SPECTRUM HEALTH

Community Health Needs Assessment for:

Mecosta County Medical Center d/b/a Spectrum Health Big Rapids Hospital

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 BIG RAPIDS HOSPITAL

Community Health Needs Assessment

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January 16, 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 Big Rapids Hospital (SHBR) 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 Spectrum Health Big Rapids Hospital 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 SHBR 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 SHBR.

More specific objectives include measuring:

- The overall health climate, or landscape, of the regions served by SHBR, including, primarily, Mecosta County, but also portions of Osceola and Lake 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 Spectrum Health Big Rapids Hospital 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**	**53**
Community Residents (Underserved)	**Self-Administered (Paper) Survey**	**Vulnerable and underserved sub-populations**	**197**
Community Residents	**Telephone Survey (BRFS)**	**SHBR area adults (18+)**	**1,004**

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 this iteration decreased 60.4% from 134 in 2014 to 53 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 197 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.

Methodology (Continued)

A Behavioral Risk Factor Survey was conducted among 1,004 SHBR 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 SHBR 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 1,004 completed surveys:

- 425 are cell phone completes (42.3%), and 579 are landline phone completes (57.7%)
- 312 are cell-phone-only households (31.1%)
- 247 are landline-only households (24.6%)
- 445 have both cell and landline numbers (44.3%)

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 SHBR 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 SHBR 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 1,004, at a 95% confidence level, is +/- 5.0% or better. This calculation is based on a population of roughly 35,043 Mecosta County residents, 17,717 Osceola County residents, and 9,473 Lake County residents who are 18 years or older, according to the 2016 U.S. Census estimates.

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 where the respondent lived.
- Allow the generalization of findings to the larger adult population of each county

Methodology (Continued)

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

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 either a "0" for each "no" or 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 they 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 SHBR area residents. As an example, if someone refused to answer all 10 ACE 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, SHBR area adults, and SHBR 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 SHBR area.

EXECUTIVE SUMMARY & KEY FINDINGS

Executive Summary and Key Findings

In general, the findings from the 2017 Community Health Needs Assessment portray the Spectrum Health Big Rapids area as a community faced with many economic, social, and health challenges. However, community members also see improvement over the past several years from the CHNAs that have been conducted and the strategic plans that have been implemented that focused on areas of need uncovered in the research.

The SHBR area is recognized as having committed leadership across a broad array of community sectors, as well as a robust volunteer force and philanthropic individuals and organizations dedicated to improving the health of the community. The area's collaborative spirit is strong, and organizations strive to make the most of limited resources.

While Mecosta County has higher levels of violent crime compared to the state and nation, Osceola and Lake counties have lower crime rates. Unemployment, while higher than state and national rates, has decreased substantially over the past few years. Poverty levels are higher than state and national rates, and Lake County in particular has a strikingly high percentage of children living in poverty, more than twice the state and national levels. Educational levels are relatively low, particularly in Lake County.

The area's physical environment, clean and with a wealth of natural beauty, is one of its best assets. The area's natural resources provide ample opportunities for outdoor activities such as hiking, biking, and water sports. Residents also have access to fresh healthy produce from nearby farms. In addition, residents enjoy a small-town feel and rural atmosphere. On the other hand, the area's rural location presents challenges with regard to recruiting health care providers to the area and transporting residents to needed services and programs.

Nearly all area residents have health insurance, and a large majority have a personal health care provider and are at least somewhat confident they can navigate the health care system.

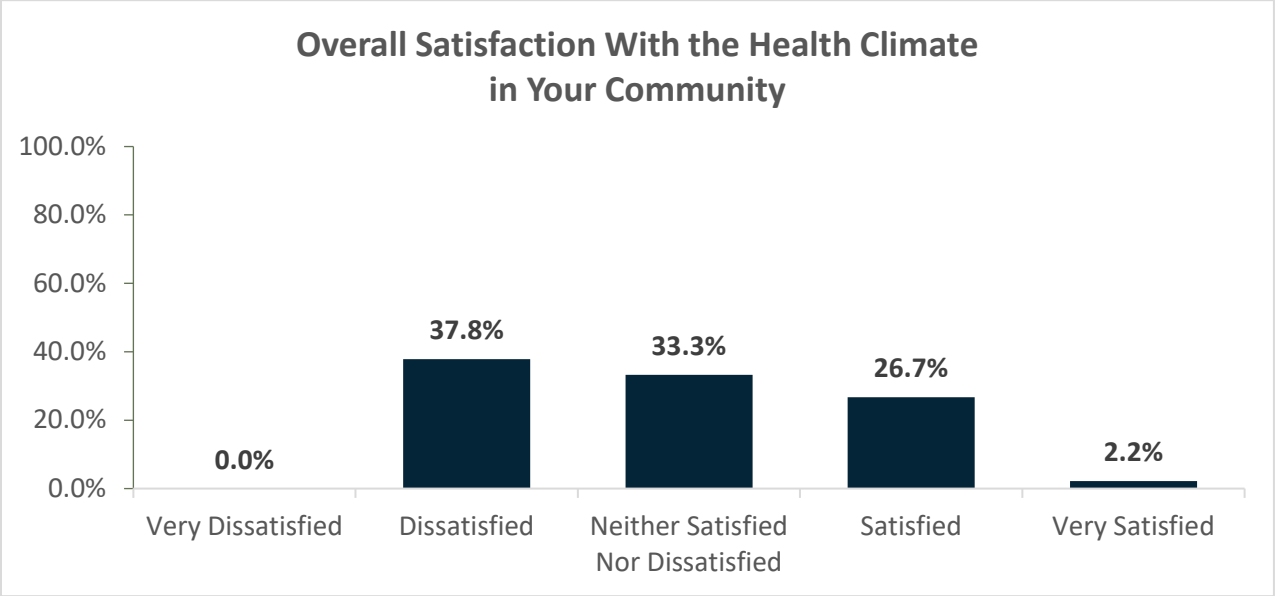
Area residents generally report good health and low levels of psychological distress. Mecosta County and Osceola County residents have life expectancy rates on par with or higher than Michigan's, while Lake County's rates are lower.

The prevalence of chronic conditions is high relative to the state and the nation. Further, the prevalence of many of the chronic conditions measured, including diabetes, is up from the last CHNA iteration in 2014. In addition, adult obesity has increased in the last few years and is higher than state and national rates.

Adult smoking has decreased substantially since 2014 but remains higher than state and national rates. Osceola County has a slightly higher youth smoking rate than the state and nation, while Lake County's rate is slightly lower. Both youth and adults have lower rates of harmful alcohol consumption (heavy drinking and/or binge drinking) compared to the state and nation. However, both adults and youth fare worse than their state counterparts with regard to physical activity. While Osceola County youth have a lower rate of sexual activity compared to the state and nation, Lake County's rate is much higher, especially among females. Teen birth rates are higher in the SHBR area compared to the state and nation.

Executive Summary and Key Findings (Continued)

In considering the overall health climate in the SHBR area, fewer than three in ten (28.9%) Key Informants – the very people on the ground working in or around the field of health care – are satisfied, demonstrating that there is substantial room for improvement, and their comments indicate concerns across several areas.



Satisfied	It is so **much better than when we moved here** 37 years ago. **Many more services**, etc. Our county **tries hard with the resources it has**.
Neither satisfied nor dissatisfied	We are **doing great things**, **but it still comes back to providers** not getting burned out and getting more to come here. There is a **lot of good work going on** but there **needs to be more collaboration** and availability/communication.
Dissatisfied	We still **don't have enough access to PCPs** and we **lack other specialty services** that patients need, such as cardiology. There are a **lot of chronic health conditions** which could be better managed or prevented.

Source: SHBR 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=45); Q11a: Why do you say that? Please be as detailed as possible.

Executive Summary and Key Findings (Continued)

What follows are nine key findings and discussions on each:

- **KEY FINDING [Significant Health Need] #1**: Health care access – is a critical area of concern and impacts all residents due to a shortage of providers (both primary care and specialty care) in the area
- **KEY FINDING [Significant Health Need] #2**: Substance use and abuse – is reported as pervasive in the community and under-addressed in terms of prevention and treatment
- **KEY FINDING [Significant Health Need] #3**: Obesity and weight issues – a sizeable majority of area adults are either overweight or obese, and this proportion is higher than it was in 2014
- **KEY FINDING [Significant Health Need] #4**: 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] #5**: Chronic conditions – area adults report more chronic conditions than adults across the state or the nation
- **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

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #1: Health care access – is a critical area of concern and impacts all residents due to a shortage of providers (both primary care and specialty care) in the area.

- The shortage of health care providers in the SHBR area emerged as the top health-related concern among Key Informants.
- Area residents experience long wait times for appointments, including primary care for both adults and children, and specialist appointments often necessitate driving out of the local area.
- With distance to providers a factor, transportation challenges present a barrier for residents who do not have access to reliable transportation and/or can't afford transportation costs.
- Cost of care is another barrier for some residents, and this barrier is present even for those with insurance due to unaffordable copays, deductibles, and spend-downs.
- These access barriers force some residents to forego needed preventive or maintenance care, including prescription medications, and over-utilize emergency room services. Vulnerable and underserved populations are most impacted by these barriers.

- Prevalence data demonstrates:
  - There are far fewer MDs and DOs per capita in Mecosta (53.2), Osceola (30.2), and especially Lake (8.8) counties compared to Michigan (80.6)
  - 15.7% of all adults have no health care provider (no medical home) and this proportion rises to 20.0% for underserved adults
  - 7.0% of all area adults aged 18-64 have no health insurance and this proportion rises to 20.9% for adults without a high school diploma
  - 17.0% of all adults have Medicaid for their health insurance, compared to 50.5% for underserved adults
  - 41.2% of children age 18 or younger in Mecosta County, 49.8% in Osceola County, and 67.7% in Lake County are insured under Medicaid
  - 9.1% of area adults had to skip or stretch their medication in the past year due to cost
  - 19.5% of area adults had to delay needed medical over the past year due to myriad reasons, but cost was at the top of the list
  - Four in ten (44.4%) underserved adults had trouble meeting their own, or their family's, health care needs in the past two years, with cost-related reasons being most prominent
  - Nearly seven in ten (68.3%) underserved adults report that they, or a family member, has visited the ER/ED at least once in the past year; 41.6% 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 regarding completing medical forms
  - They are more likely than other adults to experience problems learning about their health condition because of difficulty understanding written information
  - 23.1% are not confident in navigating the health care system and 35.9% are only somewhat confident
  - 19.3% "often" or "always" have someone else help them read medical materials

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #1: Health care access – is a critical area of concern and impacts all residents due to a shortage of providers (both primary care and specialty care) in the area. (Continued)

- Key Stakeholders and Key Informants recognize that certain subpopulations are underserved when it comes to accessing health care, especially those who are uninsured or underinsured, with reasons being:
  - 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 copays, deductibles, or spend-downs
  - These groups often have too many barriers to overcome (e.g., cost, transportation, hours of operation, cultural, system distrust, language)

- Key Informants report the programs and services most lacking in the community include:
  - Specialty services such as neurology, pediatric specialties, geriatrics, urgent care, orthopedics, and cardiology
  - Mental health treatment for mild to severe conditions
  - Substance abuse treatment
  - Obesity reduction programs
  - Primary care, mental health treatment, and dental care for the uninsured/underinsured
  - Primary care, mental health treatment, and dental care for low income groups
  - Programs/services for people with insurance, but who don't utilize coverage because they cannot afford out-of-pocket expenses
  - Wellness and prevention programs

- Underserved residents also report programs and services lacking in the community, including:
  - Classes on dieting, nutrition, and weight loss
  - Mental health services
  - Urgent care
  - Medical specialists and medical providers in general
  - Gyms and exercise classes

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #2: Substance use and abuse – is reported as pervasive in the community and under-addressed in terms of prevention and treatment.

- Substance abuse, which is often co-morbid with mental illness, is identified as one of the most pressing community issues among Key Stakeholders and Key Informants, with many singling out abuse of prescription medications as an urgent concern.

- Prevalence data demonstrates:

  - 22.1% of adults currently smoke cigarettes; while this rate has fallen since the last CHNA in 2014, it is higher than state and national rates
  - 10.9% of youth in Osceola County and 9.6% of youth in Lake County currently smoke cigarettes
  - 5.5% of adults are heavy drinkers and 11.4% are binge drinkers, the latter rate having improved since 2014 and both rates lower than state and national rates
  - 9.8% of youth in Osceola County and 8.7% of youth in Lake County engage in binge drinking
  - 22.1% of adults know someone who has taken prescription drugs to get high
  - 20.4% lived with someone growing up who abused substances

- Key Stakeholders and Key Informants express several main concerns 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
  - Lack of treatment options: Key Informants cite substance abuse treatment as a service most lacking in the community and are dissatisfied with the community's response to any substance abuse issue
  - Ease of access: Key Informants report that drugs are readily available in the community to both adults and youth
  - Culture of acceptance: Key Informants believe that substance use is considered the norm among adults and youth, with little consideration of consequences
  - Substance abuse often leads to other serious problems, including loss of employment, child welfare issues, and compounded health risks

- Area adults consider substance abuse to be one of the top health problems in the community, with 54.5% of area adults believing there is a prescription drug abuse problem in particular. Of these:
  - Almost all (92.9%) believe prescription opiates are abused
  - Roughly seven in ten believe there is abuse of prescription stimulants/amphetamines (71.8%) and depressants (67.3%)

- Half (52.1%) of area adults think that illicit methamphetamines are abused and almost half think there is abuse of marijuana (44.5%).

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #2: Substance use and abuse – is reported as pervasive in the community and under-addressed in terms of prevention and treatment. (Continued)

- Exposure to second-hand smoke is an issue in the community:
  - More than one-fourth (27.3%) of area adults report that smoking takes place inside their home
  - 71.3% of smokers and 14.9% of non-smokers report that smoking takes place in their home

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

I think it would be a much healthier community. I think it would be a much more economically viable community with a thriving workforce, lower crime, and better health care statistics. – *Key Stakeholder*

People who are spending $6 a day for a pack of cigarettes and don't have the money to do it - they would have [more] resources. – *Key Stakeholder*

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #3: Obesity and weight issues – a sizeable majority of adults are either overweight or obese, and this proportion is higher than it was in 2014.

- Health care professionals would like to see more attention and resources dedicated to promoting a healthy diet and providing access to healthy food choices, weight loss programs, and nutritional counseling. These opportunities should be available to all regardless of socioeconomic circumstances.

- Prevalence data demonstrates:
  - 73.7% of adults are either overweight (39.0%) or obese (34.7%) in the SHBR area
  - The prevalence of obesity is higher in the SHBR area than across Michigan or the U.S.
  - 11.2% and 23.3% of youth (grades 8-12) are obese in Osceola and Lake counties, respectively; the Lake County rate is higher compared to Michigan or the U.S.

- Obesity is considered one of the most pressing health issues in the SHBR area by Key Stakeholders and Key Informants, primarily because of its comorbidity with other chronic conditions or negative outcomes such as diabetes, hypertension, heart disease, and sleep apnea.

- Key Informants are dissatisfied with the community response to obesity, and more than two-thirds (68.8%) of Key Informants say that programs targeting obesity reduction are lacking in the community.
  - Further, underserved residents cite classes on dieting, nutrition, or weight loss as the number one program that they see as lacking in the community.

- 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 28.7% of obese adults view themselves as “very overweight,” and 46.0% of overweight adults view themselves as “about the right weight”
  - 30.1% and 55.5% of obese and overweight adults, respectively, are currently not attempting to lose weight

- Area residents could benefit from more guidance on ways to address their weight, considering that many do not receive advice from their health care providers.
  - 82.7% of overweight adults and 55.4% of obese adults report that health professionals have not given them advice about their weight

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #4: Mental health – especially access to treatment, continues to be a critical issue and in many regards hasn't improved since 2014.

- Prevalence data demonstrates:
  - 19.4% of area adults are considered to have mild to severe psychological distress per the Kessler 6 Mental Health Scale, and this is up from 18.8% in 2014
  - 8.0% 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
  - 31.1% and 29.3% of youth in Osceola and Lake counties, respectively, report depression
  - 14.3% of adults say that growing up they lived with someone who was depressed, mentally ill, or suicidal

- Key Stakeholders and Key Informants consider mental health to be among the most pressing community issues for several reasons:
  - The area suffers from a lack of mental health professionals and a lack of programs, services, and resources in general that address mental health; this void includes a lack of resources to address mental health proactively, such as teaching coping skills and stress management techniques and providing children with mental health support early on
  - Health is often not considered in a holistic manner, leaving root causes of a patient's condition or difficulty unaddressed; as a result, mental health issues may not be recognized in their early stages when they can be more easily treated
  - Aspects of the SHBR service area's social environment such as widespread poverty make area residents more susceptible to mental health challenges

- Key Informants perceive anxiety and depression to be prevalent in the community.
  - However, they are dissatisfied with the community response to these issues, and this dissatisfaction has remained constant since 2014

- Sizeable proportions of people who currently suffer from mental illness are not undergoing treatment or taking medication. While these numbers have improved since 2014, they remain high and of concern.
  - For example, half of adults who report poor mental health and nearly half of those who are considered to be in severe psychological distress are not currently getting 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 forego treatment that would benefit them?
  - The answer may lie partly in the continued stigma around mental illness: just half (53.4%) of adults think people are caring and sympathetic toward people with mental illness, and this percentage drops to 18.5% among those with severe psychological distress

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #4: Mental health – especially access to treatment, continues to be a critical issue and in many regards hasn't improved since 2014. (Continued)

- One in twenty area adults considered suicide in the past year and nearly half of those attempted suicide.
- With regard to area youth, the statistics are more worrisome, particularly in Osceola County where one in five youth report having thought about committing suicide in the past year and nearly one in ten has attempted suicide; both of these rates are higher than state and national rates

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

I think attendance rates for kids would go up…which leads to improved graduation rates, which leads to more employment, which leads to better communities, higher spending…An adult who can receive mental health services and maintain employment and not just go to the doctor's office and get scripts prescribed…If they can walk next door [within the same office as their physician] and get some real treatment that addresses the underlying issues, I think we're going to see more people maintain employment, maintain their kids and their homes, be able to address social issues, and the functional level is higher, which impacts the community - and safety issues, law enforcements and decreased responses. – *Key Stakeholder*

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #5: Chronic conditions – area adults report more chronic conditions than adults across the state or the nation.

- The prevalence for 7 of the 10 chronic conditions measured this CHNA iteration is higher compared to state or national prevalence rates.
  - Further, the prevalence is higher for 7 of the 10 chronic conditions this time compared to CHNA results from 2014

- Prevalence data demonstrates:
  - 30.1% of area adults suffer from chronic pain
  - 14.4% of area adults have diabetes and an additional 24.2% have pre-diabetes
  - 34.7% of area adults have arthritis
  - 14.1% currently have asthma
  - 10.4% have, or have had, some type of cardiovascular disease (heart attack, angina/CHD, stroke)
  - 9.9% have COPD
  - 4.3% of area adults have, or have had, skin cancer and 8.9% report other (non-skin) cancer

- The cancer death rate is higher in Mecosta and Osceola counties than across the state and nation, and the death rate from heart disease is higher in Osceola and Lake counties vs. state and national rates.

- Because the cancer diagnosis rate is lower in Mecosta County compared to Michigan or the U.S., but the cancer death rate is higher, it begs the question: Is better cancer screening needed in order to detect cancer before it is too late to treat the condition?

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

Executive Summary and Key Findings (Continued)

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

- Prevalence data demonstrates:
  - The infant mortality rate is higher in Mecosta County compared to state and national rates
  - Confirmed victims of child abuse/neglect rates are higher in Mecosta County and Osceola County, and much higher in Lake County, compared to the rates for Michigan or the U.S.
  - The proportions of children living in poverty, receiving WIC, and eligible for free or reduced priced school lunches are higher in Mecosta, Osceola, and Lake counties compared to Michigan and the U.S.
  - Over three-quarters (78.0%) of single-female families with children under five years old from Osceola County, and nearly nine in ten (87.2%) from Lake County, live in poverty
  - 23.5% of area adults experienced emotional abuse growing up, a rate twice as high as the U.S. rate
  - The proportion of children ages 19-35 months who are fully immunized is lower in Mecosta, Osceola, and Lake counties compared to the state or national proportions

- Women in Mecosta, Osceola, and Lake counties are more likely to receive late or no prenatal care, and are less likely to receive prenatal care in the first trimester, compared to women across Michigan.

- Three in ten (30.2%) Osceola County youth and half (51.7%) of Lake County youth have had sexual intercourse; the latter rate is higher than state and national rates.

- One in five (20.9%) Osceola County female youth, and almost half (46.4%) of Lake County female youth, have had intercourse in the past three months; the latter rate is much higher than state and national rates.

- The rates for teen births (ages 15-19) in Mecosta, Osceola, and Lake counties are higher than the rates in Michigan and the U.S.

- The rate for repeat teen births is higher in Lake County compared to the state and national rates.

Executive Summary and Key Findings (Continued)

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.

- 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 levels in the area are high, and poverty negatively impacts 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
  - Connecting economically struggling residents with services providing low-cost or no-cost doctor visits, prescription refills, and other needed health services

- 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 – including poor physical health, poor mental health, chronic pain, and smoking prevalence – compared to those who experience fewer adverse childhood experiences.

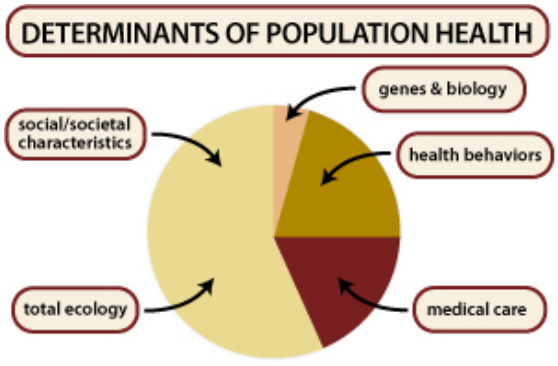
Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #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.

Executive Summary and Key Findings (Continued)

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

- There is 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. Examples of this disparity include:
  - General health status
  - Physical health and chronic pain
  - Psychological distress
  - Experiencing barriers to care (e.g., transportation, cost)
  - Chronic diseases such as diabetes, arthritis, COPD, non-skin cancer, or any cardiovascular disease
  - Health risk behaviors such as smoking, lack of physical activity, inadequate fruit and vegetable consumption
  - Preventive practices such as visiting a dentist
  - Health care access such as having a primary care provider or being health literate

- 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.

- 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:
  - Having psychological distress or poor mental health
  - Having asthma
  - Risk behaviors such as binge drinking
  - Not having blood cholesterol checked or taking medication if blood cholesterol is high
  - Not taking medication if blood pressure is high

- In other cases, negative outcomes are more associated with older adult groups, such as:
  - Fair or poor general health status
  - Having chronic diseases like diabetes, arthritis, cancer, cardiovascular disease, and COPD
  - Having high blood pressure and high cholesterol

Executive Summary and Key Findings (Continued)

Key Finding [Significant Health Need] #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:
    - Have fair or poor general health
    - Have cardiovascular disease
    - Have no health care provider (medical home)
    - Engage in risk behaviors such as cigarette smoking, binge drinking, and inadequate fruit/vegetable consumption
    - Resist preventive practices such as visiting a dentist
  - Women are more likely than men to:
    - Be at a healthy weight
    - Be part of a spiritual or religious community
    - Have a health care provider (medical home)
    - Have chronic conditions such as pre-diabetes, asthma, and arthritis

- There are also links between race and outcomes.
  - Compared to White adults, Non-White adults are more likely to:
    - Have fair or poor general health and activity limitation
    - Have high blood pressure
    - Experience psychological distress and poor mental health
    - Be part of a spiritual or religious community
    - Have chronic conditions such as asthma and stroke
    - Stretch or skip their medication to save on costs
    - Experience transportation barriers to health care
    - Have inadequate fruit and vegetable consumption
  - Conversely, White adults are more likely than Non-White adults to:
    - Be obese
    - Take medication for their high blood pressure
    - Have their blood cholesterol checked
    - Have chronic conditions such as pre-diabetes and arthritis

DETAILED FINDINGS

SOCIAL INDICATORS

Demographics of Mecosta County (Continued)

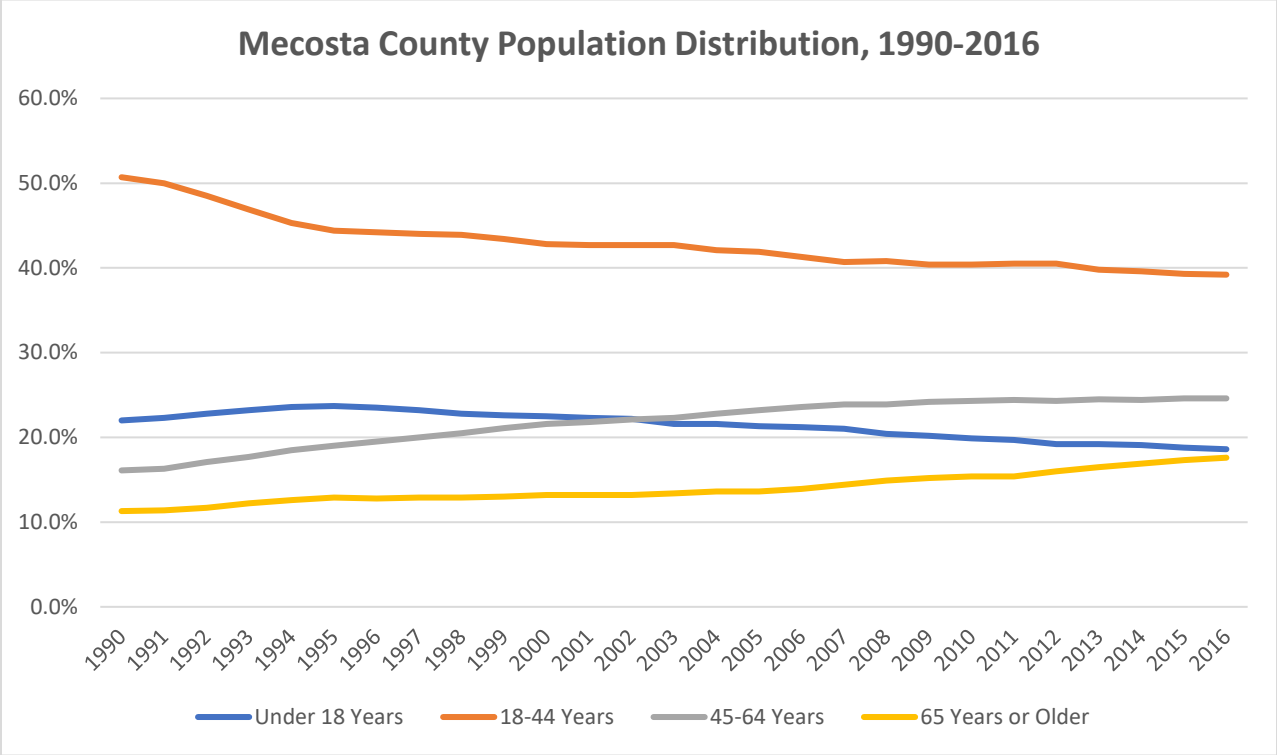
When observing the racial and ethnic population distributions within Mecosta County, it is evident that the vast majority of residents are White (91.6%), while 2.6% are Black/African American and 2.1% are Hispanic/Latino.

