking, is lower among SHP area adults compared to adults across Michigan or the U.S.

With regard to SHP area youth, the prevalence of smoking, drinking, and sexual activity is lower compared to the prevalence across the state and the nation. Conversely, area youth are less physically active than youth across the state.

Executive Summary & Key Findings (Continued)

All of that said, only three in ten (29.7%) Key Informants – the very people on the ground working in or around the field of health care – are satisfied with the overall health climate in the SHP area. This demonstrates that there is substantial room for improvement, and their comments indicate concerns across several areas but highlight the issue of access to care, especially primary care.



Satisfied	I think **overall that our community has great doctors and an awesome hospital**. The hospital has **wonderful staff** and it's the **cleanest** around. However **too many people have to go out of town to specialists**. **People get good care generally speaking**. We do **have challenging problems like obesity, smoking and some issues with access/insurance** but I think **overall people receive excellent care** when they look for it.
Neither satisfied nor dissatisfied	Could be better, could be worse, but **the largest issue is on the front end** – **access to primary care**. I feel **more work needs to be done to see significant change**. **Especially in access to care** currently.
Dissatisfied	**High incidence of unhealthy behaviors** and **health conditions** and **low availability of physicians willing to see those patients**. **Patients have a very difficult time getting in and seeing a physician in our community**.

Source: SHP Key Informant Survey, 2017, Q11: Taking everything into account, including health conditions, health behaviors, health care availability, and health care access, how satisfied are you overall with the health climate in your community? (n=37); Q11a: Why do you say that? Please be as detailed as possible.

Executive Summary & Key Findings (Continued)

What follows are nine key findings and discussions on each:

- **KEY FINDING [Significant Health Need] #1**: Health care access – is an issue for everyone because of a lack of providers (both primary care and specialty care) and a lack of specific programs and services
- **KEY FINDING [Significant Health Need] #2**: Substance use and abuse – smoking continues to be a problem, and opioid addiction and the abuse of prescription drugs have become more problematic
- **KEY FINDING [Significant Health Need] #3**: Mental health – especially access to treatment, continues to be a critical issue and in many regards hasn't improved since 2014
- **KEY FINDING [Significant Health Need] #4**: Obesity and weight issues – a sizeable majority of area adults are either overweight or obese, and this can lead to other major health problems
- **KEY FINDING [Significant Health Need] #5**: Chronic conditions – some chronic conditions warrant monitoring
- **KEY FINDING [Significant Health Need] #6**: Maternal, child, and teen health – several indicators emerge that demonstrate area children and teenagers are at a disadvantage
- **KEY FINDING [Significant Health Need] #7**: Negative social indicators – addressing certain negative social indicators will improve the overall health and health care climate of the region
- **KEY FINDING [Significant Health Need] #8**: The most appropriate way to address health and health care issues is from an integrated, holistic, or biopsychosocial perspective
- **KEY FINDING [Significant Health Need] #9**: Health disparities exist across several demographics

Key Finding [Significant Health Finding] #1: Health care access – is an issue for everyone because of a lack of providers (both primary care and specialty care) and lack of specific programs and services.

- Those with insurance and the ability to afford out-of-pocket expenses such as co-pays and deductibles have an easier time accessing care, but there are still gaps in services which force many residents to travel out of the area for treatment. Those without insurance, or with insurance but unable to afford copays/deductibles/spend-downs, have trouble accessing needed services and this is most problematic for certain vulnerable or underserved subpopulations.

- Prevalence data demonstrates:
  - There are far fewer MDs and DOs per capita in Barry County (37.1) compared to Michigan (80.6)
  - 12.2% of all adults have no health care provider (no medical home) and this proportion rises to 16.7% for underserved adults
  - 6.5% of all area adults aged 18-64 have no health insurance
  - 13.1% of all adults have Medicaid for their health insurance, compared to 45.6% for underserved adults
  - 32.8% of children under age 18 in Barry County are insured under Medicaid
  - 11.1% of area adults had to skip or stretch their medication in the past year in order to save on costs, and this rises to 40.0% for underserved adults
  - 23.9% of area adults had to delay needed medical care over the past year due to myriad reasons, but cost was cited most often
  - More than four in ten (45.6%) underserved adults had trouble meeting their own, or their family's, health care needs in the past two years
  - Six in ten (60.0%) underserved adults report that they, or a family member, has visited the ER/ED at least once in the past year; 30.0% two or more times

- Underserved adults face more challenges when it comes to being health literate; for example:
  - They are less confident than other adults in completing medical forms
  - They are more likely than other adults to experience problems learning about their health condition because of difficulty understanding written information
  - 20.4% are not confident in navigating the health care system and 33.9% are only somewhat confident
  - 21.7% "often" or "always" have someone else help them read medical materials

Key Finding [Significant Health Finding] #1: Health care access – is an issue for everyone because of a lack of providers (both primary care and specialty care) and lack of specific programs and services. (Continued)

- Key Stakeholders and Key Informants recognize that certain subpopulations are underserved when it comes to accessing health care, especially those who are uninsured, underinsured, undocumented immigrants and/or non-English speaking (ESL), for four primary reasons:
  - Even if they have insurance, it may not be accepted by some providers (e.g., Medicaid/Medicare), or they may not utilize it because they can't afford co-pays, deductibles, or spend-downs
  - These groups often have too many barriers to overcome (e.g., cost, transportation, hours of operation, cultural, system distrust, language)
  - Lack of treatment options for the underserved, including primary care, mental health, substance abuse, and dental care
  - Poverty is a social factor that contributes to poor health and lack of access to care

- In addition to the lack of services for mental health and substance abuse touched on previously, Key Informants report the programs and services most lacking include:
  - Primary care, mental health treatment, and dental care for the uninsured/underinsured and low-income groups
  - Programs/services for people with insurance, but who don't utilize coverage because they cannot afford out-of-pocket expenses
  - Mental health treatment in general (for all), especially psychiatrists/psychiatry
  - Substance abuse treatment (for all)
  - Specialty programs such as bariatric medicine, dermatology, ENT, endocrinology, GI, infectious disease, neurology, pulmonary, rheumatology, and urology
  - Services targeting obesity reduction, diabetes management, and those with disabilities

- Underserved residents report that the programs and services most lacking include:
  - Places to exercise that are free or low cost
  - Mental health services, especially psychiatry, services for anxiety and depression, and classes/education about mental health issues and mental health awareness
  - Dental care, especially dentists that accept the Medicare plan
  - Support groups, especially for senior caregivers
  - More health care provides, especially female

Key Finding [Significant Health Finding] #1: Health care access – is an issue for everyone because of a lack of providers (both primary care and specialty care) and lack of specific programs and services. (Continued)

How would your community be different if the health care access issues went away?

For primary care, absolutely people would have access and **the whole concept of prevention**, and **people not accessing urgent care and ED would be better**. We've had an urgent care volume, we've had high utilization of urgent care this year, and we think it's because of the inability of access. So, **costs would go down as well** because people wouldn't be using the ED and urgent care inappropriately. They would have a relationship, and that **care would be managed by their primary care physician**. **Care would be improved** if we had **additional specialists because our community members wouldn't be traveling north**. **Care close to home is a mantra** that's used, and we're not able to do that right now, so being surrounded by family and being able to have care close to home, especially for the type of specialists that I mentioned, would, I think, **improve care**. – *Key Stakeholder*

If we could get some providers to stay, **people would be able to get service**. They **would not be going to the emergency room or the walk-in clinic as their care provider**. – *Key Stakeholder*

Key Finding [Significant Health Finding] #2: Substance use and abuse – smoking continues to be a problem, and opioid addiction and the abuse of prescription drugs have become more problematic.

- Substance abuse, which is often comorbid with mental illness, is identified as one of the most concerning issues among Key Informants, Key Stakeholders, and area adults.

- Prevalence data demonstrates:
  - 20.3% of adults currently smoke cigarettes, a rate higher than the U.S. rate and on par with the state rate
  - 8.9% of youth in Barry County currently smoke cigarettes
  - 4.3% of adults are heavy drinkers and 15.4% are binge drinkers, rates that are lower than state and national rates
  - 11.6% of youth in Barry County engage in binge drinking
  - 24.0% of adults know someone who has taken prescription drugs to get high
  - 23.4% of adults lived with someone while growing up who was a problem drinker, an alcoholic, or who used street drugs

- Key Stakeholders and Key Informants cite several major reasons for their concern about substance abuse:
  - Prevalence; Key Stakeholders and Key Informants believe smoking, alcohol abuse, illicit drug abuse, and prescription drug abuse exist on a large scale throughout the community
  - The cycle of prescription drug abuse leading to illicit opiate use and vice versa
  - Providers over-prescribing drugs, especially opiates
  - Lack of treatment options for substance abuse; Key Informants cite substance abuse treatment as the service most lacking in the community and are dissatisfied with the community's response to any substance abuse issue
  - Social factors; negative social factors such as poverty and isolation play a role in substance abuse, and then substance abuse leads to family problems

- Further, 51.9% of area adults believe there is a prescription drug abuse problem in the community.
  - Of these, almost all (93.1%) believe prescription opiates are abused
  - More than three-fourths believe there is abuse of prescription stimulants/amphetamines (80.8%) and depressants (77.0%)

- Over half (53.9%) of area adults think that illicit methamphetamines are abused and more than four in ten think there is abuse of heroin (45.9%) and marijuana (44.7%).

Key Finding [Significant Health Finding] #2: <u>Substance use and abuse</u> – smoking continues to be a problem, and opioid addiction and the abuse of prescription drugs have become more problematic. (Continued)

- Exposure to second-hand smoke is an issue in the community:
  - 15.8% of area adults report smoking inside their home and this rises to 18.1% for households with children under age 18
  - 46.1% of smokers and 8.1% of non-smokers report smoking takes place in their home

How would your community be different if the substance abuse issues went away?

I think it would **help individuals further down their path of recovery**, whatever that may look like to them. So, you're going to **have healthier**, **more productive individuals**, and at times, that even means that **somebody's working that previously wasn't working**. So, now **they're adding to the tax base** and things of that nature, so it's **just a healthier**, **stronger**, **vibrant community**, and that's things we talk about with, like specifically Cherry Health and Spectrum Hospitals; both of those have been excellent partners so far since I've been on board. – *Key Stakeholder*

Key Finding [Significant Health Finding] #3: <u>Mental health</u> – especially access to treatment, continues to be a critical issue and hasn't improved from 2014.

- Prevalence data demonstrates:
  - 17.4% of area adults are considered to have mild to severe psychological distress per the Kessler 6 Mental Health Scale
  - 7.8% of adults report poor mental health – meaning they experienced 14 or more days, out of the previous 30, in which their mental health was not good due to stress, depression, and problems with emotions
  - 34.3% of youth in Barry County report depression; a rate higher than the state or national rates
  - 15.9% of adults say that growing up they lived with someone who was depressed, mentally ill, or suicidal

- Key Stakeholders and Key Informants consider issues surrounding mental health to be pressing or concerning in the SHP area and cite four major reasons for their concern:
  - Lack of programs, services, and resources to address all mental health issues, from mild to severe, including lack of trained clinical staff with expertise in mental health, specifically psychiatrists
  - Health professionals view mental illness as prevalent among both adults and teens, and the actual prevalence may be even greater since many residents go undiagnosed
  - Continued stigma attached to mental illness, which may prevent many people from seeking, and receiving, needed care
  - Social factors, such as poverty and isolation, produce stress on families already overburdened, that can lead to illness and negative consequences

- Key Informants perceive anxiety and depression to be prevalent in the community, and they are dissatisfied with the community response to these issues.

- It is concerning that sizeable proportions of people who currently suffer from some form of mental illness are not undergoing treatment or taking medication for their condition.
  - For example, 42.6% of adults who report poor mental health and 60.3% of those who are considered to be in mild to moderate psychological distress are **<u>not</u>** currently taking medication or receiving treatment for these conditions

- If the vast majority of adults believe that treatment can help people with mental illness lead normal lives, it begs the question: Why do so many people fail to seek treatment that would benefit them?
  - The answer may partly lie in the continued stigma mentioned above: just half (50.5%) of adults think people are caring and sympathetic toward people with mental illness

Key Finding [Significant Health Finding] #3: Mental health – especially access to treatment, continues to be a critical issue and hasn't improved from 2014. (Continued)

- The proportion of Barry County youth who think about suicide is higher than the rates for youth across Michigan of the U.S.
  - Moreover, the rate for area youth who commit suicide is higher than the national rate (but lower than the state rate)
  - Also concerning is that the proportion of local youth having suicidal ideation or attempting suicide are much larger than the proportions among local adults

Key Finding [Significant Health Finding] #4: Obesity and weight issues – a sizeable majority of adults are either overweight or obese and this can lead to other major health problems.

- Prevalence data demonstrates:
  - 69.3% of adults are either overweight (33.0%) or obese (36.3%) in the SHP area
  - The prevalence of obesity is higher in the SHP area than across Michigan or the U.S.
  - 15.1% of youth (grades 8-12) are obese in Barry County; this rate is also higher compared to Michigan or the U.S.

- Area adults and area health professionals consider obesity to be a top health issue in the community primarily because:
  - Prevalence is high in both adults and youth, is not improving over time, and in fact, is getting worse
  - Obesity is comorbid with other chronic conditions or negative outcomes such as diabetes, sleep apnea, joint problems, hypertension, heart disease, and atrial fibrillation
  - It is a product of social and environmental factors that plague the area, such as poverty, lack of educational opportunities and better access to unhealthy food compared to healthy food
  - There is a lack of resources to address the issue, especially obesity reduction programs and classes on how to cook healthy food
  - Poor lifestyle choices (diet, lack of exercise) lead to obesity and children learn these behaviors from adults

- Key Informants perceive obesity to be the most concerning health issue in the area.
  - Further, they are dissatisfied with the community response to obesity

- Compounding the problem is the fact that many adults who are overweight or obese view themselves more favorably so there may be less urgency for them to attempt to lose weight.
  - Only 36.3% of obese adults view themselves as "very overweight" and 34.1% of overweight adults view themselves as "about the right weight"
  - 37.2% and 63.8% of obese and overweight adults, respectively, are currently **not** attempting to lose weight

- Area residents could use more guidance on ways to address their weight since area health care professionals seem to be failing in this area.
  - 86.5% of overweight adults and 46.7% of obese adults report that health professionals have **not** given them advice about their weight

- More than half (55.3%) of Key Informants say that programs targeting obesity reduction are lacking in the community.

Key Finding [Significant Health Finding] #5: Chronic conditions – some chronic conditions warrant monitoring.

- Even though there were only two chronic conditions (diabetes, non-skin cancer) where prevalence was higher for SHP area adults compared to adults across Michigan or the U.S., three additional chronic conditions (arthritis, asthma, and angina/CHD) showed mixed results when compared to the state or the nation.

- Prevalence data demonstrates:
  - 30.0% of SHP adults have arthritis (tied with the MI, higher than U.S.)
  - 12.1% of area adults have diabetes, a rate much higher than MI or the U.S., and an additional 23.6% of adults have pre-diabetes
  - 9.4% of SHP adults currently have asthma, a rate lower than the state but higher than U.S.
  - 7.7% of area adults have/have had non-skin cancer, a rate higher than MI and U.S.
  - 4.2% of SHP adults have angina/CHD, a rate lower than the state rate but higher than the U.S. rate

- The cancer death rate is lower in Barry County than the state rate, but on par with the national rate.

- Death rates from chronic lower respiratory disease and Alzheimer's disease are both higher in Barry County compared to state and national rates.

- According to area adults, cancer is the most important health problem in their community today.

- On a positive note, large majorities of adults who have the chronic conditions listed above are "very" or "extremely" confident that they can do all things necessary to manage their chronic condition.

- 27.1% of area adults suffer from chronic pain, and of these, 46.3% report barriers to treating their pain, such as cost, inadequate insurance, inadequate or lack of area programs and services to help them manage their pain well, immobility, and too many chronic conditions to manage.
  - Interestingly, 10.6% reported that they don't ask for treatment of their pain and this was the most cited reason

Key Finding [Significant Health Finding] #6: Maternal, child, and teen health – several indicators emerge that demonstrate area children and teenagers are at a disadvantage.

- Prevalence data demonstrates:
  - The rate for confirmed victims of child abuse/neglect is higher in Barry County compared to the rate for the U.S.
  - 13.6% of children under age 18 live in poverty
  - Three in ten (31.3%) births in Barry County are Medicaid paid
  - 45.1% of area children aged 0-4 receive WIC assistance
  - 38.9% of students are eligible for free or reduced priced school lunches
  - More than four in ten (42.2%) single-female families with children under age 18 in Barry County live in poverty
  - 21.9% of area adults experienced emotional abuse growing up, a rate twice as high as the U.S. rate
  - Additionally, 17.5% of area adults experienced physical abuse growing up, and 8.7% experienced sexual abuse
  - The proportion of children age 19-35 months who are fully immunized is far lower in Barry County compared to state or national proportions

- As mentioned earlier, youth depression and thoughts of suicide are both higher for Barry County compared to state and national rates.

- Barry County women who are pregnant are slightly less likely to begin prenatal care in the first trimester compared to women across Michigan.

- Youth smoking rates are slightly lower the state and national rates, but one in eleven Barry County youth smoke cigarettes so it is still an issue that needs addressing.

- Similar to youth smoking, binge drinking rates for Barry County youth are lower than the state or national rates; however, roughly one in eight area youth engage in binge drinking.

- Three in ten (29.0%) Barry County youth have had sexual intercourse and roughly one in five have had intercourse in the past three months.

- The rate for teen births (age 15-19) in Barry County is higher than the state rate but lower than the U.S. rate.

Key Finding [Significant Health Finding] #7: Negative Social Indicators – addressing certain negative social indicators will improve the overall health and health care climate of the region.

- Negative social indicators, such as lack of affordable housing, lack of affordable healthy food, and adverse childhood experiences can cultivate negative health outcomes.

- As touched on in the previous section on maternal, child, and teen health, poverty can negatively impact the health of residents experiencing it.

- That said, poverty is a macro socioeconomic problem that, in and of itself, is very difficult to ameliorate and beyond the scope of any CHNA implementation plan. However, some of the issues that are connected to poverty can be addressed such as:
  - Finding ways to provide more affordable housing
  - Providing more healthy food options to residents at lower costs in order to improve the nutrition of those who would not otherwise be able to afford healthy food
  - Strengthening social service programs to offset the negative outcomes that can accompany poverty (e.g., broken homes, abusive relationships, household challenges) and help disrupt/break negative family cycles that perpetuate generations of suffering
  - Addressing the economic disparity by ensuring that underserved and vulnerable groups have access to services that will move them closer to participating on a level playing field, such as education

- This research has shown the adverse effects of negative social conditions: people who experience four or more adverse childhood experiences have a far greater chance of experiencing negative outcomes – such as poor physical health, poor mental health, and engaging in risk behaviors – compared to those who experience fewer adverse childhood experiences.

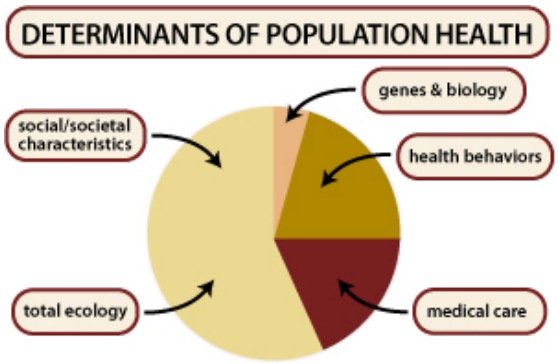
- Further, of the ten adverse childhood experiences tested in this research, SHP area adults were higher on four (meaning they experienced more of them) compared to adults across the nation.

Key Finding [Significant Health Finding] #8: The most appropriate and effective way to address health and health care issues is from an integrated, holistic, or biopsychosocial perspective.

- We recommend adopting the tenants of the World Health Organization:
  - Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity
  - The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition
  - The health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest co-operation of individuals and States
  - The achievement of any State in the promotion and protection of health is of value to all
  - Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger
  - Healthy development of the child is of basic importance; the ability to live harmoniously in a changing total environment is essential to such development
  - The extension to all peoples of the benefits of medical, psychological and related knowledge is essential to the fullest attainment of health
  - Informed opinion and active co-operation on the part of the public are of the utmost importance in the improvement of the health of the people
  - Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures

- Further, the determinants of health that contribute to each person's well-being are biological, socioeconomic, psychosocial, behavioral, and social. The determinants of health include*:
  - Biological (genes) (e.g., sex and age)
  - Health behaviors (e.g., drug use, alcohol use, diet, exercise)
  - Social/environmental characteristics (e.g., discrimination, income)
  - Physical environment/total ecology (e.g., where a person lives, crowding conditions)
  - Health services/medical care (e.g., access to quality care)

- The chart below estimates how each of the five major determinants influence population health:



*Source – World Health Organization; U.S. Department of Health and Human Services, Healthy People 2020; CDC.

Key Finding [Significant Health Finding] #9: Health disparities exist across several demographic groups.

- There is also a direct relationship between health outcomes and both education and income. Positive outcomes are more prevalent among adults with higher levels of education and adults from households with higher income levels, while negative outcomes are more prevalent among those with less education and lower incomes. These disparities can be seen in:
  - General health status
  - Physical health and activity limitation
  - Mental health and/or psychological distress
  - Being part of a spiritual or religious community
  - Experiencing barriers to care (e.g., transportation, cost)
  - Chronic diseases such as arthritis, cardiovascular disease, diabetes, skin cancer, and COPD
  - Health risk behaviors such as smoking and physical activity
  - Preventive practices such as visiting a dentist
  - Health care access such as having a primary care provider and forgoing health care due to costs

- The link between both education and income and positive health outcomes goes beyond the direct relationship. Those occupying the very bottom groups, for example having no high school diploma and/or household income less than $20K (or living below the poverty line), are most likely to experience the worst health outcomes. Conversely, residents with a college degree and/or household incomes of $75K or more are most likely to experience the best health outcomes.

- There is also a direct relationship between health outcomes and age. In many cases, negative outcomes are more often associated with younger adult age groups, for example:
  - Engaging in risk behaviors such as smoking cigarettes, binge drinking, and lack of fruit and vegetable consumption
  - Lacking a personal health care provider (medical home)
  - Forgoing needed medical care due to cost
  - Experiencing transportation as a barrier to care
  - Not visiting a dentist

- In other cases, negative outcomes are more associated with older adult groups, such as having:
  - Fair or poor general health status
  - Poor physical health and activity limitation
  - Chronic diseases like diabetes, pre-diabetes, arthritis, cancer, and cardiovascular disease
  - High blood pressure and high cholesterol
  - Chronic pain

Key Finding [Significant Health Finding] #9: Health disparities exist across several demographic groups. (Continued)

- There are links between health outcomes and gender. For example:
  - Men are more likely than women to:
    - Engage in leisure time physical activity
    - Have high blood pressure and high cholesterol
    - Engage in risk behaviors such as smoking and binge drinking
    - Experience transportation as a barrier to care
    - Have chronic diseases such as cardiovascular disease
  - Women are more likely than men to:
    - Consume fruits and vegetables
    - Take medication for their HBP
    - Have their cholesterol checked
    - Have mild to severe psychological distress
    - Be part of a spiritual or religious community
    - Have a health care provider (medical home)
    - Stretch medication due to cost
    - Have chronic conditions such as asthma

- There are also links between race and outcomes.
  - Compared to non-White adults, White adults are more likely to:
    - Have their blood cholesterol checked and take medication for it
    - Have high blood pressure and take medication for it
    - Experience activity limitation
    - Visit a dentist
    - Have mild to severe psychological distress and poor mental health
    - Participate in leisure time physical activity
    - Engage in heavy drinking and binge drinking
    - Be part of a spiritual or religious community
    - Have chronic conditions such as diabetes, chronic pain, and skin cancer
    - Have a health care provider (medical home) and have health insurance
  - Conversely, compared to White adults, Non-White adults are more likely to:
    - Engage in risk behaviors such as smoking
    - Experience transportation as a barrier to care
    - Consume fruits and vegetables
    - Have high cholesterol
    - Stretch medication due to cost
    - Have pre-diabetes, asthma, COPD, and arthritis
    - Be obese or be at a healthy weight (but not overweight)

DETAILED FINDINGS

SOCIAL INDICATORS

Demographics of Barry County

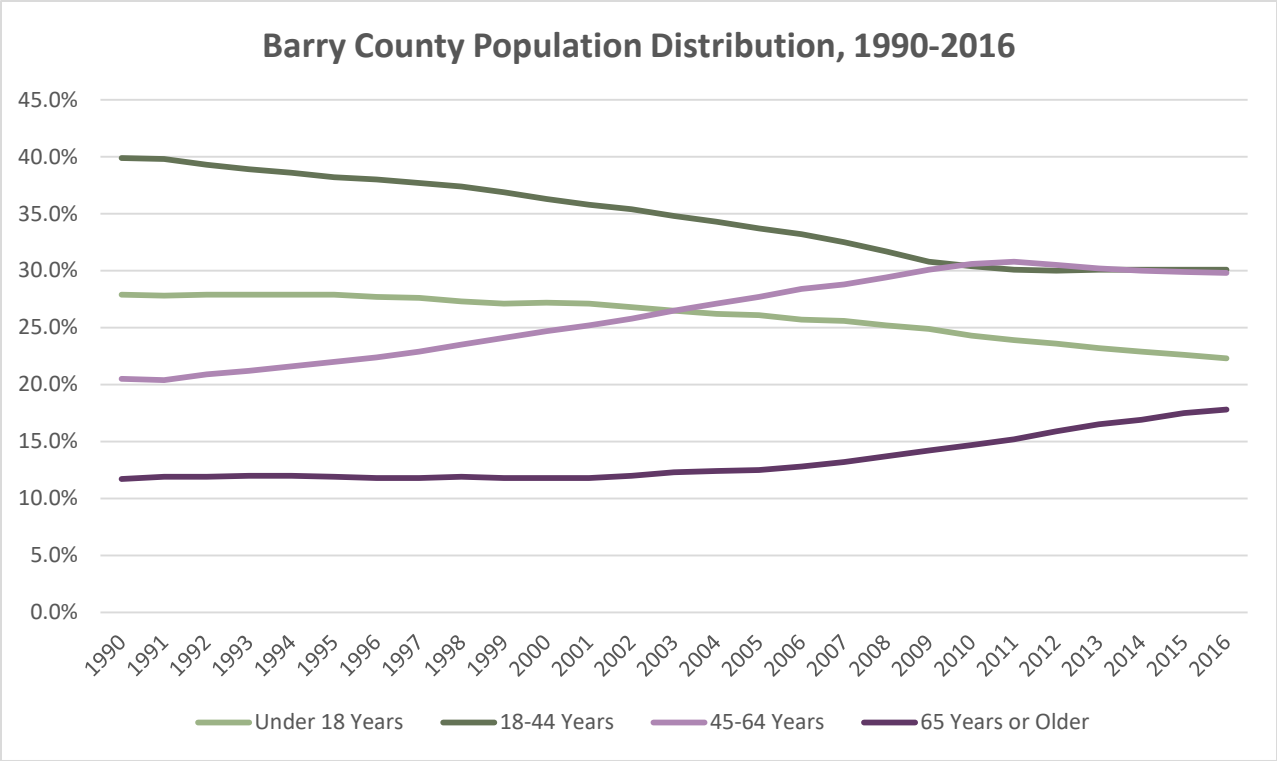
When observing the racial and ethnic population distributions within Barry County, it is evident that the vast majority of residents are White (94.8%) and 2.6% are Hispanic/Latino.

Barry County Demographic Characteristics: Gender and Race		
	N	%
Gender		
Male	29,844	50.3%
Female	29,472	49.7%
Race/Ethnicity		
White/Caucasian	56,251	94.8%
Hispanic/Latino	1,528	2.6%
Black/African American	282	0.5%
American Indian/Alaskan Native	154	0.3%
Asian	301	0.5%
Some other race	50	0.1%
Two or More Races	750	1.3%

Source: U.S. Census Bureau, American Community Survey, 2012-2016.

Demographics of Barry County (Continued)

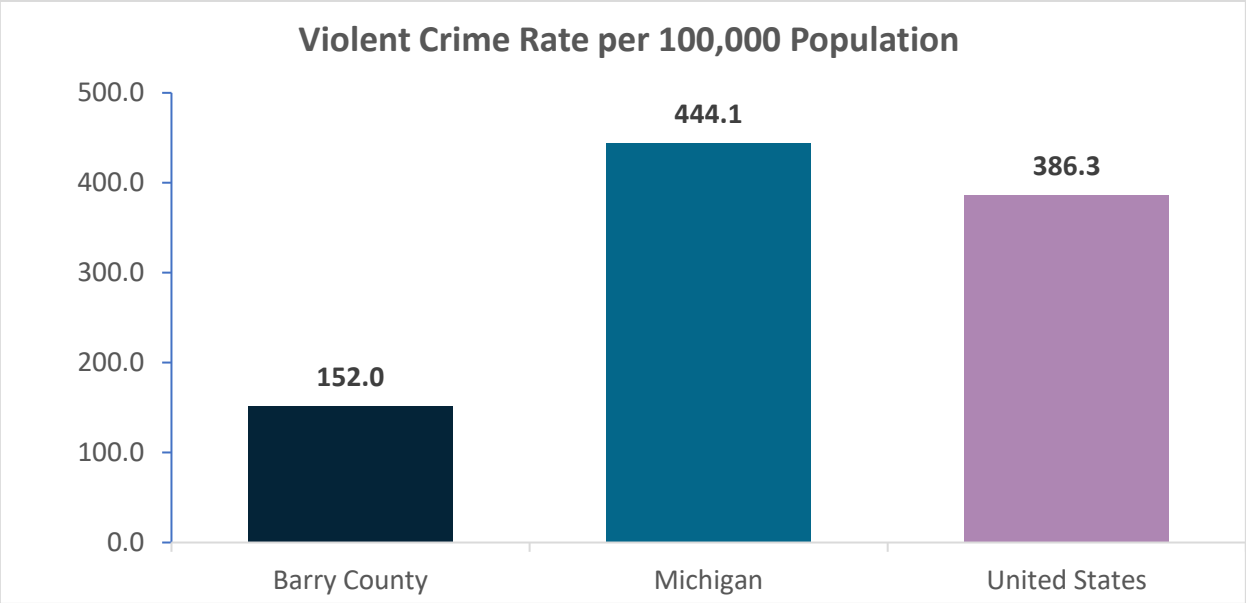
- The age distribution of Barry County has shifted toward an older population over time. In 1990, residents aged 45-64 comprised 20.5% of the population compared to 29.8% in 2016.
- Moreover, the proportion of adults aged 18-44 has declined over time: this group comprised 39.9% of the population of Mecosta County in 1990 compared to 30.1% in 2016.



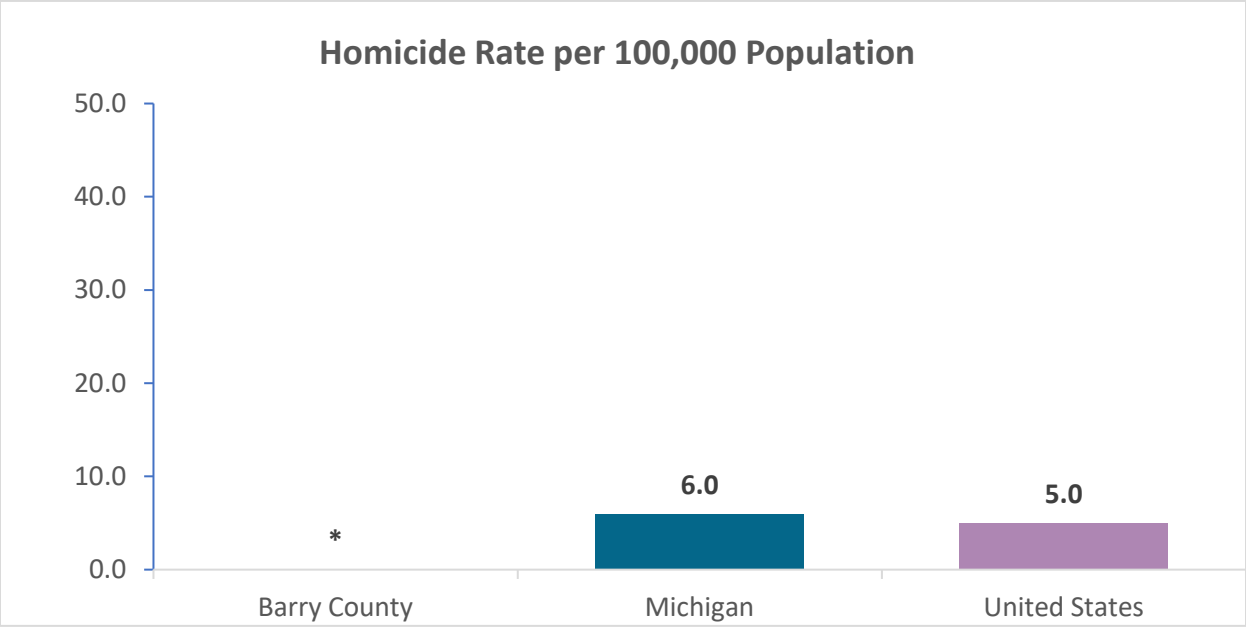
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

Crime Rates

The rates for both violent crime and homicide are far lower in Barry County compared to Michigan or the United States.



Source: County Health Rankings, 2012-2014.

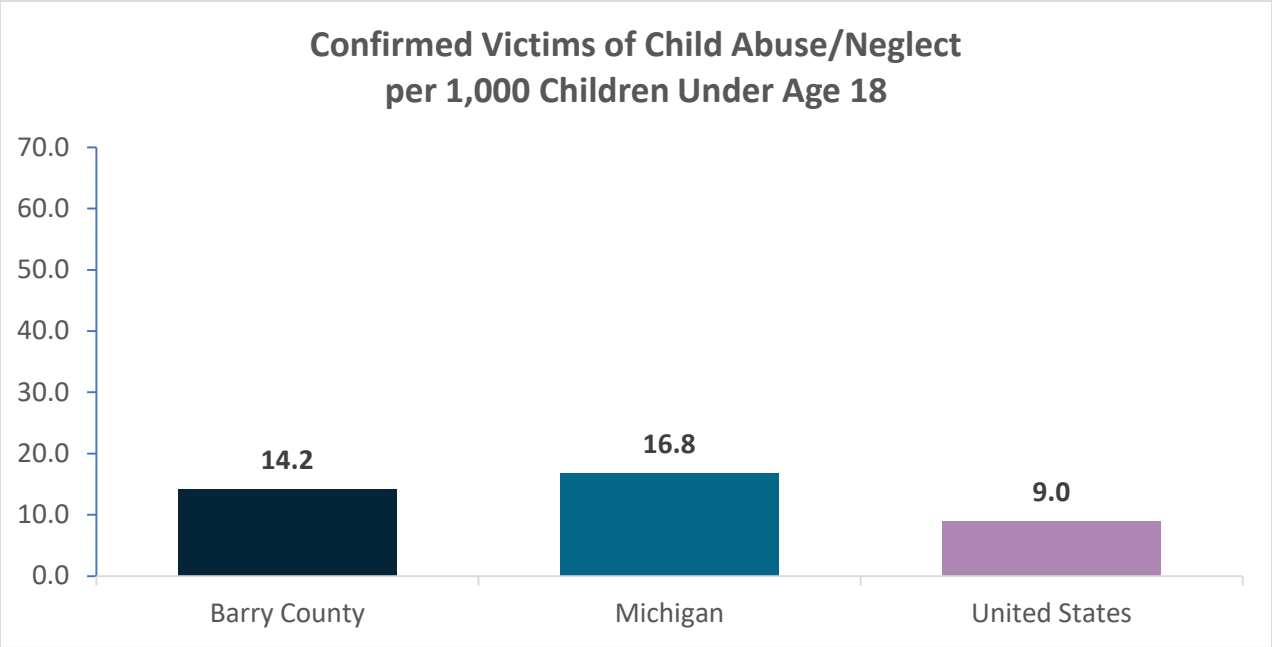


Source: County Health Rankings, 2012-2014. *Note: For Barry County, the number of homicides is too low to calculate rate.

Crime Rates (Continued)

- Confirmed child abuse and neglect rates are lower in Barry County compared to the rate in Michigan but higher than the national rate.

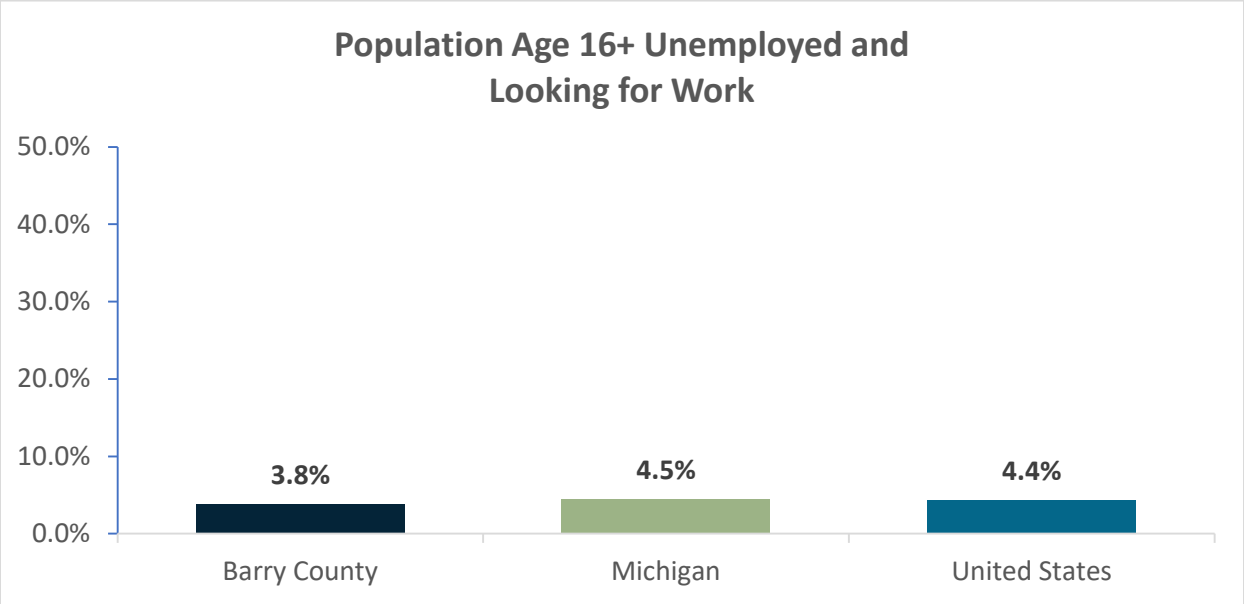
- Of the 31 Key Informants who rated the prevalence of child abuse and neglect in the community in the Key Informant Online Survey, 61.3% believe child abuse and neglect is “somewhat” or “very” prevalent, and 57.7% are “somewhat” or “very” satisfied with the community response to child abuse and neglect.



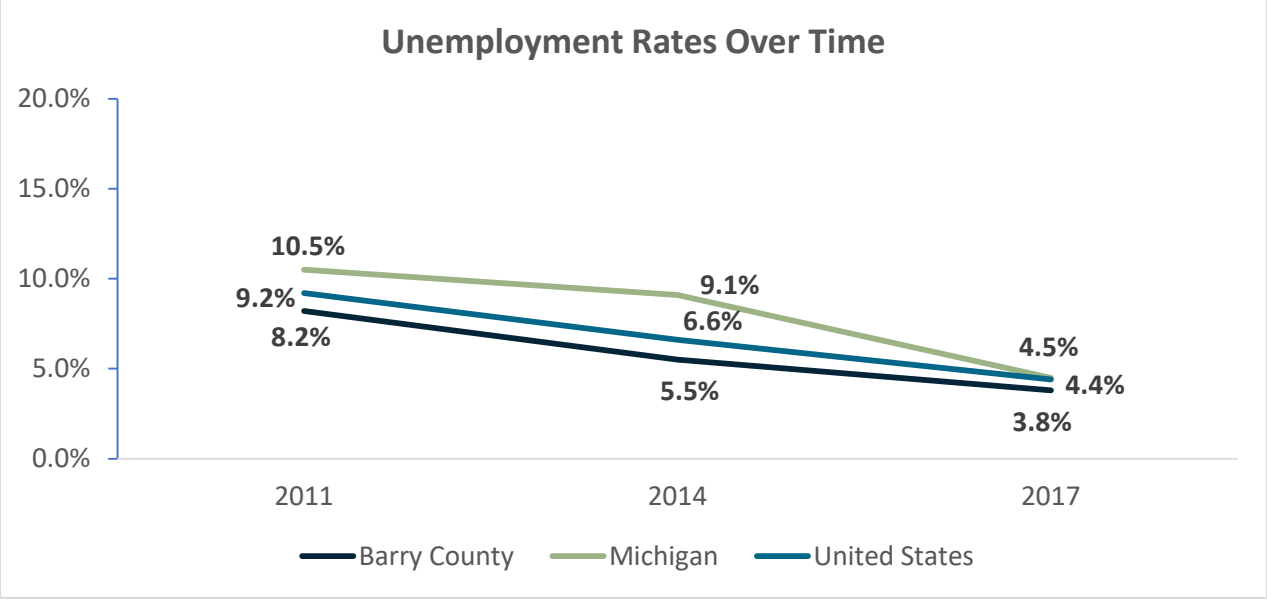
Source: County Health Rankings, 2012-2014.

Unemployment

- The most recent unemployment rate for Barry County is lower than the rates for Michigan and the U.S. The unemployment rate for all three has dropped significantly since 2011.
- The current unemployment rate is not considered to be a societal issue in Barry County or to have a negative impact on the health of area residents as it was perceived in years past.



Source: Bureau of Labor Statistics, Local Area Unemployment Statistics 2017



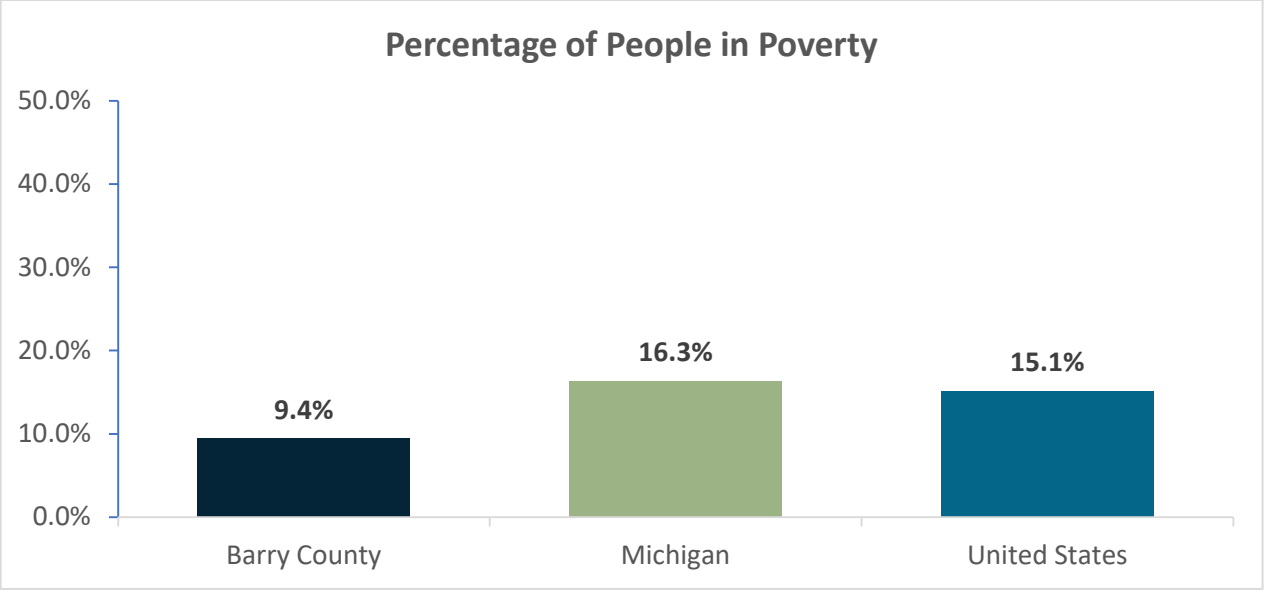
Source: Bureau of Labor Statistics, Local Area Unemployment Statistics 2011, 2014, 2017

Poverty

- Poverty, although not as critical of a social problem in the SHP area as many surrounding counties, is still regarded to have a critical impact on other domains of life, including health. Key Informants and Key Stakeholders report below on the impact of poverty and the importance of focusing on it.

> The health department and hospital I know work on the issue, but I feel that [**smoking] is more of a poverty issue**. – *Key Informant*
>
> Perhaps we need a community action group to **address poverty and its health implications** [as a solution to barriers to care]. – *Key Informant*
>
> Provide a **safety 'trampoline' for our population living in poverty** [as something that could be done to improve the overall health climate of the community]. – *Key Informant*
>
> We try to stay as culturally competent as we can. I think there could be more **cultural understanding about the economic status of folks** because I see that there's a lot of people that are serving the **economically disadvantaged** but who have no clue, so their normal is never going to be the same as the normal of who they're serving. I think we could benefit from some **cultural competency and understanding of what it takes to be in poverty**, or 200% of poverty, in today's world. – *Key Stakeholder*
>
> They've been doing **poverty simulations** to try to **build awareness**. I haven't gone through one of the simulations, so I don't know if those have gone well, but maybe that would help with **awareness** of some situations. – *Key Stakeholder*

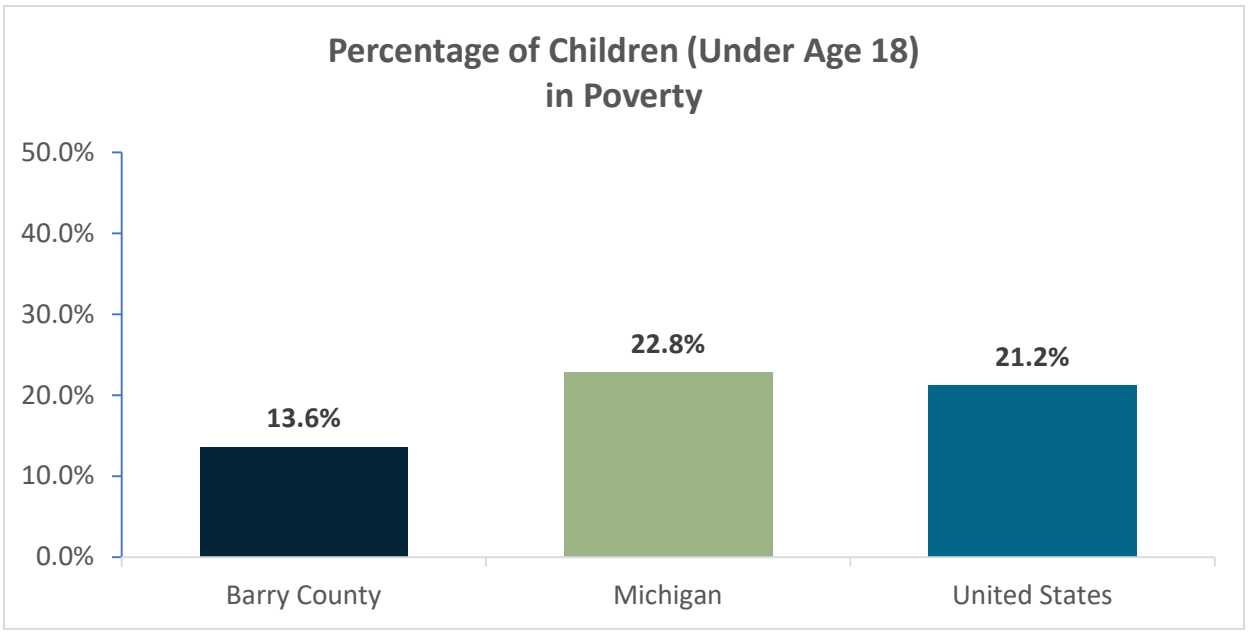
- The proportion of people living in poverty in Barry County is much lower than the proportions for the state or the nation.



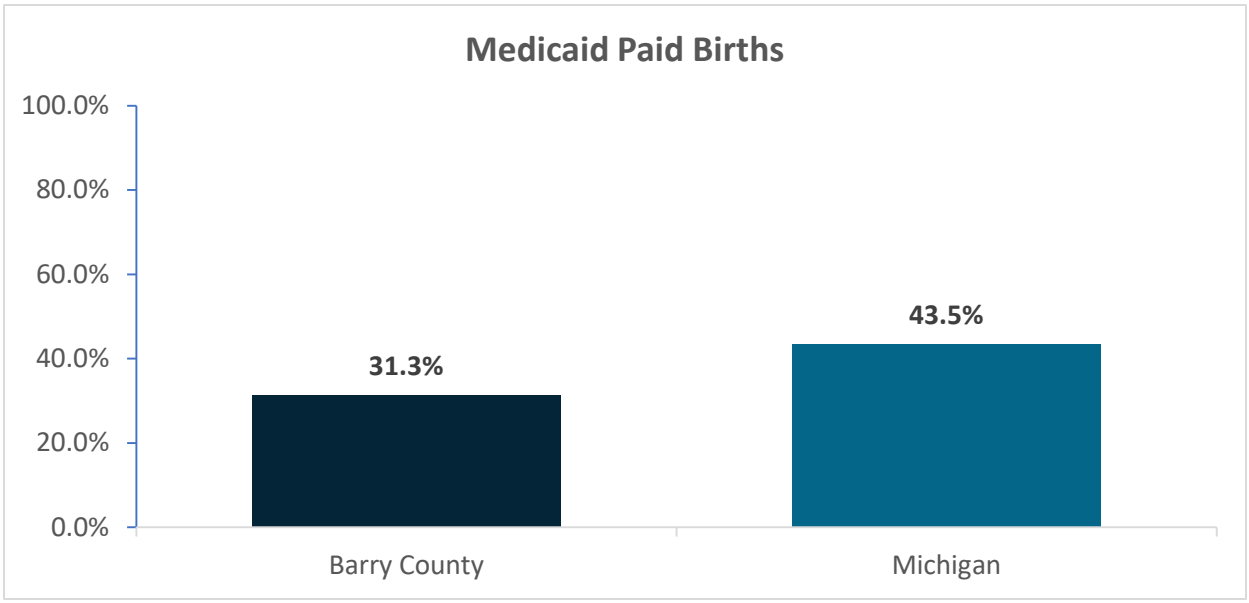
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.

Poverty (Continued)

- Roughly one in seven (13.6%) children in Barry County live in poverty; a rate lower than the state or national rates.
- Three in ten (31.3%) births in Barry County are covered by Medicaid.



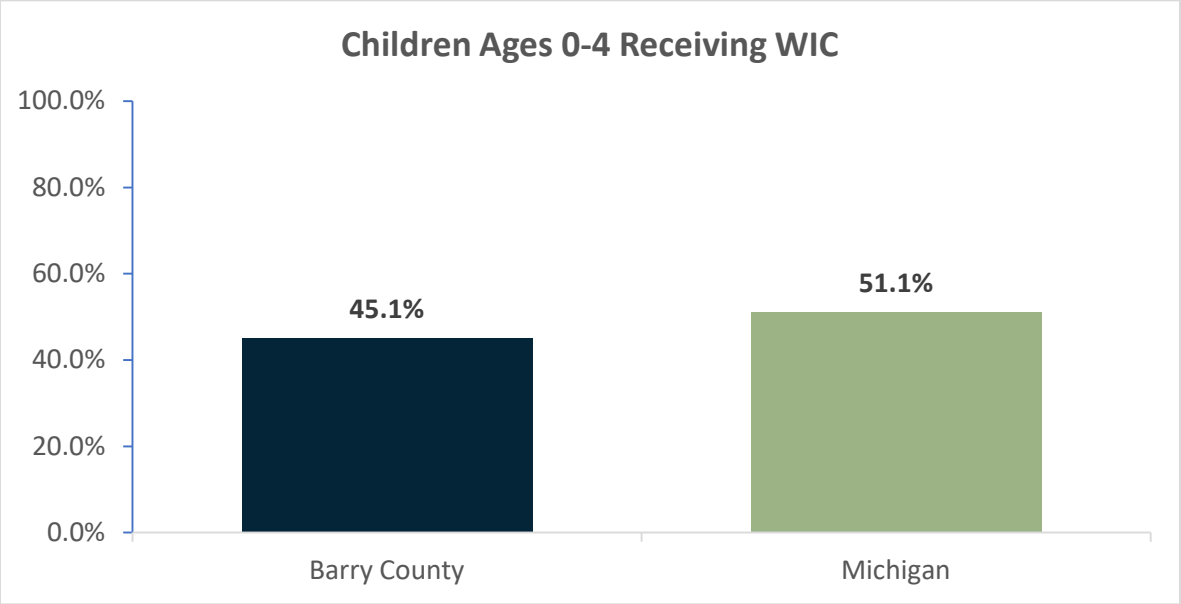
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.



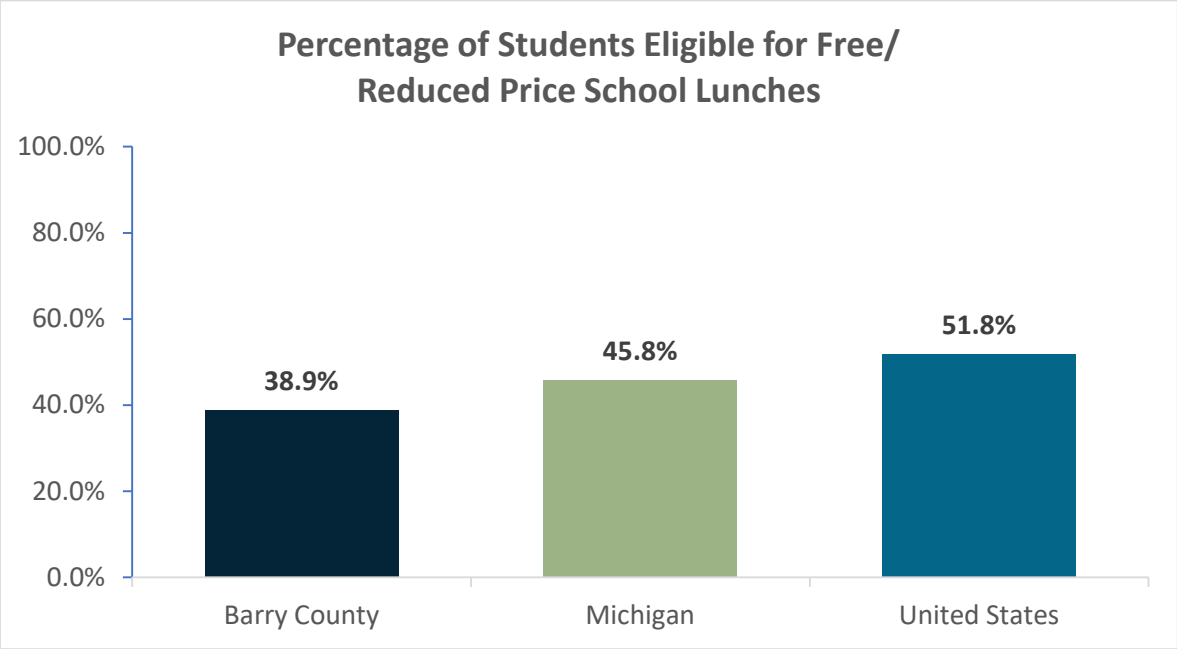
Source: Kid's Count Data Book, 2015.

Poverty (Continued)

- More than four in ten (45.1%) Barry County children four years old or younger receive WIC assistance; a rate lower than the state rate.
- Further, almost four in ten (38.9%) Barry County students are eligible for free or reduced priced school lunches; a rate lower than the state or national rates.



Source: Kid's Count Data Book, 2015.



Source: Kid's Count Data Book for MI and Barry County, 2016; Digest of Education Statistics for U.S., 2016.

Poverty (Continued)

- The proportion of families from Barry County living in poverty is lower than the proportions in the state or nation.
- Married couple families are less likely to be living in poverty compared to single-female households.
- More than four in ten (42.2%) single-female families with children under age eighteen lives in poverty.

Poverty Levels			
	Barry County	Michigan	U.S.
All Families			
With children under age 18	**10.1%**	**19.4%**	**17.4%**
With children under age 5	**12.8%**	**25.2%**	**21.8%**
Total	**5.3%**	**11.5%**	**11.0%**
Married Couple Families			
With children under age 18	**4.5%**	**8.1%**	**7.9%**
With children under age 5	**7.7%**	**11.1%**	**10.3%**
Total	**2.7%**	**5.2%**	**5.5%**
Single Female Families			
With children under age 18	**42.2%**	**44.3%**	**39.7%**
With children under age 5	**35.5%**	**57.3%**	**51.7%**
Total	**29.6%**	**32.9%**	**29.9%**

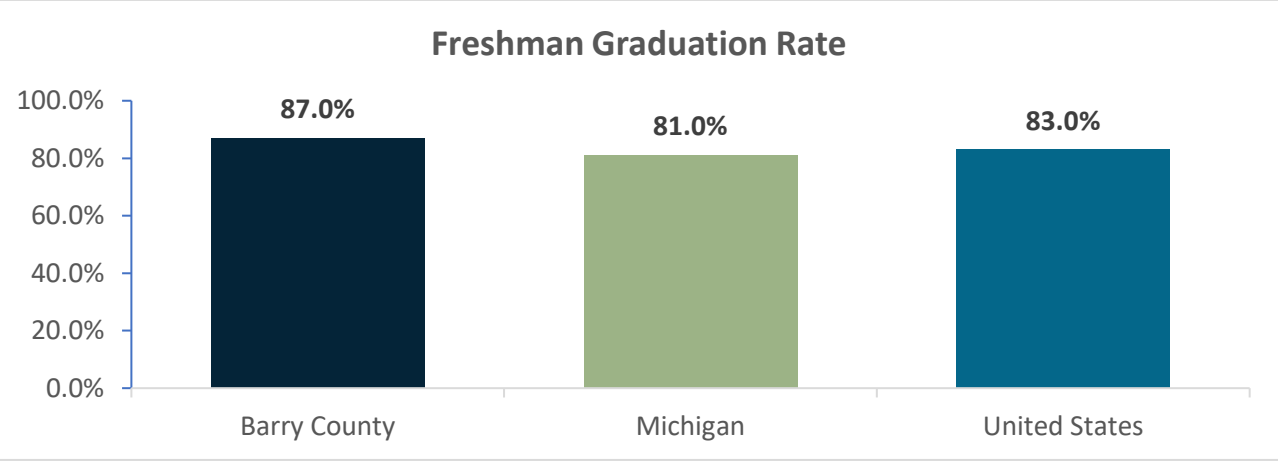
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.

Education

- Greater proportions of men and women aged 25 years or older in Barry County have a high school diploma or less compared to adults across Michigan or the U.S.
- Moreover, fewer Barry County men and women have Bachelor's degrees or graduate degrees compared to men and women across Michigan or the U.S.
- On the other hand, the freshman graduation rate is higher in Barry County vs. Michigan or the U.S.

Educational Level (Among Adults Age 25+)						
	Men			Women		
	Barry County	Michigan	U.S.	Barry County	Michigan	U.S.
Did Not Graduate High School	10.8%	10.5%	13.5%	7.2%	9.2%	12.1%
High School Graduate, GED, or Alternative	38.5%	30.1%	28.4%	36.3%	28.7%	26.8%
Some College, No Degree	26.6%	23.6%	20.5%	22.7%	23.7%	21.0%
Associate's Degree	8.5%	8.0%	7.3%	13.0%	10.4%	9.1%
Bachelor's Degree	10.5%	16.9%	18.8%	14.1%	17.1%	19.2%
Master's Degree	4.4%	7.2%	7.5%	6.3%	8.6%	8.9%
Professional School Degree	0.9%	2.1%	2.4%	0.7%	1.2%	1.6%
Doctorate Degree	0.6%	1.5%	1.7%	0.3%	0.9%	1.1%

Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.



Source: County Health Rankings, 2015.

Environmental Factors

- Environmental factors that positively impact the health of area residents include a wealth of natural resources that make it easier to be active, such as parks, lakes, trails, paths, and because it is largely a rural community, there is plenty of green space and fresh air.
- The people who make up Barry County, are considered to be caring, involved, and connected, and are viewed as an environmental entity that positively impacts the health of area residents.

Natural resources are conducive to recreation and outdoor activities	Living in the country **allows us to get out and exercise and hike**. – *Underserved Resident* Plenty of **walking/biking trails that are safe and clean**, and **parks** are the same way. – *Underserved Resident* That's easy for me to talk about because the **topography** of this county is just beautiful, and what I mean by that is there are **wonderful lakes**, **beautiful trees**, the **smallness** of communities, and it's **charming**. It would be like the 1950s. There's a new library now, and the downtown venue for music is great. – *Key Stakeholder* **Parks** and nice **sidewalks** for **walking**, etc. – *Key Informant* With the number of **parks** and **recreational opportunities** in the county, it can **foster a very active community**, and the **trailway systems** and those kinds of things. There is also a lot of **lakes and recreational opportunities. –** *Key Stakeholder* I think **Delton Schools** offer **'walking" in the hallways during winter** for exercise. – *Underserved Resident*
The people	We have such **caring people** of our community that **if you have an abuse issue**, whether it be drugs or alcohol or obesity or whatever, there are **people that will provide that care for others in the community**, and **they will help them**. – *Key Stakeholder* I think there's a **growing environmental attitude that community involvement or connectedness is helpful to your kids**. That they need to be connected. – *Key Stakeholder*

Source: SHP Key Stakeholder In-Depth Interviews, 2017, Q11b: Are there any environmental factors in your community that could/do positively impact the health of area residents (adults and children)?; Q11a: What are they? (n=4); SHP Key Informant Online Survey, 2017, Q1b: What are the resources available in the community to address/resolve this [most pressing] issue? (n=34); SHP Underserved Resident Survey, 2017, Q15: What are the primary characteristics in your community that make it easy to be healthy? (n=122)

Environmental Factors (Continued)

On the other hand, the lack of affordable housing, the distance some people have to travel to utilize programs and services, the plethora of unhealthy food choices coupled with the lack of affordable healthy food, and local water being contaminated with E. coli and toxic algae are all environmental factors that negatively impact area residents' health.

Lack of affordable housing	We **don't have affordable housing**. We're having an awful time spending our Rapid Rehousing dollars because there's **no housing available in any specific market**. We had a friend a month and a half ago put their house on the market and it sold in six hours. It doesn't matter whether you've got a $200,000 home, $40,000 home, $750 rental unit, or $500 affordable rental unit. **There's nothing available**. – *Key Stakeholder* I think **finding affordable housing for individuals, that's a challenge**. – *Key Stakeholder*
Distance	**Gym or community pool are 20 minutes away**. – *Underserved Resident* **Some people in county 40 minutes from a hospital**. – *Underserved Resident*
Toxins and bacteria	I do know that **many of our water sources - our lakes and rivers - suffer from E. coli contamination that can put people at risk,** and currently, right now, we're dealing with a **toxic algae bloom in one of our recreational lakes**, and we've had to put advisories out on that. **Recreational water quality is always a potential threat to the population**, and then what **trickle effect that could have potentially down the road to our drinking water system is a concern**, as well. – *Key Stakeholder*
Lack of affordable and healthy food/too many unhealthy food options	**Food banks/pantries** offer **too many unhealthy carbs**. – *Underserved Resident* **Fast food everywhere**, **food that's good for you is too expensive**. – *Underserved Resident*

Source: SHP Key Stakeholder In-Depth Interviews, 2017, Q11c: Conversely, are there environmental factors that positively impact the health of area residents?; Q11d: What are they? (n=5); SHP Underserved Resident Survey, 2017, Q16: On the other hand, what are the primary characteristics of your community that make it hard to be healthy? Please be as detailed as possible. (n=35)

Adverse Childhood Experiences

Area adults were more likely to have experienced emotional abuse, emotional neglect, parental separation or divorce, or having an incarcerated family member growing up compared to adults across the U.S., but less likely to have experienced physical or sexual abuse.

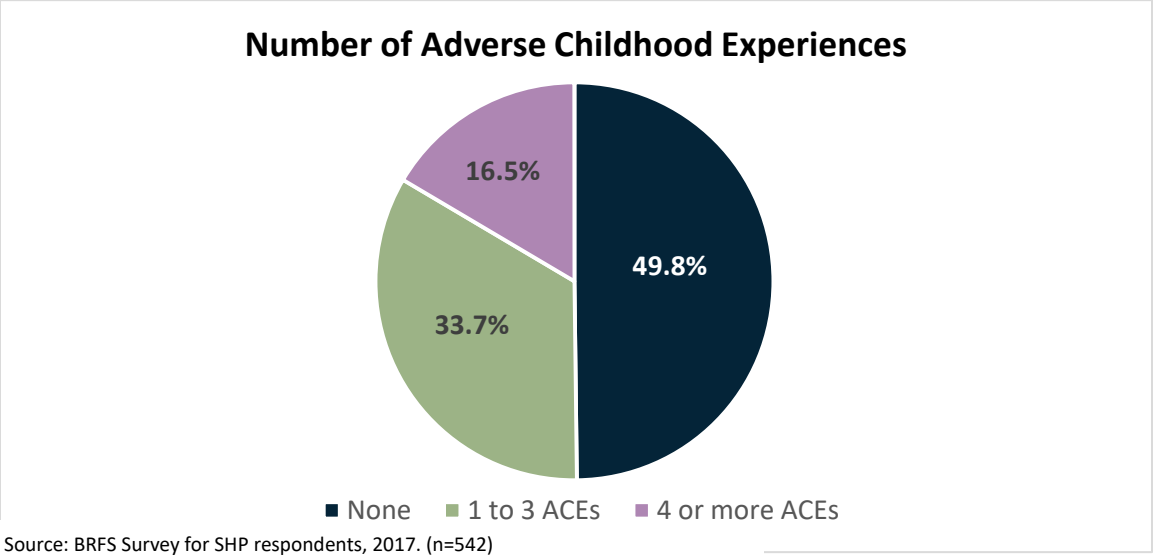
ACE Questions	Percent of People with Each ACE					
	SHP Area			United States		
	Total	Women	Men	Total	Women	Men
Did a parent or other adult in the household often swear at you, insult you, put you down, or humiliate you, **OR**, act in a way that made you afraid that you might be physically hurt? (n=569)	21.9%	18.6%	34.2%	10.6%	13.1%	7.6%
Did a parent or other adult in the household often push, grab, slap, or throw something at you, **OR**, ever hit you so hard that you had marks or were injured? (n=567)	17.5%	17.1%	29.9%	28.3%	27.0%	29.9%
Did an adult or person at least 5 years older than you ever touch or fondle you or have you touch their body in a sexual way, **OR**, try to or actually have oral, anal, or vaginal sex with you? (n=566)	8.7%	14.5%	11.0%	20.7%	24.7%	16.0%
Did you often feel that no one in your family loved you or thought you were important or special, **OR**, your family didn't look out for each other, feel close to each other, or support each other? (n=566)	16.2%	17.6%	16.0%	14.8%	16.7%	12.4%
Did you often feel that you didn't have enough to eat, had to wear dirty clothes, and had no one to protect you, **OR**, your parents were too drunk or high to take care of you or take you to the doctor if you needed it? (n=569)	7.3%	8.1%	9.9%	9.9%	9.2%	10.7%
Were your parents ever separated or divorced? (n=567)	27.0%	34.8%	36.5%	23.3%	24.5%	21.8%
Was your mother or stepmother often pushed, grabbed, slapped, or had something thrown at her, **OR**, Sometimes or often kicked, bitten, hit with a fist, or hit with something hard, **OR**, ever repeatedly hit over at least a few minutes or threatened with a gun or knife? (n=554)	10.3%	15.6%	18.7%	12.7%	13.7%	11.5%
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs? (n=563)	23.4%	28.0%	32.0%	26.9%	29.5%	23.8%
Was a household member depressed or mentally ill or did a household member attempt suicide? (n=565)	15.9%	24.3%	21.2%	19.4%	23.3%	14.8%
Did a household member go to prison? (n=567)	6.6%	6.0%	11.5%	4.7%	5.2%	4.1%

Source: SHP Behavioral Risk Factor Survey, 2017; Centers for Disease Control and Prevention, Kaiser Permanente. The ACE Study Survey Data, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2016.

ABUSE | NEGLECT | HOUSEHOLD CHALLENGES

Adverse Childhood Experiences (Continued)

- Half of (50.2%) SHP area residents have experienced at least one adverse childhood experience and 16.5% have experienced four or more.
- It's clear that those who have had adverse childhood experiences are more likely to suffer negative outcomes as adults.



Source: BRFS Survey for SHP respondents, 2017. (n=542)

	Number of ACEs		
	None	1-3	4 or More
Poor physical health	6.0%	13.0%	14.8%
Poor mental health	3.6%	3.8%	24.2%
Have COPD	2.8%	5.0%	9.4%
Have arthritis	24.8%	26.1%	46.8%
Have chronic pain	20.4%	25.8%	46.6%
Current cigarette smoker	18.0%	21.5%	23.9%
Mild to moderate psychological distress	4.4%	20.1%	20.8%
Severe psychological distress	1.5%	2.8%	12.6%
Mild to severe psychological distress	5.9%	22.8%	33.4%
Thought about committing suicide	0.9%	6.8%	23.2%

COMMUNITY CHARACTERISTICS

Characteristics of a Healthy Community

When asked to describe what a healthy community looks like, Key Stakeholders moved beyond common physical metrics (e.g., lifestyle choices, chronic conditions), although these are certainly important. Their responses, focused more on the social determinants of health, such as education, employment, engagement, collaboration, the importance of family, access to places to be active, and access to resources. This demonstrates that they view health and health care from a holistic or biopsychosocial lens.

- ✓ A lot of collaboration, a lot of moving forward
- ✓ Ability to access good foods
- ✓ Ability to be outside and exercise
- ✓ Ability to make their rent payments/house payments
- ✓ Circles that interconnect rather than a silo as a stand-alone
- ✓ Everyone has the opportunity to live a long, healthy, active life
- ✓ Everybody works together
- ✓ Family-oriented activities
- ✓ Folks are gardening,
- ✓ Good health care and good referrals to other programs
- ✓ Healthy families = a healthy community (starts with the family)
- ✓ Healthy options for people
- ✓ Living wage
- ✓ More of the interrelated circles and fewer silos
- ✓ Opportunities for family fitness, family activity, young people activities that are free
- ✓ Opportunities for individuals to pursue employment and recreational needs
- ✓ People actually get time with their provider
- ✓ People are engaged and involved in outdoor activities
- ✓ People and families are engaged in their health
- ✓ People are out and about and being active
- ✓ People get case management and educational services
- ✓ Resources to provide needs for individuals, whether it's physical health, behavioral health, or spiritual needs
- ✓ Vibrant community with bicycle and walking paths

Key Stakeholders are mixed in their view of the SHP service area as a healthy community, but they certainly see ongoing attempts to improve the health and health care landscape.

At times. There's no perfect community, I know that. I really do **believe we could be healthier**, but I know that the **people of Barry County work on things** and try to keep most of their head out of the sand about stuff.

I think it's a **healthy community for some**. I think there's **still limitations** for those **who are financially limited** or who still have limitations - cultural access issues, as well. There's still a cultural sort of issue of not seeking health care when it's needed.

On a scale of one to ten, I'd probably put us at a **four**. We **have this whole group of people that are healthy**. They're out, they're engaged, they're riding their bikes all over the place. We've got engagement with different activities that are going on all the time. **Then we have this other, entirely different population**, **that is not**. They tend to be low-income, they tend to be in certain pockets in certain communities. So, we have those that are and those that aren't, and I'm not sure we have a lot of middle ground.

No, but we want to be. We're on the path. We're doing a remarkable job of working with all the agencies, putting together a coalition - the Be Healthy coalition of 19 organizations, and they were recognized by the state last year for their multitude of initiatives.

I would say yes, it is. It doesn't mean we're perfect and it doesn't mean there's certain things that we don't need to continue to work on, like the opiate epidemic has hit us, just like every other community.

Source: SHP Key Stakeholder In-Depth Interviews: Q2: In your opinion, what is a healthy community? In other words, what does a healthy community look like? (n=5); Q2a: Is the SHP service area made up of healthy communities? (n=5)

Characteristics That Make the SHP Area Healthy

Characteristics that make the SHP service areas healthy communities are: (1) outdoor recreational opportunities, (2) a collaborative spirit manifested by agencies and organizations coordinating programs and services, (3) programs and services in place that address many resident needs, and (4) various social aspects (e.g., education, employment, health care) that, when taken together, positively impact the health of area residents.

Recreational opportunities	We have a **lot of lakes** around Barry County. There are lots of free activities that can be done with families. I think that those things make us healthy. We have **bike paths**, and we have **trails** and **woods**, and we have **frisbee golf courses**, and we have **golf courses** and **sporting events** outside. They're working on [building an ice rink] here in Hastings to find those ways to engage kids [in the winter]. Barry County **has a lot of recreational opportunities with their lakes and parks and walking areas**. There's some **walking trails** that have been built and improved over the last several years. They've done a lot of work on **park improvement** and the **river trails or the rails-to-trails kinds of situations** - that's part of what makes the community healthy.
Collaboration	I think we have some fairly good **collaborations** happening. I **coordinate a substance abuse task force** and we've been active since 2004. We just stay focused on tasks and **we stay focused on data**. What makes it healthy is that **people want to be a part of that**. They **realize that if we work together, we'll make more of an impact than if we're kind of treading water a little**.
Programs and services in place	There's some of those things that Barry County has done well. They've done things like worked with the restaurants to have **healthy eating options on our menus.** They've done some **interventions in the schools on healthy eating**. They've done some **Cooking Matters workshops** to teach people how to cook healthy eating options, so those are some examples of why Barry County is healthy.
Social aspects	What makes it healthy is an **economically viable place**, meaning, **employment** and **jobs**. Of course, a **good hospital**, **school system**, an **engaged** community. The **schools are getting stronger**. **Until about two years ago, people were all choosing** (when we recruited here at Pennock) **to live in other communities** besides the City of Hastings. They would live closer to Grand Rapids, but our schools are going through a transformation.

Source: SHP Key Stakeholder In-Depth Interviews: Q2b: What makes the SHP service areas healthy communities? (n=5)

Community Strengths

Key Stakeholders believe the community foundations and other non-profit organizations like United Way are the greatest strength or resources upon which to build programs or initiatives to address health needs or issues. Additional resources include the strong collaborative spirit or community connectedness among people and organizations to address problems, as well as a strong philanthropic spirit and caring people who want to make the area the best it can be.

Community Foundations/Non-Profit Organizations	There are **funding** opportunities in Barry County. There's the **Community Foundation** and the **United Way** that are both exceptionally strong, especially given the size of the community. I know there's a **foundation** here which seems pretty healthy. I know there's **United Way**, which is huge here, **contributing grant opportunities and volunteering**. **Habitat for Humanity is also huge in this county**. **Volunteerism** seems to be pretty solid. There also seems to be a **pretty solid faith-based community** here. We have an incredibly great **community foundation**. **T**he **United Way** invests a lot in healthy things, we provide all the major funding for the substance abuse program in third and fifth grade and healthy lifestyles, and we provide **funding** for opportunities for kids through our local Parks and Rec and through our **YMCA**. The **Balm Foundation funded a culinary arts program for our kids** to help them be more successful. We have a very engaged DDA, **Downtown Development Authority**, that **engages downtown businesses** that are looking at trying to encourage people to buy local/stay local, and so that improves jobs, economy.
Collaboration/ connectedness	Barry County is a **close community that works very well together**, and **they look out for each other**, so when there is a problem, Barry County will usually **come together pretty easily** and work towards addressing it. It's a small community, people know each other, and **they're willing to work together**.
Philanthropic/caring spirit	There's a lot of **philanthropy** in Barry County. There's a lot of **great "can-do" attitude**. Our Barry County **Community Foundation** and our **United Way** really make things happen, and we have a lot of **benefactors** throughout the county that **give generously to make things happen**. We have a lot of **people that care deeply about this community** and that work in it and that work to make things go better, so they're some of the greatest resources. **People want to work here and live here**; they **want to make a difference**; they **want to be healthier**. I think there's a lot of **passion** about **having Barry County be a happy, healthy place**.

Source: SHP Key Stakeholder In-Depth Interviews: Q8: In order to improve the health of your community, please talk about some of the strengths/resources that your community has to build upon. (n=5)

Characteristics That Make the SHP Area Unhealthy

Conversely, many characteristics that make the SHP area unhealthy stem from the fact that it is a rural area and the by-product of that, such pockets of isolated residents that are hard to reach and consequently have a hard time accessing resources, as well as the cycle of poverty and socioeconomic challenges.

Hard to reach subpopulations	There is a large **population of parents that are increasingly difficult to reach**. In particular, 25 to 29-year-olds are hard to reach. So, if **you can't reach that young mom that's 26 and has two kids**, **how do you let her know there's WIC**? How do you let her know there's **Great Start programs or Head Start**? **How do you get her information** if all she's doing is looking at her phone, social media, and Facebook? **I think we could work together a lot better**.
Cycle of poverty	I think **people choose not to work**. You have a lot of people that have never worked and never plan on working or maybe go get a job and don't like it, so they revert back. I do have concerns about that because if **you're third or fourth generation living on assistance**, you're never [going to work]. We kind of have that **systemic rural** "there's no job for me; I'm going to stay home; I'm not going to go to work at Wal-Mart and make $8" kind of thing.
Lack of access to resources	Probably some **access to resources that maybe aren't as readily available as other counties**, so that might mean individuals that provide SUD treatment or opiate addiction treatment. We have some, but not as flush as other counties. We lack those kinds of **specialized services** that many other counties have. For our own services, we currently are looking for a psychiatrist. My psychiatrist is retiring in September, and I'm pretty sure he's the only one in Barry County, so just **access to psychiatry**, so we're working on telepsych and trying to find a doc that's not 83 and ready to retire. I think where Barry County struggles is still the **rural nature of the community** - that there's people that are **isolated** and **unable to access a lot of these resources**. So, if you're not in the Hastings city limit or some of the other, even smaller, towns, you miss out on those activities and opportunities.

Source: SHP Key Stakeholder In-Depth Interviews: Q2c: What makes the SHP area unhealthy? (n=5)

Resource Limitations

- Despite the fact that community foundations and their available funds are a resource strength, some Key Stakeholders suggest there are not enough funds to go around to address all of the issues facing SHP area residents. Additionally, agencies and organizations compete for the same funds, and a stigma attached to mental illness and substance abuse can prevent these services from receiving needed funding.
- Further, there are capacity issues as there are not enough people to do the work necessary.
- One Key Stakeholder doesn't see any resource limitations but instead sees programs and services that are not fully utilized because of lack of motivation (although lack of awareness could also be an issue).