Mecosta County Demographic Characteristics: Gender and Race		
	N	%
Gender		
Male	21,816	50.4%
Female	21,443	49.6%
Race/Ethnicity		
White/Caucasian	39,622	91.6%
Black/African American	1,222	2.6%
Hispanic/Latino	895	2.1%
Asian	359	0.8%
American Indian/Alaskan Native	205	0.5%
Native Hawaiian/Pacific Islander	27	0.1%
Some other race	78	0.2%
Two or More Races	951	2.2%

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

Demographics of Mecosta County (Continued)

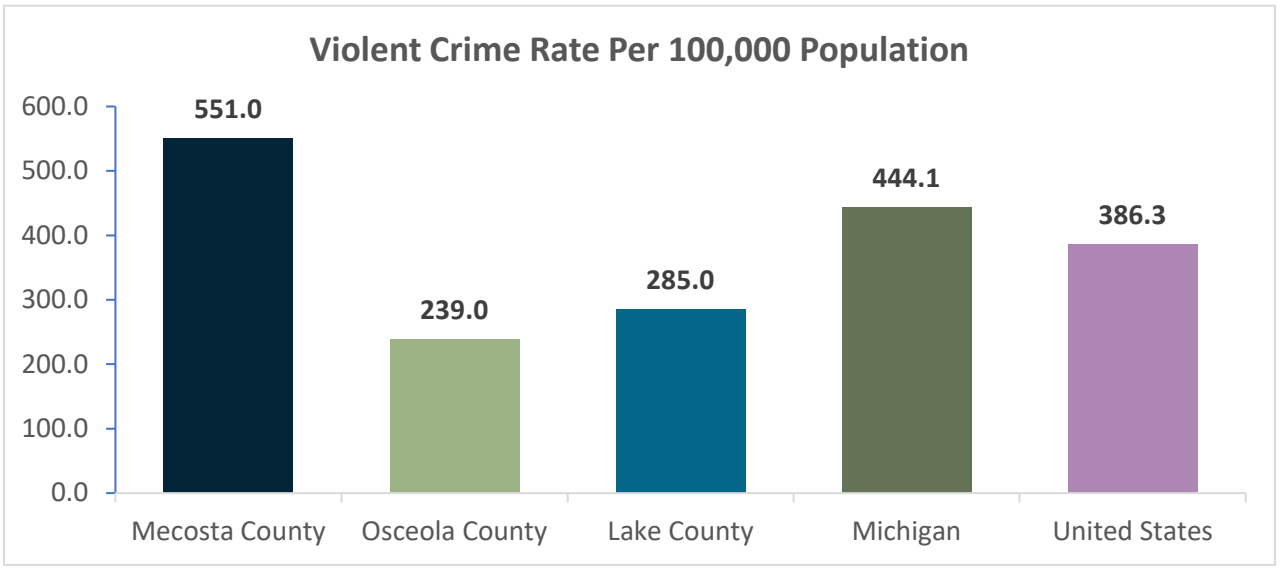
- The age distribution of Mecosta County has shifted toward an older population over time. In 1990, residents aged 45-64 comprised 16.1% of the population compared to 24.6% in 2016.
- Moreover, the proportion of adults aged 18-44 has declined over time: this group comprised 50.7% of the population of Mecosta County in 1990 compared to 39.2% in 2016.



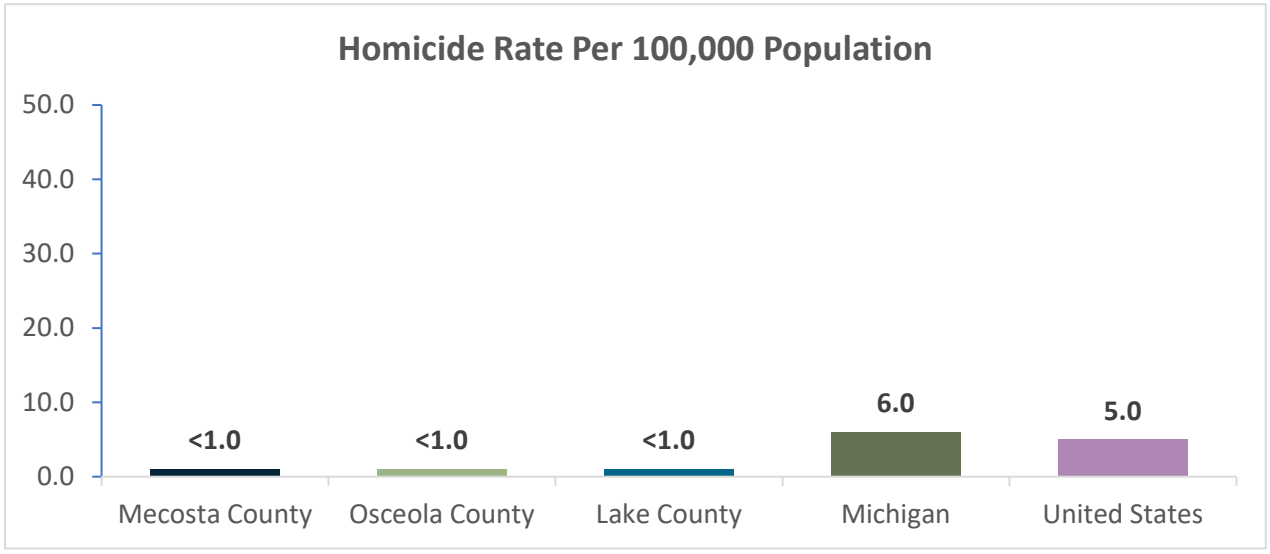
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

Crime Rates

- Osceola and Lake counties experience considerably less violent crime than Michigan or the U.S. However, in Mecosta County, violent crime rates are higher than both state and national rates.
- All three counties have lower homicide rates than Michigan and the U.S.



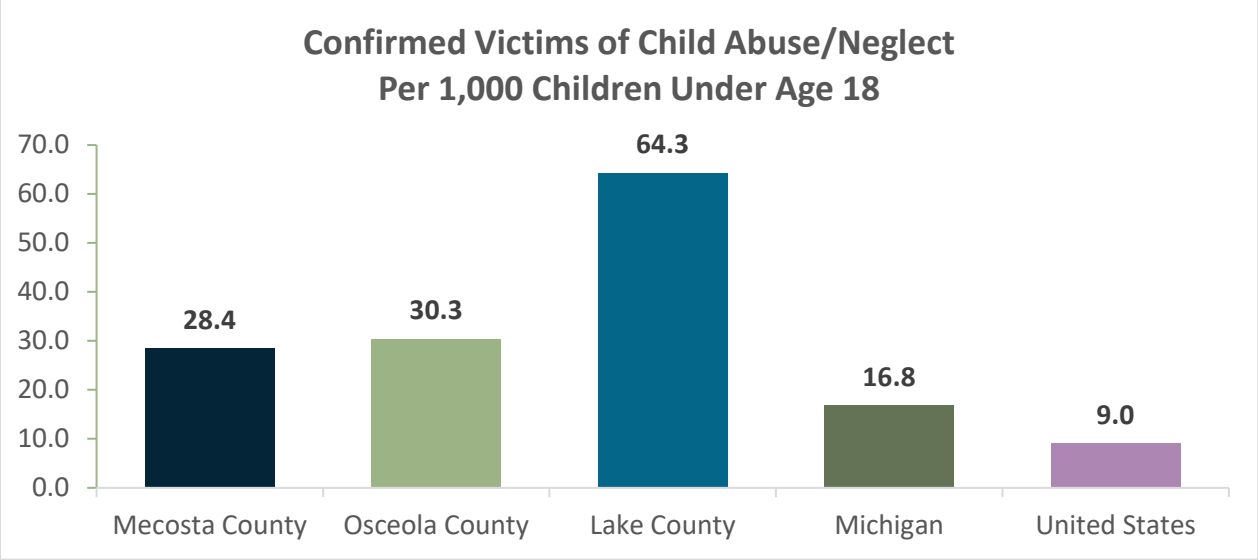
Source: County Health Rankings, 2012-2014.



Source: County Health Rankings, 2012-2014.

Crime Rates (Continued)

- While all three area counties have higher rates of child abuse and neglect than Michigan and the U.S., rates in Lake County are strikingly high in comparison – nearly four times the state rate and more than seven times the national rate.



Source: County Health Rankings, 2012-2014.

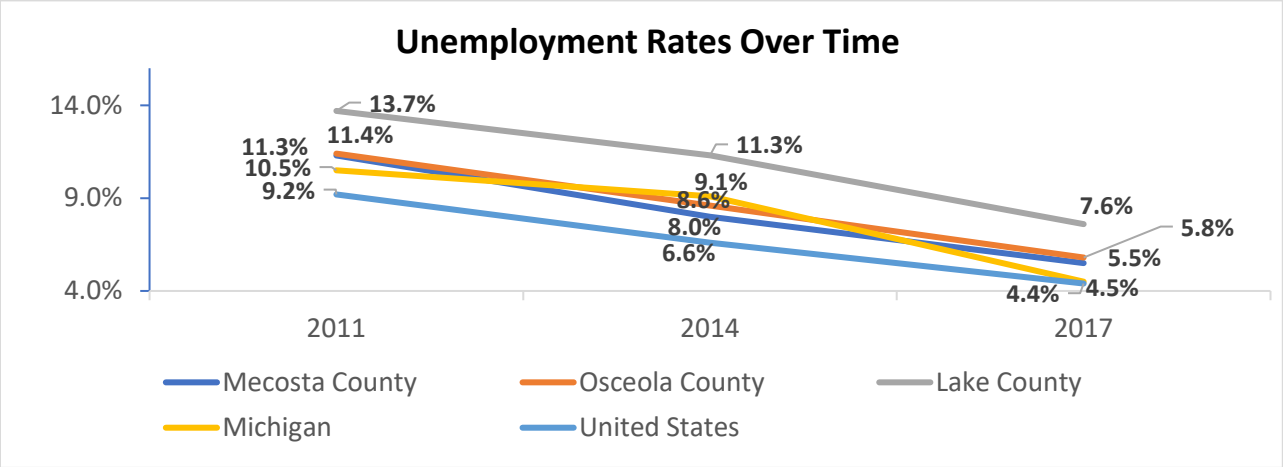
- Key Informants expressed concern about child abuse/neglect in their communities. Of the 41 Key Informants who rated the prevalence of various health behavior issues in the community, 73.2% reported child abuse and neglect as "somewhat" or "very" prevalent. Further, only 27.8% of Key Informants are "somewhat" or "very" satisfied with the community response to this issue (n=36).

- Abuse of prescription medications was cited as a contributor to the number of child welfare cases in the community.

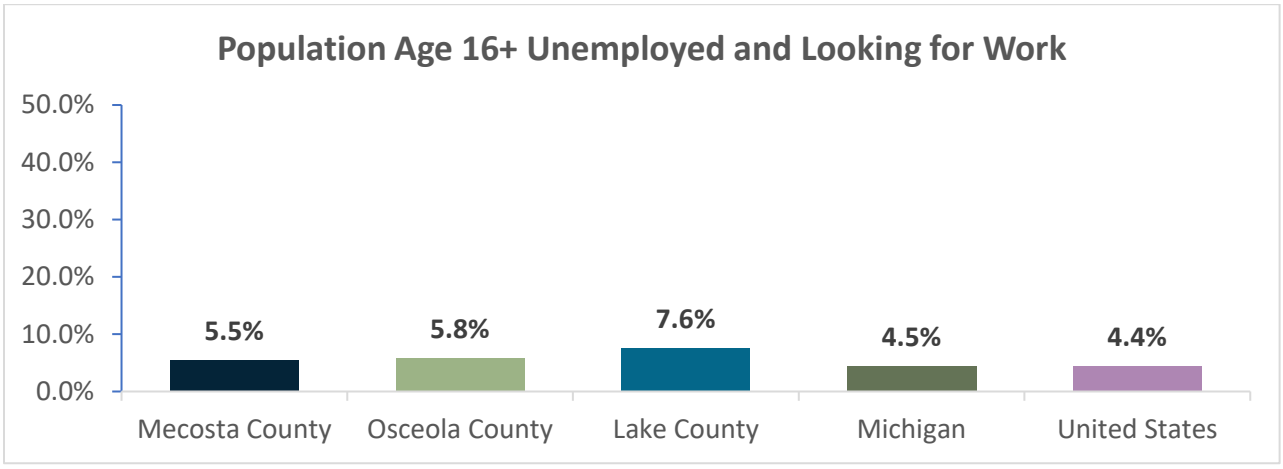
> The **over-prescription of** various **narcotics** and very addictive medication [is] such a significant problem impacting us here. It even **impacts our child welfare system, leading to removals of children that really are pretty unnecessary** - these are pretty competent individuals prior to utilization of prescription narcotics when other options might be available. – *Key Stakeholder*

Unemployment

- Unemployment rates in Mecosta, Osceola, and Lake counties have continued to fall dramatically since the last CHNA was conducted in 2014.
- Nevertheless, unemployment rates in all three counties are higher than Michigan and U.S. rates.



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



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

Poverty

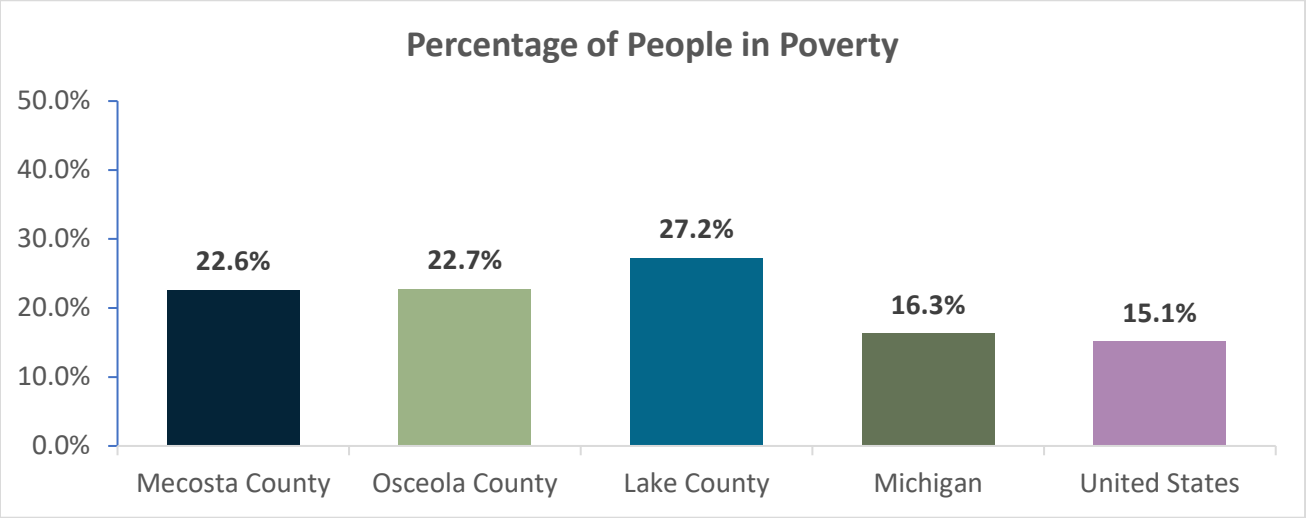
Poverty is a critical social problem in the Spectrum Health Big Rapids area due to its prevalence and its impact on health, family life, crime, and other aspects of well-being. Key Stakeholders, Key Informants and underserved residents all shared observations on the impact of poverty.

I think **we strive to be healthy** with the limited resources that we have, but…we're [Lake County] one of the, if not the poorest county in the state…**Poverty affects so many different areas**…not having adequate food supplies, fresh vegetables, and poverty has brought a lot of stress to families. They don't have money to meet their bills, so **they kind of live on the fringe, and they attempt to be employed sometimes in not so good ways**, so we have quite a **drug trafficking** problem here. There's a fair amount of **domestic violence** as well. So, **poverty, I believe, contributes to a lot of the unhealthiness in the area**. – *Key Stakeholder*

Because we work **in very poor counties,** it is **hard to provide necessary resources to help with transportation and the barrier of costs.** – *Key Informant*

Can't afford healthy foods. – *Underserved Resident*

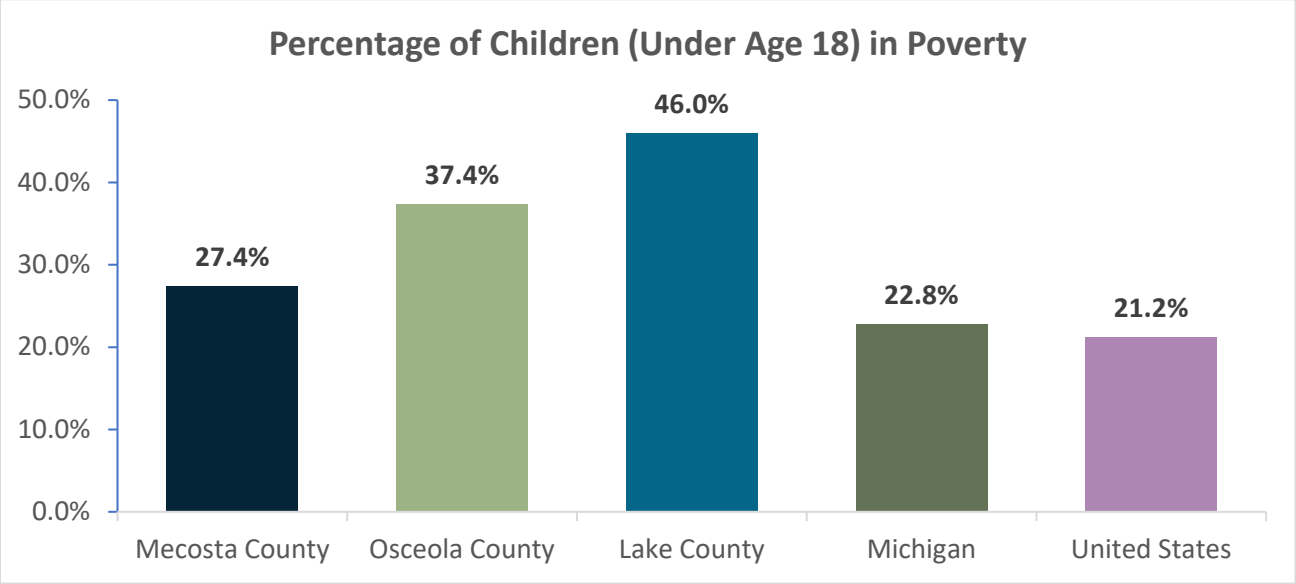
Mecosta, Osceola, and Lake counties all have poverty rates higher than Michigan and the U.S.



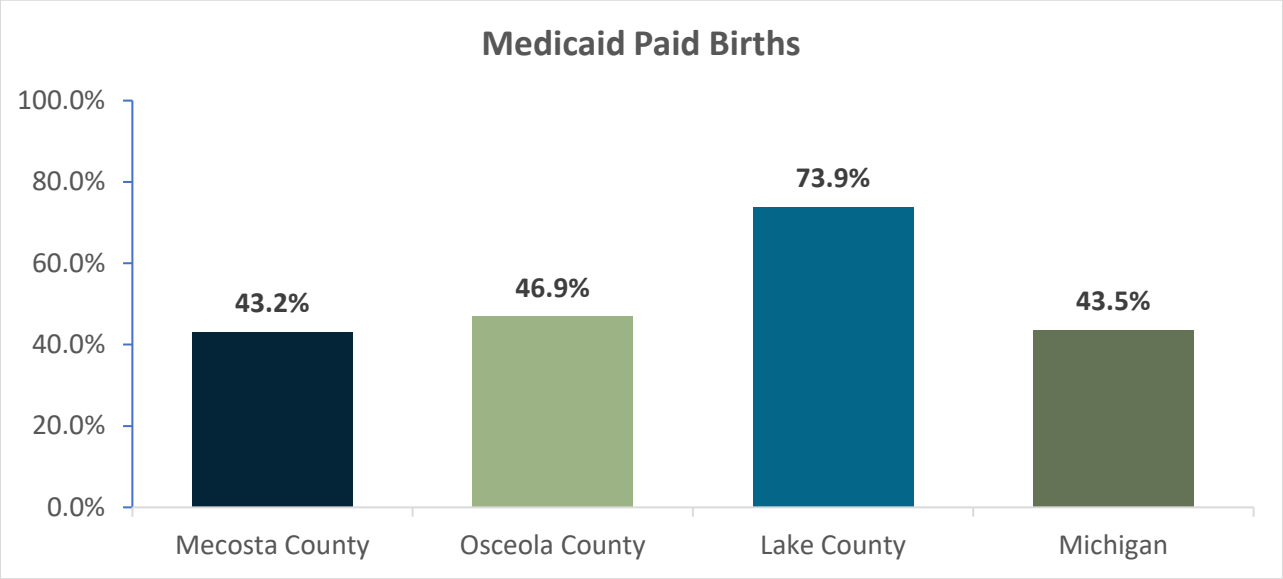
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.

Poverty (Continued)

- In addition, the percentage of children living in poverty is higher in all three counties than in the state and nation as a whole. In Lake County, nearly half of children under age 18 live in poverty.
- In Mecosta County, the percentage of births that are Medicaid paid is on par with Michigan as a whole, while in Osceola County the percentage is slightly higher and in Lake County it is much higher.



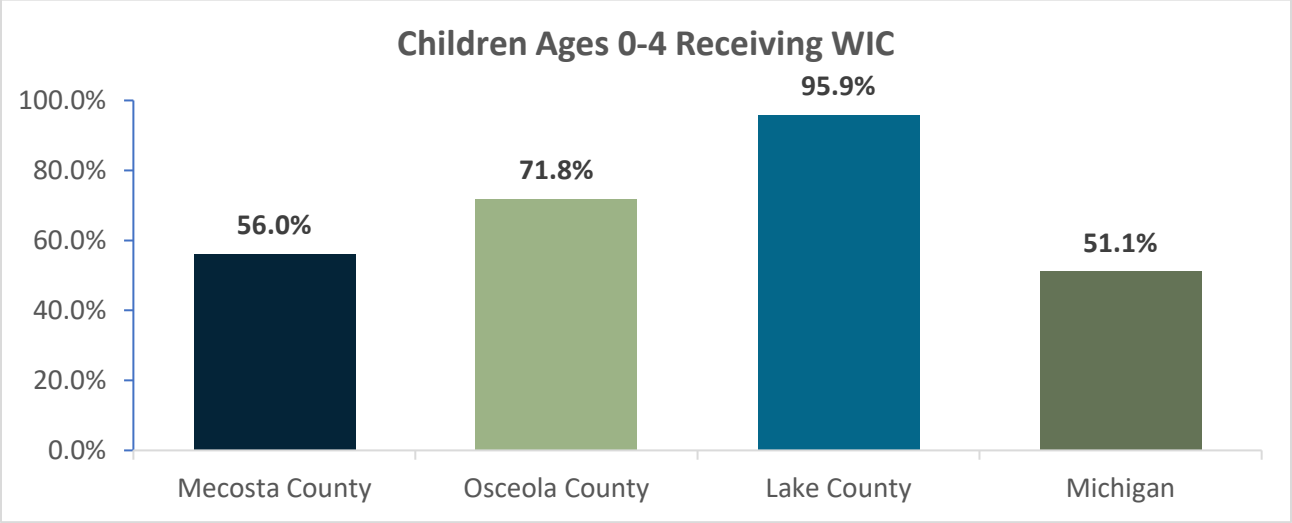
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.



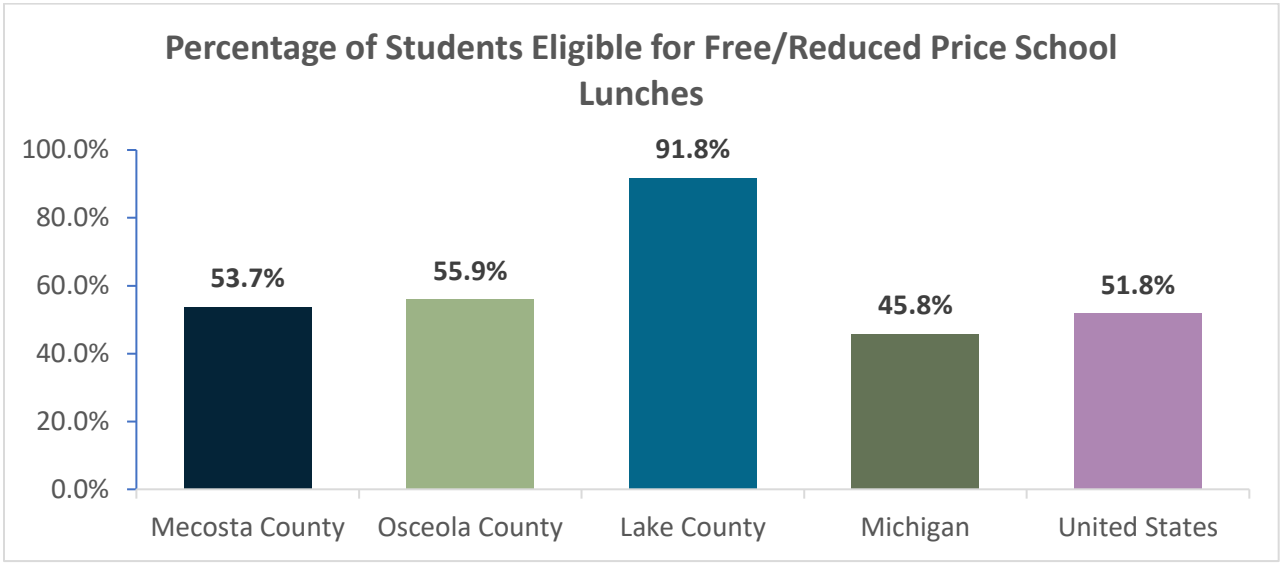
Source: Kids Count Data Book, 2015.

Poverty (Continued)

- All three area counties have higher proportions of children ages 0-4 receiving WIC as compared to the state. In Lake County, nearly all children ages 0-4 receive WIC.
- In addition, all three area counties have higher proportions of students eligible for free/reduced price lunches as compared to the state and nation. In Lake County, more than nine in ten students are eligible.



Source: Kids Count Data Book, 2015.



Source: Kids Count Data Book for MI and counties, 2016; Digest of Education Statistics for U.S., 2016.

Poverty (Continued)

- In all three area counties, the proportion of families living in poverty is higher than state and national rates. In Lake County, half of families with children under age 5 live in poverty.
- Married couple families are far less likely to be living in poverty compared to single-female households.
- Over three-quarters of single-female families with children under five years old from Osceola County, and nearly nine in ten from Lake County, live in poverty.

	Poverty Levels				
	Lake County	Mecosta County	Osceola County	Michigan	U.S.
All Families					
With children under age 18	40.5%	23.6%	31.5%	19.4%	17.4%
With children under age 5	50.6%	29.1%	40.4%	25.2%	21.8%
Total	18.7%	12.7%	16.5%	11.5%	11.0%
Married Couple Families					
With children under age 18	16.5%	12.1%	16.2%	8.1%	7.9%
With children under age 5	28.0%	16.2%	21.9%	11.1%	10.3%
Total	9.8%	6.5%	8.8%	5.2%	5.5%
Single Female Families					
With children under age 18	76.5%	51.2%	63.4%	44.3%	39.7%
With children under age 5	87.2%	63.8%	78.0%	57.3%	51.7%
Total	56.5%	39.8%	47.3%	32.9%	29.9%

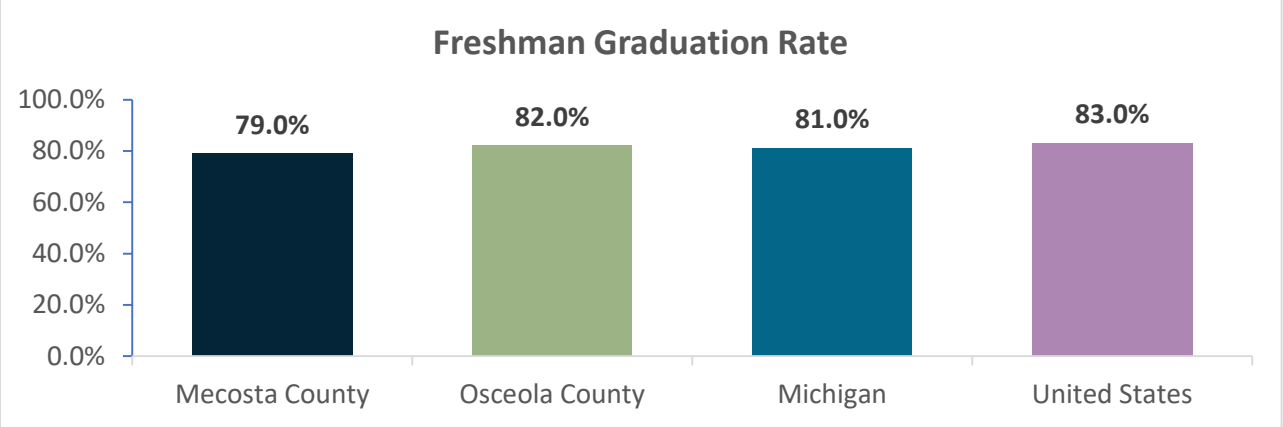
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.

Education

- All three area counties have lower proportions of high school graduates (male, female) than Michigan overall. In addition, fewer male and female residents of these counties have earned a Bachelor's degree or higher compared to Michigan or the U.S. Lake County fares worst on both measures.
- The Mecosta County freshman graduation rate is lower than both the state and national rates, whereas Osceola County's rate falls between the state rate and the national rate.

	Educational Level (Among Adults Age 25+)									
	Men					Women				
	Lake County	Mecosta County	Osceola County	MI	U.S.	Lake County	Mecosta County	Osceola County	MI	U.S.
No Schooling Completed	1.7%	1.3%	0.8%	1.1%	1.4%	1.5%	1.4%	0.4%	1.0%	1.4%
Did Not Graduate High School	20.1%	11.6%	14.5%	10.8%	13.7%	15.6%	9.8%	10.6%	9.5%	12.4%
High School Graduate, GED, or Alternative	43.6%	36.1%	47.4%	30.2%	28.2%	41.5%	34.3%	42.4%	29.0%	26.9%
Some College, No Degree	22.0%	22.2%	20.9%	23.7%	20.6%	23.8%	24.0%	21.7%	23.8%	21.2%
Associate's Degree	5.4%	9.1%	5.4%	7.9%	7.3%	10.0%	10.5%	11.1%	10.3%	9.0%
Bachelor's Degree	5.5%	12.8%	7.3%	16.6%	18.6%	6.1%	13.3%	9.6%	16.8%	19.0%
Master's Degree	2.5%	5.7%	3.4%	7.2%	7.5%	2.5%	6.3%	3.9%	8.5%	8.8%
Professional School Degree	0.4%	0.8%	0.7%	2.1%	2.4%	0.3%	0.8%	0.4%	1.3%	1.6%
Doctorate Degree	0.5%	1.7%	0.4%	1.4%	1.7%	0.3%	0.9%	0.4%	0.9%	1.0%

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



Source: County Health Rankings, 2015.
Note: Lake County data not available.

Environmental Factors

Environmental factors that positively impact the health of area residents include: outdoor natural areas with trails and waterways; access to fresh foods through farmers markets and community gardens; proximity to health care, businesses, etc.; and a community that is safe, clean, and quiet.

Conducive to recreation and outdoor activities	We have some great **hiking and biking trails**…Groups and individuals have really worked hard to ensure that they're **accessible** to everyone. – *Key Stakeholder* The **Muskegon River** is there; people are very proud of the walkway - and it's beautiful. Those are positives, really positive, and **people like being rural and out in nature**…People love being up there **fishing** and **hunting** and **snowmobiling** and things like that. – *Key Stakeholder* Plenty of **trails to walk**, and **waters to swim and kayak**. – *Key Informant* **Easy to walk** with paths set up. – *Underserved Resident*
Farmers markets/Community gardens	I think having our **community gardens**. It's in Big Rapids…The community comes together, and **the food** that comes from that **can go to food pantries**, so people, instead of just getting all these packaged, processed food, can get fresh food. – *Key Stakeholder* **Farmer's market** in town. – *Key Informant* Access to **fresh food** during late summer and fall **at farmers markets**. – *Underserved Resident*
Proximity to health care, businesses, etc.	Easy to **walk to places in town**; **hospital** located **in town**. – *Underserved Resident* Country atmosphere - **facilities are** fairly **close**. – *Underserved Resident*
Safe, clean, quiet community	It's a **safe community**; it's great to feel safe on a walk or bike ride. – *Underserved Resident* Live in the country; **clean air**. – *Underserved Resident*

Source: Key Stakeholder In-Depth Interviews, Key Informant Online Survey, Underserved Resident Self-Administered Survey, 2017.

Environmental Factors (Continued)

- Environmental factors that negatively impact the health of area residents include: abundant fast food options coupled with a lack of affordable healthy food options; a lack of affordable housing; a lack of doctors, long wait times for appointments, and distance to providers; and a lack of programs and exercise facilities.

Pervasiveness of fast food restaurants/Lack of affordable healthy food	**Fast food**. **One grocery store**, leaving it hard to buy healthy food. – *Key Informant* **Too many fast food places** and **healthy eating is much more expensive** than less healthy options. – *Underserved Resident* Serve **junk food at Senior Center**. – *Underserved Resident*
Lack of affordable housing	There's just **not good adequate housing for lower-income** people, either **in Newaygo or in Lake County**…There are **people living in tents, people living in shacks**. – *Key Stakeholder* Big Rapids is actually one of our most challenging ones because **students are living in most of the housing**, even if it's income-based, and **so that creates situations where others are having trouble**. – *Key Stakeholder*
Lack of doctors/Long wait times for appointment/ Distance to providers	Need more docs - **hard to get an appointment** when in need. – *Underserved Resident* Lack of transportation and **distance to health care providers**. – *Underserved Resident*
Lack of programs/exercise facilities	**No** available **senior exercise programs** in Big Rapids. – *Underserved Resident* Small community **only** provides **certain programs**. – *Underserved Resident*

Source: Key Stakeholder In-Depth Interviews, Key Informant Online Survey, Underserved Resident Self-Administered Survey, 2017.

Adverse Childhood Experiences

During their childhood, area adults were more likely to have experienced emotional abuse compared to adults across the U.S., but less likely to have experienced physical or sexual abuse.

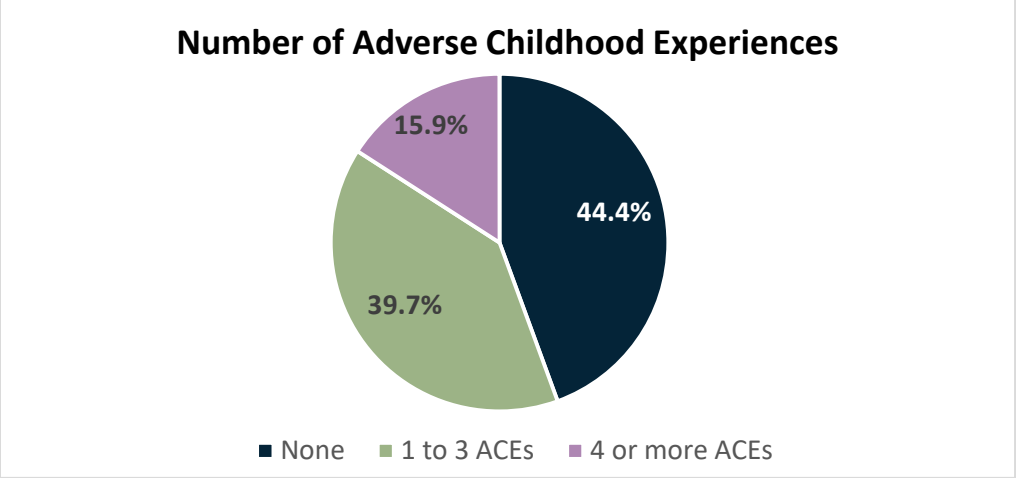
ACE Questions	Percent of People with Each ACE					
	SHBR Area			United States		
	Total	Women	Men	Total	Women	Men
Did a parent or other adult in the household often swear at you, insult you, put you down, or humiliate you, **OR**, act in a way that made you afraid that you might be physically hurt? (n=955)	**23.5%**	**23.3%**	**23.8%**	**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=956)	**18.5%**	**15.9%**	**21.2%**	**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=953)	**11.0%**	**13.2%**	**8.9%**	**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=953)	**14.2%**	**15.1%**	**13.3%**	**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=954)	**6.4%**	**7.8%**	**5.0%**	**9.9%**	**9.2%**	**10.7%**
Were your parents ever separated or divorced? (n=949)	**29.4%**	**30.6%**	**28.0%**	**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=931)	**9.9%**	**10.0%**	**9.9%**	**12.7%**	**13.7%**	**11.5%**
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs? (n=955)	**20.4%**	**24.1%**	**16.7%**	**26.9%**	**29.5%**	**23.8%**
Was a household member depressed or mentally ill or did a household member attempt suicide? (n=954)	**14.3%**	**15.1%**	**13.4%**	**19.4%**	**23.3%**	**14.8%**
Did a household member go to prison? (n=952)	**8.3%**	**9.9%**	**6.8%**	**4.7%**	**5.2%**	**4.1%**

ABUSE | NEGLECT | HOUSEHOLD CHALLENGES

Source: BRFS Survey for SHBR respondents, 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.

Adverse Childhood Experiences (Continued)

- More than half (55.6%) of SHBR area residents have experienced at least one adverse childhood experience, and 15.9% 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 SHBR respondents, 2017. (n=914).

	Number of ACEs		
	None	1-3	4 or More
Poor physical health (n=912)	7.8%	18.6%	18.2%
Poor mental health (n=913)	2.9%	11.5%	11.6%
Have asthma (n=913)	6.8%	13.9%	23.3%
Have COPD (n=914)	4.7%	8.8%	20.3%
Have arthritis (n=910)	25.9%	37.4%	50.2%
Suffer from chronic pain (n=913)	18.9%	32.2%	52.1%
Current smoker (n=914)	12.6%	24.1%	38.1%
Mild to severe mental illness (Kessler 6) (n=907)	5.1%	19.3%	43.2%
Thought of committing suicide in past year (n=912)	0.8%	1.0%	14.3%

Source: BRFS Survey for SHBR respondents, 2017.

COMMUNITY CHARACTERISTICS

Characteristics of a Healthy Community

When asked to describe what a healthy community looks like, Key Stakeholders took a broad perspective, discussing not only improved physical outcomes but also a culture of wellness, collaboration, and innovation, as well as universal access and a safe and economically prosperous environment.

- ✓ Accessible health care (mental, dental, physical)
- ✓ Access to healthy food choices; fresh markets
- ✓ Safe
- ✓ Chronic disease in check
- ✓ Resource fairs; continuous distribution of information; outreach to engage various populations
- ✓ Creative, cutting-edge strategies
- ✓ Risk factors manageable
- ✓ Jobs; strong industry
- ✓ Supportive
- ✓ Collaborative (working together for common good)
- ✓ Residents outside, walking and biking
- ✓ Minimal substance abuse
- ✓ Communicative
- ✓ Constant learning
- ✓ Lifestyle issues addressed

With regard to the SHBR service area, Key Stakeholders report efforts at tackling health-related challenges in the community but still see substantial room for improvement.

There's **a lot of people** that are **overweight**, and I know that there have been efforts more recently to offer diabetes clinics or outreach or education. **MSU Extension has been a great resource**, even going into offices and **providing wellness opportunities**…Not only the obesity issue, but I also think that prescription drug piece is a huge part of it. A lot of **people are not as healthy as they could be** or should be **because of addiction issues**.

There's a lot of people who…want to do well by the community; **there's just not the thinking at a distance**, the long-view, to be able to go after some of this stuff.

There are efforts underway to try to get there, but I think **that's not a scenario that you can create overnight**…and it's going to take some realization on some of the partners that they can't do it themselves and **they need to be part of a larger group effort**.

There's **very little economic progress** in the area - very **little opportunity to encourage our young people to stay** and gain employment and be productive in our own community...I'm here to try and make a difference, and there's others here as well - we all work together to try and strive for that - but I do believe that we have a ways to go.

We have some positives, but I think we have a ways to go. We have a **high rate of obesity**. We have **significant mental illness**.

Source: 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 SHBR service area made up of healthy communities? (n=5).

Characteristics That Make the Community Healthy/Unhealthy

With regard to elements that make the SHBR service areas healthy communities, Key Stakeholders point to the presence of people in the communities working on improvements and cite specific efforts underway aimed at wellness/prevention as well as disease management and treatment.

People working on improvements	I think what makes it healthy is there are **core people** in each of the communities that are typically more the community leaders **that work to improve the community**.
Wellness/ Prevention	We have a **farmers' market…**and so **people can** actually use the moneys for Medicaid (the card) and go in and **get double the amount of fresh fruit or vegetables.**
Disease management and treatment	Spectrum Health has worked with Susan P. Wheatlake to offer a **cancer center**, and so there's a resource center as well as a treatment center in Osceola County…Spectrum is offering more in the way of **diabetes clinics** and information sessions.

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

With regard to elements that make area communities unhealthy, Key Stakeholders point to poverty and the rural nature of the area, which is associated with fewer employment opportunities and a lack of involvement on the part of residents in terms of health-promoting behaviors.

Poverty	Our **economic status** here and the **lack of employment** plays a major role in the unhealthiness.
Rural nature of community	**You can have all of the organizations that are working on those things** recognize what needs to get done, **but** I think a lot of times **what we lack is just the actual community member participation and effort to make those changes**…The simple fact that they're rural contributes to that. If you look at statistics, **rural communities tend to be less healthy**. I mean, you have **less access to health care…Transportation issues** contribute to [that] where you don't have buses to get people around or get them access [to] services. They're **not a walkable community**; you don't have any sidewalks…You **don't have a lot of healthy eating options**.

Source: Key Stakeholder In-Depth Interviews: Q2c: What makes the SHBR area unhealthy? (n=6).

Community Strengths

Key Stakeholders named many strengths and resources that the community can build upon in order to improve the health of the community, and many of these strengths center on the passion, commitment, and generosity of a broad scope of community members – from volunteers and philanthropists/community foundations to social service agencies, area legislators, school administrators, and other community leaders. Local universities serve as another important resource. Collaboration among entities was also noted as a valuable strength.

Volunteers	We have a **large volunteer force with Ferris State University**. We have students that are always looking for volunteer opportunities and field placements, so at any given time we have five to eight interns. We have an **AmeriCorps volunteer** placed with us; we have **AARP volunteers** placed with our agencies, so we have significant resources for volunteers.
Foundations	We do have **foundation dollars**. Each of the communities has a local community foundation.
Universities	We have **area universities** that are also a strength to all of us; they **provide potential employees** to us, so we have **students that rotate through** - all different kinds of students, from **pharmacy students to optometry students**.
Leadership and collaboration	We have those in **leadership** who are **committed to the population**. Our community **school systems**, Baldwin Community Schools and Pine River Schools…are very **committed to families and to the students** and **work very hard to be very innovative**. There's the **Promise** here in Baldwin that **helps kids** once they graduate to **get a couple years of college** in. Regardless of political stance, we have had **bipartisan support for** our services as a **federally-designated health center**. Our **legislators** have been very proactive and very **supportive**, of course, **of the Promise** both in Newaygo and Lake County. A strength is definitely our **collaboration** and our **coordination of care** and our **willingness to sit down, even when we disagree**, and hash out the situation and **come to a resolution.** There are **people** that are really **willing to take the initiative**. We have a **trafficking group** that…created quite a bit of momentum to address the needs of trafficking victims and identify trafficking, and that was completely outside the scope of any agency. It was really a community that **came forward and said, "This is important to us, and we're going to do something about it."**

Source: 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).

Resource Limitations

In discussing resource limitations, Key Stakeholders point to funding caps and a limited number of personnel.

Funding	Any time you talk about grants, the fear is that **those grant dollars go away**, and then **what happens to the programming efforts**? **Funding**'s always one of the heavy hitters.
Personnel	**Staff time to actually accomplish some things**. We all deal with pretty small staff, so we see the same people over and over again at various meetings when we talk about the organizations, so I think that **community involvement/resident involvement** in addressing these issues is an important piece that – **we need to figure out how to be successful with that**.

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

Collaboration and Coordination

- Nearly half (47.8%) of Key Informants, and four of the five Key Stakeholders, report that area organizations and agencies collaborate "somewhat" or "very" well together in order to make programs and services more accessible to area residents. Many state that communication among entities has been improving.
- Several of those who report collaboration to be lacking state that health care providers, agencies, etc. are unaware of other existing resources in the community.

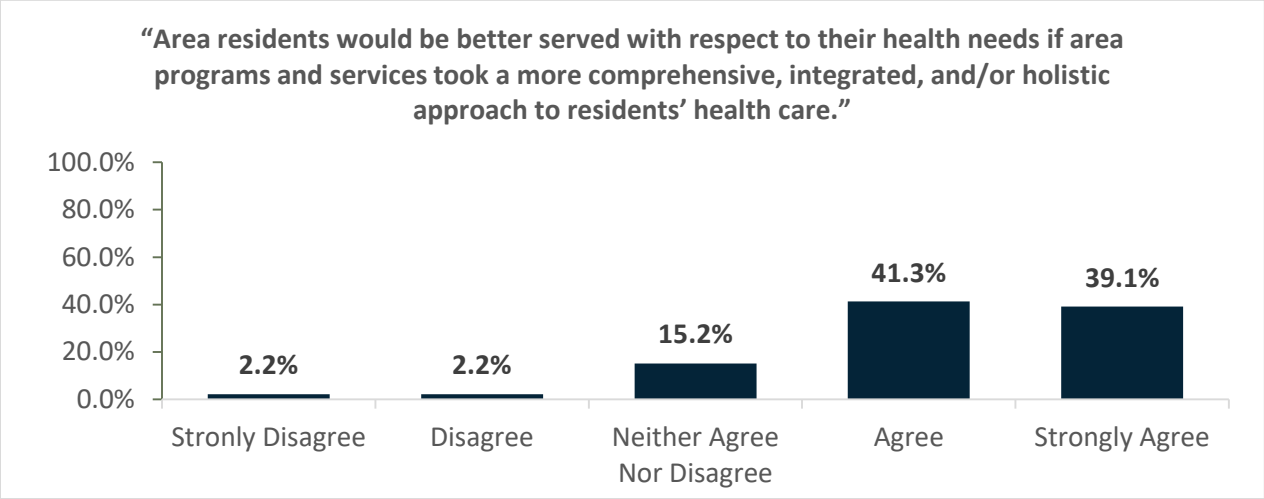
Source: Key Informant Online Survey, Q9/Q9a; Key Stakeholder Interviews, Q5/Q5a: How well do organizations and agencies in your community collaborate and coordinate together in order to make programs and services more accessible to area residents? Why do you say that? (n=46/n=5).

Somewhat Well/Very Well	I think **it has gotten much better** because we've been forced to do that, because the pie itself is getting so much slimmer. There's **less resources to go around that it's forcing us to collaborate together more**. Having said that, though, I think there are **still situations where we have some competing forces or some duplication** of efforts. – *Key Stakeholder* **Since CHNAs were implemented** for all non-profits, **this has resulted in more organizations and agencies working together** and this time working on **tangible programs with measured results**. – *Key Informant*
Not At All Well/Not Very Well	I **don't see much evidence of intentional working together**…There's not the **higher-level thinking or** the **long-term view** about "How do we strategically go after this?" – *Key Stakeholder* The **physician offices** often **do not have information of everyday services available** by other agencies. – *Key Informant*

Holistic/Biopsychosocial Approach

- Four of the five Key Stakeholders report that area programs and services take a comprehensive, integrated, and/or holistic approach to serving the health and health care needs of area residents, or that they are moving in that direction. Among Key Informants, eight in ten (80.4%) believe that residents would be better served if area programs and services took this approach.

- These professionals note that health encompasses physical, mental, behavioral, and social factors, with all being interdependent. In addition, several recognize that working together and sharing information leads to a more effective system, reducing duplication of efforts and communication gaps.



Source: 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=46).