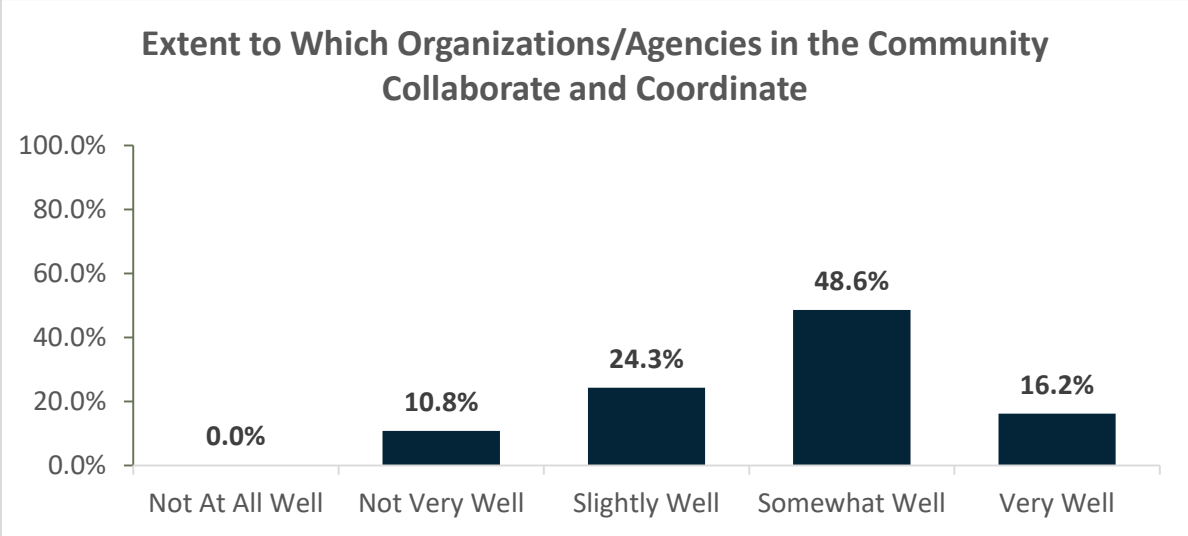
Funding and funding issues	Obviously, **funding** is always a limitation. **Money**.
Competition	If you've got a need for a halfway house or a sober living house, you're **probably going to attract that same benefactor** who wants to give to a dialysis center because there is some **stigma** about those folks who have **mental health** or **substance use** disorders that **it's a choice or they could be helping themselves**, so you have to **find the right benefactor**, but there's still **stigma**. Resources limitations would be, again, how do we reach the people who need it the most? How do we serve the marginalized or the at-risk populations? How do we form relationships with them and get them where they need to go? **Health competes with other competing donation dollars** and community interests.
Lack of people	**Capacity** - **bodies** to work on these problems. We **need more people involved**, and, of course, that tends to be **limited by the funding** that's available.
Lack of motivation	I'm **not as worried about the resources**. We're not out of resources. We don't have to ask for more funding at this point. **We have to get people that want to participate**. **We have all kinds of opportunities**. We have **lack of participation by people wanting to do something better or different**. They have to want to do it. You can't make somebody do something, but you can be that cheerleader to help them go forward.

Source: SHP Key Stakeholder In-Depth Interviews: Q8a: What are any resource limitations, if any? (n=5)

Collaboration and Coordination

- Six in ten (64.8%) Key Informants, and all five Key Stakeholders, report that area organizations and agencies collaborate and coordinate "somewhat well" or "very well" together in order to make programs and services more accessible to area residents.

- Limited resources have forced community organizations and leaders to collaborate and coordinate well, however, some have suggested there is room for improvement in this area with regard to the local hospital and mental health.



Source: SHP Key Informant Online Survey, Q9/Q9a; Key Stakeholder Interviews, Q5/Q5a: How well do organizations and agencies in your community collaborate and coordinate together in order to make programs and services more accessible to area residents? Why do you say that? (n=37/n=5)

Somewhat Well/Very Well

There's a **very collaborative nature in Barry County**, and the **organizations like to work together and support each other**. – *Key Stakeholder*

The community - **if there's an issue**, and we need to figure out how to fix it, **we work on fixing it**. – *Key Stakeholder*

Lots of opportunity to meet and **collaborate**. – *Key Informant*

I think there is a **lot of communication between providers**. – *Key Informant*

Not At All Well/Not Very Well

No participation by the hospital on tobacco reduction, opioid awareness or suicide prevention coalitions. – *Key Informant*

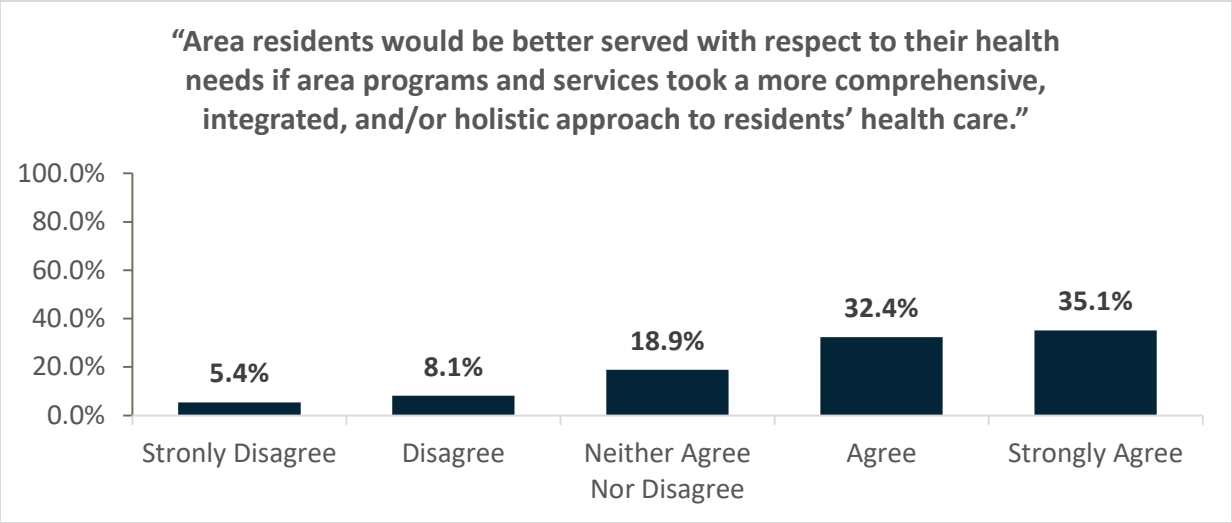
Hospital could coordinate more with the local senior center COA. – *Key Informant*

We've **got issues with mental health**. If there was any area that was **not cooperative with other organizations and agencies**, it would be mental health. – *Key Stakeholder*

Holistic/Biopsychosocial Approach

- All five Key Stakeholders report that at least some area programs and services take a comprehensive, integrated, and/or holistic approach to serving the health and health care needs of area residents. Two-thirds (67.5%) of Key Informants believe area residents would be better served if local programs and services took this approach.

- These community leaders see the benefit in serving area residents' health and health care needs in a comprehensive, integrated, and/or holistic manner; a biopsychosocial approach. They understand that health, or illness, depends on physical, mental, spiritual, and social well-being.



Source: SHP Key Stakeholder Interviews, Q5b/Q5c: In your opinion, do area programs and services take a comprehensive, integrated, and/or holistic approach to serving the health and health care needs of area residents? Why do you say that? (n=5); Key Informant Online Survey, Q10/Q10a: Please indicate your level of agreement with the following statement. Why do you say that? (n=37)

There is **usually more than one causation to a crisis** and/or need and as mentioned previously, **financial health goes hand in hand with physical health**. – *Key Informant*

I feel it is **important to consider the whole person** when it comes to program development; including **health literacy**, **physical** and **emotional limitations**, **outside stressors**, etc. – *Key Informant*

Too often people only address the most urgent healthcare need instead of taking a preventative, **holistic approach** to address all of their healthcare issues. – *Key Stakeholder*

Most health care issues are multi-faceted and overlap each other. – *Key Informant*

I've worked at two other CMHs in the State of Michigan, so here we take an integrated and a co-occurring approach, and the therapists are all co-occurring trained and licensed and credentialed. – *Key Stakeholder*

Everyone wants **patient-centric**, **coordinated care delivered by a team that cares**. – *Key Informant*.

Barriers to Care Coordination

- All five Key Stakeholders believe there are barriers to care coordination, such as understanding the protocol, rules, or regulations of various organizations, lack of integrated technology where information could be shared, HIPPA requirements, and lack of staff are all barriers to care coordination. More specifically, Key Stakeholders suggest primary care physicians and nurses could be better at providing referrals, and mental health agencies could be better in collaborating with other organizations.

Yes, sometimes we might work with a health plan on the physical health side to coordinate needs for an individual, so **working with**, quite frankly, the **health plans can be a barrier**. They just **have different expectations**, or we certainly have **different rules and regulations** that we have to abide by, mental health codes, things of that nature. So, when we're trying to coordinate with them, that sometimes becomes a barrier.

I think that the barriers are **staffing issues**. It's a **lot of work to coordinate care between services**, and most of the time, the entities that are trying to coordinate **services don't have enough staff to take that time to do it or to do it well**. I think that at times it's perceived that there are policies or political barriers, but generally, in terms of care coordination, there shouldn't be those obstacles. It's just a **matter of understanding the rules and how to work within them**.

We're still integrating with Spectrum Health, and so **part of our barriers are our electronic medical record and having the relationships built to a referring organization**.

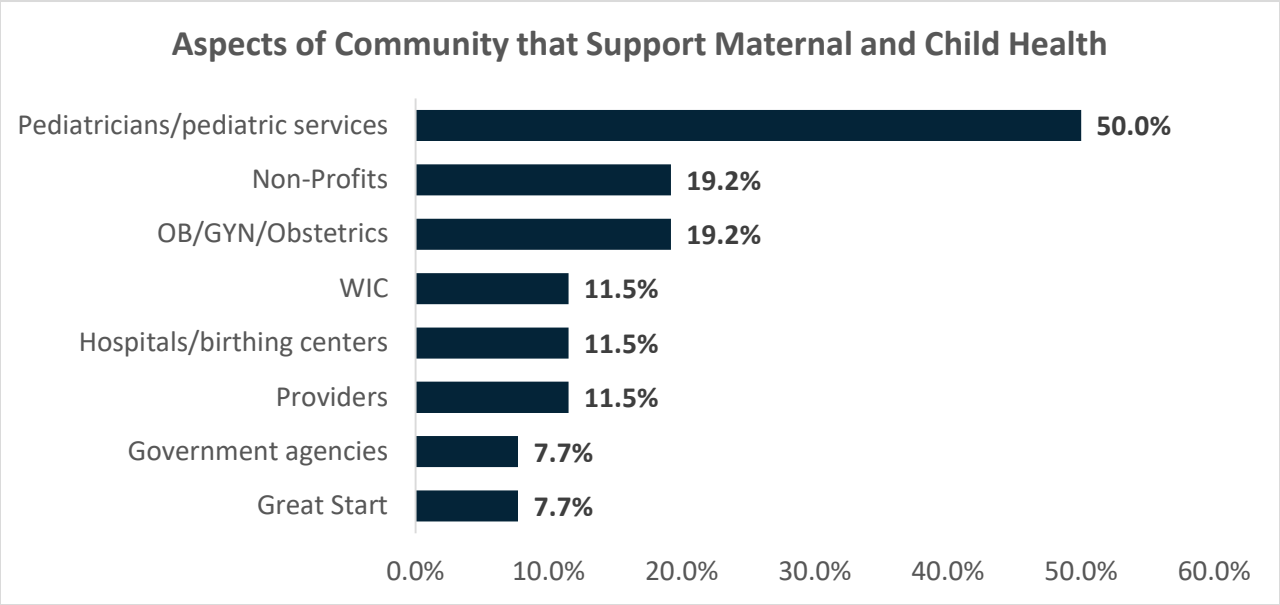
HIPAA can be a huge barrier to care coordination, and Mental Health stands behind it all the time. We can talk in generalities with everybody else, but Mental Health - unless they have that signed document, they don't seek assistance for their clients, they don't know about other assistance for their patients. **Mental Health does not play well with others**.

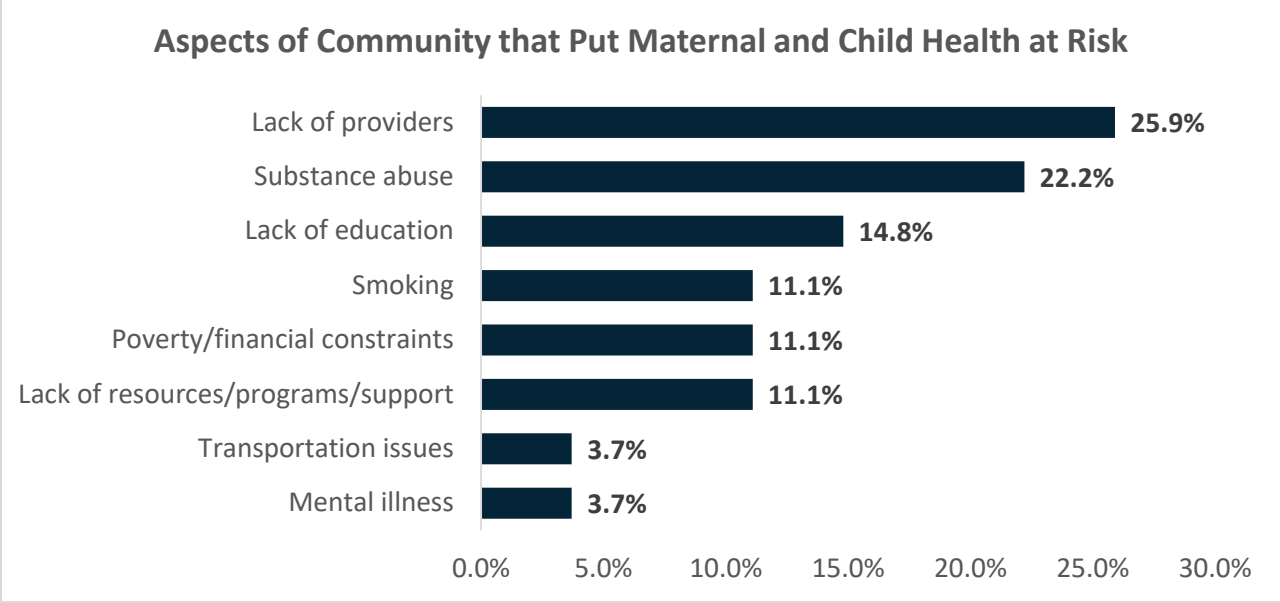
I think sometimes the **primary care doctors are too busy to help facilitate a referral to care coordination**, and then you've got **people who don't understand** or you've got people [patients] that **aren't going to be compliant**. But the doctors are **so busy** and the nurse practitioners - they're so busy that I **don't think sometimes that they're very good at making referrals**. We get very few referrals for women who may have substance abuse issues.

Source: SHP Key Stakeholder Interviews, Q5d: Are there any barriers to care coordination? (n=5)

Maternal and Child Health

- Key Informants name pediatric services as the top aspect of the community that supports maternal and child health, followed non-profits, OB/GYN services, WIC, and hospitals.
- Conversely, aspects that put maternal and child health at risk include a lack of providers, substance abuse, and lack of education.



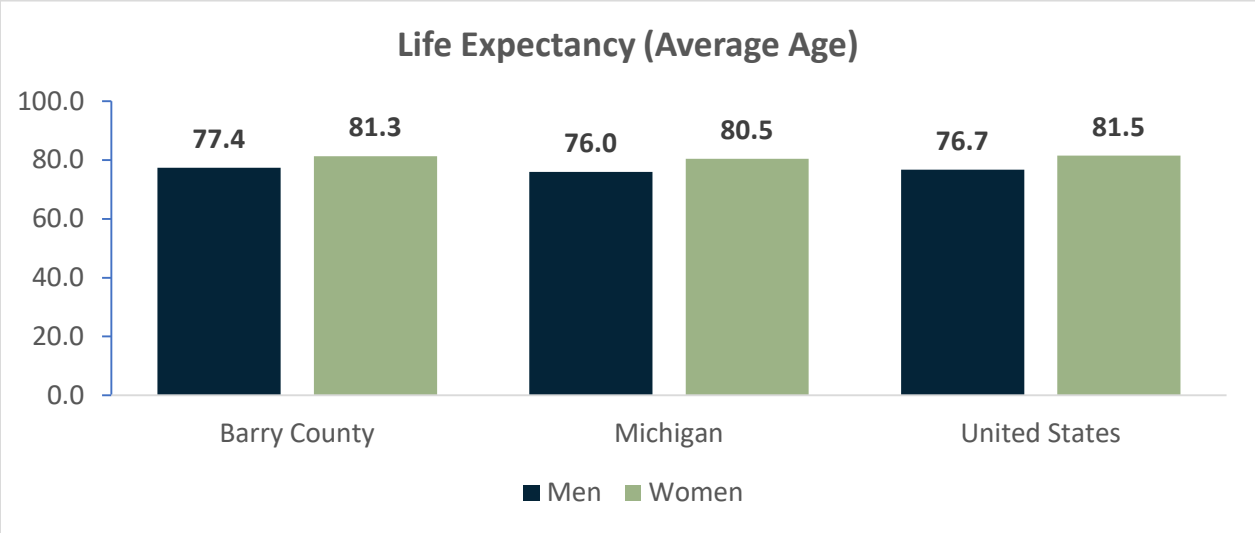


Source: SHP Key Informant Online Survey, 2017, Q13: What about this community supports maternal and child (age birth-18) health? Please be as detailed as possible. (n=26); Q14: What about this community puts maternal and child (age birth-18) health at risk? Please be as detailed as possible. (n=27)

HEALTH STATUS INDICATORS

Life Expectancy and Years of Potential Life Lost

- In Barry County, men have higher life expectancy rates (when adjusted for age) compared to men across Michigan or the U.S.; local women fare better than the state rate and are on par with the national rate.
- Barry County residents also fare better than residents across the state or nation in terms of years of potential life lost for all major health conditions.



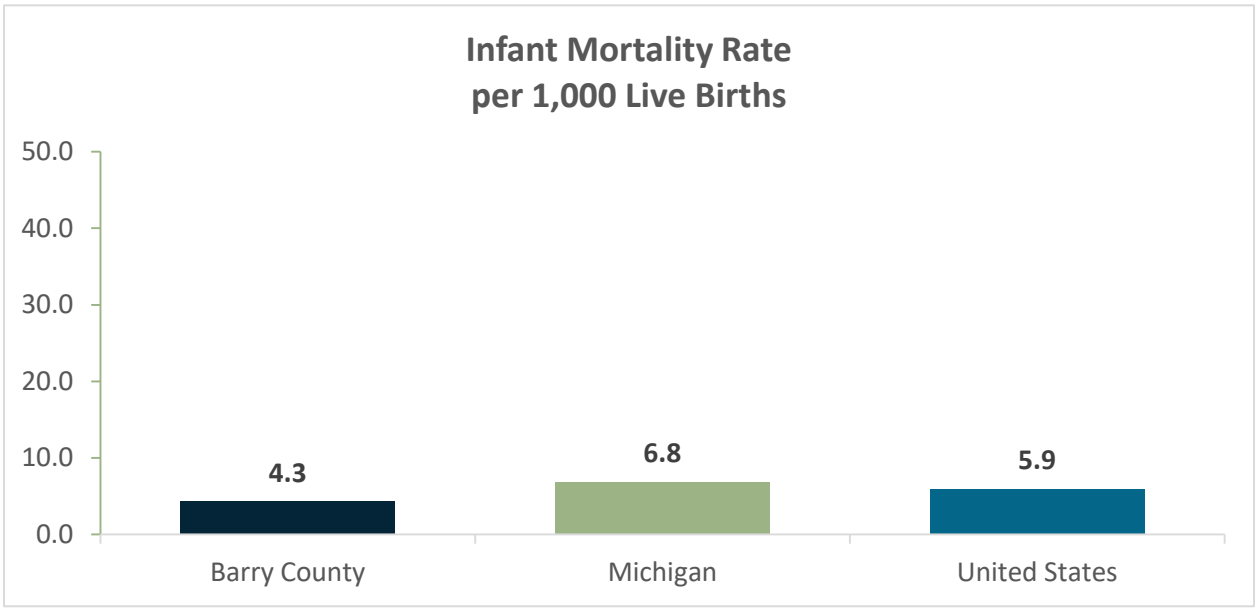
Source: Institute for Health Metrics and Evaluation at the University of Washington, 2014.

Rates of Years of Potential Life Lost (YPLL) (Below Age 75)				
	Michigan		Barry County	
	Rank	Rate	Rank	Rate
All Causes		7697.6		6203.7
Malignant neoplasms (All)	1	1620.8	1	1458.5
Diseases of the heart	2	1276.0	2	1014.6
Accidents	3	1136.4	3	886.0
Drug induced deaths	4	791.0		**
Intentional self-harm (Suicide)	5	428.4		**
Chronic lower respiratory diseases	6	255.4	4	244.6

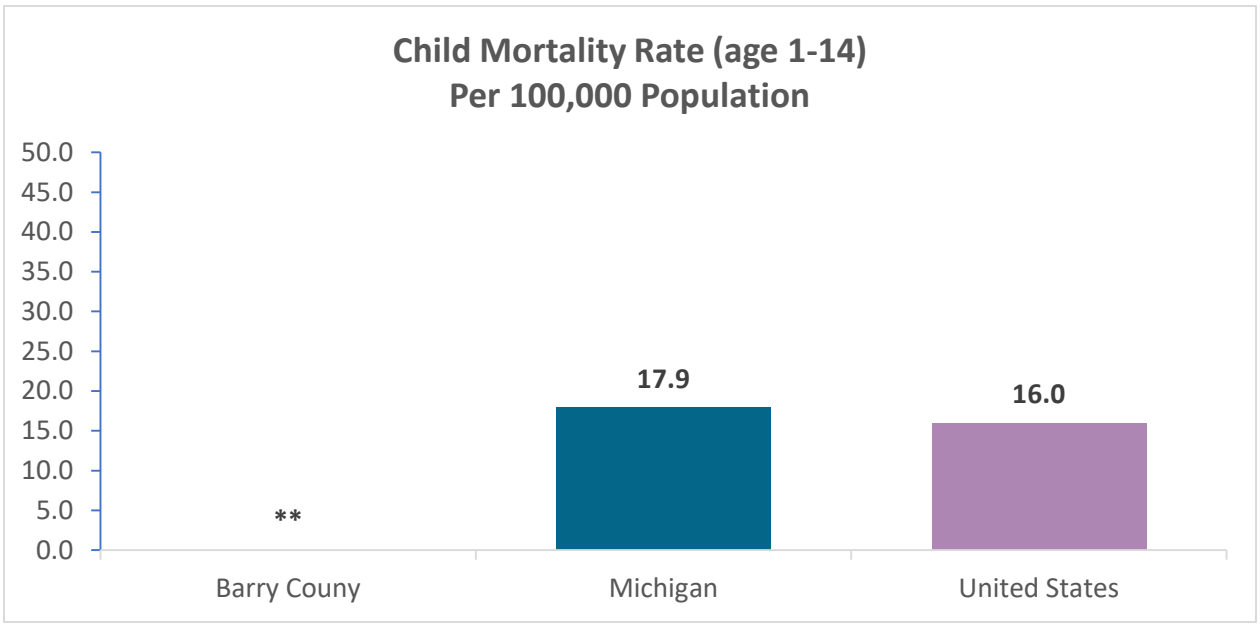
Source: Michigan DHHS, Division of Vital Records and Health Statistics, Geocoded Michigan Death Certificate Registry, 2015.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

Mortality Rates

The rates for infant and child mortality are lower in Barry County compared to the state or national rates.



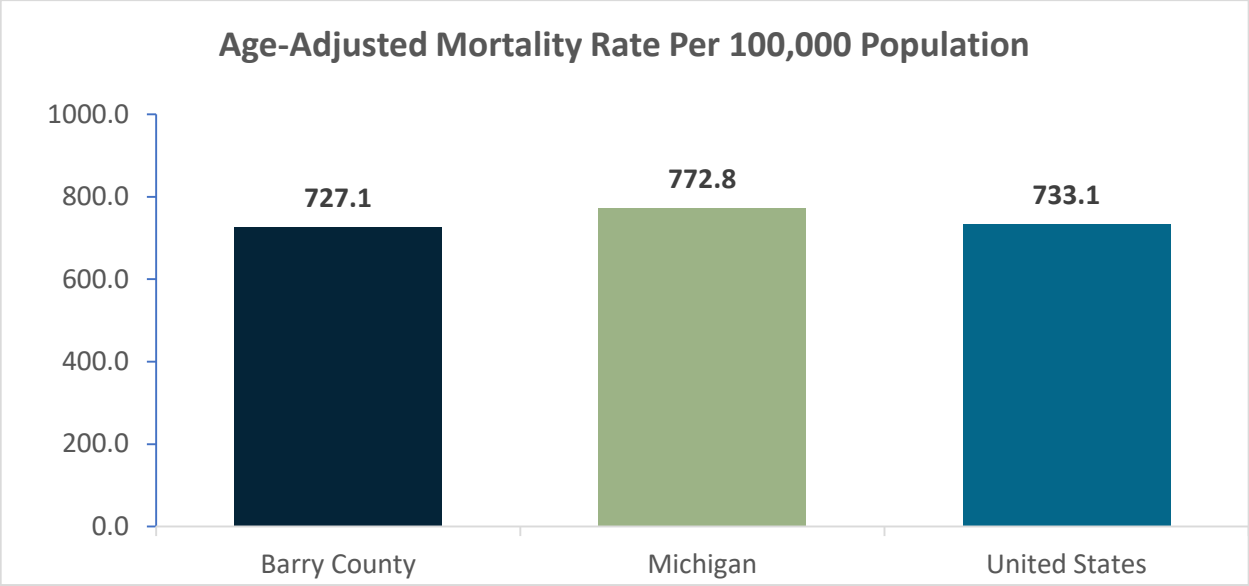
Source: Michigan DHHS, Division of Vital Records and Health Statistics, Michigan and U.S., 2015, Barry County 2014.



Source: Michigan DHHS, Division of Vital Records and Health Statistics, MI and US, 2015, Barry, 2014. Note: *occurrences were too few to calculate rate.

Mortality Rates (Continued)

The age-adjusted mortality rate for Barry County is lower than the state rate and national rates.



Source: Michigan Resident Death File, Vital Records & Health Statistics Section, Michigan Department of Health and Human Services, 2015.

Leading Causes of Death

- Heart disease and cancer are the leading causes of death in Barry County, the state, and the nation.
- Compared to the state or the nation, the death rate for heart disease is lower in Barry County, and the death rate for cancer is lower in Barry County compared to the state rate, but slightly higher than the national rate.
- The death rates for chronic lower respiratory diseases and Alzheimer's disease are higher in Barry County compared to the state or national rates, while the death rate from unintentional injuries and stroke are lower in Barry County vs. state or national rates.
- The death rates for cancer and chronic lower respiratory diseases in Barry County increased from the last CHNA iteration in 2014.

	Michigan		United States		Barry County	
	Rank	Rate	Rank	Rate	Rank	Rate
Heart Disease	1	195.5	1	168.5	1	168.1
Cancer	2	164.9	2	158.5	2	158.7
Chronic Lower Respiratory Diseases	3	46.7	4	41.6	3	51.8
Unintentional Injuries	4	42.9	3	43.2	5	35.4
Stroke	5	36.8	5	37.6	6	31.9
Alzheimer's Disease	6	29.7	6	29.4	4	39.9
Diabetes Mellitus	7	22.2	7	21.3		**
Kidney Disease	8	15.4	9	13.4		**
Pneumonia/Influenza	9	15.0	8	15.2		**
Intentional Self-Harm (Suicide)	10	13.6	10	13.3		**
All Other Causes		190.1		191.1		176.5

Source: Michigan Department of Health and Human Services, 2015.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

Leading Causes of Preventable Hospitalization

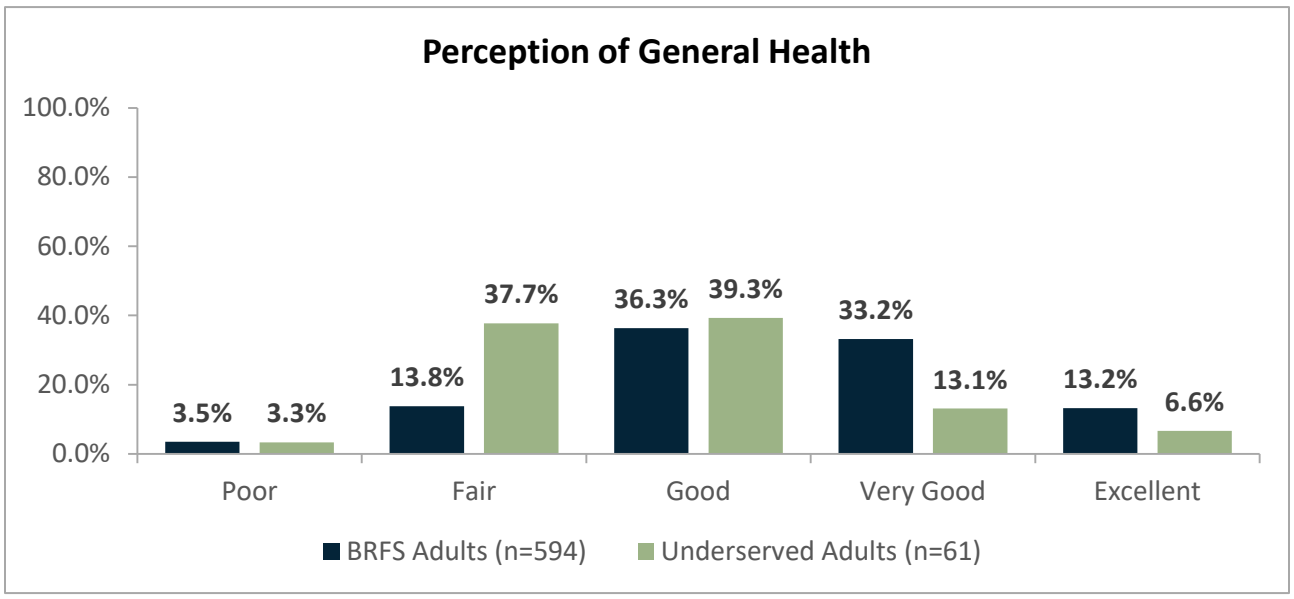
- Preventable hospitalizations as a proportion of all hospitalizations in Barry County is slightly lower than the state proportion.
- Congestive heart failure, bacterial pneumonia, and chronic obstructive pulmonary disease are the leading causes of preventable hospitalization in both Barry County and across Michigan, but the proportion for the latter two are higher in Barry County compared to the state.
- Residents of Barry County are more likely to be hospitalized for kidney/urinary infections and dehydration than residents across Michigan.
- On the other hand, residents across Michigan are more likely to be hospitalized for cellulitis, diabetes, and asthma compared to residents in Barry County.

	Michigan		Barry County	
	Rank	% of All Preventable Hospitalizations	Rank	% of All Preventable Hospitalizations
Congestive Heart Failure	**1**	**14.0%**	**2**	**14.0%**
Bacterial Pneumonia	**2**	**9.7%**	**3**	**11.5%**
Chronic Obstructive Pulmonary Disease	**3**	**9.1%**	**1**	**14.3%**
Kidney/Urinary Infections	**4**	**6.8%**	**4**	**7.5%**
Cellulitis	**5**	**6.5%**	**5**	**5.6%**
Diabetes	**6**	**5.9%**	**6**	**5.3%**
Asthma	**7**	**5.3%**	**7**	**3.7%**
Grand Mal and Other Epileptic Conditions	**8**	**3.3%**	**8**	**2.6%**
Dehydration	**9**	**1.8%**	**9**	**2.2%**
Gastroenteritis	**10**	**1.7%**	**10**	**2.0%**
Convulsions				**1.9%**
All Other Ambulatory Care Sensitive Conditions		**36.1%**		**31.4%**
Preventable Hospitalizations as a % of All Hospitalizations		**19.9%**		**17.8%**

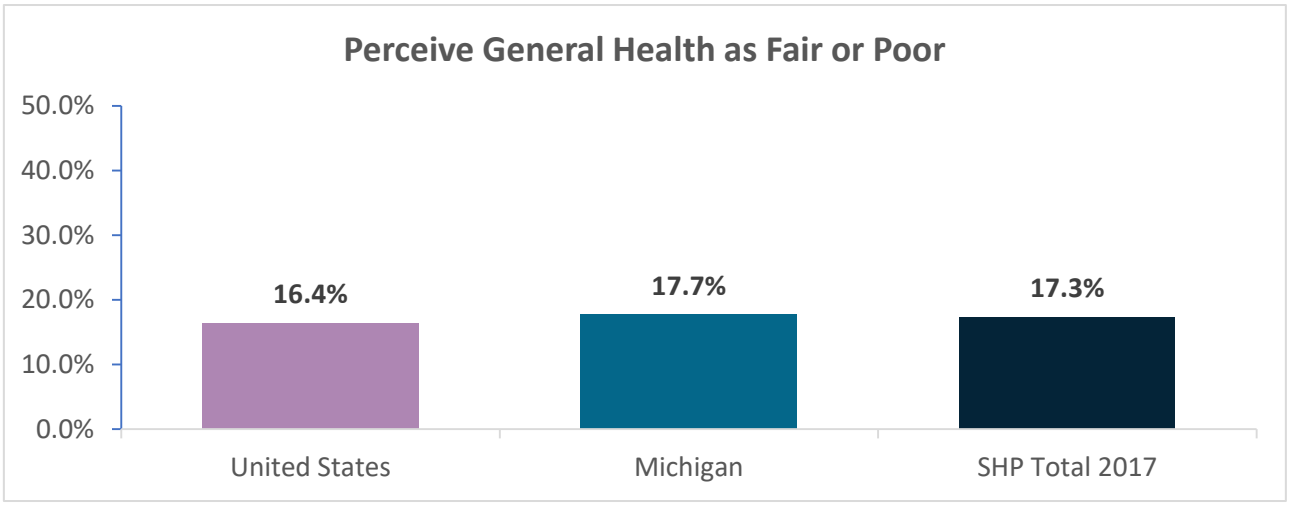
Source: MDHHS Resident Inpatient Files, Division of Vital Records. Barry County and MI, 2014.

General Health Status

- Roughly one in six (17.3%) SHP area adults reports fair or poor general health; this proportion increases to 41.0% for underserved adults.
- The proportion of area adults reporting fair or poor health is higher than the national proportion and slightly lower than the state proportion.



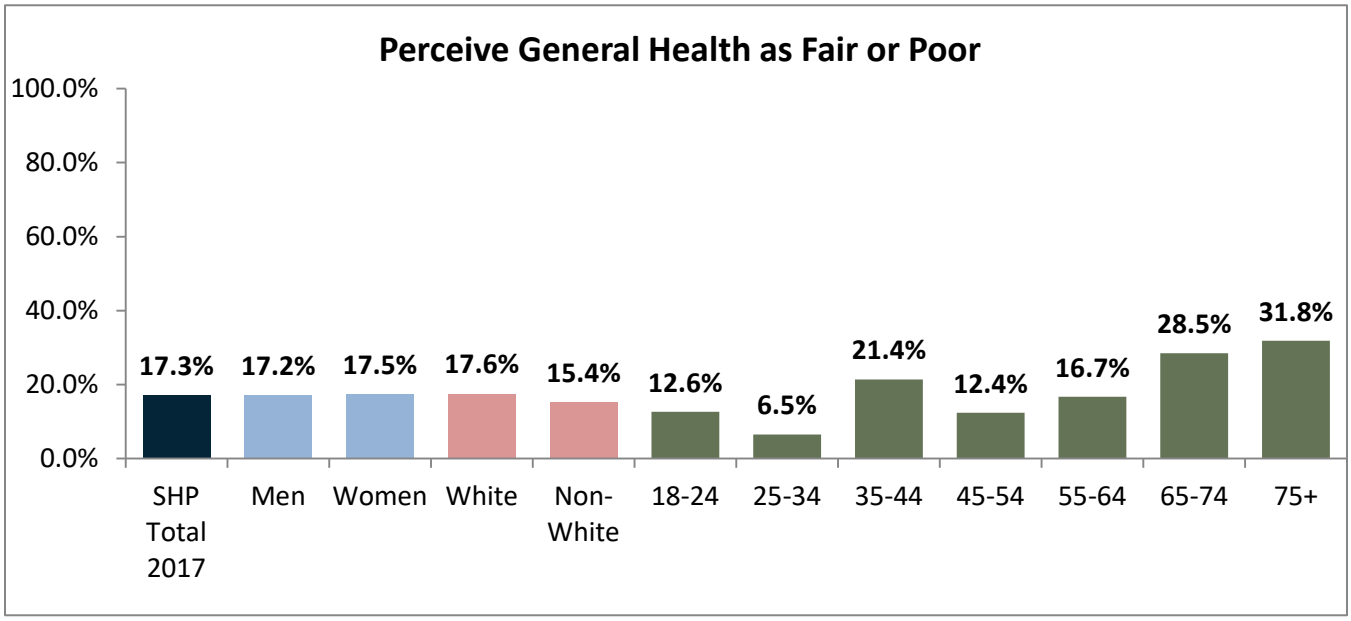
Source: SHP Behavioral Risk Factor Survey, 2017, Q1.2/SHP Underserved Resident Survey, 2017, Q1: Would you say your general health is excellent, very good, good, fair, or poor?

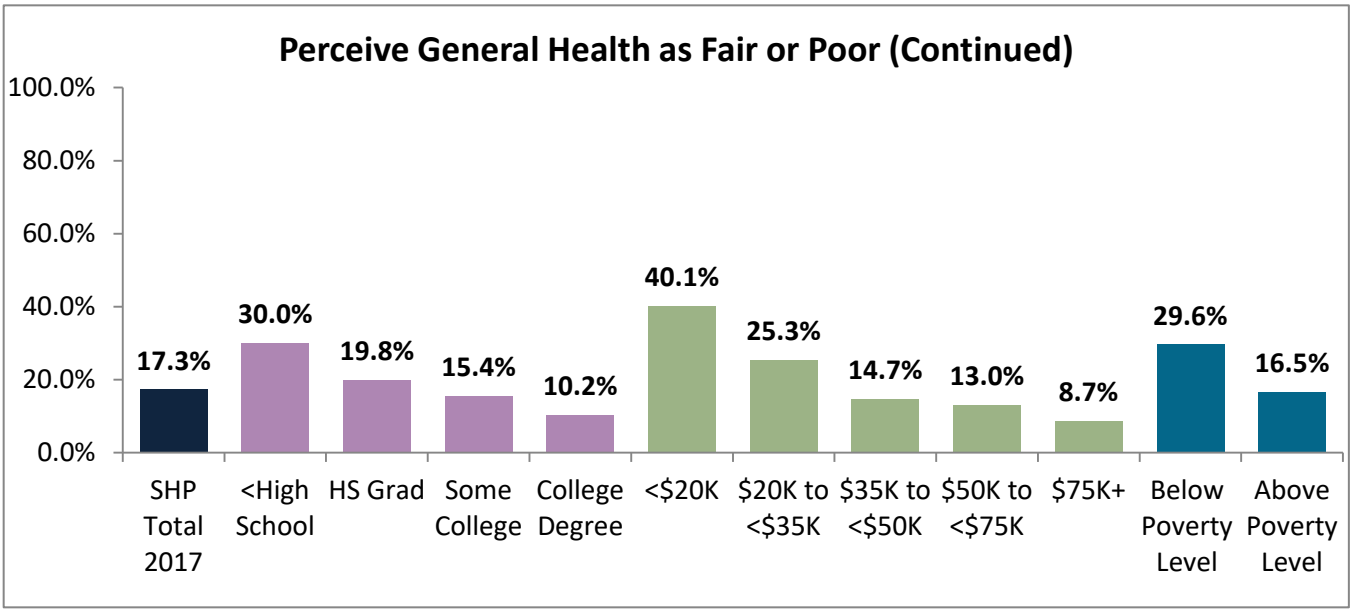


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017, Q1.2. Note: the proportion of adults who reported that their health, in general, was either fair or poor.

General Health Status (Continued)

- The proportion of SHP area adults who perceive their health as fair or poor is inversely related to level of education and household income.
- Area adults who are age 65 or older are more likely to report their general health as fair or poor compared to younger adults.

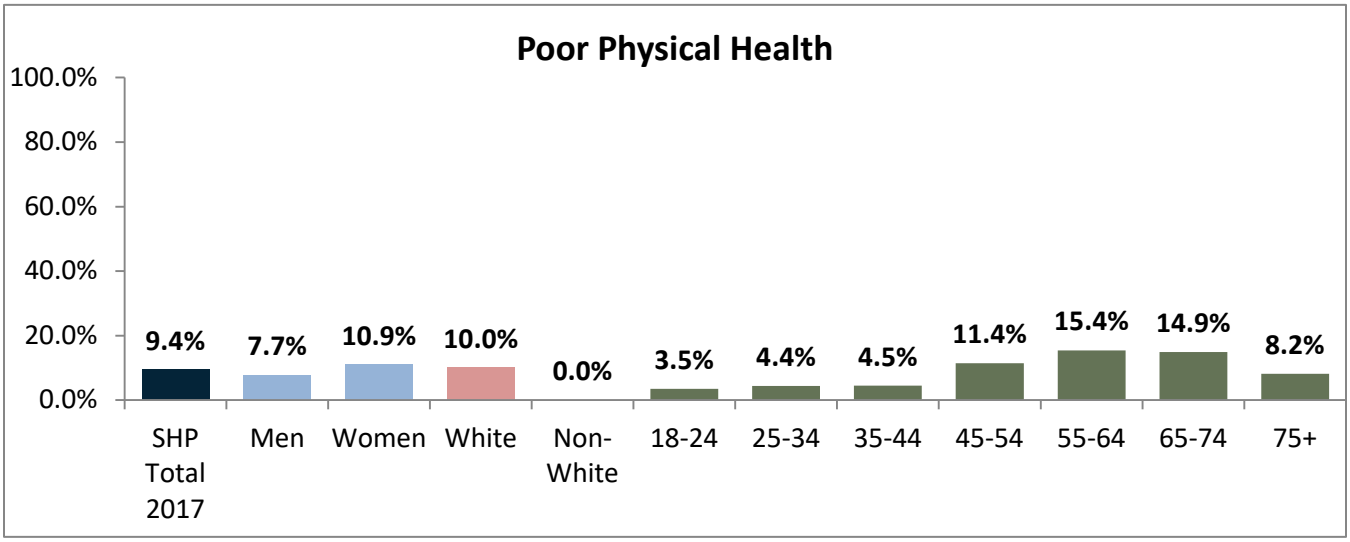


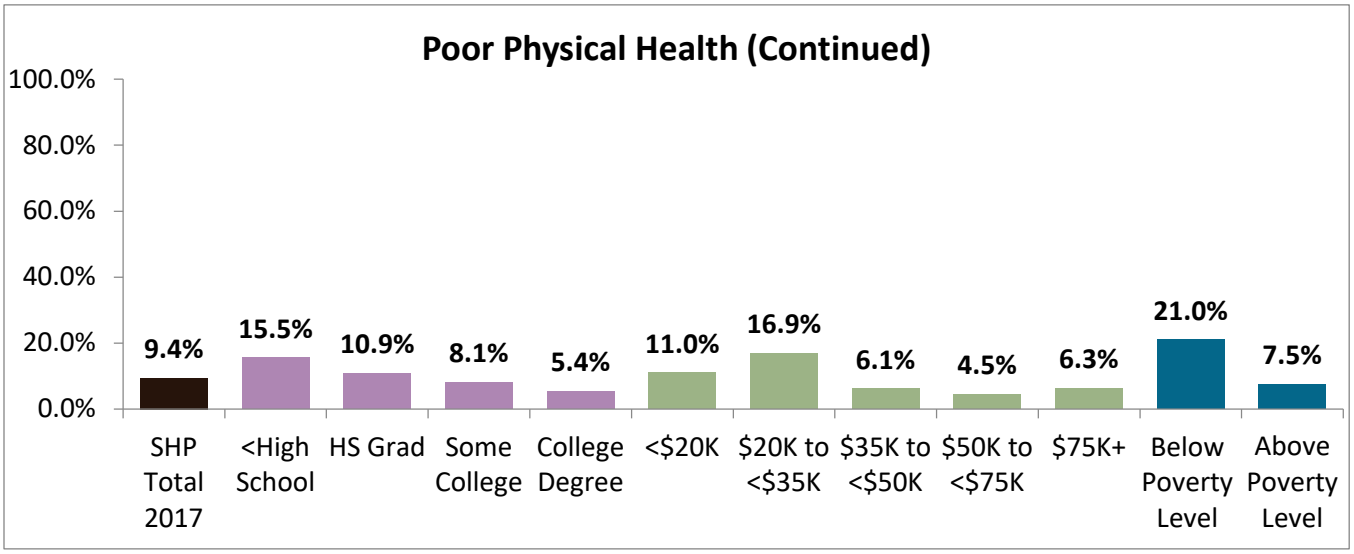


Source: SHP Behavioral Risk Factor Survey, 2017, Q1.2.

Physical Health Status

- Among SHP area adults, 9.4% have poor physical health, which means they experienced fourteen or more days of poor physical health, which includes physical illness and injury, during the past 30 days.
- The prevalence of poor physical health is lowest among adults age 18-44, those with a college degree, and/or those with household incomes of $35K or more.
- White adults are more likely to experience poor physical health than non-White adults.

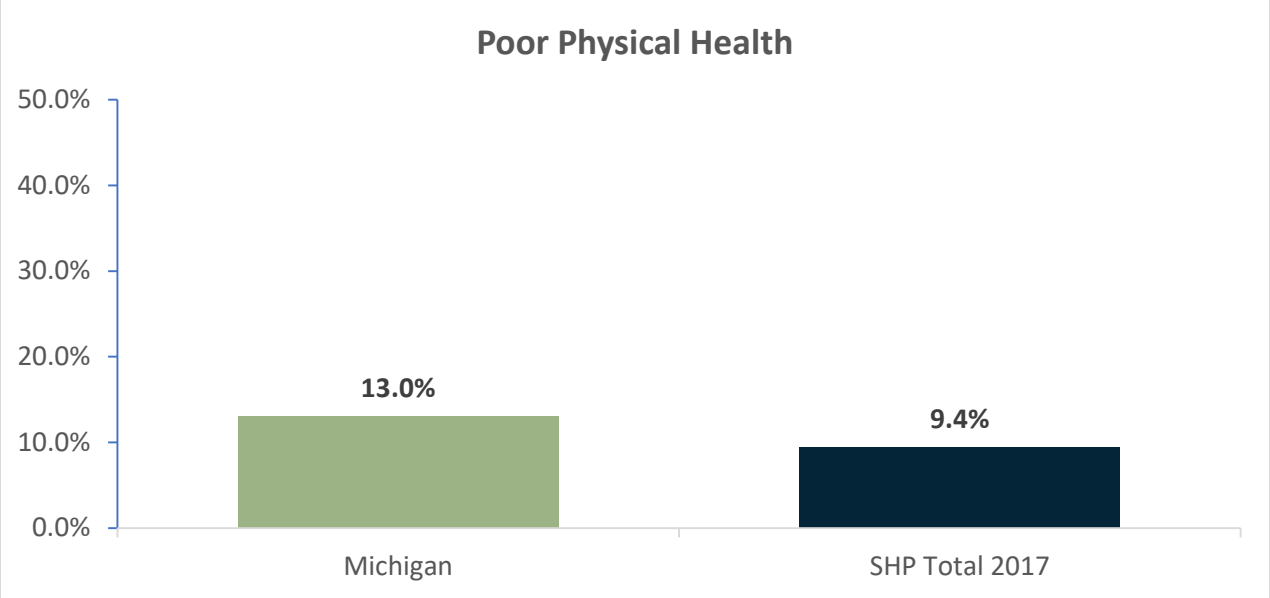




Source: SHP Behavioral Risk Factor Survey, 2017, Q2.1: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? (n=593). Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes physical illness and injury.

Physical Health Status (Continued)

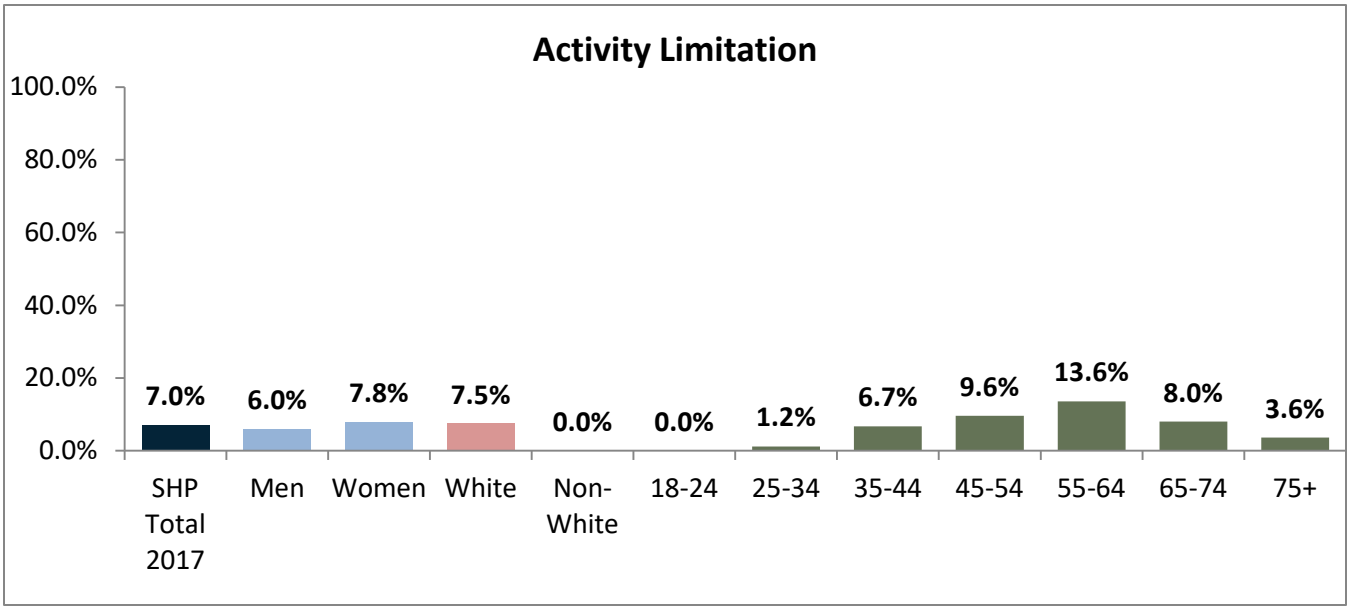
The proportion of area adults who have poor physical health is lower compared to the state proportion.

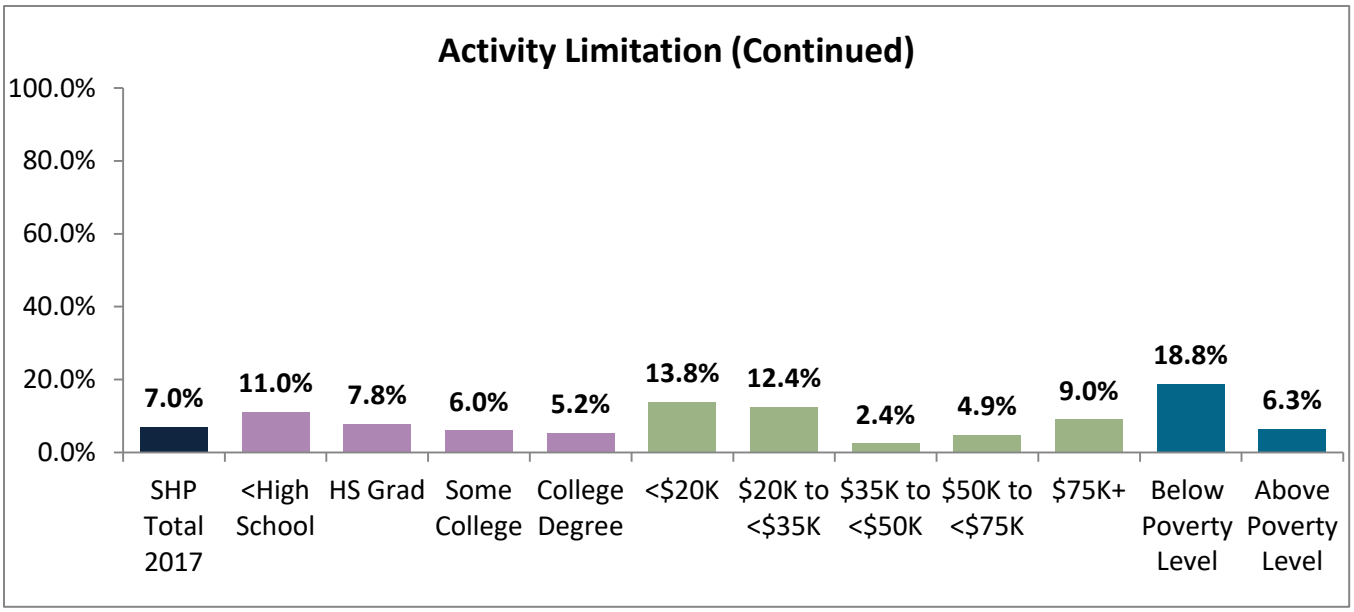


Source: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017, Q2.1. Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes physical illness and injury.

Activity Limitation

- Overall, 7.0% of area adults are prevented from doing their usual activities (e.g., self-care, work, recreation) because of poor physical or mental health.
- The largest proportions of adults who experience activity limitation are found among those with less than a high school diploma and/or those with incomes less than $35K.

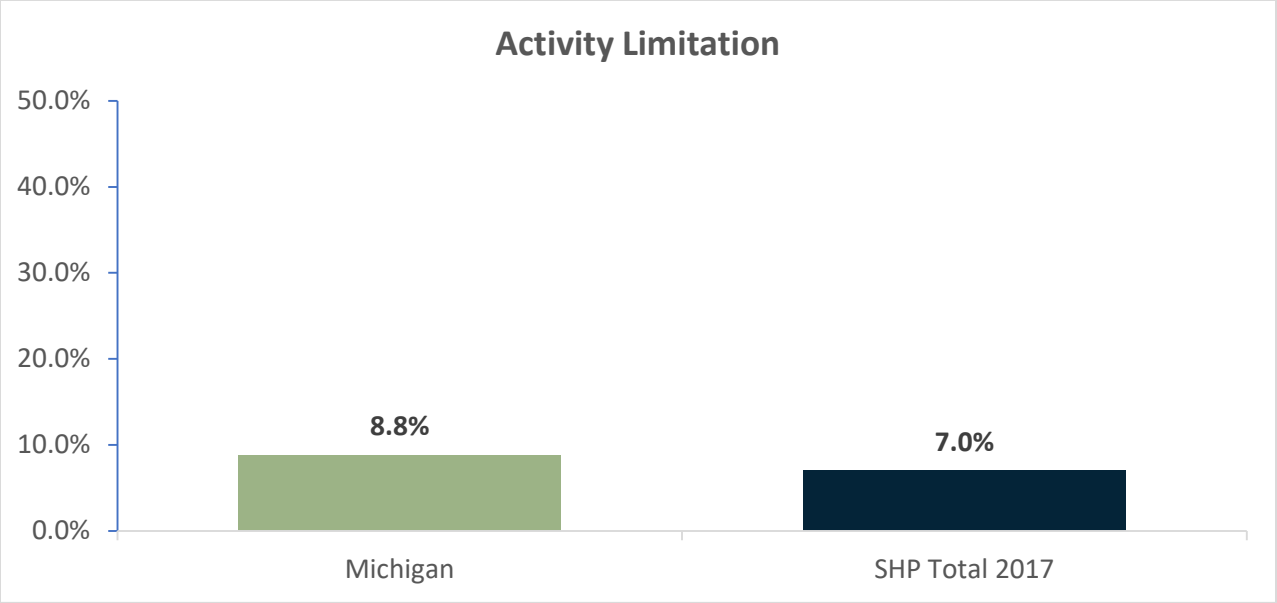




Source: SHP Behavioral Risk Factor Survey, 2017, Q2.3: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation? (n=592). Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which either poor physical health or poor mental health kept them from doing their usual activities, such as self-care, work, and recreation.

Activity Limitation (Continued)

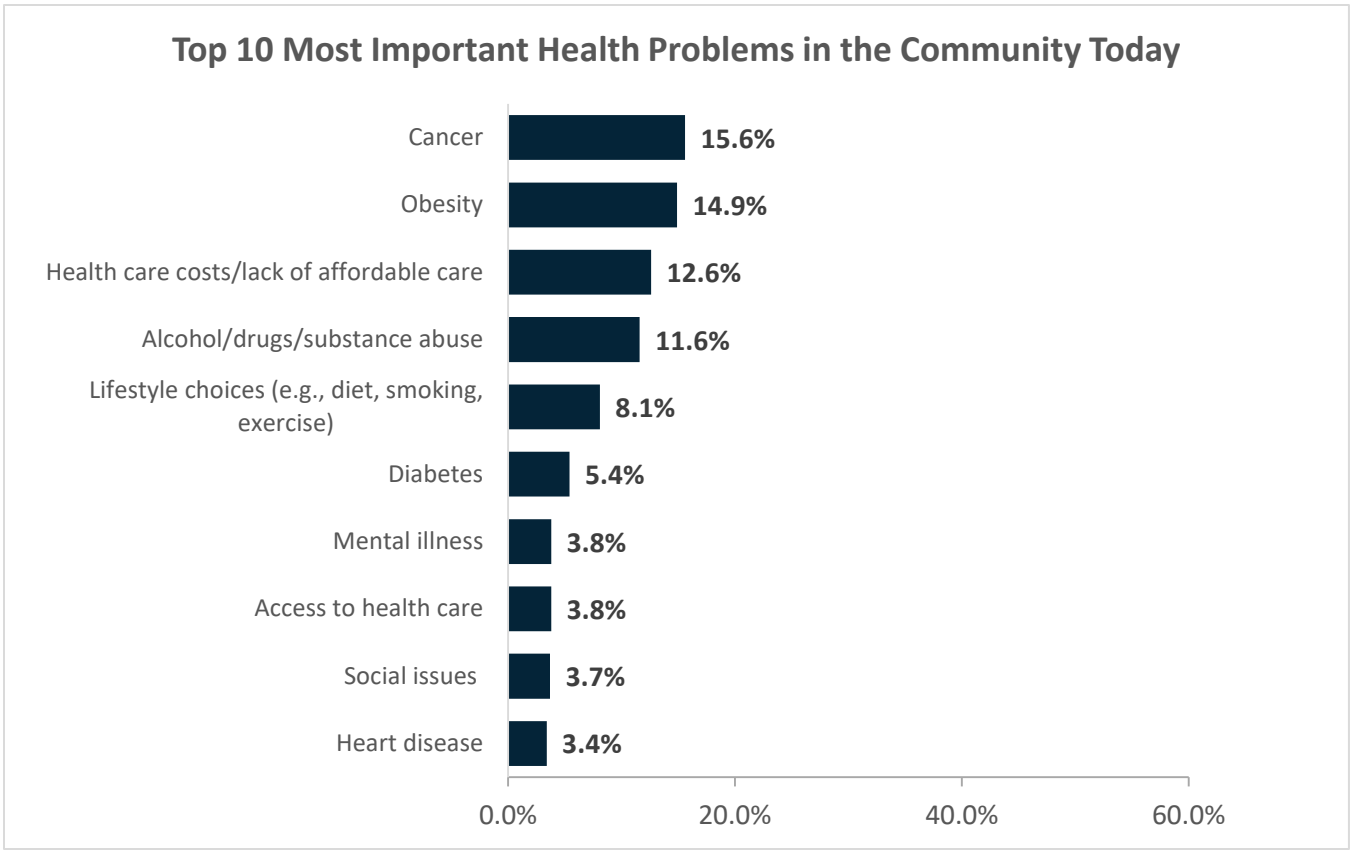
The proportion of area adults whose activity is limited is lower than the state proportion.



Source: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2014, 2017, Q2.3. Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which either poor physical health or poor mental health kept them from doing their usual activities, such as self-care, work, and recreation.

Most Important Health Problems in the Community

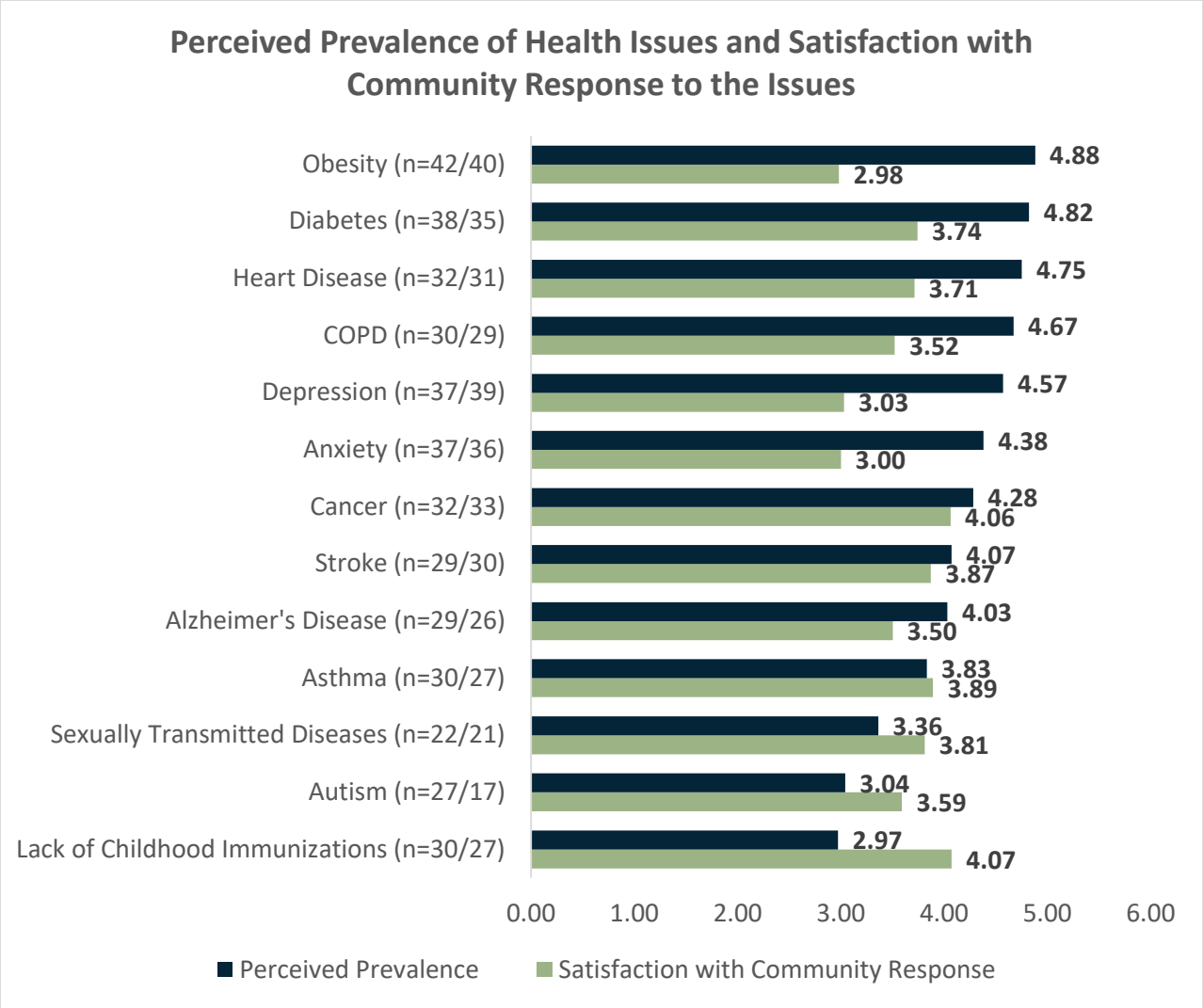
Area adults consider cancer and obesity to be the top two health problems in the SHP area, followed by the cost of health care, substance abuse, and lifestyle choices (e.g., diet, smoking, exercise).



Source: SHP Behavioral Risk Factor Survey, 2017, Q1.1: What do you feel is the most important health problem in your community today? (n=547)

Most Prevalent Health Issues in the Community

- Like 2014, Key Informants view obesity and diabetes as the top two health issues in terms of prevalence in the SHP area.
- Heart disease, COPD, depression, anxiety, and cancer are also perceived to be prevalent.
- More concerning is that Key Informants are least satisfied with the community's response to several of the issues perceived to be most prevalent, most notably obesity, depression, and anxiety.



Source: SHP Key Informant Online Survey, 2017, Q2: Please tell us how prevalent the following health issues are in your community. Q2a: How satisfied are you with the community's response to these issues?
Note: Prevalence scale: 1=not at all prevalent, 2=not very prevalent, 3=slightly prevalent, 4=somewhat prevalent, 5=very prevalent; Satisfaction scale: 1=not at all satisfied, 2=not very satisfied, 3=slightly satisfied, 4=somewhat satisfied, 5=very satisfied.

Most Prevalent Health Issues in the Community (Continued)

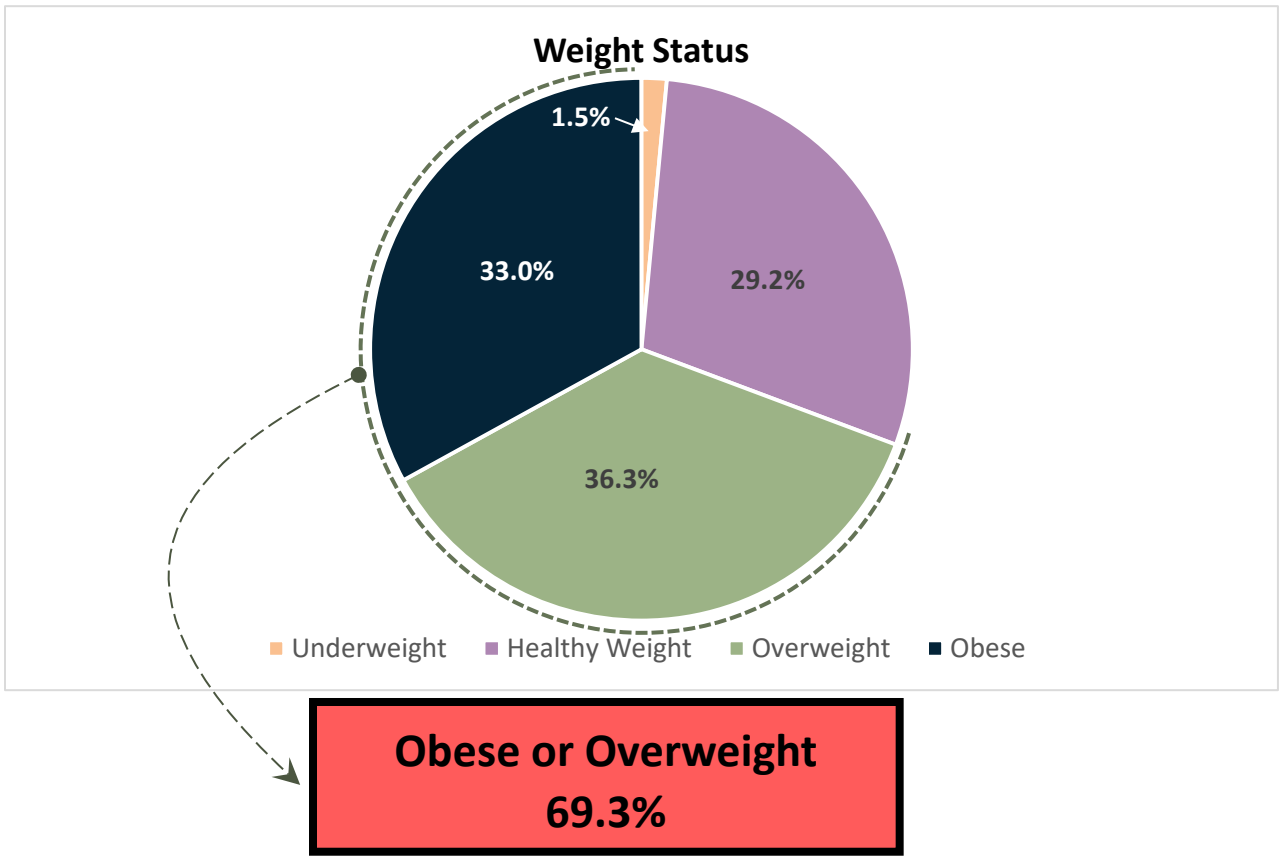
When asked to comment on any additional health issues that they deem prevalent in the community, Key Informants mentioned several areas related to mental illness (e.g., lack of access to treatment, overutilization of the ER/ED, lack of psychiatrists), underserved subpopulations (underinsured, low-income), and the lack of primary care providers in the area, among others:

- ✓ Administration of Vitamin K and erythromycin eye ointment
- ✓ Dementia
- ✓ Disabilities
- ✓ Fall prevention
- ✓ Hard to place patients for psych issues
- ✓ I do think a lack of insurance is a problem in the community, by choice or not
- ✓ Lack of access to mental health providers (only 1 psychiatrist in county)
- ✓ Lack of contact with a primary care physician
- ✓ Lack of ER's and school's recognition of child neglect/abuse and the laws requiring TO REPORT
- ✓ Lack of primary care physicians; people cannot get into the few family practice and internal medicine physicians we have in Barry County, and therefore they are not receiving regular care
- ✓ Mental health issues; everyone funnels through the ED overwhelming the system
- ✓ Need for nutritional resources, dietary counseling
- ✓ Not enough PCP's
- ✓ PAD
- ✓ Parental choice to decline routine immunizations and birth prophylaxis
- ✓ People use the urgent care and ER because there are too few physicians and other providers
- ✓ Underinsurance (high deductibles and co pays)
- ✓ Untreated dental problems
- ✓ Vulnerable populations that are unable to manage their basic living needs let alone their basic health needs; they go hand in hand and if you can't manage one you can't conceivably manage the other

Source: SHP Key Informant Online Survey, 2017, Q2b: What additional health issues are prevalent in your community, if any? (n=22)

Weight Status

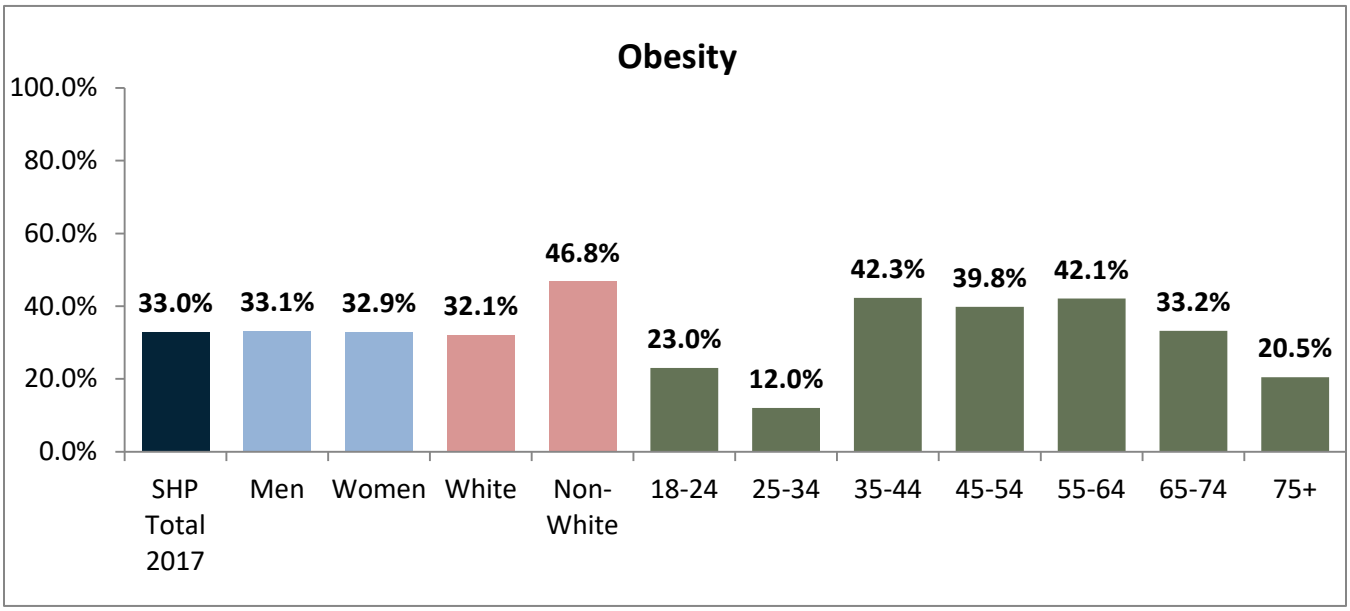
One-third (33.0%) of SHP area adults are obese per their BMI score, while an additional 36.3% are overweight; all told, 69.3% of area adults are either overweight or obese.

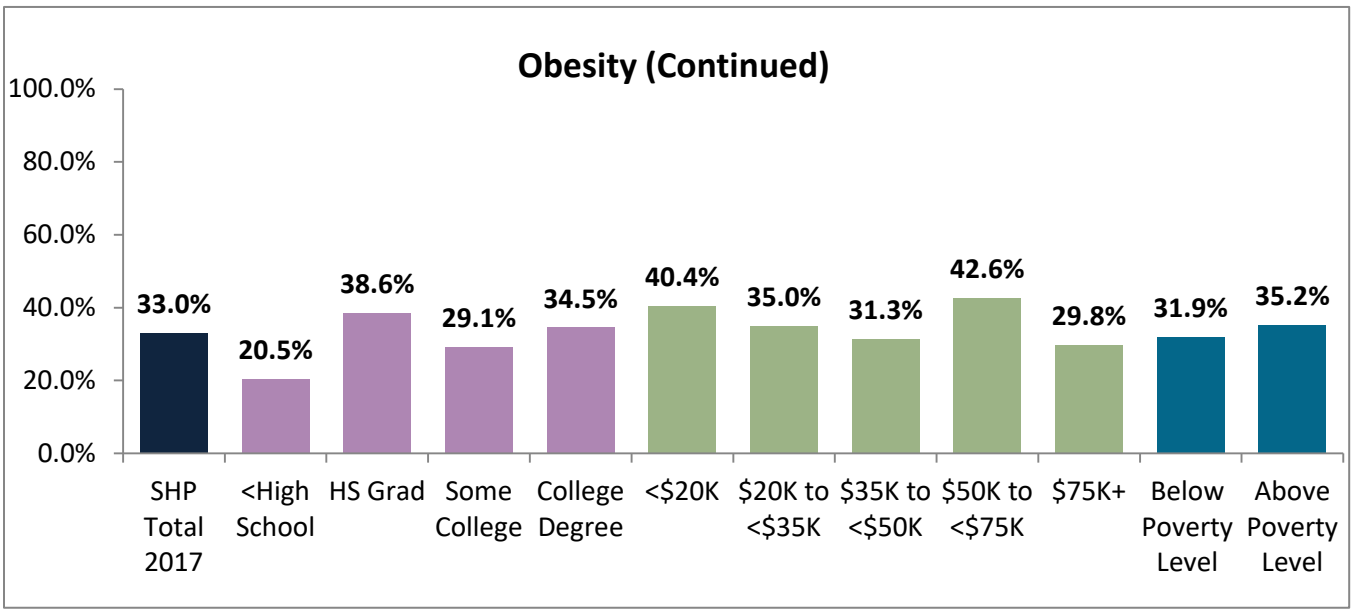


Source: SHP Behavioral Risk Factor Survey, 2017, Q12.9: About how much do you weigh without shoes? Q12.10: About how tall are you without shoes? (n=552)
Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)2]. Weight and height were self-reported. Pregnant women were excluded. Obese = the proportion of adults whose BMI was greater than or equal to 30.0; overweight = the proportion of adults whose BMI was greater than or equal to 25.0, but less than 30.0; healthy weight = the proportion of adults whose BMI was greater than or equal to 18.5, but less than 25.0; underweight = the proportion of adults whose BMI was less than 18.5.

Weight Status (Continued)

- Obesity is more common in adults between the ages of 35-64 than adults younger or older.
- Obesity is more common in non-White adults compared to White adults.

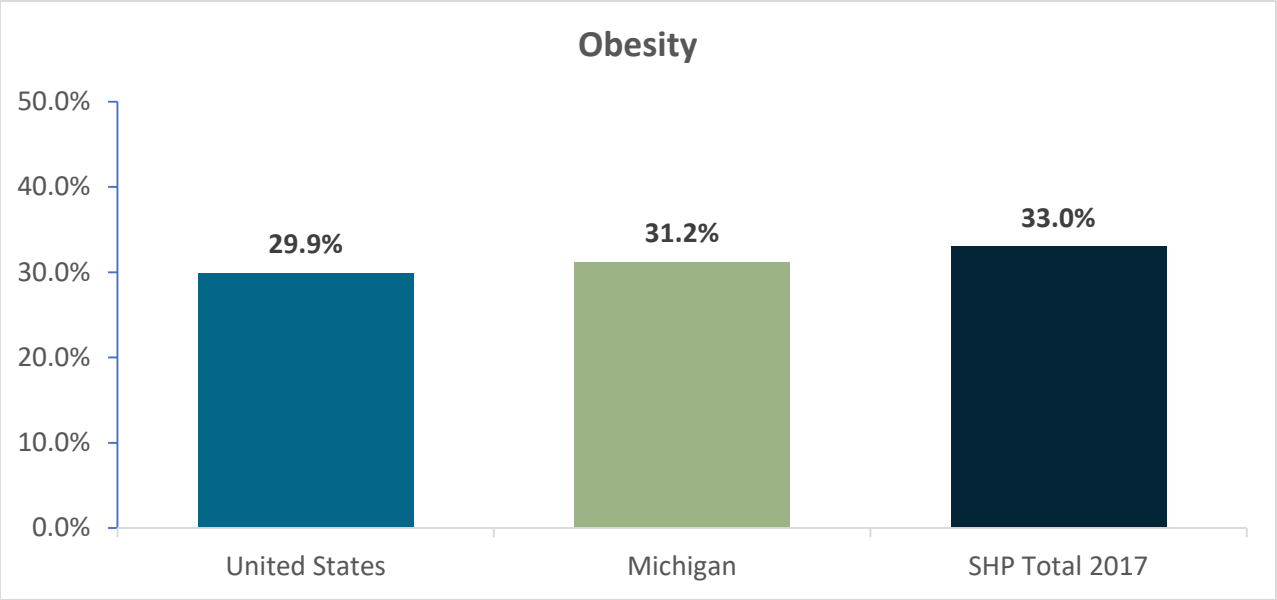




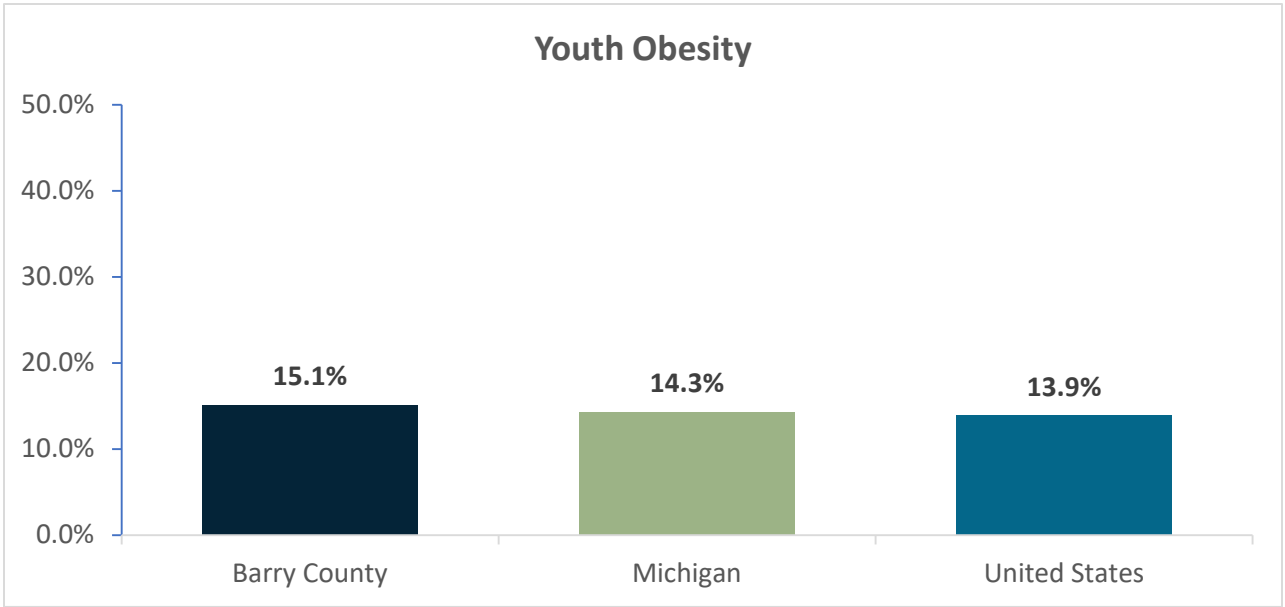
Source: SHP Behavioral Risk Factor Survey, 2017. (n=559)
Note: the proportion of adults whose BMI was greater than or equal to 30.0.