There's a pretty **strong resource group** that meets with the Department with churches and many agencies, and there's usually **40 to 50 people at the table just sharing information and resources on a monthly basis**. We have a strong **wrap-around program that tries to address holistically** how we meet the needs; our Spectrum nurse from the schools is present at those as well as a Spectrum administrator. 1016, Community Mental Health, the Department - lots of different entities to ensure that we offer families pretty holistic opportunities…The Department has placed **eligibility specialists and child welfare workers out in the schools** so that we better understand the needs of children in those areas and families and can meet their needs right where they're at. – *Key Stakeholder*

I think **it's moving in that direction**. It's gotten much better than what it was statewide six, maybe ten, years ago. – *Key Stakeholder*

You **cannot treat obesity without addressing the underlying issues** [whether they be] physiological, psychological, spiritual, or environmental. – *Key Informant*

I see fragmentation, especially **in treating those with mental illness**. Often the patient's other **physical health and preventive services are not provided**. Chronic disease is very related to risk behaviors that are interrelated and cannot be treated in isolation. Also, **social determinants for health are often not addressed**. – *Key Informant*

You can **reach more people with a more effective program** if we can **work in a coordinated fashion** and **not have redundant programs** in place. – *Key Informant*

Barriers to Care Coordination

Key Stakeholders report several barriers to care coordination, such as funding limitations, individual agendas, distance between services, technology limitations, and electronic information systems that are not linked.

Funding limitations. You may have **funds that are so narrowly focused** that you can't do anything else.

It's challenging because of the **distances between us**.

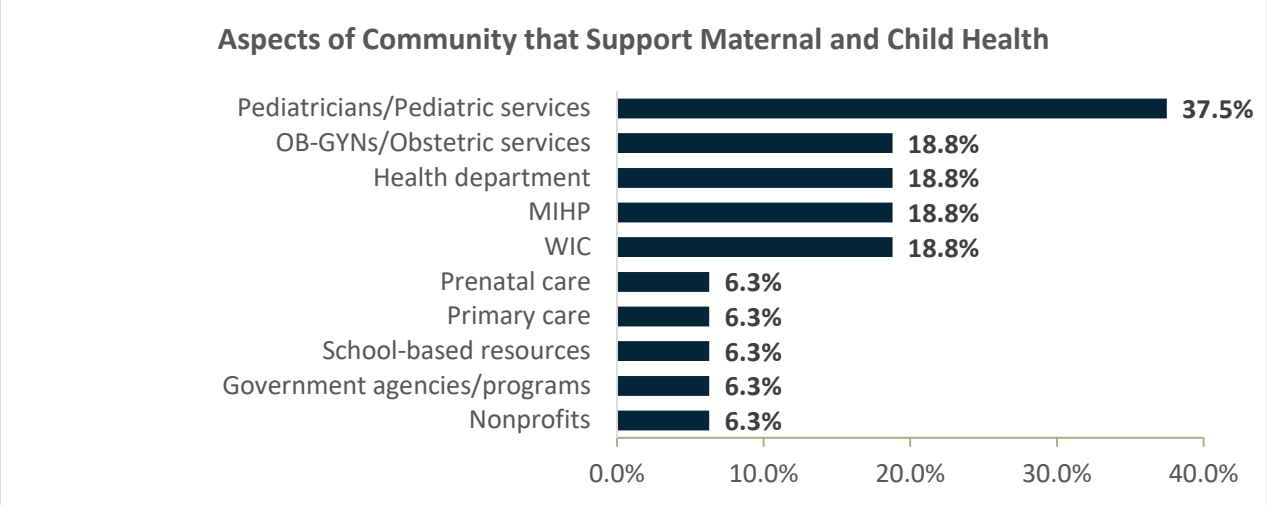
We'd like to really bring more technology on, and the health center has been working with the Big Rapids system on more innovative ways with telehealth; **reimbursement's not there right now**, so with **limited resources**, it's kind of hard to really put things into action.

We cannot access each other's records. We both have our own electronic system, but often we're serving the same individuals...It would be wonderful if there was some way, when we come and do crisis [evaluation], to enter into their electronic record…We're looking at it. I'm not sure how feasible it is at this time.

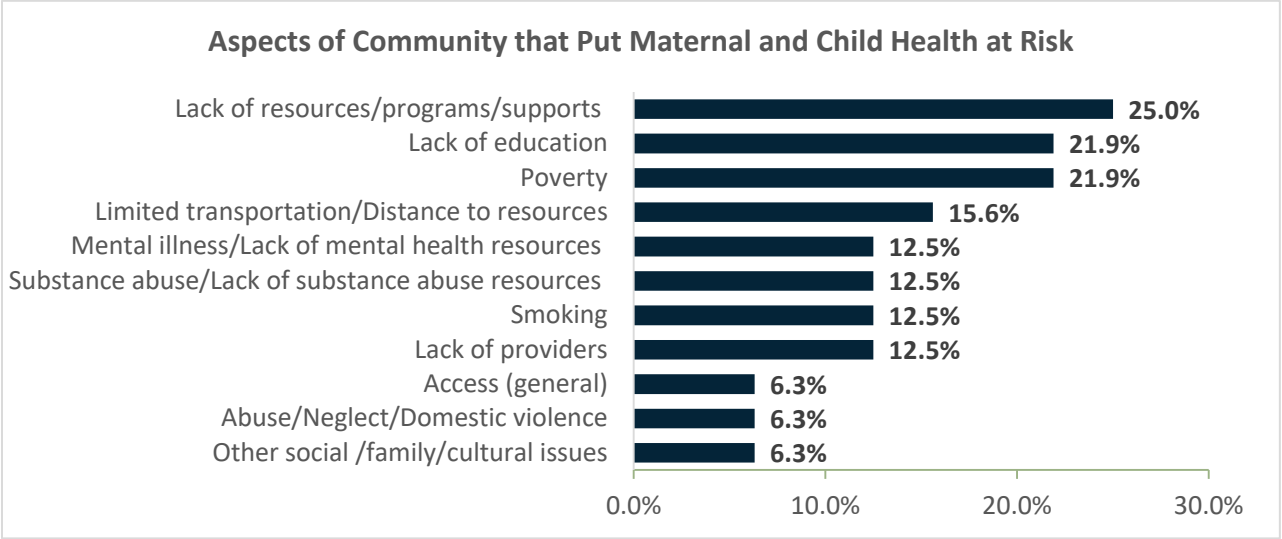
Source: Key Stakeholder Interviews, Q5d: Are there any barriers to care coordination? (n=5).

Maternal and Child Health

- Key Informants name pediatric services the top aspect of the community that supports maternal and child health, followed by obstetric services, area health departments, MIHP, and WIC.
- Aspects of the community that put maternal and child health at risk include a lack of resources/programs/support (including those for mental illness and substance abuse), a lack of education, poverty, and transportation barriers.



Source: Key Informant Online Survey, Q12: What about this community supports maternal and child (age birth – 18) health? Please be as detailed as possible. (n=32).

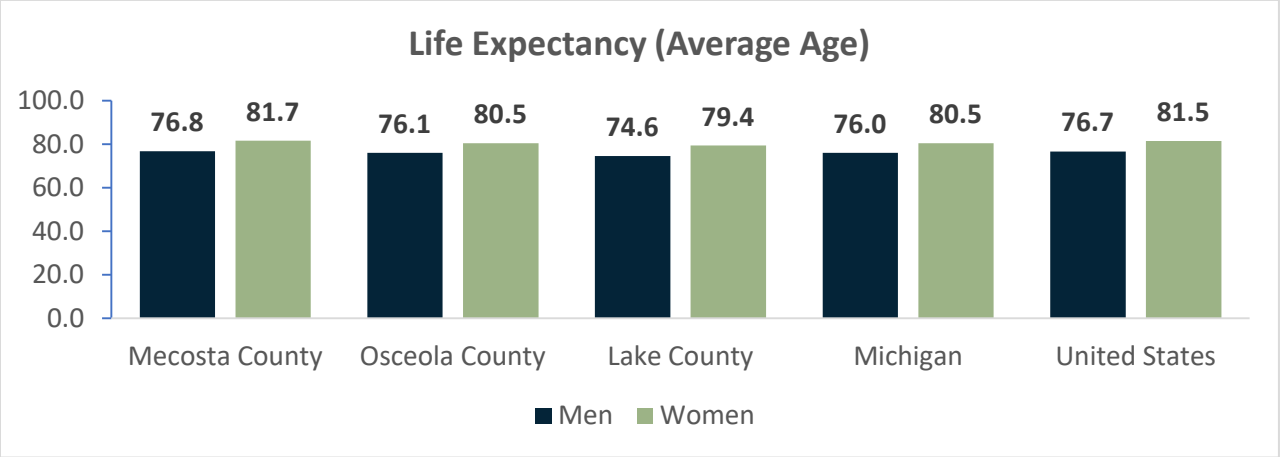


Source: Key Informant Online Survey, Q13: What about this community puts maternal and child (age birth – 18) health at risk? Please be as detailed as possible. (n=32).

HEALTH STATUS INDICATORS

Life Expectancy and Years of Potential Life Lost

- For both men and women, life expectancy in Mecosta County is higher compared to Michigan and the U.S. Osceola County rates are roughly on par with Michigan but lower than the U.S., while Lake County experiences lower rates compared to Michigan and the U.S. for both genders.
- Mecosta County residents experience fewer years of potential life lost overall compared to Michigan but lose more years to malignant neoplasms, heart disease, and chronic lower respiratory disease.
- Osceola and Lake counties experience more years of potential life lost overall and due to malignant neoplasms compared to the state, and Lake County residents also lose more years to heart disease compared to the state.



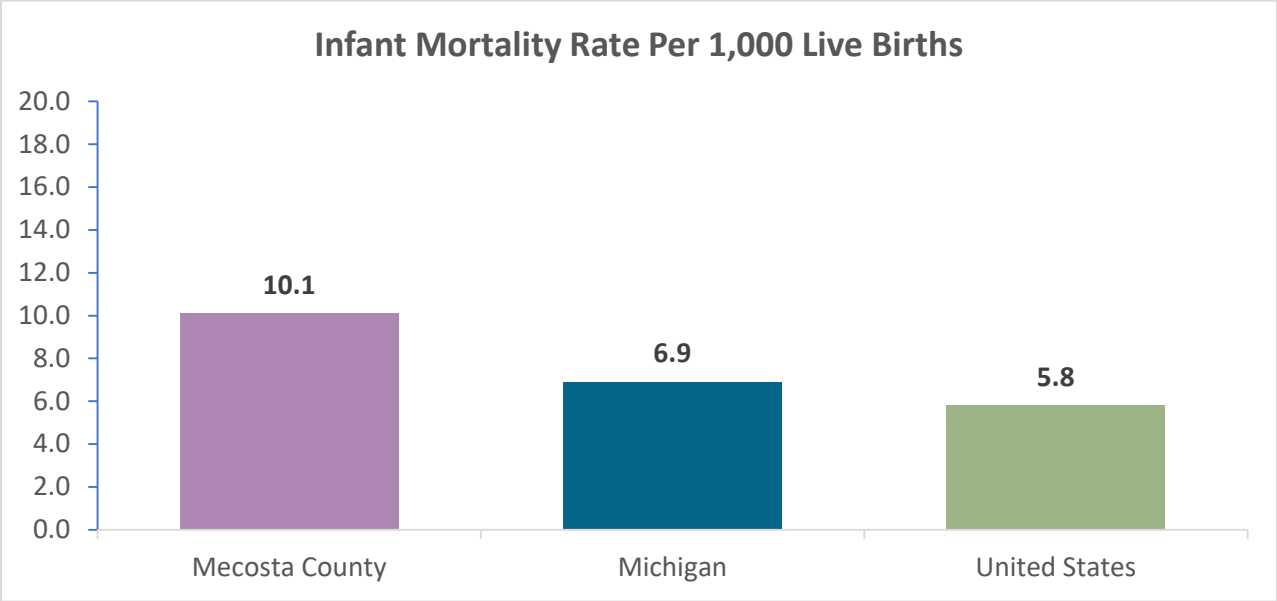
Source: Institute for Health Metrics and Evaluation at the University of Washington, 2014.

	Michigan		Mecosta County		Osceola County		Lake County	
	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate
All Causes		7697.6		7246.2		8182.9		9312.8
Malignant neoplasms (All)	1	1620.8	1	1821.5	1	1639.4	1	2245.2
Diseases of the heart	2	1276.0	2	1422.3	2	1015.8	1	2245.2
Accidents	3	1136.4		**		**		**
Drug induced deaths	4	791.0		**		**		**
Intentional self-harm (Suicide)	5	428.4		**		**		**
Chronic lower respiratory diseases	6	255.4	3	424.2		**		**

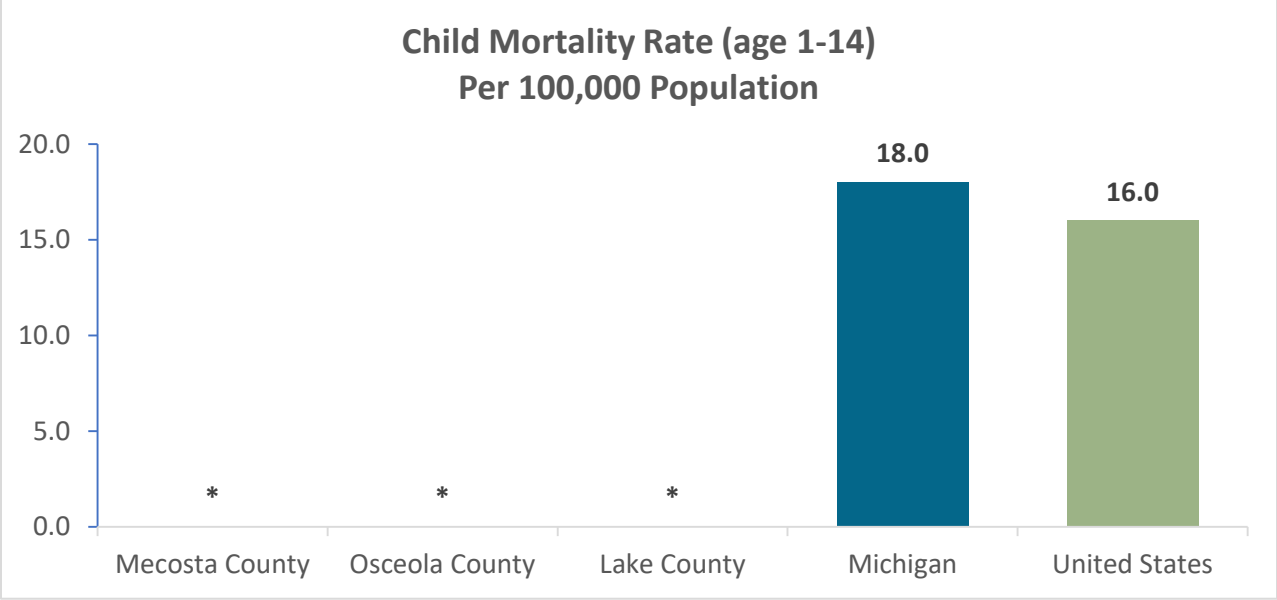
Source: Michigan DHHS, Division of Vital Records and Health Statistics, Geocoded Michigan Death Certificate Registry, 2015.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

Mortality Rates

- Mecosta County's infant mortality rate is 10.1, considerably higher than both state and national rates.
- For Mecosta, Osceola, and Lake counties, the number of child mortality cases was below the threshold needed to calculate a rate.



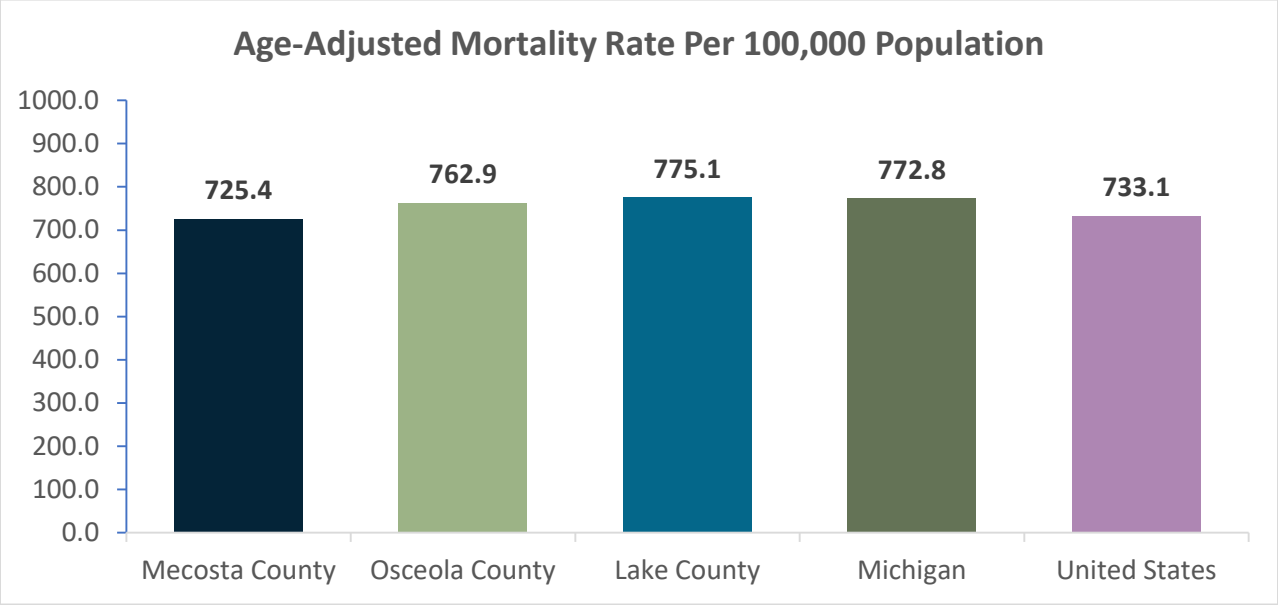
Source: Michigan Department of Health and Human Services, Division of Vital Records and Health Statistics, 2014.
Note: Lake and Osceola counties not included because they had fewer than 6 cases in 2014.



Source: Michigan Department of Health and Human Services, Division of Vital Records and Health Statistics, MI and US, 2015.
Note: * Number of cases was below the threshold needed to calculate a rate.

Mortality Rates (Continued)

- Lake County's age-adjusted mortality rate is the highest among the state, nation, and three SHBR area counties.
- Mecosta County has the lowest rate among the five areas.



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

Leading Causes of Death

- Heart disease and cancer are the leading causes of death in Mecosta, Osceola, and Lake counties, as they are in the state and nation.
- Mecosta County has a higher death rate from cancer compared to the other regions represented in the table below, but has a lower death rate from heart disease than the other regions.
- Osceola and Lake counties have higher death rates from heart disease than the state and nation, and Osceola County has a higher death rate than the state and nation from cancer.

	Michigan		United States		Mecosta County		Osceola County		Lake County	
	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate
Heart Disease	1	195.5	1	168.5	2	154.9	1	197.8	1	198.7
Cancer	2	164.9	2	158.5	1	200.6	2	170.7	2	153.3
Chronic Lower Respiratory Diseases	3	46.7	4	41.6	3	46.4		**		**
Unintentional Injuries	4	42.9	3	43.2		**		**		**
Stroke	5	36.8	5	37.6		**		**		**
Alzheimer's Disease	6	29.7	6	29.4		**		**		**
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	15.4	10	13.3		**		**		**
All Other Causes		190.1		191.1		174.0		152.8		214.7

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

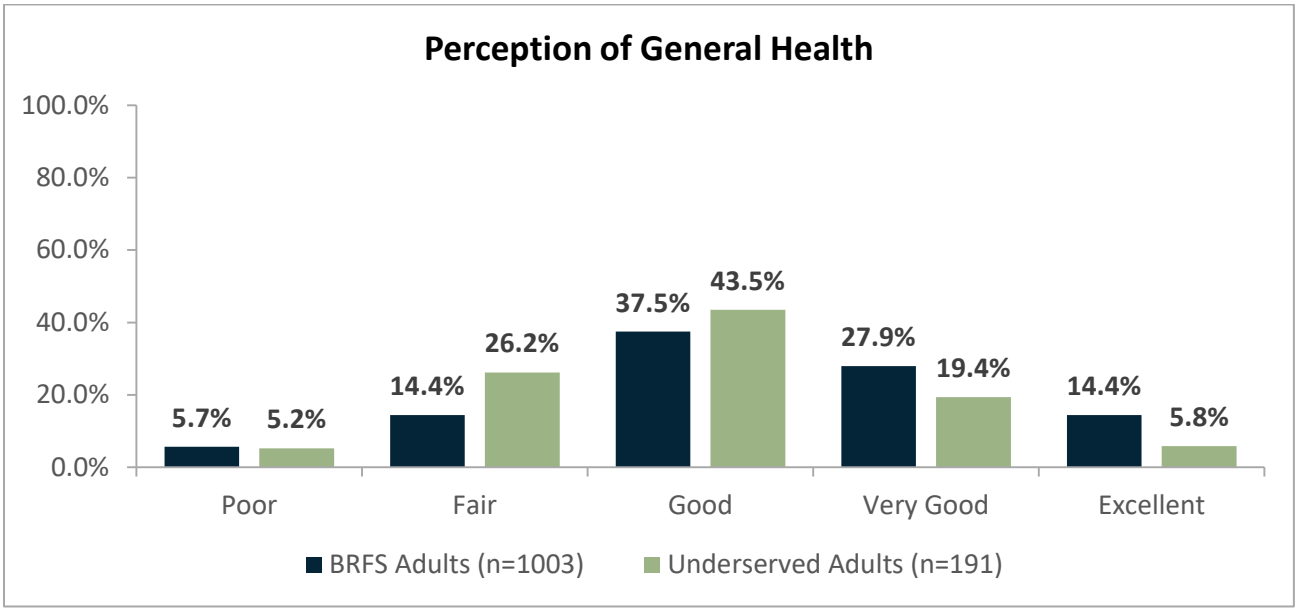
- Preventable hospitalizations are more common in Lake County compared to Mecosta and Osceola counties and the state. Mecosta County has a lower rate than the state and the other counties.
- Congestive heart failure and bacterial pneumonia are the leading causes of preventable hospitalizations in all three counties as well as the state.
- Mecosta County residents have higher rates of preventable hospitalization for congestive heart failure and gastroenteritis compared to the other counties and the state, while Lake County residents have comparably higher rates for bacterial pneumonia, chronic obstructive pulmonary disease, and diabetes. Osceola County residents have a comparably higher rate for epileptic conditions.

	Michigan		Mecosta County		Osceola County		Lake County	
	Rank	% of All Preventable Hospitalizations	Rank	% of All Preventable Hospitalizations	Rank	% of All Preventable Hospitalizations	Rank	% of All Preventable Hospitalizations
Congestive Heart Failure	1	14.0%	1	21.2%	2	13.4%	2	16.8%
Bacterial Pneumonia	2	9.7%	2	13.3%	1	17.8%	1	18.8%
Chronic Obstructive Pulmonary Disease	3	9.1%	3	11.2%	3	11.0%	3	12.9%
Kidney/Urinary Infections	4	6.8%		**	6	5.0%	7	2.6%
Cellulitis	5	6.5%	5	4.8%	4	5.7%	5	5.8%
Diabetes	6	5.9%	4	5.6%	7	3.8%	4	6.5%
Asthma	7	5.3%	6	3.4%	8	3.6%	6	3.6%
Grand Mal and Other Epileptic Conditions	8	3.3%	9	2.6%	5	5.2%	7	2.6%
Dehydration	9	1.8%		**		**	**	**
Gastroenteritis	10	1.7%	8	2.9%	10	1.5%	9	2.3%
Convulsions			7	3.2%	9	2.1%	10	1.6%
All Other Ambulatory Care Sensitive Conditions		36.1%		29.3%		31.1%		26.5%
Preventable Hospitalizations as a % of All Hospitalizations		19.9%		15.6%		20.0%		21.3%

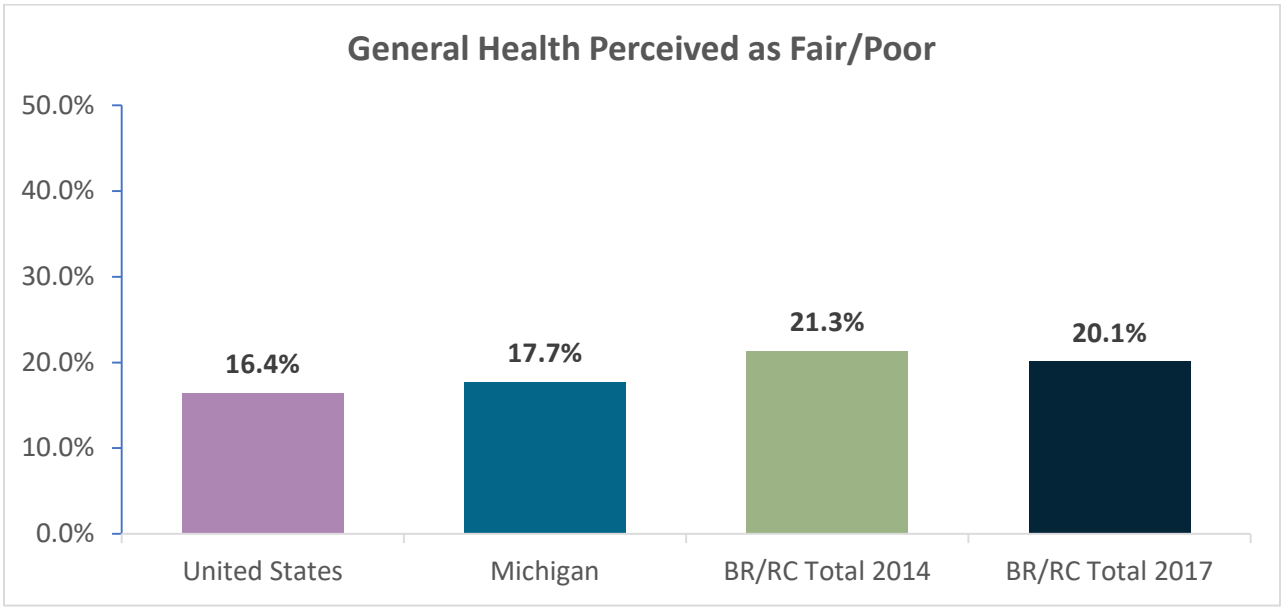
Source: MDHHS Resident Inpatient Files, Division of Vital Records. Counties and MI, 2014.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

General Health Status

- One in five (20.1%) SHBR area adults report fair or poor general health; this proportion rises to 31.4% of underserved adults.
- The proportion of area adults reporting fair or poor health has improved slightly since the last CHNA but is still higher than state and national proportions.



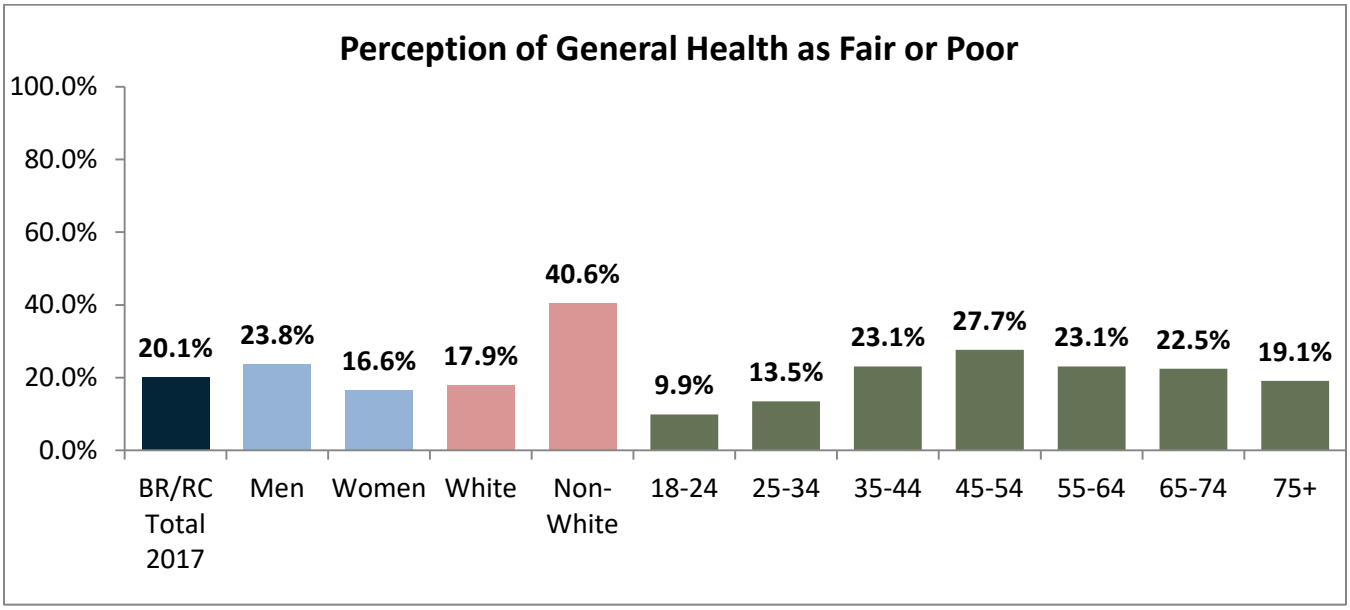
Source: SHBR Behavioral Risk Factor Survey, 2017, Q1.2; SHBR Underserved Resident Survey, 2017: Would you say your general health is excellent, very good, good, fair, or poor?

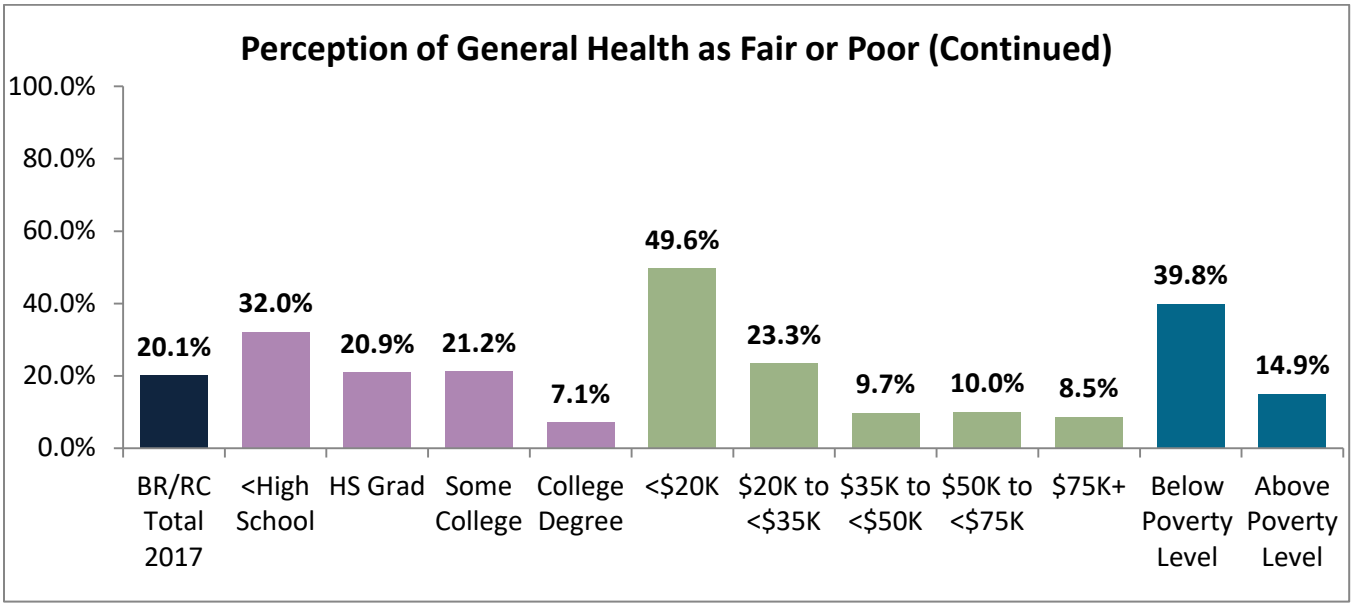


Source: U. S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017, Q1.2
Note: the proportion of adults who reported that their health, in general, was either fair or poor.

General Health Status (Continued)

- The proportion of adults who perceive their health as fair or poor is inversely related to household income and level of education.
- Non-White adults are more than twice as likely to report fair or poor general health compared to White adults. In addition, men are more likely than women to report fair or poor general health.

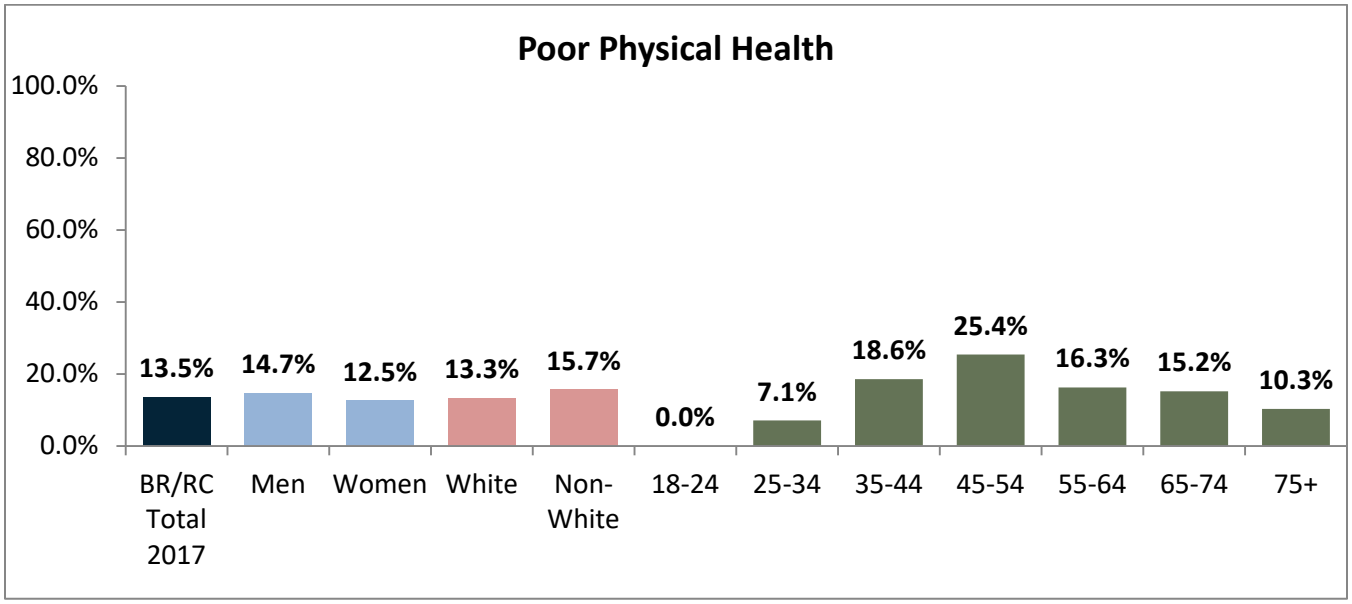


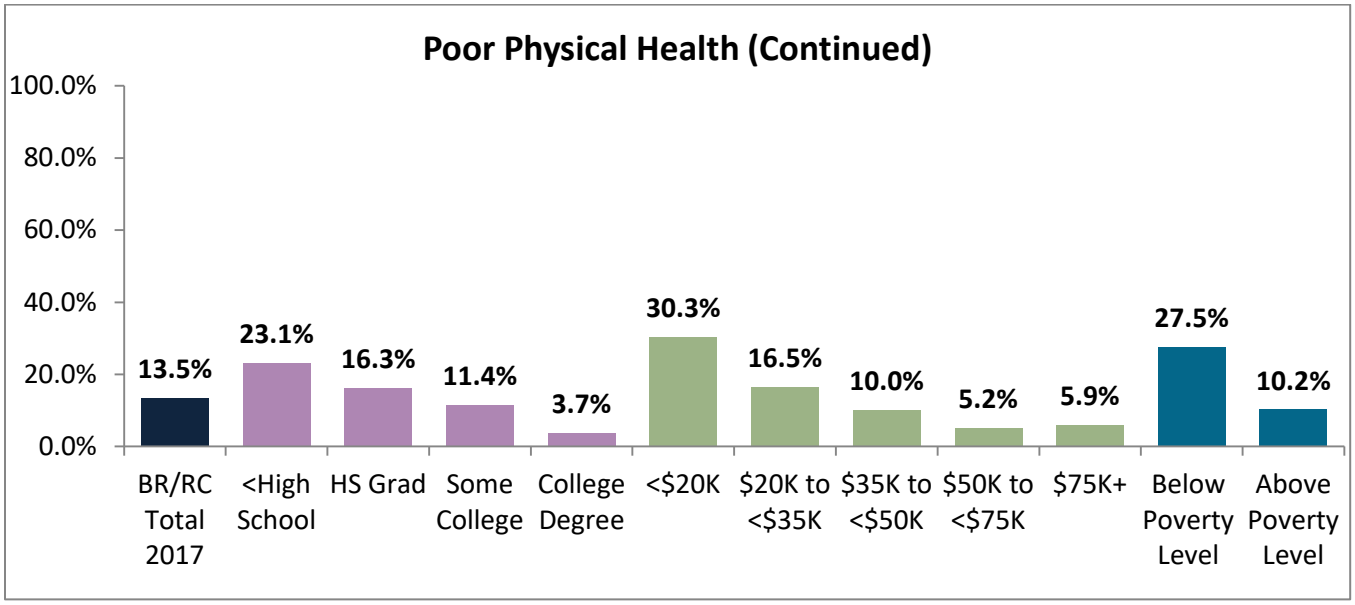


Source: SHBR Behavioral Risk Factor Survey, 2017, Q1.2.

Physical Health Status

- Almost one in seven SHBR area adults have poor physical health, experiencing 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 those age 18-24 and those with a college degree. Those below the poverty level are far more likely than those above the poverty level to experience poor physical health.

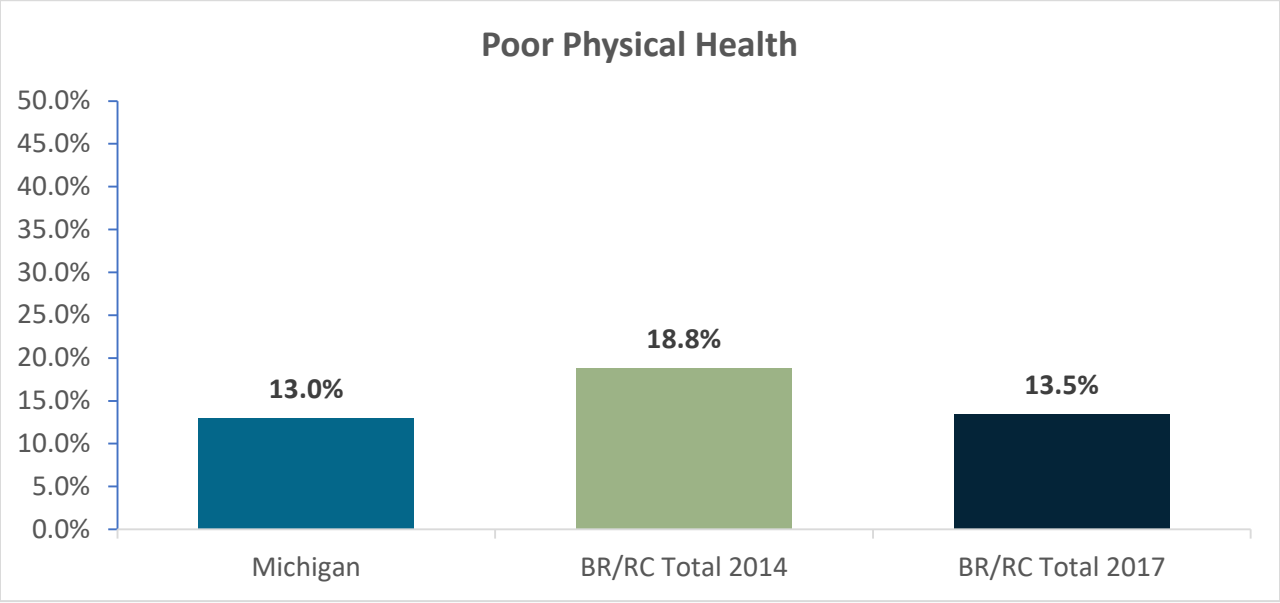




Source: SHBR Behavioral Risk Factor Survey, 2017, Q2.1: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? (n=1001).
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes physical illness and injury.

Physical Health Status (Continued)

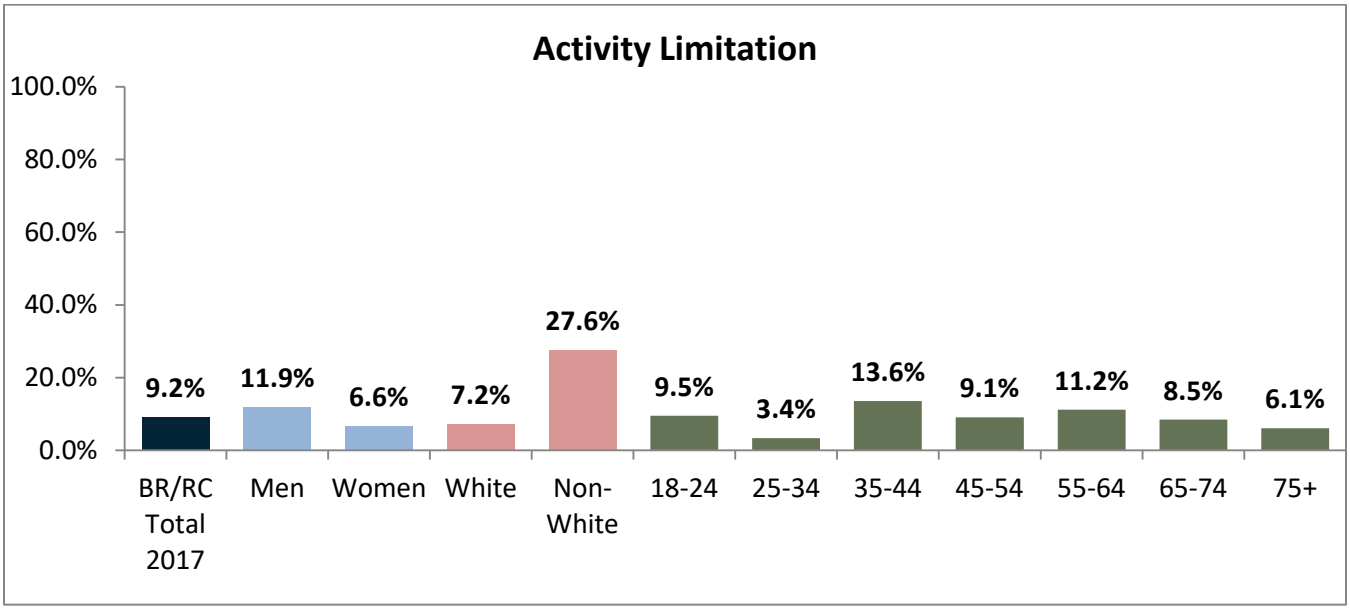
The proportion of area adults who have poor physical health fell by more than one-quarter since the last CHNA and is now only slightly higher than the state proportion.

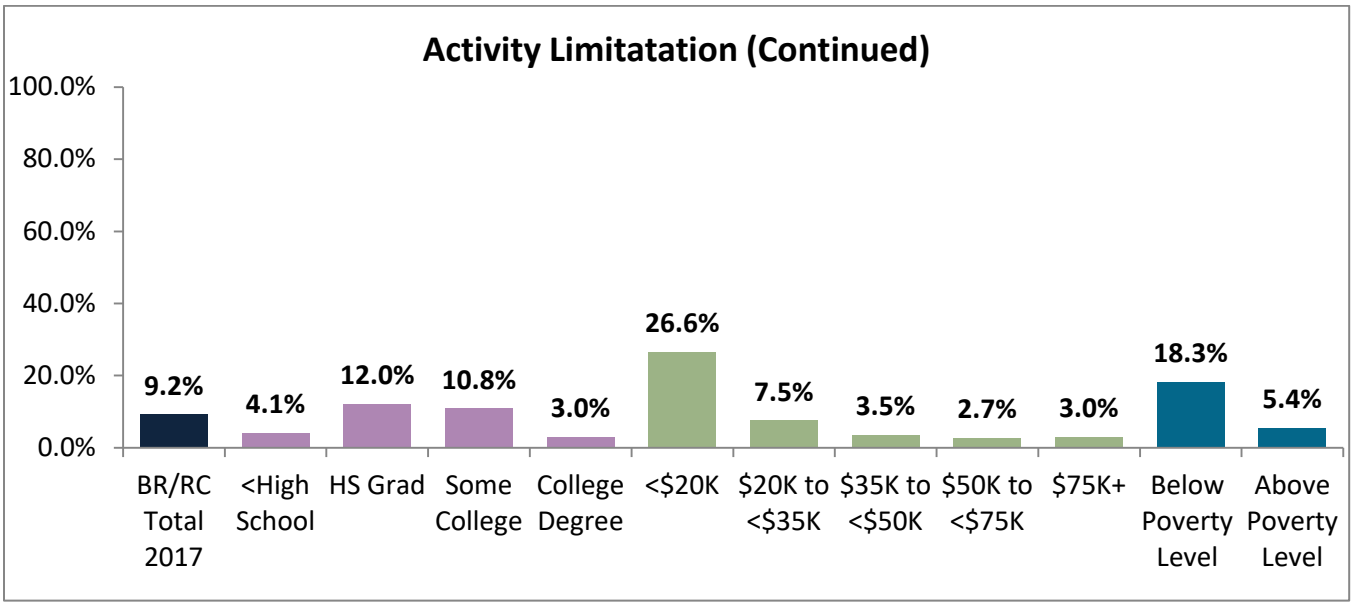


Source: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017, Q2.1.
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes physical illness and injury.

Activity Limitation

- Overall, 9.2% of area adults are prevented from doing their usual activities due to consistently poor physical or mental health.
- Groups that experience activity limitation most widely are Non-White adults and those with incomes less than $20k.

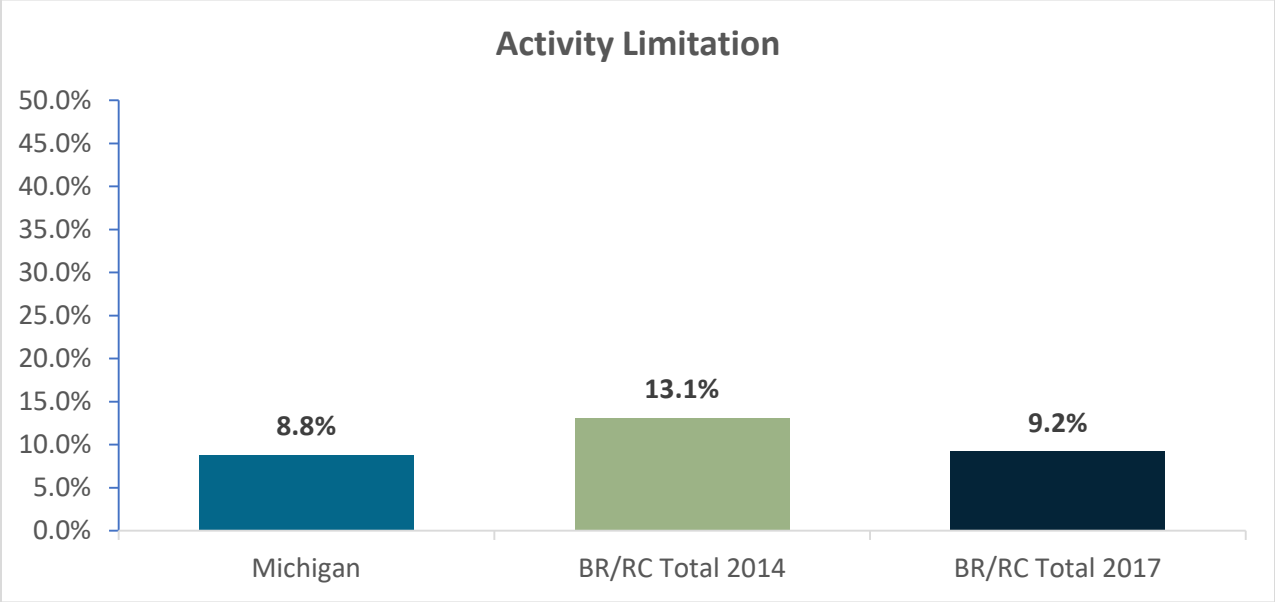




Source: SHBR Behavioral Risk Factor Survey, 2017, Q2.3: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation? (n=1,002).
Note: The proportion of adults who reported 14 or more days, out of 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)

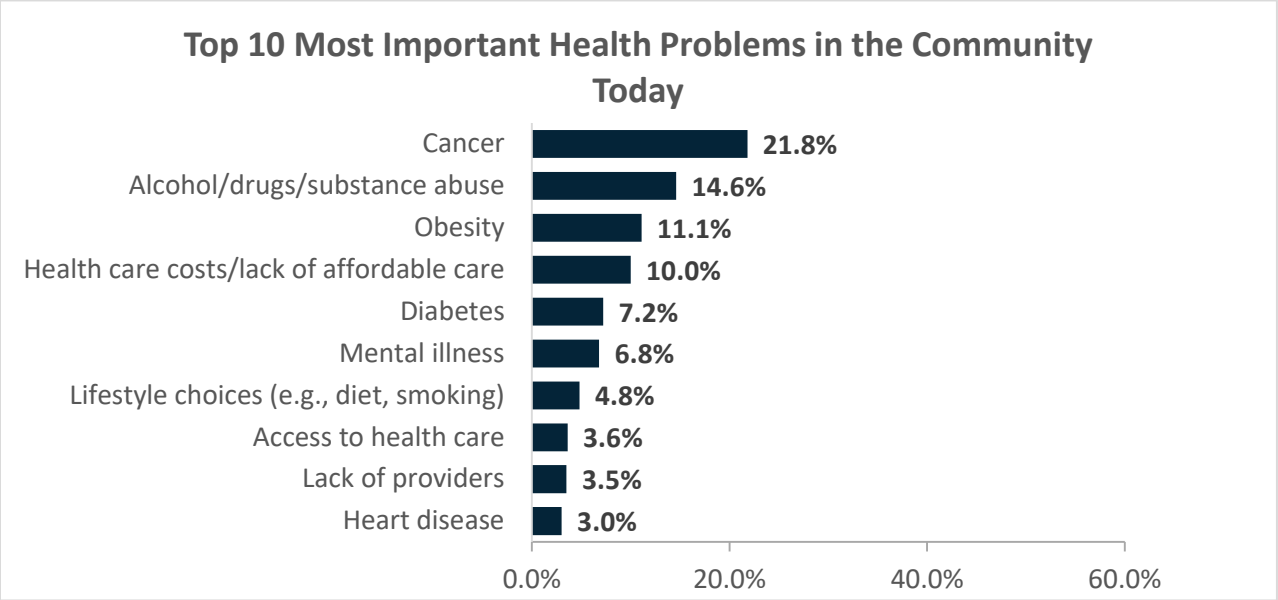
The proportion of area adults experiencing activity limitation has decreased since the last CHNA but is slightly higher than the state proportion.