Weight Status (Continued)

- The proportion of obese adults and youth in the SHP area are greater than the proportions across Michigan or the U.S.



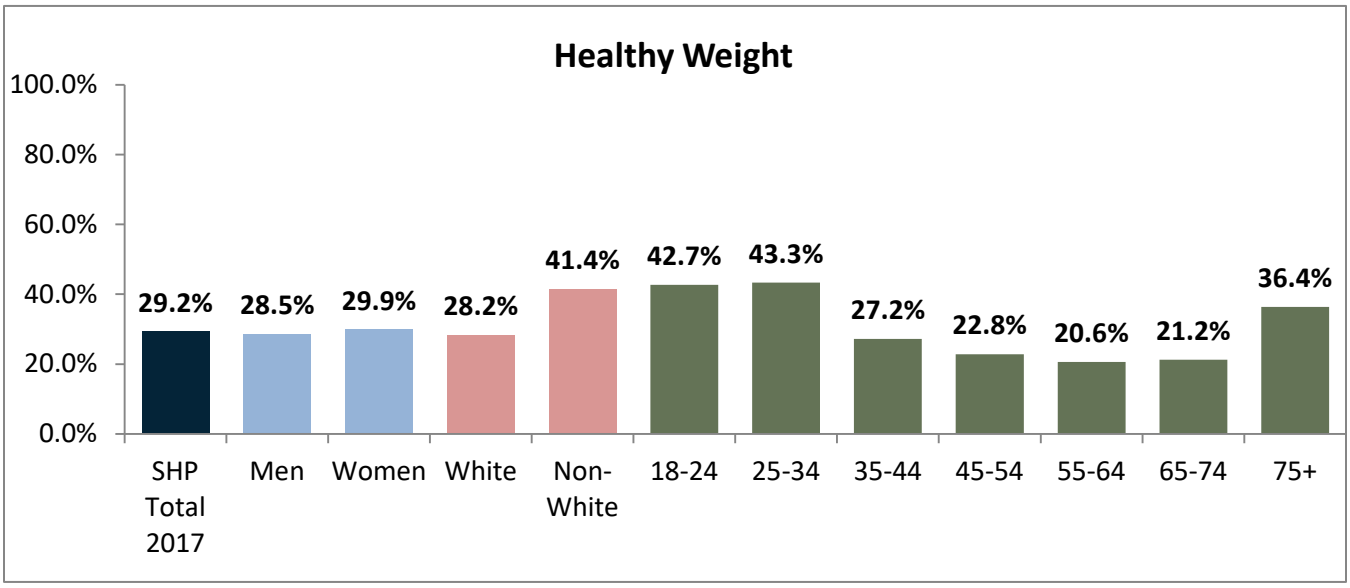
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.Note: the proportion of adults whose BMI was greater than or equal to 30.0.

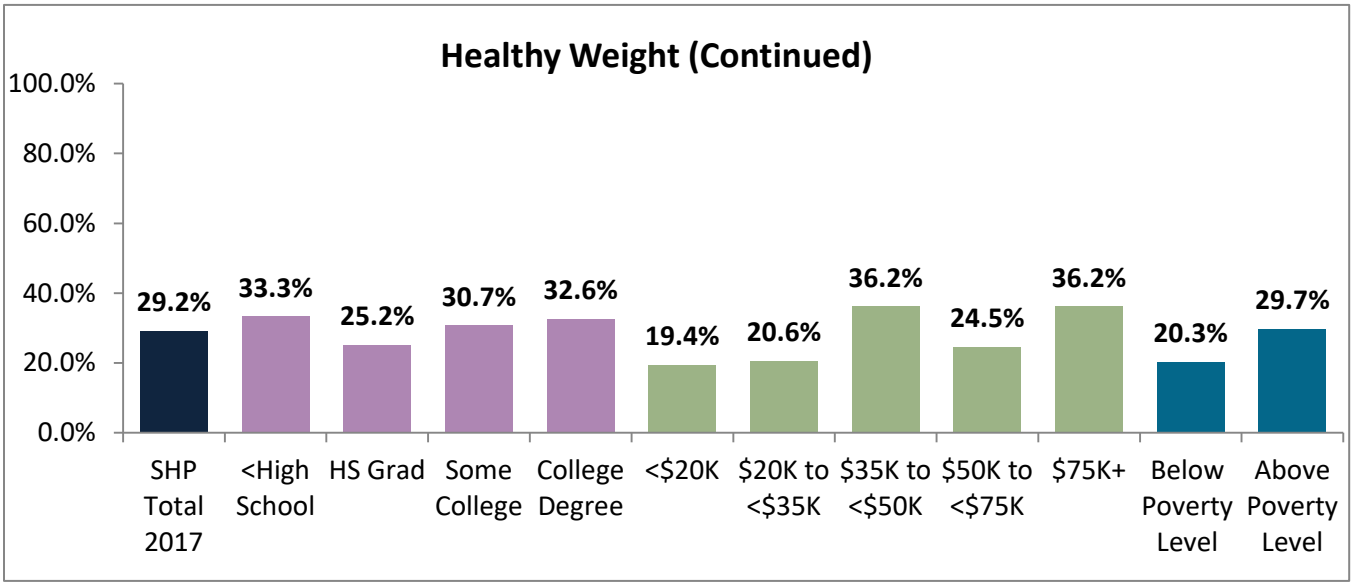


Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Weight Status (Continued)

- Almost three in ten (29.2%) area adults are at a healthy weight per their BMI.
- More non-White adults are at a healthy weight compared to White adults, and the youngest (18-34) and oldest (75+) adults are more often at a healthy weight compared to adults aged 35-74.





Source: SHP Behavioral Risk Factor Survey, 2017, (n=559).
Note: the proportion of adults whose BMI was greater than or equal to 18.5, but less than 25.0.

Weight Status (Continued)

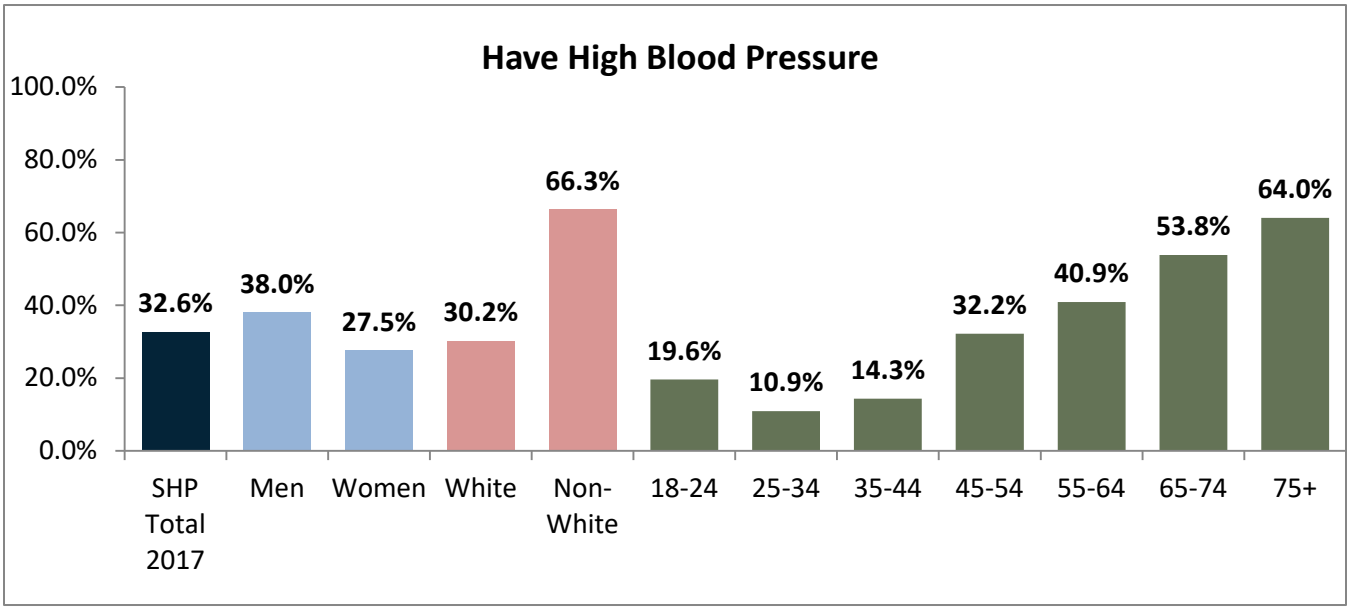
- Key Stakeholders and Key Informants consider obesity to be one of the most pressing or concerning health issues in the SHP area, not only because it's highly prevalent, but more importantly: (1) it is partly a by-product of the environment because of lack of affordable healthy food, poverty, and lack of education, (2) it is highly prevalent in both adults and youth, (3) it's often comorbid with other conditions, or negative outcomes, such as diabetes, heart disease, high blood pressure, and sleep apnea, and (4) it is also a partly a by-product of lifestyles choices (e.g., diet, exercise).

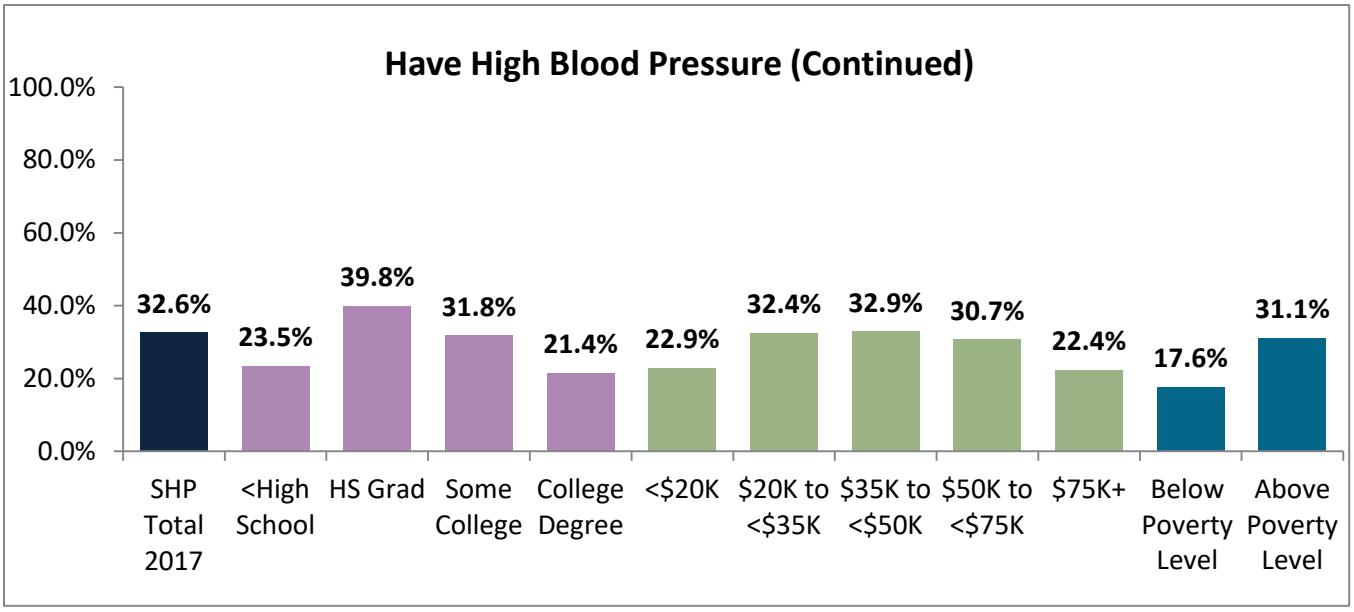
Product of environment	**Socioeconomic** is the cause; **no money**, **little education**, **obesity**, and **poor parenting**. – *Key Informant* I think this is a **cultural issue**, but also an **education issue**. **People make poor food choices** but **may not realize it**. It is also an **economic issue**. **Healthy food is more expensive**. – *Key Informant* **Socioeconomics**, **education**. – *Key Informant*
Prevalence (adult and youth)	I see **so many young children with visible weight issues** that will **translate** to **chronic health issues for their whole lives**. – *Key Informant* **Obesity** and diabetes issues seem to be **increasing**. – *Key Stakeholder*
Comorbidity	**Hypertension**, **diabetes**, **hyperlipidemia**, **heart disease**, **sleep apnea**, **atrial fibrillation**. – *Key Informant* **Large number of diabetics**, **obesity**. – *Key Informant*
Lifestyle choices	**Lifestyle** in general, **education on food portions** and **choices**. – *Key Stakeholder* We see many **children don't participate in school or recreational functions**, and there is a **need for professionals to educate parents and children about making healthy choices**. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in your community? (n=5); SHP Key Informant Online Survey, 2107, Q1/Q1a: To begin, what are one or two most pressing health issues or concerns in your community? Why do you think it is a problem in the community? Please be as detailed as possible. (n=49).

Hypertension

- One-third (32.6%) of area adults have high blood pressure, and not surprisingly, it is more prevalent with age.
- It is also more common in men than women and more common in non-White adults than White adults.

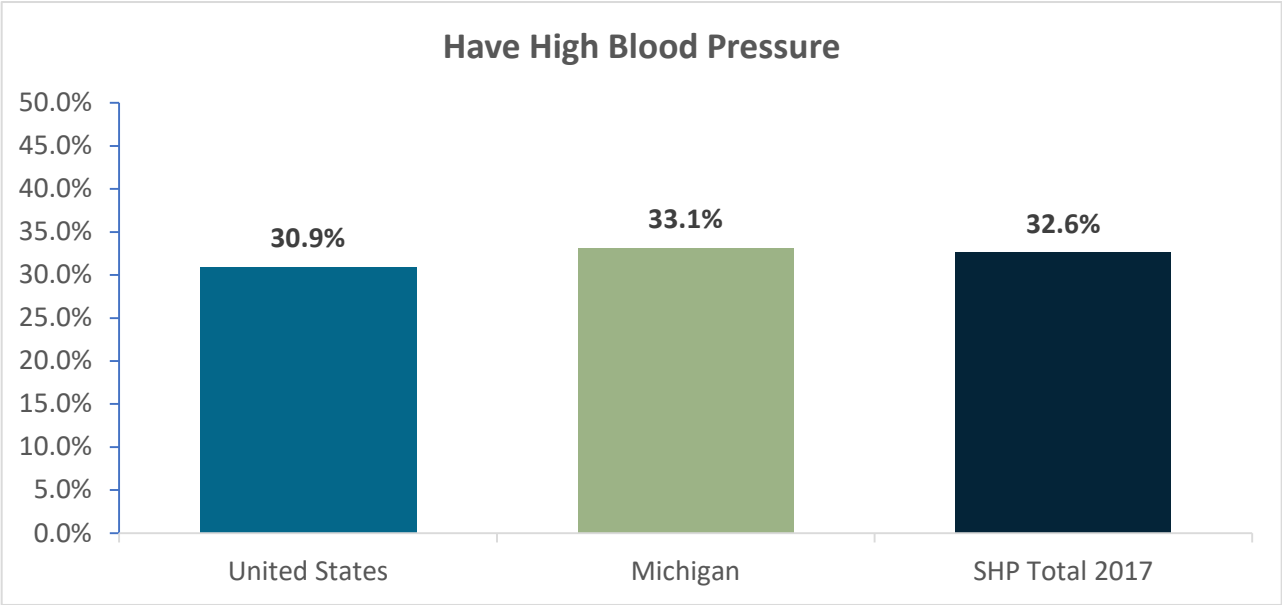




Source: SHP Behavioral Risk Factor Survey, 2017, Q6.1: Have you EVER been told by a doctor, nurse, or other health professional that you have high blood pressure? (n=592).
Note: adults who reported they were told by a health care professional that they had high blood pressure. Does not include women who were told they had high blood pressure only during pregnancy.

Hypertension (Continued)

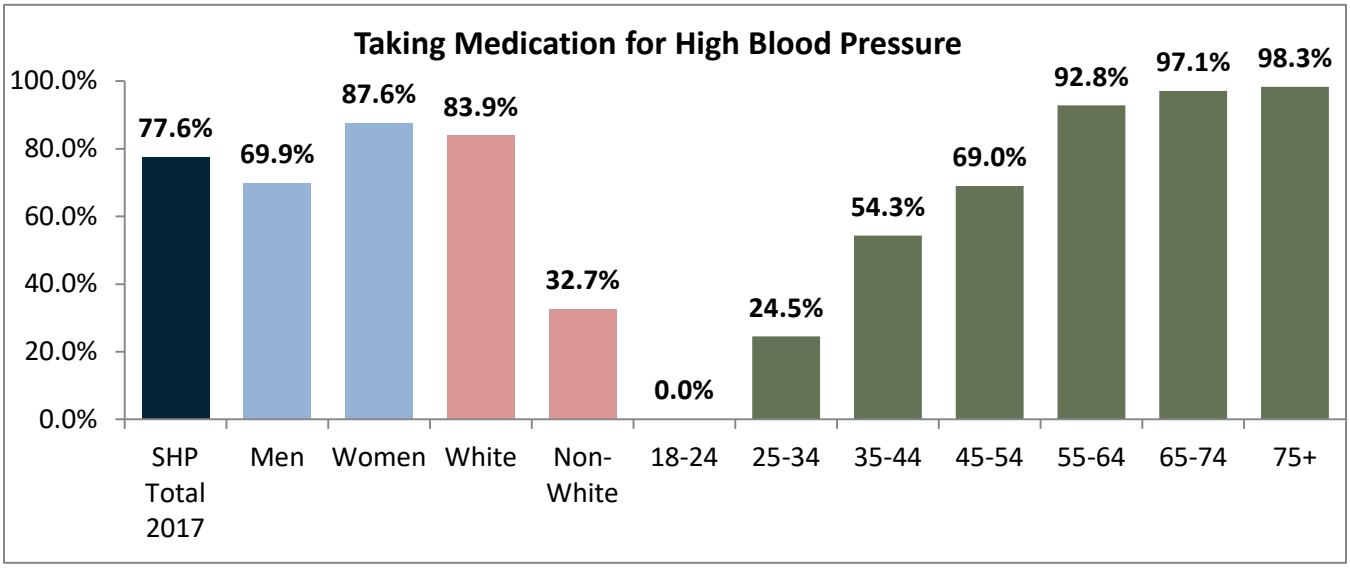
- The proportion of adults with high blood pressure in the SHP area is lower than the state proportion but higher than the national proportion.

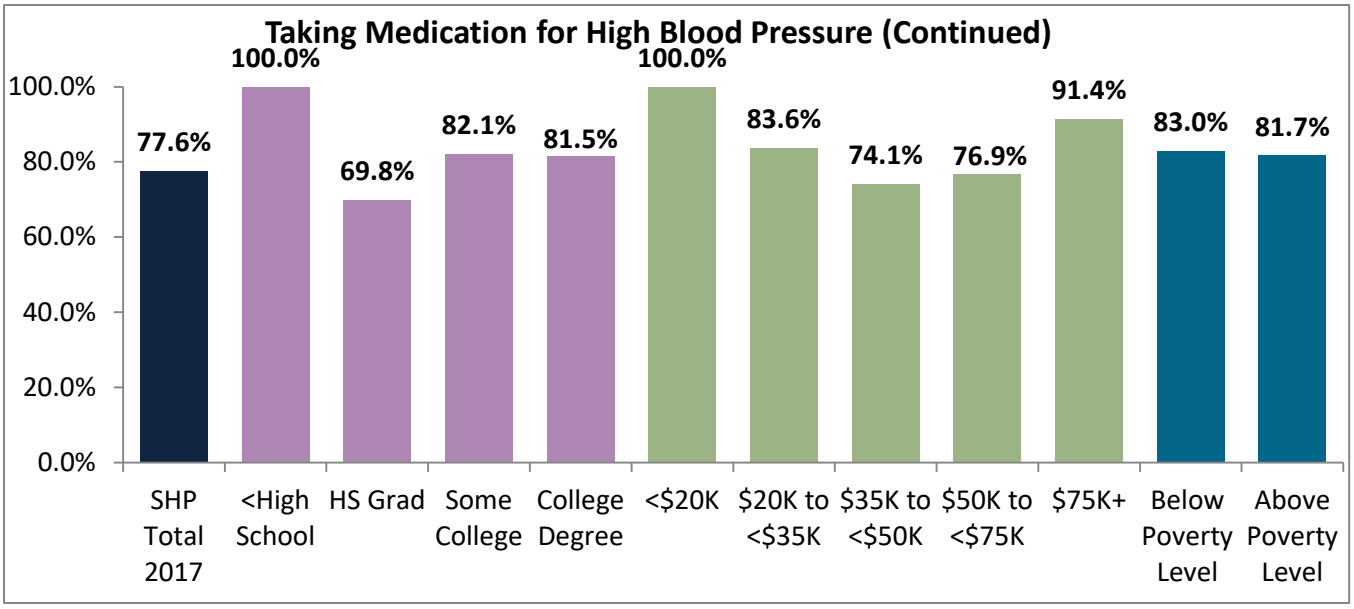


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.

Hypertension (Continued)

- Among area adults who have high blood pressure, more than three-fourths (77.6%) are taking medication for their condition.
- Those adults least likely to take medication for the HBP comes from groups that are men, non-White, and under age 45.

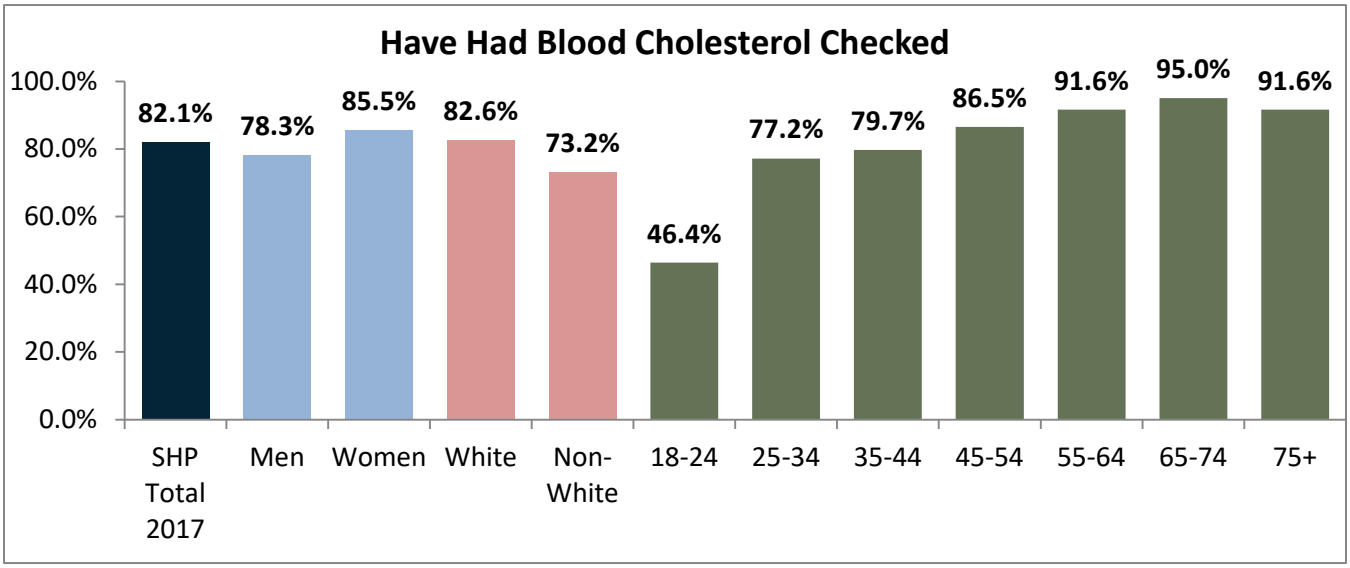


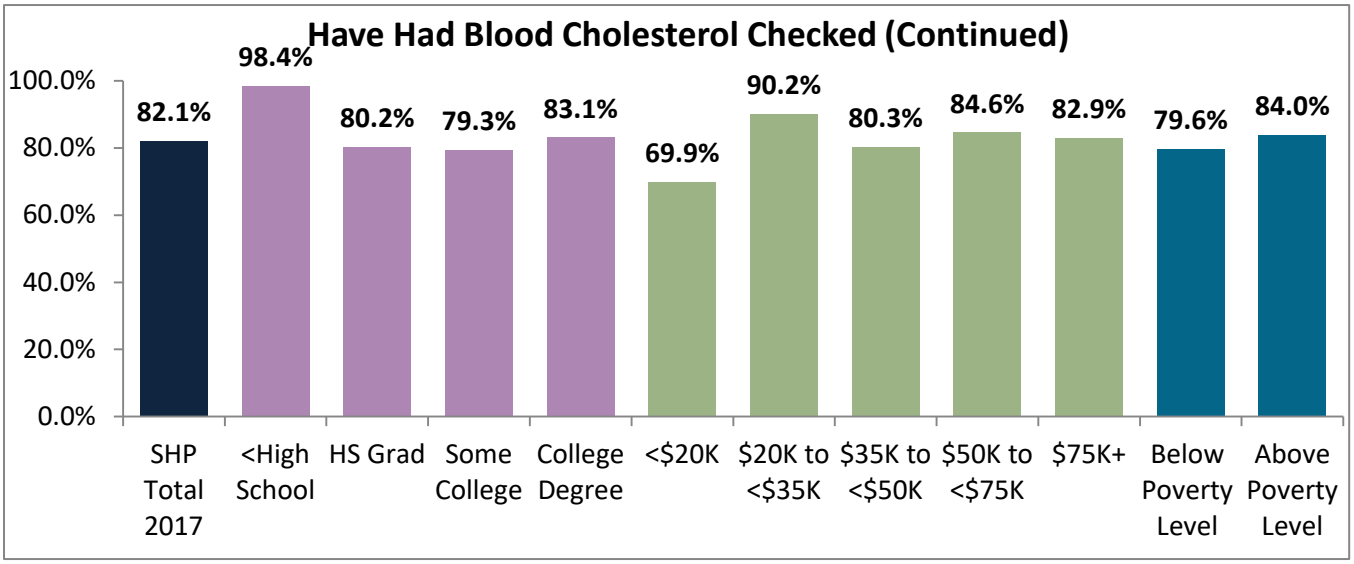


Source: SHP Behavioral Risk Factor Survey, 2017, Q6.2: Are you currently taking medicine for your high blood pressure? (n=247).
Note: adults who reported they were told by a health care professional that they had high blood pressure.

Cholesterol

- Eight in ten (82.1%) SHP area adults have had their cholesterol checked and the likelihood of this preventive practice occurring is directly related to age.
- White adults and women are more likely to have had their cholesterol checked than non-White adults and men, respectively.

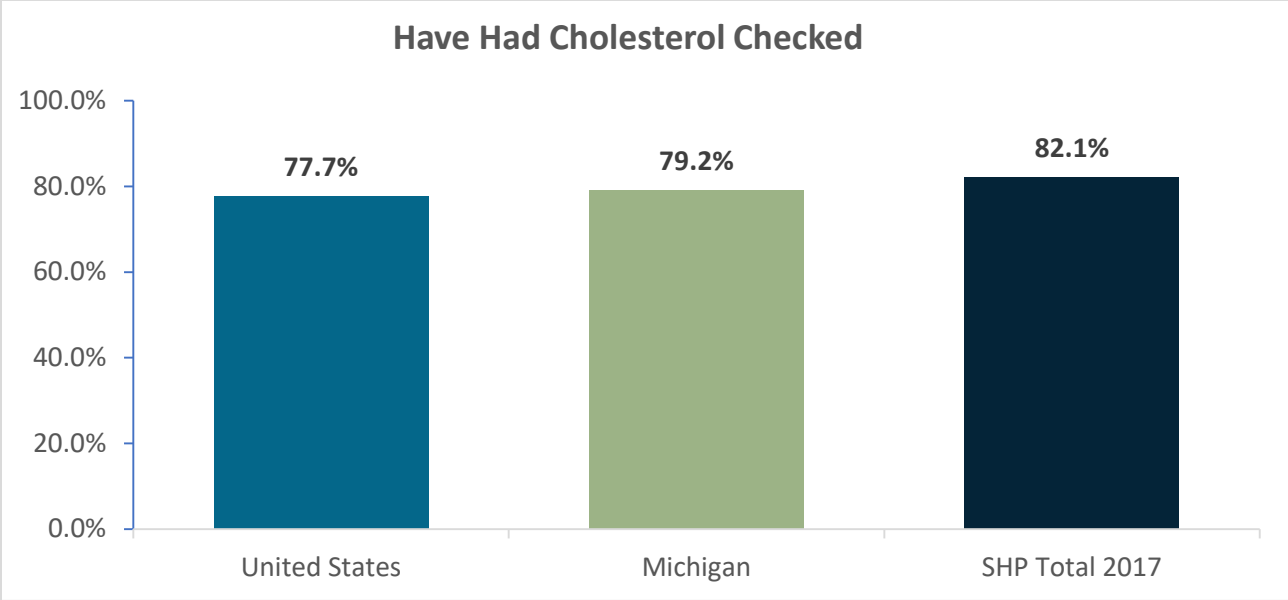




Source: SHP Behavioral Risk Factor Survey, 2017, Q7.1: Blood cholesterol is a fatty substance found in the blood. Have you EVER had your blood cholesterol checked? (n=586).

Cholesterol (Continued)

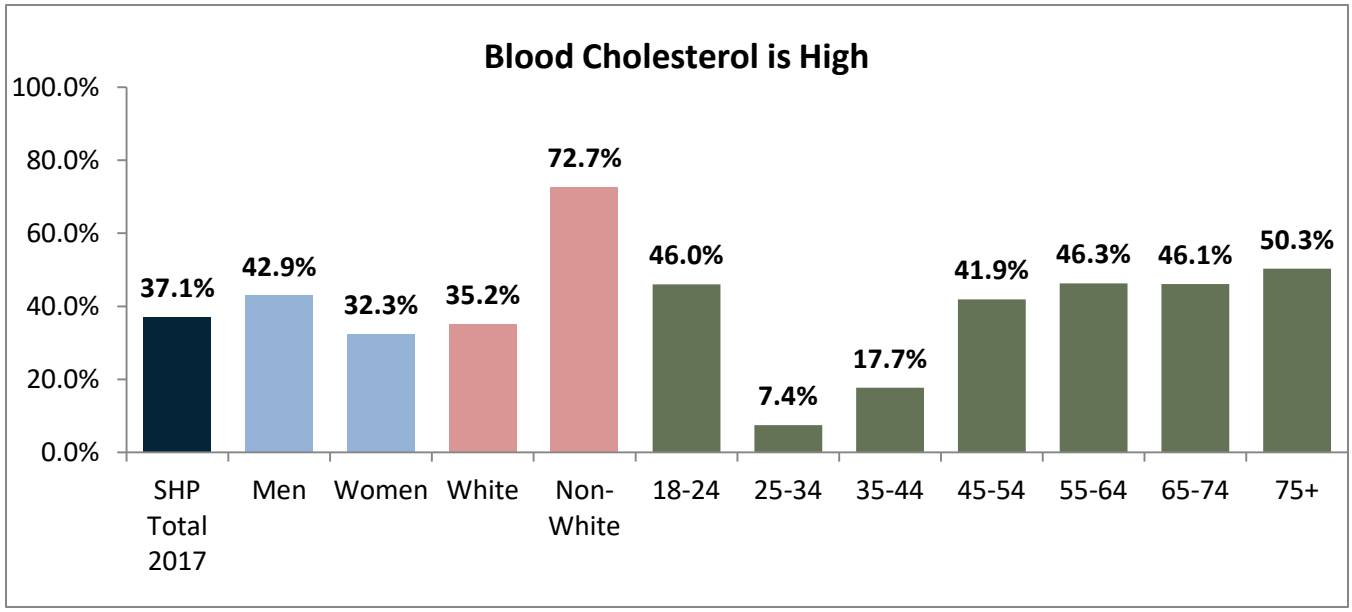
More SHP area adults have had their cholesterol checked compared to adults across the state or the nation.

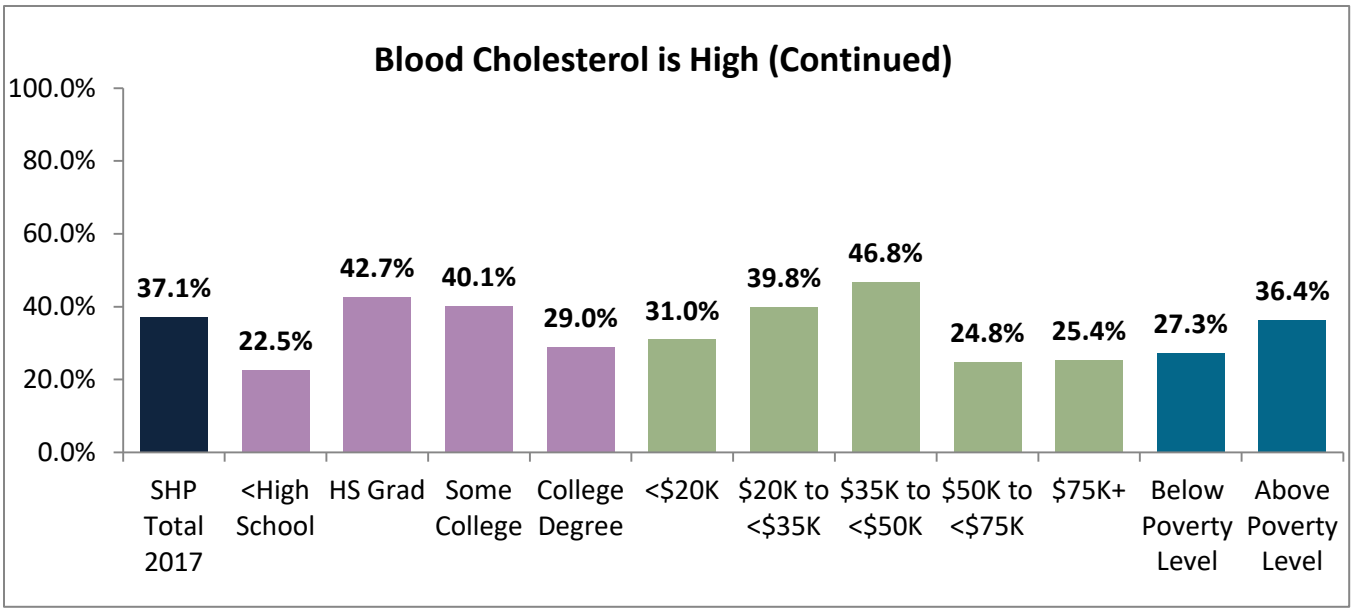


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.

Cholesterol (Continued)

- More than one-third (37.1%) of SHP area adults who have had their cholesterol checked have been told their blood cholesterol is high.
- Non-White adults and men are more likely to have high blood cholesterol than White adults and women, respectively.

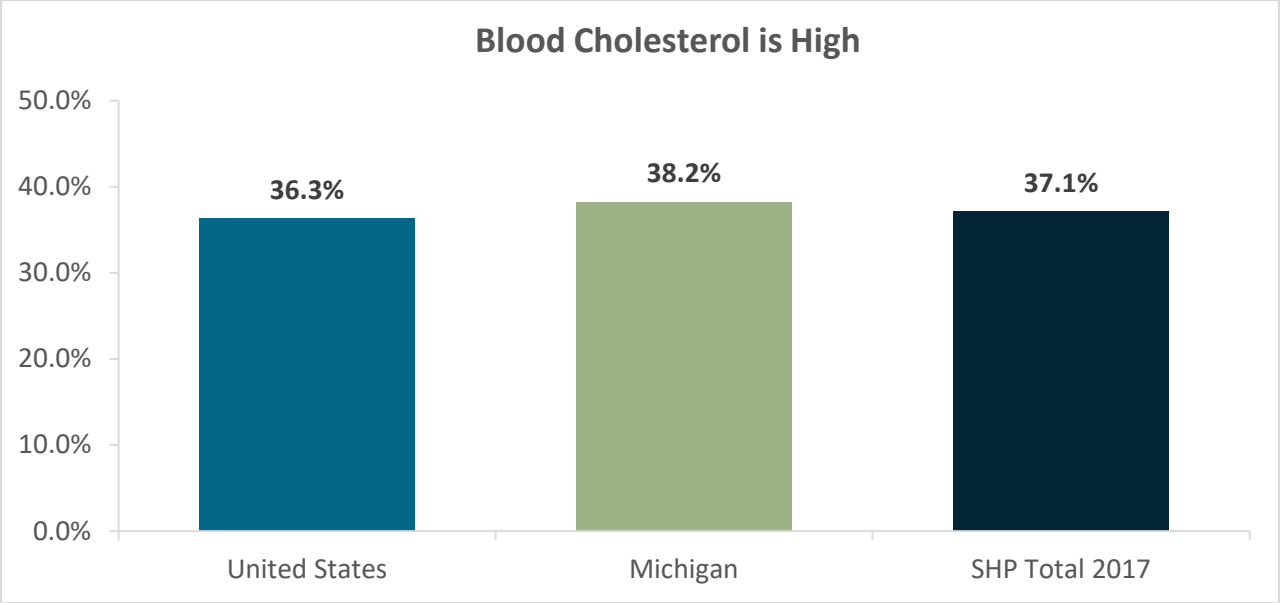




Source: SHP Behavioral Risk Factor Survey, 2017, Q7.2: Have you EVER been told by a doctor, nurse or other health professional that your blood cholesterol is high? (n=503).
Note: adults who reported they have had their blood cholesterol checked.

Cholesterol (Continued)

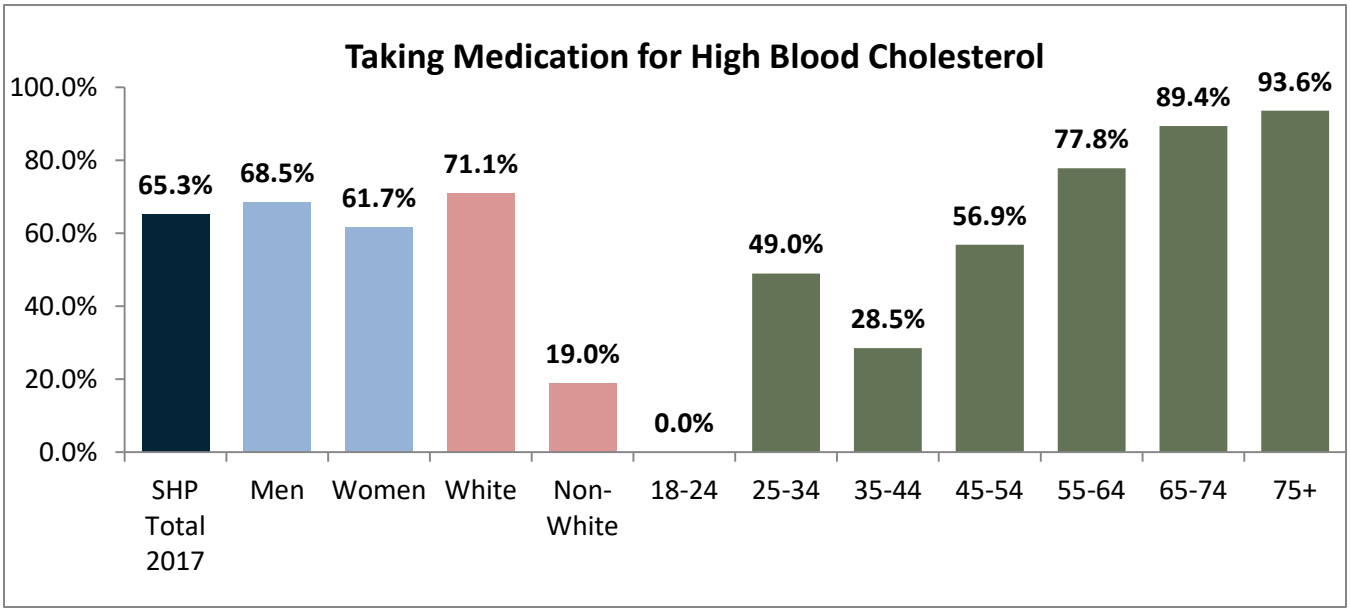
The prevalence of high cholesterol among SHP area adults is on par with the state or national prevalence.

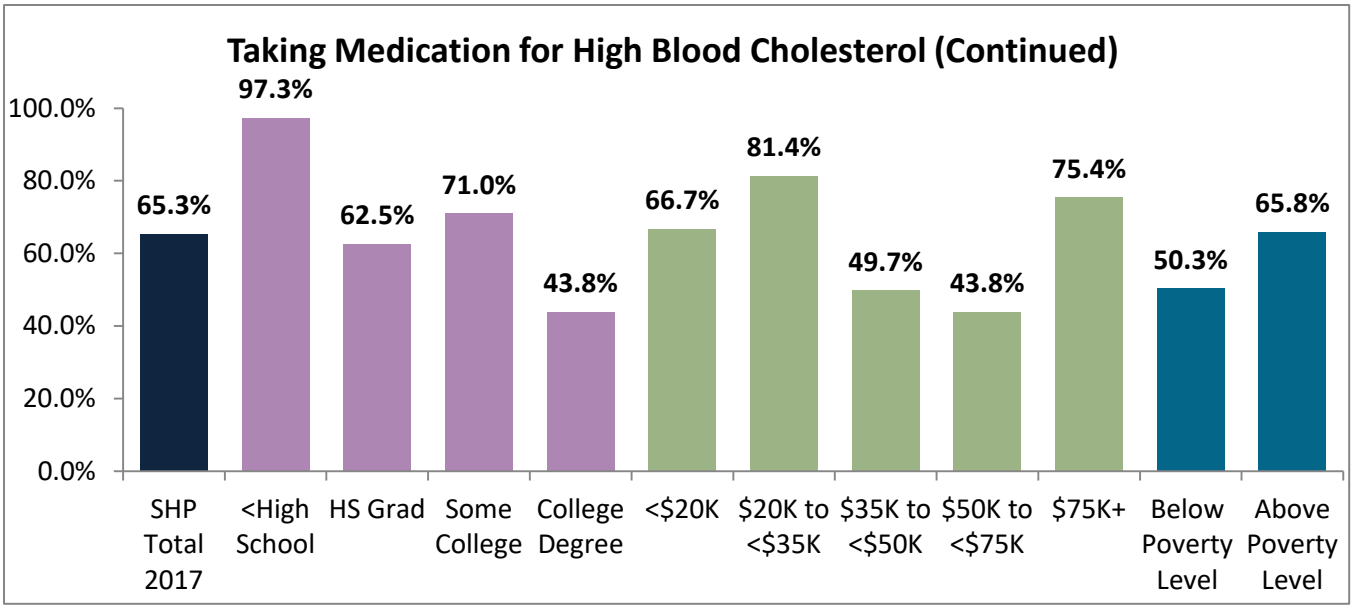


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.

Cholesterol (Continued)

- Almost two-thirds (65.3%) of area adults who have high cholesterol currently take medication for it.
- Non-White adults are far less likely to take cholesterol medication compared to White adults.
- The chances of adults taking medication for high cholesterol increases for those age 55 or older.





Source: SHP Behavioral Risk Factor Survey, 2017, Q7.3: Are you currently taking medicine for your high cholesterol? (n=201).
Note: adults who reported they have high blood cholesterol.

Mental Health

Key Stakeholders and Key Informants offer numerous reasons why mental/behavioral health is one of their top concerns, but three main themes rise to the top. First, there is a lack of resources to deal with the problem (e.g., lack of programs, lack of psychiatrists). Second, social factors, such as poverty and lack of economic resources place stress and strain on some individuals which leads to illness and/or negative oucomes. Third, there is stigma attached to having mental illness (and substance abuse issues) which would prevent many from seeking needed care.

Lack of resources	**No resources available for quick appointments**, **immediate hospitalization**, **suicide prevention**, **drug crisis**. **Community health does not care for people commercially insured**. – *Key Informant* There are many people who could benefit from mental health services: counseling, appointments with psychiatry, or inpatient hospitalization. **Many of these services are either not available in the area**, **do not have enough providers**, or **do not take certain insurances**. – *Key Informant* We have had so many **challenges in our ED**, like having to **hold patients** and **not being able to place youth**. I hear from providers with regularity that we have those challenges. I don't know if that's really the poor, but we do **end up having persons who don't have economic resources**. We **struggle trying to get them the help they need for behavioral health issues**. – *Key Stakeholder* I feel that there may **not** be **enough community-based resources** and consequently **patients have to be sent out of county**. There also **does not seem to be a great concern by staff that manage mental health** in the hospitals. – *Key Informant* There has been **only one part-time psychiatrist and other ancillary mental health staff to cover a large demand**. – *Key Informant*
Social factors	**Low income families with minimal resources** get **stressed** and **overburdened** and **do NOT know how to deal with this in their lives** - **leads to illness** and **unhealthy consequences**. – *Key Informant*
Stigma	There is a **stigma** attached to people who have **mental health** or **substance use disorders**; that it's a **choice they made** or that they could be helping themselves. – *Key Stakeholder*

Source: SHP Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in your community, especially the underserved? (n=6); SHP Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in your community? (n=49); Key Informant Online Survey, 2017, Q1a: Why do you think it's a problem in your community? Please be as detailed as possible. (n=15)

Mental Health (Continued)

- More than eight in ten (82.6%) area adults are considered to be mentally healthy, or psychologically well, according to the Kessler 6 Psychological Distress Questionnaire.*
- Conversely, 13.6% experience mild to moderate psychological distress and 3.8% are severely distressed.

	During the Past 30 Days, About How Often Did You….					
Frequency of Feeling	**Feel Nervous (n=592)**	**Feel Hopeless (n=593)**	**Feel Restless or Fidgety (n=592)**	**Feel So Depressed That Nothing Could Cheer You Up (n=593)**	**Feel That Everything Is an Effort (n=593)**	**Feel Worthless (n=593)**
None of the time	**54.3%**	**83.0%**	**57.2%**	**85.6%**	**66.9%**	**88.4%**
A Little	**25.7%**	**7.7%**	**21.4%**	**7.7%**	**16.3%**	**5.2%**
Some of the time	**14.3%**	**6.3%**	**13.9%**	**4.2%**	**9.5%**	**4.9%**
Most of the time	**3.0%**	**2.0%**	**3.8%**	**2.3%**	**4.1%**	**0.9%**
All of the time	**2.7%**	**1.0%**	**3.7%**	**0.2%**	**3.2%**	**0.7%**

Mentally Healthy/Psychologically Well = 82.6%

Mild to Moderate Psychological Distress = 13.6%

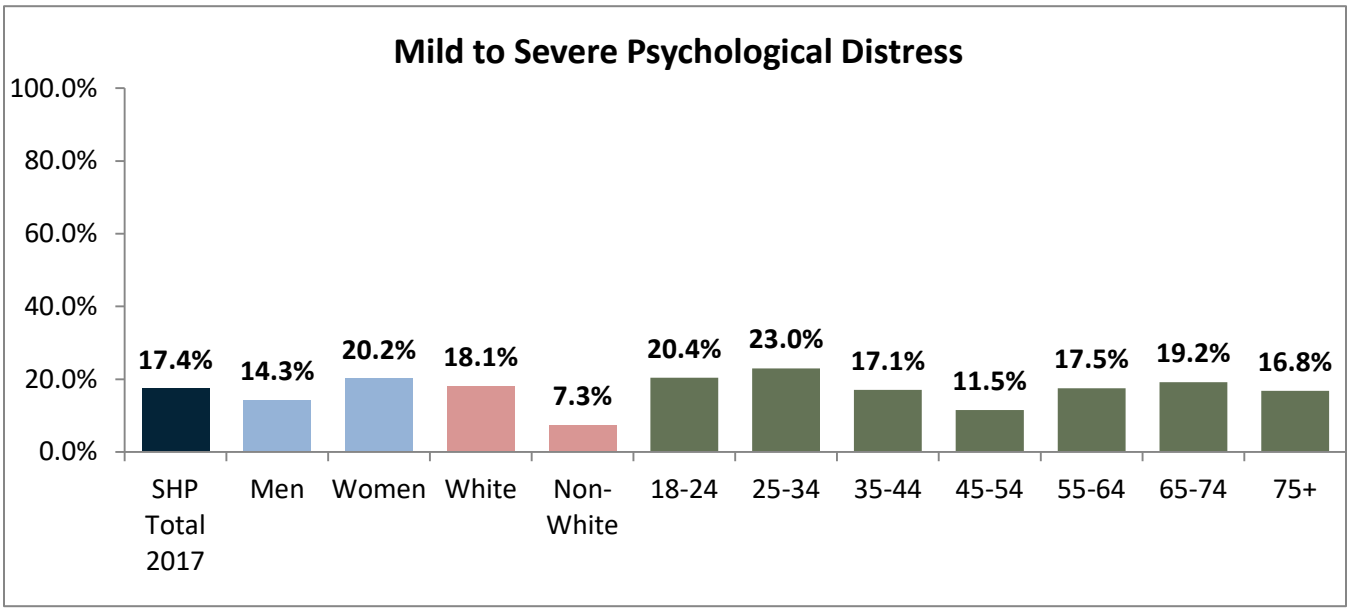
Severe Psychological Distress = 3.8%

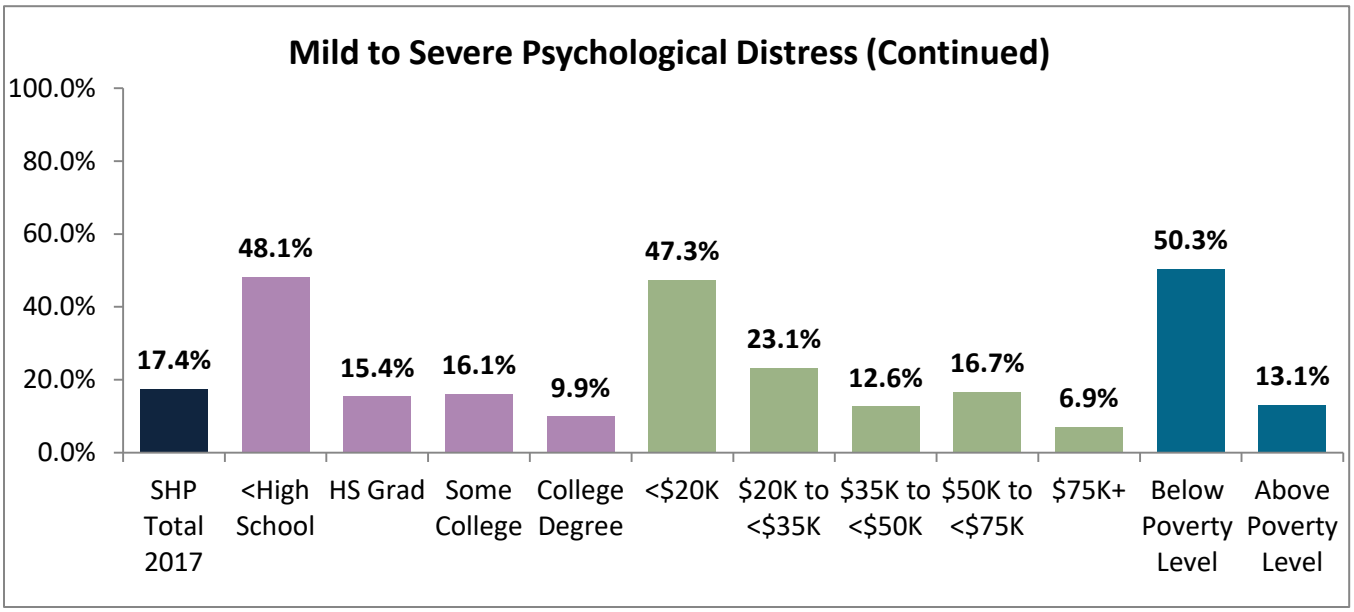
Source: SHP Behavioral Risk Factor Survey, 2017, Q18.1-Q18.6: During the past 30 days, about how often did you feel….? (n=591).
Note: *Calculated from responses to Q. 18.1- 18.6, where none of the time = 1, a little = 2, some of the time = 3, most of the time = 4, and all of the time = 5. Responses were summed across all six questions with total scores representing the above categories: mentally well (6-11), mild to moderate psychological distress (12-19), and severe psychological distress (20+).

Mental Health (Continued)

- Among SHP area adults, the groups most likely to have mild to severe psychological distress include those who: are youngest (< age 35), have less than a high school diploma, and have household incomes less than $20K.

- With regard to the educational disparity, 48.1% of those with no high school diploma have mild to severe psychological distress compared to 9.9% for those with a college degree.

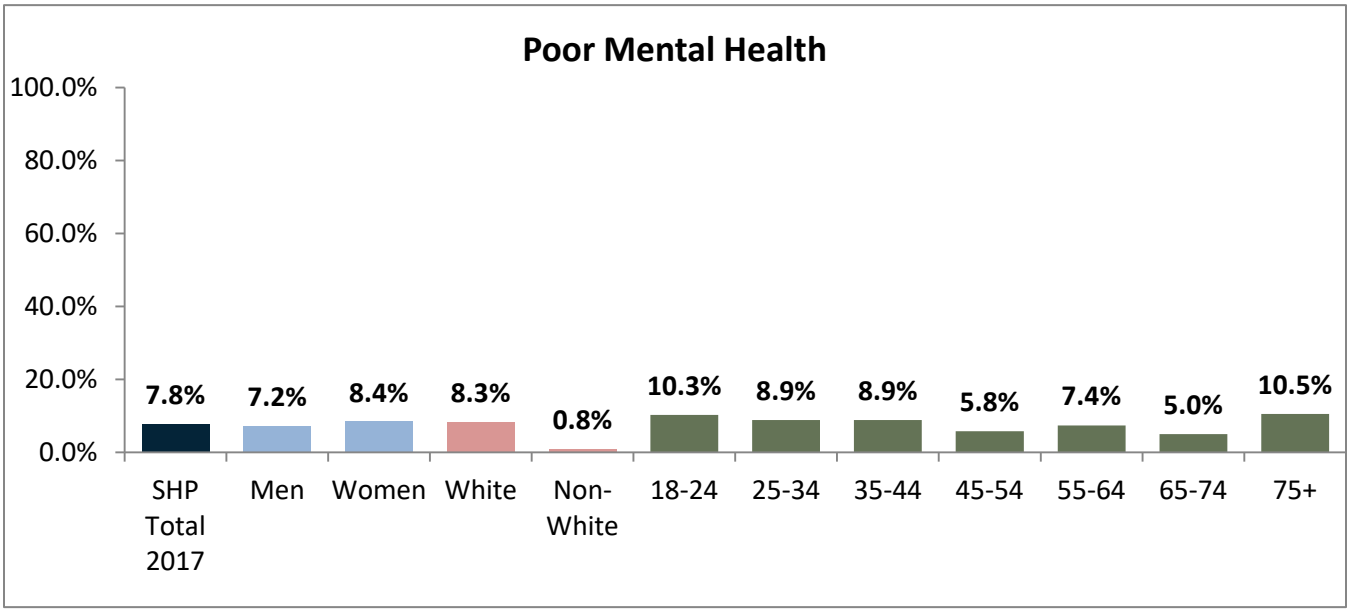


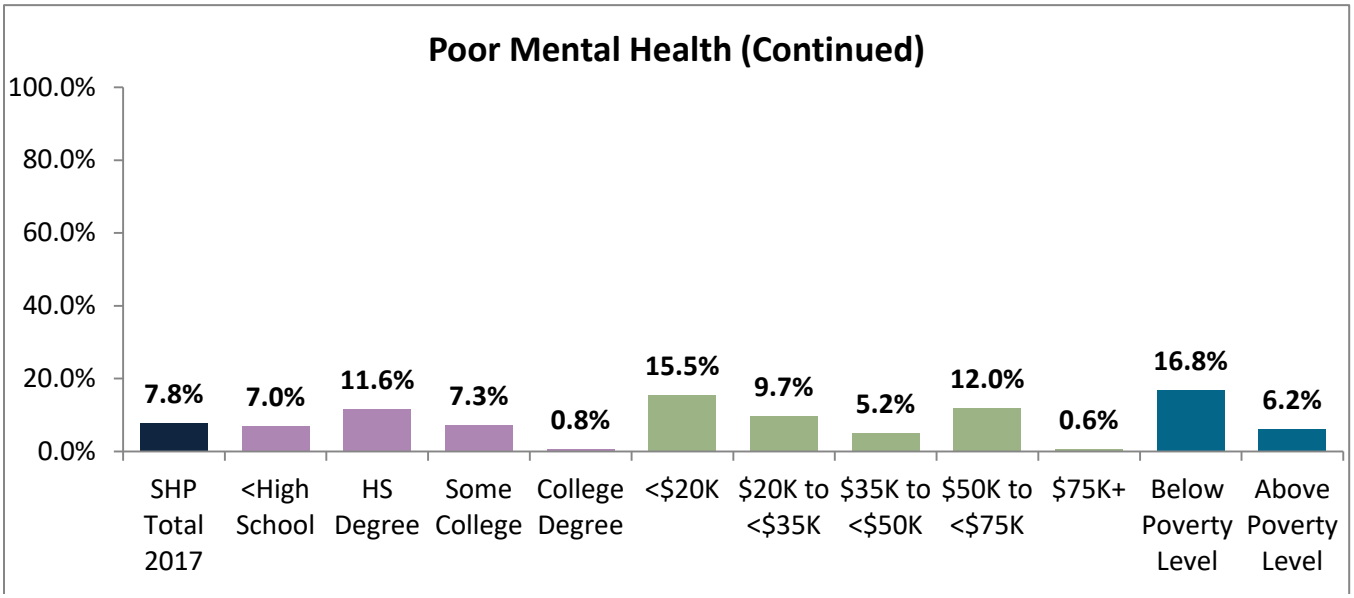


Source: SHP Behavioral Risk Factor Survey, 2017, Q18.1-Q18.6: During the past 30 days, about how often did you feel….?
Note: those adults who scored 12 or higher on the Kessler 6 instrument.

Mental Health (Continued)

- Among SHP area adults, 7.8% have poor mental health, which means they experienced fourteen or more days in which their mental health was not good, which includes stress, depression, and problems with emotions, during the past 30 days.
- The prevalence of poor mental health is highest among adults in the lowest income group (less than $20K, below the poverty line).
- It is also more prevalent among White adults compared to non-White adults.

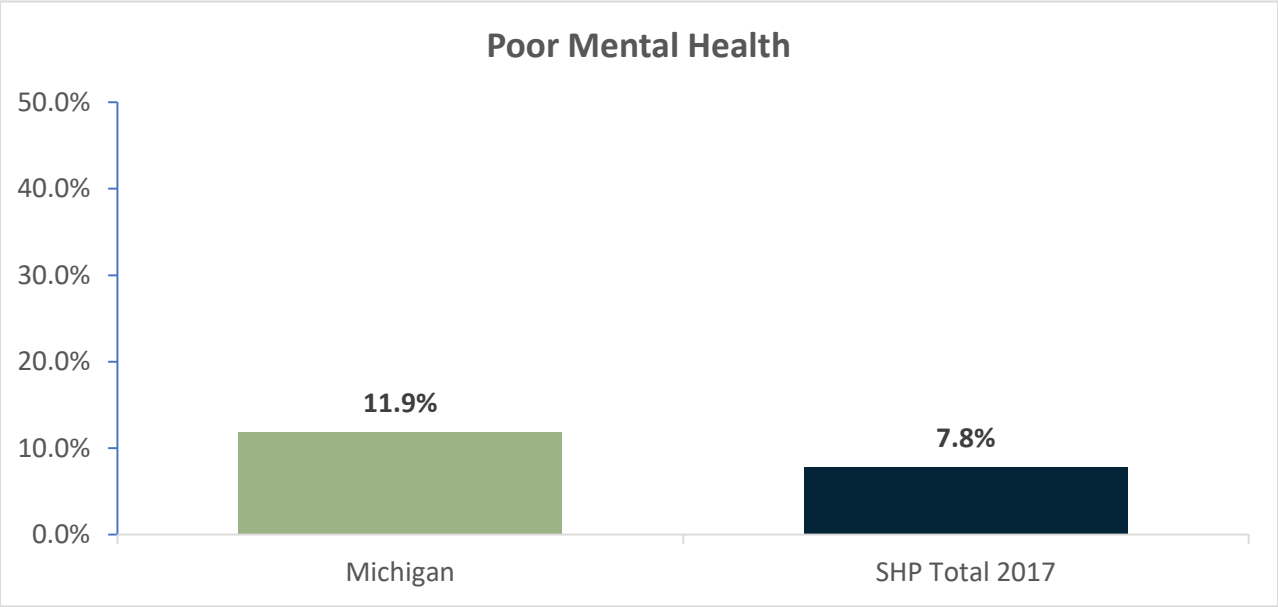




Source: SHP Behavioral Risk Factor Survey, 2017, Q2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good? (n=592).
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their mental health was not good, which includes stress, depression, and problems with emotions.

Mental Health (Continued)

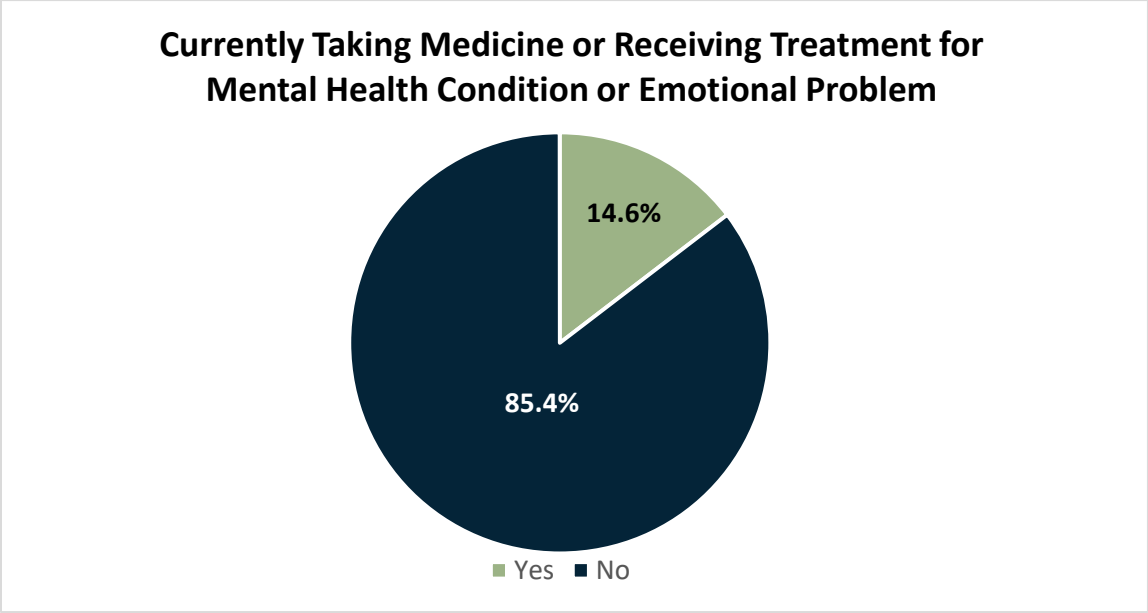
The prevalence of poor mental health among SHP area adults is lower than the state's prevalence rate.

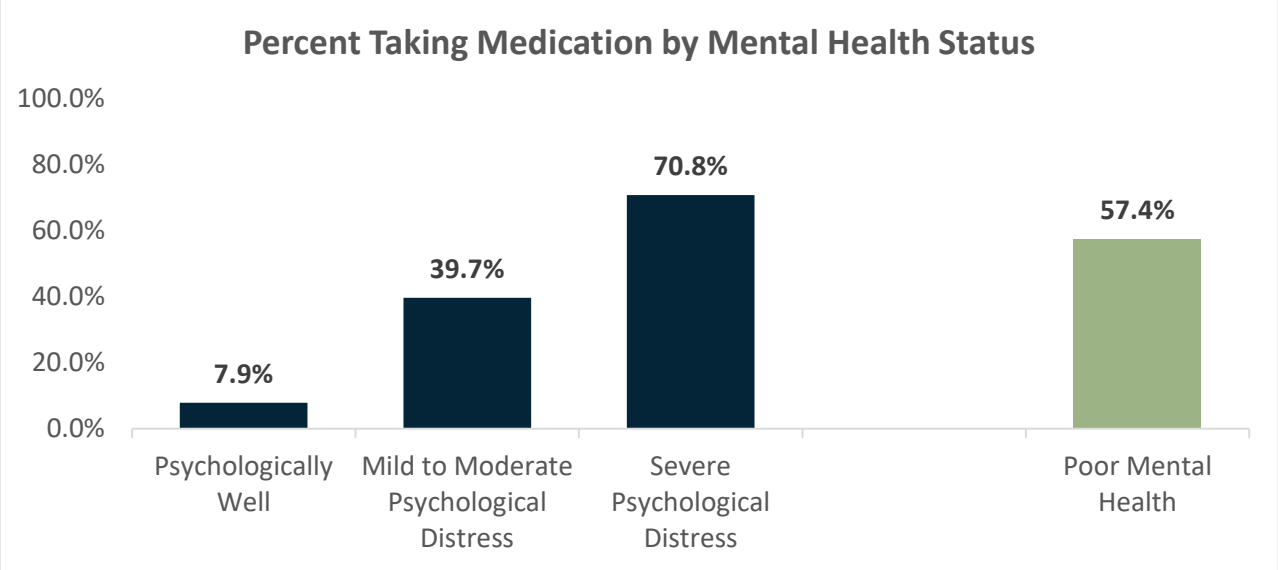


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.

Mental Health (Continued)

- Of all SHP area adults, 14.6% currently take medication or receive treatment for a mental health condition or emotional problem.
- However, many of those who could benefit the most from medication/treatment are not getting it: roughly four in ten of those classified as having "mild to moderate psychological distress" (39.7%), more than half reporting poor mental health (57.4%), as well as 70.8% of those classified as having "severe psychological distress," currently take medication and/or receive treatment for their mental health issues.

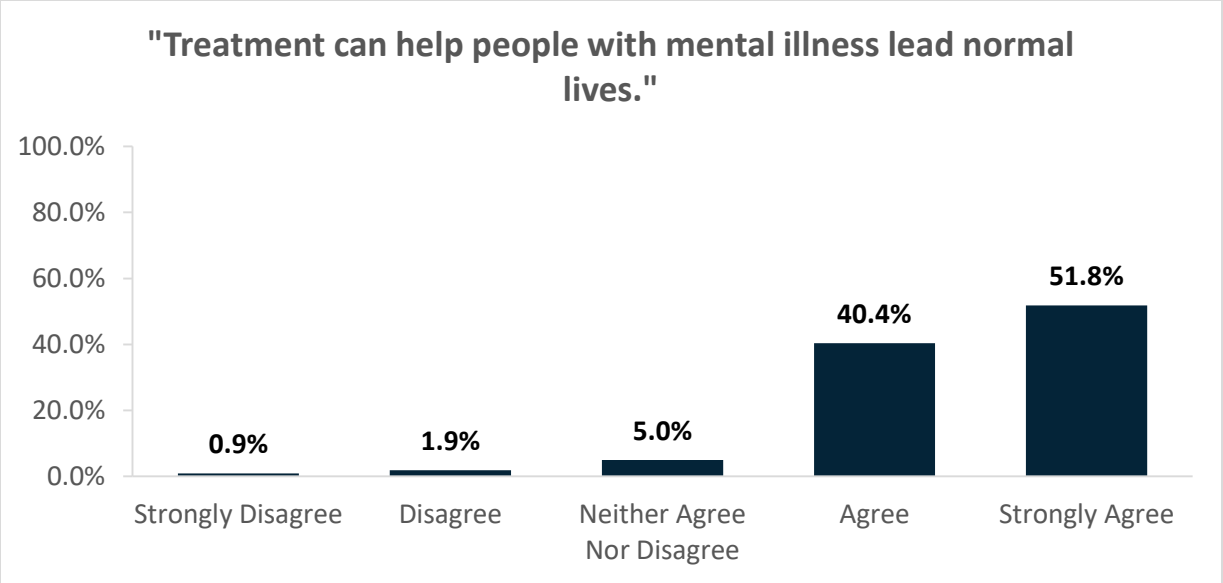


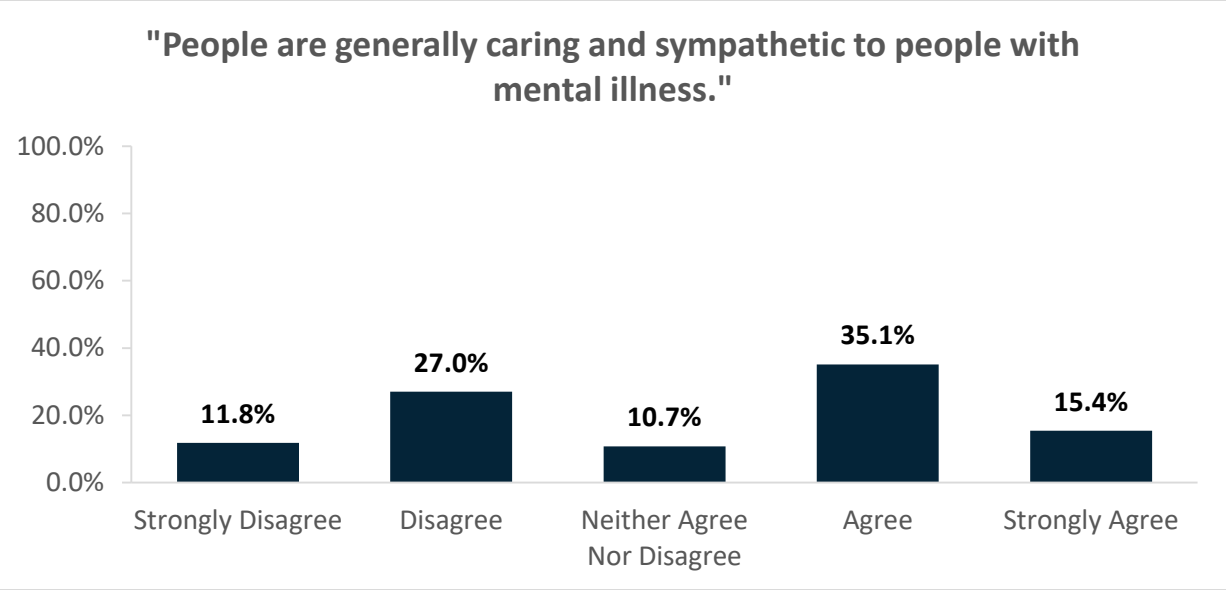


Source: SHP Behavioral Risk Factor Survey, 2017, Q18.7: Are you now taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problem? (n=590).

Mental Health (Continued)

- Even though more than nine in ten (92.2%) area adults believe treatment can help people with mental illness lead normal lives, just half (50.5%) think people are generally caring and sympathetic to people with mental illness.
- This continued stigma could be the reason that more people don't seek treatment even though they could benefit from it.

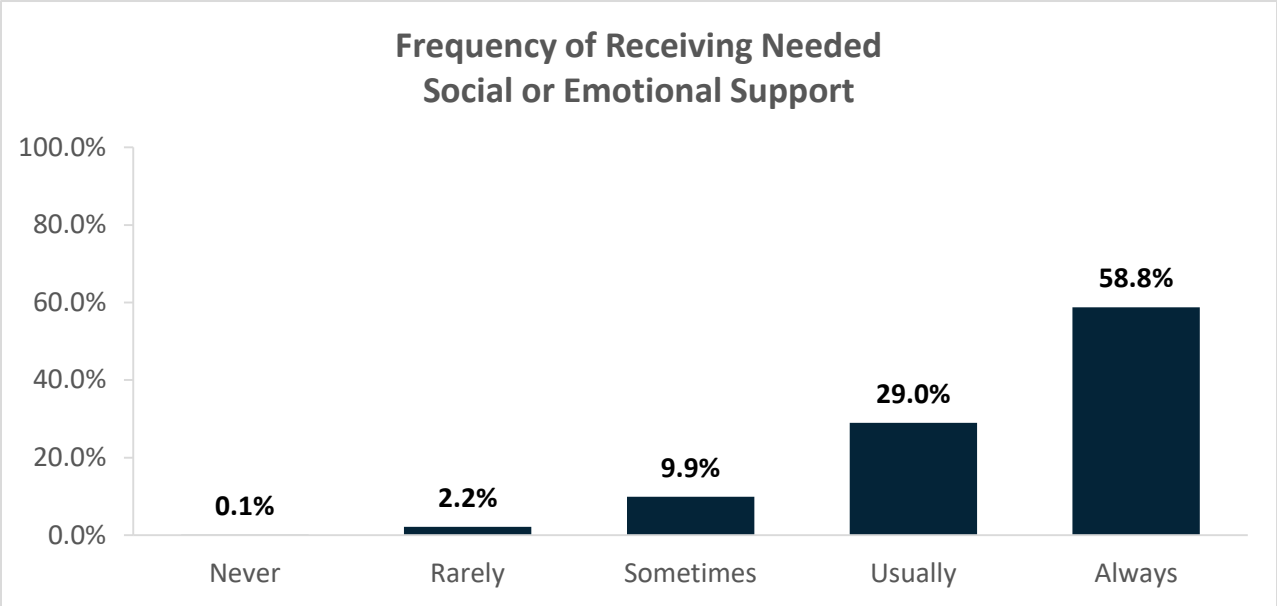




Source: SHP Behavioral Risk Factor Survey, 2017, Q18.8: What is your level of agreement with the following statement? "Treatment can help people with mental illness lead normal lives." Do you – agree slightly or strongly, or disagree slightly or strongly? (n=582); Q18:9: What is your level of agreement with the following statement? "People are generally caring and sympathetic to people with mental illness." Do you – agree slightly or strongly, or disagree slightly or strongly? (n=576)

Mental Health (Continued)

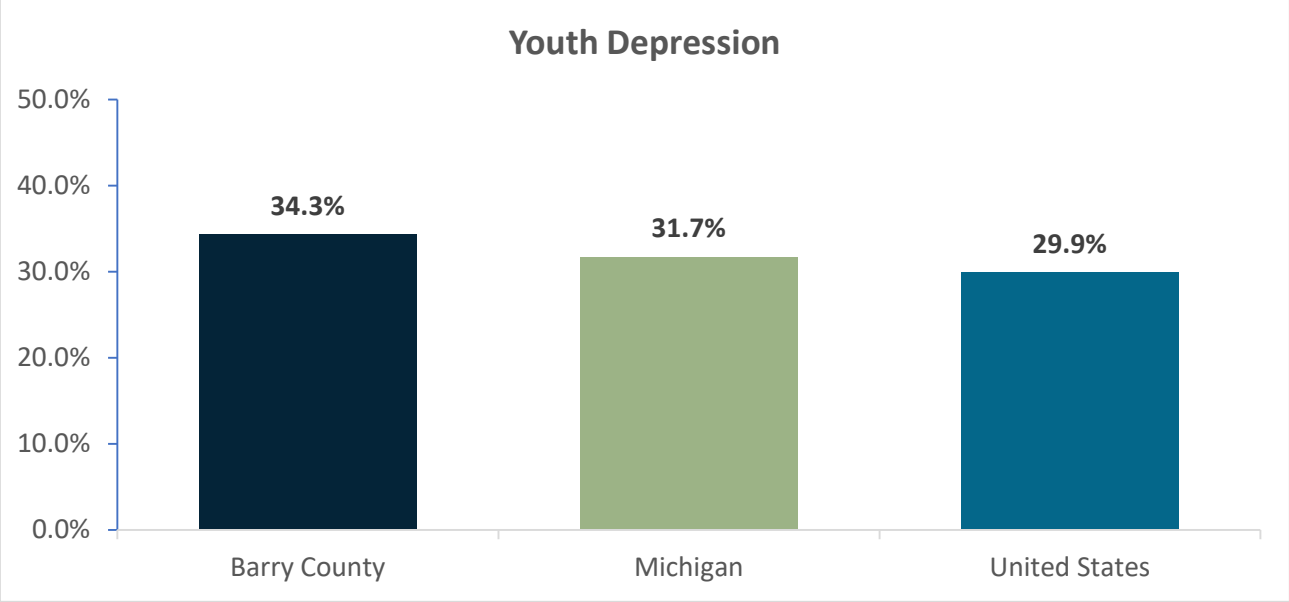
- The vast majority (87.8%) of area adults “usually” or “always” receive the social or emotional support that they need.



Source: SHP Behavioral Risk Factor Survey, 2017, Q18.10: How often do you get the social and emotional support you need? (n=591).

Mental Health (Continued)

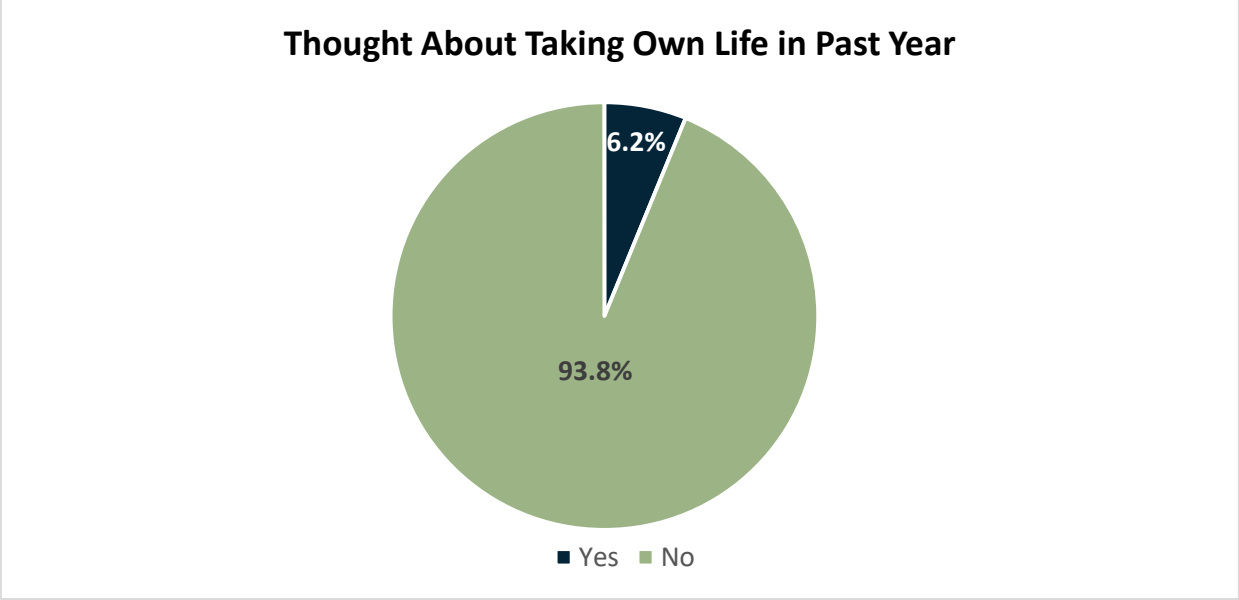
- More than one-third (34.3%) of Barry County youth report depression during the past year, a rate higher than state or national rates.



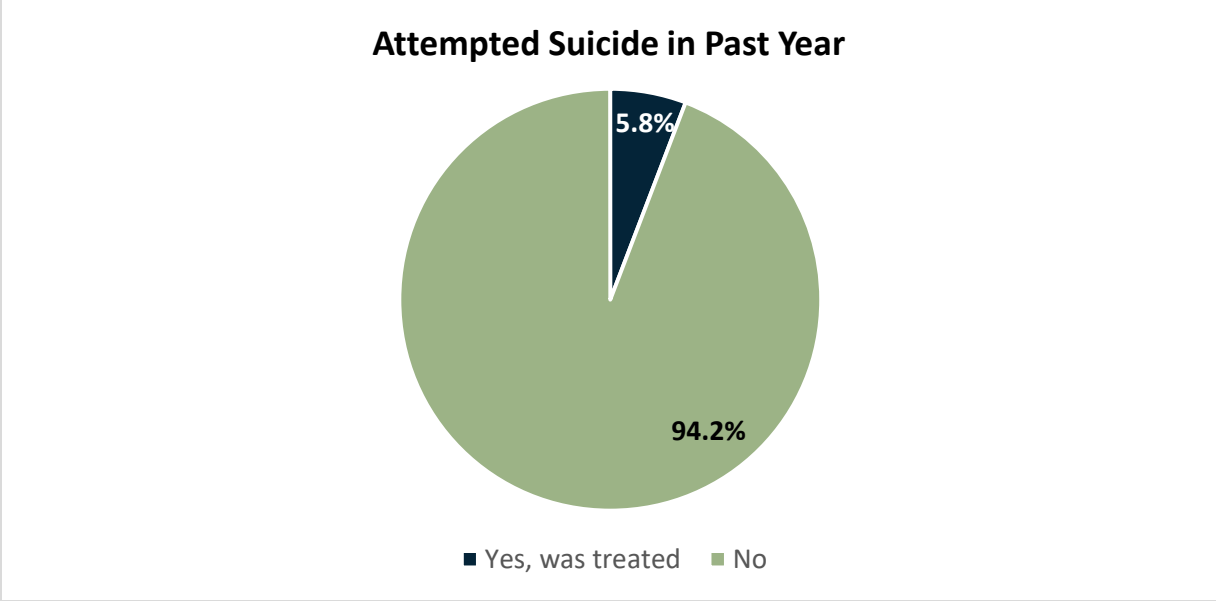
Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Suicide

Nearly one in sixteen (6.2%) SHP area adults have thought taking their own life in the past year, and of those 5.8% actually attempted suicide in the past year.



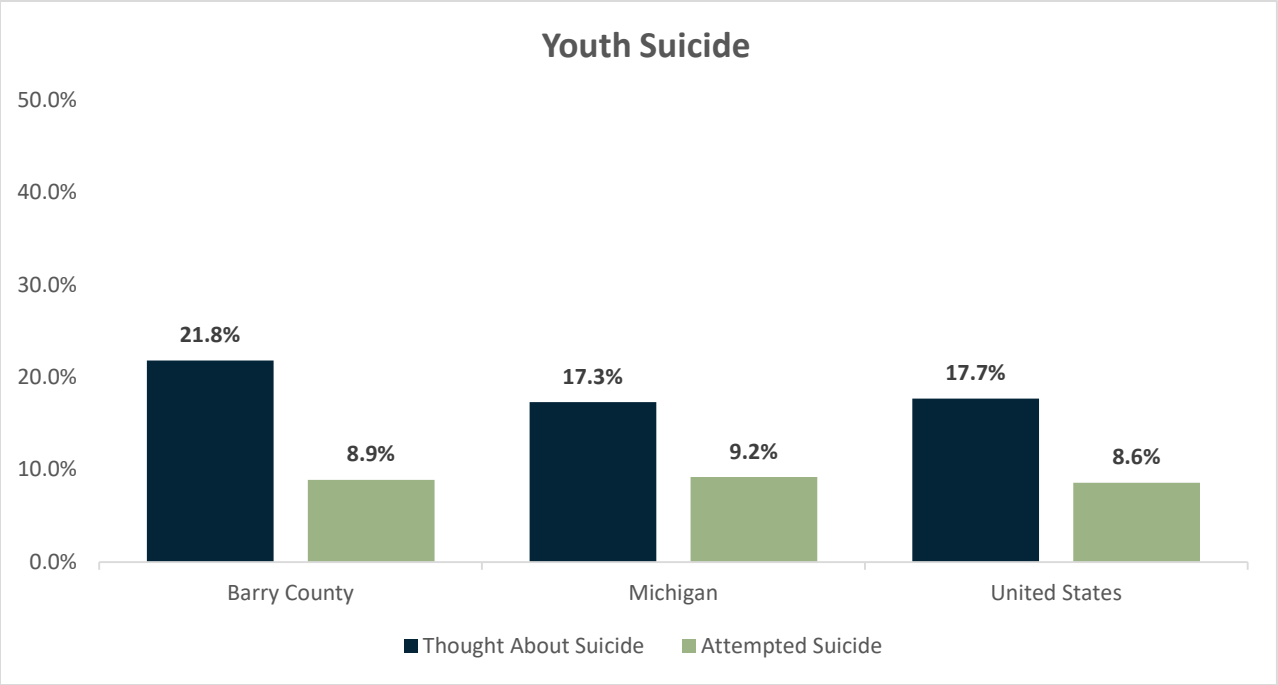
Source: SHP Behavioral Risk Factor Survey, 2017, Q20.1: Has there been a time in the past 12 months when you thought of taking your own life? (n=585).



Source: SHP Behavioral Risk Factor Survey, 2017, Q20.2: During the past 12 months, did you attempt to commit suicide (take your own life)? Would you say… (n=23).
Note: among those who said they thought about taking their own life in the past year.

Suicide (Continued)

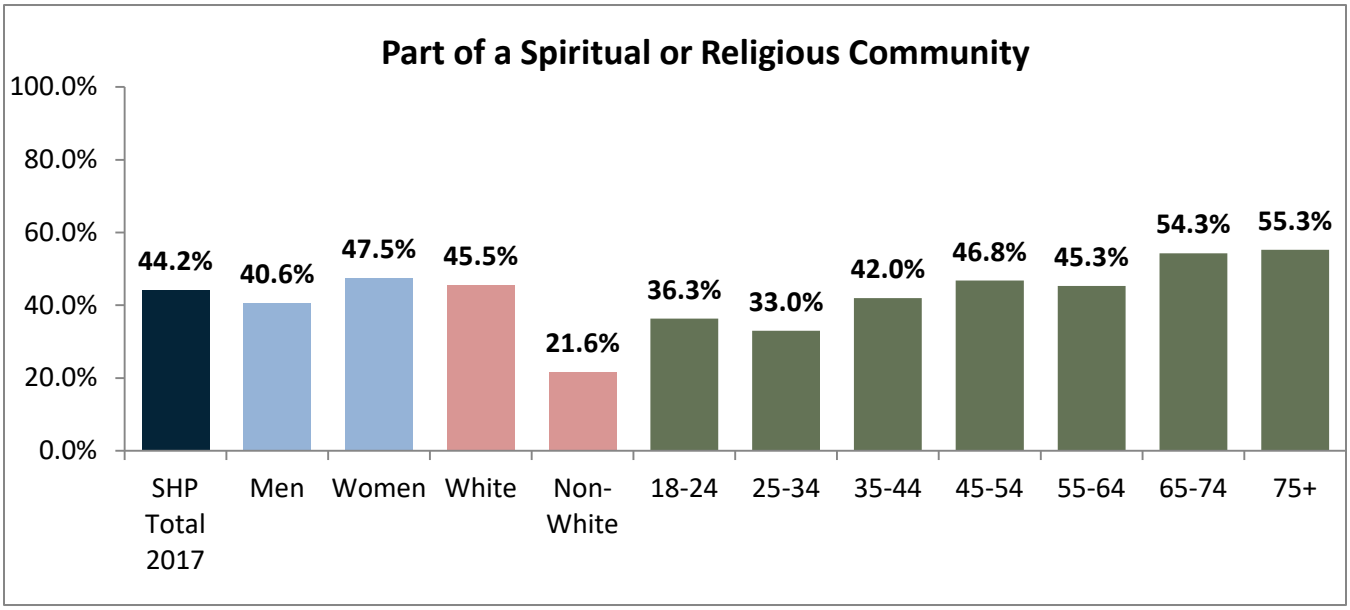
- One in five (21.8%) Barry County youth have thought about committing suicide in the past year, a rate higher than the state or national rates.
- One in eleven (8.9%) Barry County youth have actually attempted suicide, a rate higher than the national rate.

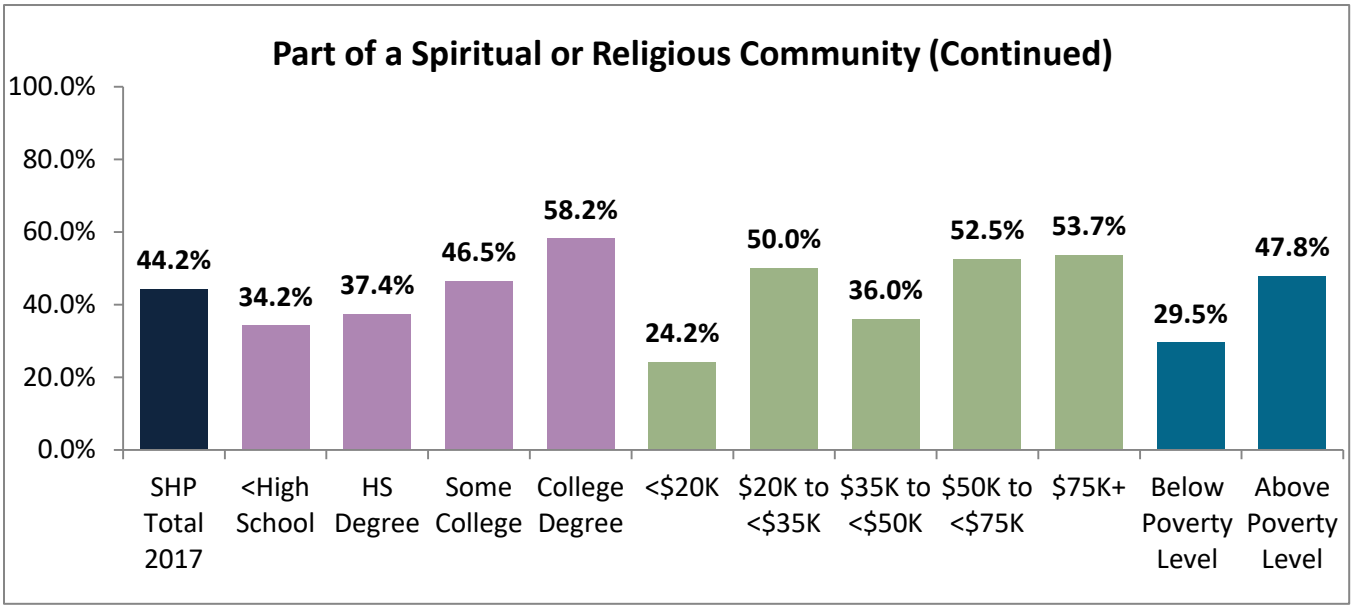


Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Spirituality

- More than four in ten (44.2%) area adults are part of a spiritual or religious community.
- Those most likely to be part of a spiritual or religious community tend to come from groups that are: women, White, older (age 65+), have college degrees, and have incomes of $50K or more.





Source: SHP Behavioral Risk Factor Survey, 2017, Q18.11: Are you part of a spiritual or religious community? (n=586).

Spirituality (Continued)

- Area adults who are part of spiritual or religious communities fare better on a number of health outcomes vs. those adults who are not part of a spiritual or religious community.
- The greatest difference can be seen in smoking behavior, having chronic pain, engaging in binge drinking, having psychological distress, and having had adverse childhood experiences growing up; those who are not part of a religious or spiritual community have worse outcomes on all these measures compared to those who are part of a religious or spiritual community.

	Part of Spiritual or Religious Community	
	Yes	No
General health is fair/poor	16.8%	18.2%
Poor physical health	8.3%	10.3%
Poor mental health	6.8%	8.8%
Activity limitations	5.2%	8.5%
Current smoker	15.9%	23.7%
Chronic pain	21.7%	31.8%
No leisure time physical activity	28.1%	36.1%
Binge drinker	10.6%	19.6%
Mild to moderate psychological distress	8.2%	18.1%
Severe psychological distress	0.6%	6.4%
1+ ACEs	40.3%	59.1%

CHRONIC CONDITIONS

Prevalence of Chronic Health Conditions

- The prevalence of diabetes and non-skin cancer is higher among SHP area adults compared to the prevalence among adults across the state or nation.
- Conversely, the prevalence of COPD, skin cancer, heart attacks, or stroke is lower among SHP area adults compared to the prevalence among adults across MI or the U.S.

Prevalence of Chronic Conditions			
	SHP Area 2017	Michigan	U.S.
Arthritis	30.0%	30.0%	25.8%
Pre-diabetes	23.6%	--	--
Lifetime asthma	14.5%	15.7%	14.0%
Current asthma	9.4%	10.2%	9.3%
COPD	4.9%	7.7%	6.3%
Diabetes	12.1%	10.7%	10.8%
Other (non-skin) cancer	7.7%	7.0%	6.7%
Skin cancer	5.7%	6.1%	5.9%
Heart attack	3.9%	4.7%	4.4%
Stroke	2.8%	3.3%	3.1%
Angina/coronary heart disease	4.2%	4.6%	4.1%

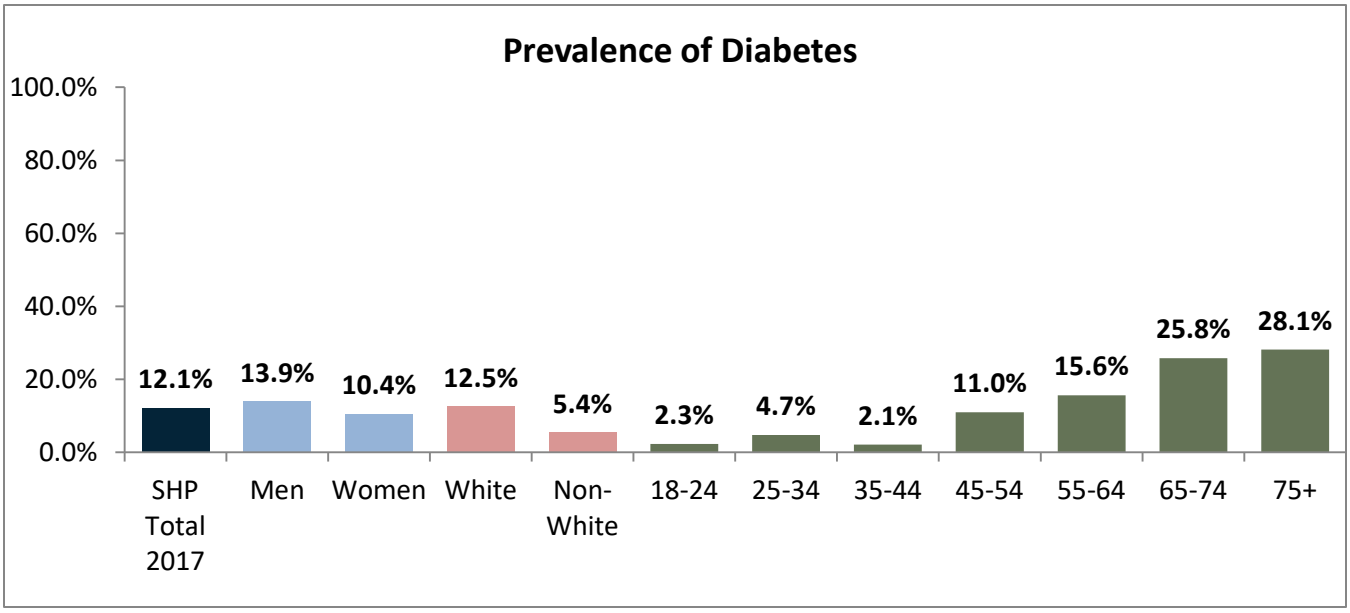
● = SHP area is best compared to MI and U.S.

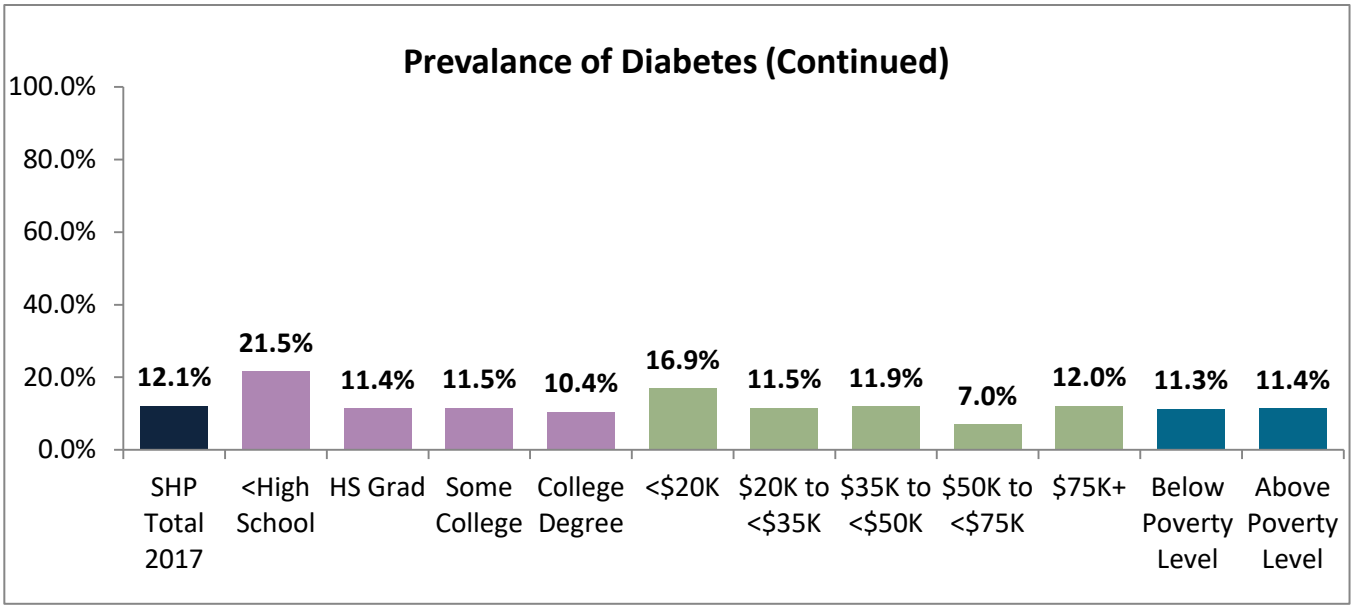
● = SHP area is worst compared to MI and U.S.

Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.

Diabetes

- Roughly one in eight (12.1%) area adults have been told by a health care professional that they have diabetes.
- The prevalence of diabetes is greater for older adults (55+), men, those with less than a high school degree, and those with incomes less than $20K.

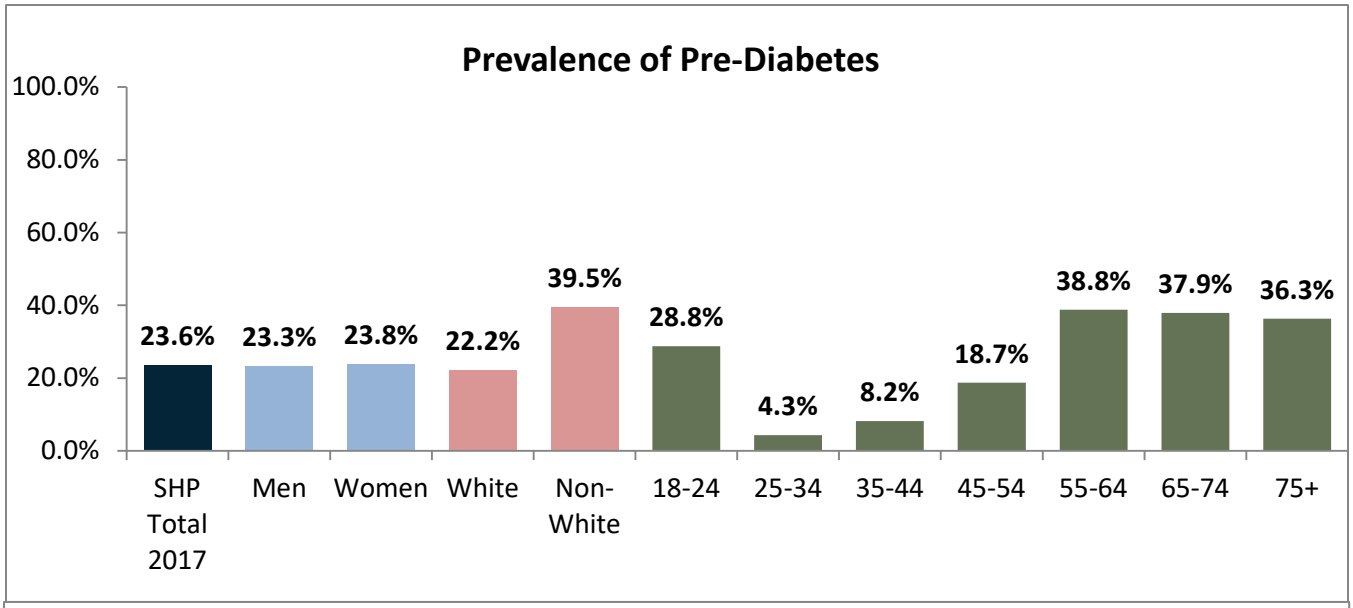


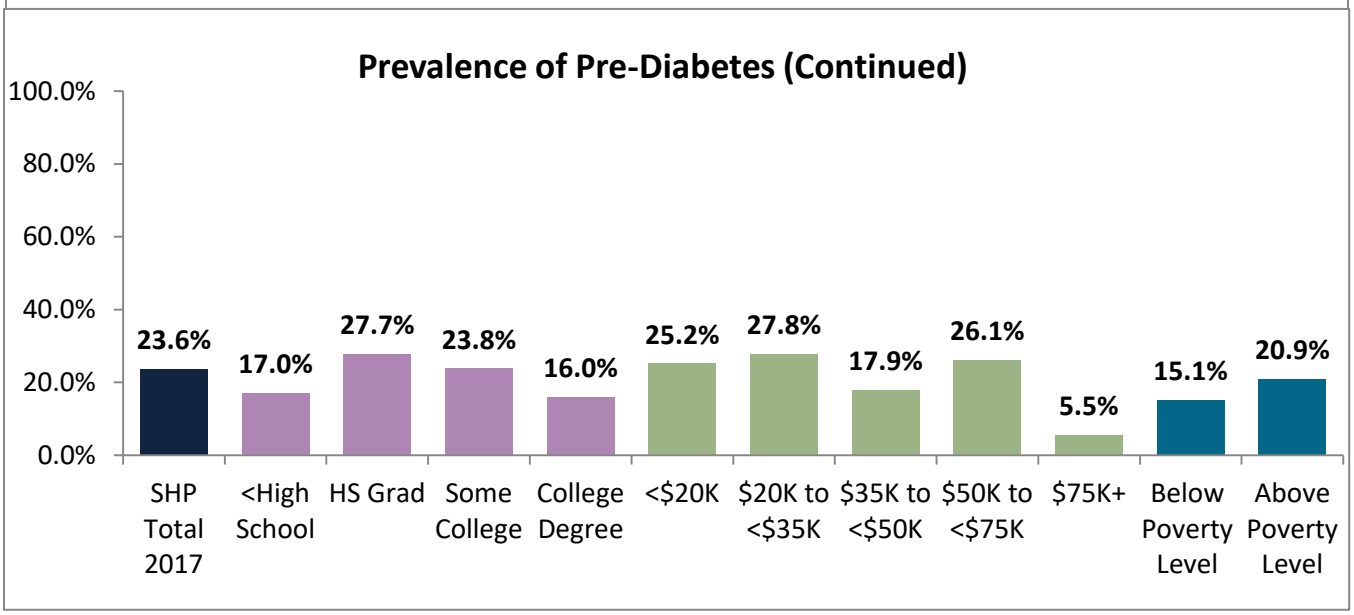


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.3: Has a doctor, nurse, or other health professional EVER told you that you had diabetes? (n=592).
Note: excludes women who had diabetes only during pregnancy.

Pre-Diabetes

- Additionally, almost one-fourth (23.6%) of SHP area adults has been told by a health care professional that they have pre-, or borderline, diabetes.
- The prevalence of pre-diabetes is greater among non-White adults compared to White adults.

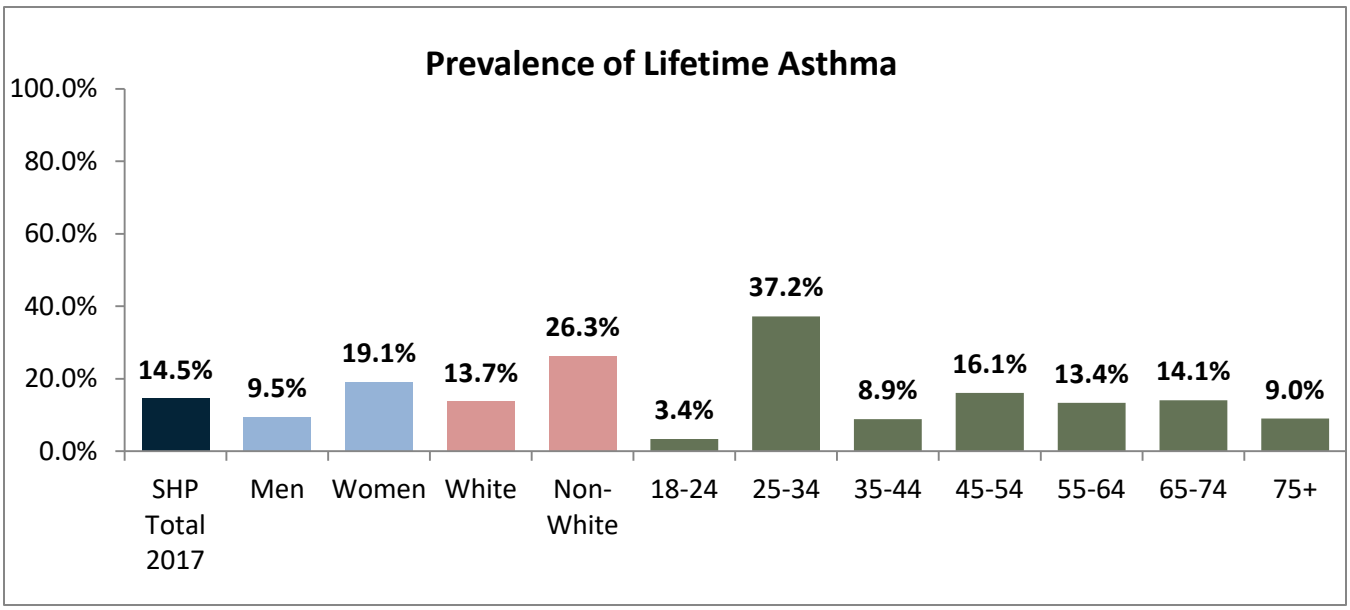


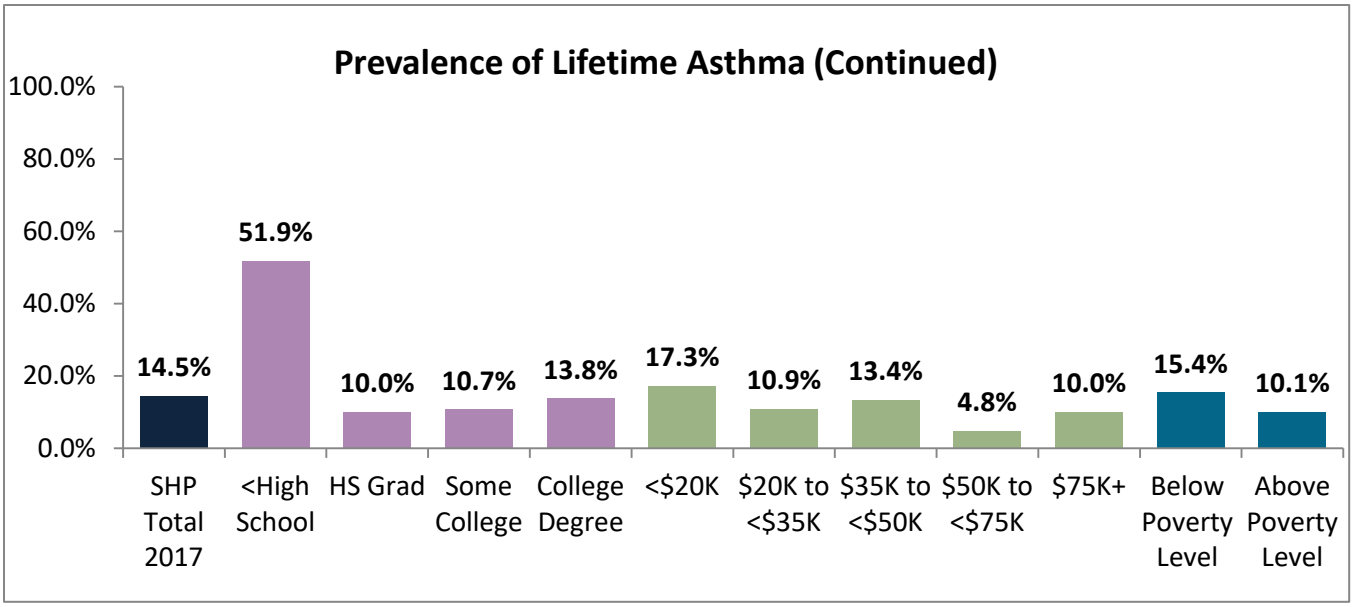


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.3: Has a doctor, nurse, or other health professional EVER told you that you had pre-diabetes or borderline diabetes? (n=490).
Note: excludes those who currently have diabetes.

Asthma

- Roughly one in seven (14.5%) area adults have been told by a health care professional at some point in their life that they had asthma.
- The prevalence of lifetime asthma is greater for women than men, and greater for non-White adults compared to White adults, and highly prevalent among those with less than a high school diploma.

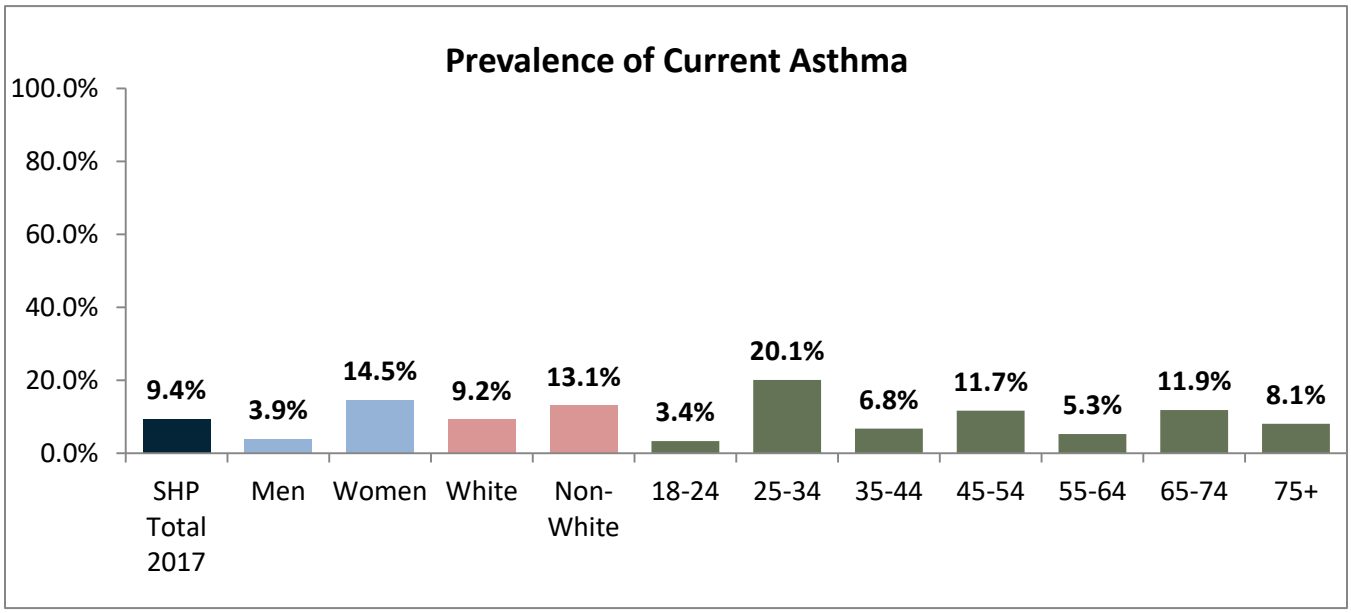


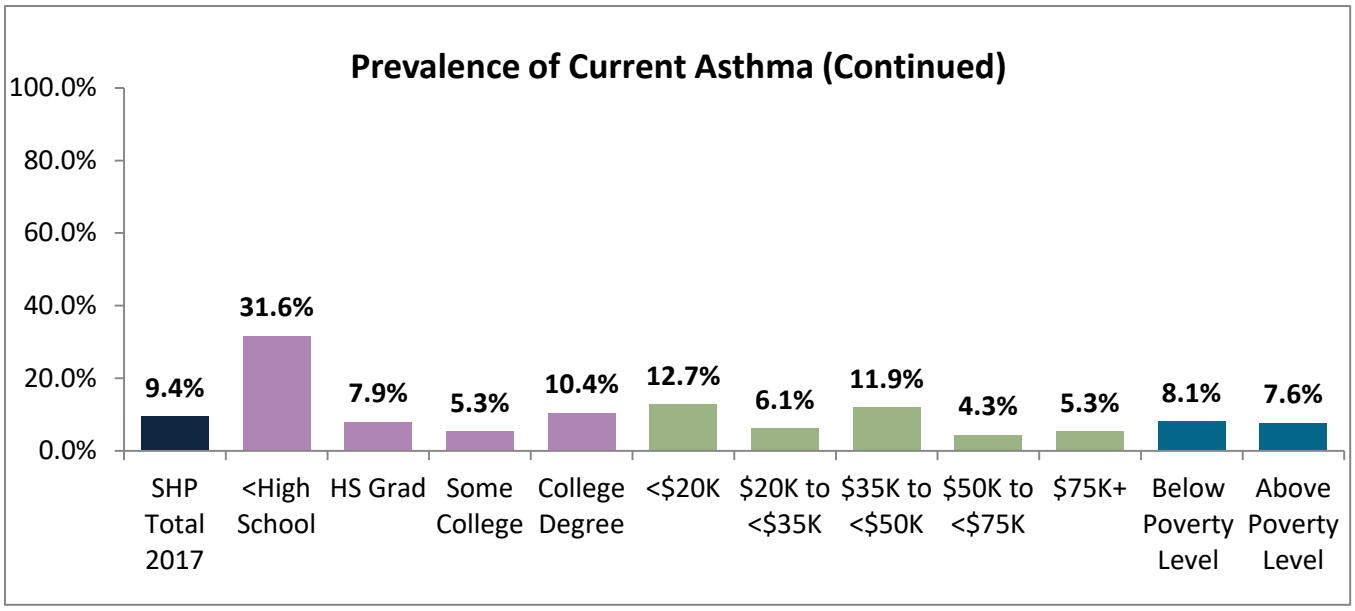


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.1: Has a doctor, nurse, or other health professional EVER told you that you had asthma? (n=592).

Asthma (Continued)

- Almost one in ten (9.4%) area adults currently have asthma.
- Like lifetime asthma, the prevalence of those who currently have asthma is greater for women, non-White adults, and those with less than a high school diploma.

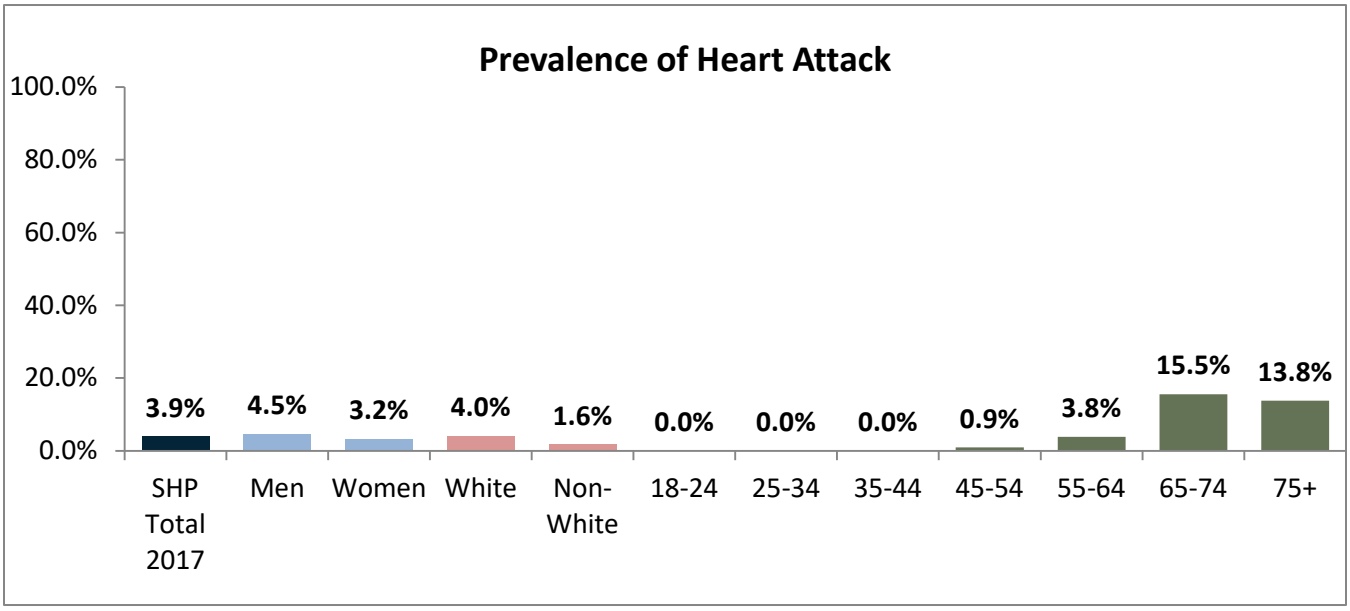


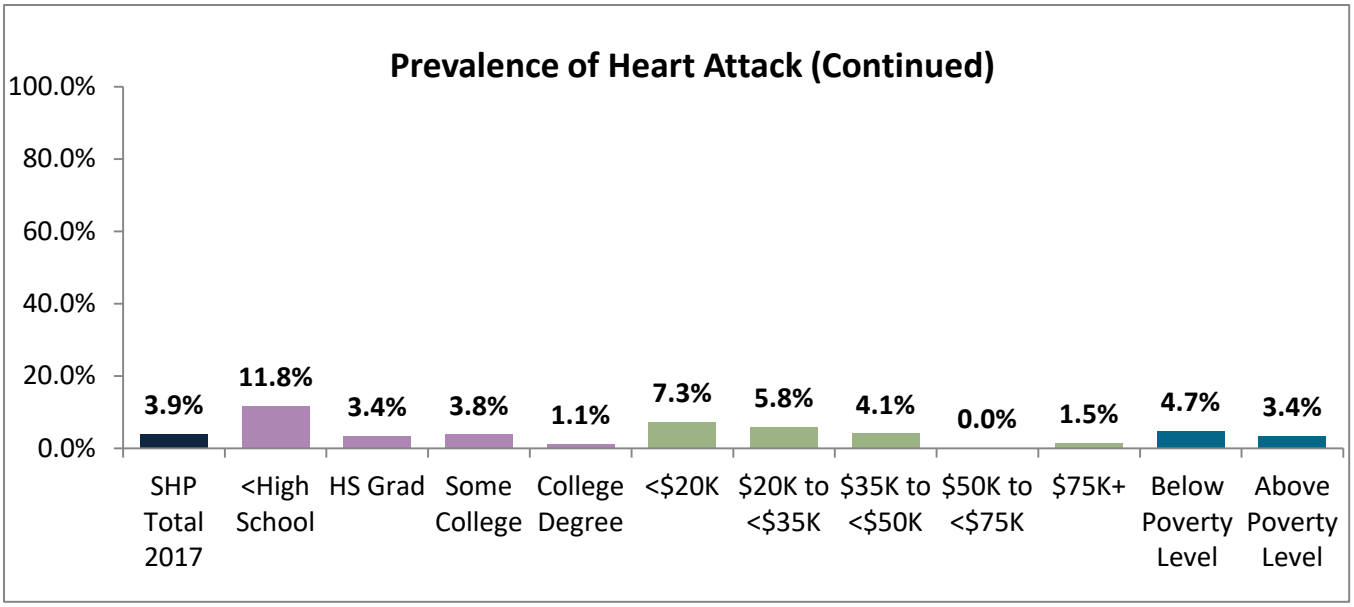


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.2: Do you still have asthma?
Note: based on all adults, (n=592).

Cardiovascular Disease and Stroke

- The prevalence of having a heart attack is low (3.9%) but most likely to be reported by the oldest adults (65+) and/or those with less than a high school diploma.
- Prevalence is slightly higher in: men compared to women, White adults compared to non-White adults, and adults with incomes less than $50K compared to those with higher incomes.

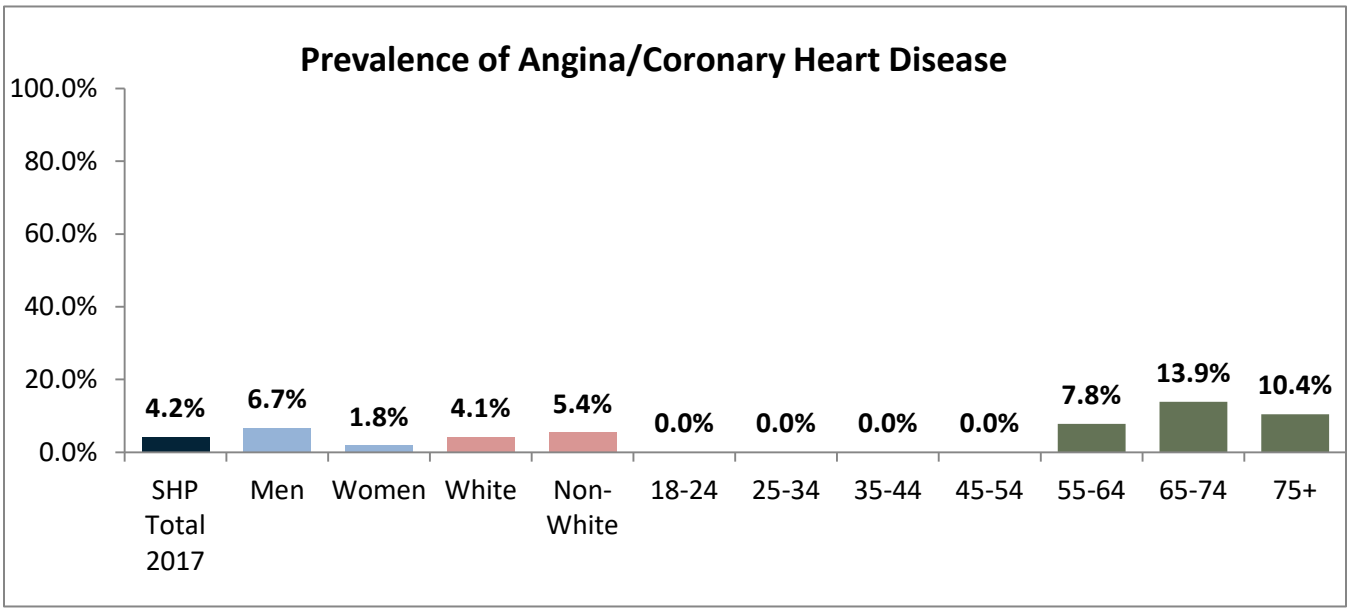


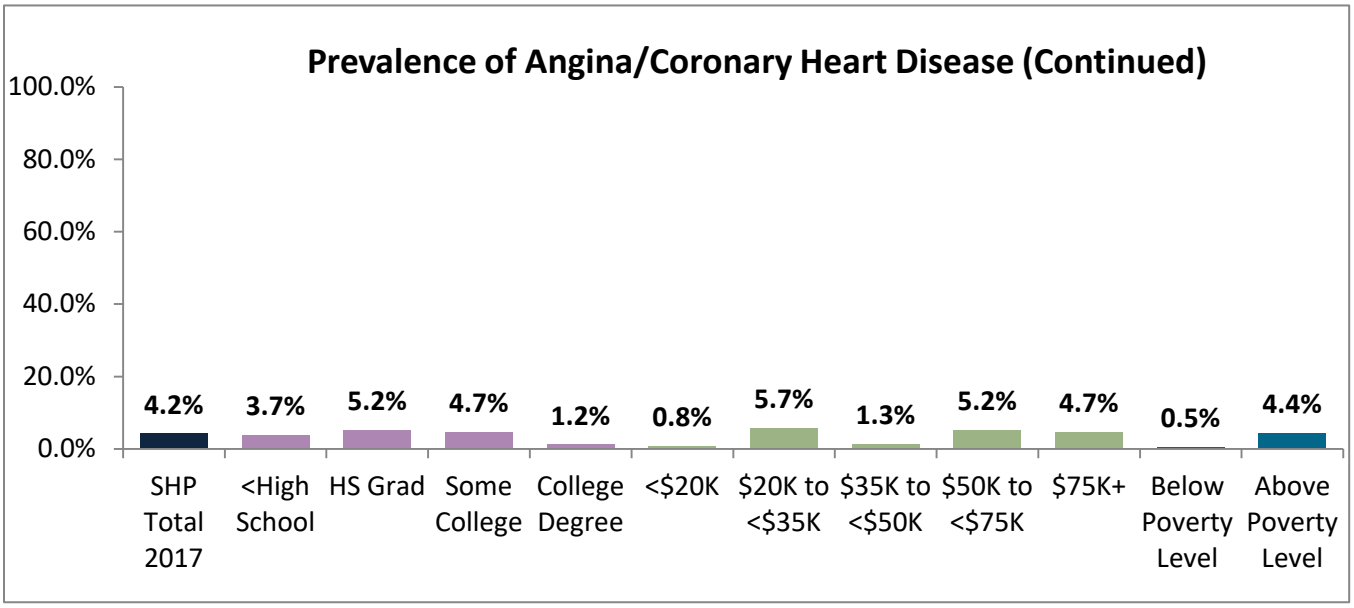


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.5: Has a doctor, nurse, or other health professional EVER told you that you had a heart attack also called a myocardial infarction? (n=592).

Cardiovascular Disease and Stroke (Continued)

- The prevalence of angina/coronary heart disease is low but is highest among those aged 55 or older and lower among those with a college degree compared to adults with less education.
- Angina/CHD is also higher among men than women.

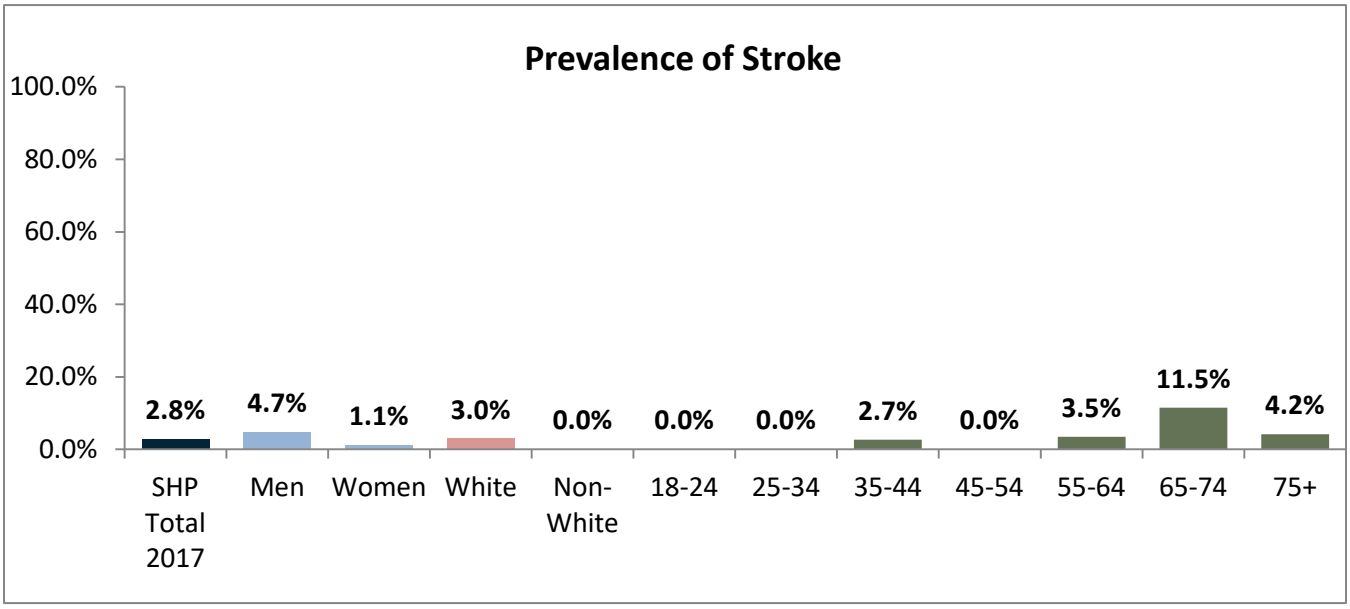


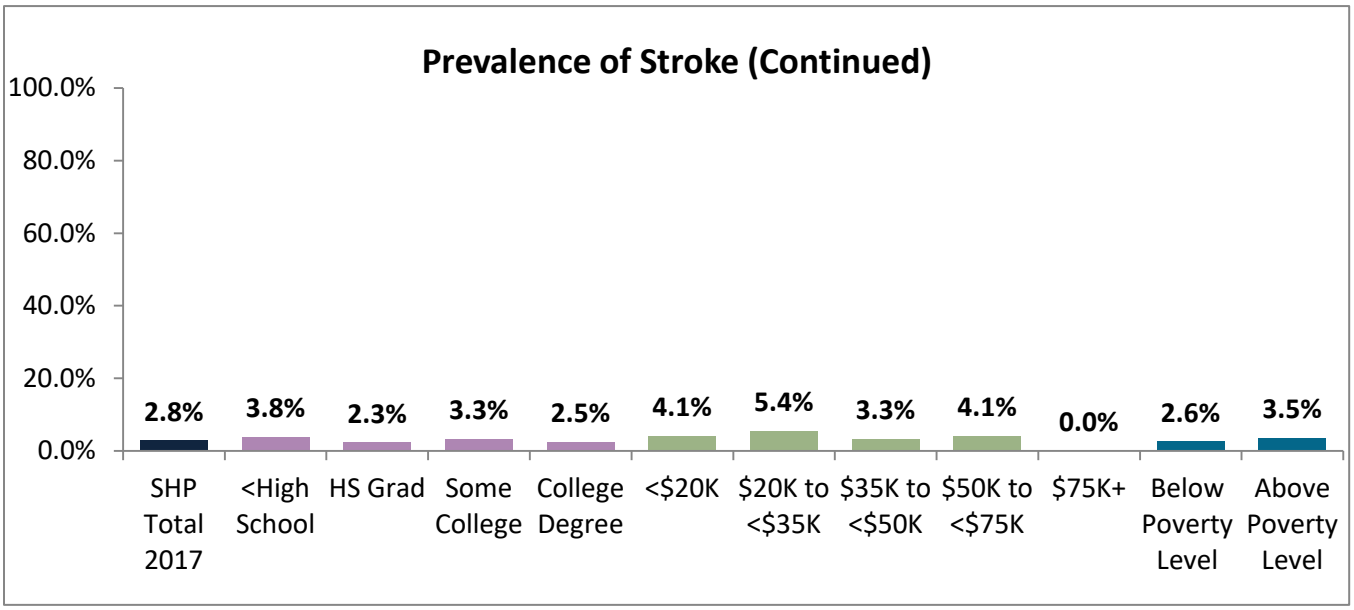


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.6: Has a doctor, nurse, or other health professional EVER told you that you had angina or coronary heart disease? (n=592).

Cardiovascular Disease and Stroke (Continued)

- In 2017, 2.8% of SHP area adults reported that at some point in their life they had been told by a health professional that they had a stroke.
- The prevalence of stroke is higher for those aged 55+ compared to those younger, and higher in men than women.

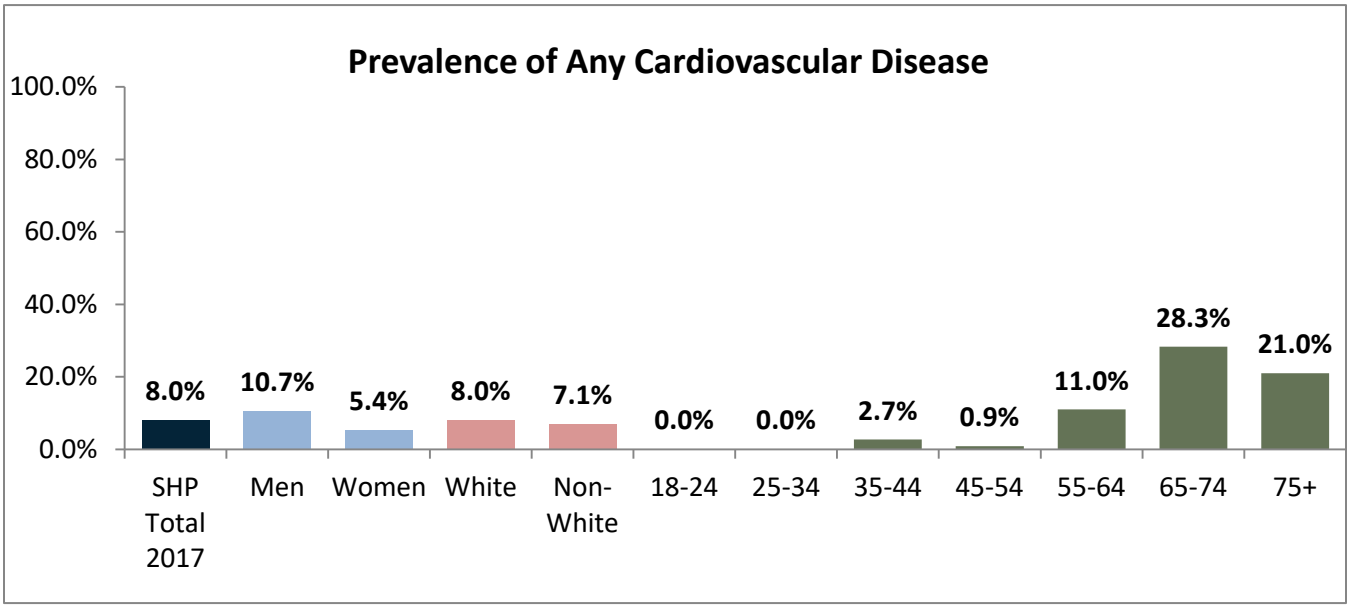


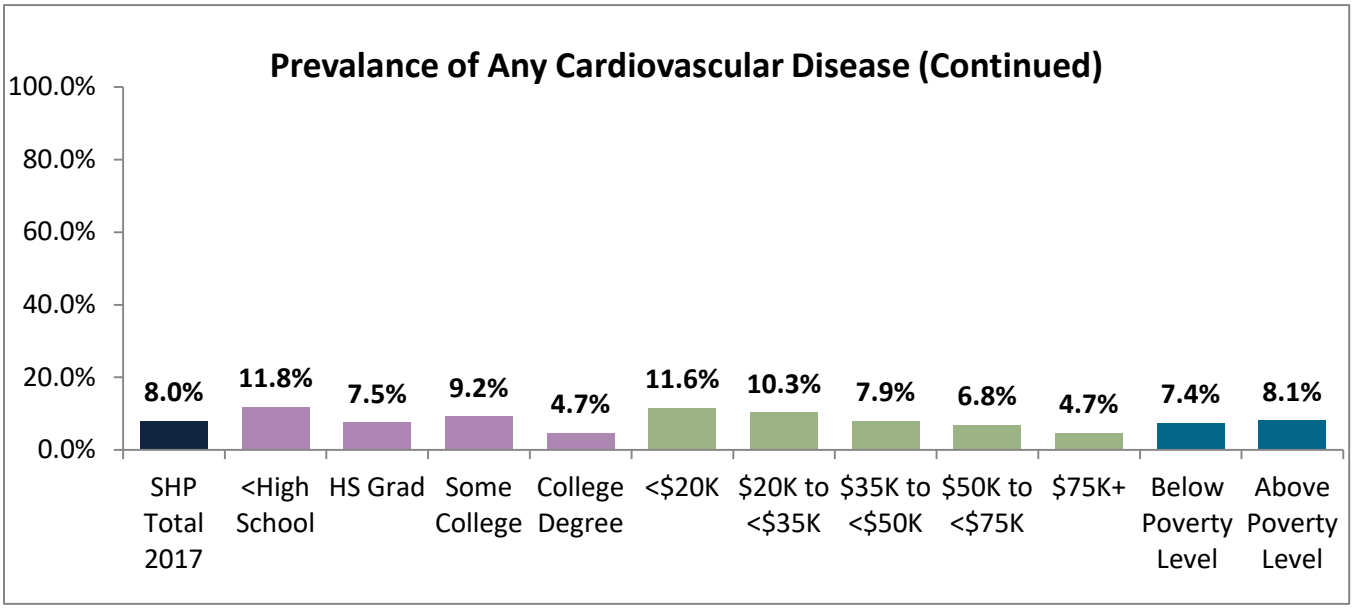


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.7: Has a doctor, nurse, or other health professional EVER told you that you had a stroke? (n=590).

Cardiovascular Disease and Stroke (Continued)

- Roughly one in twelve (8.0%) area adults have had some form of cardiovascular disease (e.g., heart attack, angina/CHD, and/or stroke), and prevalence is higher for men than women.
- The highest prevalence of cardiovascular disease can be found in adults from the highest age groups (55+), and the lowest prevalence can be found in adults with a college degree and/or with incomes of $75K or more.

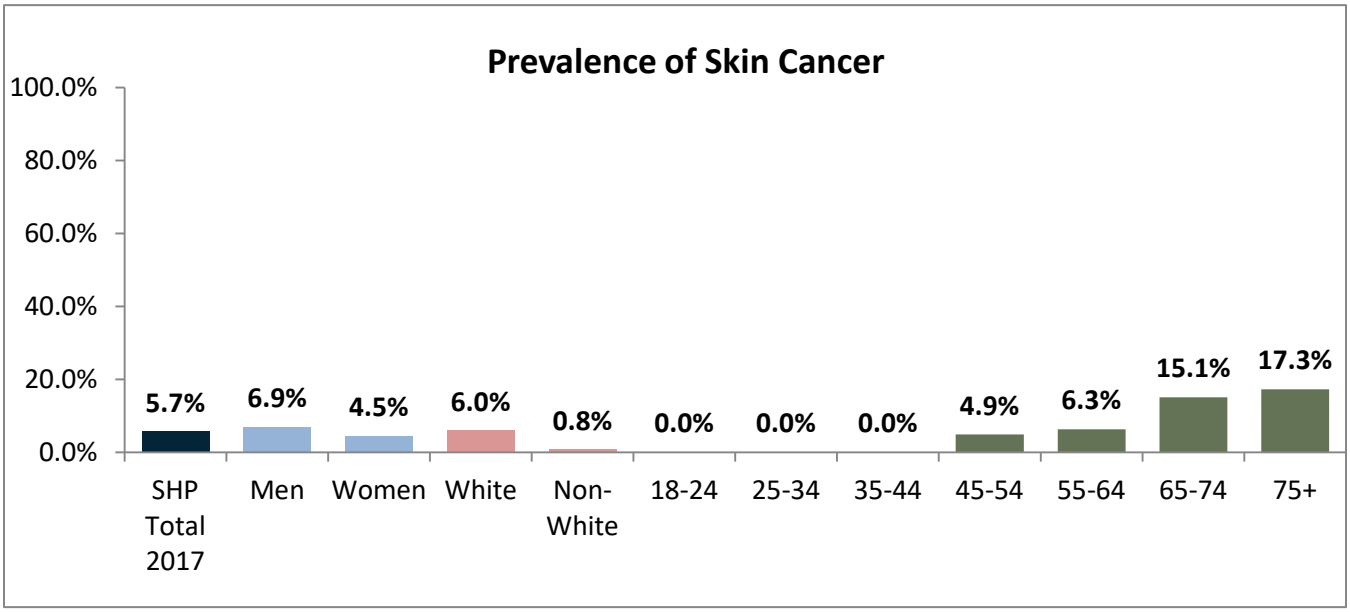


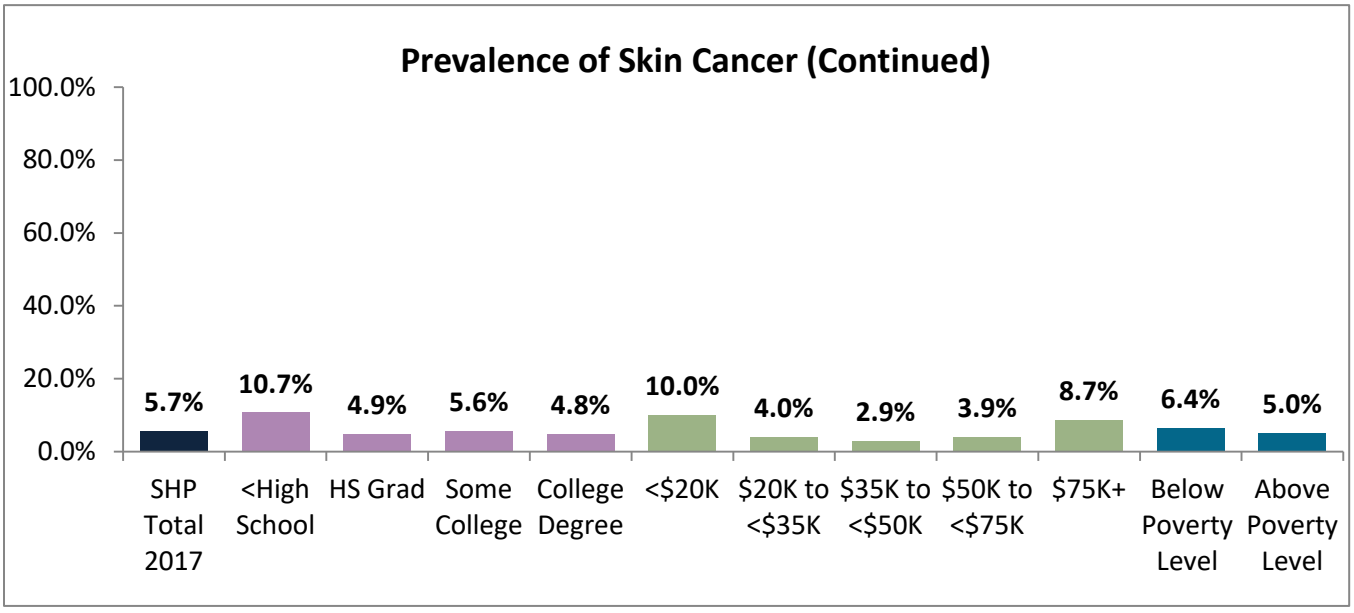


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.5/Q4.6/Q4.7.
Note: among all adults who have had some form of cardiovascular disease (heart attack, angina/CHD, stroke). (n=590)

Cancer (Continued)

- One in twenty (5.7%) SHP area adults has been told they have skin cancer.
- The prevalence of skin cancer is higher among the oldest groups (55+), and is far more common in White adults compared to non-White adults.
- It is also higher in adults with less than a high school diploma and those with incomes of less than $20K compared to those with more education or income, respectively.

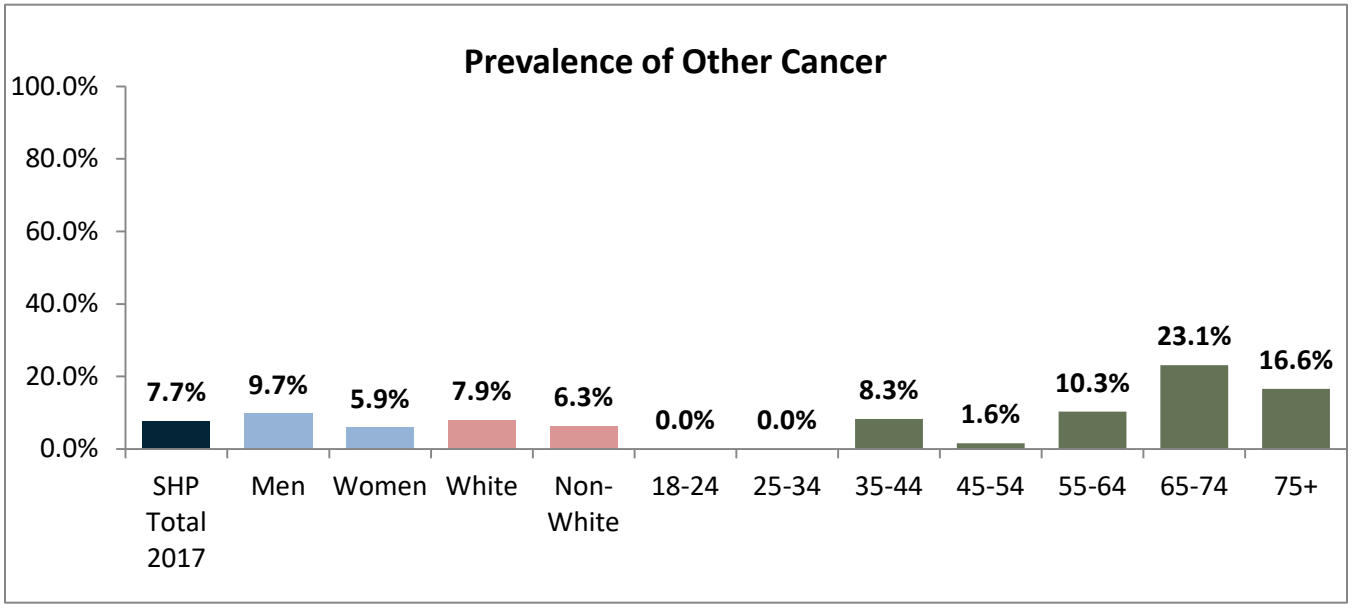


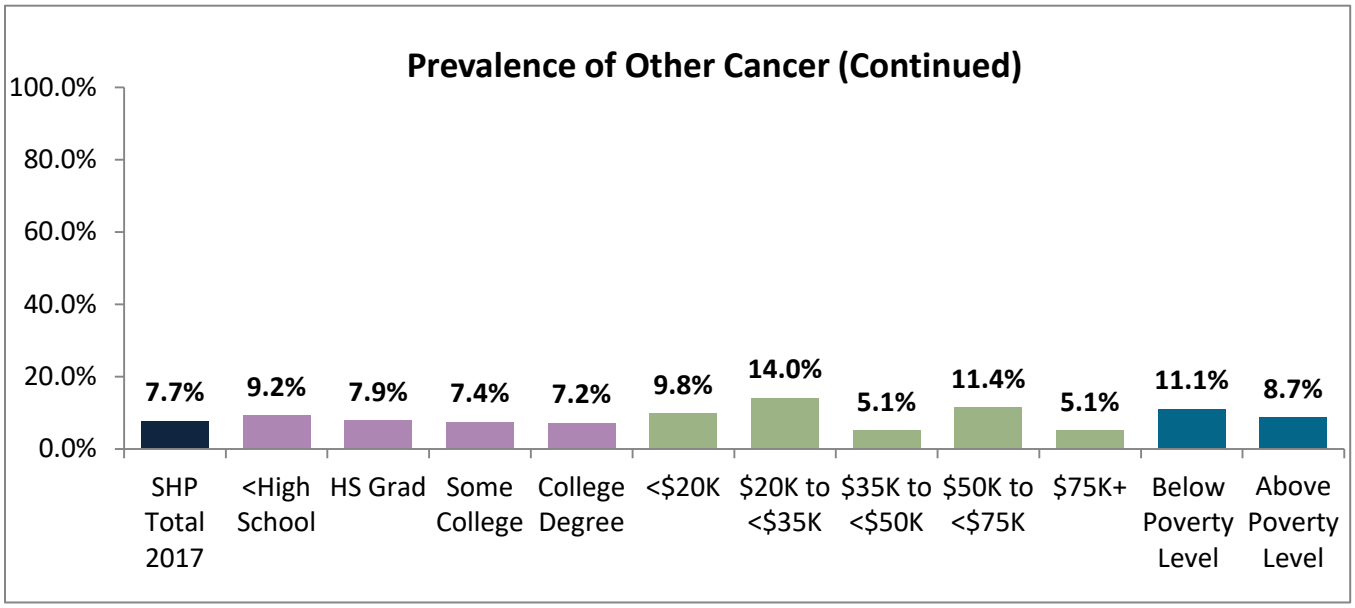


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.8: Has a doctor, nurse, or other health professional EVER told you that you had skin cancer? (n=590).

Cancer (Continued)

- Among SHP area adults, 7.7% have been told they have other forms of cancer (non-skin).
- Cancer is more common in area men than women, and more common in adults age 55 or older compared to younger adults.

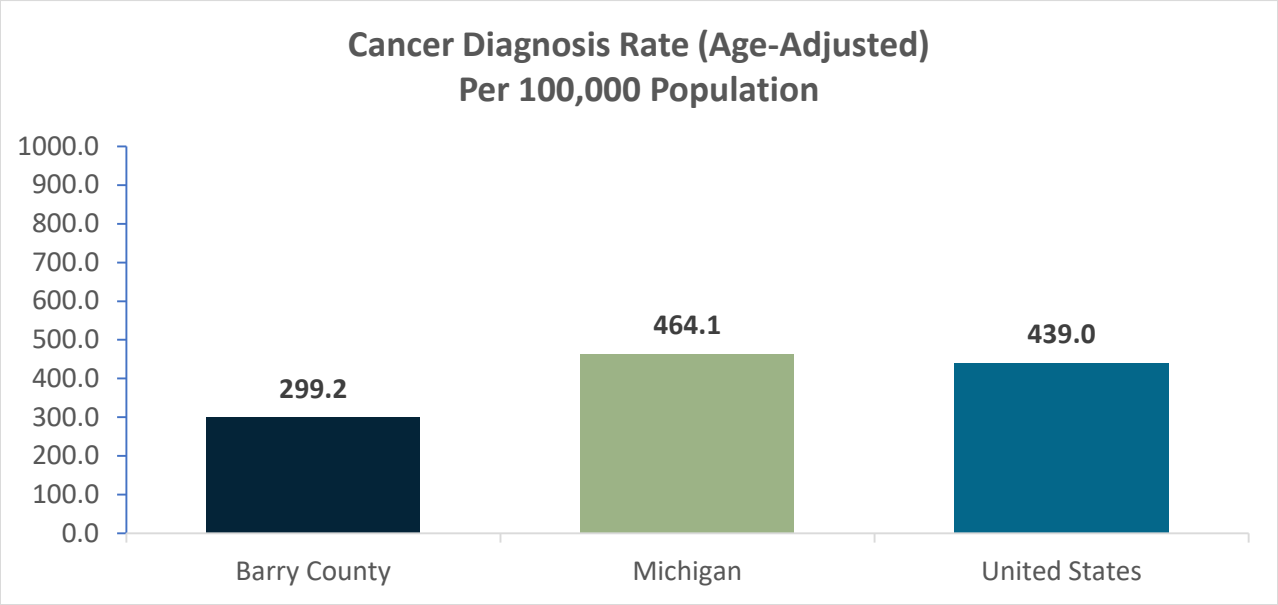




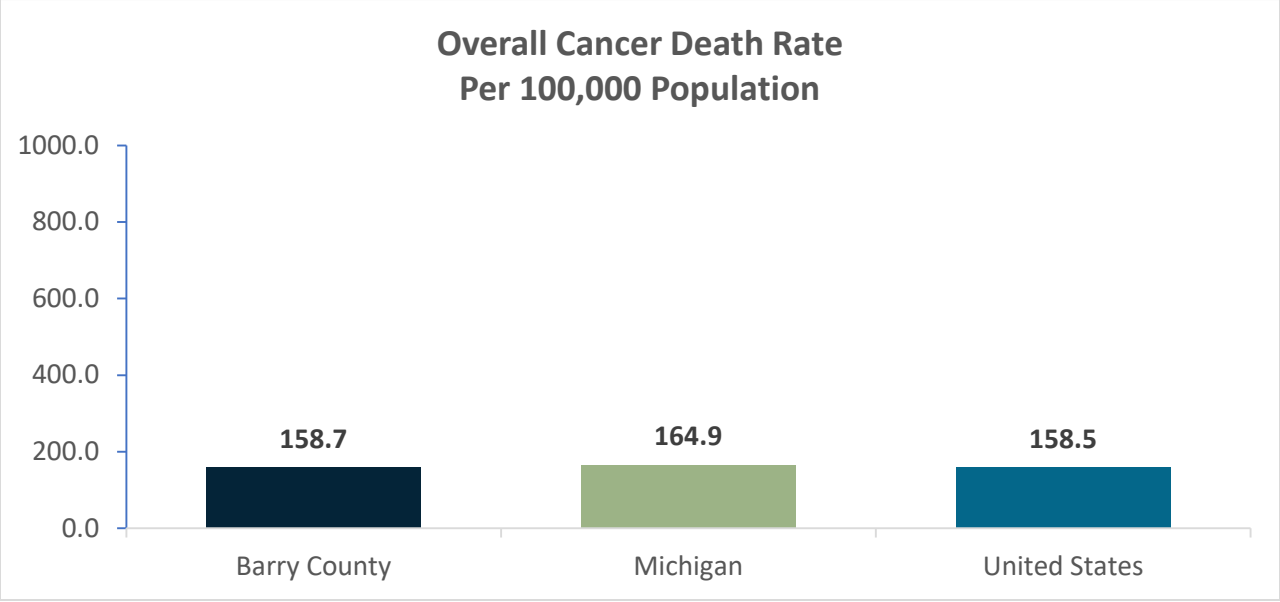
Source: SHP Behavioral Risk Factor Survey, 2017, Q4.9: Has a doctor, nurse, or other health professional EVER told you that you had any other types of cancer? (n=591).

Cancer (Continued)

- The cancer diagnosis rate in Barry County is much lower than the state and national rates.
- The cancer death rate is lower in Barry County compared to the state rate and on par with the national rate.



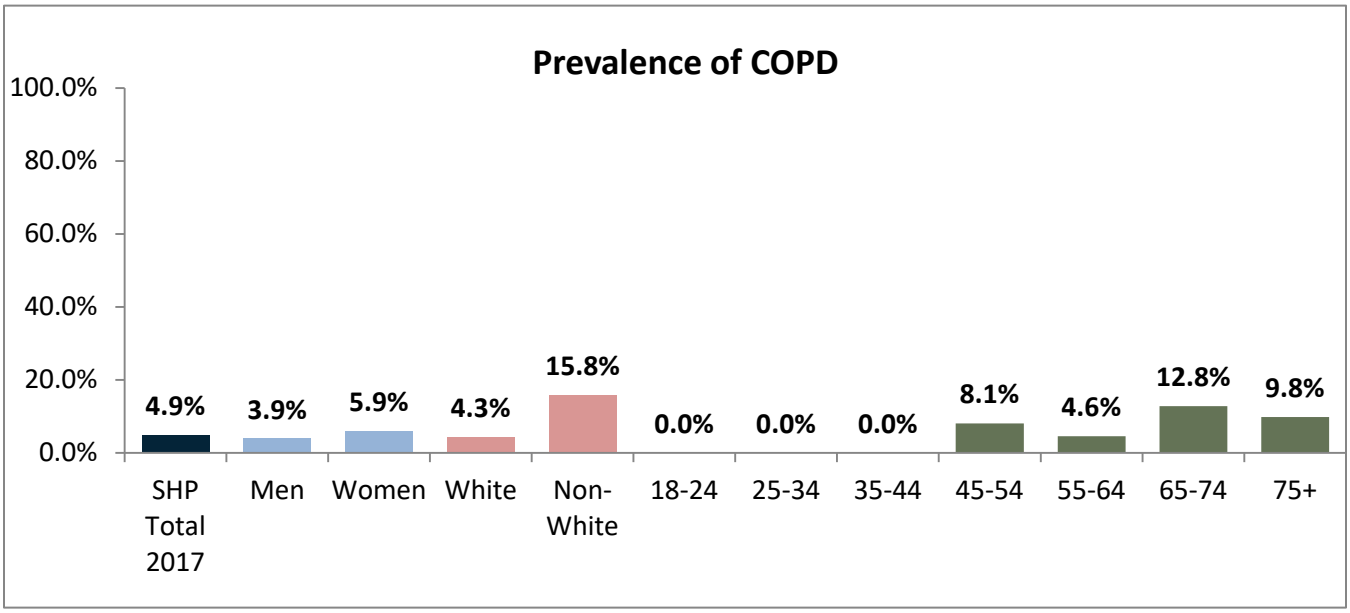
Source: MDCH Cancer Incidence Files. Barry County and MI 2010-2015 5-year average, US: Kaiser Family Foundation Health Facts, 2013.

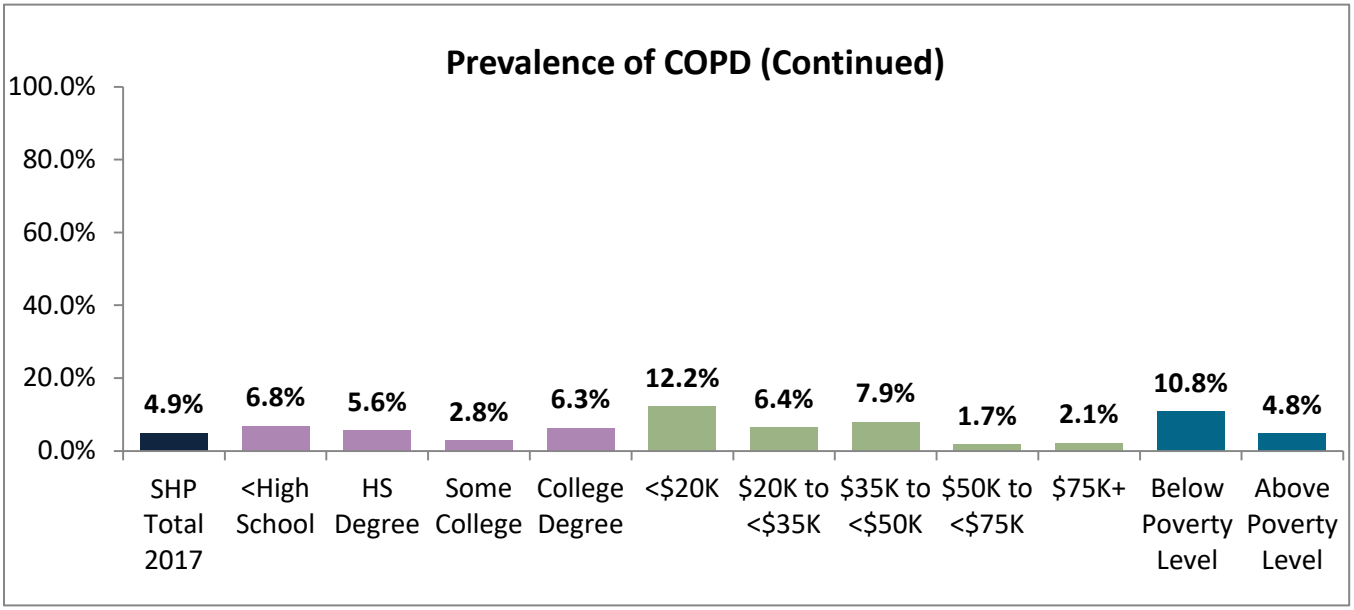


Source: MDHHS Barry County, MI, and U.S., 2015.