Source: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR 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

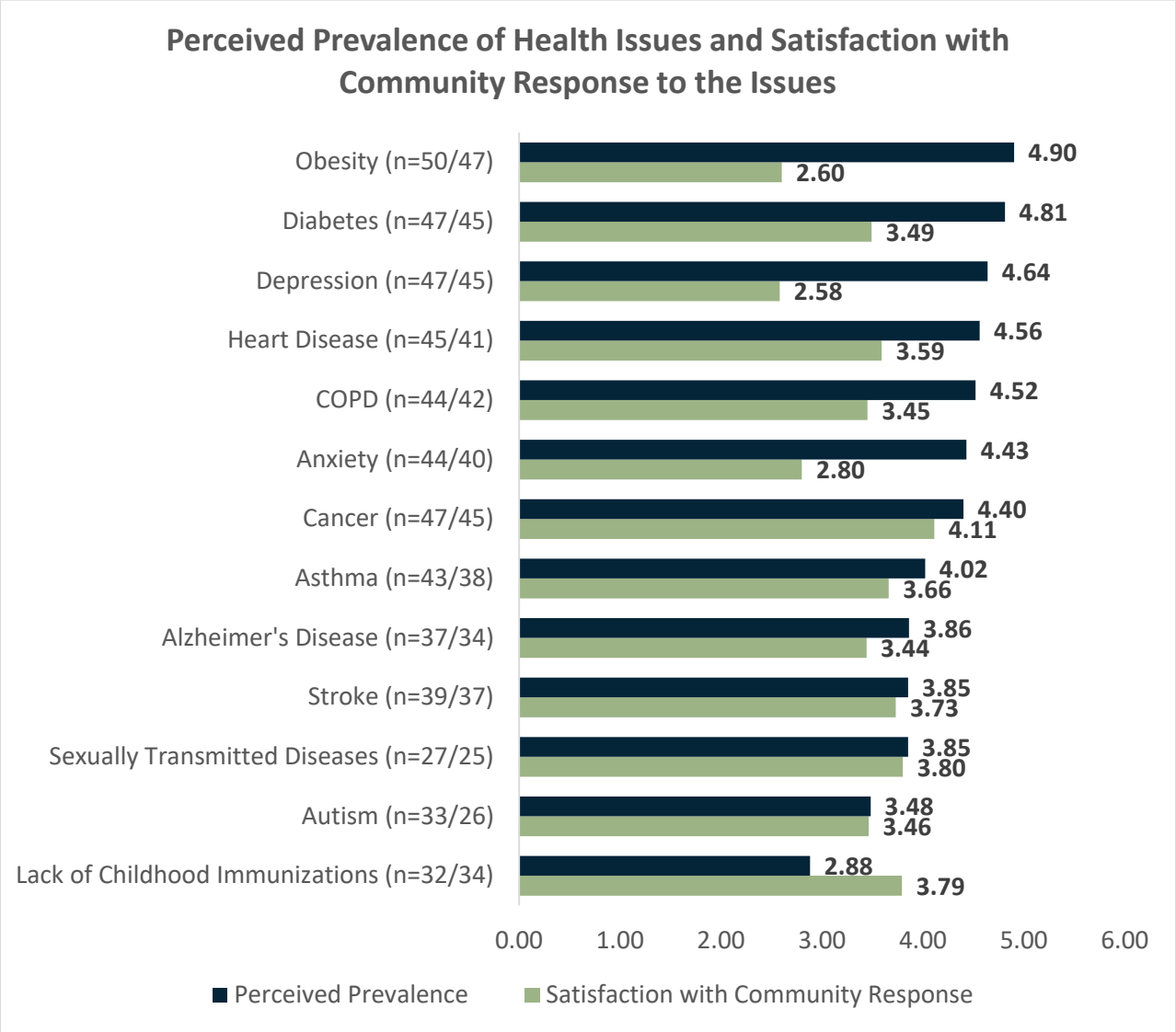
Area adults consider cancer to be the top health problem in their community, followed by substance abuse, obesity, and the cost of health care.



Source: SHBR Behavioral Risk Factor Survey, 2017, Q1.1: What do you feel is the most important health problem in your community today? (n=929).

Most Prevalent Health Issues in the Community

- Key Informants perceive obesity and diabetes to be the most prevalent health issues in the community.
- Depression, heart disease, COPD, anxiety, cancer, and asthma are also perceived to be prevalent.
- Key Informants report low satisfaction with the community's response to several of these issues, specifically obesity, depression, and anxiety.



Source: SHBR 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)

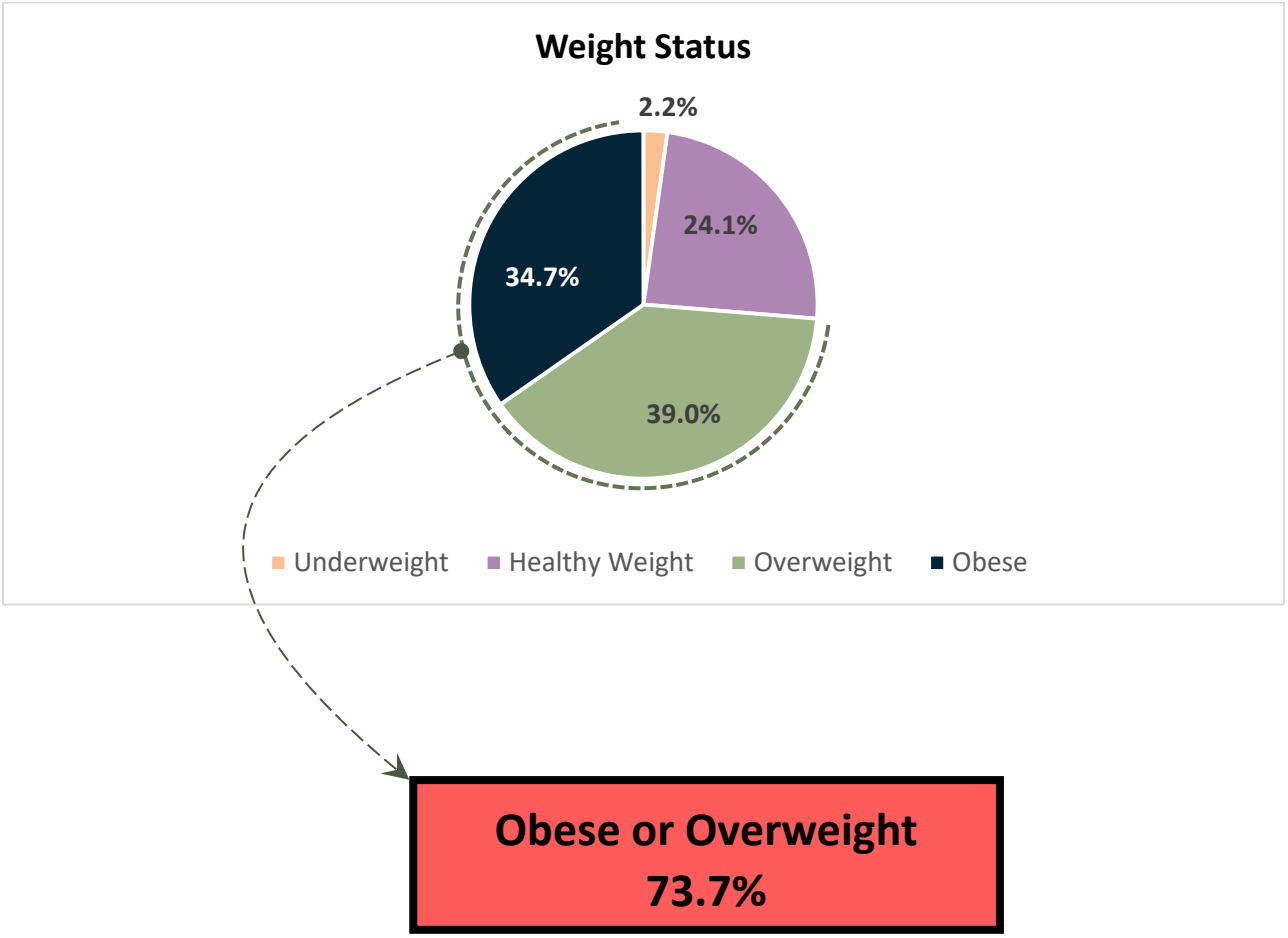
When asked to comment on any additional health issues that they deemed prevalent in the community, Key Informants mentioned a lack of resources for those with mental illness, a lack of exercise opportunities, veterans' issues, and food access, among other concerns.

- ✓ Mental health and access to mental health/behavioral health services/providers (7)
- ✓ Lack of physical activity opportunities/community exercise programs (2)
- ✓ PTSD among veterans
- ✓ Veterans services
- ✓ Access to healthy foods
- ✓ Access to nearby affordable food for low income families
- ✓ Access to health care
- ✓ Aging and loss of flexibility
- ✓ Lack of knowledge of healthy behaviors among young people
- ✓ Addiction
- ✓ Head lice, bed bugs, dental needs
- ✓ Maternal child care lacking
- ✓ Not enough doctors
- ✓ Lack of affordable elder care
- ✓ High number of children living in poverty

Source: SHBR Key Informant Online Survey, 2017, Q2b: What additional health issues are prevalent in your community, if any? (n=23).

Weight Status

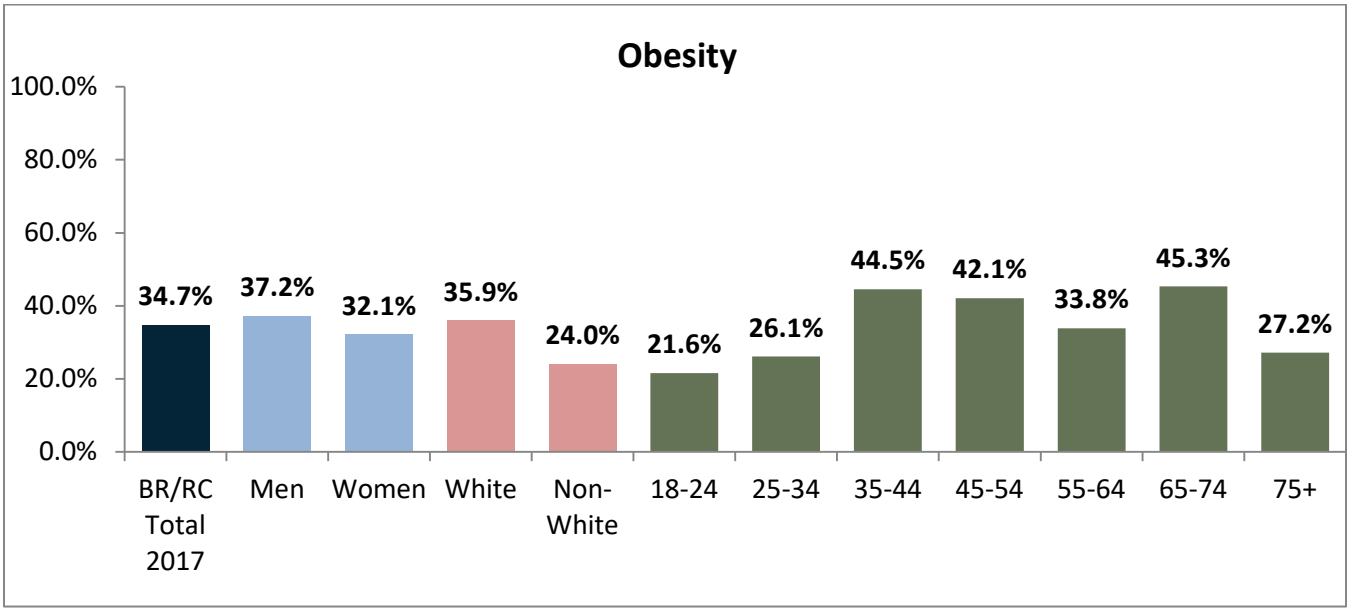
Slightly more than one-third (34.7%) of area adults are obese per their BMI, while an additional 39.0% are overweight. All told, 73.7% of area adults are either obese or overweight.

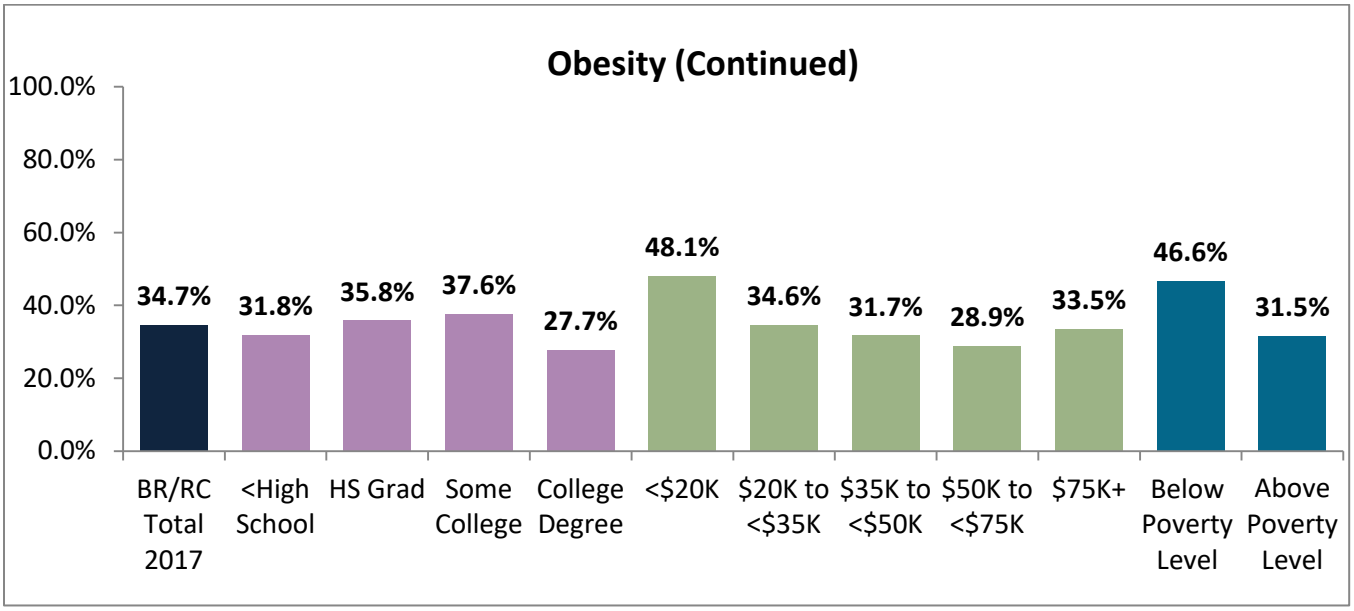


Source: SHBR Behavioral Risk Factor Survey, 2017, Q12.9: About how much do you weigh without shoes? Q12.10: About how tall are you without shoes? (n=960).
Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)2]. Weight and 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 among those living below poverty level than above poverty level.
- It is also more common among White adults than non-White adults.

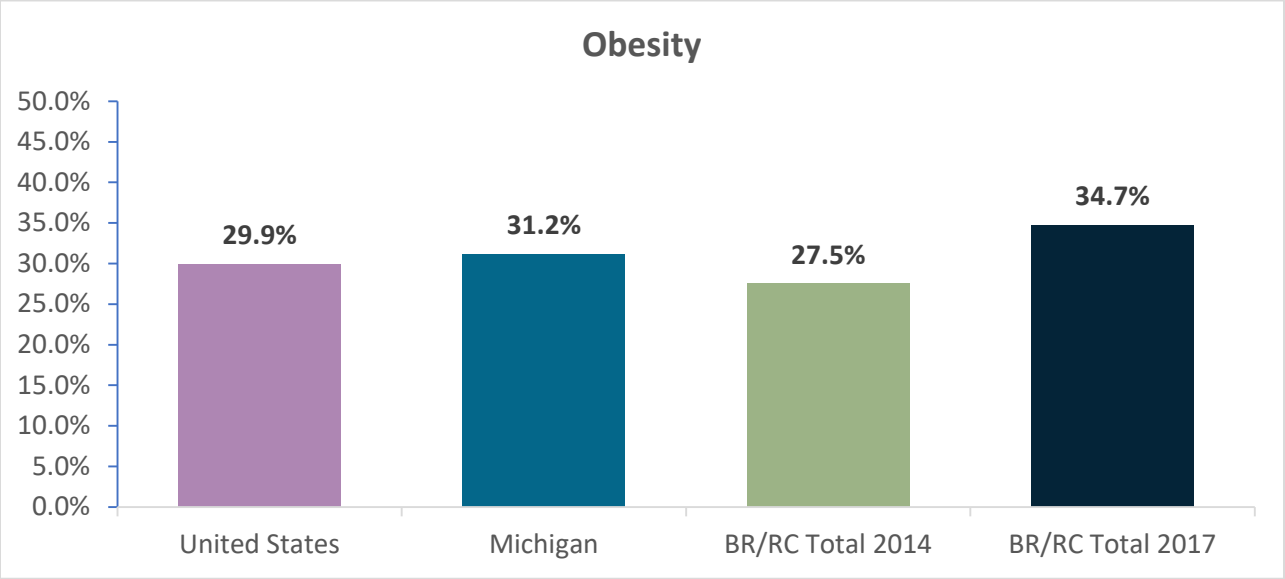




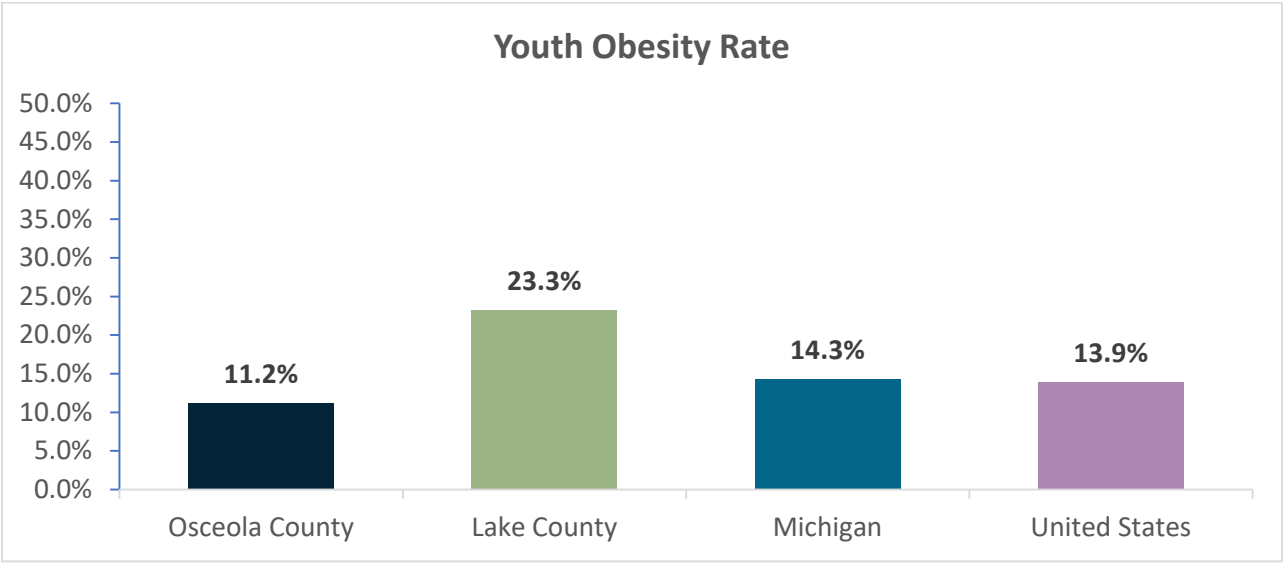
Source: SHBR Behavioral Risk Factor Survey, 2017. (n=960).
Note: the proportion of adults whose BMI was greater than or equal to 30.0.

Weight Status (Continued)

- The proportion of obese adults in the SHBR area has increased substantially since the last CHNA, to 34.7%, and is now higher than both Michigan and U.S. proportions.
- In addition, nearly one in four Lake County youth (23.3%) are obese, a much higher rate than in Osceola County, Michigan, or the U.S.



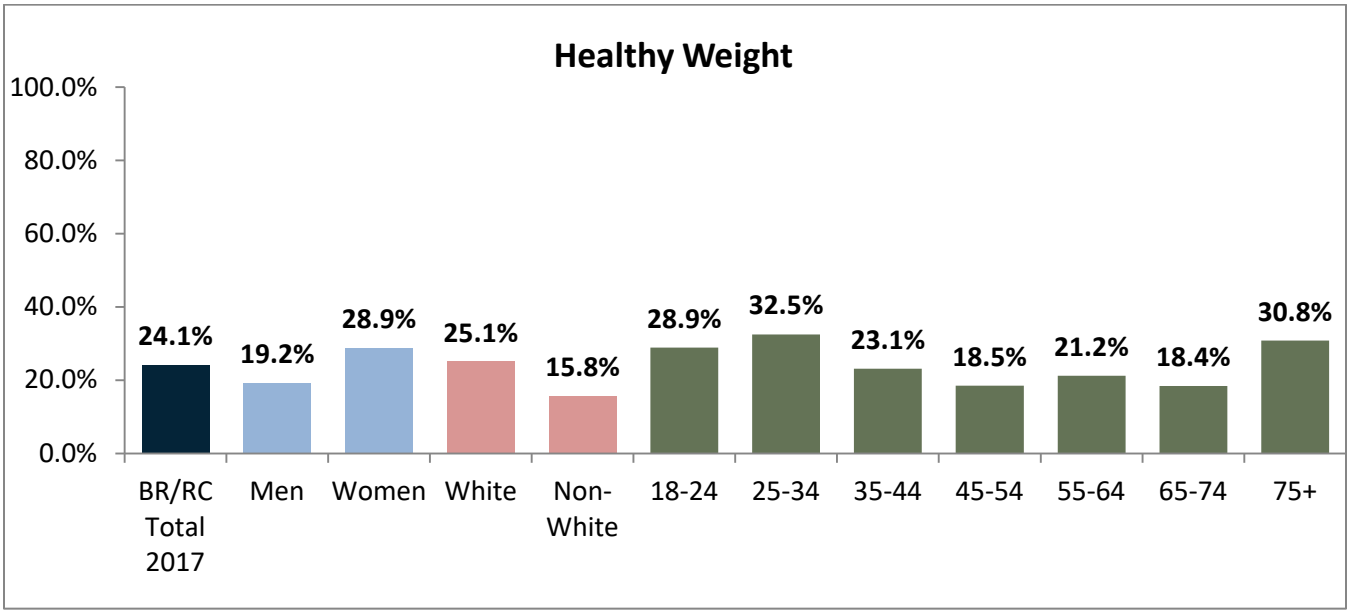
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.
Note: the proportion of adults whose BMI was greater than or equal to 30.0.

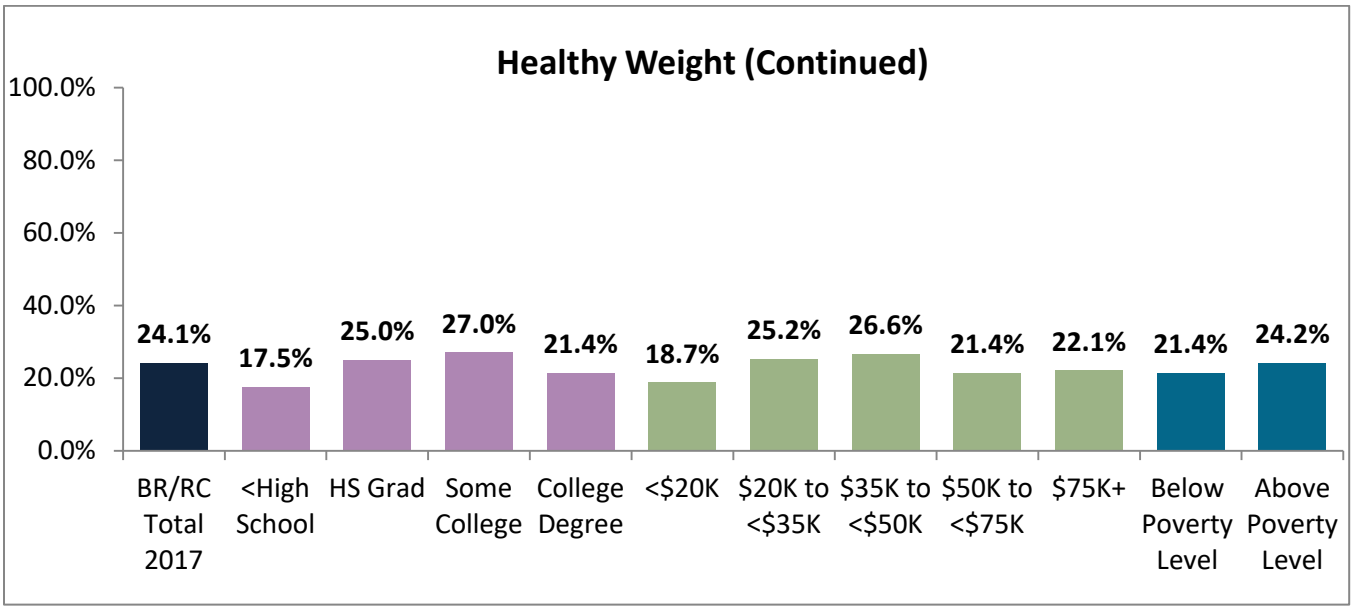


Source: For Osceola and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Weight Status (Continued)

- Just under one-fourth (24.1%) of area adults are at a healthy weight per their BMI.
- More women than men are at a healthy weight, as are more White adults than non-White adults.
- The youngest and oldest adults (age 18-34 or age 75+) are more likely to be at a healthy weight than adults age 35-74.