COPD

- One in twenty (4.9%) area adults have chronic obstructive pulmonary disease (COPD).
- The disease is more common in adults who are older (45+) and/or who have incomes below $50K, and more common in non-White adults compared to White adults.

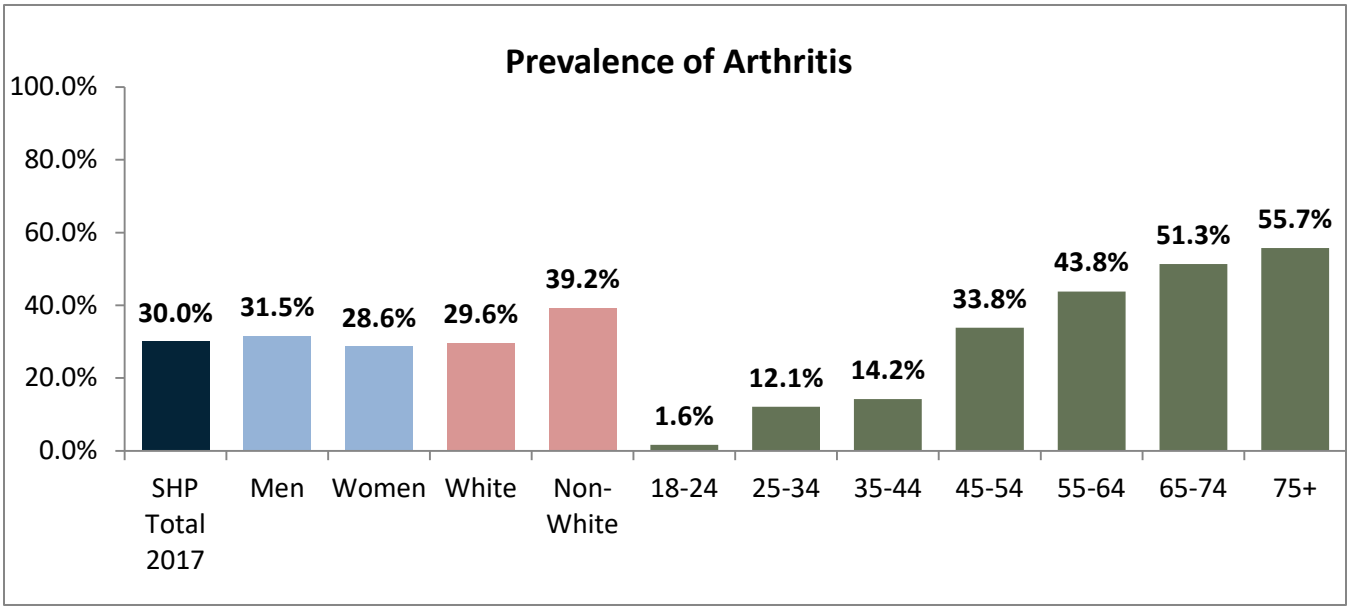


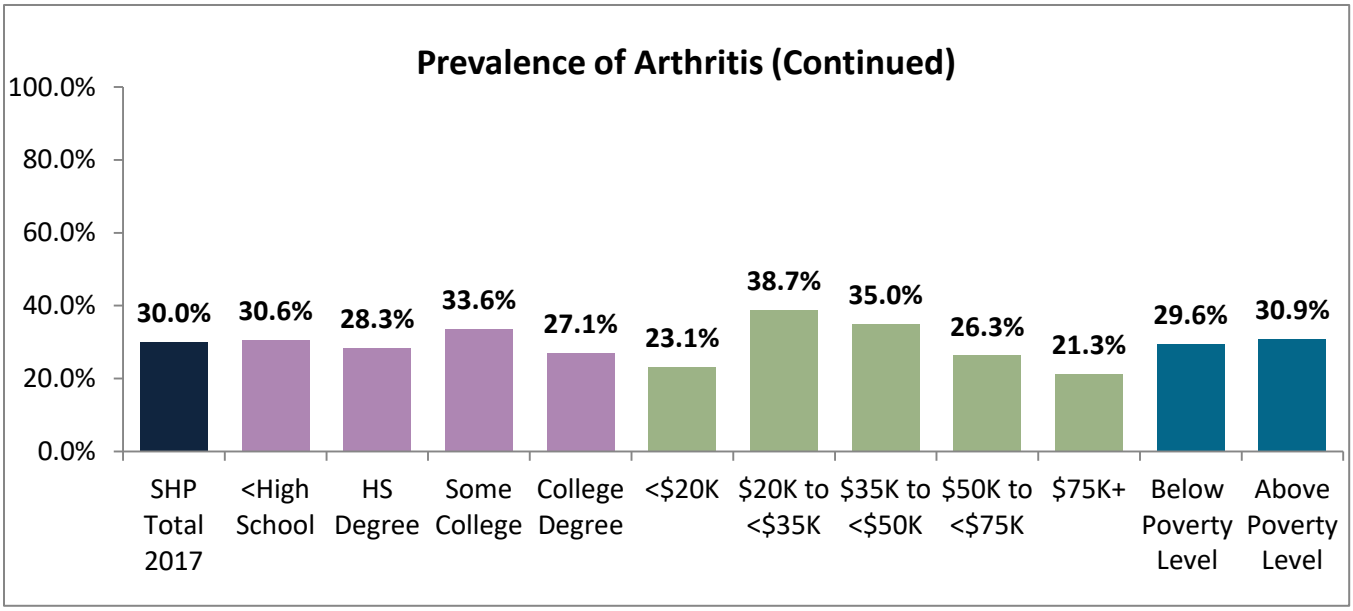


Source: SHP Behavioral Risk Factor Survey, 2017, Q4.10: Has a doctor, nurse, or other health professional EVER told you that you had COPD (chronic obstructive pulmonary disease), emphysema or chronic bronchitis? (n=592).

Arthritis

- Three in ten (30.0%) area adults have arthritis, and this is largely a condition that comes with age.
- The disease is also more common in non-White adults compared to White adults.

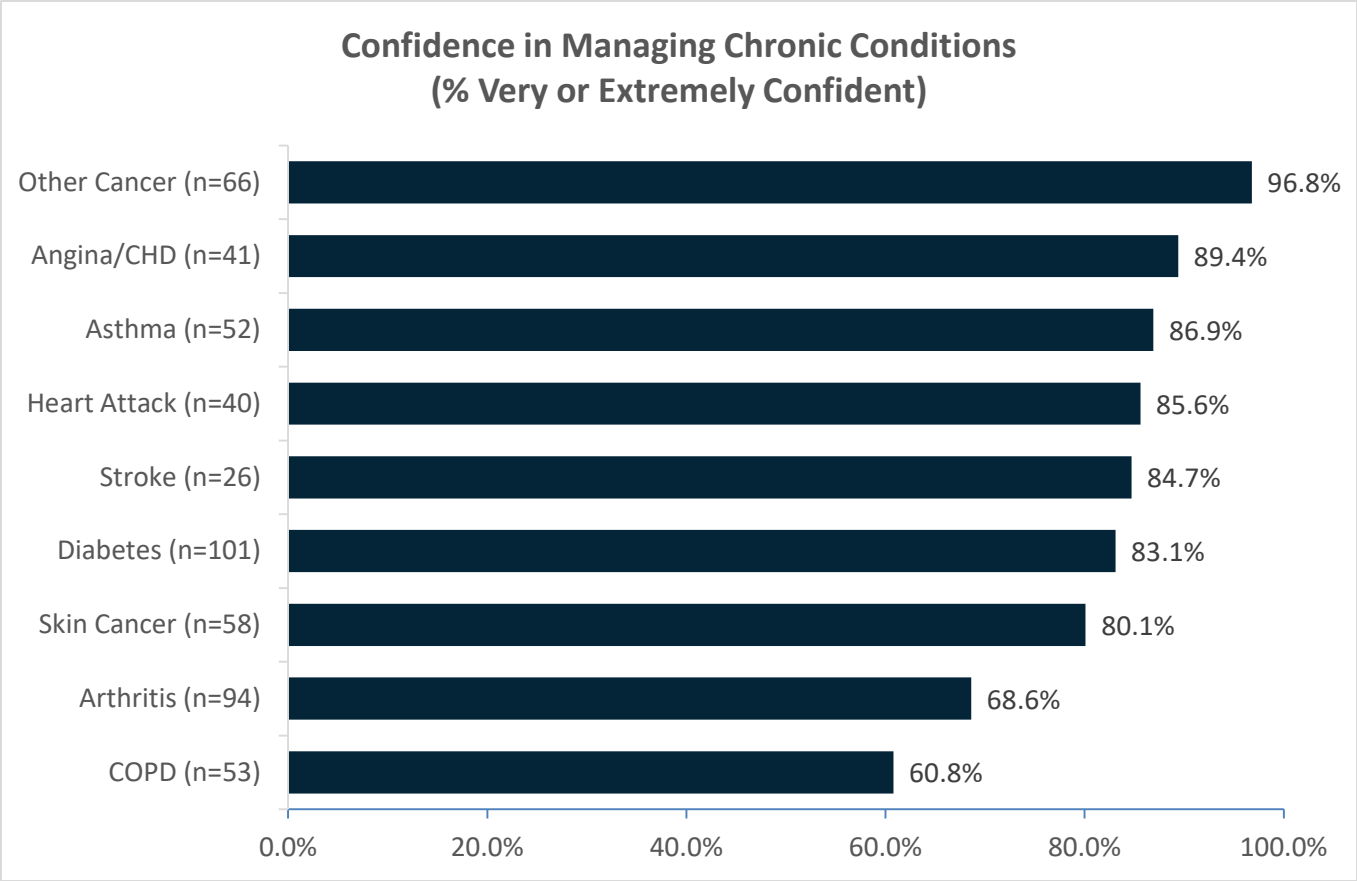




Source: SHP Behavioral Risk Factor Survey, 2017, Q4.11: Has a doctor, nurse, or other health professional EVER told you that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia? (n=590).

Management of Chronic Conditions

- A sizeable majority of adults with chronic conditions are confident that they can do all things necessary to manage their condition.
- The greatest barriers to confidence are inadequacy, or lack, of existing programs and services to assist them in managing their condition and/or having multiple chronic conditions that makes management difficult.

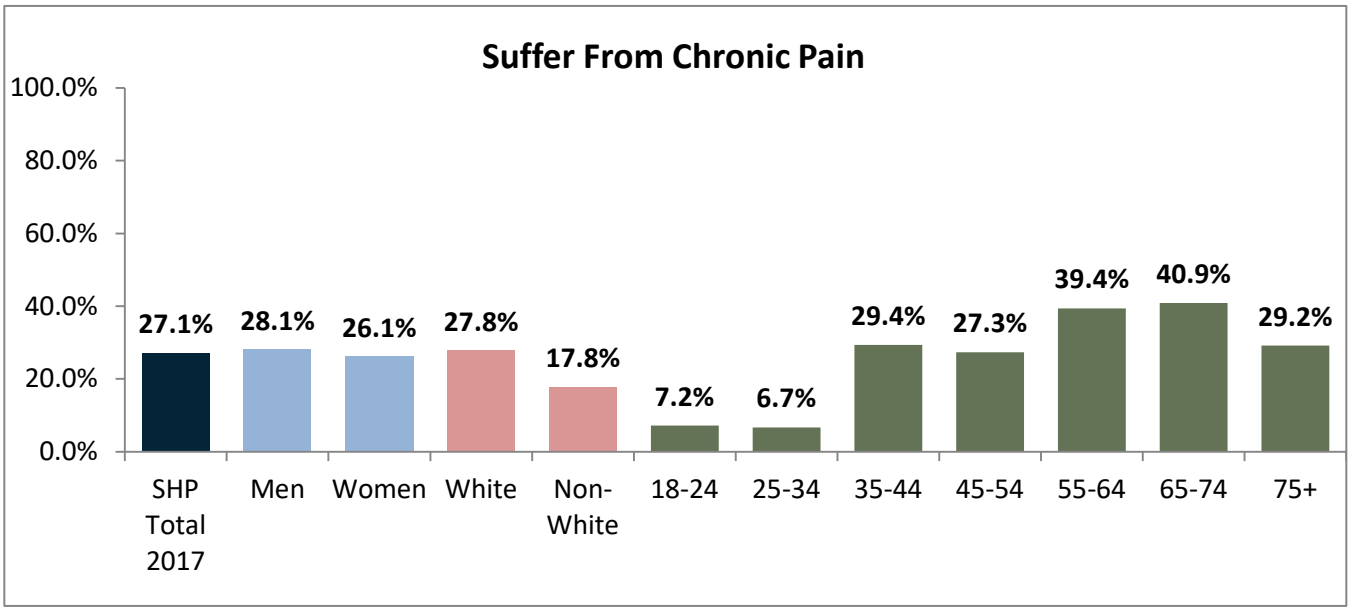


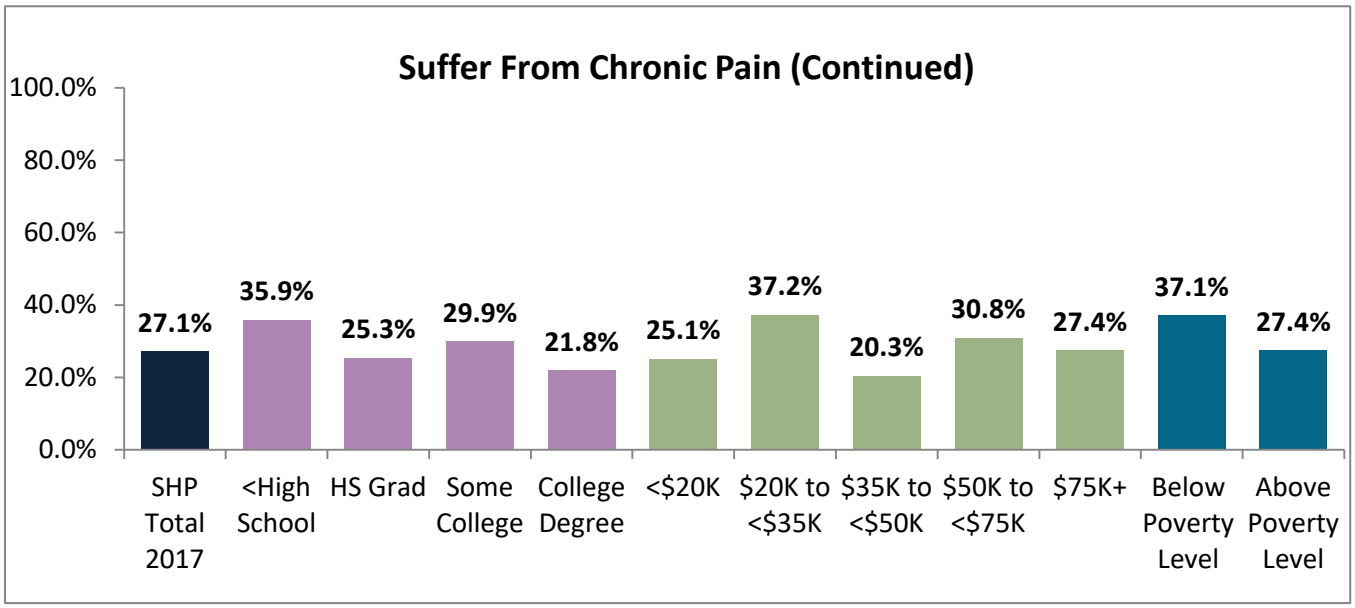
Source: SHP Behavioral Risk Factor Survey, 2017, Q5.1: Having an illness often means doing different tasks and activities to manage your condition. How confident are you that you can do all the things necessary to manage your [insert condition]? Would you say you are not at all confident, not very confident, somewhat confident, very confident, or extremely confident?; Q5.2: (If not very or not at all confident) Why do you say you are [insert rating from ABOVE] that you can do all the things necessary to manage your [insert condition]?

Chronic Pain

- More than one-fourth (27.1%) of area adults suffer from chronic pain, and it is more common among White adults than non-White adults, and more common in adults with less than a high school education compared to those with more education.

- Almost seven in ten (68.2%) of those adults with chronic pain report their pain is managed well.

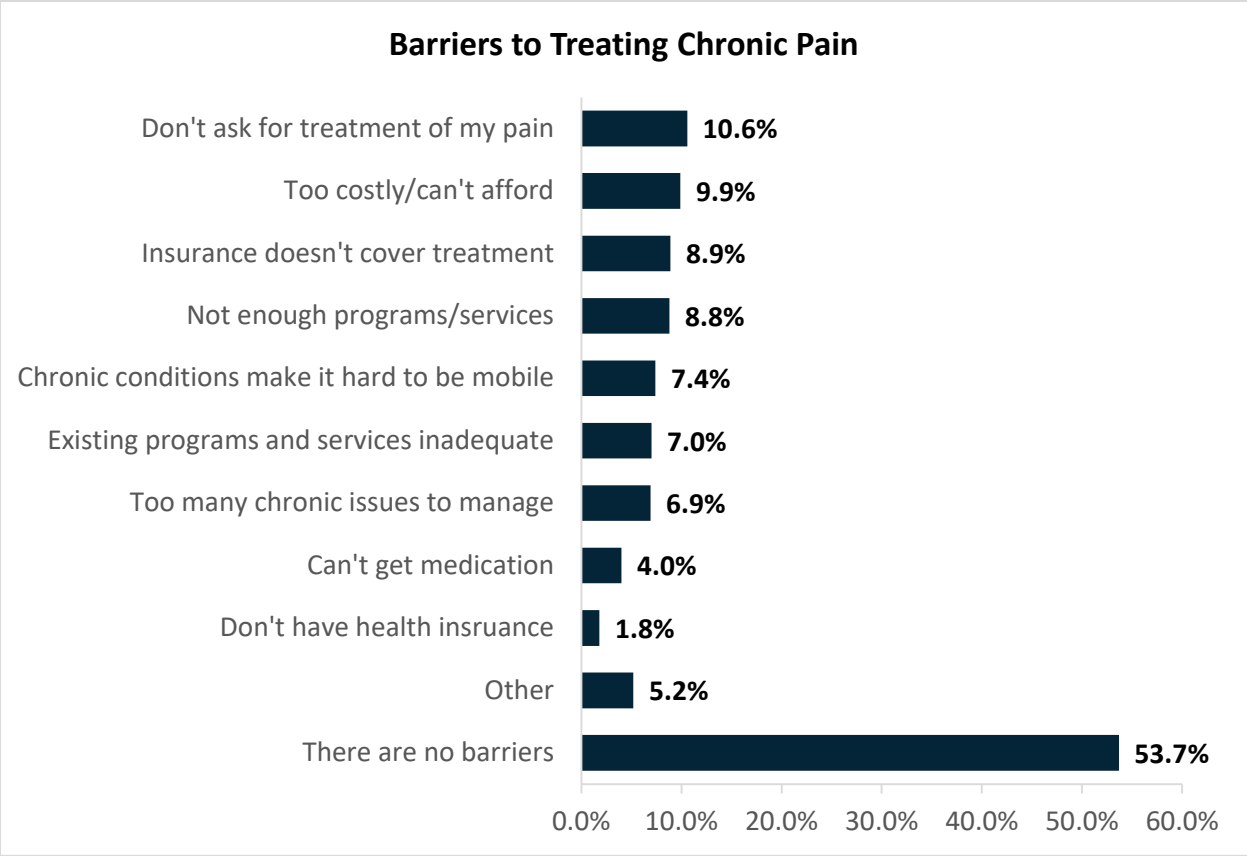




Source: SHP Behavioral Risk Factor Survey, 2017, Q8.1: Do you suffer from any type of chronic pain; that is, pain that occurs constantly or flares up frequently? (n=591); Q8.1: (If yes) Do you feel your pain is managed well? (n=168).

Barriers to Treating Chronic Pain

Almost half (46.3%) of area adults suffering from chronic pain report myriad barriers to treating their pain, including: cost, insurance that won't cover treatment, inadequate/lack of programs and services that could help them deal with their pain better, their condition makes it hard to be mobile, and too many chronic issues to manage.



Source: SHP Behavioral Risk Factor Survey, 2017, Q8.3: What are some of barriers to treating your pain? (n=166)
Note: The proportion of adults who reported they suffer from chronic pain.

HEALTH CARE ACCESS

Overall State of Health Care Access in the Community

According to Key Stakeholders, despite increased coverage via the Affordable Care Act and Healthy Michigan Plan, there are still access to care issues, including both primary care and specialty care, and especially psychiatrists. There has been some improvement and several steps are being taken to address these gaps, such as utilizing telepsych and hiring more mid-level practitioners.

I think that **access to care is still an issue**, even though we have Medicaid coverage here, and it's not a question of payment, **it's a question of number of providers**. We've **had numerous physicians retire and exit the marketplace**, and we've **been unsuccessful in recruiting specialists** to come to our community. For GI, urology, and ophthalmology people used to be able to have their work done here in their local community, but now **need to travel.**

We have **mental health issues** and have had so **many challenges in our ED** with having to hold patients and not being able to place youth. I hear from providers with regularity that we have those challenges. I don't know if that's really the poor, but we do end up **having persons who don't have economics resources**. We **struggle with trying to get them the help they need for behavioral health issues**.

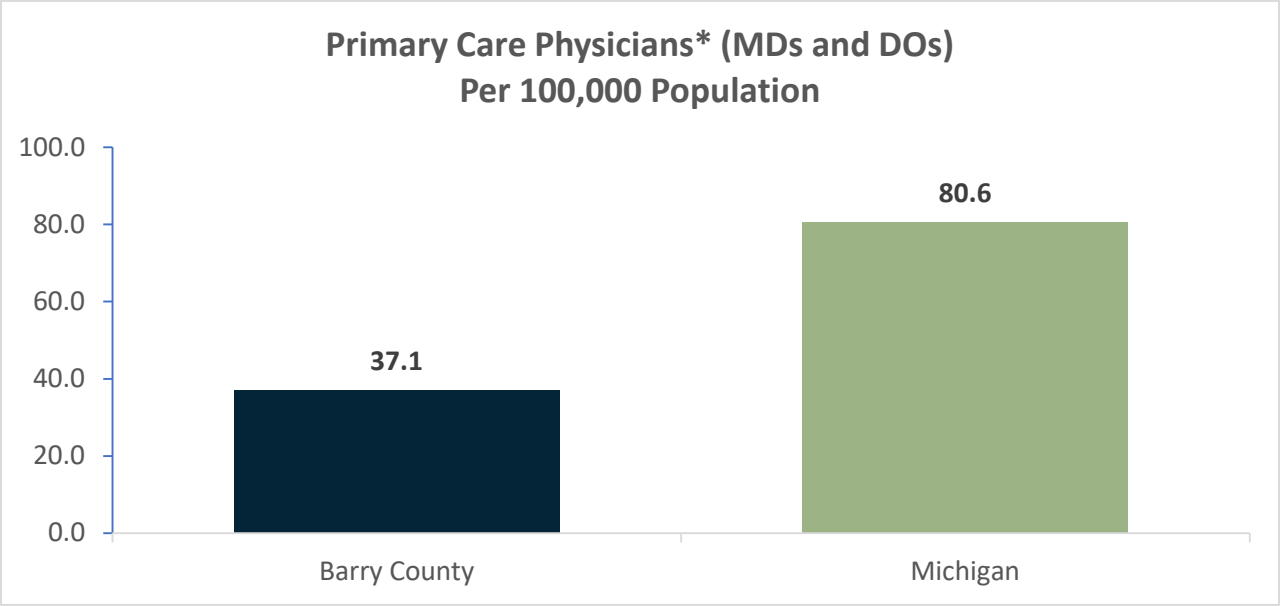
We're **short on docs** - **primary care docs**. Way short. I can't even tell you how many times my friends call and say, "Who's a doctor? Do you have any way to get me into a doctor? Every doctor I've called can't/isn't taking new patients."

Specifically, to behavioral health, I think it's improved. We submit data to the state every quarter on access to services. This last quarter, we were 100% on all those standards on access except one, which we were at 94%. I think we had 43 out of 46, so I would classify that as good. I had heard, in years past, specific to behavioral health, that it was challenging. The one point I would say **as far as access to services that is a challenge** that we **need to work on is access to psychiatric services**, and to be quite frank, that is due to a **lack of resources**, and so we're **trying to have a three-pronged approach** to go forward with. I have a lead on a nurse practitioner once she finishes school, telepsych, and then I do have a new doctor that's coming on board just one day a week. So, hopefully, in the future, that will get better, but that **is a challenge as far as access**. The rest of it is pretty good.

Source: SHP Key Stakeholder Interviews, 2017, Q3: Describe the current state of health care access in the community. (n=5)

Health Care Providers

- There are far fewer primary care physicians (MDs or DOs) per capita in Barry County compared to the state rate. In fact, the state rate for primary care physicians per capita is more than double the rate for Barry County.
- Key Stakeholder and Key Informant comments support this finding.



Source: County Health Rankings, 2015
*Note: Physicians defined as general or family practice, internal medicine, pediatrics, obstetrics or gynecology.

People are not able to obtain a regular PCP because there are not enough doctors in our county. – *Key Informant*

Have not been proactive with recruitment. Have known about the coming shortage for at least five years with **little action early on to head off shortage**. – *Key Stakeholder*

We **don't have enough** [PCPs]. **Wait times are too long**. **One on one is short**. If you don't have a personal relationship with your doctor, I believe your **care is minimalized**. – *Key Informant*

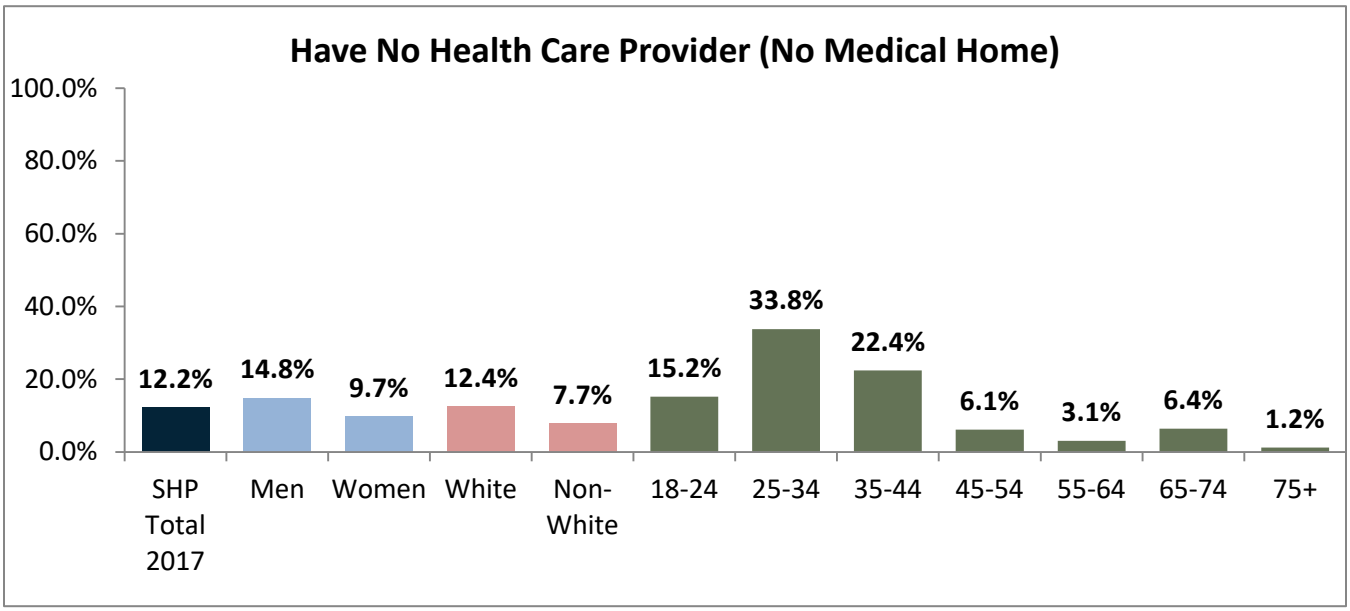
Many providers have retired, will be retiring soon, or have **left the community to practice elsewhere**. There have been **very few new physicians opening practices in our community**. Patients **continue to complain about the difficulty they have getting a primary care doctor** or getting in to see the few that are in town. – *Key Informant*

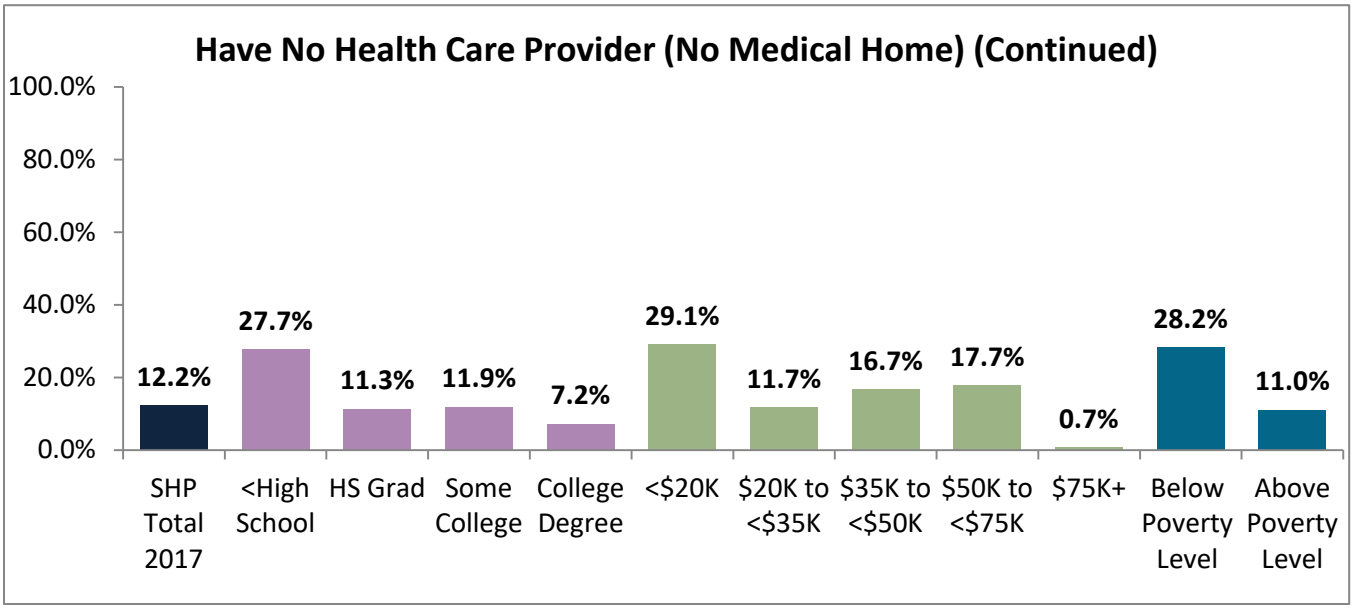
Doctors are retiring and **medical offices are being consolidated and brought away from rural areas**. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q3a: Is there a wide variety/choice of primary health care providers? (n=5); SHP Key Informant Online Survey, 2017, Q1a: Why do you think [lack of providers] is a problem in the community? Please be as detailed as possible. (n=18)

Health Care Providers (Continued)

- Almost one in eight (12.2%) SHP area adults have no personal health care provider, and this rises to 16.7% for underserved adults.
- Men and White adults are more likely to lack a PCP than women and non-White adults, respectively.
- Adults most likely to lack a PCP come from groups that are the youngest (18-44), have no high school diploma, and have incomes less than $20K.

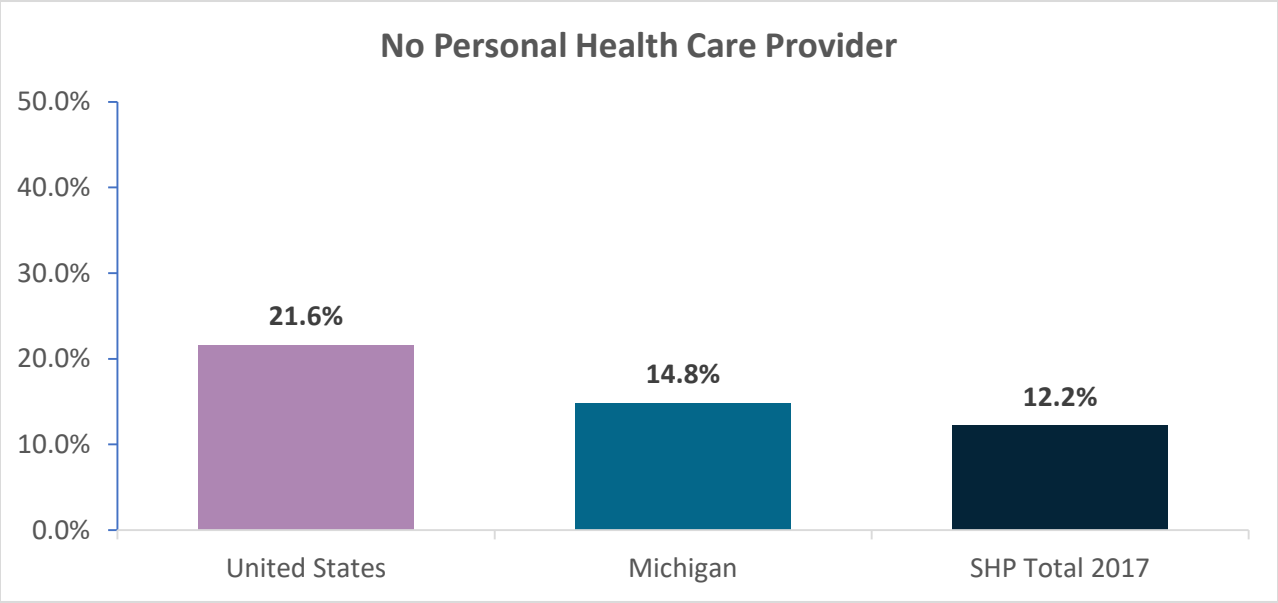




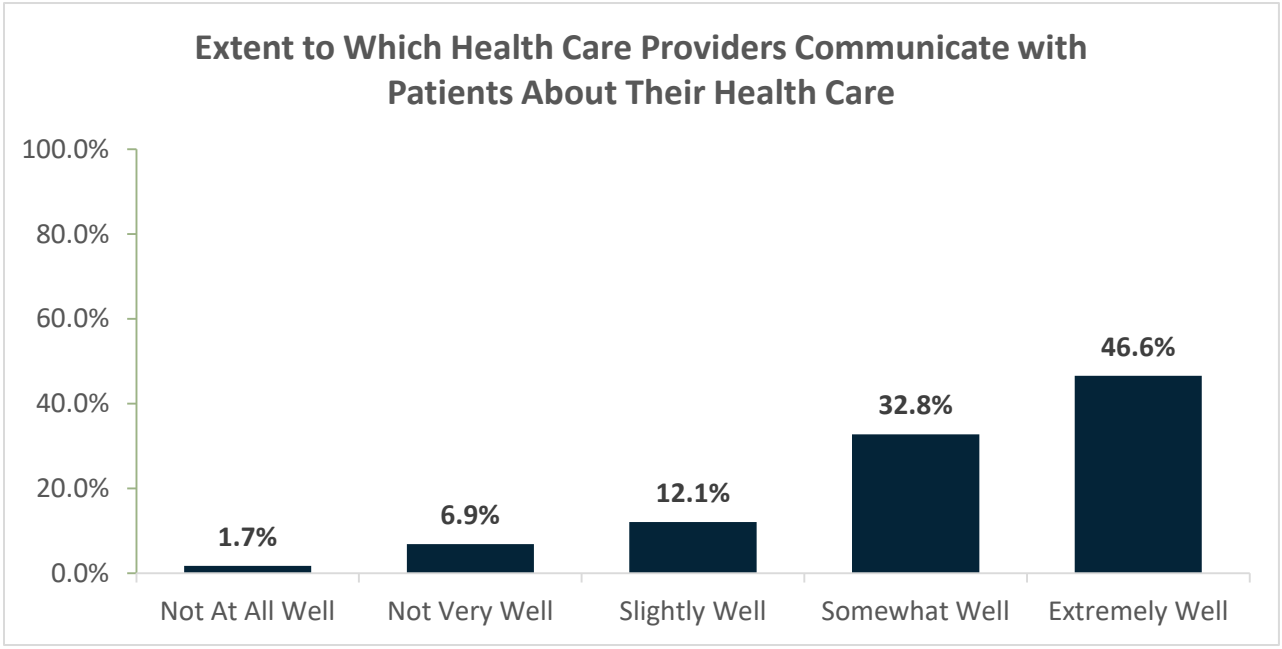
Source: SHP Behavioral Risk Factor Survey, 2017, Q3.4: Do you have one person you think of as your personal doctor or health care provider? (n=594); SHP Underserved Resident Survey, 2017, Q2: Do you and your family have a primary care physician that you can visit for questions or concerns about your health? (n=148)

Health Care Providers (Continued)

- The proportion of SHP area adults with no personal health care provider is lower compared to the state and national proportions.
- A large majority (79.4%) of underserved adults believe health care providers communicate well with them.



Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.



Source: SHP Underserved Resident Survey, 2017, Q8: How well do you feel health care providers communicate with you about your health care? (n=58)

Health Care Providers (Continued)

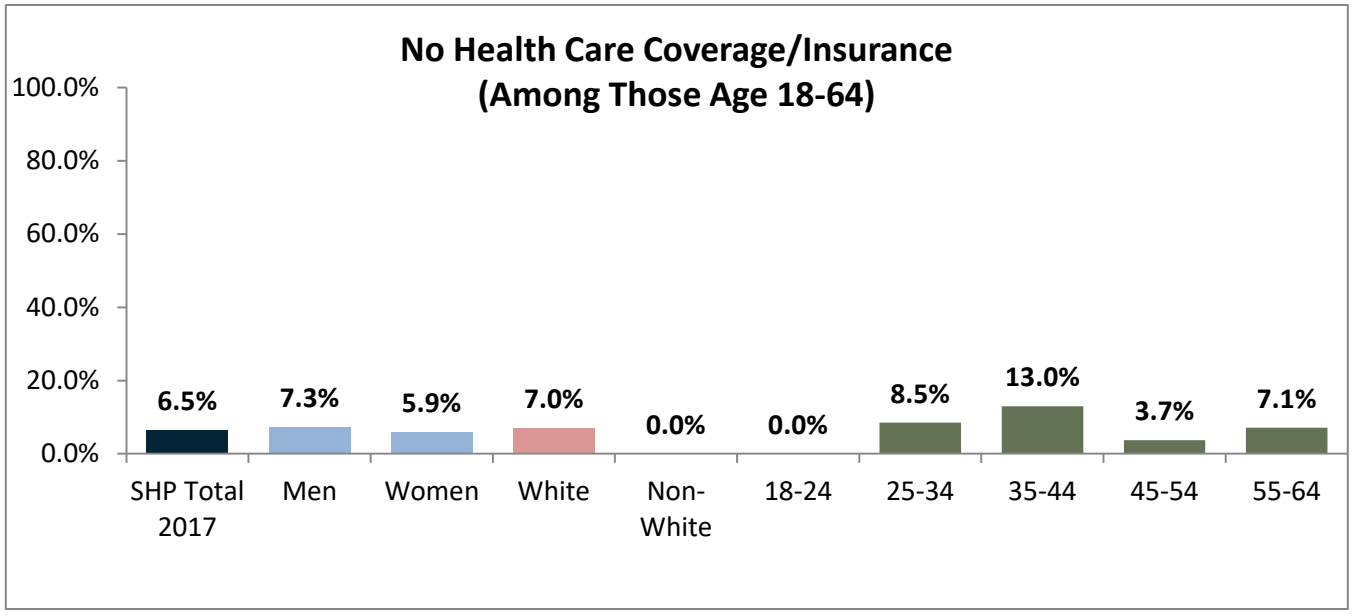
- Underserved residents seek providers who are: good listeners, available and accessible, attentive, trustworthy, honest, friendly, and compassionate. Being a good listener also means they should communicate well; they should ask questions and answer questions and explain things as thoroughly as necessary. Additionally, providers should show genuine concern, have a good bedside manner, and take time to visit with patients without making them feel rushed.

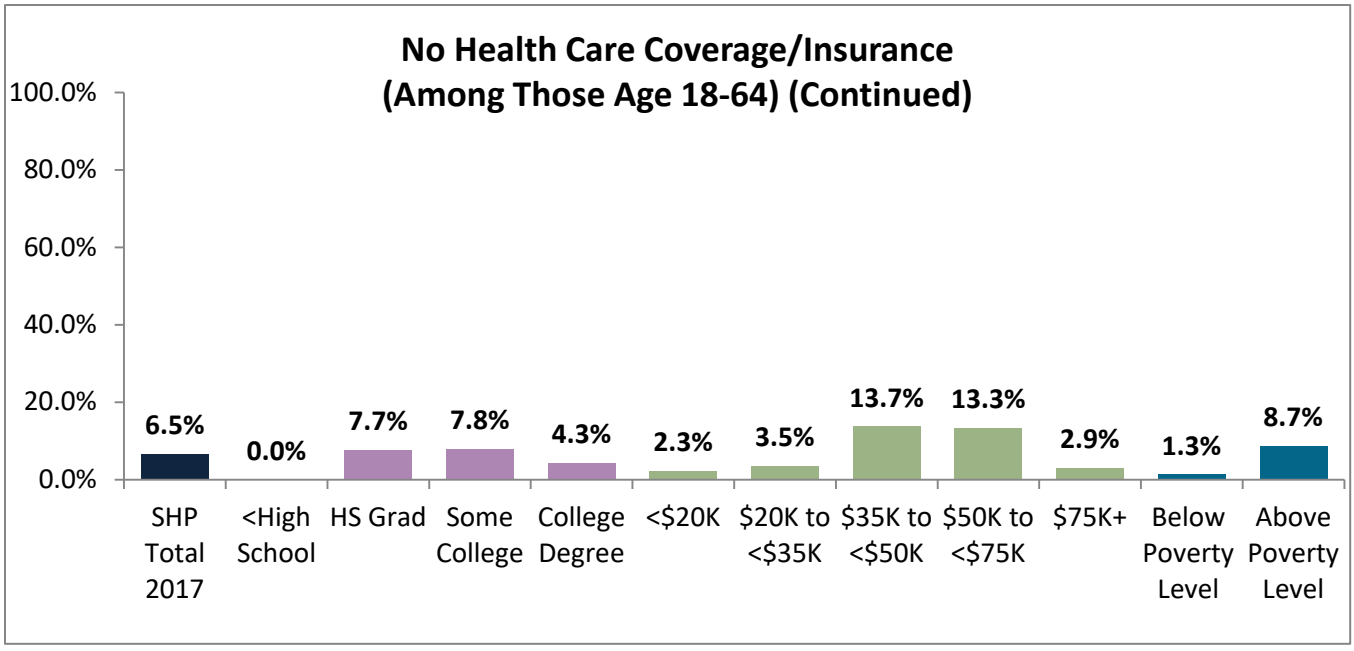
- Moreover, but not mentioned as frequently, are desired provider qualities such as being open to alternative treatment and therapies, having a focus on prevention and wellness, accepting the patient's insurance, and being affordable.

Source: SHP Underserved Resident Survey, 2017, Q3: What is the most important quality you look for in a health care provider? Please be as detailed as possible. (n=47)

Health Care Coverage

- Among SHP area adults aged 18-64, 6.5% have no health care coverage or insurance; this rate is better than the state (12.0%) or national (12.3%) rates.
- White adults are less likely to have health insurance than non-White adults.





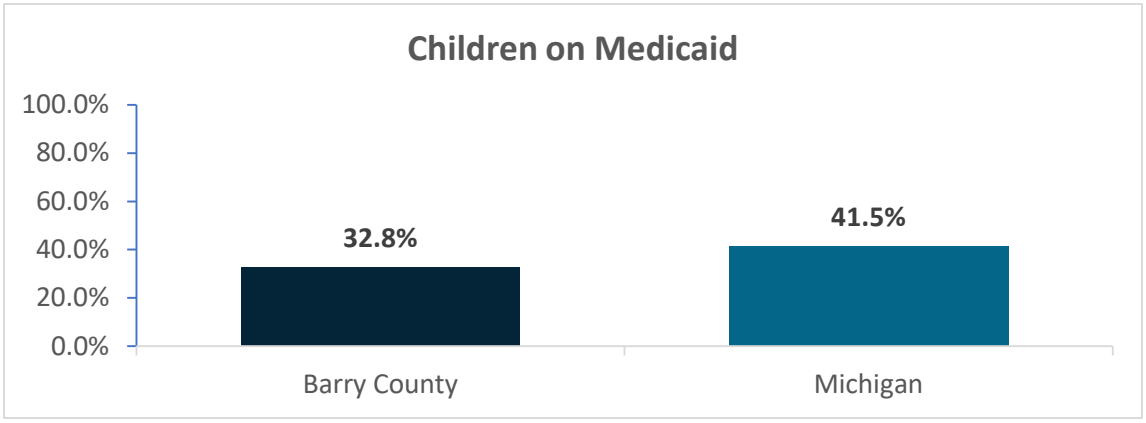
Source: SHP Behavioral Risk Factor Survey, 2017, Q3.1: Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare or Indian Health Service? (n=303). Note: among adults aged 18 to 64.

Health Care Coverage (Continued)

- More often, the primary source of health coverage for all adults in the general population, is a plan purchased through an employer or union.
- This differs markedly from underserved adults, who are more likely, by far, to have Medicare (49.1%) or Medicaid (45.6%) than any other coverage.
- Fewer children are on Medicaid in Barry County compared to Michigan.

	Primary Source of Health Coverage of All Adults	
	BRFS (n=588)	Underserved* (n=57)
A plan purchased through an employer or union	48.5%	10.5%
Medicare	20.5%	49.1%
A plan that you or another family member buys on your own	9.9%	1.8%
Medicaid or other state program	13.1%	45.6%
Tricare, VA, or military	2.7%	5.3%
Medicare supplement	NA	14.0%
None	5.2%	5.3%

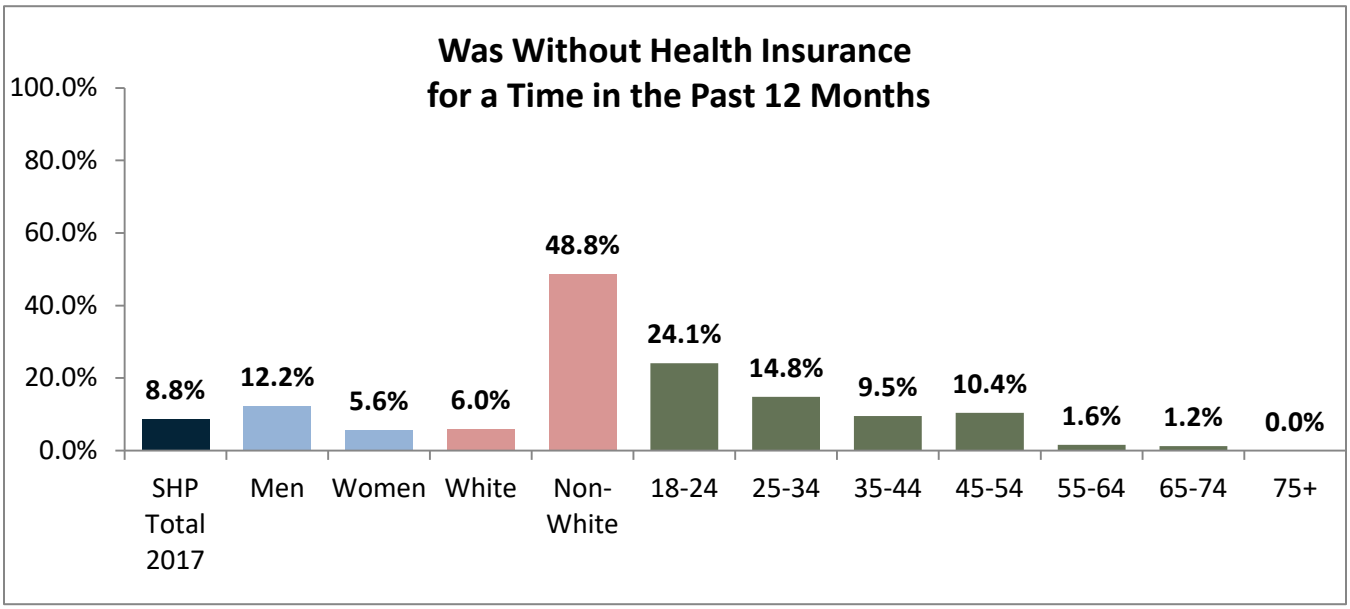
Source: SHP Behavioral Risk Factor Survey, 2017, Q3.2: What is the primary source of your health care coverage? Is it…?; SHP Underserved Resident Survey, 2017, Q9: Which of these describes your health insurance situation? *Note: multiple response question.

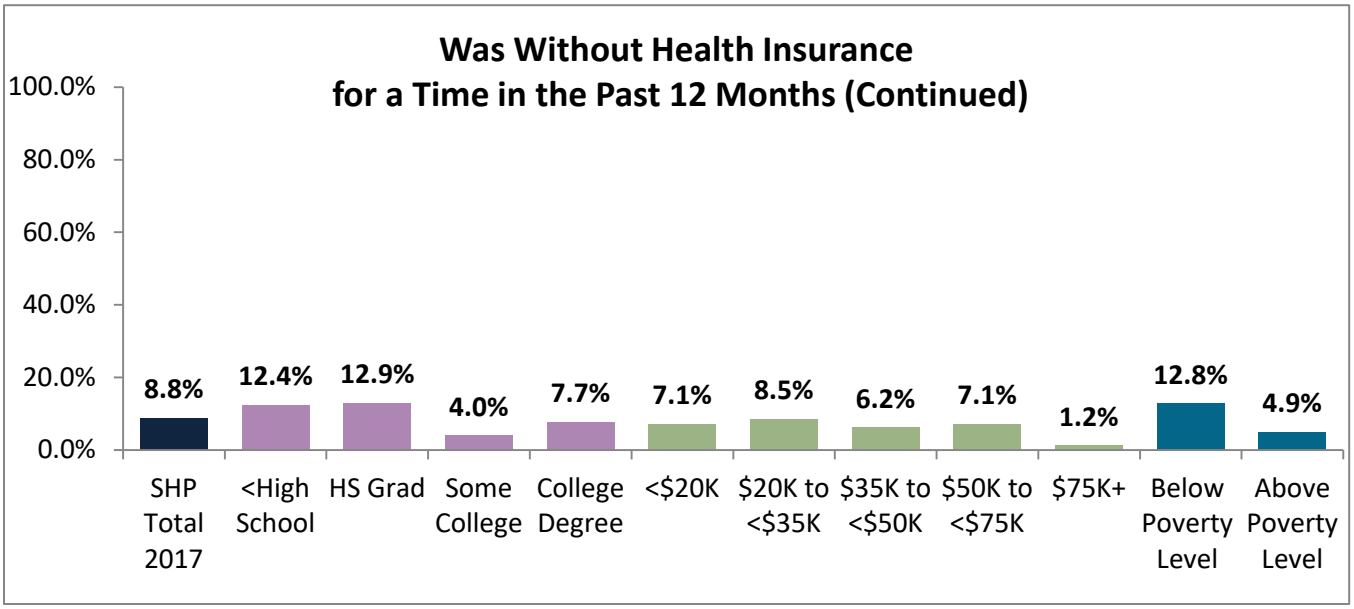


Source: Kids Count Data Book, 2016.

Health Care Coverage (Continued)

- Among area adults with health insurance, 8.8% went without insurance at some time during the past year.
- Those more likely to be without insurance at some point during the past year come from groups that are men, non-White, age 18-34, and/or have less than a college education.

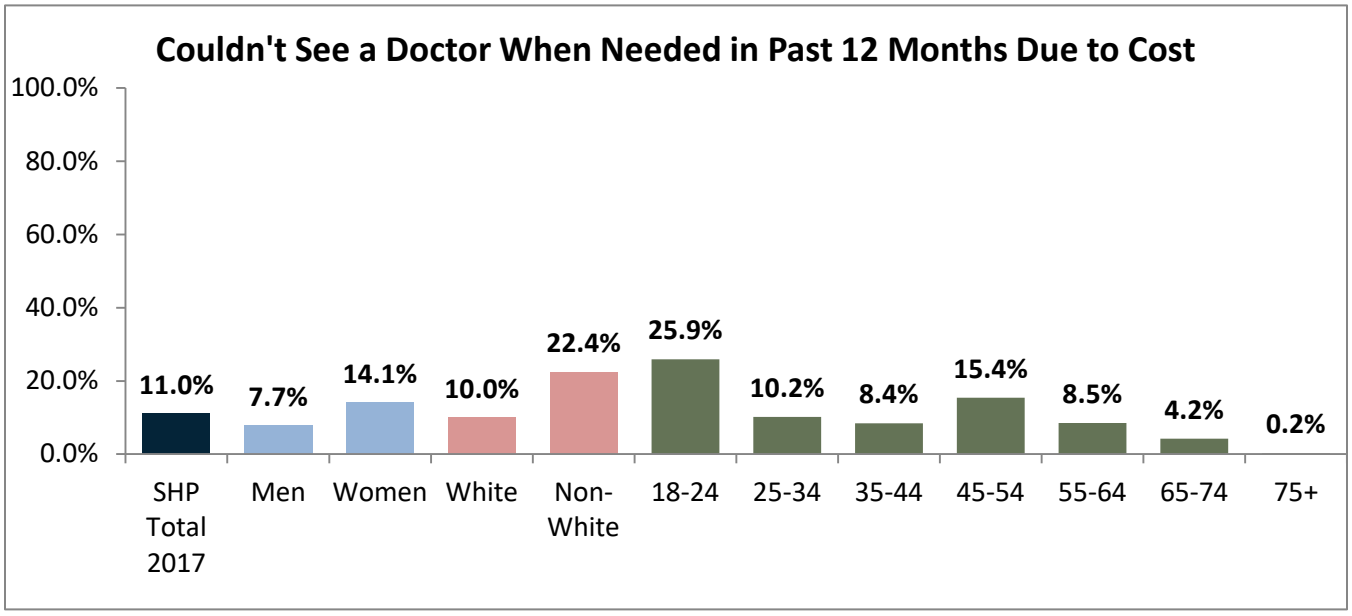


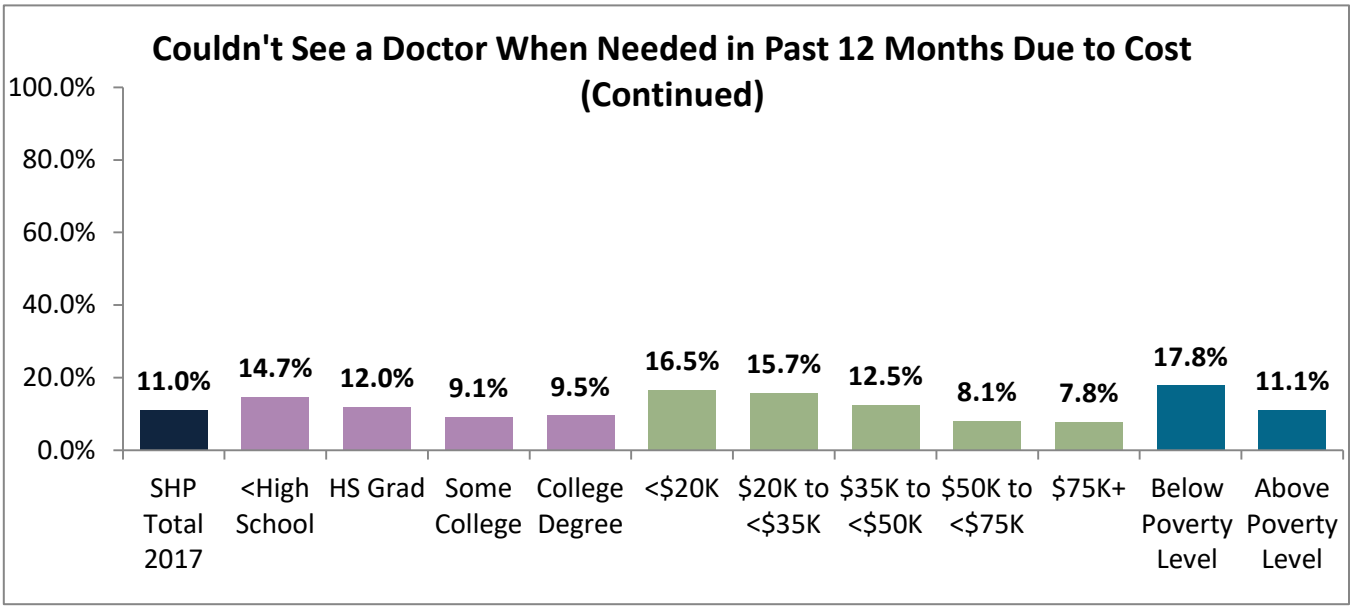


Source: SHP Behavioral Risk Factor Survey, 2017, Q3.3: In the past 12 months was there any time when you did not have any health insurance or coverage? (n=575)
Note: among all adults who had health insurance.

Problems Receiving Health Care

- Among all SHP area adults, 11.0% have foregone health care in the past year due to cost; this rate is slightly lower than the state (12.7%) or national (12.0%) rates.
- Forgoing needed care is more common in women and non-White adults compared to men and White adults, respectively.
- It is also most common among adults with incomes less than $50K and those age 18-24.

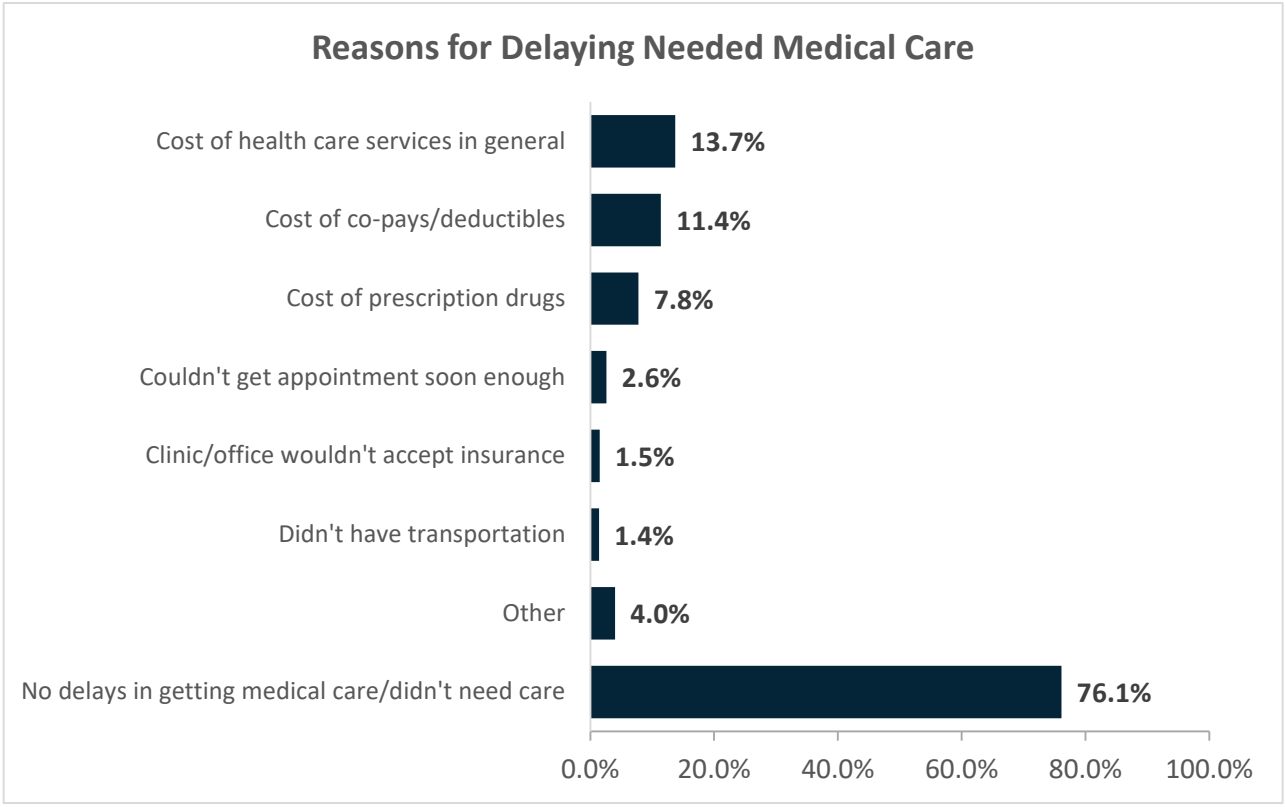




Source: SHP Behavioral Risk Factor Survey, 2017, Q3.5: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost? (n=594)

Problems Receiving Health Care (Continued)

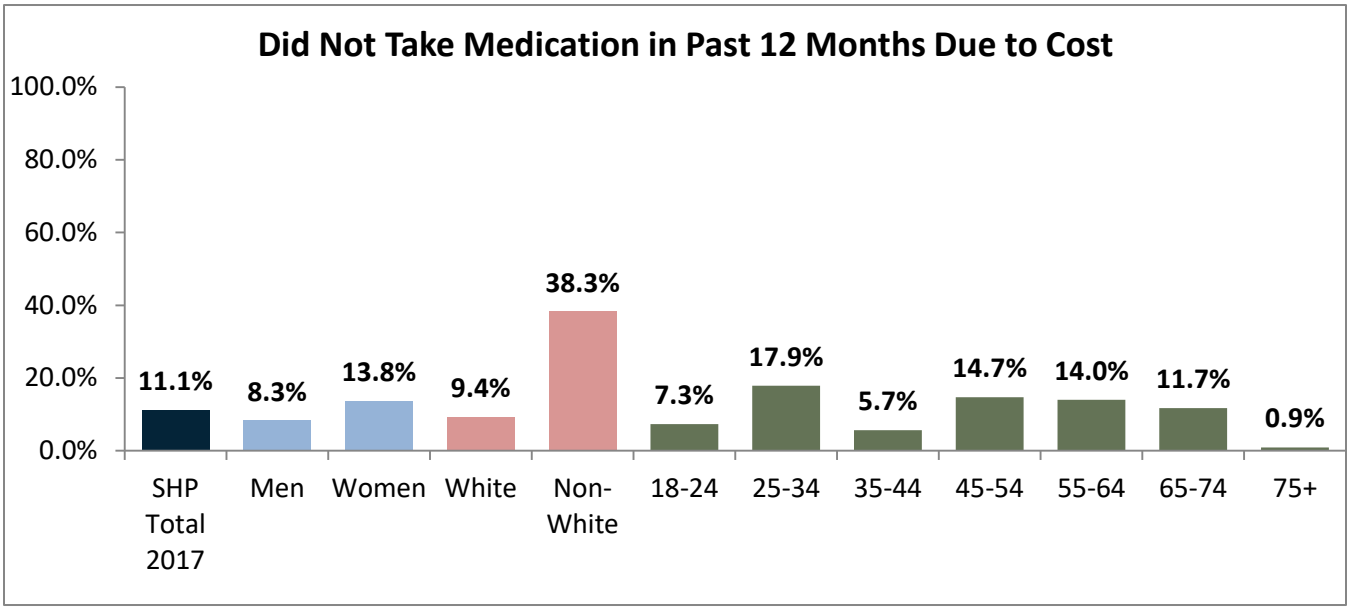
Three-fourths (76.1%) of area adults did not experience delays in receiving needed medical care in the past year, but those who did they cite general health care costs; an inability to afford out-of-pocket expenses such as co-pays and deductibles; and the cost of prescription drugs as top barriers to needed care.

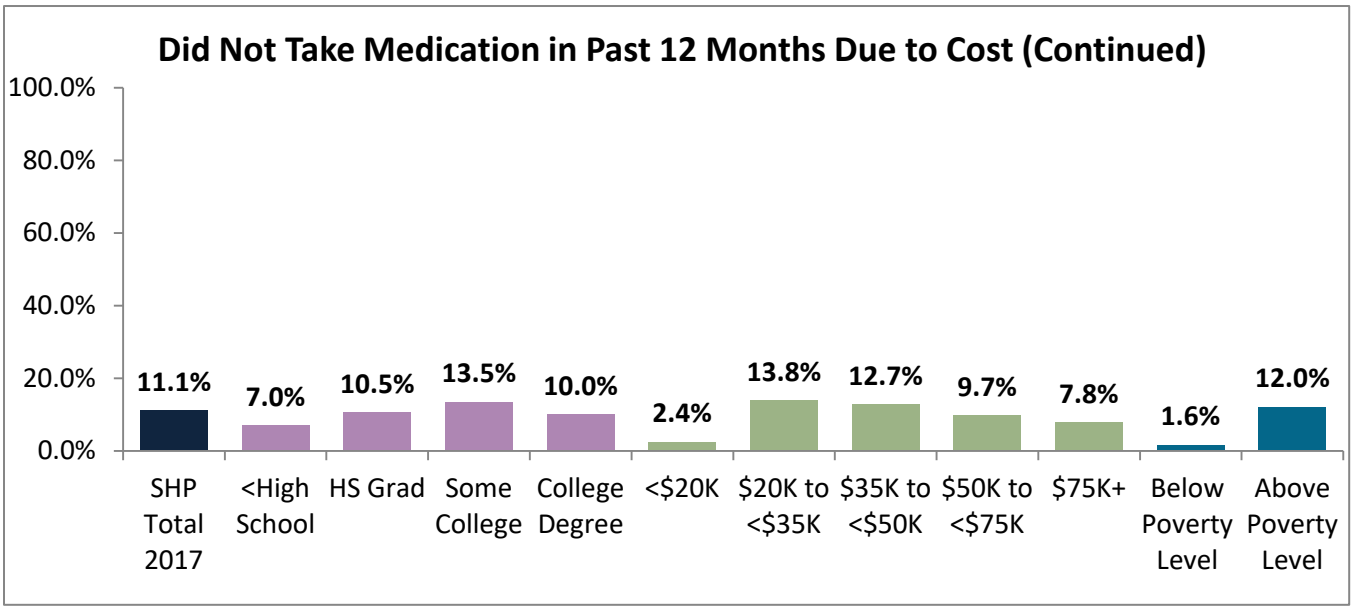


Source: SHP Behavioral Risk Factor Survey, 2017, Q3.6: There are many reasons why people delay getting needed medical care. Have you delayed getting needed medical care for any of the following reasons in the past 12 months? (n=592)

Problems Receiving Health Care (Continued)

- -Among area adults, 11.1% did not take their medication as prescribed due to costs, and this proportion rises to 40.0% for underserved adults.
- Prescription costs tend to impact women more than men, and non-White adults more than White adults.

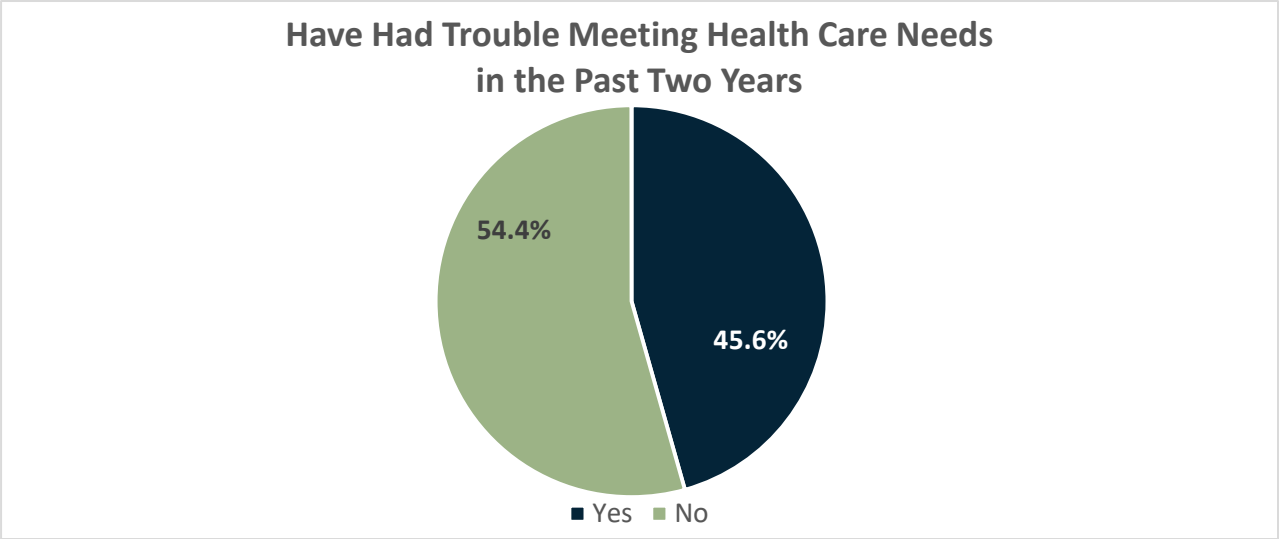




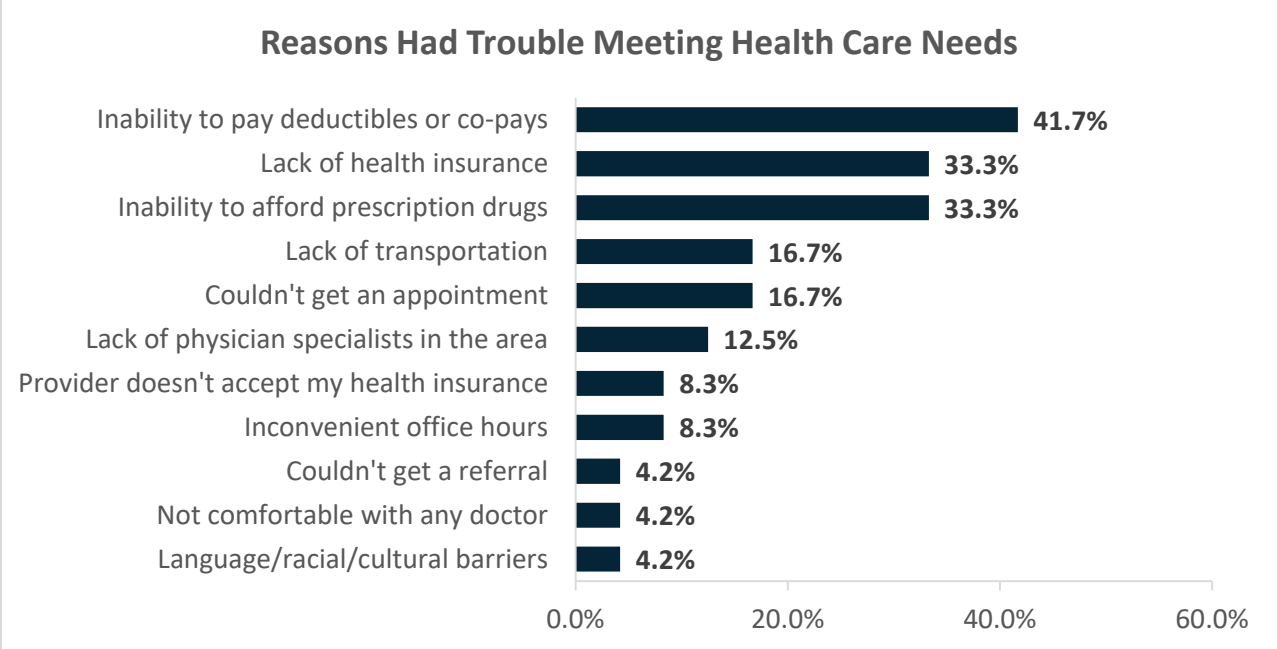
Source: SHP Behavioral Risk Factor Survey, 2017, Q3.7: Was there a time in the past 12 months when you did not take your medication as prescribed, such as skipping doses or splitting pills, in order to save on costs? Do not include over-the-counter (OTC) medication. (n=594); Underserved Resident Survey, 2017, Q12: Have you ever skipped your medication, or stretched your supply of medication, in order to save costs? (n=60)

Problems Receiving Health Care (Continued)

- More than four in ten (45.6%) underserved adults have had trouble meeting their own or their family's health care needs in the past two years.
- Common barriers for those who had trouble meeting these needs were out-of-pocket expenses (co-pays, deductibles, prescription drugs), lack of insurance, the cost of medication, and transportation.



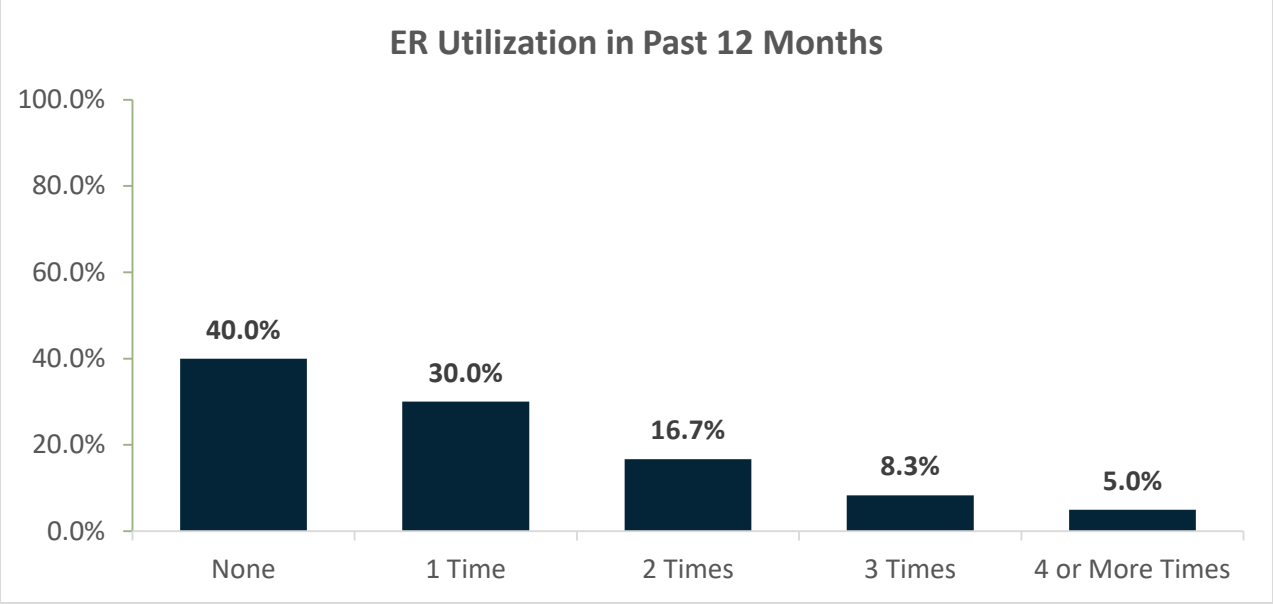
Source: SHP Underserved Resident Survey, 2017, Q10: In the past two years, was there a time when you had trouble meeting the health care needs of you and your family? (n=57).



Source: SHP Underserved Resident Survey, 2017, Q11: What are some of the reasons you had trouble meeting the health care needs of you and your family? (n=24). Note: among those who had trouble meeting health care needs of themselves/their family.

Problems Receiving Health Care (Continued)

- Among underserved adults, six in ten (60.0%) report either they or an immediate family member have visited the Emergency Room (ER) in the past year, and three in ten (30.0%) visited two or more times.
- Key Stakeholder and Key Informant comments support the notion that ER/ED use occurs far more often than is warranted either because the circumstances are avoidable or they are the result of mental health and/or substance abuse issues for which treatment is lacking.



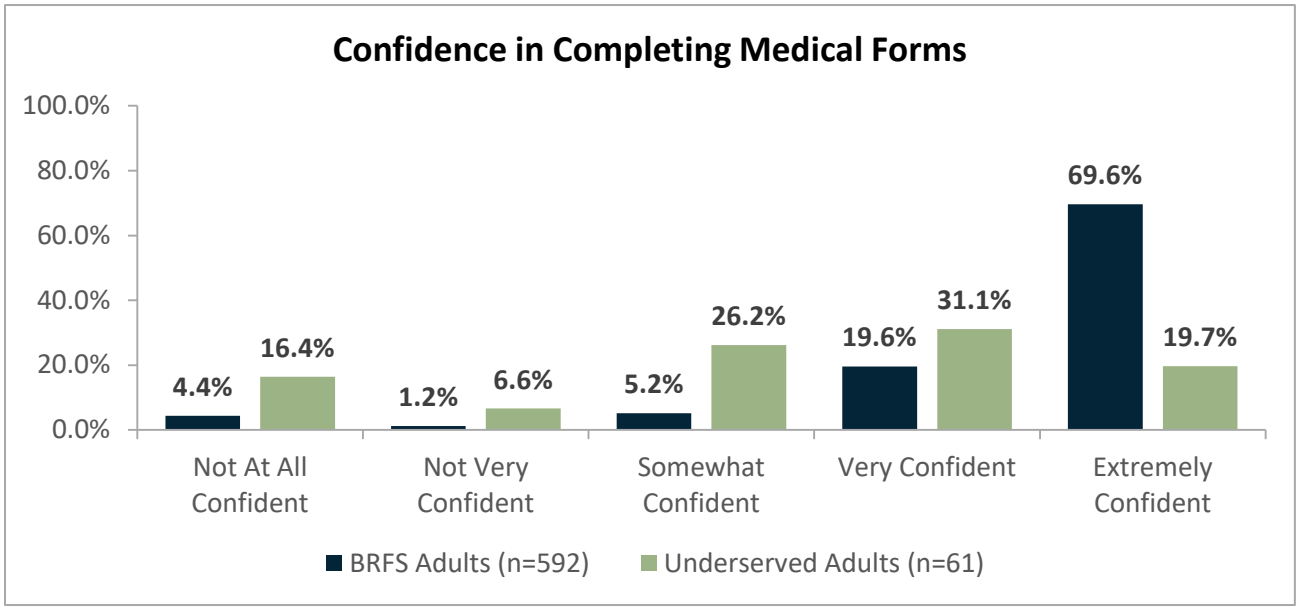
Source: SHP Underserved Resident Survey, 2017, Q13: In the past 12 months, how many times have you, or an immediate family member, visited the Emergency Room (ER)? (n=60)

Cherry Street and the Free Clinic are available to those who can't afford healthcare but doesn't address **those in the middle**. Many feel they can't utilize those services or scheduling is an issue. They **use the Emergency Room for their healthcare**. – *Key Informant*

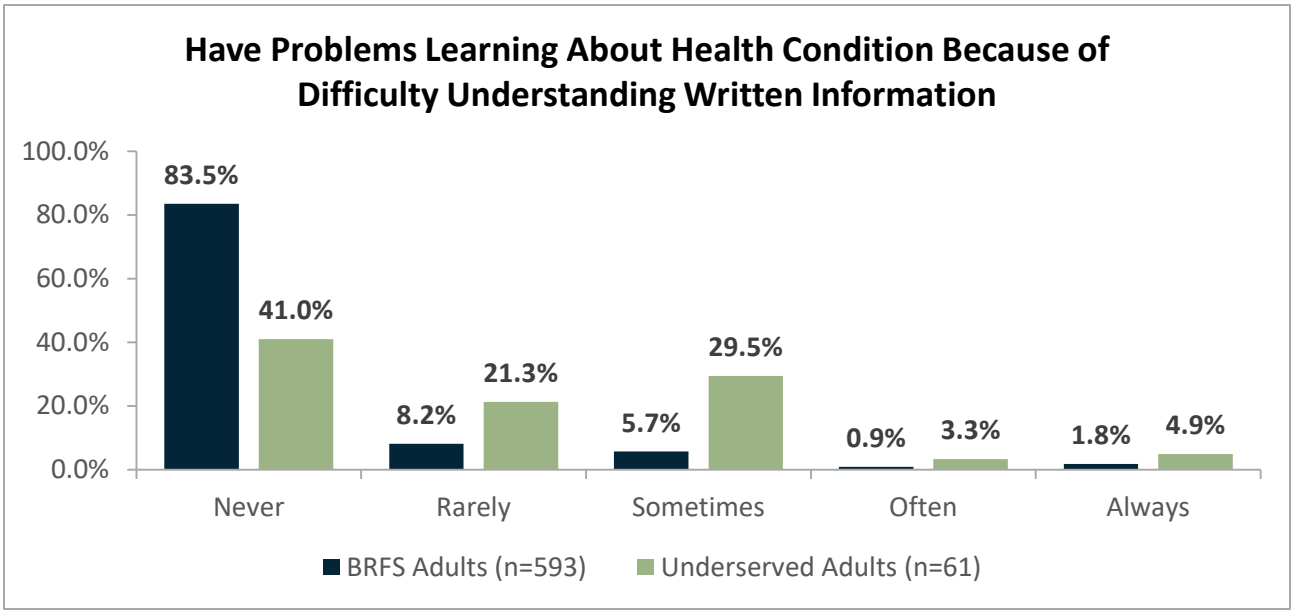
Doctors are retiring, some are not accepting new patients and **people are not educated to realize that preventative care is a better self-care practice than waiting until emergency care is necessary** (an ounce of prevention is worth a pound of cure).