Source: SHBR Behavioral Risk Factor Survey, 2017, (n=960).
Note: the proportion of adults whose BMI was greater than or equal to 18.5, but less than 25.0.

Weight Status (Continued)

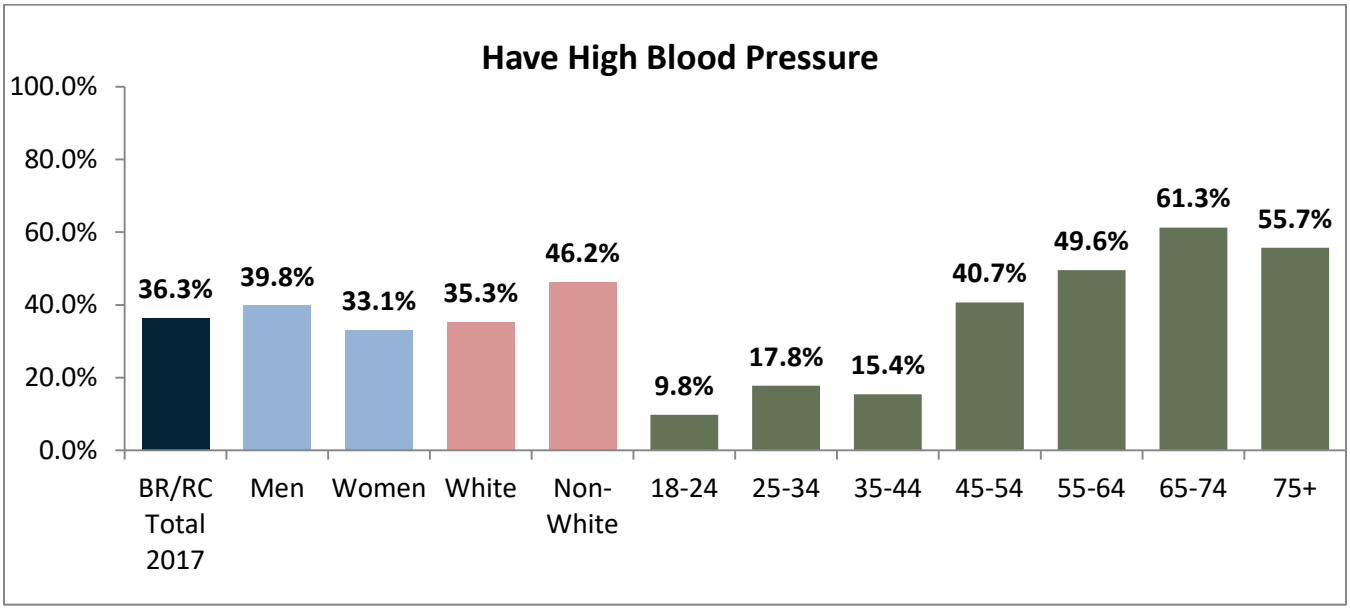
- Key Stakeholders and Key Informants consider obesity to be one of the most pressing health issues in the SHBR area due to its prevalence and its comorbidity with other chronic health conditions.
- These health professionals cite environmental factors that contribute to the pervasiveness of obesity in the community, such as limited access to healthy foods and exercise opportunities, and they recognize that residents' lifestyle choices need to change in order to reverse the trend in obesity rates.

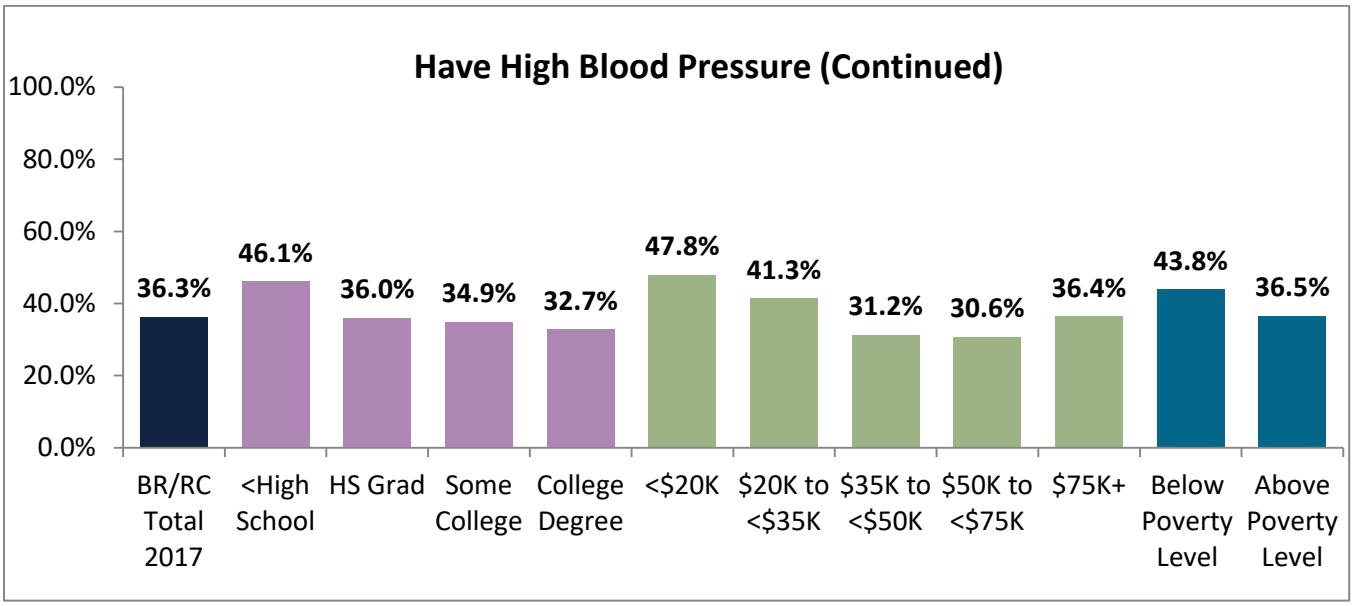
Co-morbidity	Obesity is a **prevalent problem in this community** and if not addressed, generations to come will continue to acquire all of the **chronic disease complications** that occur as a result of obesity. –*Key Informant* [Obesity] is **tied to so many chronic health issues**. – *Key Informant* [Obesity is related to] **hypertension**, **diabetes**, **hyperlipidemia**, **heart disease**, **sleep apnea**, **atrial fibrillation**. – *Key Informant*
Environmental factors	I'd say **access to healthy food** [is lacking in the community] and even knowledge of what's healthy, because we do have high obesity rates. – *Key Stakeholder* There are a lot of low income families who do not have the **funds to pay for a gym membership**, and who do not really have the motivation or see the importance of losing weight. When the parents don't tackle their own obesity, it leads children to obesity as well. – *Key Informant* **Access to healthy food** needs to be improved. – *Key Informant*
Lifestyle choices	**We should be partnering** with health departments, other physician practices, local fit clubs and healthy food markets **to have collaborative and supportive programs that lead to healthy lifestyle changes** and choices. – *Key Informant*

Source: SHBR 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); SHBR 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=46).

Hypertension

- More than one-third of area adults (36.3%) have high blood pressure, and, not surprisingly, this condition is more prevalent with advanced age.
- High blood pressure is also more common among non-White adults, those without a high school diploma, and those with incomes less than $20k.

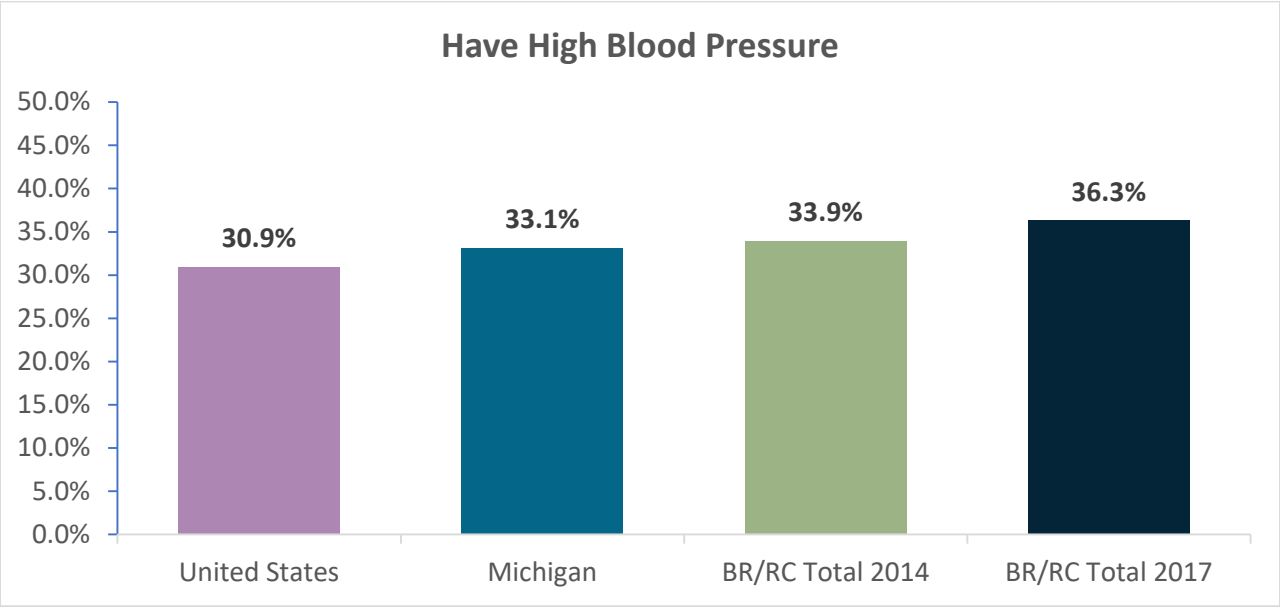




Source: SHBR Behavioral Risk Factor Survey, 2017, Q6.1: Have you EVER been told by a doctor, nurse, or other health professional that you have high blood pressure? (n=1002).
Note: adults who reported they were told by a health care professional that they had high blood pressure. Does not include women who were told they had high blood pressure only during pregnancy.

Hypertension (Continued)

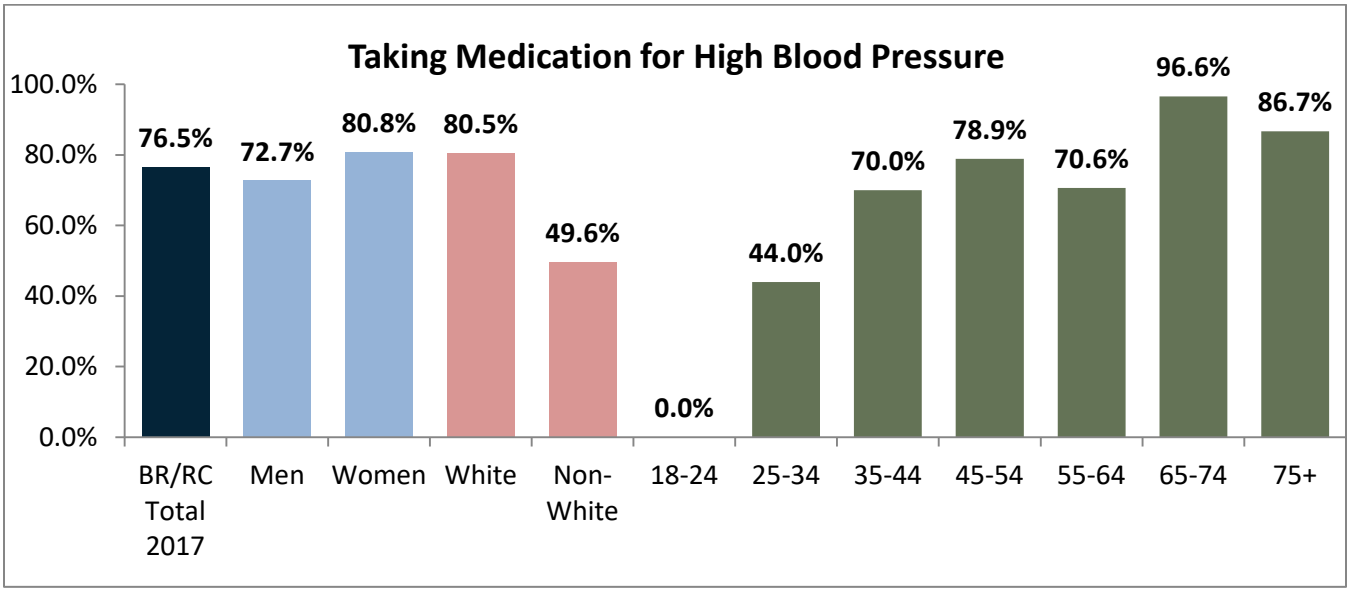
The proportion of adults in the SHBR service area with high blood pressure has increased since the last CHNA and is higher than both U.S. and state rates.

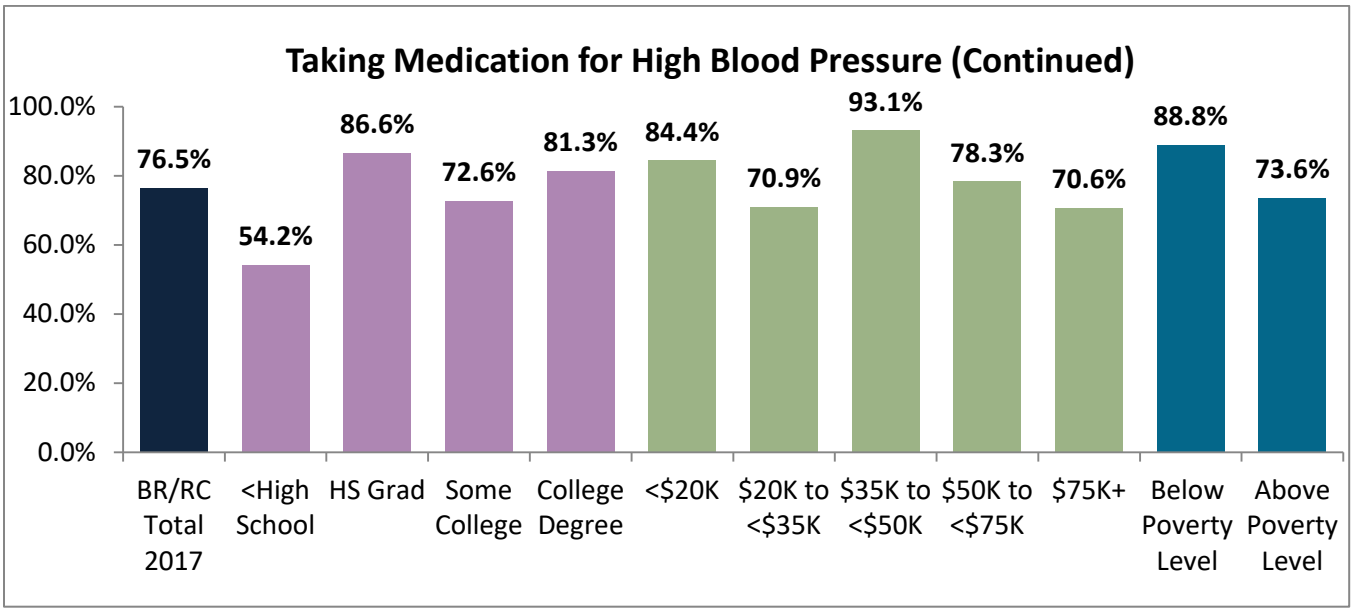


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016;
Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.

Hypertension (Continued)

- Among area adults who have high blood pressure, more than three-quarters (76.5%) are taking medication for the condition.
- Non-White adults are far less likely than White adults to be taking HBP medication, as are those without a high school diploma compared to those with higher education levels.
- In addition, younger adults (age 18-34) are less likely to take HBP medication than older adults.

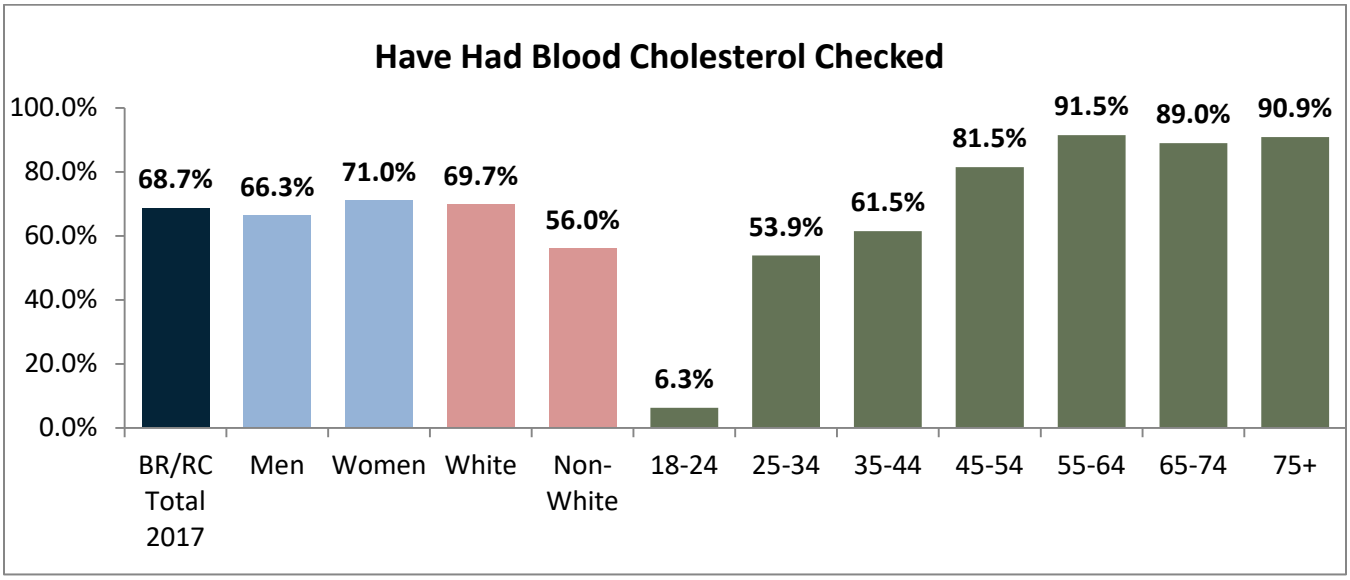


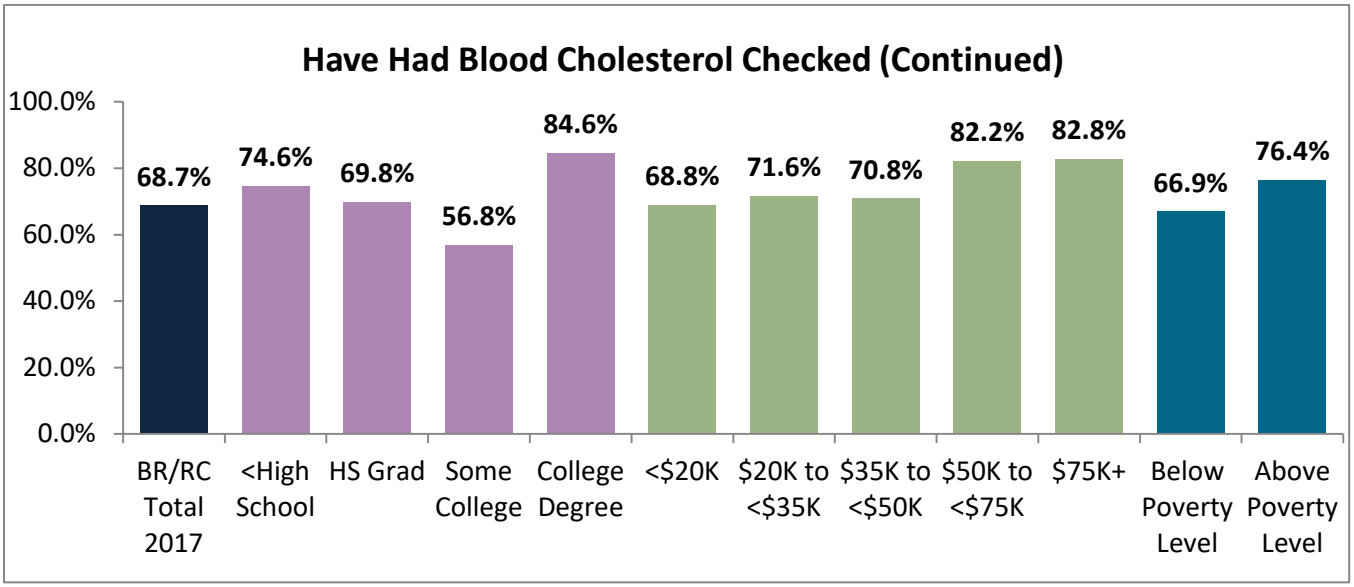


Source: SHBR Behavioral Risk Factor Survey, 2017, Q6.2: Are you currently taking medicine for your high blood pressure? (n=446).
Note: adults who reported they were told by a health care professional that they had high blood pressure.

Cholesterol

- In the SHBR area, more than two-thirds (68.7%) of adults have had their blood cholesterol checked, and the percentage rises to roughly nine in ten among area adults ages 55+.
- Residents with a college degree and/or incomes of $50k or higher are more likely to have had their cholesterol checked than those without a college degree and those with lower incomes.
- In addition, White adults are more likely than non-White adults to have had this preventive practice.

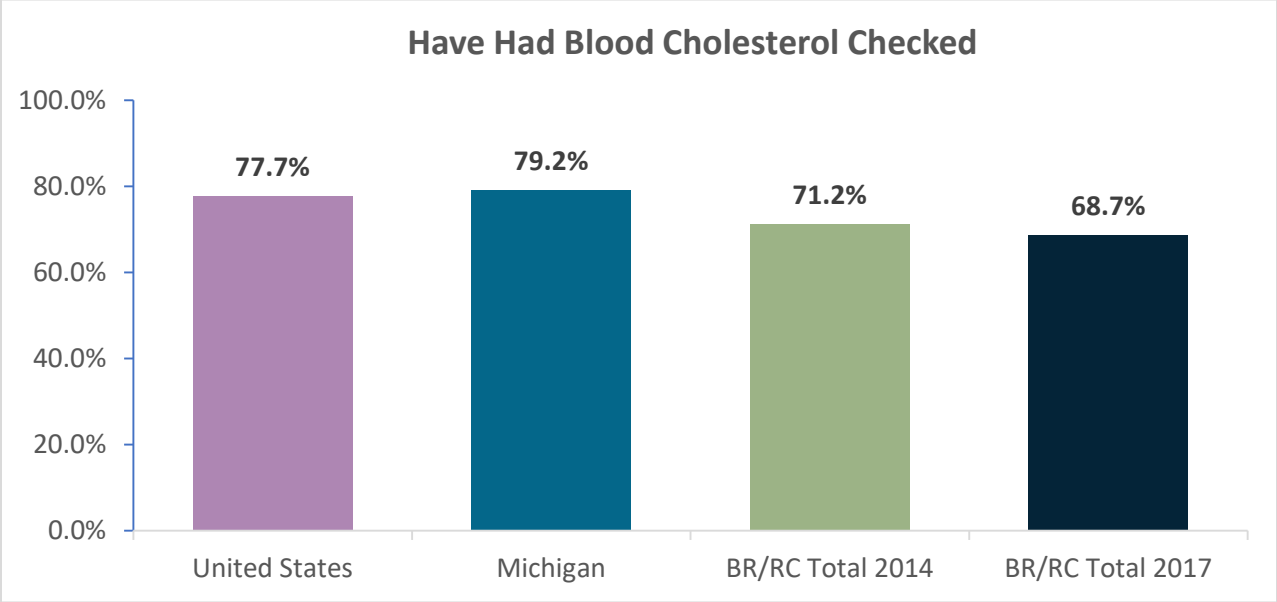




Source: SHBR Behavioral Risk Factor Survey, 2017, Q7.1: Blood cholesterol is a fatty substance found in the blood. Have you EVER had your blood cholesterol checked? (n=997).