Health Literacy

Underserved adults are more challenged when it comes to health literacy compared to adults in the general population. For example, 89.2% adults in the general population are very or extremely confident in completing medical forms compared to 50.8% of underserved adults.



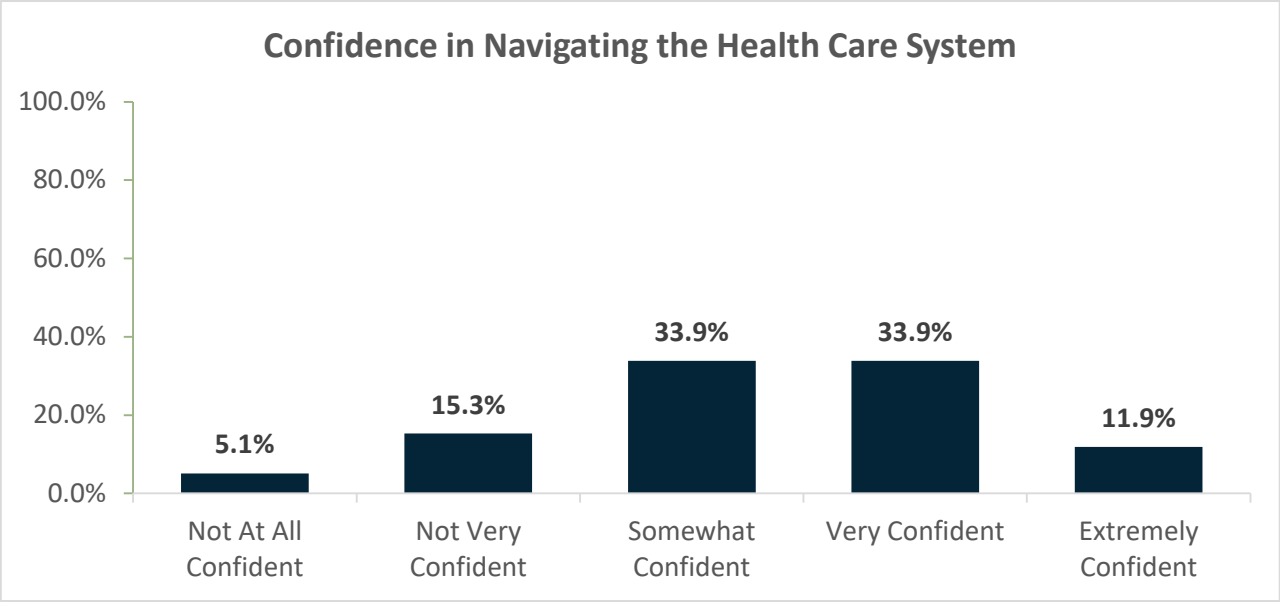
Source: SHP Behavioral Risk Factor Survey, 2017, Q9.1/SHP Underserved Resident Survey, 2017, Q19: How confident are you in filling out medical forms by yourself? For example, insurance forms, questionnaires, and doctor's office forms. Would you say….?



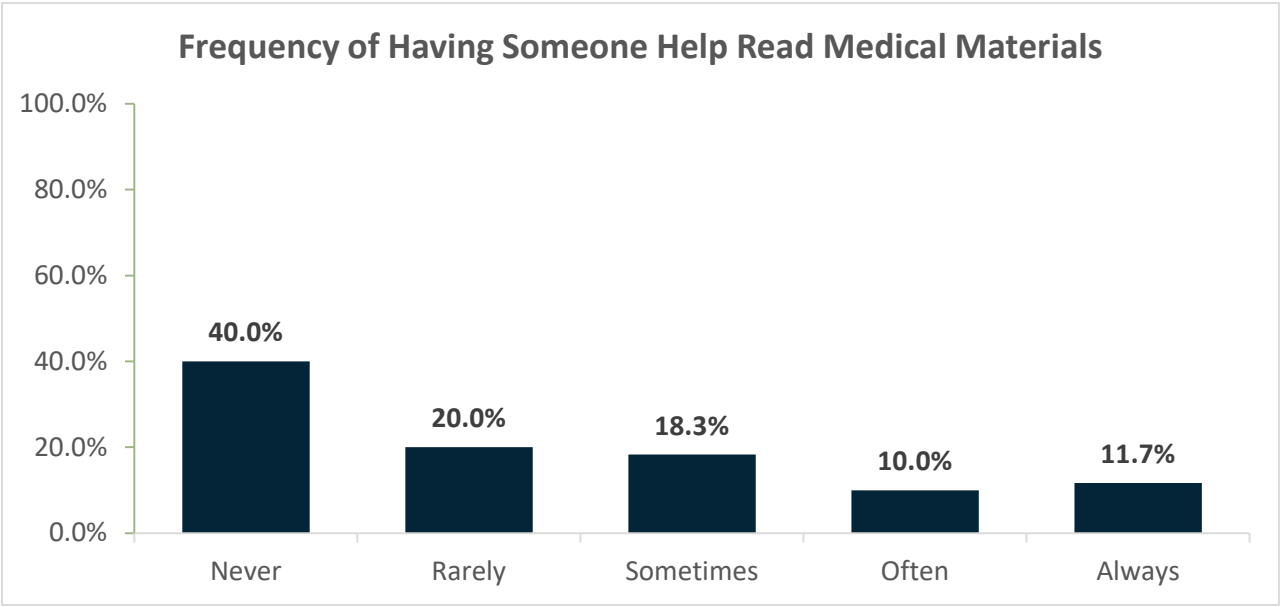
Source: SHP Behavioral Risk Factor Survey, 2017, Q9.2/SHP Underserved Resident Survey, 2017, Q21: How often do you have problems learning about your health condition because of difficulty in understanding written information? Would you say…?

Health Literacy (Continued)

- One in five (20.4%) underserved adults are not confident in navigating the health care system and an additional 33.9% are only somewhat confident.
- Further, 40.0% at least sometimes require someone to help them read medical materials.



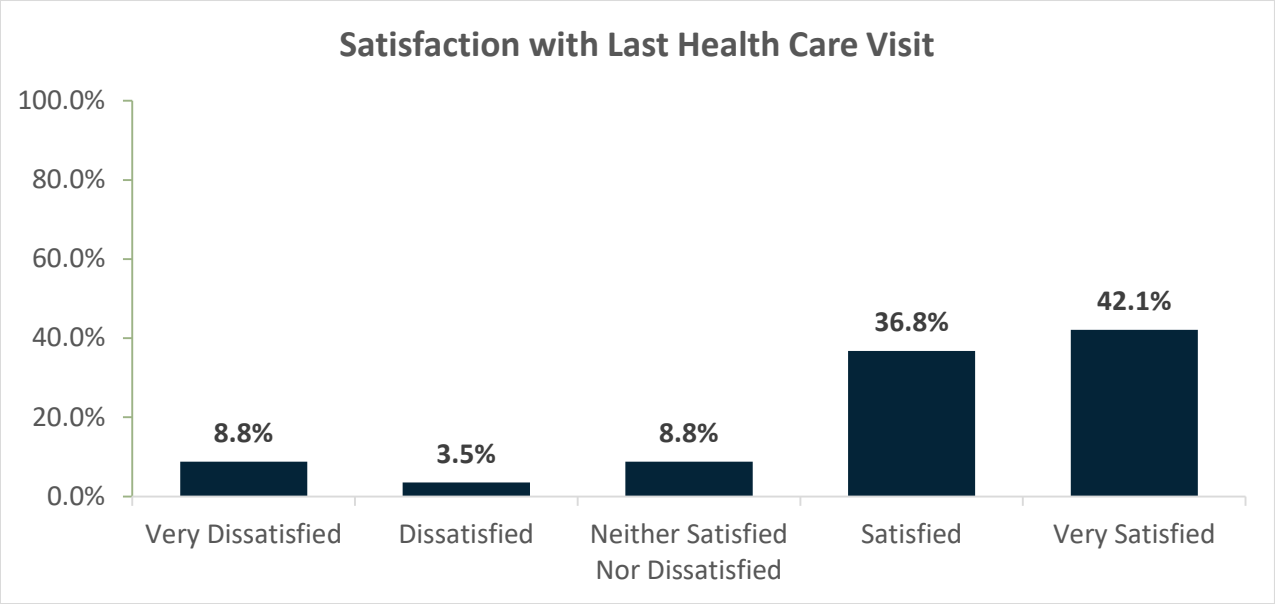
Source: SHP Underserved Resident Survey, 2017, Q18: How confident are you that you can successfully navigate the health care system? By navigating the health care system, we mean knowing: how to use your health plan or insurance, what your plan covers, how to read your statements, where to go for services, how to find a primary care provider, what your options are for treatment, etc. Would you say…? (n=59)



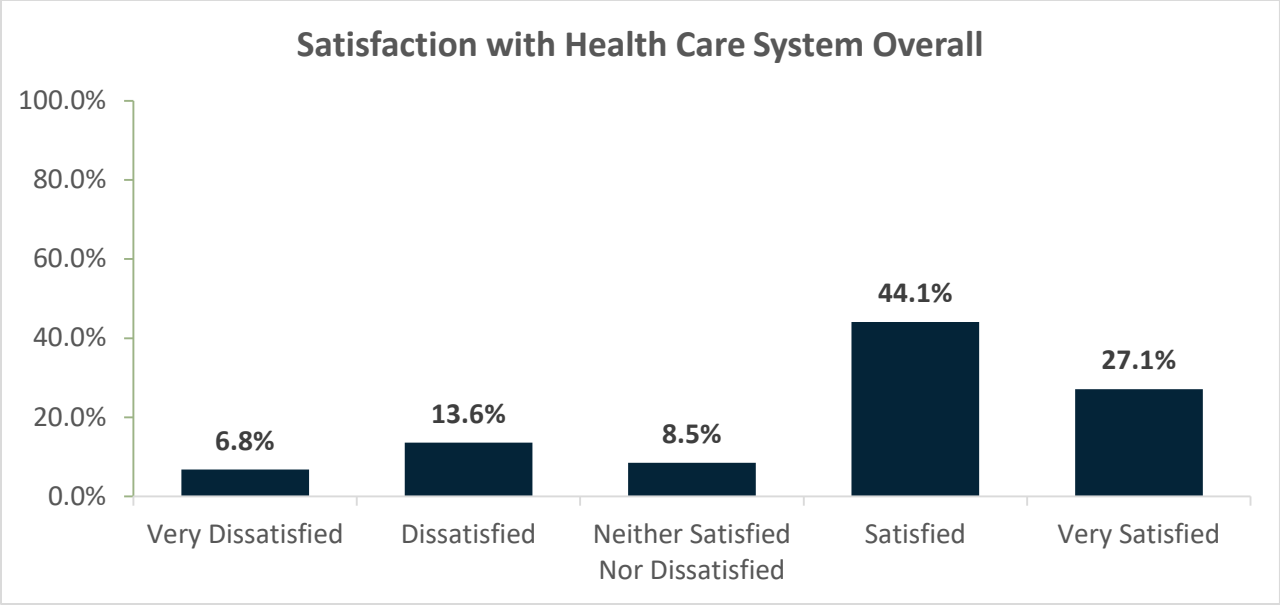
Source: SHP Underserved Resident Survey, 2017, Q20: How often do you have someone help you read medical materials? For example, a family member, friend, caregiver, doctor, nurse, or other health professional? Would you say…? (n=60)

Satisfaction with Health Care System

The vast majority (78.9%) of underserved adults are satisfied with their last health care visit and three-fourths (71.2%) are satisfied with the health care system overall.



Source: SHP Underserved Resident Survey, 2017, Q4: How satisfied were you with your last visit for health care? (n=57)



Source: SHP Underserved Resident Survey, 2017, Q6: How satisfied are you with the health care system overall? (n=59)

Satisfaction with Health Care System (Continued)

Underserved residents who are satisfied with their last health care visit cite the quality of care, feeling comfortable with the relationship because the provider is personable, shows concern, is attentive, and treats patients like family, and having providers who find solutions to their problems, as reasons for satisfaction.

Quality of care	They were **helpful**, **thorough**, **showed concern**, **friendly**, **smiled**. Doctors were **thorough** and did all that was needed. He **listens to me**, he **helps keep me healthy**. They **did a good job** and they were **quick** about. I had to have open-heart surgery at Melter Heart Center and **had excellent care**.
Have a history/good relationship	My doctor is very **friendly**, **great sense of humor** with a lot of **laughing** – **enjoyable**. My **doctor is like part of our family**. He **cares about all of my children** and my doctor **shows concern for me as well**. I have been **going to my same doctor for years we have developed a relationship**.
Attentive providers	She was **nice**, **thorough**, and **took time to listen to my concerns**.
Offers solutions/meet needs	He has **always been accurate in his diagnosis**.

Source: SHP Underserved Resident Survey, 2017, Q5: (If satisfied with last health care visit) Why do you say that? Please be as detailed as possible. (n=46)

Satisfaction with Health Care System (Continued)

Conversely, those dissatisfied with their last health care visit cite the lack of quality of care, including over-prescribing, their insurance plan's failure to cover costs, and an inability to get a needed referral.

Quality of care	Too many **unanswered questions**. **Too many doctor changes**. **Too many drugs**.
Insurance issues	I have an annual wellness checkup and an annual physical with $0 copay which I make appointments back to back for. **This year my insurance wouldn't cover back-to-back appointments** so my **doctor charged me my regular visit copay** because I asked two questions about my medication. That should have been covered under my annual physical! They **wouldn't cover anything**.
Couldn't get referral/see physician they wanted	Because I **wanted to be checked by a heart doctor but wasn't given a referral**. They had me take a test, which proved nothing, plus it **wasn't the doctor it was a PA**.

Source: SHP Underserved Resident Survey, 2017, Q5: (If dissatisfied with last health care visit) Why do you say that? Please be as detailed as possible. (n=11)

Satisfaction with Health Care System (Continued)

Above all, underserved residents who are satisfied with the health care system overall value the quality of care they receive. They also appreciate their health insurance if the network includes preferred providers. It's worth noting that many people who are satisfied with the health care system overall cited reasons that were far from glowing (e.g., have no complaints, haven't had problems) which may say something about consumers low expectations for health care.

Quality of care	I feel I'm very **well taken care of**. **Quick** and **understanding** staff. Very **thorough** checkup. Doctors are very **thorough**. They **do a good job**.
Neutral (not glowing) responses	**Never had a problem** getting health care services. **No problems**. I have **no complaints**. It **seems ok** to my family and I.
Good insurance	**Have most providers in network**, seems to **help things moving forward** when a problem arises.

Source: SHP Underserved Resident Survey, 2017, Q7: (If satisfied with the health care system) Why do you say that? Please be as detailed as possible. (n=35)

Satisfaction with Health Care System (Continued)

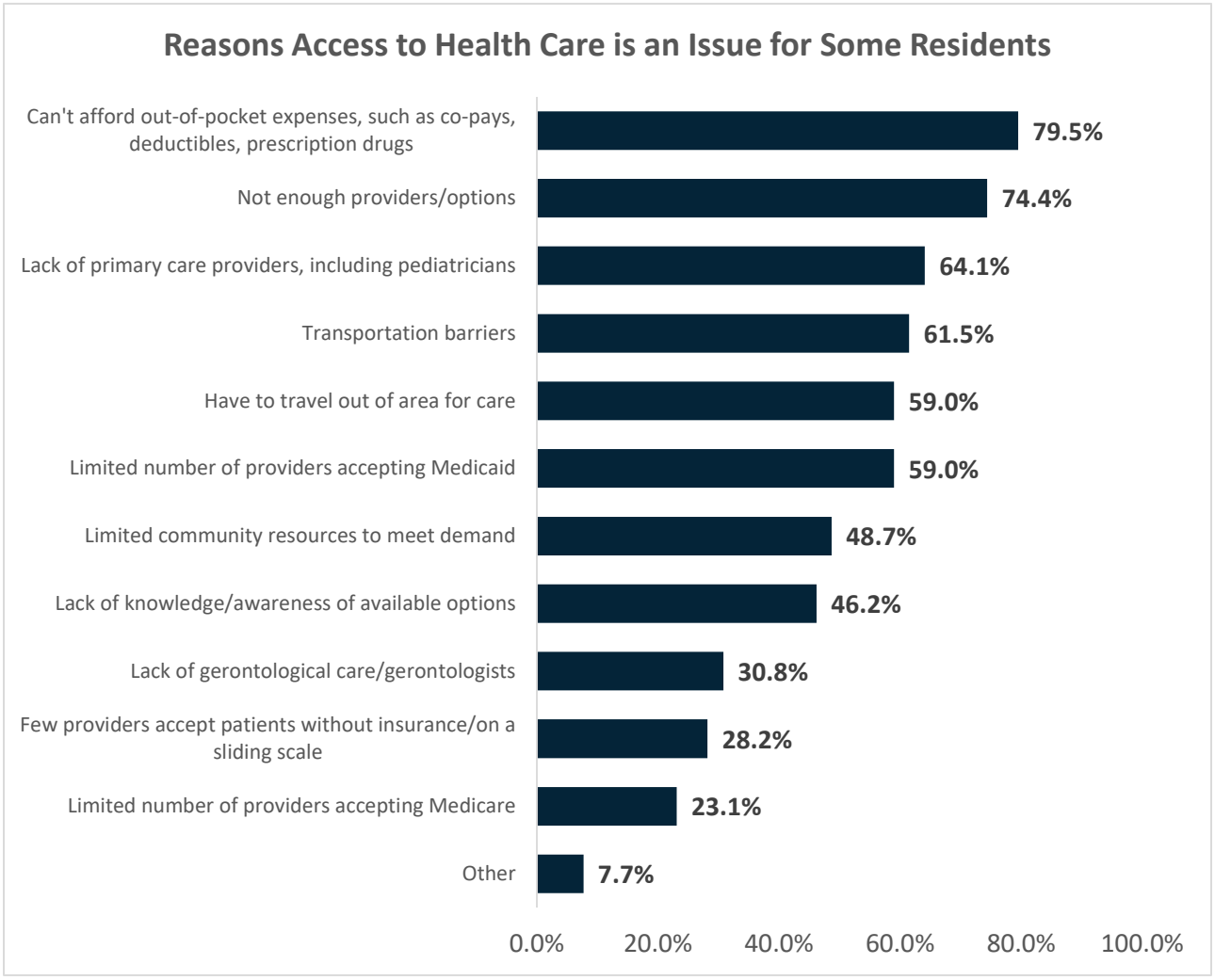
Conversely, those dissatisfied see a system that is too costly, see too many people uninsured or underinsured, have received unexpected bills many months after treatment, think providers are over-prescribing medication, and some have had a hard time receiving needed treatment.

Cost	I think the **cost of health care and prescriptions are much too high**. Sometimes I **can't afford my medicine**! **Too expensive**! **Cost way too much**.
Uninsured/underinsured	There are **way too many people without health care**. Some **members not fully covered by Medicare**.
Problems with billing	I was sent a **bill** for some outpatient surgery a year after it was done...for $12,000! This **should have been written off after my insurance paid** what it was contracted to pay! I didn't get any bills for any services **until 6 months to a year had passed**!
Incorrect/negligent treatment/over-prescribing	**Prescribe pills too often without discussing side effects or alternatives**. **Limited to discussing one or two issues in a short visit**, when I have more complicated issues to discuss.
Problems receiving treatment	It's **hard to get your meds and the treatment you need**.

Source: SHP Underserved Resident Survey, 2017, Q7: (If dissatisfied with the health care system) Why do you say that? Please be as detailed as possible. (n=12)

Barriers to Health Care

- More than nine in ten (95.1%) Key Informants believe access to health care is a critical issue for some residents in the community.
- Three-fourths, or more, believe the top two barriers to care for this group are an inability to afford out-of-pocket expenses such as co-pays, deductibles, spend-downs, and prescription drugs, as well as a lack of providers, especially primary care providers.
- Other major barriers are transportation, limited providers accepting Medicaid, limited community resources to meet demands, and a lack of awareness of available options.

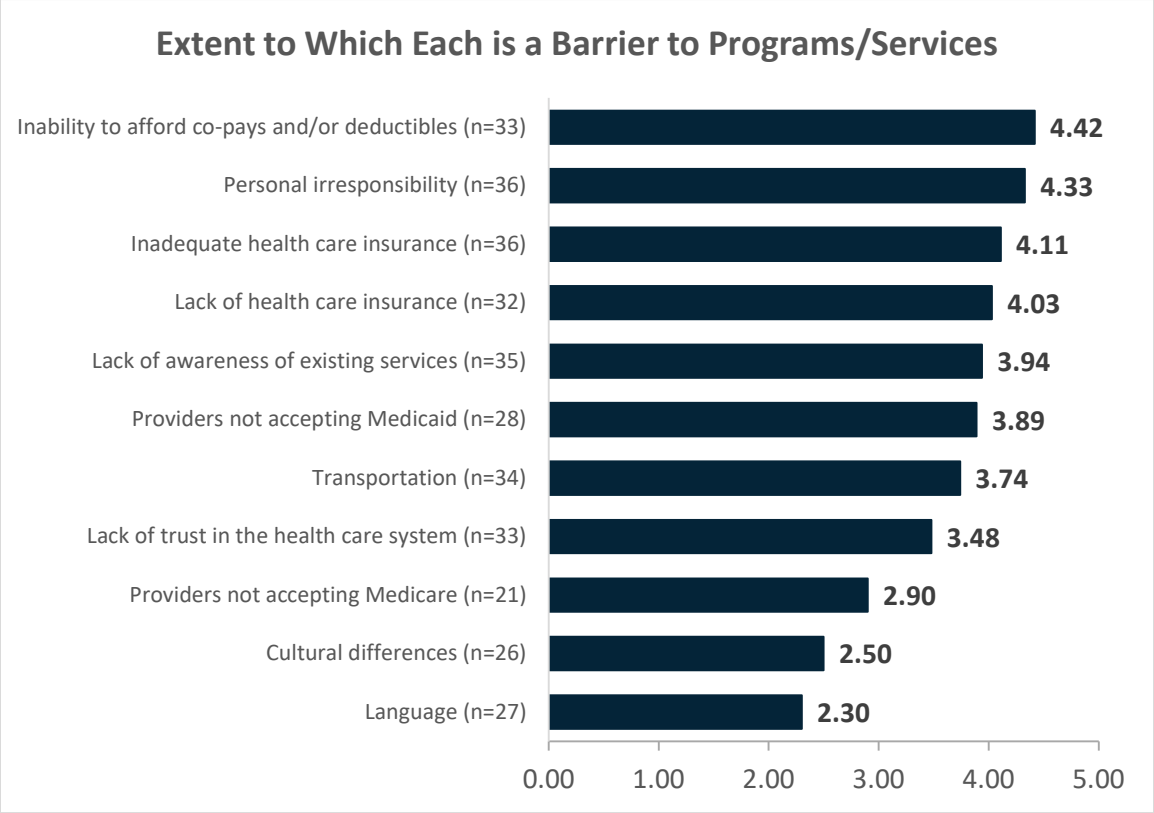


Source: SHP Key Informant Online Survey, 2017, Q4: Do you believe that access to health care is a critical issue for some residents in your community? (n=41); Q4a (If yes) In your opinion, why is access to health care an issue for some residents in your community? (n=39)

Barriers to Health Care (Continued)

- When rating the extent to which something is a barrier to health care, Key Informants, place an inability to afford out-of-pocket costs at the top, followed by personal irresponsibility, inadequate insurance, lack of insurance, lack of awareness of existing programs/services, and providers not accepting Medicaid.

- Key Stakeholder and Key Informant comments highlight out-of-pocket costs and lifestyle choices below.



Source: SHP Key Informant Online Survey, 2017, Q8: To what extent is each of the following a barrier or obstacle to health care programs and services? Note: 1-5 scale, where 1=not at all, 2=not very much, 3=slightly, 4=somewhat, 5=very much.

With the new health care system, what I'm seeing is that there are people who have coverage, but we've got that whole **ALICE population** - the **asset limited income** - that are **really, really struggling with their copays** - the **deductibles** and copays. – *Key Stakeholder*

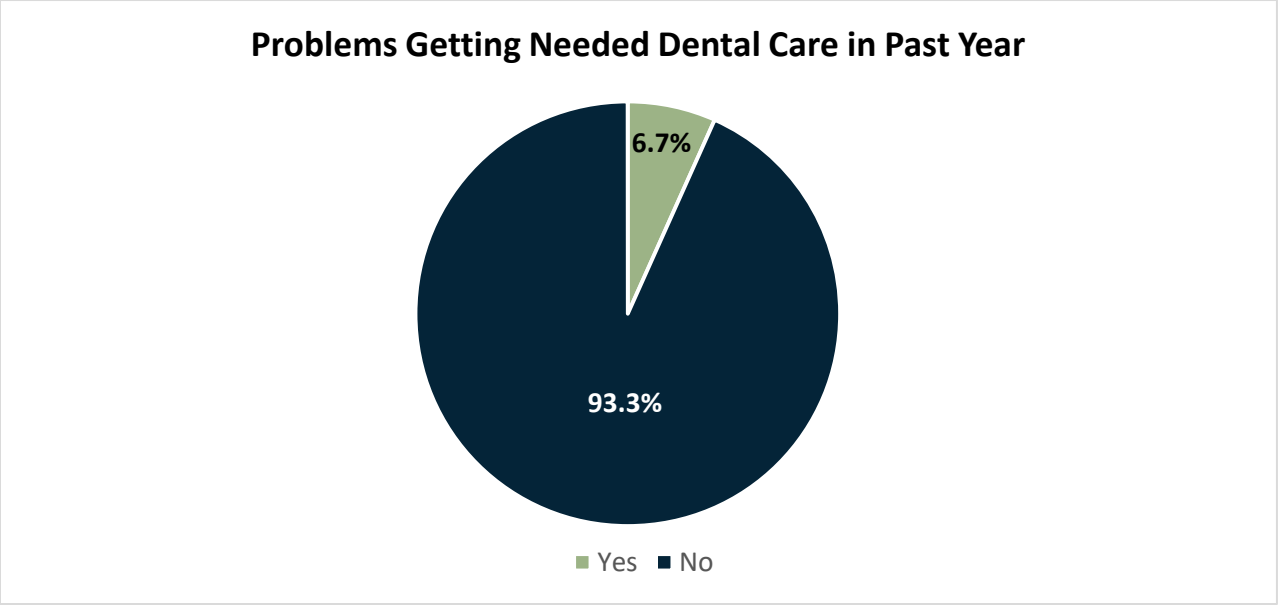
Insurances rates are going up along with deductibles and co-pays that are also going up, so **people are putting off health issues because they have less money to spend**. – *Key Informant*

I feel **people in our community lack education/knowledge on how to realistically help themselves through positive lifestyle changes**. – *Key Informant*

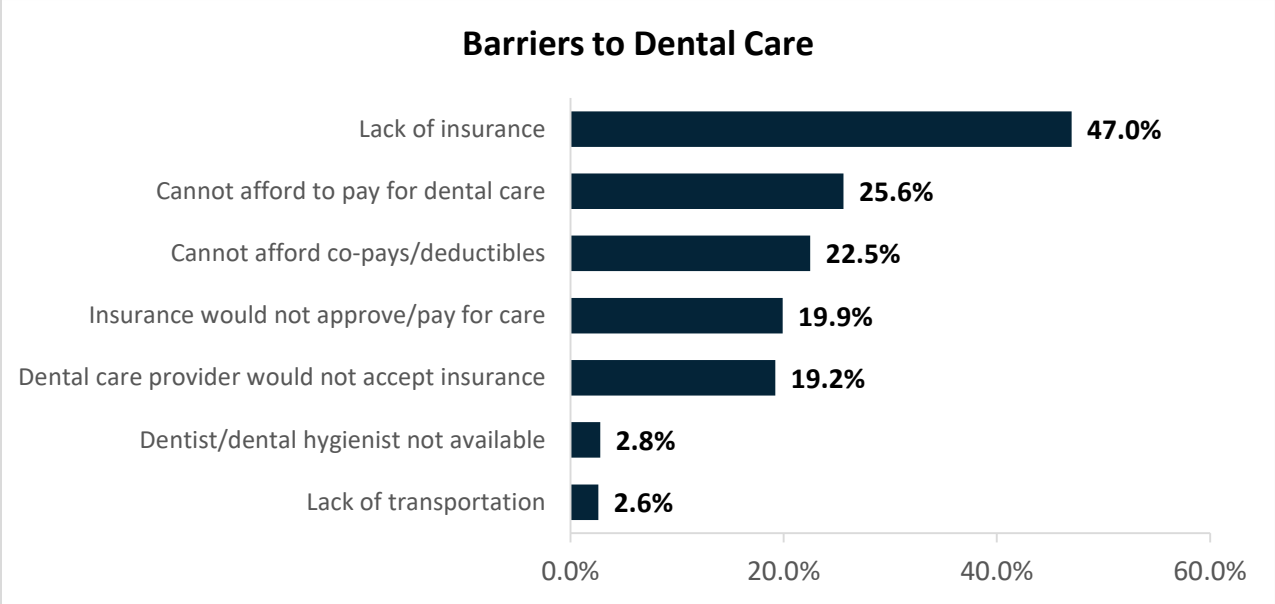
Source: From various questions in the Key Stakeholder Interviews and Key Informant Online Survey, 2017.

Barriers to Dental Care

Few (6.7%) area adults had problems receiving needed dental care in the past year, but those who did reported lack of insurance and the inability to afford dental care or out-of-pocket expenses as the top obstacles to care.



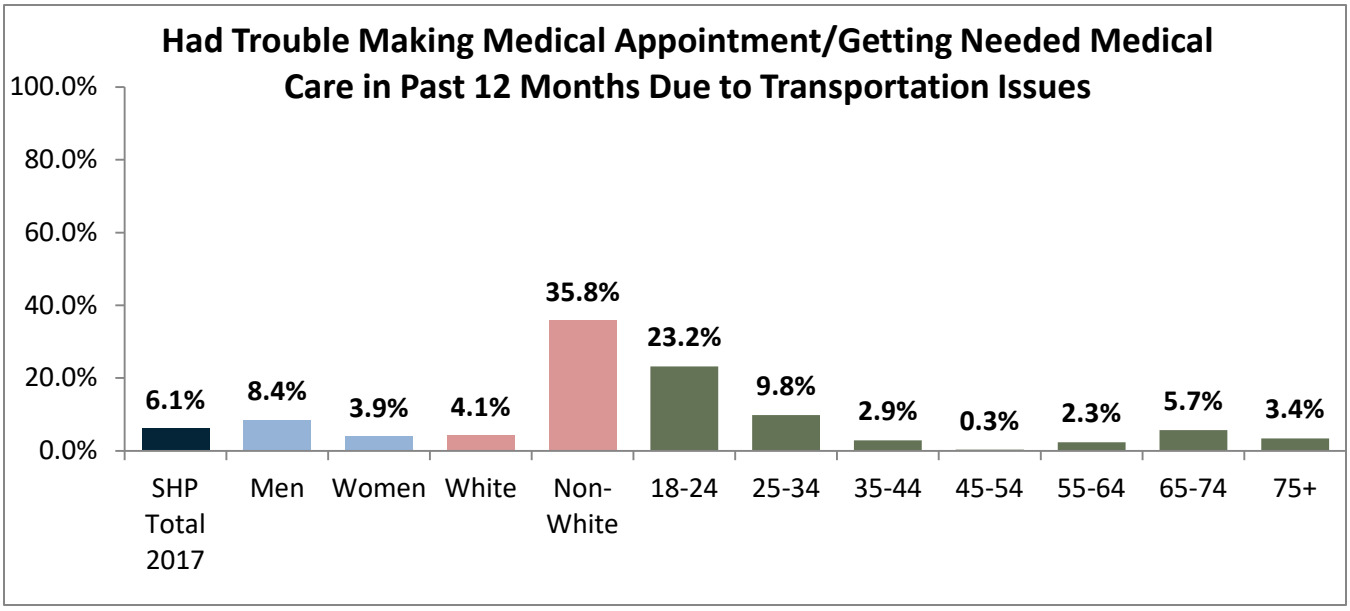
Source: SHP Behavioral Risk Factor Survey, 2017, Q19.2: In the past 12 months, have you had problems getting needed dental care? (n=592)

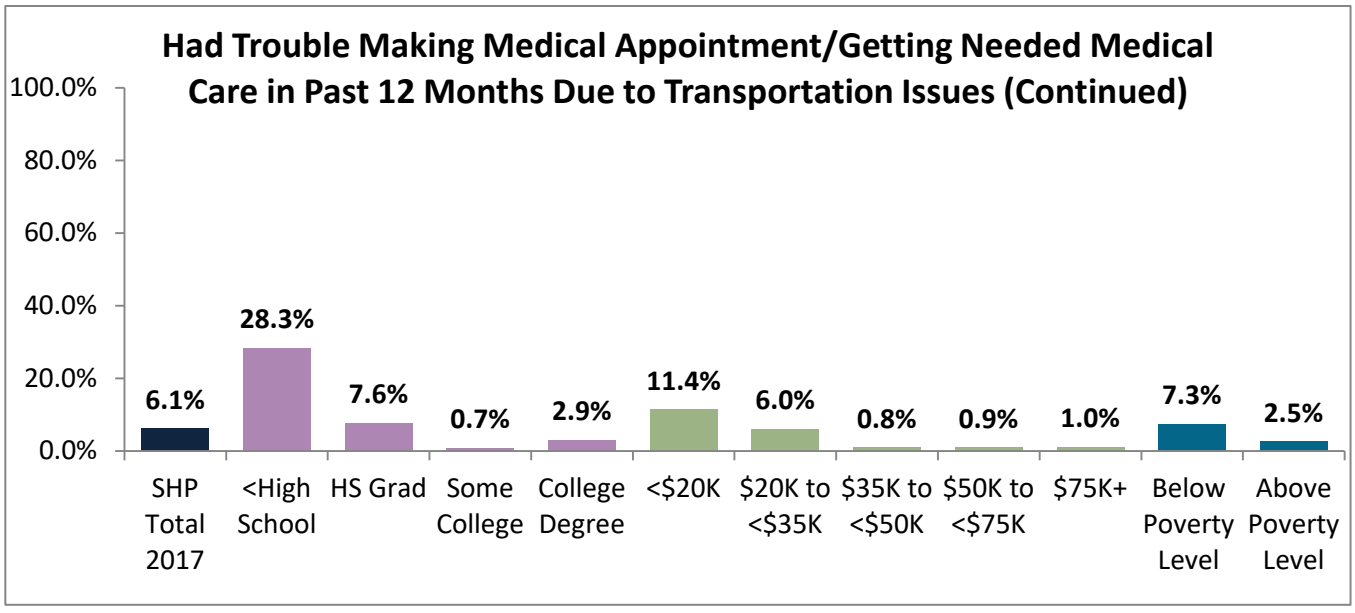


Source: SHP Behavioral Risk Factor Survey, 2017, Q19.3: (If yes) Please provide the reason(s) for the difficulty in getting dental care. (Multiple response) (n=39)

Transportation as a Barrier to Care

- Almost one in sixteen (6.1%) SHP area adults had trouble making a medical appointment or getting needed medical care in the past year because of transportation issues.
- Those most likely to have transportation issues come from groups that are youngest (18-24), non-White, have less than a high school diploma, and have incomes below $20K.

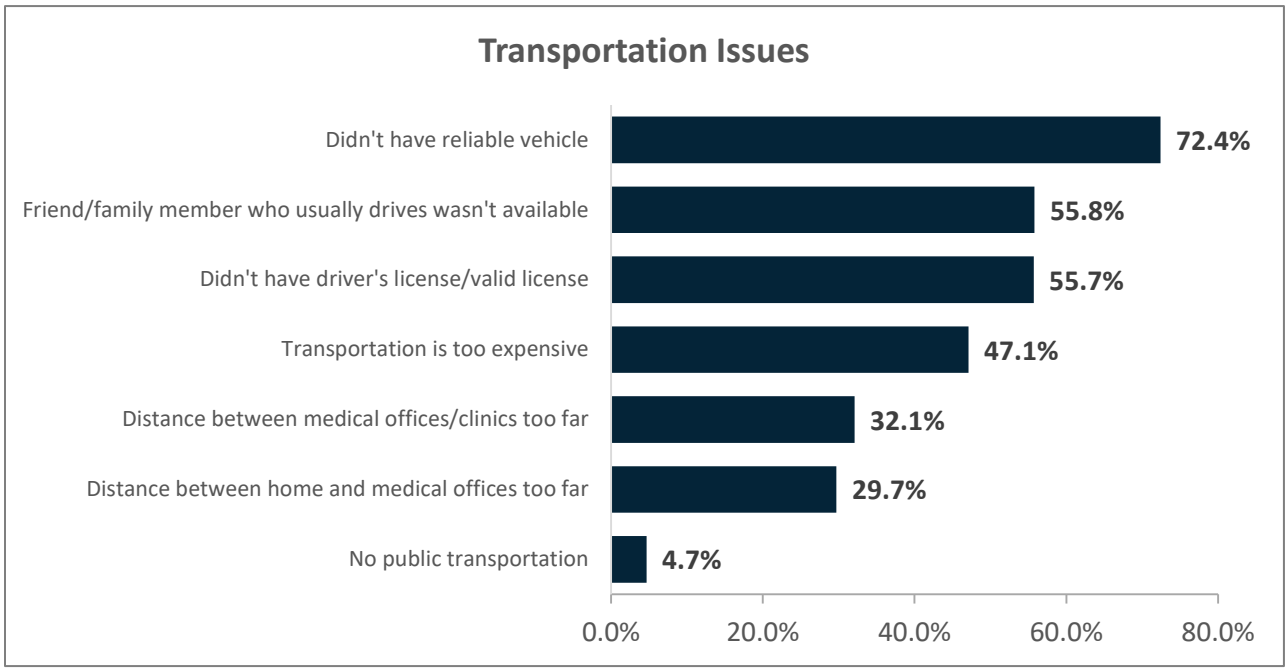




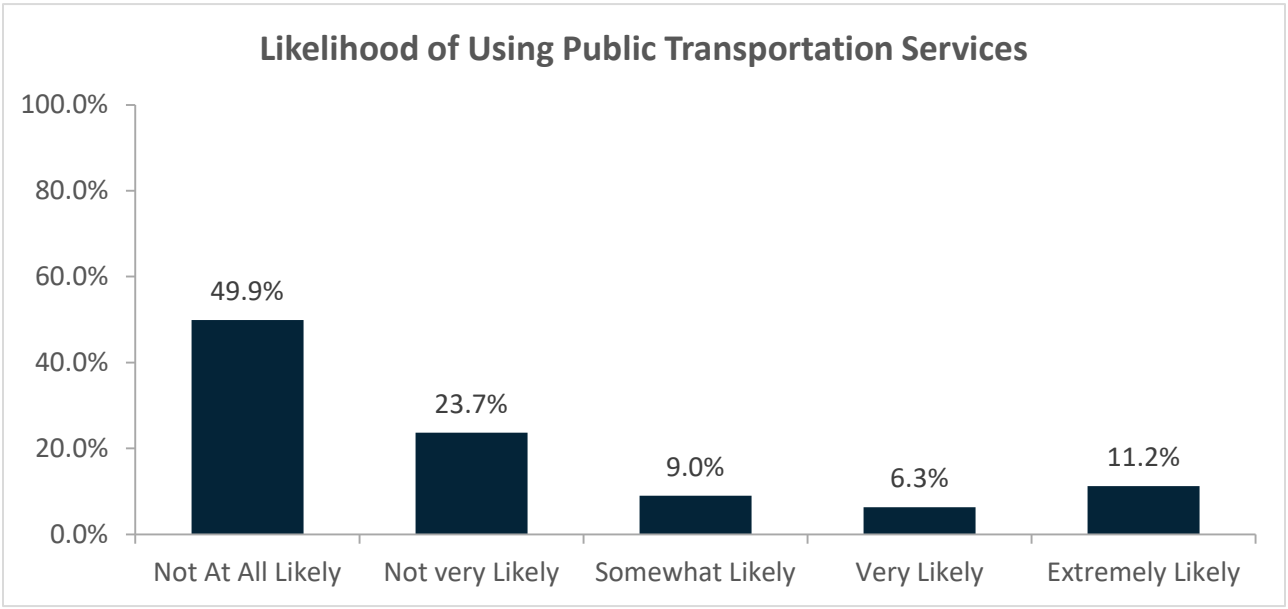
Source: SHP Behavioral Risk Factor Survey, 2017, Q3.8: In the past 12 months, did you have trouble making a medical appointment or getting needed medical care because of transportation issues? (n=594)

Transportation as a Barrier to Care (Continued)

- Among those who had transportation issues, lack of a reliable vehicle was, by far, the main barrier, followed by the unavailability of family or friends, and lacking a valid driver's license.
- When all area adults were asked how likely they were to use public transportation if it were available, three-fourths (73.6%) said they would not likely use.



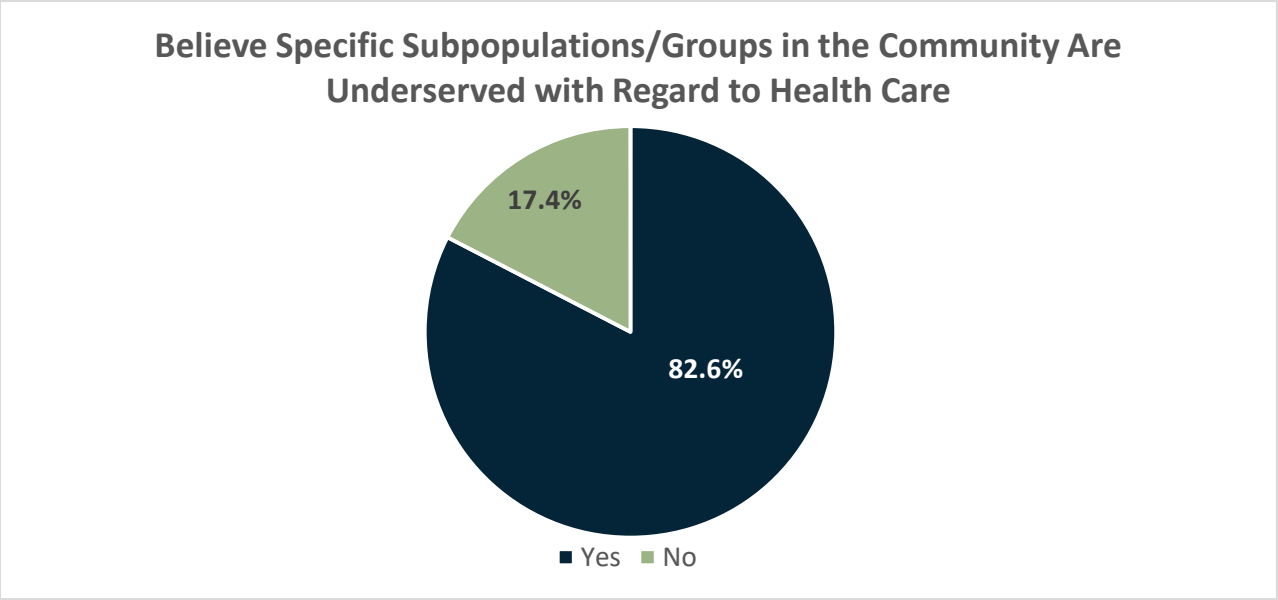
Source: SHP Behavioral Risk Factor Survey, 2017, Q3.9: (If yes) What were the transportation issues? (Multiple response) (n=20)

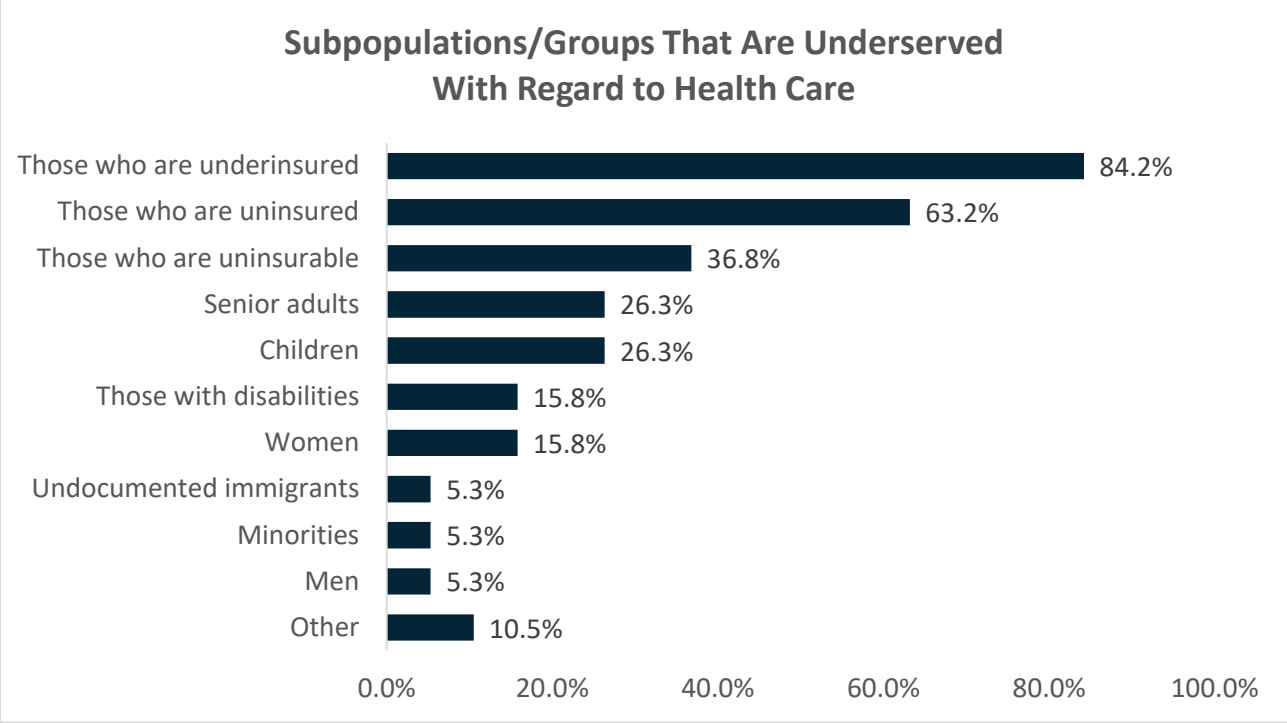


Source: SHP Behavioral Risk Factor Survey, 2017, Q3.10: If public transportation were made more available (e.g., community vans, Uber, buses, etc.), how likely would you use these services? Are you….? (n=587)

Underserved Subpopulations

Eight in ten (82.6%) Key Informants believe specific subpopulations, or groups, in the community are underserved with regard to health care, and those most underserved are the underinsured and the uninsured.





Source: SHP Key Informant Online Survey, 2017, Q5: Are there specific subpopulations or groups of people in your community that are underserved with regard to health care? (n=23); Q5a: (If yes) Which of the following subpopulations are underserved? (n=19)

Underserved Subpopulations (Continued)

Key Stakeholders and Key Informants believe access to health care programs and services is a critical issue for vulnerable and/or underserved subpopulations, because in addition to experiencing obstacles receiving care even when they have coverage, there are numerous other barriers preventing them from living optimally healthy lives, such as poverty. However, lack of coverage and the inability to use coverage because of out-of-pocket expenses they cannot afford, are the top barriers.

Insurance not utilized because of out-of-pocket expenses	With **increasing deductibles and co-pays**, it's **impacting** families lives because **they have less money for other things like cars, travel, dining** etc. – *Key Informant* **Insurance rates are going up along with deductibles and co-pays** are going up so **people are putting off health issues because they have less money to spend**. – *Key Informant* More than one patient has told me **they cannot afford the OTC meds for colonoscopy prep**. Typically the total is $10-15 or less, but this is a struggle for some. – *Key Informant*
Lack of coverage	Right now, I would say it's just this whole **unknowing about the Affordable Care Act and Medicaid expansion** - where that all fits. I would say that our **folks here in Barry County that have been underserved have benefited from Medicaid expansion**, and **if that goes away** with changes to the governmental health care plan, **then we'll be back in trouble.** We'll be back to where **people don't know how to use the system because the system keeps changing**. – *Key Stakeholder* We have a diverse socio-economic population and **many are those who are in the middle, earn too much to get assistance and too little to afford what they need for coverage**. – *Key Informant* We have **people who need counseling and are unable to obtain good counseling at a price they can afford**. We have a lot of people who come to the hospital with chronic outstanding needs. – *Key Informant*
Social factors	**Poverty effects all aspects of health**. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in your community, especially the underserved? (n=5); Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in the community? (n=49); Q1a: Why do you think it's a problem in your community? (n=49)

Effectiveness of Existing Programs and Services

- Key Stakeholders say the existing programs and services in the SHP area meet the needs and demands of area residents somewhat well because, although there are certain programs and services lacking and there are definite gaps in services, collaboration and coordination among community agencies and organizations is strong.

- Effectiveness could be strengthened if: some clients were more proactive with their health care; some resource limited programs found ways to see more clients; and, there was less duplication of services.

I'd say somewhat well to exceptionally well. It **depends on who you are**. I don't think that necessarily means someone's economic status or education level. I think it just means that if you get yourself a case manager, and that case manager helps you, and you get what you need, you'll get the care that you need. Well, **people will fight to get you what you need**. **Sometimes**, in my profession or my **colleagues** - I see them **working harder than clients to get them full care**. Sometimes that's the case - **we have to be their advocate**. So, I'd say, all in all, it's better than people think it is. I think it could be better.

Some of the **programs are transactional-type programs** that **require payment that not everyone can afford**, and then some are just **limited by the hours the services are offered** that don't necessarily mesh with the schedules of the population, so just **limited access**. Some of them are just **resource-limited**, so they **can only accept small numbers of individuals into the program**, and there's a **greater demand for the services being provided**.

Because I see the **gap**. We are all **on divergent medical record platforms**, and so **when it comes to hand off care, pieces are missed**, and so there's a **duplication of effort on patients**, and **sometimes things are slowed up**, and it's not all because of the medical record. Because it's a small community, I feel that one of the things that is done well is that there's **good physicians and physician communication**, and I think that's different in the downtown Grand Rapids hospitals. They **pick up the phone here and call each other**, and so they still **know their patients and care about their patients**, and they **do good physician-to-physician communication**.

Because it's Barry County. **If there is a patient with a need, the doctors' offices are great about calling us and then working to coordinate those services that are available to them**. We truly have doctors' offices that will call and say, "I've got this patient. He's X-years old. These are the issues. Do we have a way to help address these other issues?" So, when they talk about that **patient-centered** home, I see the **doctors' offices working incredibly well with coordinating services** to the people of our community whether it's in their realm or not. I'm **really impressed with the way that everyone works together**.

We hired an individual whose primary job is to work on **integration of care**, so they will **work with Cherry Health** and clients that go to Cherry Health and come to behavioral health services here and **make sure those services are coordinated** and make sure that **our doctor is talking to their doctor** and the **insurance is paying for what they're supposed to** - things of that nature. We're **looking at ways to collaborate together** and **ensure that patients get the services they need in health care and behavioral health**.

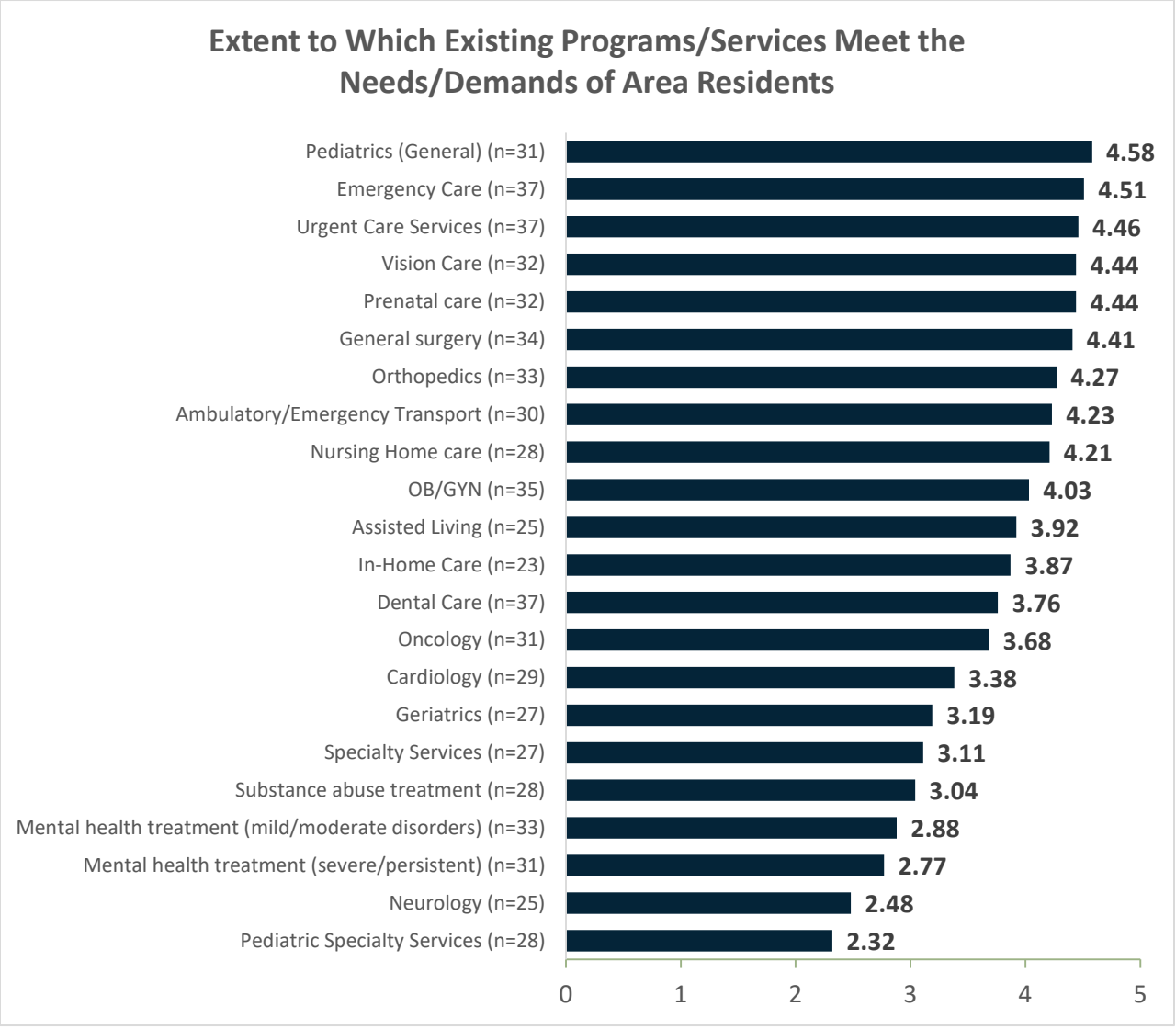
Source: SHP Key Stakeholder Interviews, 2017, Q4: How well do existing programs and services meet the needs and demands of people in your community? Would you say they meet them not at all well, not very well, somewhat well, very well, or exceptionally well? (n=5); Q4a: Why do you

Gaps in Programs and Services

- Key Informants say the programs and services that meet the needs and demands of area residents best include pediatrics, emergency care, urgent care services, vision care, prenatal care, general surgery, orthopedics, emergency transport, and nursing home care.

- Conversely, pediatric specialty services, neurology, mental health treatment for all disorders (from mild to severe), substance abuse treatment, and geriatrics do not meet the needs and demands of area residents well.

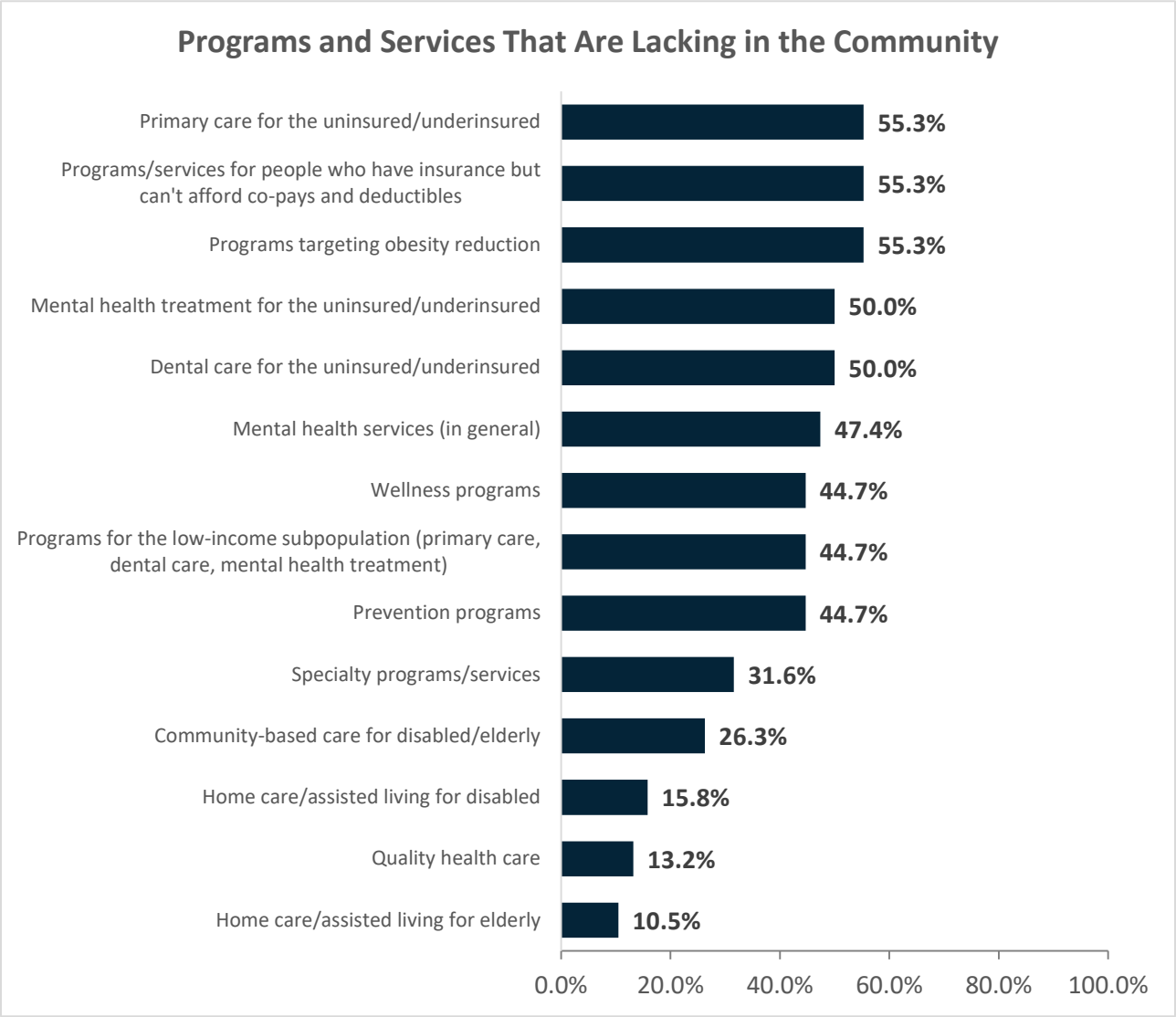
- Additional services lacking include: bariatric medicine, dermatology, ENT, endocrinology, GI, infectious disease, services for people with disabilities (e.g., stroke, physical impairment, autism), psychiatry, pulmonary, rheumatology, and urology.



Source: SHP Key Informant Online Survey, 2017, Q6: How well do the following programs and services meet the needs and demands of residents in your community? Note: 1-5 scale, where 1=not at all well, 2=not very well, 3=slightly well, 4=somewhat well, 5=very well. Source: SHP Key Informant Online Survey, 2017, Q6a: What specialty services are currently lacking in your community? (n=12)

Specific Programs and Services Lacking in the Community

- According to Key Informants, the SHP area needs programs or services focusing on mental health treatment, but also programs and services for the most vulnerable: low income, the uninsured, the underinsured, and those with insurance but who can't afford to utilize it.
- There is also a lack of services targeting obesity or focusing on wellness and/or prevention, as well as dental care for the uninsured/underinsured.



Source: SHP Key Informant Online Survey, 2017, Q7: What programs and services are lacking in the community, if any? (n=38)

Specific Programs and Services Lacking in the Community (Continued)

Underserved residents cite myriad programs, services, or classes that they perceive are lacking in the community. However, the greatest areas of need are access to places to exercise that are free or low cost, diabetes management, mental health treatment, dental care, more providers, more providers accepting a broader range of coverage, and support groups. Other needs include CPR, vision, and weight loss.

- ✓ Diabetes (2)
- ✓ Anxiety and depression
- ✓ Mental health care
- ✓ CPR
- ✓ Dental
- ✓ Exercise classes
- ✓ Female doctors accepting patients
- ✓ Free exercise and weight loss
- ✓ Free place to exercise
- ✓ Meridian Medicaid
- ✓ More dentists that accept Medicare plan in area that are attached to Dr. plan in area
- ✓ More health care providers
- ✓ More help with costs of care
- ✓ Nature care
- ✓ Senior caregiver support group
- ✓ Support groups for Dowling, MI
- ✓ Vision/eyeglasses
- ✓ Weight loss

Source: SHP Underserved Resident Survey, 2017, Q14: What health care related programs, services, or classes are lacking in your community? In other words, what programs, services, or classes do you want that are currently unavailable? Please be as detailed as possible. (n=45)

Specific Programs and Services Lacking in the Community (Continued)

- Similar to Key Informants, Key Stakeholders report the SHP area lacks specialty services such as urology and GI, as well as psychiatrists. They also point to a lack of dental care, programs for diabetes and obesity, and mobile crises services. That said, progress is being made with telehealth, OB/GYN and mid-wife programs, and cancer infusion.

We have good transportation. I **don't know that people utilize it as well as they could** because they want it to be easier and if you're going to use the transit, you have to pay for it **and you have to plan ahead**. Transportation continues to be an issue, but I think **if people just planned ahead**, they could **make it work**. We **need psychiatrists**, that's not anything different. We **need a child psychiatrist**. We're **working to get telehealth** in; we'll see how that goes. That seems to be the new wave: telehealth. We're **just getting access for cancer infusion** stuff.

I would say **mobile crisis services**. We have started a conversation because we realized there was a need. We haven't formalized a plan yet, but I would say **mobile crisis services specific to behavioral health**.

Dental care. **Obesity** and **diabetes** issues seem to be on the increase. We do a lot of lift assists.

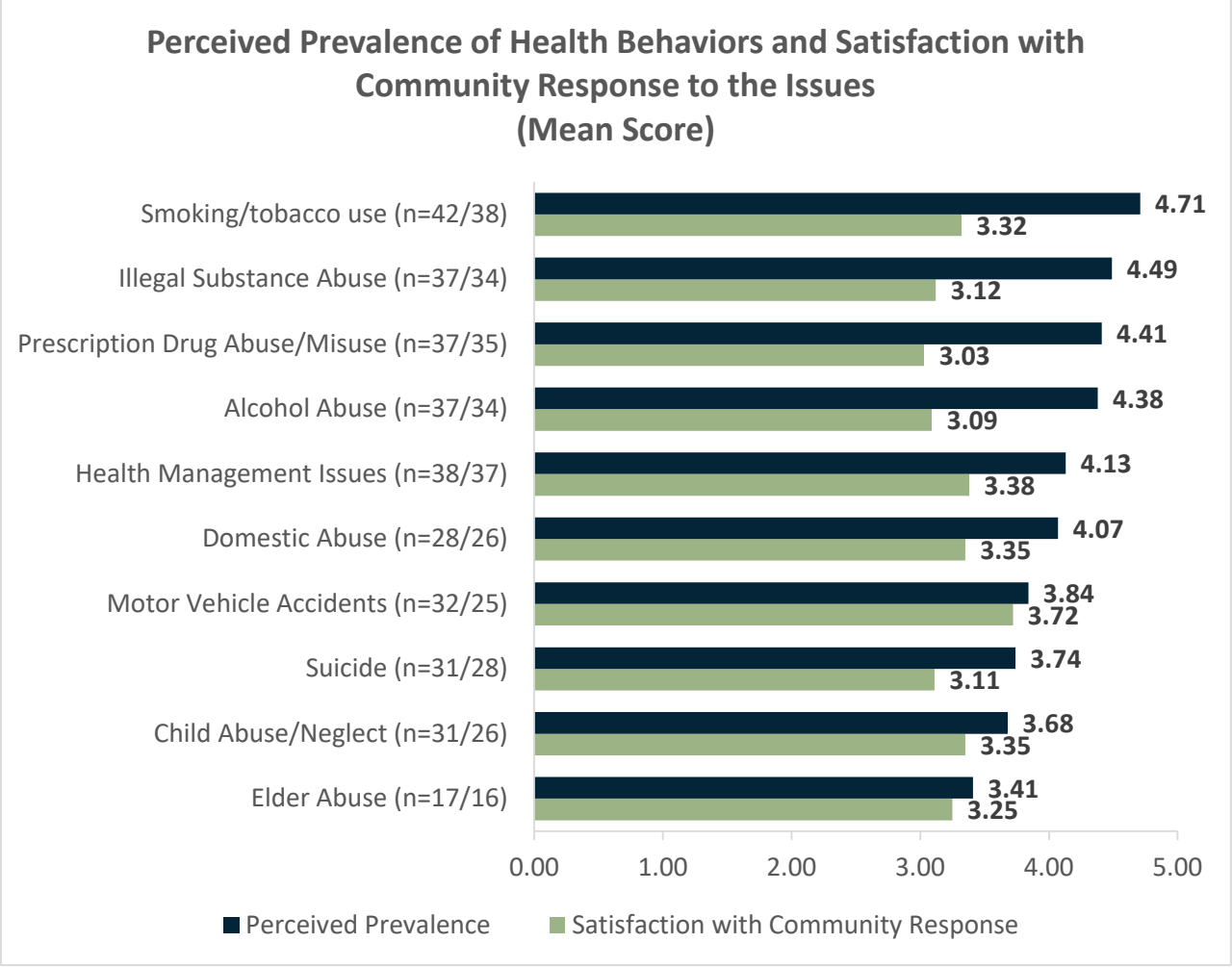
Urology and **other specialty services**. We **just opened the cancer program last week**, which was pretty exciting. We're **working on rebuilding the OB/GYN program**, and we're starting a **new midwifery program** that's going to be pretty innovative on our part. That hasn't launched yet, but I feel like we've got all the components, and we're moving in that direction. **We're not on any path for GI or urology**, and we **made some progress with primary care, but not enough yet**.

Source: SHP Key Stakeholder Interviews, 2017, Q4b: What programs or services are lacking in the community? (n=5)

RISK BEHAVIOR INDICATORS

Prevalence of Health Behavior Issues

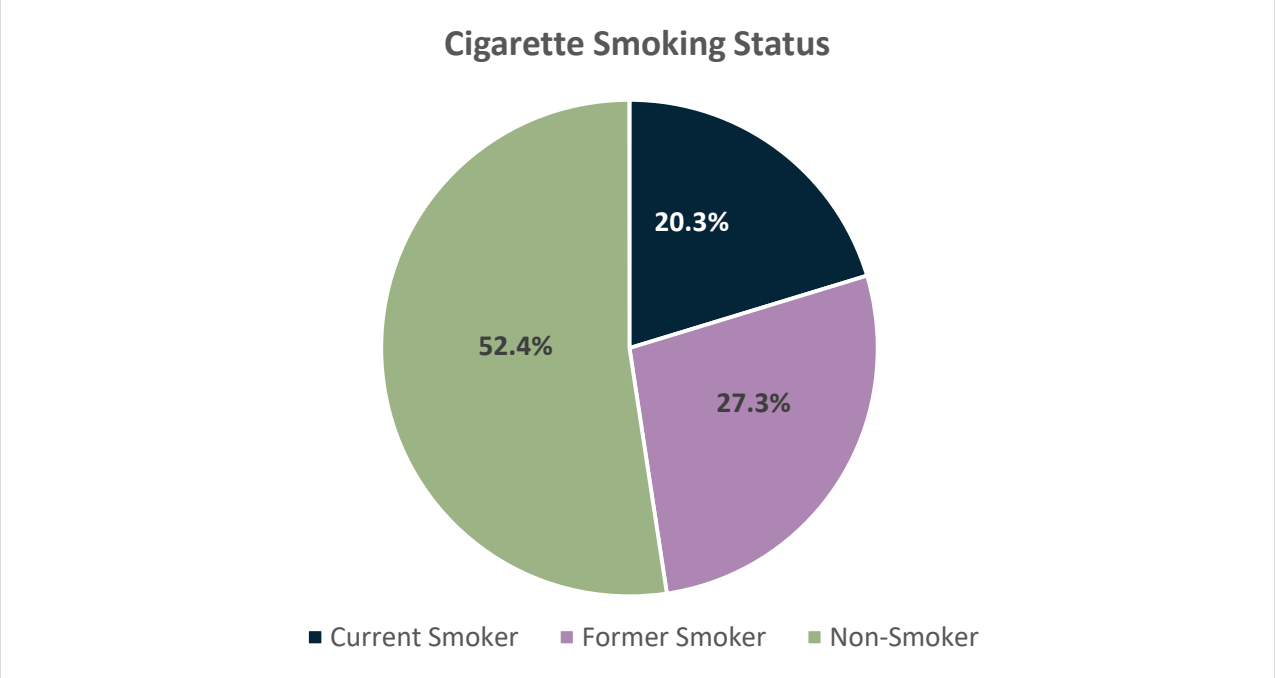
- Key Informants perceive smoking to be the most prevalent health behavior issue, the same as in 2014. The next three health behavior issues perceived to be prevalent are substance abuse issues: illegal substance abuse, prescription drug abuse, and alcohol abuse.
- Health management issues and domestic abuse are also perceived to be prevalent.
- Additional health behavior issues mentioned are poor lifestyle choices (e.g., diet, exercise) and medication mismanagement.
- More concerning is that Key Informants are least satisfied with the community's response to anything related to substance abuse, licit or illicit.



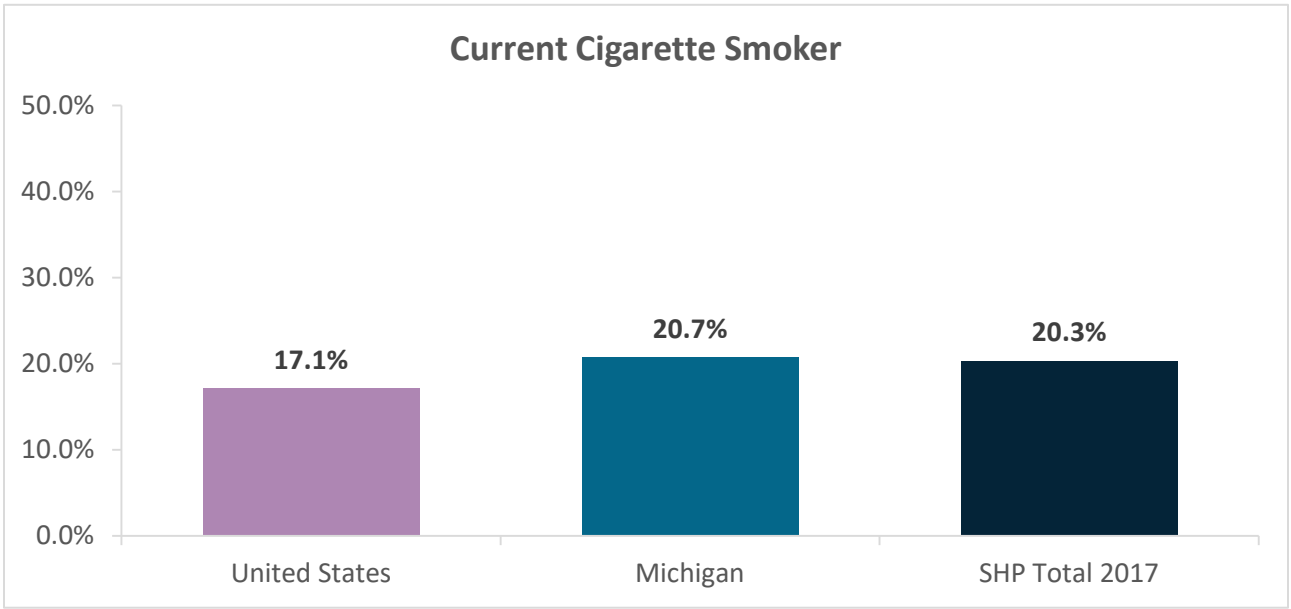
Source: SHP Key Informant Online Survey, 2017, Q3: Please tell us how prevalent the following health behaviors are in your community. Q3a: How satisfied are you with the community's response to these issues?; SHP Key Informant Online Survey, 2017, Q3b: What additional health behaviors are prevalent in your community, if any? (n=10). Note: Prevalence scale: 1=not at all prevalent, 2=not very prevalent, 3=slightly prevalent, 4=somewhat prevalent, 5=very prevalent; Satisfaction scale: 1=not at all satisfied, 2=not very satisfied, 3=slightly satisfied, 4=somewhat satisfied, 5=very satisfied.

Smoking and Tobacco Use

One in five (20.3%) SHP area adults are cigarette smokers, a rate on par with the state and higher than the national rate.



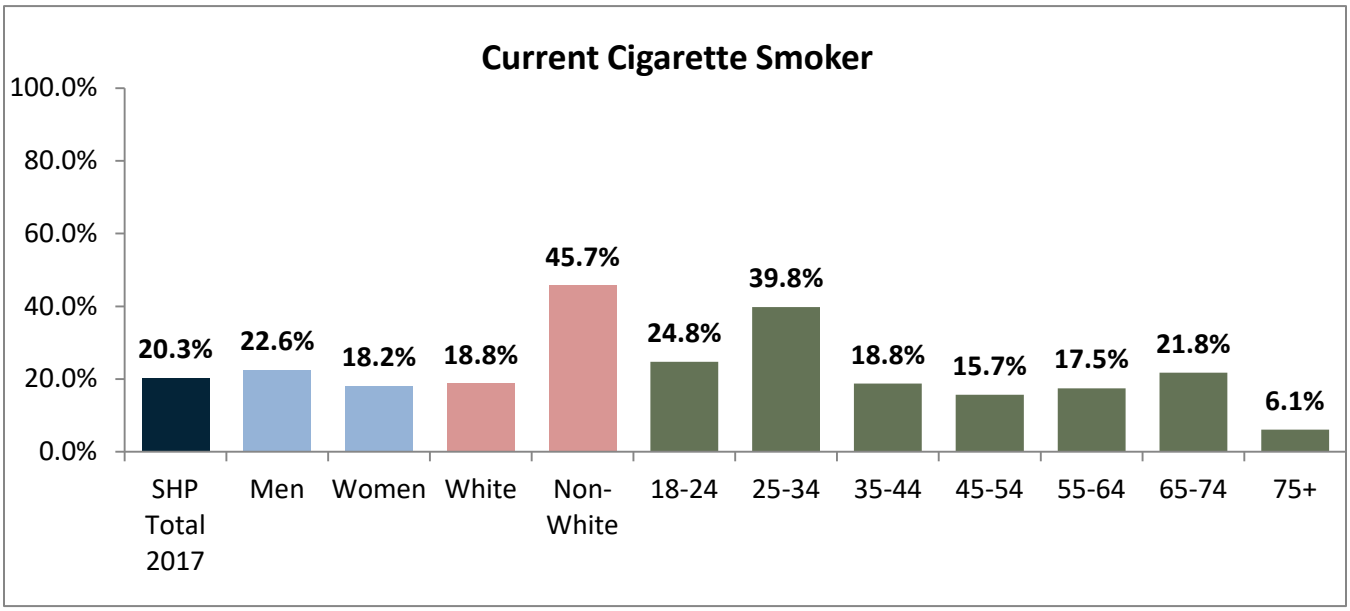
Source: SHP Behavioral Risk Factor Survey, 2017, Q10.1: Have you smoked at least 100 cigarettes in your entire life? (n=594); Q10.2: Do you now smoke every day, some days, or not at all? (n=335).
Note: current smoker = among all adults, the proportion reporting that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

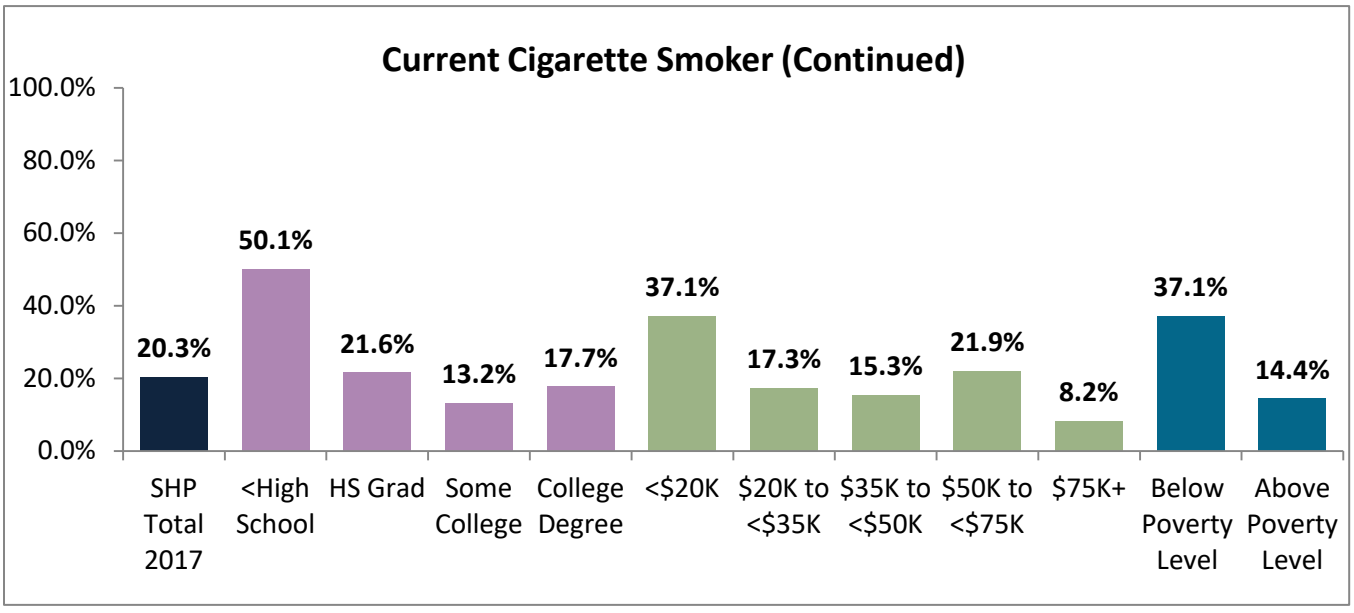


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.

Smoking and Tobacco Use (Continued)

- The prevalence of cigarette smoking is highest in the lowest education and lowest income groups.
- Prevalence is also much higher in non-White adults compared to White adults.

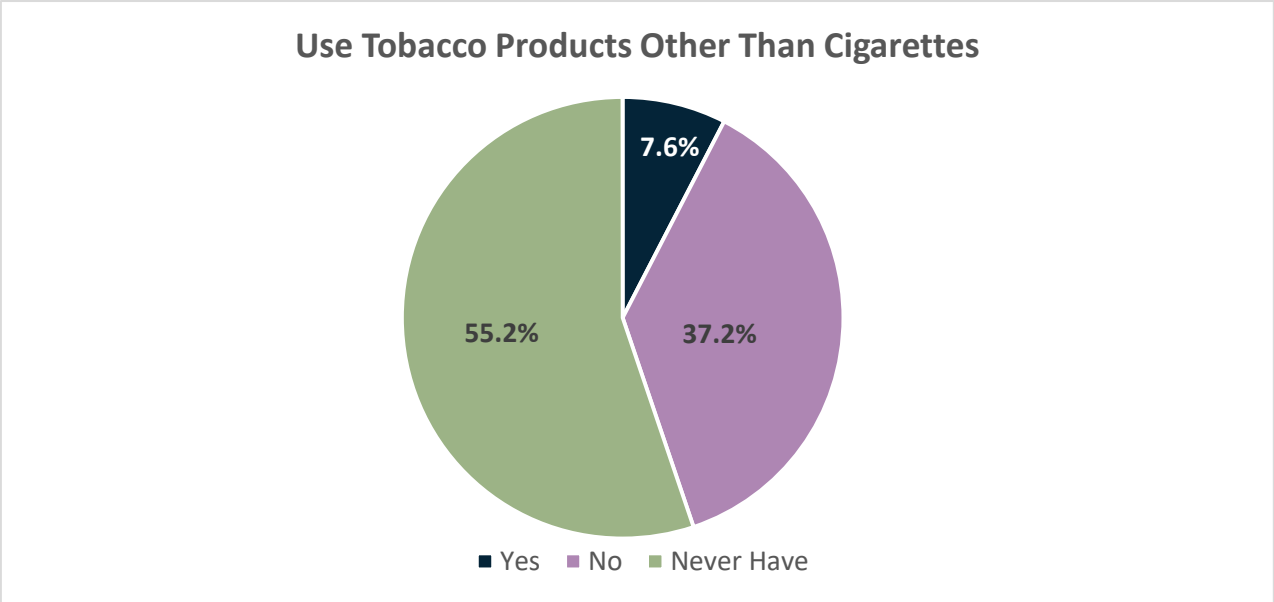




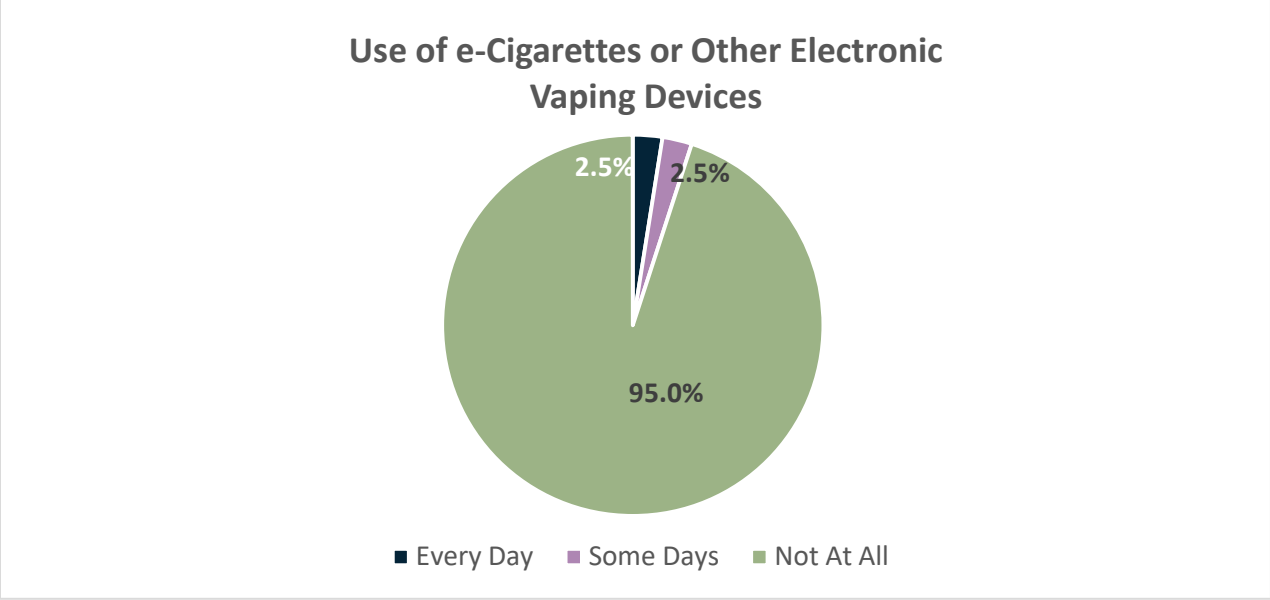
Source: SHP Behavioral Risk Factor Survey, 2017, Q10.1/Q10.2, status = smoker. (n=594).

Smoking and Tobacco Use (Continued)

Roughly one in thirteen (7.6%) area adults use tobacco products other than cigarettes and 5.0% report using e-cigarettes or vaping devices.



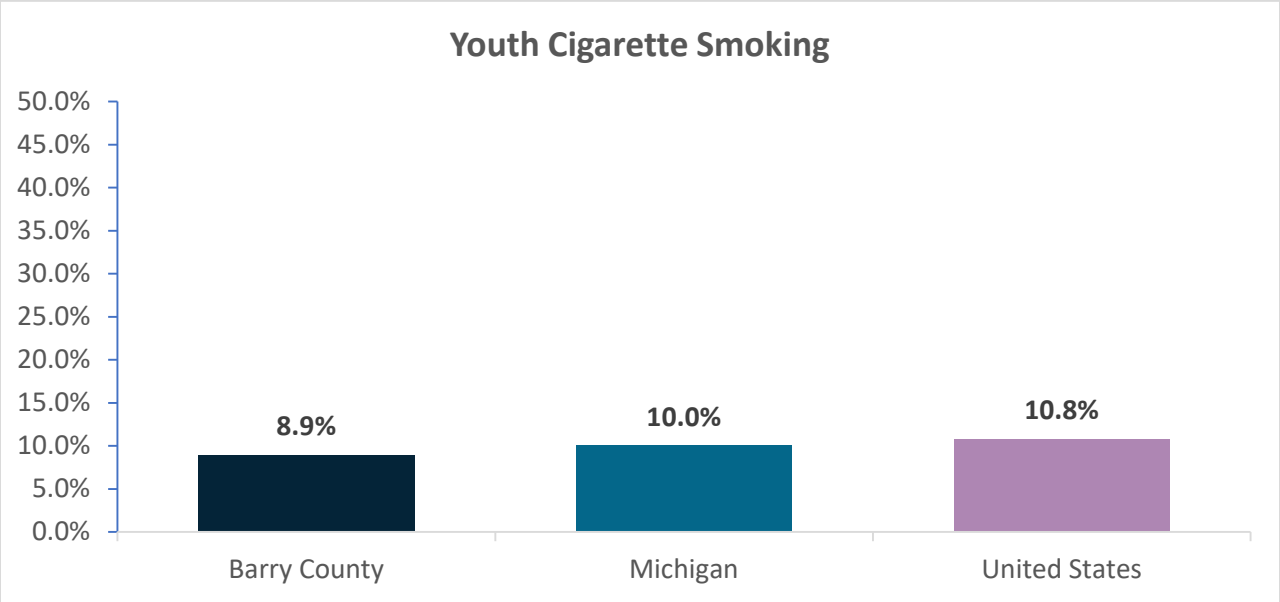
Source: SHP Behavioral Risk Factor Survey, 2017, Q10.3: Do you currently use any tobacco products other than cigarettes, such as chew, snuff, cigars, pipes, bidis, kreteks or any other tobacco product? (n=591).



Source: SHP Behavioral Risk Factor Survey, 2017, Q10.5: Do you now use e-cigarettes or other electronic "vaping" products every day, some days, or not at all? (n=590).

Smoking and Tobacco Use (Continued)

The prevalence of smoking among youth in Barry County is lower than state or national rates. Still, one in eleven youth in Barry County smoke cigarettes so it is a problem worth addressing.



Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Smoking and Tobacco Use (Continued)

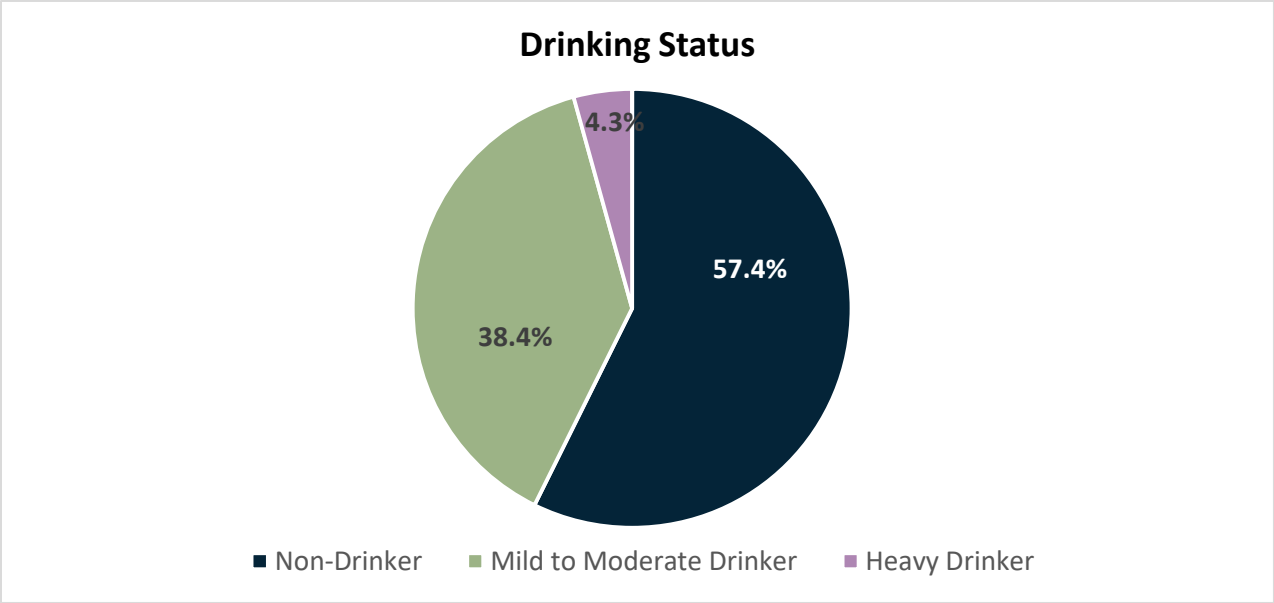
- Roughly one in six (15.8%) area adults report smoking inside their home and this rises to 18.1% for households with children.
- Among non-smoking area adults, 8.1% are exposed to smoking in their home.

	Smoking in the Home				
Number of People Who Smoke in the Home	**Total (n=593)**	**Have Children in the Home (n=107)**	**No Children in the Home (n=486)**	**Non-Smokers (n=497)**	**Smokers (n=96)**
None	**84.2%**	**81.9%**	**85.3%**	**91.9%**	**53.9%**
1 person	**8.4%**	**10.0%**	**7.5%**	**6.6%**	**15.1%**
2 or more people	**7.4%**	**8.1%**	**7.2%**	**1.5%**	**31.0%**

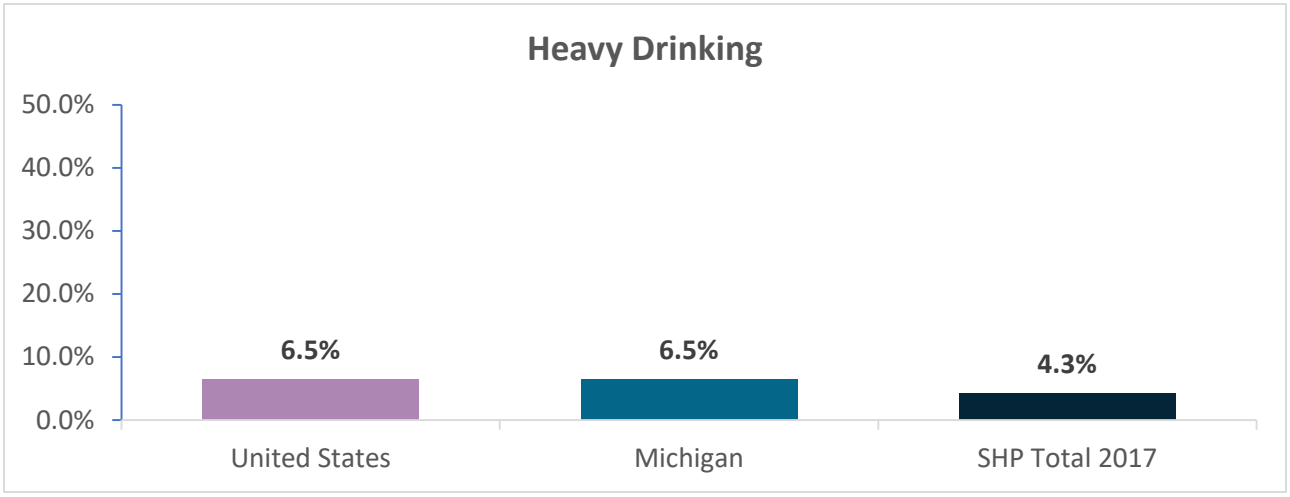
Source: SHP Behavioral Risk Factor Survey, 2017, Q10.4: Now I would like to ask you a few questions about smoking where you live. How many people that live with you smoke cigarettes, cigars, little cigars, pipes, water pipes, hookah, or any other tobacco products in the home?

Alcohol Use

- Among area adults, 57.4% are considered to be non-drinkers because they have not consumed alcohol within the past month, while 38.4% are mild to moderate drinkers and 4.3% are considered to be heavy drinkers.
- The prevalence of heavy drinking among area adults is lower than state or national rates.



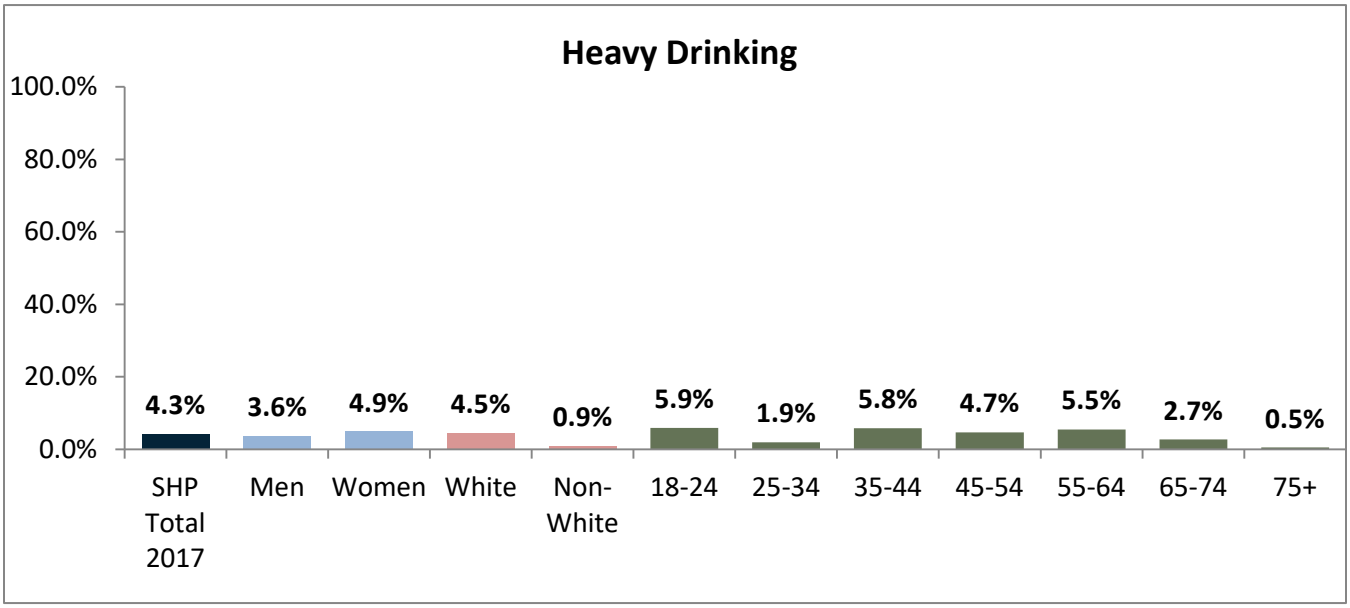
Source: SHP Behavioral Risk Factor Survey, 2017, Q17.1: During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor? (n=587); Q17.2: One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average? (n=197). Note: heavy drinkers = the proportion who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the previous month.

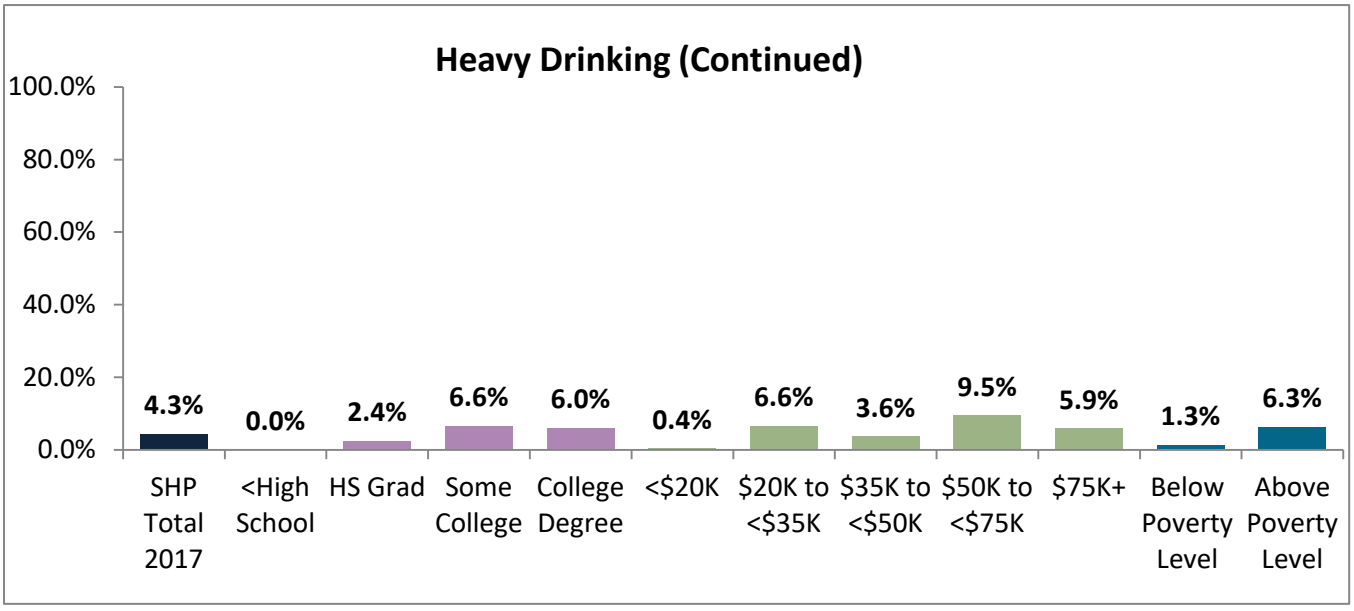


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.

Alcohol Use (Continued)

Among SHP area adults, White adults are more likely to engage in heavy drinking than non-White adults, and those adults with the lowest levels of education and lowest incomes are least likely to engage in heavy drinking.

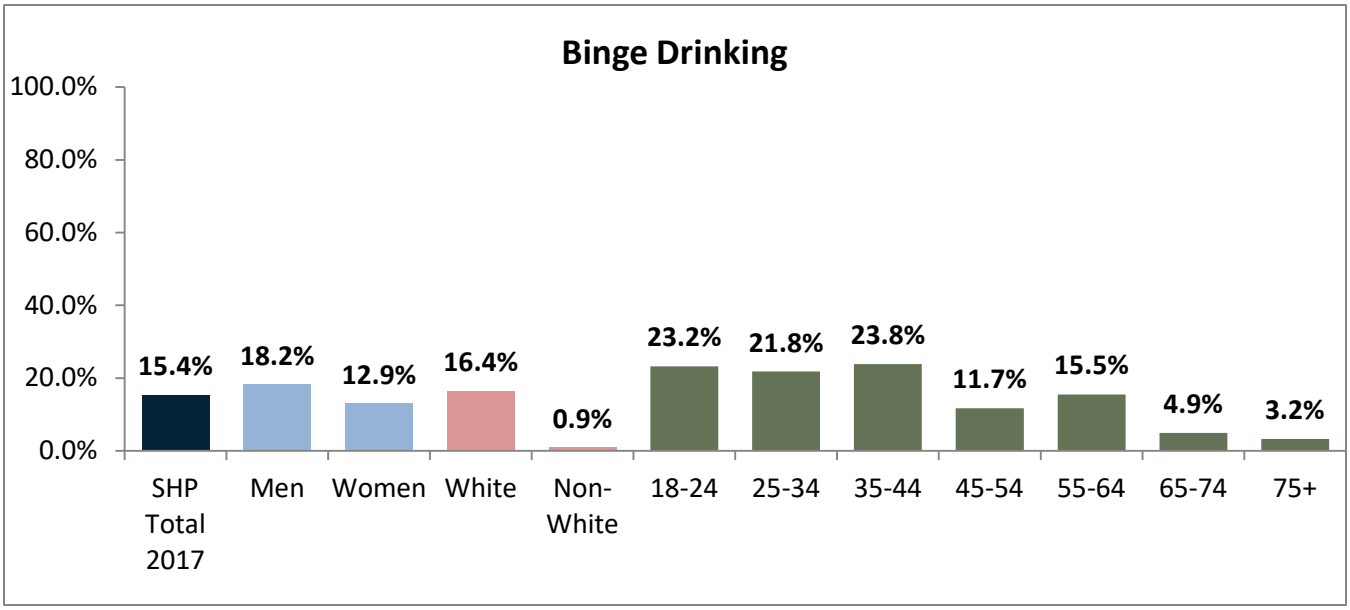


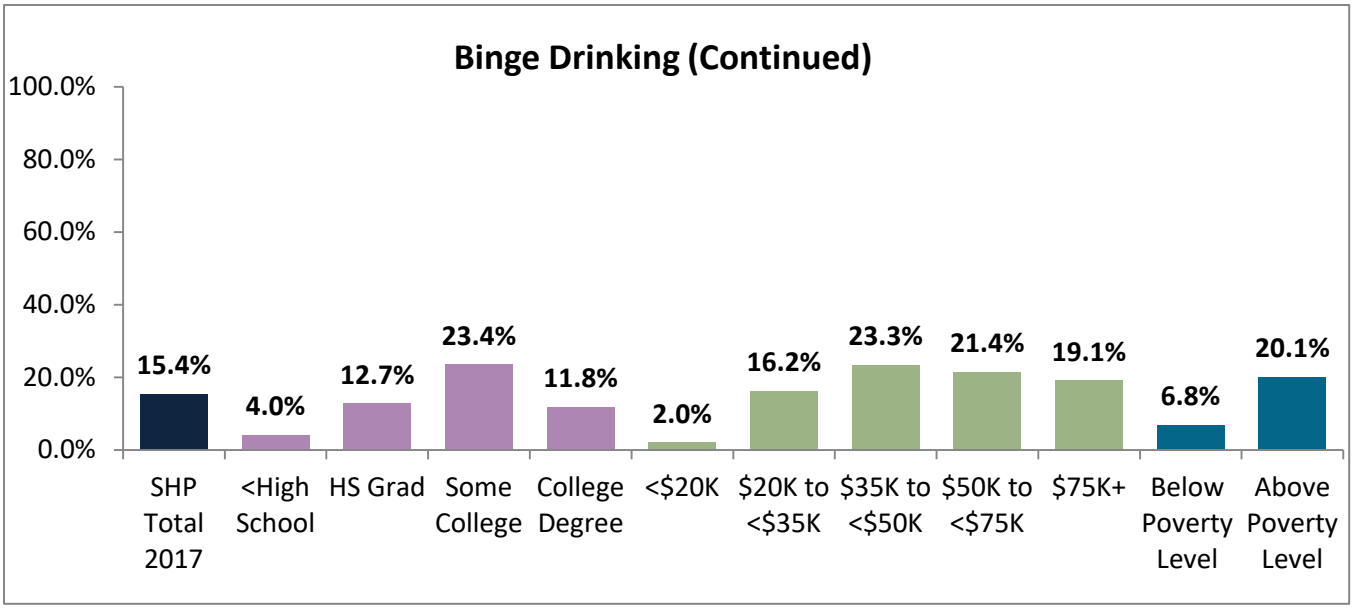


Source: SHP Behavioral Risk Factor Survey, 2017, Q17.1: During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor? (n=587); Q17.2: One drink is equivalent to a 12-ounce beer, a 5-ounce glass of wine, or a drink with one shot of liquor. During the past 30 days, on the days when you drank, about how many drinks did you drink on the average? (n=197). Note: heavy drinkers = the proportion who reported consuming an average of more than two alcoholic drinks per day for men or more than one per day for women in the previous month.

Alcohol Use (Continued)

- More than one in six (15.4%) area adults engage in binge drinking and the prevalence is lowest among those with no high school diploma and/or with incomes less than $20K.
- Binge drinkers are more likely to come from groups that are men, White adults, and aged 18-44.

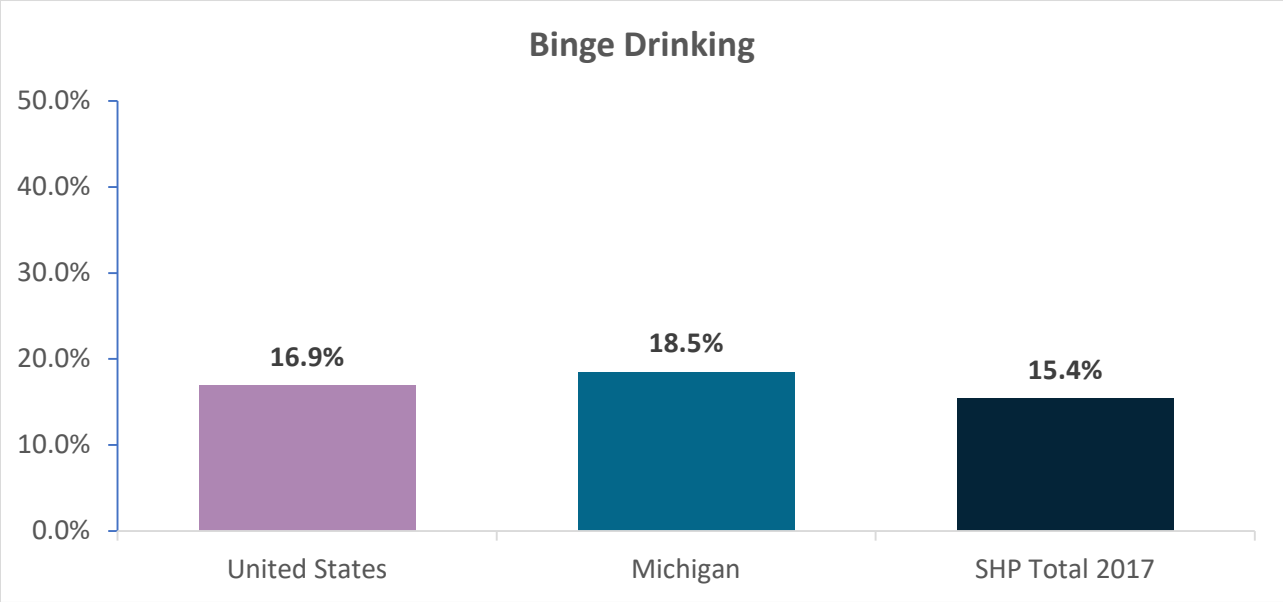




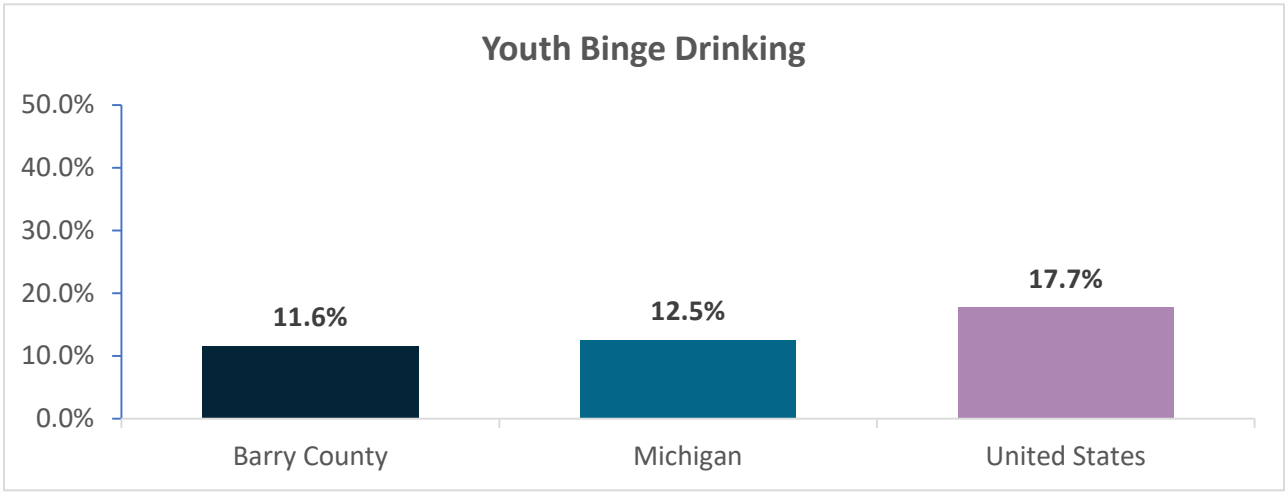
Source: SHP Behavioral Risk Factor Survey, 2017, Q17.3: Considering all types of alcoholic beverages, how many times during the past 30 days did you have X (CATI X = 5 for men, X = 4 for women) or more drinks on an occasion? (n=586). Note: among all adults, the proportion who reported consuming five or more drinks per occasion (for men) or 4 or more drinks per occasion (for women) at least once in the previous month.

Alcohol Use (Continued)

- Among area adults, the prevalence of binge drinking is lower than state or national rates.
- Additionally, the prevalence of binge drinking among youth in Barry County is lower than state or national rates.



Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHP Behavioral Risk Factor Survey, 2017.



Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Substance Abuse

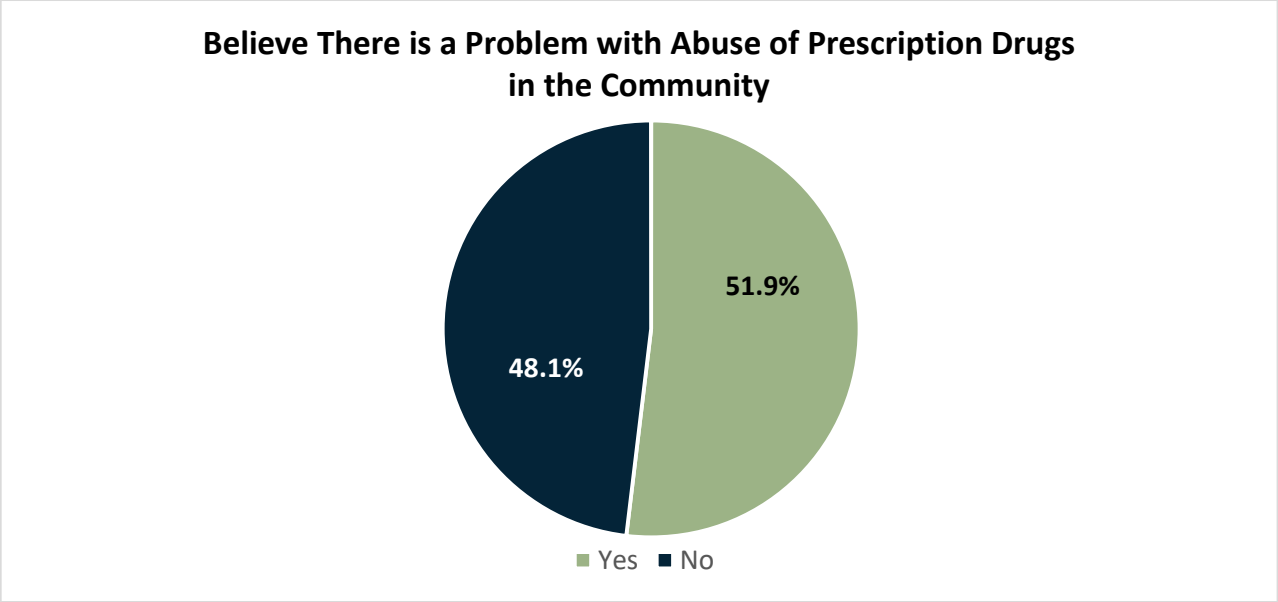
Key Stakeholders and Key Informants consider substance abuse to be one of the most pressing or concerning health issue in the SHP area. Not only is prescription drug abuse prevalent due partly to providers overprescribing, but it feeds the cycle of illicit opiate use. The opioid epidemic has had an enormous impact on many facets of the community, especially families. Complicating things further, there is a lack of adequate programs and services to treat substance abuse.

Prescription drug abuse	I think that and the **opioid issue**. It is [both licit and illicit]. I think **one leads to the other**, and I'm seeing a lot of people who are **addicted to prescribed medications.** I see a lot of people who are on a lot of meds, that are headed down some pretty dangerous paths. – *Key Stakeholder* **Many people are using illicit and prescription drugs**. – *Key Informant*
Providers overprescribing	**High number of prescriptions**. – *Key Informant* **Providers are not utilizing best practice in prescribing**, no MAT program in Eaton County. – *Key Informant*
Opiate/opioid use	This issue of **addiction** and the amount of drug use and **opiate stuff happening in our community is a big deal**, too. I just know **we have people coming into our ED and it's a lot more than used to be**, and when we try to get people into rehab program, that kind of touches on that whole behavioral health piece, **we're having a heck of a time trying to get help for people**. – *Key Stakeholder*
Social factors/causes	**Low socioeconomic status** and many people **unemployed**. – *Key Informant*
Family destruction	Too many **children coming into knowledge of being born addicted** or **parents unable to care for their children due to addictions**. – *Key Informant*
Lack of access to treatment	Many **patients are coming into the ED** and being **admitted to the hospital for drugs and alcohol**. I also feel this is an issue within our schools. – *Key Informant*

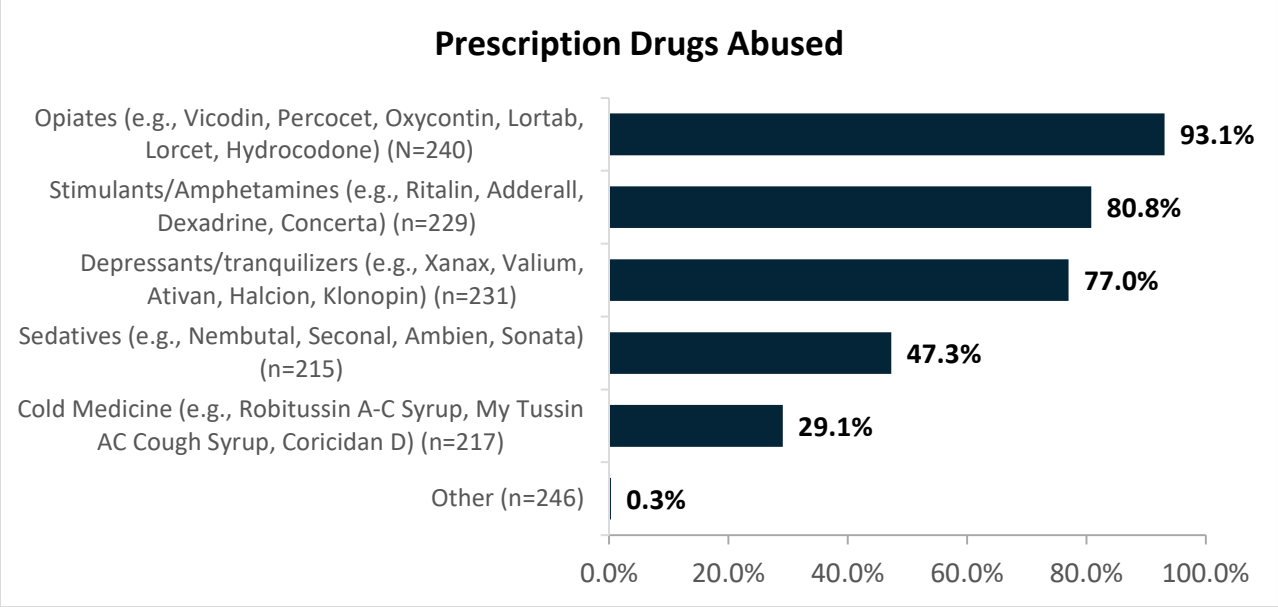
Source: SHP Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in the community, especially the underserved? (n=5); Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in the community? (n=49); Q1a: Why do you think it's a problem in the community? (n=11)

Substance Abuse (Continued)

- Half (51.9%) of SHP area adults believe there is prescription drug abuse problem in the community, and of those more than nine in ten (93.1%) believe prescription opiates are abused.
- More than three-fourths also believe prescription stimulants and depressants are abused.



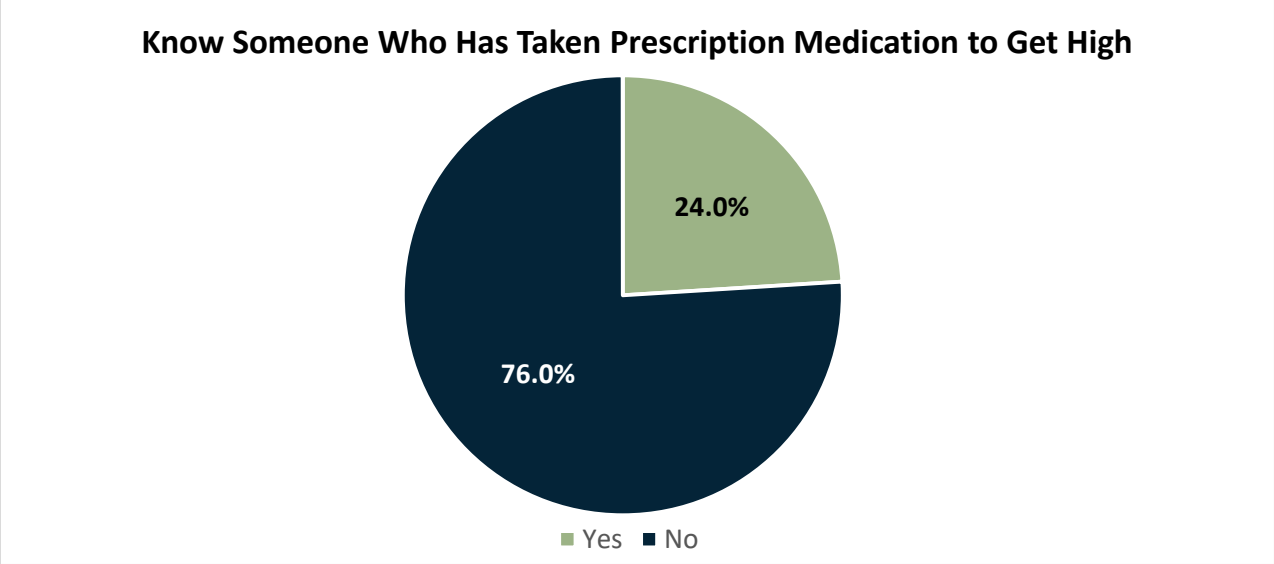
Source: SHP Behavioral Risk Factor Survey, 2017, Q11.1: Do you believe there is a problem in your community with the abuse of prescription medication (e.g., Oxycontin)? (n=516)



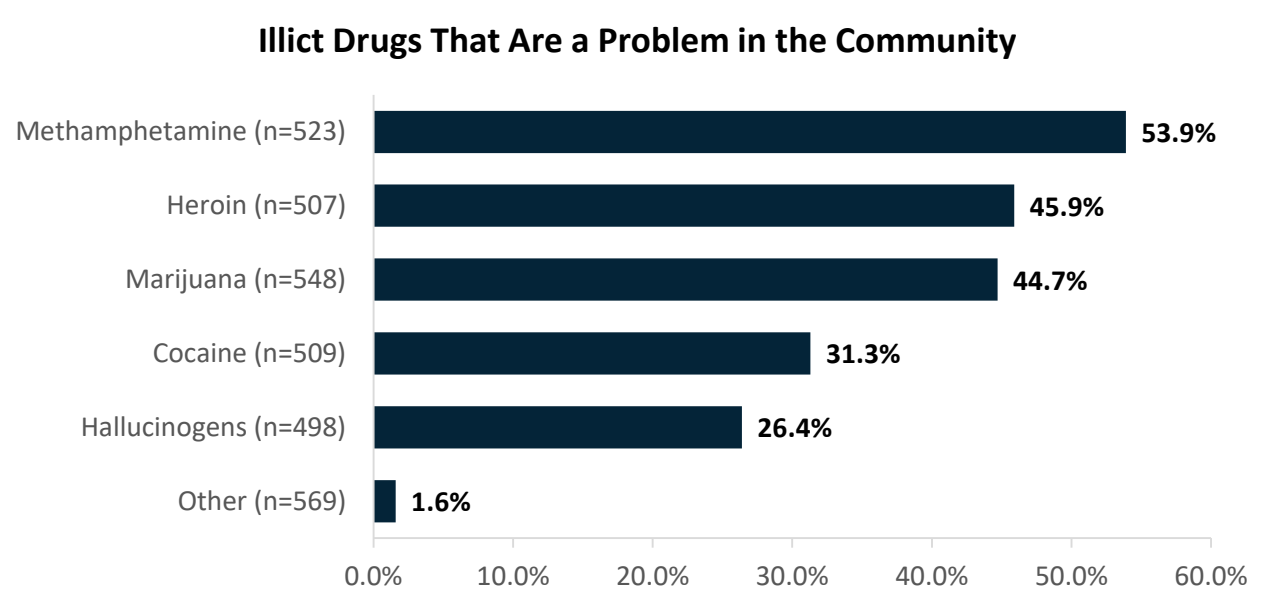
Source: SHP Behavioral Risk Factor Survey, 2017, Q11.2-q11.7: Which prescription drugs do you feel are abused in your community?

Substance Abuse (Continued)

- One-fourth (24.9%) of SHP area adults report that they know someone who has taken prescription drugs to get high.
- Over half of area adults believe the use of methamphetamines is a community problem and more than four in ten believe the same about heroin and marijuana use.



Source: SHP Behavioral Risk Factor Survey, 2017, Q11.8: Do you know someone who has taken prescription medication, such as Oxycontin, to get high? (n=582)

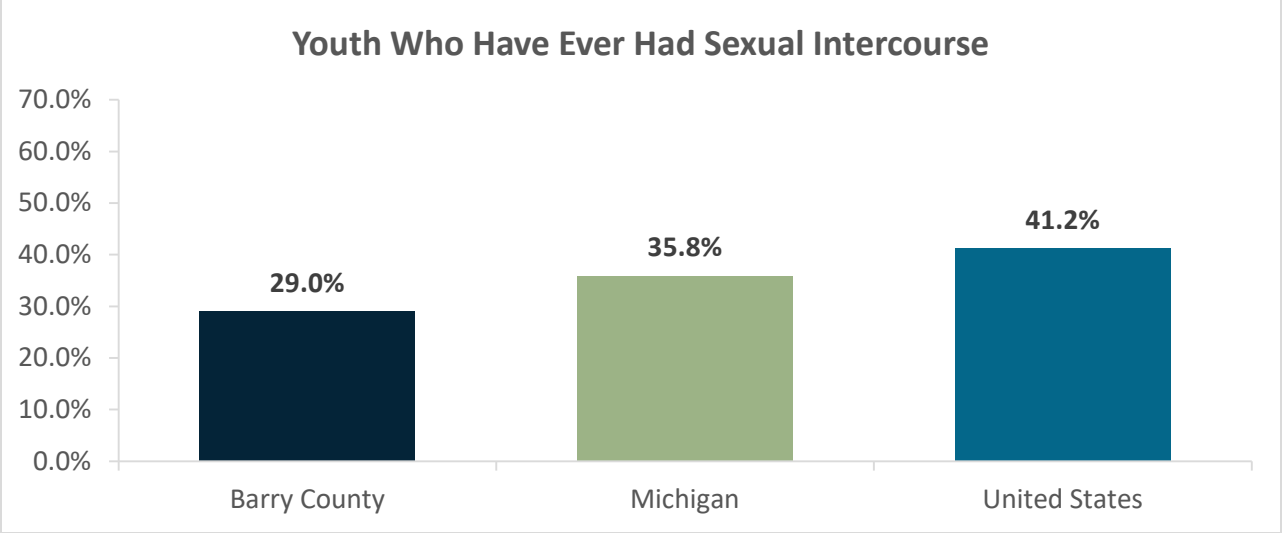


Source: SHP Behavioral Risk Factor Survey, 2017, Q11.9-Q11.14: With regard to the use of the following drugs, which do you think are a problem in your community today?

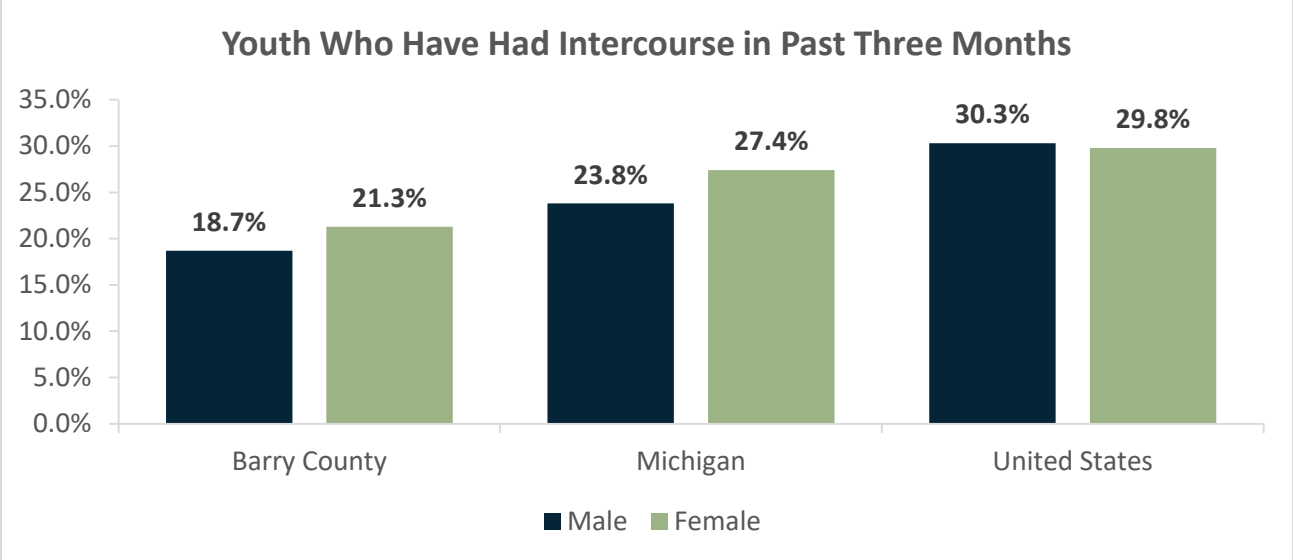
Teenage Sexual Activity

- Three in ten (29.0%) Barry County teens have had sexual intercourse, a rate lower than the state or national rates.

- Among teens who report having had sexual intercourse in the past three months, the proportion of females is higher than the proportion of males; more than one in five (21.3%) Barry County female teens and just fewer than one in five male teens have had sexual intercourse in the past three months.



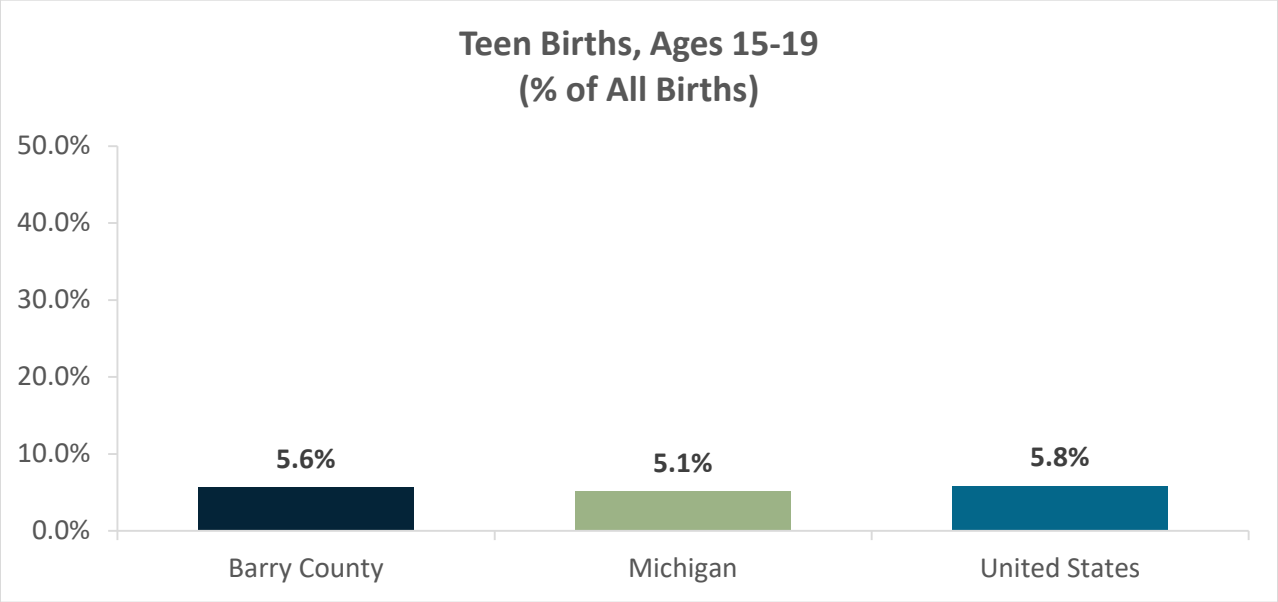
Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.



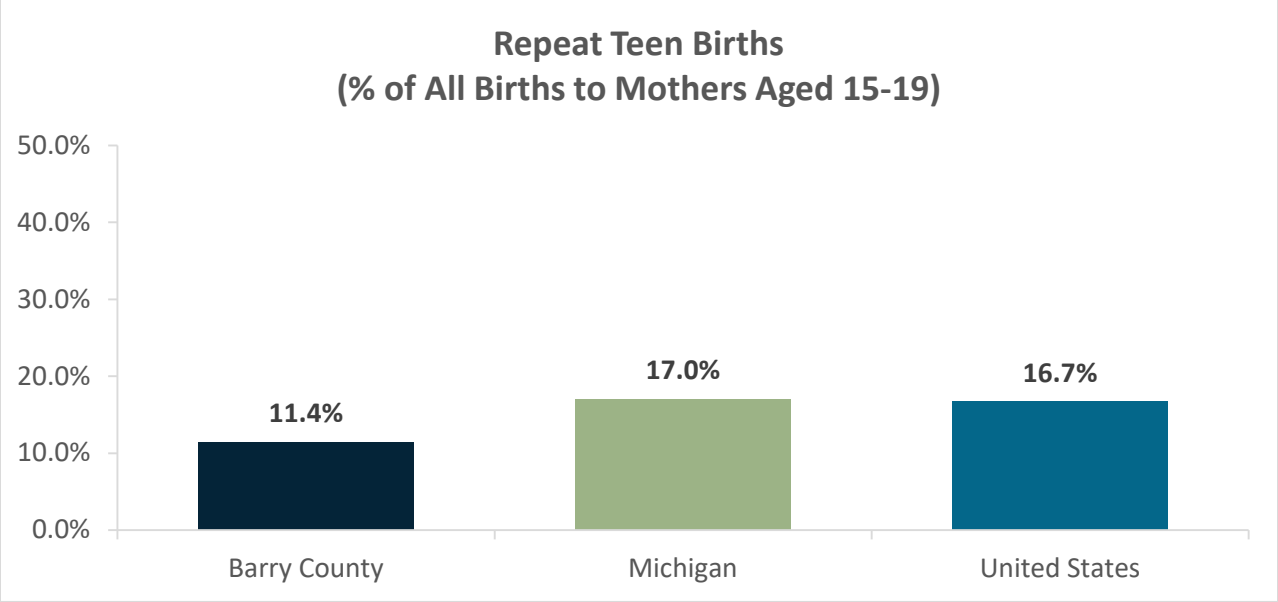
Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Teenage Sexual Activity (Continued)

- As a percentage of all births, the rate of teen births is higher in Barry County than in Michigan but lower than the U.S. rate.
- Repeat teen births are lower in Barry County compared to the state or the nation.



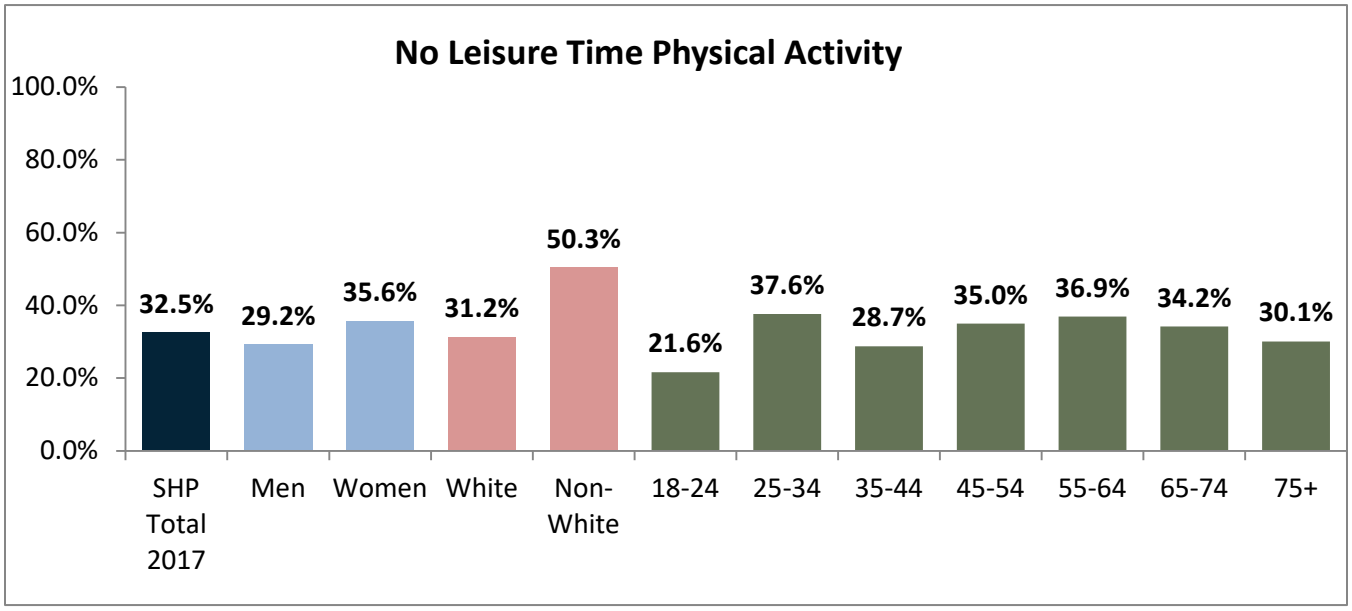
Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

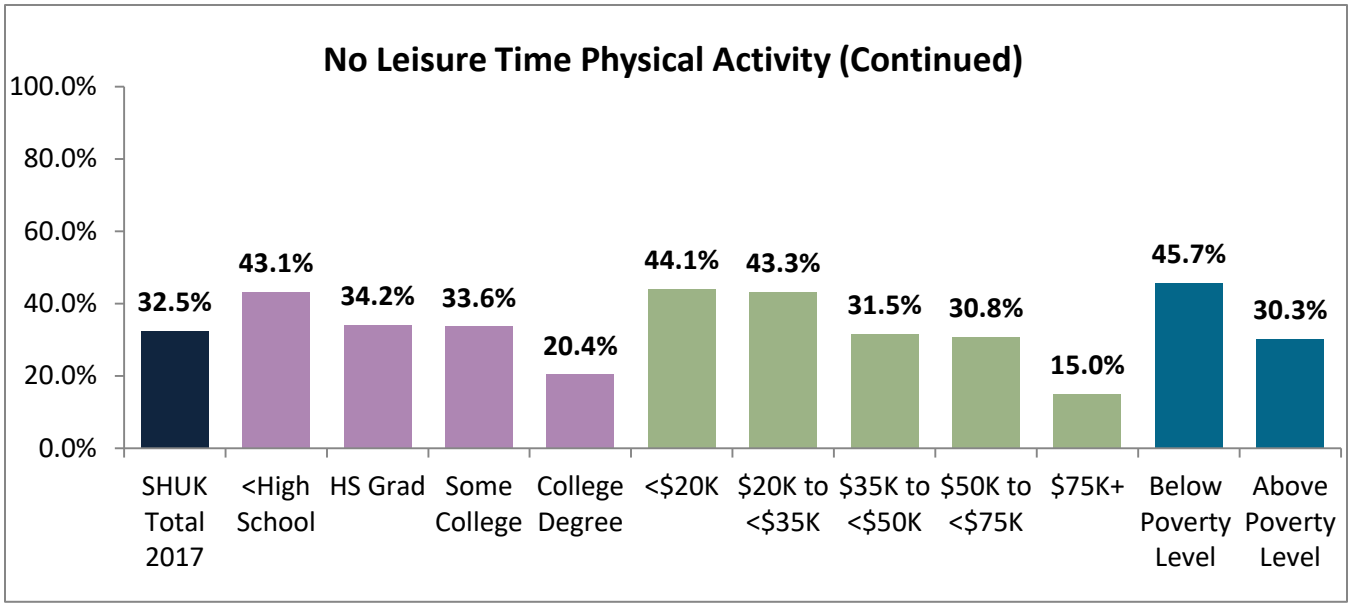


Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Physical Activity

- Almost one-third (32.5%) of area adults do not participate in leisure time physical activity outside of their job.
- Lack of physical activity is inversely related to income; more than four in ten adults with incomes of less than $35K do not participate in physical activity compared to 15.0% of adults with incomes of $75K or more.
- Further, engaging in leisure time physical activity is inversely related to education.

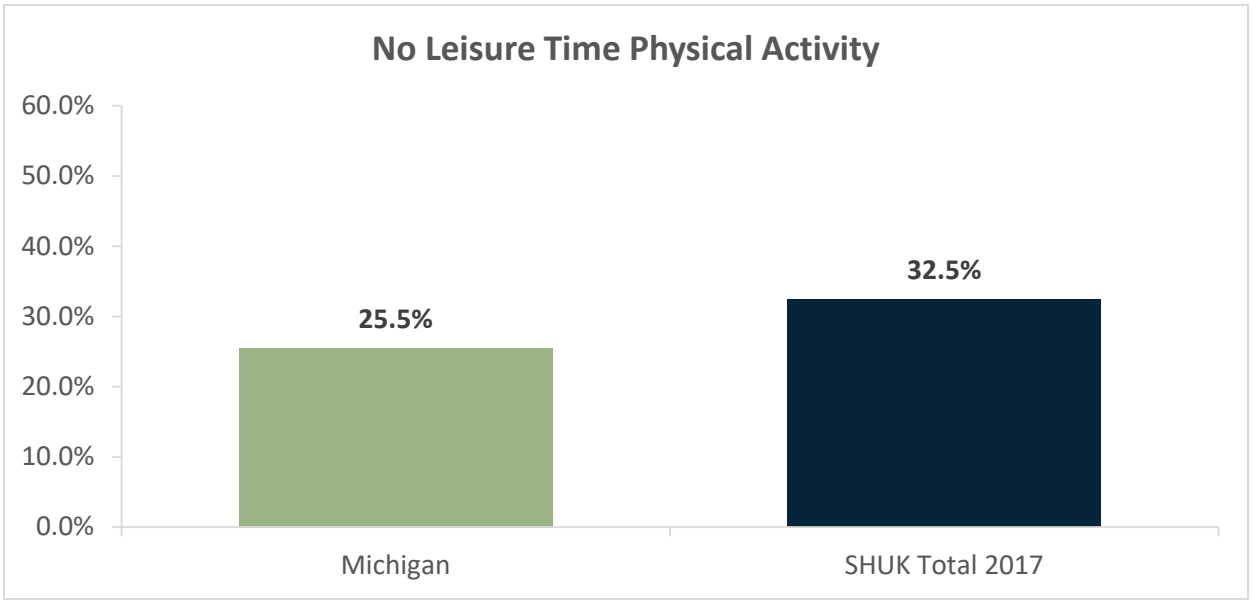




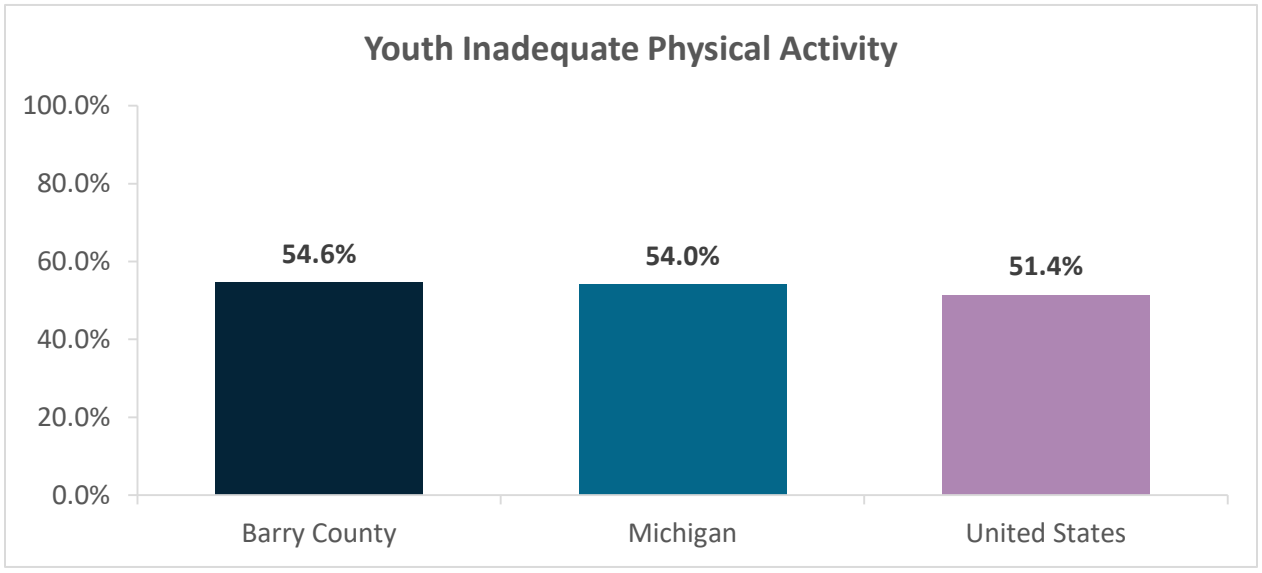
Source: SHP Behavioral Risk Factor Survey, 2017, Q16.1: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise? (n=590)

Physical Activity (Continued)

Both SHP area adults and youth are less active than adults and youth across Michigan, respectively.



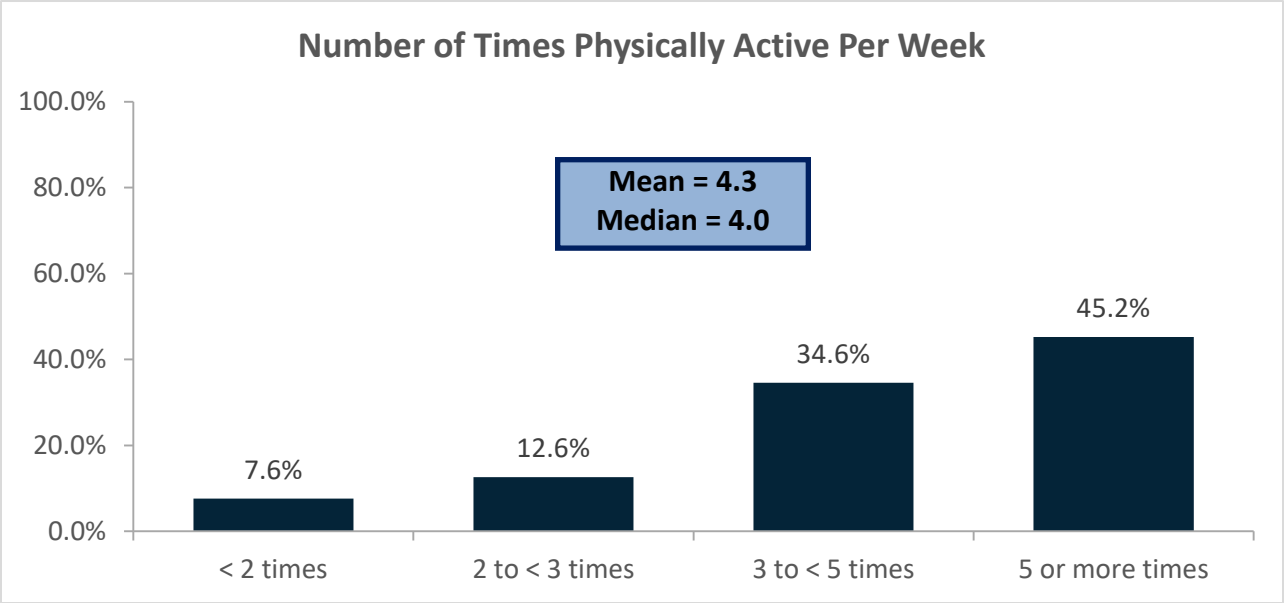
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016. Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHPK Behavioral Risk Factor Survey, 2017.



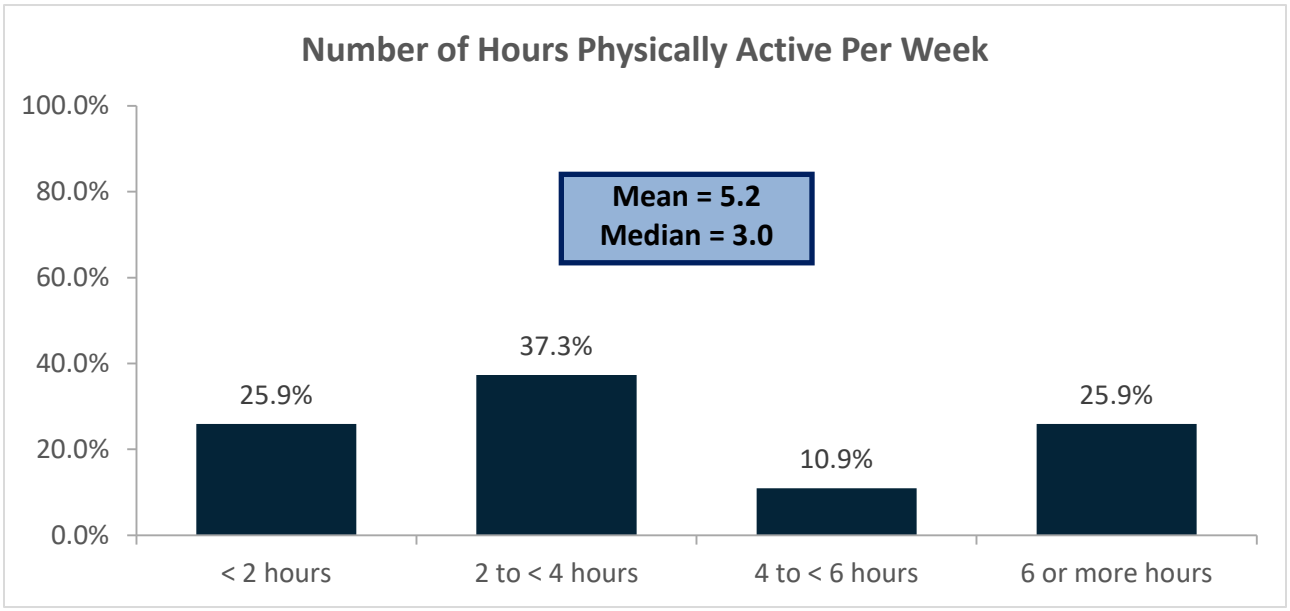
Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Physical Activity (Continued)

- Among those who exercise, 79.8% participate at least three times per week.
- More than six in ten (63.2%) participate for less than four hours per week, while one-fourth (25.9%) participate for six hours or more.



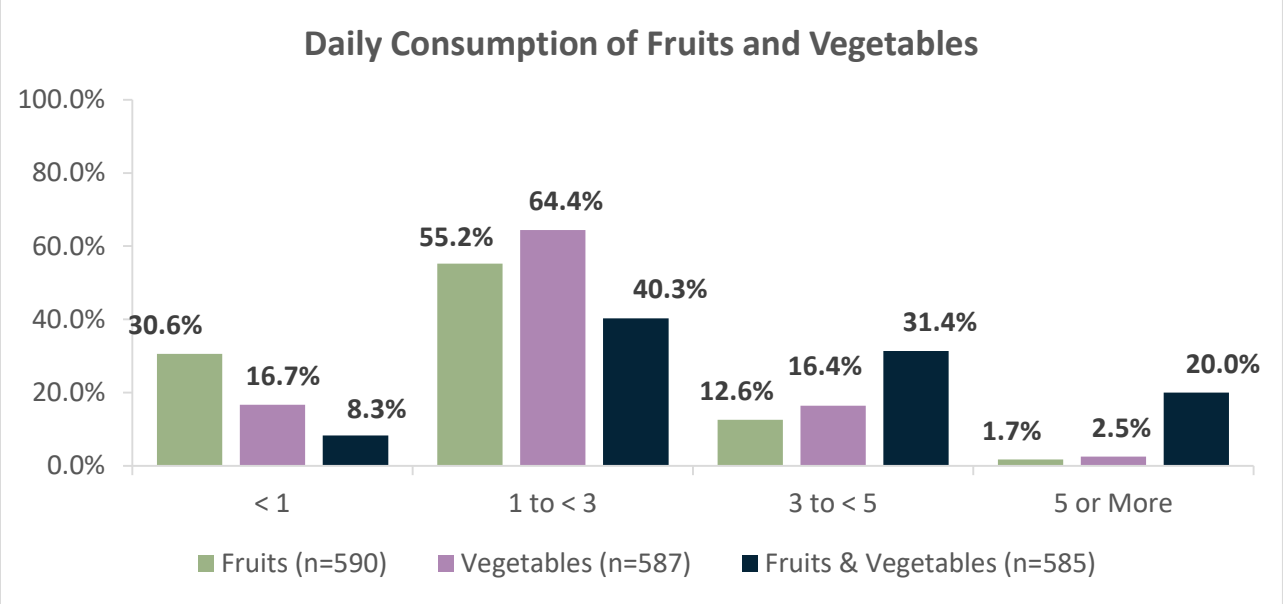
Source: SHP Behavioral Risk Factor Survey, 2017, Q16.2: How many times per week or per month did you take part in physical activity during the past month? (n=393). Note: among those who engage in leisure time physical activity.



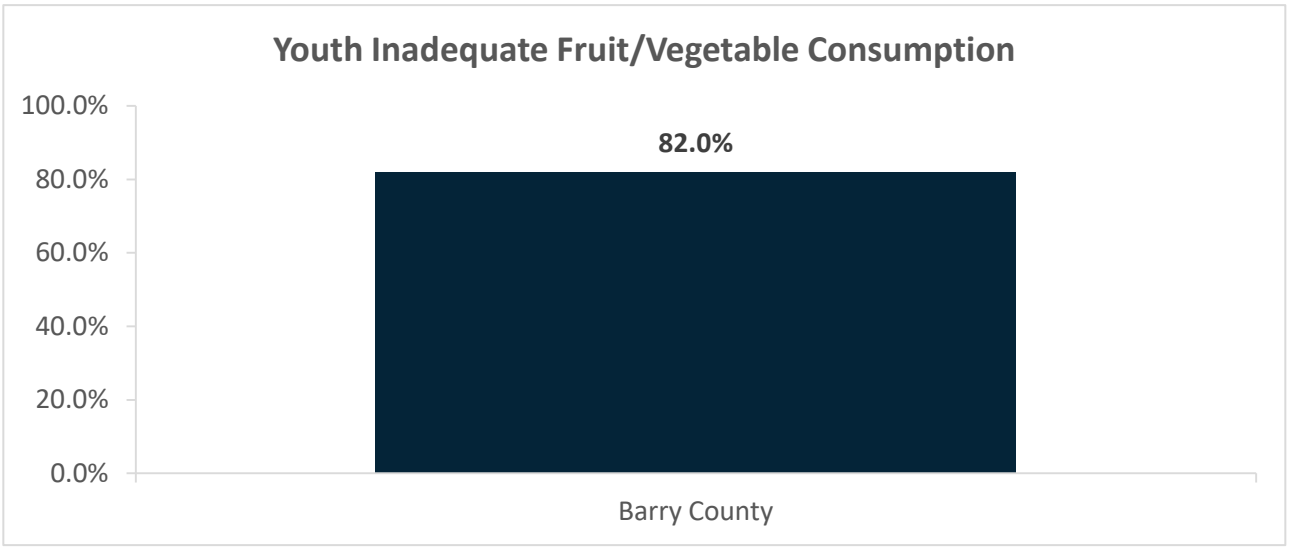
Source: SHP Behavioral Risk Factor Survey, 2017, Q16.3: And when you took part in physical activity, for how many minutes or hours did you usually keep at it? (n=389). Note: among those who engage in leisure time physical activity.

Fruit and Vegetable Consumption

- One in five (20.0%) SHP area adults and youth (18.0%) consume adequate amounts of fruits and vegetables per day, which is defined as five or more times per day.
- Large majorities of area adults consume fruits and vegetables fewer than three times per day.



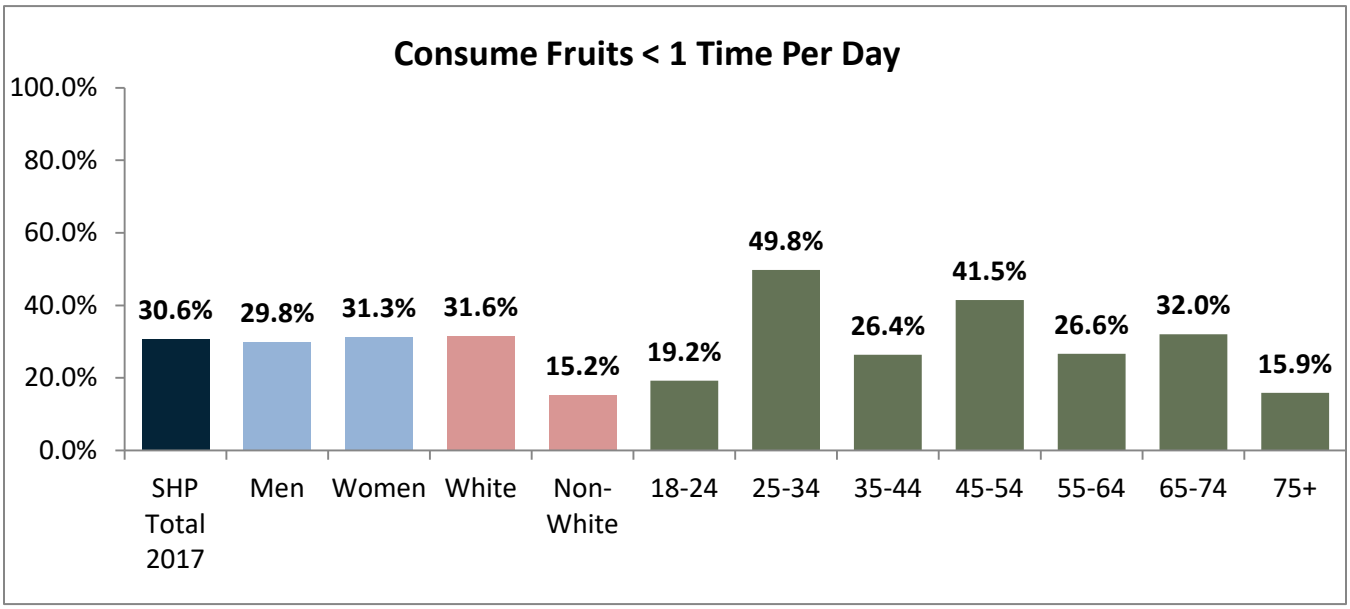
Source: SHP Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.; Q14.2: During the past month, how many times per day, week, or month did you eat vegetables for example broccoli, sweet potatoes, carrots, tomatoes, V-8 juice, corn, cooked or fresh leafy greens including romaine, chard, collard greens or spinach?

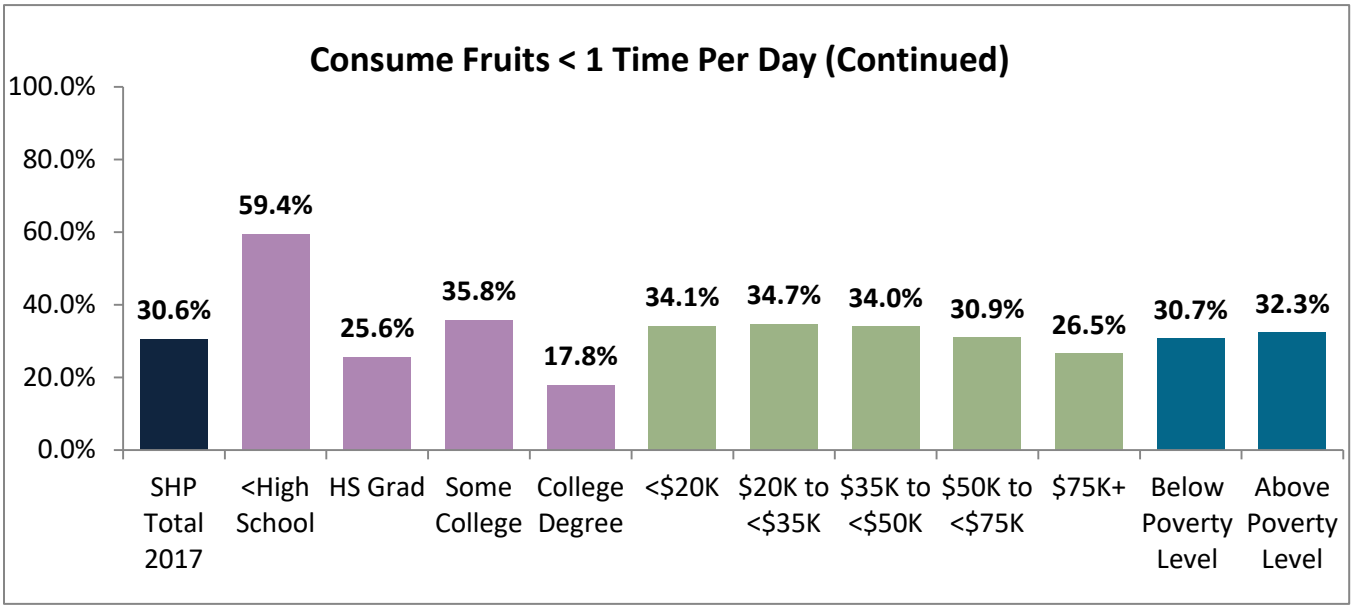


Source: For Barry County: Michigan Profile for Healthy Youth (MiPhy), 2015.

Fruit and Vegetable Consumption (Continued)

- Three in ten (30.6%) area adults consume fruit less than one time per day on average.
- Area adults most likely to consume fruits less than one time per day have less than a high school diploma.

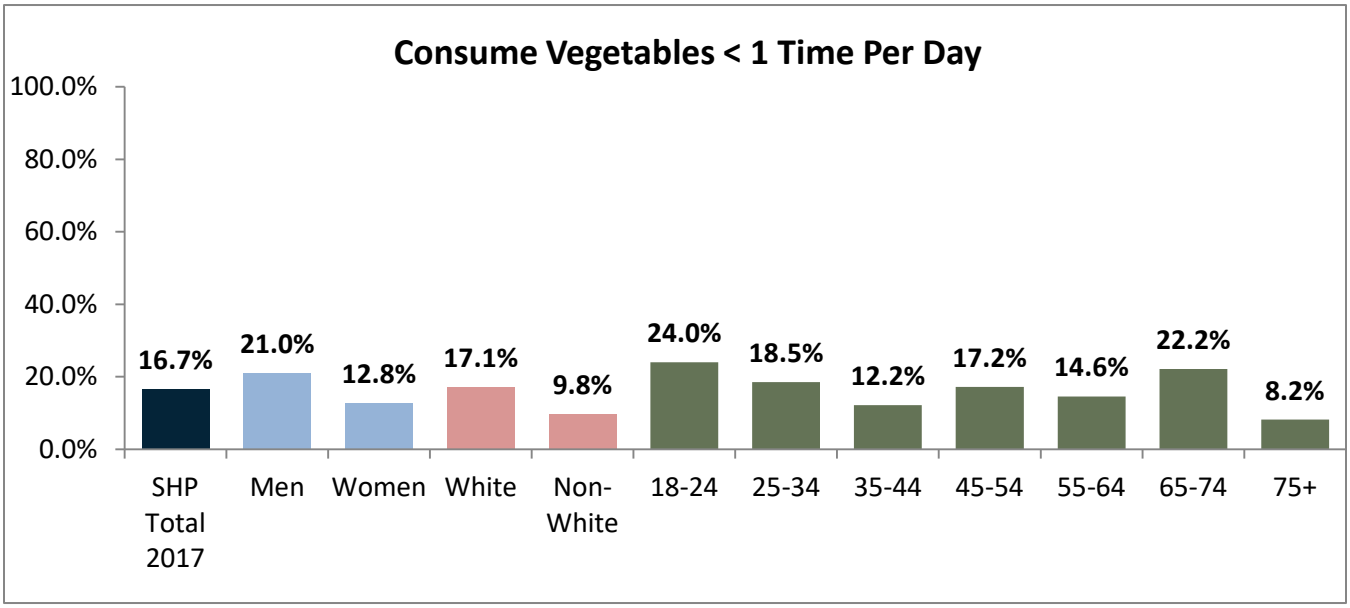


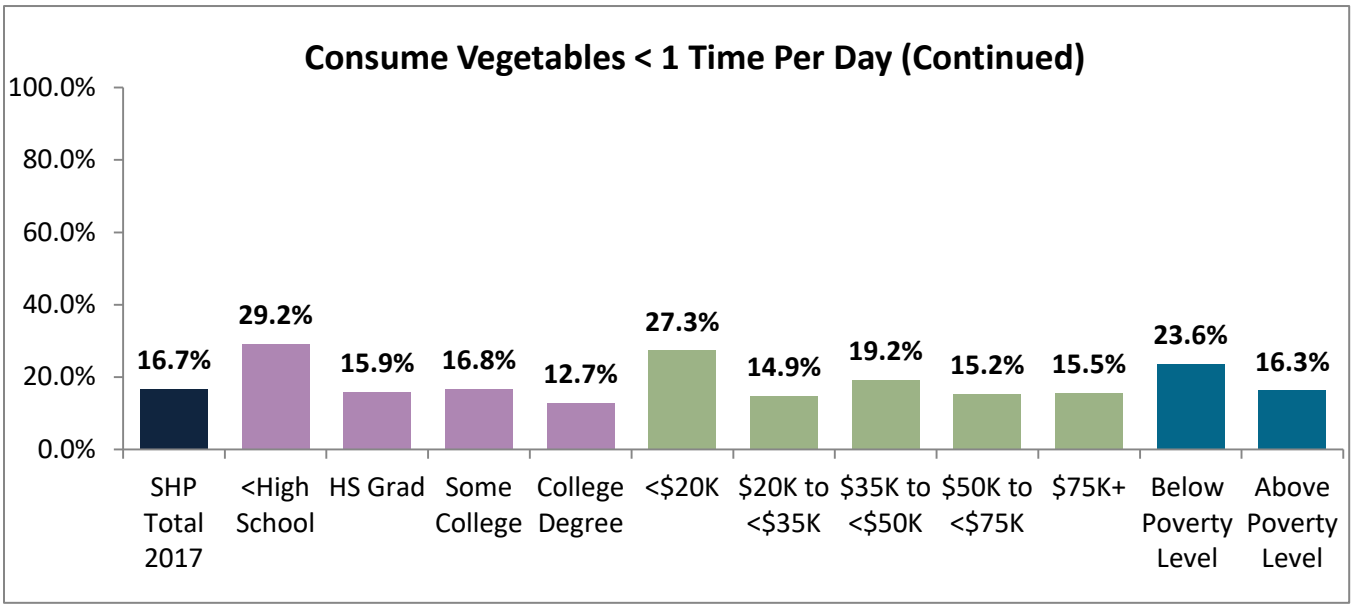


Source: SHP Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.

Fruit and Vegetable Consumption (Continued)

One in six (16.7%) SHP area adults consumes vegetables less than one time per day, on average, and those most likely to do this come from groups that are youngest (under age 25), have no high school diploma, and/or have incomes of less than $20K.

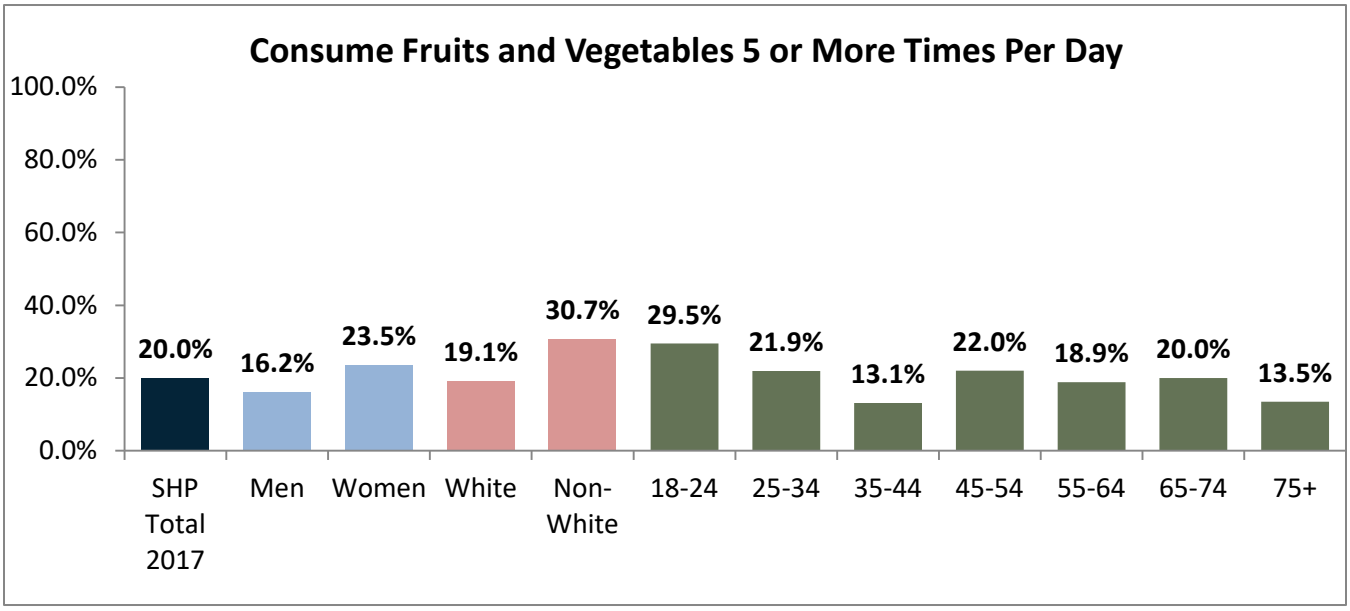


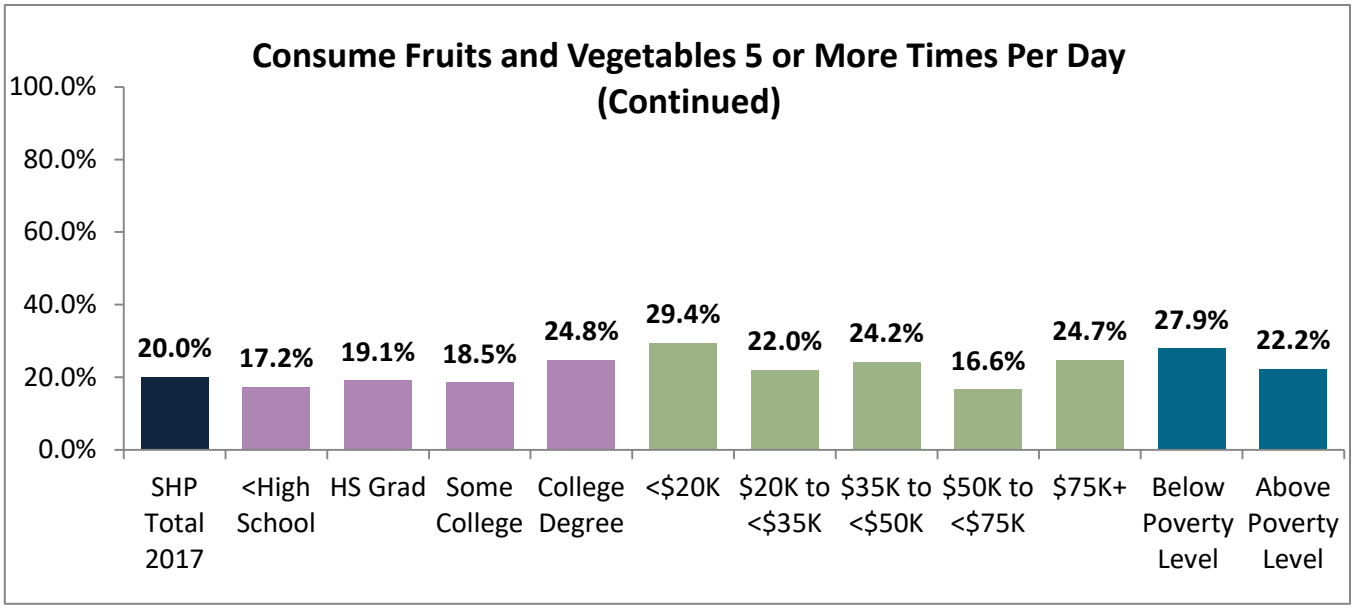


Source: SHP Behavioral Risk Factor Survey, 2017, Q14.2: During the past month, how many times per day, week, or month did you eat vegetables for example broccoli, sweet potatoes, carrots, tomatoes, V-8 juice, corn, cooked or fresh leafy greens including romaine, chard, collard greens or spinach?

Fruit and Vegetable Consumption (Continued)

- Women and non-White adults are more likely to consume adequate amounts of fruits and vegetables daily, compared to men and White adults, respectively.
- Adults with a college degree are more likely to consume adequate amounts of fruits and vegetables compared to adults with less education.





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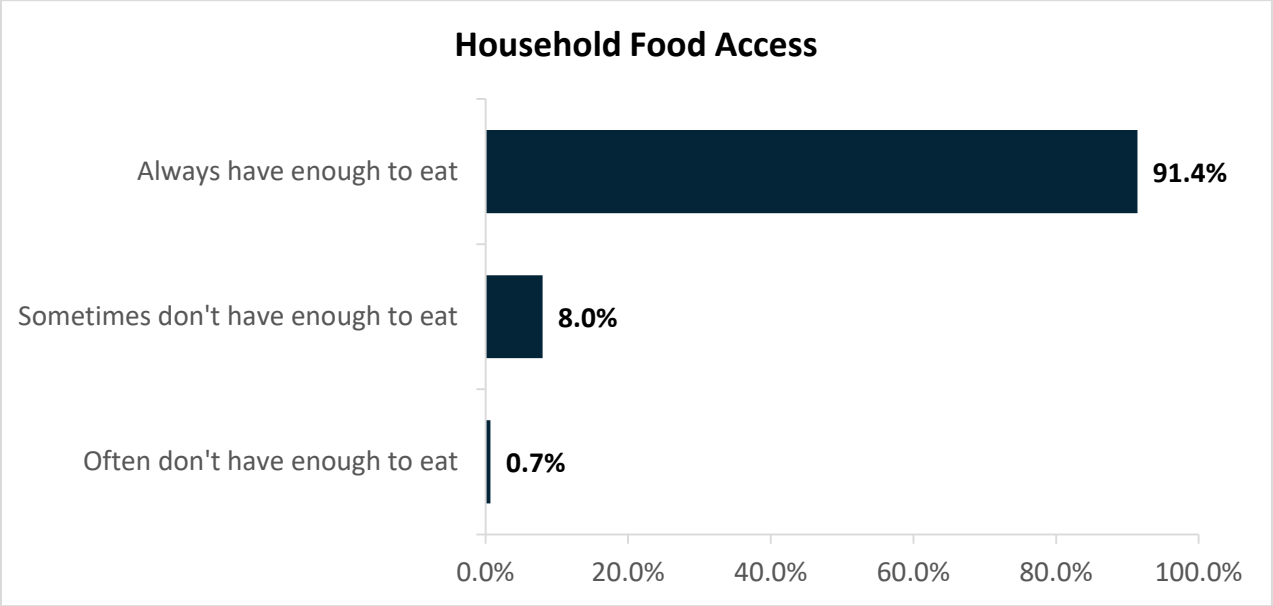
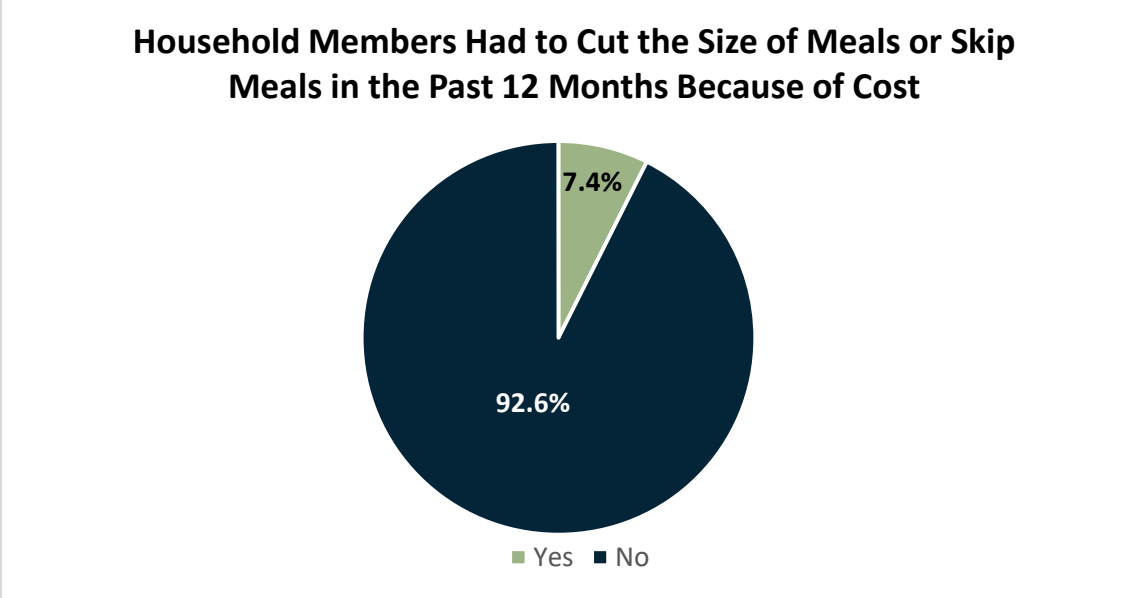
Food Sufficiency

- More than nine in ten (91.4%) area adults report they always have enough food to eat.
- More than one in thirteen (7.4%) say they have had to cut the size of meals, or skip meals, because of cost.



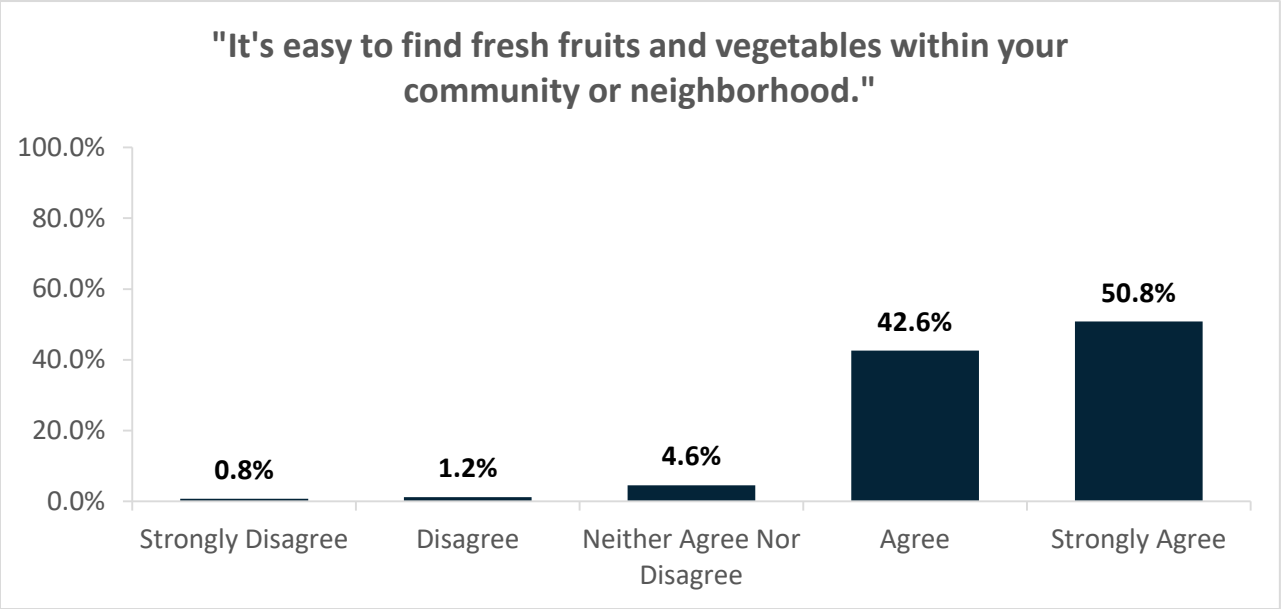
Source: SHP Behavioral Risk Factor Survey, 2017, Q15.1: Which of the following statements best describes the food eaten in your household within the last 12 months? Would you say that…? (n=593)



Source: SHP Behavioral Risk Factor Survey, 2017, Q15.2: In the past 12 months, did you or others in your household ever cut the size of your meals or skip meals because there wasn't enough money for food? (n=594)

Food Sufficiency (Continued)

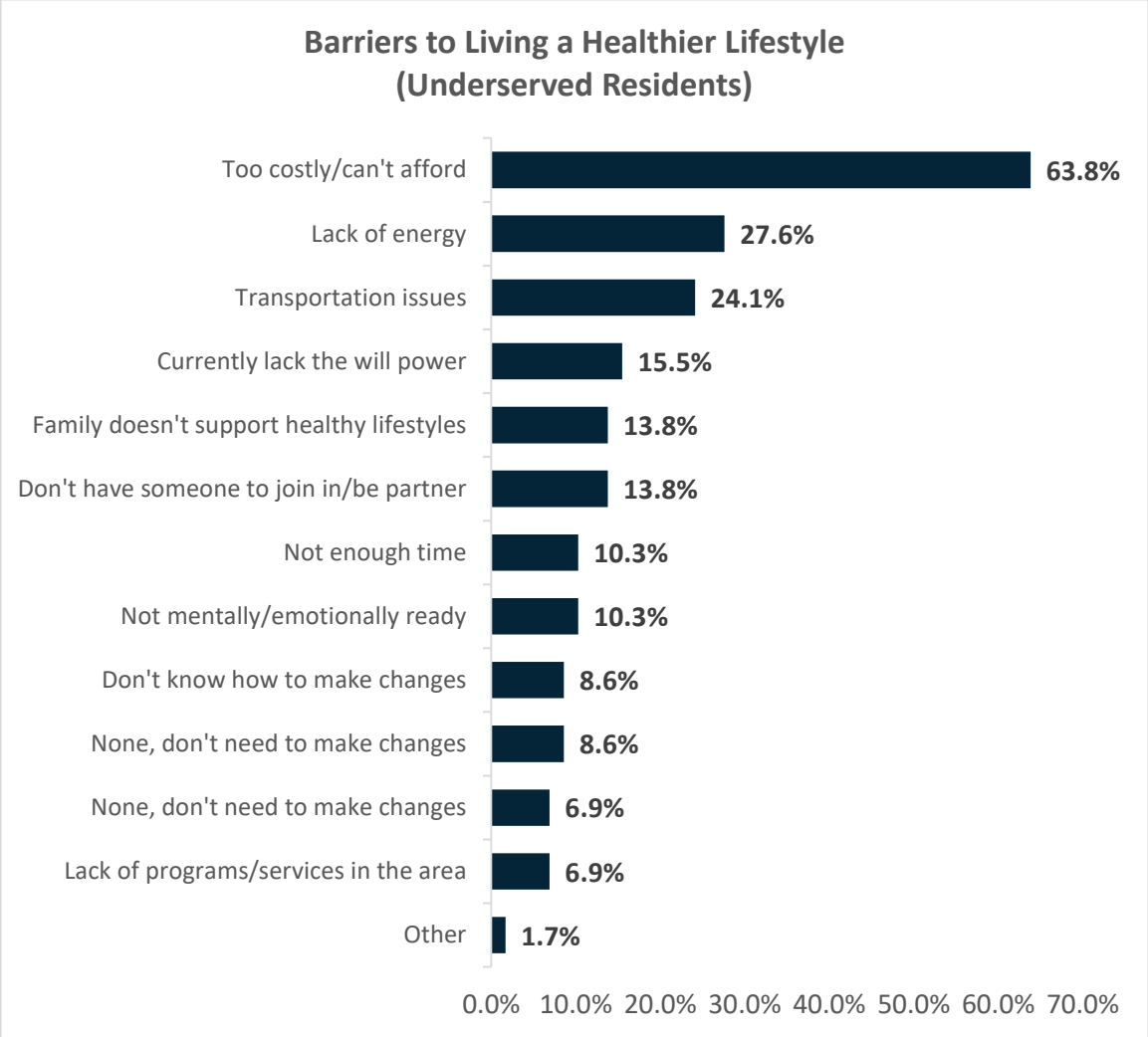
Additionally, more than nine in ten (93.4%) area adults say that it's easy to find fresh fruits and vegetables within their neighborhood or community.



Source: SHP Behavioral Risk Factor Survey, 2017, Q15.3: Please tell me how much you agree or disagree with the following statement. "It is easy to find fresh fruits and vegetables within your community or neighborhood." Would you say that you…? (n=589)

Barriers to Living a Healthier Lifestyle

- Underserved adults face many barriers when trying to live a healthier lifestyle but cost is by far the most impactful
- Lack of energy and transportation issues are also barriers to living healthier.

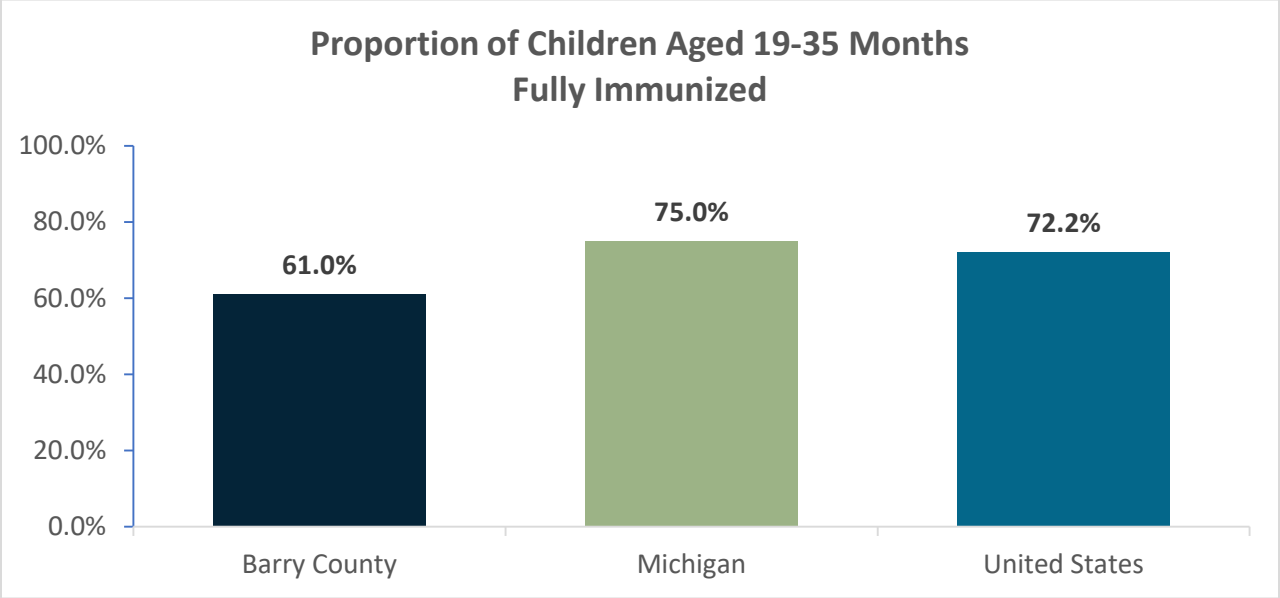


Source: SHP Underserved Resident Survey, 2017, Q17: What are some of the barriers you face personally when trying to live a healthier lifestyle? (n=135)

CLINICAL PREVENTATIVE PRACTICES

Child Immunizations

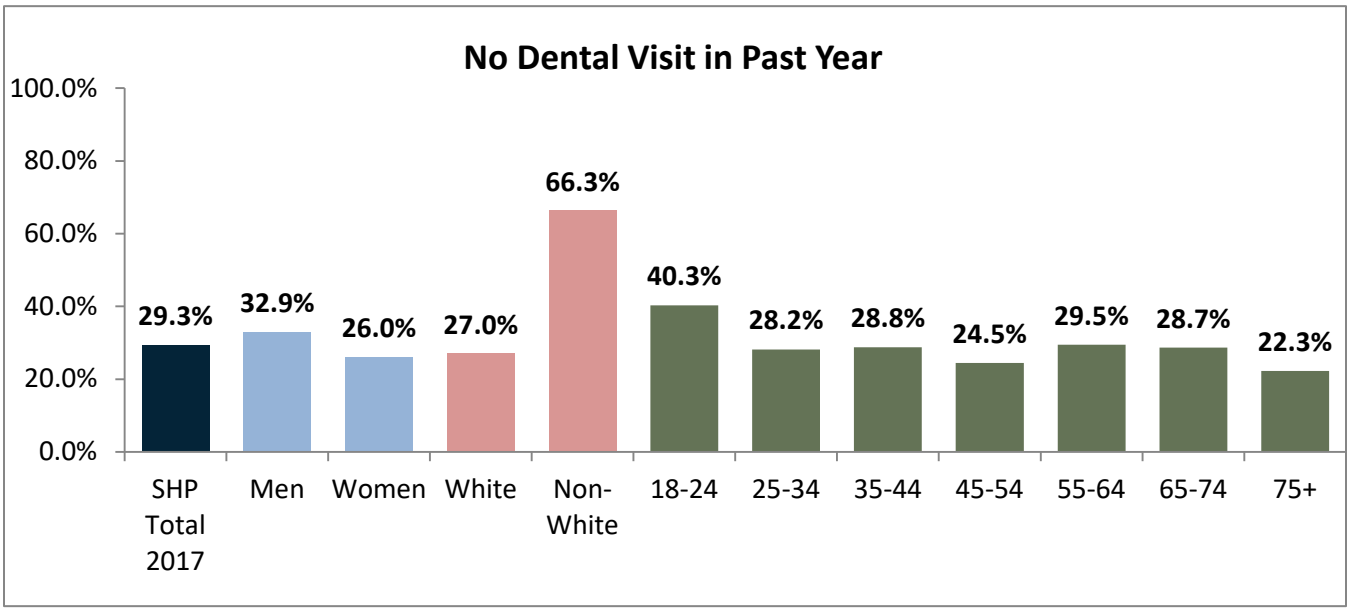
- Six in ten (61.0%) children aged 19-35 months in Barry County are fully immunized, rates far below the state or national rates.
- Despite the low immunization rates, Key Informants do not consider lack of childhood immunizations as one of the most pressing or prevalent health issues in the community; in fact, they rank it last of the thirteen health issues they ranked for prevalence.

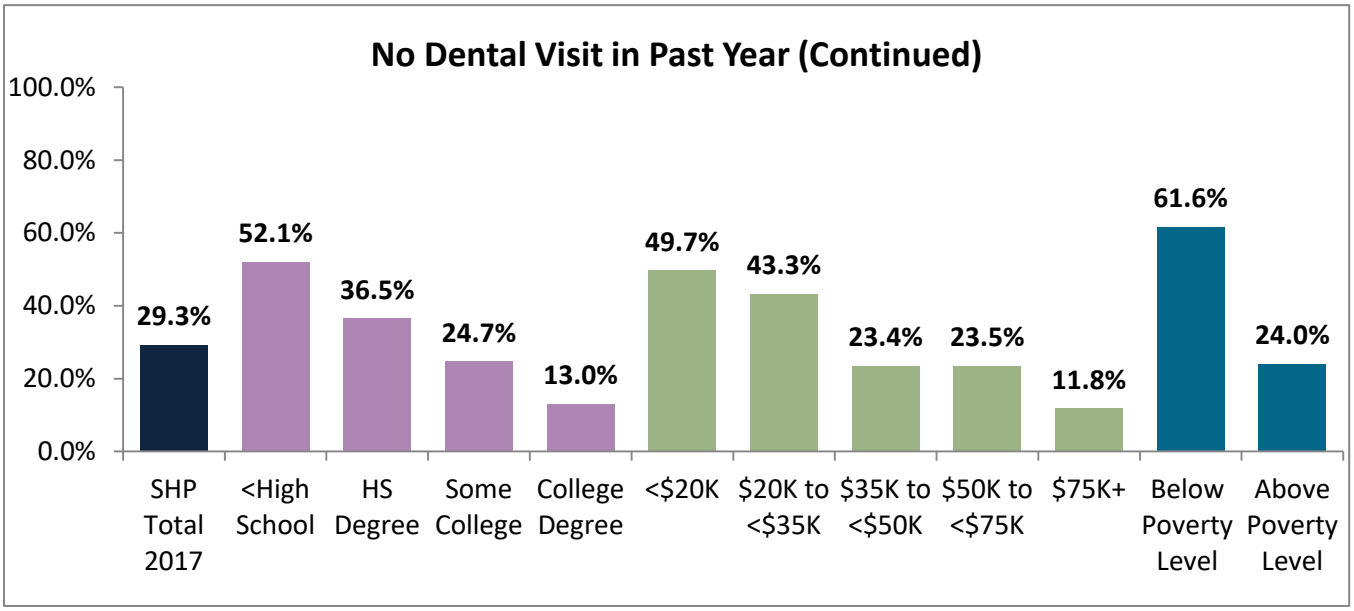


Source: Barry County and MI % from MICR, 2016, National data at CDC National Immunization Survey, 2015.

Oral Health

- Three in ten (29.3%) SHP area adults have not visited a dentist in the past year.
- Men and non-White adults are less likely to visit a dentist than women or White adults, respectively.
- The chances of visiting a dentist increases with education and income.

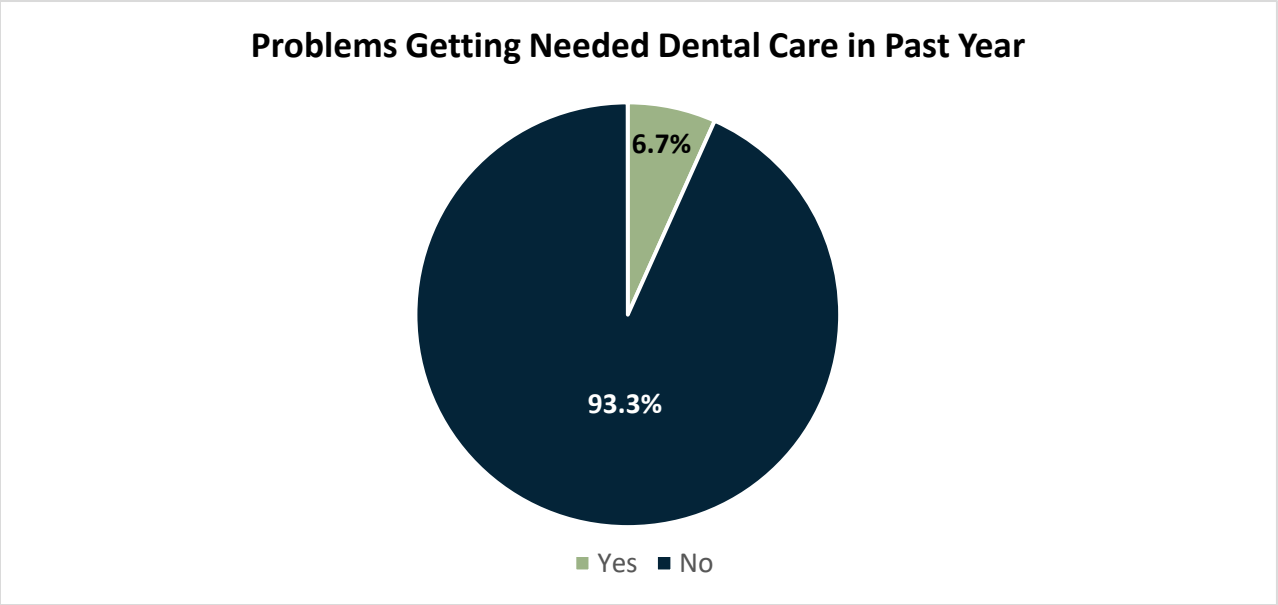




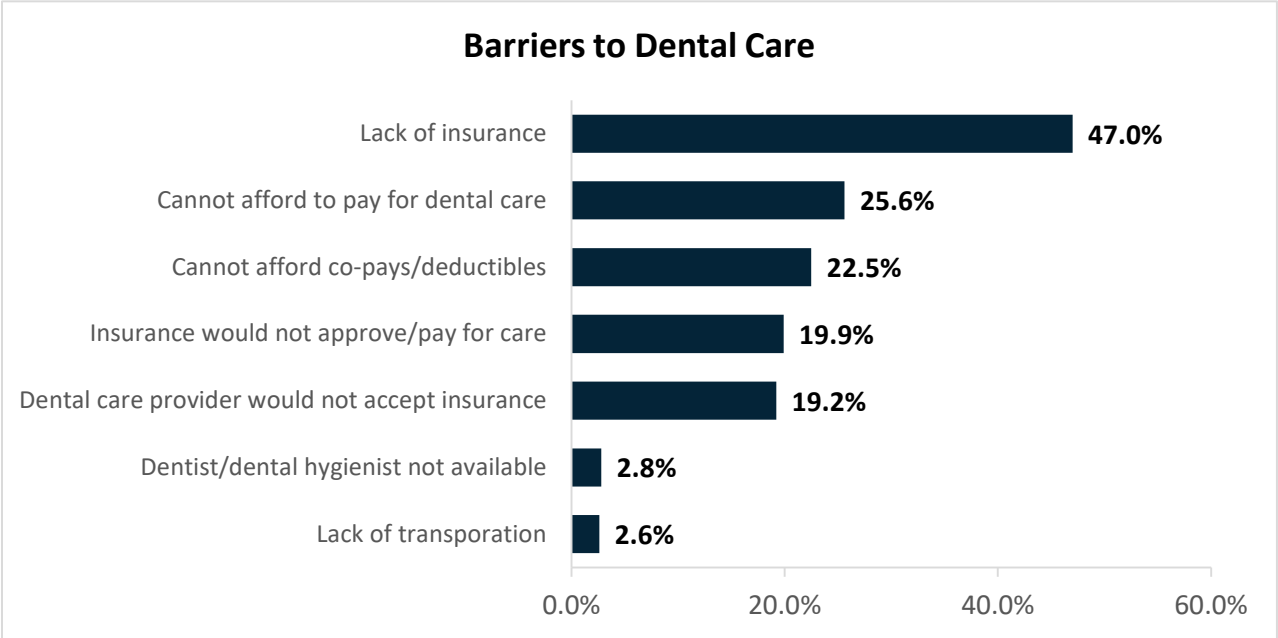
Source: SHP Behavioral Risk Factor Survey, 2017, Q19.1: How long has it been since you last visited a dentist or a dental clinic for any reason? Include visits to dental specialists, such as orthodontists. (n=587)

Oral Health (Continued)

Very few (6.7%) area adults have had problems receiving needed dental care in the past year, but for those who have, lack of dental insurance and an inability to afford dental care in general, or the out-of-pocket expenses such as co-pays and deductibles, are the major barriers to care.



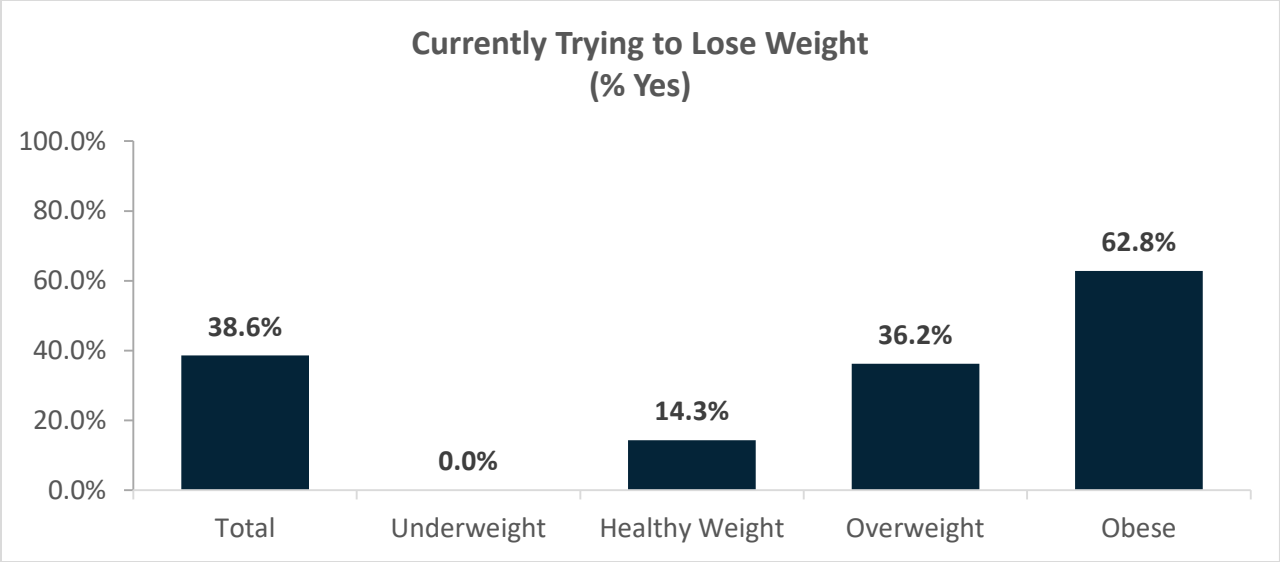
Source: SHP Behavioral Risk Factor Survey, 2017, Q19.2: In the past 12 months, have you had problems getting needed dental care? (n=592)



Source: SHP Behavioral Risk Factor Survey, 2017, Q19.3: Please provide the reason(s) for the difficulty in getting dental care. (Multiple response). (n=39)

Weight Control

- Almost four in ten (38.6%) area adults are currently trying to lose weight but only 36.2% of adults who are overweight, and 62.8% of adults who are obese, per their BMI, are currently trying to lose weight.
- Further, many of those who are overweight or obese see themselves more favorably; for example, only 36.3% of those considered obese per their BMI see themselves as very overweight, and 34.1% of those who are overweight view themselves as about the right weight.



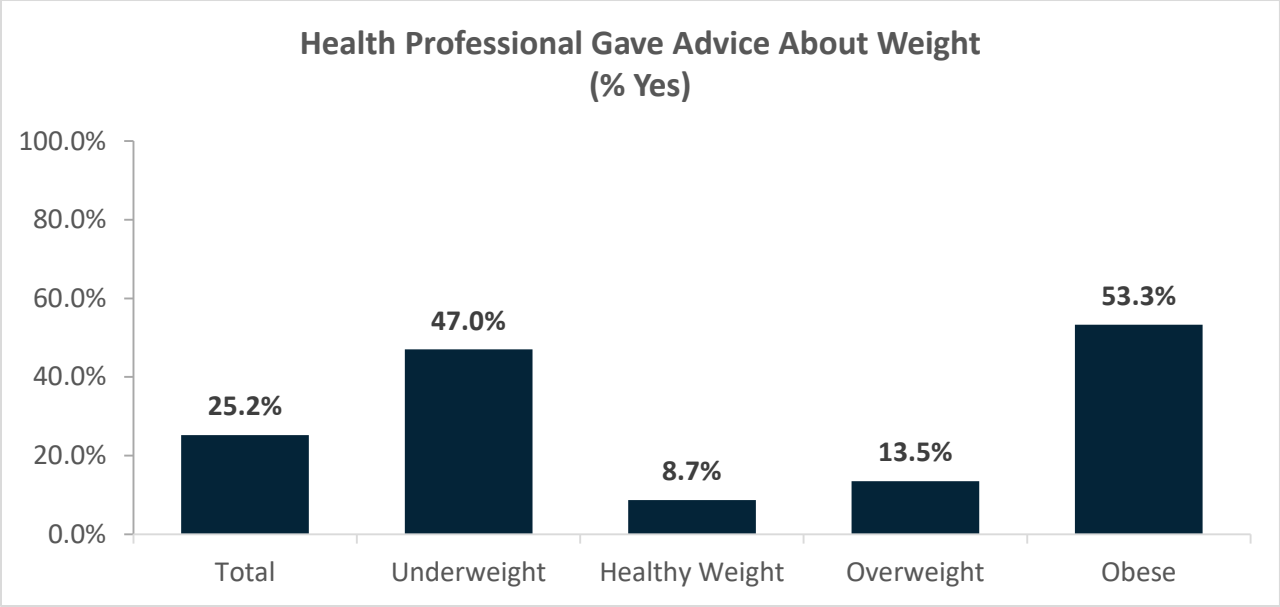
Source: SHP Behavioral Risk Factor Survey, 2017, Q13.1: Are you currently trying to lose weight? (n=589)

		BMI Category			
Self-Described Weight	TOTAL (n=586)	Obese (n=193)	Overweight (n=205)	Healthy Weight (n=155)	Underweight (n=6)
Underweight	3.4%	0.7%	0.6%	7.5%	59.4%
About the right weight	39.8%	13.7%	34.1%	78.9%	40.7%
Slightly Overweight	43.8%	49.3%	63.6%	12.7%	0.0%
Very Overweight	13.0%	36.3%	1.7%	0.8%	0.0%

Source: SHP Behavioral Risk Factor Survey, 2017, Q13.2: How would you describe your weight? Would you say…?

Weight Control (Continued)

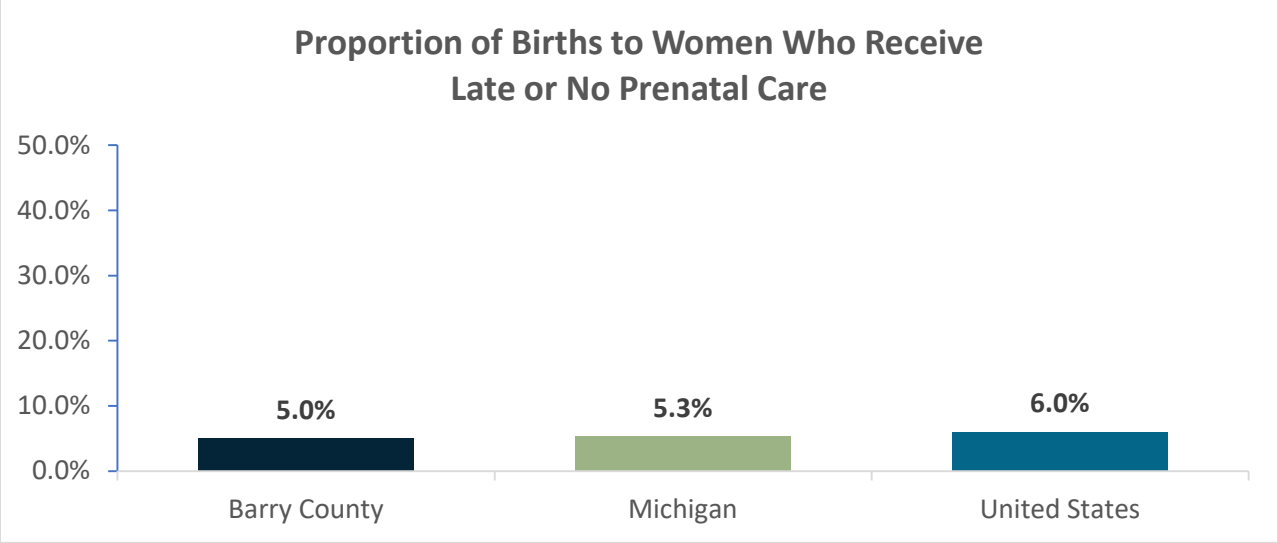
In light of the fact that seven in ten adults in the SHP area are either overweight or obese per this 2017 CHNA, it is surprising that many more adults are not receiving advice from health care professionals regarding their weight; only 13.5% of adults who are overweight, and 53.3% of those who are obese, per their BMI, are receiving advice about their weight from a health professional.



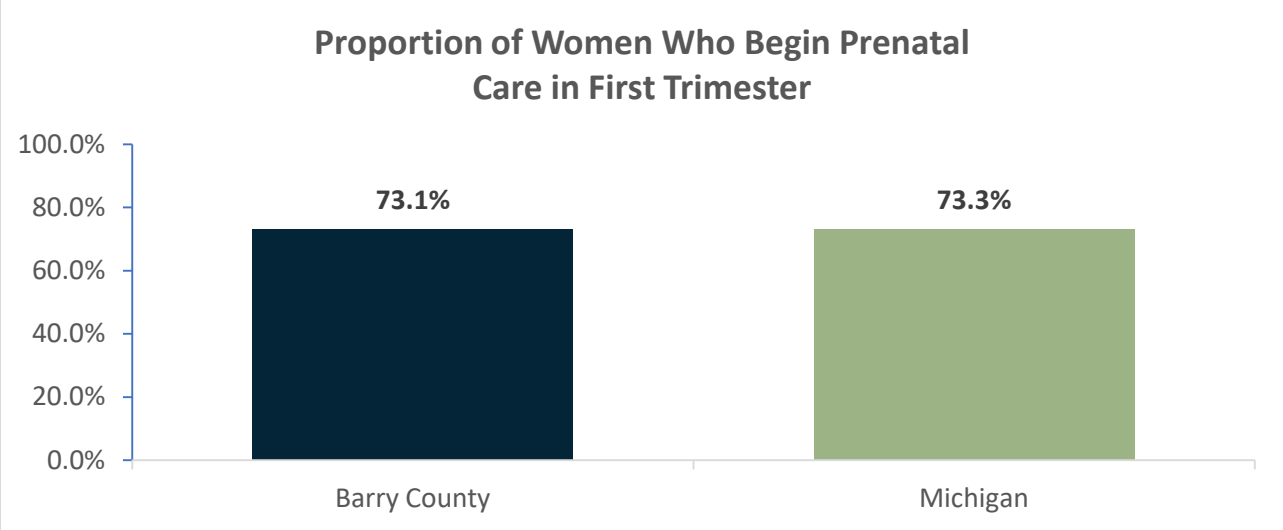
Source: SHP Behavioral Risk Factor Survey, 2017, Q13.3: Has a doctor, nurse, or other health professional given you advice about your weight? (n=588)

Prenatal Care

- The proportion of pregnant women in Barry County that have late or no prenatal care is extremely low, and lower than the state or national rates.
- There is also room for improvement as more than one-fourth (26.9%) of pregnant women in Barry County do not receive prenatal care in the first trimester.



Source: Kids Count Data Book, 2015.



Source: MDHHS Vital Records, Barry County and MI, 2015.

SOLUTIONS & STRATEGIES

Partnerships That Could Be Developed

Key Stakeholders named several strong partnerships currently in place among area organizations and agencies but also believe that additional partnerships would be beneficial in meeting community health needs. One particular area of opportunity cited by several Key Stakeholders is increased communication and collaboration between physical health and mental/behavioral health care providers.

Physical health and mental/behavioral health partnerships	**We can definitely have a stronger partnership between health care and behavioral health care**, so we have understanding…I think in a lot of ways, we have a lot of great partnerships in the county. I **wish we would work better with Barry Mental Health.** Mental Health in Michigan is very strict on sharing information and medical records - behavioral health information. **I'm sure it's done to protect the patients, but it's really hard on the primary care physician when he or she is trying to manage the health of that patient; there's a lack of access of information**. Even though we have current relationships with these organizations, **we're meeting monthly specifically to enhance those relationships**. **[One of] those would be the hospital**, and out of that might come additional training on either side, **looking at how we can integrate services together**. [Another one is] the FQHC, which is Cherry Health. **Cherry Health and Barry County Community Mental Health wrote a SAMHSA grant together…**Even if we don't get that grant, **we're talking about: What are ways we can increase our collaboration, whether it's providing more case management or more therapy, and what does that look like?**
Partnerships among other area agencies/ organizations	I think **Cherry Health and the hospital could work more collaboratively together…**I wish we could work with health care and hospitals and lab and ancillary, so that that **continuity of care would occur even better** in the community. – *Key Stakeholder* **There's opportunity for community partners to come together to support public health** more and the work that we do on addressing these issues, because **the political support isn't there.** [Among elected officials] there's a lot of negativity towards the Health Department, which means that we struggle financially, and having stronger support from our community partners to stand up for us to those political leaders would make a big difference.

Source: SHP Key Stakeholder Interviews, 2017, Q6: Are there any specific partnerships that could be developed to better meet a need? (n=5)

Resources Available to Meet Issues/Needs

Area health professionals cite many resources in place to address some of the community's most pressing health concerns. In many cases, however, resources do not fully cover the need, either because there are too few resources or because they are available only to certain groups, based on income level, insurance type, age, or other factors. For example, limited resources exist to address barriers to access (e.g., lack of providers, cost of care) and mental health. With regard to lack of providers, several Key Informants noted efforts underway by Spectrum Health to recruit more physicians.

Lack of providers	**Pennock Hospital has worked** a little bit **on this issue with Spectrum** but there is still **not a sustainable model**. – *Key Informant* **Increased clinic hours** are **being researched**. – *Key Informant* Some **specialists** come to the area **once a month**. – *Key Informant* There are **not adequate resources to deal with the number of people who need dental** assistance…It's better than it was, but it's not at the top. – *Key Stakeholder*
Cost of care	**If you have financial resources** and access to health care, **there are resources to address [health issues]**, but **for many individuals, there aren't because they can't afford** to do so. – *Key Stakeholder* **Cherry Street**, the **Free Clinic** are available to those who can't achieve healthcare but [that] **doesn't address those in the middle**. – *Key Informant* There are some local agencies like **United Way** that help some people. – *Key Informant* **Barry County Mental Health**. **Cherry Health**. There is a new non-profit private practice/**Ascension Counseling**. – *Key Informant*
Mental/behavioral health	**Barry County Mental Health.** They **do a great job but are severely underfunded** and understaffed. – *Key Informant* Currently there is **NO child psychiatrist in Barry County**. – *Key Informant* **CMH**, **private providers**, **Cherry St. Health**. – *Key Informant* **Support groups** are offered in the community for free on several topics, i.e. AA, grieving support, diabetes, church groups. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1a: Are there adequate area resources available to address these issues? (n=5); SHPH Key Informant Online Survey, 2017, Q1b: What are the resources available in the community to address/resolve this issue? Please be as detailed as possible. (n=49)

Resources Available to Meet Issues/Needs (Continued)

Similarly, resources to address substance use/abuse are limited, particularly treatment options, including smoking cessation for minors. Health professionals cited resources in place to address chronic conditions such as heart disease, diabetes, and dementia, as well as obesity.

Substance use/abuse	Barry County mental health **for those with Medicaid**. – *Key Informant* **Pain clinic via Spectrum** (limited specialty access is also an overall issue for those with chronic diseases). – *Key Informant* We have an organized **Substance Abuse Task Force** which includes representatives from healthcare, law enforcement, education, mental health, DHS, community, spiritual areas. – *Key Informant* [For smoking] prevention: **Teens Against Tobacco Use** Program. [For smoking] treatment: **No treatment options for kids under 18**. – *Key Informant*
Chronic disease	A strong health system with **excellent cardiac care**. – *Key Informant* **Diabetes Prevention Program**. Diabetes **outpatient counseling and classes**. Diabetes **Support Group.** – *Key Informant* [For diabetes:] It is great to see **food banks supply fresh vegetables**; however, the space and access is limited. I can see where communities may have space for being active, it just may be a matter of utilizing and organizing what is available. The **trail in Hastings** is a great addition. The **B.Healthy bus wrap** is a great start to marketing healthy behaviors. The **DK Garden program** to teach kids gardening, healthy eating and being active is in its 2nd year. – *Key Informant* [For dementia:] **Thornapple Manor. Woodlawn Meadows** dementia unit. **Magnum Care** dementia unit. **Council on Aging** adult day care. – *Key Informant*
Obesity	**B.Healthy coalition** is doing a really good job in education and I know that the **pediatrics offices are consistently working with the families**. – *Key Informant* **Weight loss programs** at Pennock. – *Key Informant* Outside **trails**, **gym membership if you have money**. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1a: Are there adequate area resources available to address these issues? (n=5); SHPH Key Informant Online Survey, 2017, Q1b: What are the resources available in the community to address/ resolve this issue? Please be as detailed as possible. (n=49)

Resources Available to Meet Issues/Needs (Continued)

A summary of area resources available to address health and health care needs are as follows:

- Access Coalition (dental)
- Ascension Counseling
- B. Healthy Coalition
- Barry Community Free Clinic
- Barry Community Health Center (Cherry Health)
- Barry County Community Mental Health Authority (BCCMHA)
- Barry County United Way
- Barry Eaton District Health Department
- Commission on Aging
- Council on Aging
- Department of Health and Human Services (DHHS)
- Diabetes Prevention Program
- DK Garden Program
- Farmer's markets (Hastings, Middleville)
- Food banks
- Magnum Care Dementia Unit
- MedNow and other technology to increased health care access
- Smoking cessation programs
- Spectrum Health Pennock Hospital
- Spectrum Health Pain Clinic
- Substance Abuse Task Force
- Suicide Awareness and Prevention Program
- Support groups (e.g., AA, grieving, diabetes, faith-based)
- Teens Against Tobacco Use
- Thornapple Manor
- Weight loss programs
- Woodlawn Meadows Dementia Unit

Strategies Implemented Since Last CHNA

Key Stakeholders and Key Informants cited numerous initiatives that have grown out of prior CHNA research and the corresponding implementation plans. Initiatives focus on several critical areas, including improved access, chronic disease prevention and management, wellness, suicide prevention, and substance use/abuse.

Access	**Cherry Health** opening a local clinic. – *Key Informant* **MedNow** program has been initiated, for virtual contact with patients. – *Key Informant* They are **actively recruiting more doctors** and specialists. – *Key Informant* Our **Access Coalition** has worked on **improving dental**. – *Key Stakeholder*
Chronic disease prevention and management	Hospital opened a **Cancer Center** in 2017. – *Key Informant* Provided funding for **diabetes prevention programs**. – *Key Informant* There's been some positive **policy work around tobacco and chronic disease management**. – *Key Stakeholder*
Wellness	The **B.Healthy Coalition** has organized community agencies to develop resources, market restaurant table topper materials for healthy eating. – *Key Informant* Health Department **wellness initiatives**. – *Key Informant*
Suicide prevention	**Suicide awareness** and prevention. – *Key Informant*
Substance use/abuse	Effort has been made in **addressing substance abuse** and some effort into **addressing smoking and prenatal health**. – *Key Informant* **Smoking cessation**. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q10 (n=5); SHPH Key Informant Online Survey, 2017, Q16 (n=49): There was a Community Health Needs Assessments conducted in your community back in 2014. What, if anything, has been done locally to address any issues relating to the health or health care of area residents?

Suggested Strategies to Improve Overall Health Climate

Key Informants offer myriad suggestions for improving the overall health climate of the community, with the top areas being: (1) an increased focus on prevention and wellness; (2) a more holistic/integrated way of serving patients via increased communication and collaboration among physical health, mental health, and other community partners; (3) continued provider recruitment; (4) increased awareness and education about health resources and promotion of healthy lifestyles; and (5) enhanced resources for mental health.

Prevention/Wellness	A more **inclusive wellness center** (not just a fitness center, but a wellness/fitness/community center). A **sustained campaign** for many years **emphasizing wellness**. Have more **sponsored heath events, healthy eating and cooking, weight loss**.
Collaboration/Holistic approach	Better **communications between healthcare and other community partners** to bring a **more comprehensive health picture** to our families. A **comprehensive program targeting many of the issues identified** in this survey. **All healthcare areas need to be involved, as well as the schools**/children's programs. Increased **communication and integration between mental health and physicians**.
More providers	Improve access to care by gaining **more providers** in the area. **Increased availability** of medical providers.
Awareness/Education	More **awareness of services**, especially free ones. **Improved marketing** of existing programs. **Free seminars to educate on prevention** as well as **how to understand insurances**. More **education on healthy habits** and lifestyle habits that are open to everyone. More **education about access to fresh foods**.
Mental health	Better and more readily accessible **mental health services**. Stronger mental health services with a **psychiatrist available full time**. **Telemed may help**.

Source: SHP Key Informant Online Survey, 2017, Q12: What one or two things could be done in your community that would improve the overall health climate in the community? Please be as detailed as possible. (n=49)

Suggested Strategies to Address Specific Issues/Needs

Key Stakeholders and Key Informants offer a number of potential solutions to address **barriers to health care**, such as expanding community partnerships to fill access gaps, examining pay scales and incentives as part of provider recruitment efforts, and increasing the marketing of existing services.

Lack of providers	I think that the more **partnerships** we can make in the community **to try to fill the gaps for people who don't have access** otherwise - that's important. – *Key Stakeholder* Passing the bond helped. I think **we live in an amazing community and we need to advertise that**. – *Key Informant* **Marketing**. Examination of **pay scale**. – *Key Informant* Connect with **medical schools and residencies.** – *Key Informant* I think they are doing their best to recruit. **The doctors might need an incentive** to come here. We wouldn't need them here full time so maybe **they could split their time with other towns**. – *Key Informant* Recruitment of providers including **physicians**, **nurse practitioners** and **physician assistants**. – *Key Informant* Perhaps **when Cherry Health is open maybe five days a week to do dental care**, that that will be helpful. – *Key Stakeholder*
Cost of care	More **employer-employee meetings** learning to deal with medical care costs. Review of services to **see where savings can be achieved**. As local companies, we continue to review individual costs from different providers and find massive differences in specific billings. – *Key Informant* More than one patient has told me they **cannot afford the OTC meds for colonoscopy prep**. Typically the total is $10-15 or less, but this is a struggle for some. [Proposed solution:] **Sample in office to give patients** (Miralax, Dulcolax). A **local pharmacy that will discount** (possibly for tax credit). – *Key Informant*
Lack of awareness of services	**Billboards** or some type of **community education as to services available**. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHPH Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=49)

Suggested Strategies to Address Specific Issues/Needs (Continued)

Suggested strategies to address **substance abuse** in the community include: (1) provide more education for youth and about youth substance use; (2) place limits/constraints on, and/or provide guidelines to, providers to minimize over-prescribing of drugs, especially opiates; (3) offer more treatment options; and (4) integrate behavioral health care into primary care offices.

Addressing youth substance use	Discuss and/or **educate in the schools** on these issues. – *Key Informant* More **public education as to the effects of marijuana** in the community and **developmental stages of children with exposure**. – *Key Informant*
Limiting prescriptions	A **firm narcotic policy** that ALL providers must sign and adhere to. – *Key Informant* **Caps on the number distributed**, and **regulations on what you are allowed to prescribe for**. Should Oxycontin ever be prescribed for a headache? – *Key Informant* Less prescriptions for opioids. **Make ordering physicians aware when their ordering patterns diverge from norms**. – *Key Informant*
More treatment options	Local **detox/drug counseling** readily available for everyone. – *Key Informant* Better **addiction treatment** programs. – *Key Informant*
Holistic approach to health	Better **access to mental health, social work in [primary care]** offices would be very beneficial. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHPH Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=49)

Suggested Strategies to Address Specific Issues/Needs (Continued)

Although research has shown that people know what they need to do to **lose weight** or stay in shape, changing long-established habits is difficult; emphasizing the importance of exercise and healthy eating early in life can set the tone for a lifetime of health-conscious choices. With availability and promotion of affordable and appealing exercise facilities, and access to affordable healthy foods, people may be more inspired to participate and, in turn, lose weight. Policy changes that make healthier choices more convenient and affordable vis-a-vis less healthy choices may also help.

Begin early in the life cycle	More **educational opportunities** within the schools. A **professional health coach** or like-minded person **to promote better choices and more physical activities**. – *Key Informant* **Healthy lifestyles program**, encouraging healthy eating, food preparation, weight loss, exercise, **focused on children in schools and on young adults, but available to anyone**. The greatest success for **lifetime health starts with the already healthy young**, who will then teach their children to be healthy. – *Key Informant*
Promote and improve access to healthy choices	**Promote exercise** and healthy lifestyles. – *Key Informant* Pennock gym in the dungeon [is] boring. Snap Fitness in Kmart plaza [is] small with glass storefront – yuck. **[Need a] nicer place that is exciting and motivating**, like the place in Charlotte called Alive. – *Key Informant* **Nutrition courses**? – *Key Informant*
Policy changes	Policy changes – **taxes on sugar-sweetened beverages**. At hospital level, **eliminate sugar-sweetened beverages from cafeterias and vending machines**. – *Key Informant* **Subsidize healthy food**? – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHPH Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=49)

Suggested Strategies to Address Specific Issues/Needs (Continued)

Area professionals suggest that **mental health issues** can be addressed not only by increasing the number of psychiatrists in the area but also providing more comprehensive and integrated care, including case management services, recognizing that the best way to address mental health is through a multidisciplinary approach.

More psychiatrists	**Apply for available federal and state grants** as well as **recruiting another psychiatrist**. – *Key Informant* Finding a way to **partner with psychiatrists to have them spend 1-2 days a week** in Barry County. – *Key Informant*
Integration of care/ Comprehensive care	**Social work, RN in family offices** to aid in helping patient find available resources and follow up calls/track patients in need. – *Key Informant* **Educate primary care physicians** to increase their willingness to prescribe psychiatric drugs. – *Key Informant* Easier access to **counseling services**, better **follow up after inpatient admission**, **get professionals to go to their homes to SEE what is going on THERE**. – *Key Informant* **Improved/increased case management** within the hospital by clinicians and/or social workers. Community mental health unit to address 72-hour crisis holds. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHPH Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=49)

Suggested Strategies to Address Specific Issues/Needs (Continued)

Key Stakeholders and Key Informants offer numerous suggestions to address other issues such as smoking, diabetes and other chronic diseases, and prevention.

Smoking	**Increase tobacco sales age to 21**. Limits kids' access to social sources of tobacco. Spectrum can join the statewide tobacco 21 coalition. Spectrum can also put its lobbying and financial resources in support of local and statewide tobacco 21 efforts, as has Trinity Health. – *Key Informant* **Discuss it at every patient visit**; **especially** discuss the risks **with children and teenagers**. – *Key Informant* Pennock Hospital sponsored **smoking cessation clinic** and program. – *Key Informant*
Chronic disease	**Free [diabetes] seminars**. – *Key Informant* **Utilize school buildings** during evenings or weekends to allow **for indoor walking** – especially in winter, poor weather. **Hold cooking classes, health education classes** (diabetes, diabetes prevention) **at local libraries**. **Market the diabetes education program, diabetes prevention, and/or healthy lifestyle behaviors on billboards, newspaper ads**, etc. **Influence healthier behaviors for the youth** in our communities, 'primary prevention'. – *Key Informant* **Weight loss** assistance, **smoking cessation** programs, **diabetes management**. – *Key Informant* [For dementia:] need more **home care workers**. – *Key Informant* Create the ability (system or process) to **integrate healthcare and community-based resources** to support, educate, motivate, and **empower individuals to take steps toward better health and wellness**; break down the silos, **share information, improve access and connection** to services and resources. – *Key Informant*
Prevention	We must continue to **educate our population how they can control their own health care** by making smarter decisions. – *Key Informant*

Source: SHP Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHPH Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=49)

APPENDIX

Participant Profiles

Key Stakeholder In-Depth Interviews

CEO, Spectrum Pennock Hospital

Executive Director, Barry County CMH

Executive Director, Barry County United Way & Volunteer Center

Health Officer, Barry-Eaton District Health Department

Substance Abuse Community Preventionist, Barry County CMH

Key Informant Online Survey		
Physician (8)	Healthcare provider	Program Director/Coordinator
Nurse Practitioner (4)	Manager	Programs Director and Public Safety
Executive Director (2)	Mental Health Clinician	Registered Dietitian
Nurse (2)	Ophthalmologist	Site Manager
Care Manager	Pediatrician	Volunteer PFAC member
CEO of local company	Physician Assistant, Family Medicine	YMCA Director
Community Mental Health	Podiatrist	
Education Director	President	

Participant Profiles (Continued)

Behavioral Risk Factor Survey (Telephone)					
	TOTAL		TOTAL		TOTAL
Gender	(n=594)	Marital Status	(n=592)	Own or Rent	(n=590)
Male	48.3%	Married	59.4%	Own	79.9%
Female	51.7%	Divorced	8.0%	Rent	12.3%
Age	(n=588)	Widowed	4.3%	Other	7.8%
18 to 24	13.1%	Separated	0.6%	County	(n=594)
25 to 34	11.5%	Never married	24.0%	Barry	90.5%
35 to 44	16.1%	Member of an unmarried couple	3.7%	Ionia	5.9%
45 to 54	19.0%	Employment Status	(n=593)	Kent	0.3%
55 to 64	20.4%	Employed for wages	47.4%	Eaton	3.3%
65 to 74	12.0%	Self-employed	5.1%	Zip Code	(n=594)
75 or Older	7.9%	Out of work 1 year+	5.2%	48815	2.8%
Race/Ethnicity	(n=592)	Out of work <1 year	0.3%	48849	4.1%
White/Caucasian	93.9%	Homemaker	3.6%	48890	0.7%
Black/African American	0.1%	Student	3.3%	48897	2.3%
Hispanic/Latino	5.3%	Retired	27.3%	49046	8.3%
Native American	0.7%	Unable to work	7.8%	49050	1.9%
Adults in Household	(n=594)	Education	(n=590)	49058	54.1%
One	13.2%	Less than 9th grade	1.6%	49073	7.1%
Two	58.5%	Grades 9 through 11	6.9%	49096	1.3%
Three	16.6%	High school grad/GED	38.2%	49325	3.1%
Four	8.6%	College, 1 to 3 years	35.3%	49333	9.5%
Five or more	3.2%	College 4+ years (grad)	17.9%	49344	3.1%
Children in Household	(n=593)	Income	(n=428)	49348	1.7%
None	66.5%	Less than $10K	2.8%		
One	8.2%	$10K to less than $15K	5.4%		
Two	16.3%	$15K to less than $20K	5.5%		
Three	6.1%	$20K to less than $25K	5.3%		
Four or more	2.9%	$25K to less than $35K	16.7%		
		$35K to less than $50K	26.0%		
		$50K to less than $75K	17.6%		
		$75K or more	20.8%		

Participant Profiles (Continued)

Underserved Resident Survey (Self-Administered)					
	TOTAL		TOTAL		TOTAL
Gender	(n=59)	Marital Status	(n=61)	Own or Rent	(n=61)
Male	35.6%	Married	37.7%	Own	60.7%
Female	64.4%	Divorced	32.8%	Rent	29.5%
Age	(n=61)	Widowed	13.1%	Other	9.8%
18 to 24	3.3%	Separated	1.6%	County	(n=59)
25 to 34	13.1%	Never married	13.1%	Barry	93.2%
35 to 44	13.1%	Member of an unmarried couple	1.6%	Eaton	1.7%
45 to 54	14.8%	Employment Status	(n=60)	Kent	1.7%
55 to 64	18.0%	Employed for wages	11.7%	Allegan	3.4%
65 to 74	23.0%	Self-employed	3.3%	Zip Code	(n=61)
75 or Older	14.8%	Out of work 1 year+	8.3%	48849	1.6%
Race/Ethnicity	(n=60)	Out of work <1 year	8.3%	48897	4.9%
White/Caucasian	95.0%	Homemaker	11.7%	49017	1.6%
Native American	3.3%	Student	1.7%	49021	1.6%
Other	1.7%	Retired	30.0%	49046	9.8%
Adults in Household	(n=57)	Unable to work	25.0%	49050	1.6%
One	38.6%	Education	(n=60)	49056	1.6%
Two	47.4%	Less than 9th grade	8.3%	49058	57.4%
Three	8.8%	Grades 9 through 11	6.7%	49073	1.6%
Four	3.5%	High school grad/GED	53.3%	49080	1.6%
Five or more	1.8%	College, 1 to 3 years	26.7%	49325	6.6%
Children in Household (6-17)	(n=53)	College 4+ years (grad)	5.0%	49333	6.6%
None	75.5%	Income	(n=61)	49344	1.6%
One	9.4%	Less than $10K	26.2%	49519	1.6%
Two or more	15.1%	$10K to less than $15K	31.1%		
Children in Household (<6)	(n=53)	$15K to less than $20K	11.5%		
None	83.0%	$20K to less than $25K	11.5%		
One	9.4%	$25K to less than $35K	6.6%		
Two or more	7.5%	$35K to less than $50K	9.8%		
		$50K to less than $75K	1.6%		
		$75K or more	1.6%		

Previous Implementation Plan Impact

Spectrum Health Pennock Hospital

This document serves as the tool to identify the impact of actions taken from 2015-2018 to address the significant health needs in the Implementation Plans created as a result from the previous 2014 CHNA.

Specific Health Need Goal	Metric	Impact of Implementation Plan Strategy
Access		
Increase access to Primary Care providers by hiring new net providers	• 1 Primary Care Physician by December 2016, increasing primary care visits to 1,920. Increase visits another 50% by June 2018. • 3 Advanced Practice Providers (APP) by August 2016 increasing visits by 1,536 by June 2017 and an additional 50% increase in visits by June 2018. • 3 additional Primary Care Physicians by July 1, 2018.	We have successfully achieved our goal of hiring the initial Primary Care Physician. We received the physician's commitment in January 2017 and the official onboarding began in August 2017. We fully anticipate meeting the primary care visits goal by June 2018. Fully achieved. As of March 2018 we expect to have fully on boarded the additional 3 Primary Care Providers during the period of July 2018-October 2018.
Reintroduce a provider-based consultative and chemotherapy program and increase days from one day a week in year 1 to 2 days a week in year 2. Barry County currently does not have cancer or medical oncology services.	• Expand Cancer Services to include Hospital Based Medical Oncology: • Reintroduce provider-based consultative and chemotherapy program for improved access to care by March 2017 • Create an eight week baseline on initial usage with one day per week at new site • Increase baseline 2% by December 2017 • Between July 2017-June 2018, increase clinic	The program start was delayed, pushing target dates out by 4-months making the open date for the clinic July 1, 2017. A 2% increase from the date of opening has been realized, with an average increase of 2% growth each month.

Previous Implementation Plan Impact

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Specific Health Need Goal	Metric	Impact of Implementation Plan Strategy
	days to two days per week and increase visits another 10% over baseline.	
Implement MedNow visits for home or provider service locations to help overcome long drives for patients to see specialists and long waits to see primary care providers	MedNow: Implement existing Spectrum Health MedNow services to increase access to primary and specialty care services January 1, 2017: • Hire MedNow staff August 2016 • Create baseline based on initial usage of primary care by October 2016. Increase MedNow use (from baseline) 25% by June 2017 and another 50% by June 2018. • Create baseline from initial usage of specialist by October 2016 • Increase referrals to specialists 10% by June 2017 and another 10% by June 2018.	All goals of hiring providers and increasing growth of patient encounters have been achieved.
Collaborative Agreement: Create a collaborative agreement between Cherry Health and Barry County United Way to increase access to health care for the underserved population through hospital-based referrals to Cherry Health for primary, behavioral,	Supporting Cherry Health will be demonstrated through: • Development of a collaborative agreement, for primary care and dental services with Cherry Health and United Way of Barry County by September 2016 • Establish baseline referral rate follow-up visits by October 2017	We have been successful in maintaining our ongoing collaborative agreement with Cherry Health. Through staff providing follow up phone calls we were able to create a baseline for referral rates. However, we do not have adequate reporting methods to provide ongoing tracking to confirm follow up visits as patients traverse between the two separate entities. More favorably, we have experienced a significant reduction in patients

Previous Implementation Plan Impact

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Specific Health Need Goal	Metric	Impact of Implementation Plan Strategy
and dental care and to the United Way of Barry County to assist those patients unable to pay their co-pay or other services that are not covered. Those that qualify are at or below 250% of Federal Poverty Level.	• Increase referral follow-up visits 10% by June 2017 and another 10% by June 2018 • Provide staffing for patient follow-up calls	without primary care providers so we believe that improvements are being made. Interactive voice response calls are made to 100% to Emergency Department and Maternal Services patients with the monthly data reports being reviewed by our nursing and systems teams.
Support Access to Care Coalition Initiatives: Pennock is a collaborative member of the Access to Care Coalition, where a group of community organizations work together to increase access to healthcare and most recently, mental health and dental services. Pennock will continue to support education and resources networking, especially in the area of the underserved population. One deficit in access is lack of knowledge of resources available to patients dealing with mental health issues for both publically and in the mental health community, as well as how to	Through the Access to Care Coalition, Pennock will utilize one employee to: • Ongoing Facilitating Access to Care meetings • Coordinate and create a Mental/Behavioral Health Resource Guide: a. Develop a resource guide with the Coalition that will be publically available and used as a resource for patients, social service agencies, and health care employees working with underserved populations, and the medical providers in Barry County (July 2016-December 2016) • Distribute Resource Guide to all medical providers and social service agencies in Barry County and have publically available January	We have fully achieved facilitating ongoing Access to Care meetings. We have been challenged with generating a resource guide as part of the clinic's Patient Centered Medical Home that can be made available to all employed and affiliate clinics. However, we have successfully created a Spectrum Health Psychiatric and Behavioral Health guide that is used throughout 5 Spectrum Health clinics.

Previous Implementation Plan Impact

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Specific Health Need Goal	Metric	Impact of Implementation Plan Strategy
reach or best serve that population.	2017 • Assist in coordinating one health-related poverty simulation to increase awareness of barriers faced by the underserved population that specifically targets area businesses and the medical community. Currently, there is no such education related to health and bridging the medical and business communities to help the underserved population. • Conduct poverty simulation by November 2016 • Educate 70 business and medical community members	The goal of coordinating and executing a Poverty Simulation has been successfully met. The simulation provided education to 70 business and medical community members to understand the social determinants of health barriers that many of our underserved clients face.
Prevention and Wellness		
Expand SH Pennock Hospital's Diabetes Management program	• Decrease no show rate by 5% utilizing Continuous Quality Improvement (CQI) project; choosing and acting on one aspect of no show for improvement. • Increase patients referred into the Diabetes Self-Management Education program (DSME) by 5% to increase referrals up to 205 by October 2017 and another 5% by June 2018.	The continuous quality improvement project to decrease the no show rate has proven to be successful as we were able to exceed your goal of 5% to 6%. Our referral rate was slightly lower than our targeted goal. We attribute the decline to be attributed to provider resources.

Previous Implementation Plan Impact

Spectrum Health Pennock Hospital

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Specific Health Need Goal	Metric	Impact of Implementation Plan Strategy
	• Add one additional .5 FTE hours by August 2017 to accommodate patient demand. Our current dietitian is only .5 FTE and is at capacity. • Increase the individualized goal attainment rate of 87% for Diabetes Management Program patients by 2% by October 2017	We have been challenged with being able to add the additional dietitian fill demand. We continue to search for other opportunities to meet our patients' needs. We have successfully achieved our target by exceeding expectations by an additional 2%. The patient goal attainment is 89%.
Supplement Pennock's diabetes management program by financially supporting two National Diabetes Prevention programs in Barry County through a collaborative agreement with the MSU Extension. This program enhances existing services and gives patients referred into the program, the day-to-day life skills needed to manage their diabetes through developing new behaviors.	Provide funding through SHP Foundation through June 2017 Provide programmatic resources through SH Pennock Hospital July 2017-June 2018 Provide SH Pennock Hospital dietitians and Diabetic educator to work with the National Diabetes Prevention programs Pennock Medical Staff referrals: establish baseline September 2016-June 2017 and increase referrals into the program by 5% by July 1, 2018.	We have fully achieved our goals.

Previous Implementation Plan Impact

Spectrum Health Pennock Hospital

This document serves as the tool to identify the impact of actions taken from 2015-2018 to address the significant health needs in the Implementation Plans created as a result from the previous 2014 CHNA.

Specific Health Need Goal	Metric	Impact of Implementation Plan Strategy
Obesity Management		
Improve outcomes of patient's referred into Pennock's outpatient weight management counseling that utilizes Pennock dieticians to conduct bioelectrical impedance scale screening and counselling.	• Conduct pre and post Bioelectric Impedance Scale screening for outpatient referral, weight management patients • Establish baseline for retention rate by January 2017 and increase rate by 2% by June 2017 • Establish baseline for retention rate by January 2017 and increase rate by 2% by June 2017	We have been able to demonstrate a partial achievement in meeting our targeted goals. As behavioral modifications programs (such as weight loss management) are a challenge for patients to maintain, we have had patients quit due to the confines of the program. Of those patients who were able to see the program to its completion, there was an average weight loss of 3.32%. We will continue to monitor the patients' progress and seek out innovative solutions to improve programmatic retention.
Use SH Pennock Hospital staff to support B. Healthy Coalition and B. Healthy Families Program. Pennock's collaboration with the B. Healthy Coalition specifically addresses the issue of obesity through improved nutrition and promotion of physical activity through policy change, access to healthy choices, and community education.	• Pennock will provide at least 1 employee to help facilitate the B. Healthy Coalition and B. Healthy Families program • The B. Healthy Coalition and SH Pennock Hospital will conduct at least one six week B. Healthy Families program by June 2017 and one by June 2018 with a minimum of twenty children and one adult caregiver per family in each session.	Goals have been fully achieved.