Cholesterol (Continued)

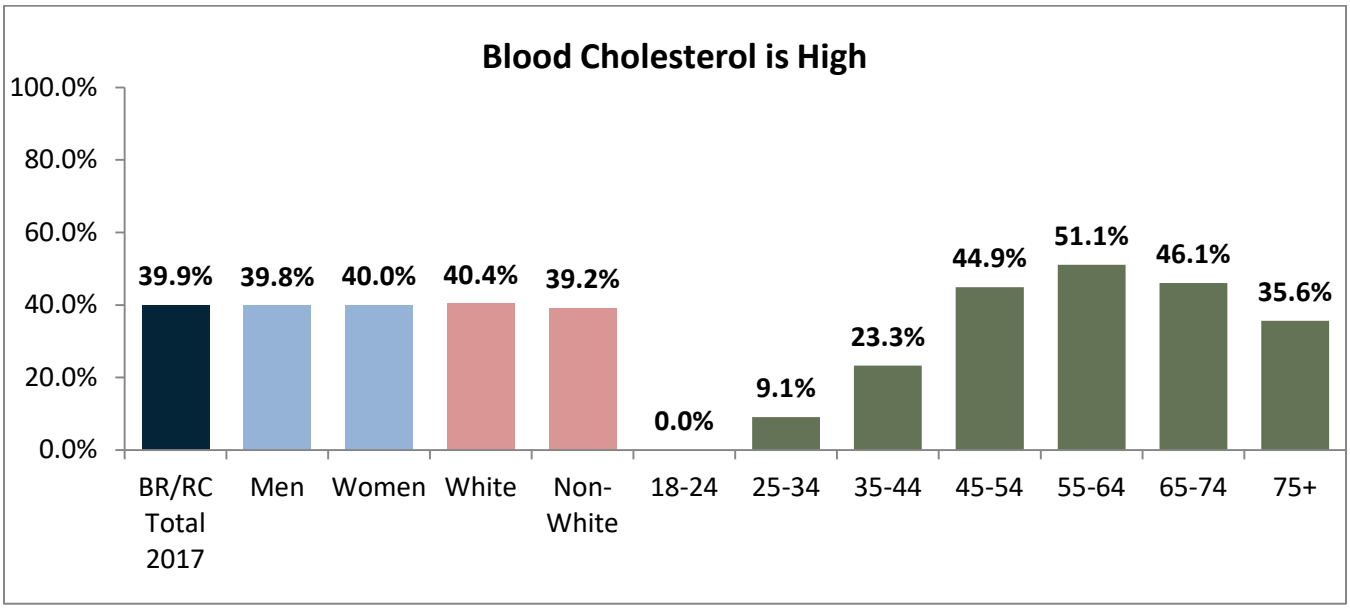
The percentage of area adults who have had their blood cholesterol checked has fallen since the last CHNA, and the rate is well below U.S. and state percentages.

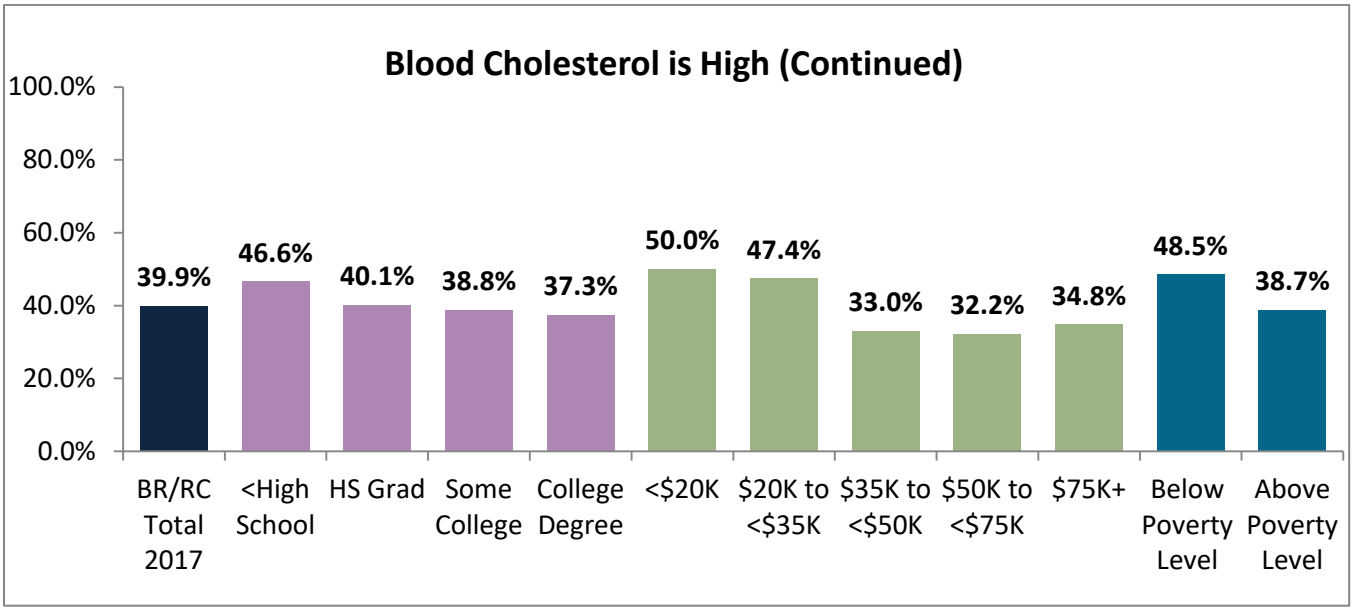


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.

Cholesterol (Continued)

- Among area adults who have had their blood cholesterol checked, four in ten (39.9%) have been told their cholesterol is high.
- Residents without a high school diploma and/or incomes under $35k are more likely to have been told they have high cholesterol compared to those with higher education levels and higher incomes, respectively.

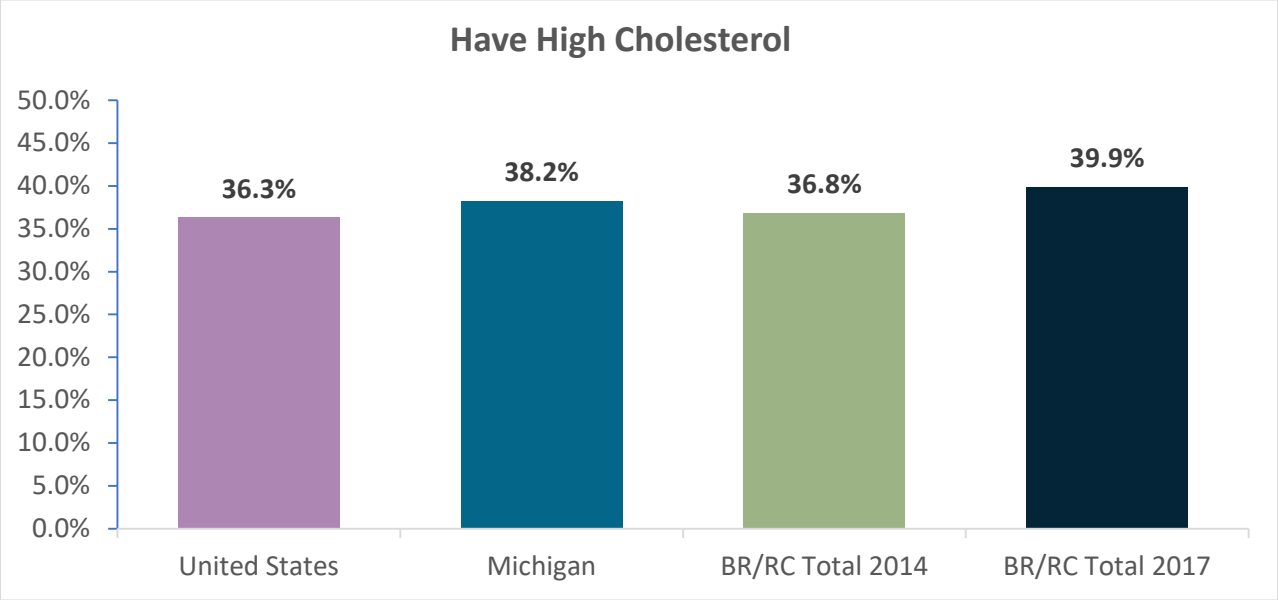




Source: SHBR Behavioral Risk Factor Survey, 2017, Q7.2: Have you EVER been told by a doctor, nurse or other health professional that your blood cholesterol is high? (n=810).
Note: adults who reported they have had their blood cholesterol checked.

Cholesterol (Continued)

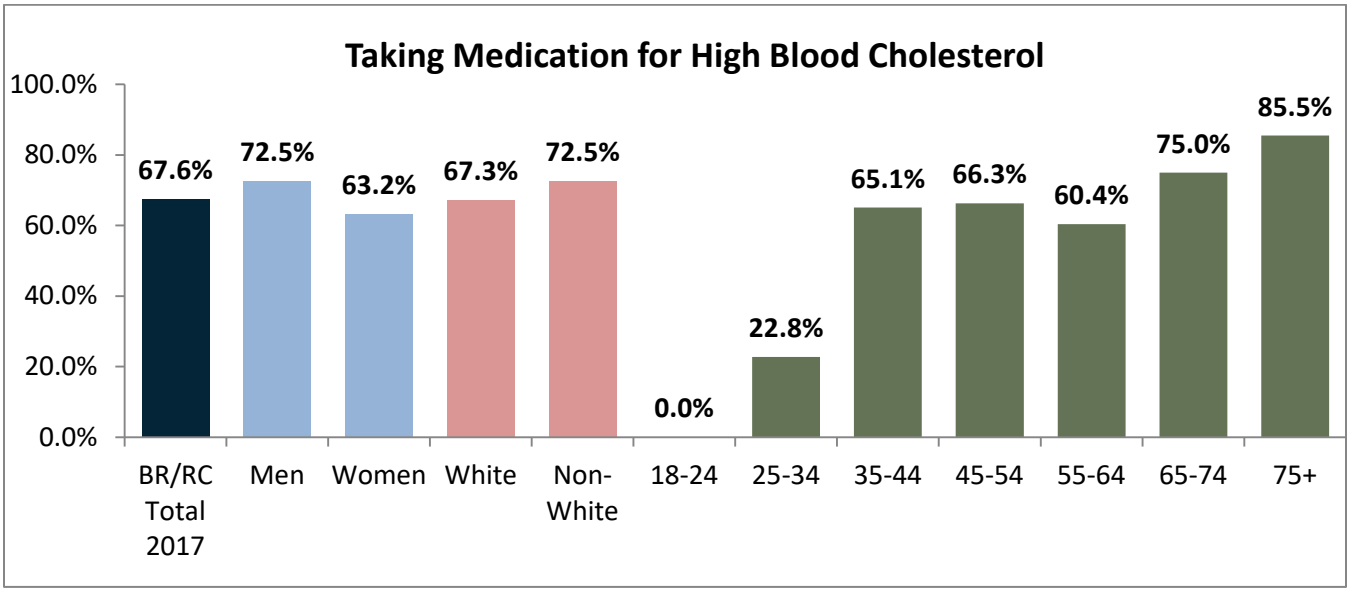
The percentage of SHBR area adults with high cholesterol has increased since 2014 and is now higher than both state and national rates.

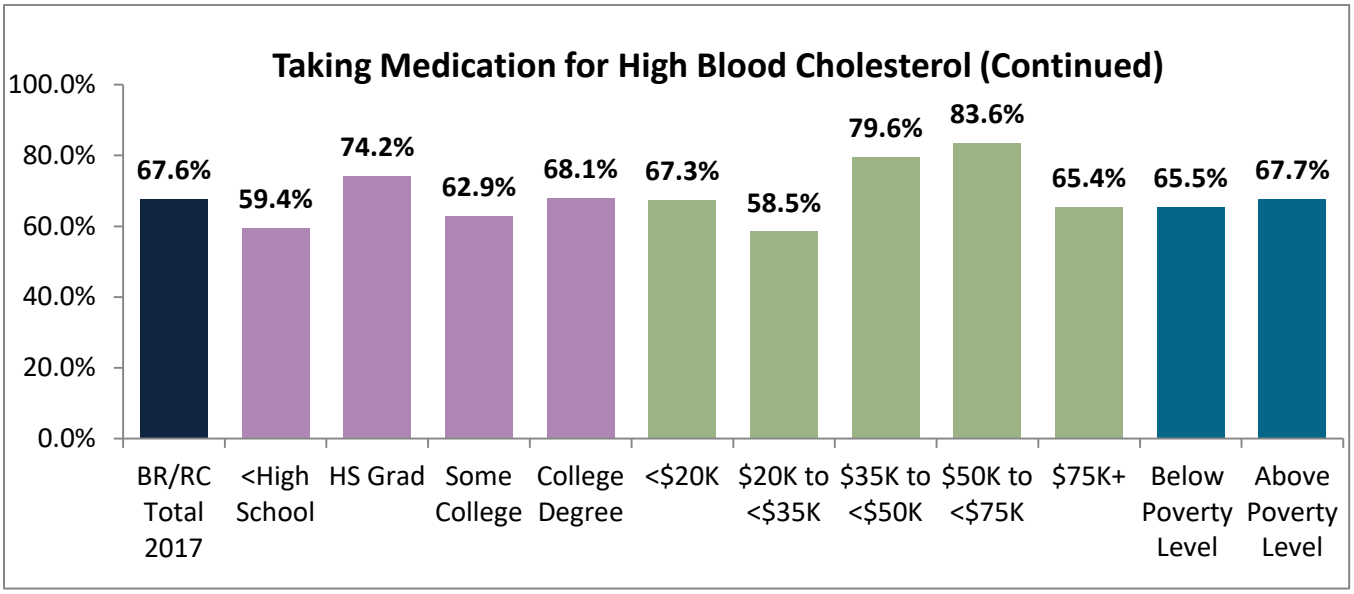


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.

Cholesterol (Continued)

- Two-thirds (67.6%) of area adults who have high cholesterol currently take medication for the condition.
- Among those with high cholesterol, older adults (age 65+) are more likely than younger adults to take medication.
- In addition, men and non-White adults are more likely than women and White adults, respectively, to take this type of medication.





Source: SHBR Behavioral Risk Factor Survey, 2017, Q7.3: Are you currently taking medicine for your high cholesterol? (n=327).
Note: adults who reported they have high blood cholesterol.

Mental Health

- Key Stakeholders and Key Informants consider mental health to be one of the SHBR service area's most pressing health concerns, due to a scarcity of services and resources to treat mental illness, the lack of a holistic approach to health, and environmental factors that undermine mental health.
- Several respondents singled out particular groups for whom mental health services and resources are lacking, including children, low income residents, and mothers with postpartum depression.

Lack of services/resources	The behavioral health piece - again, **it's that capacity issue** for health care providers. **We could use more behavioral health providers**. – *Key Stakeholder* There just are a **limited amount of mental health resources because we are rural**, and a lot of people aren't going into private practice in this area. – *Key Stakeholder* Mental health and behavioral health are some of the most difficult patients to provide resources for in the community. While we have CMH, there is a **lack of specific services within the hospital system** to provide mental health treatment. There is **no psychiatrist in the Mecosta area**. – *Key Informant* **Lack of resources** to provide [mental health] support to **children**. – *Key Informant* **Lack of providers that accept low income** insurance, **overworked case managers** who do the bare minimum with the client which causes frequent ED visits. – *Key Informant* **Little support** in the community **for moms with postpartum depression**. – *Key Informant*
Lack of holistic approach	**A real need**…from very young children to elderly is the provision of **services for holistic care**. So, for example, **health clinics [that] include mental health services** or have something on site where referrals can be made. – *Key Stakeholder* It really is a **holistic view of human behavior and the wellbeing of the body**…We know **diabetes affects mental health**; you can get depression **if you're not receiving the appropriate treatment** for that illness…**If you don't look at the whole person and everything that's going on, physical and mental, then you're not going to be adequately addressing their needs**. – *Key Stakeholder*
Environmental factors	**Mental health [is a problem** in the community] **because of poverty, lack of employment**. – *Key Informant*

Source: SHBR 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); SHBR 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=46).

Mental Health (Continued)

- Four in five (80.6%) area adults are considered to be mentally healthy, or psychologically well, according to the Kessler 6 Psychological Distress Questionnaire.*
- Conversely, 17.3% experience mild to moderate psychological distress, and 2.1% are severely distressed.

	During the Past 30 Days, About How Often Did You….					
Frequency of Feeling	**Feel Nervous (n=1002)**	**Feel Hopeless (n=1002)**	**Feel Restless Or Fidgety (n=1001)**	**Feel So Depressed That Nothing Could Cheer You Up (n=999)**	**Feel That Everything Is An Effort (n=1001)**	**Feel Worthless (n=999)**
None of the time	**55.8%**	**81.4%**	**56.7%**	**84.4%**	**62.0%**	**89.0%**
A Little	**22.2%**	**9.3%**	**18.3%**	**8.8%**	**18.1%**	**4.9%**
Some of the time	**17.7%**	**7.8%**	**16.4%**	**5.0%**	**11.5%**	**4.2%**
Most of the time	**3.0%**	**1.1%**	**3.5%**	**0.9%**	**4.3%**	**1.3%**
All of the time	**1.3%**	**0.4%**	**5.1%**	**0.8%**	**4.0%**	**0.7%**

Mentally Healthy/Psychologically Well = 80.6%

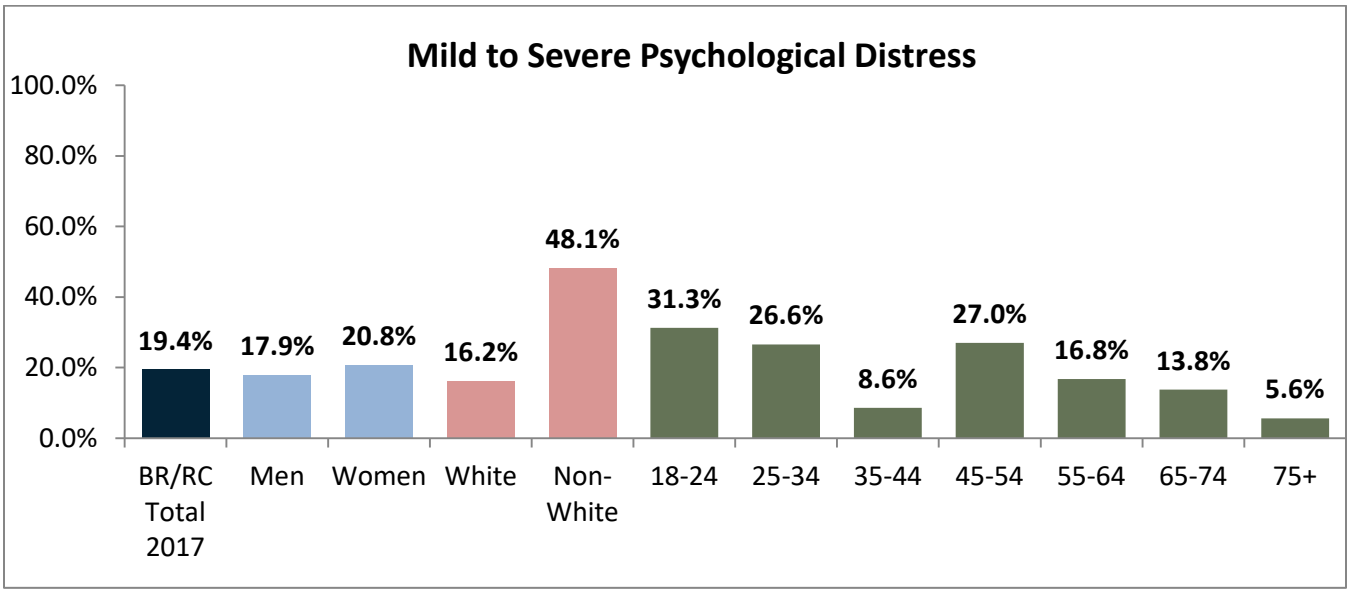
Mild to Moderate Psychological Distress = 17.3%

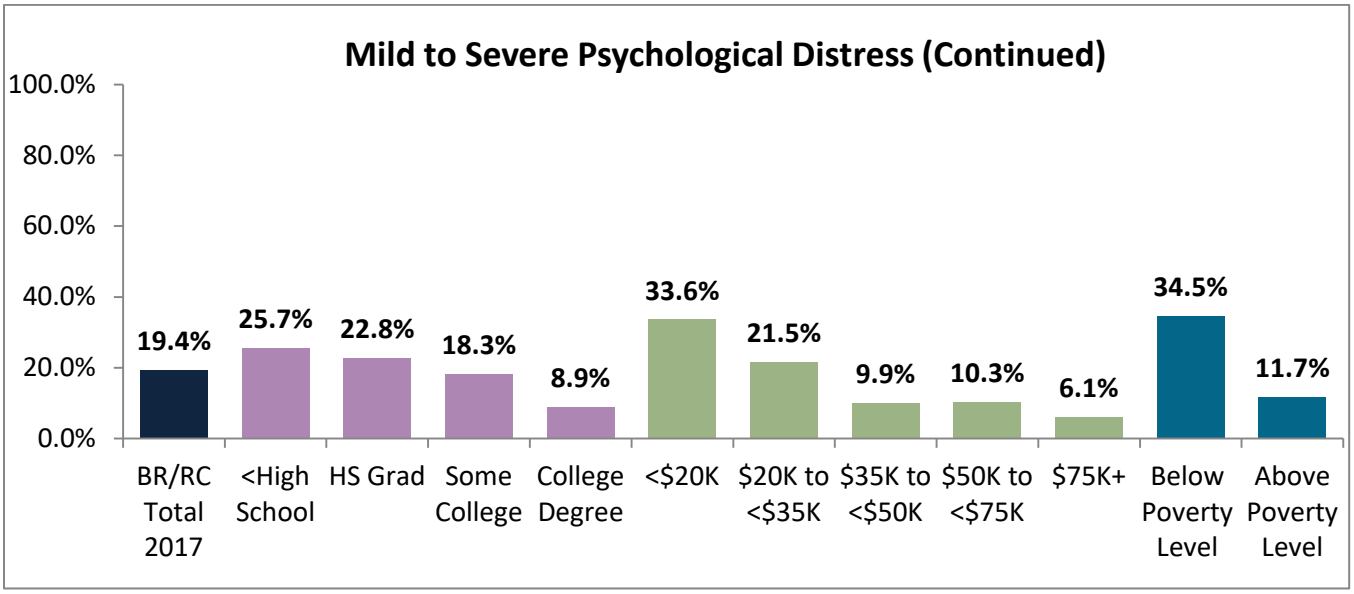
Severe Psychological Distress = 2.1%

Source: SHBR Behavioral Risk Factor Survey, 2017, Q18.1-Q18.6: During the past 30 days, about how often did you feel….? (n=994).
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 SHBR area adults, the groups most likely to be considered as having mild to severe psychological distress are those who are non-White, below poverty level, with household income under $20k, and/or 18-24 years of age.
- The rate of mild to severe psychological distress is nearly three times as high for non-White adults as it is for White adults. Similarly, the rate is nearly three times as high for those below poverty level compared with those above poverty level.

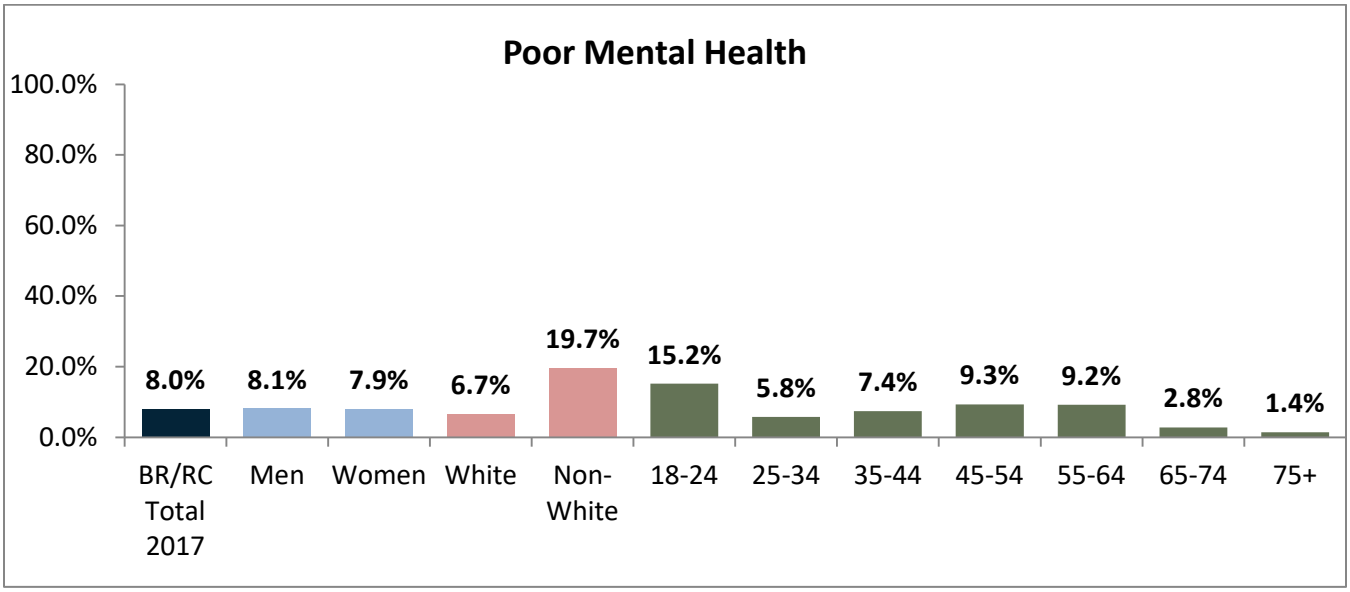


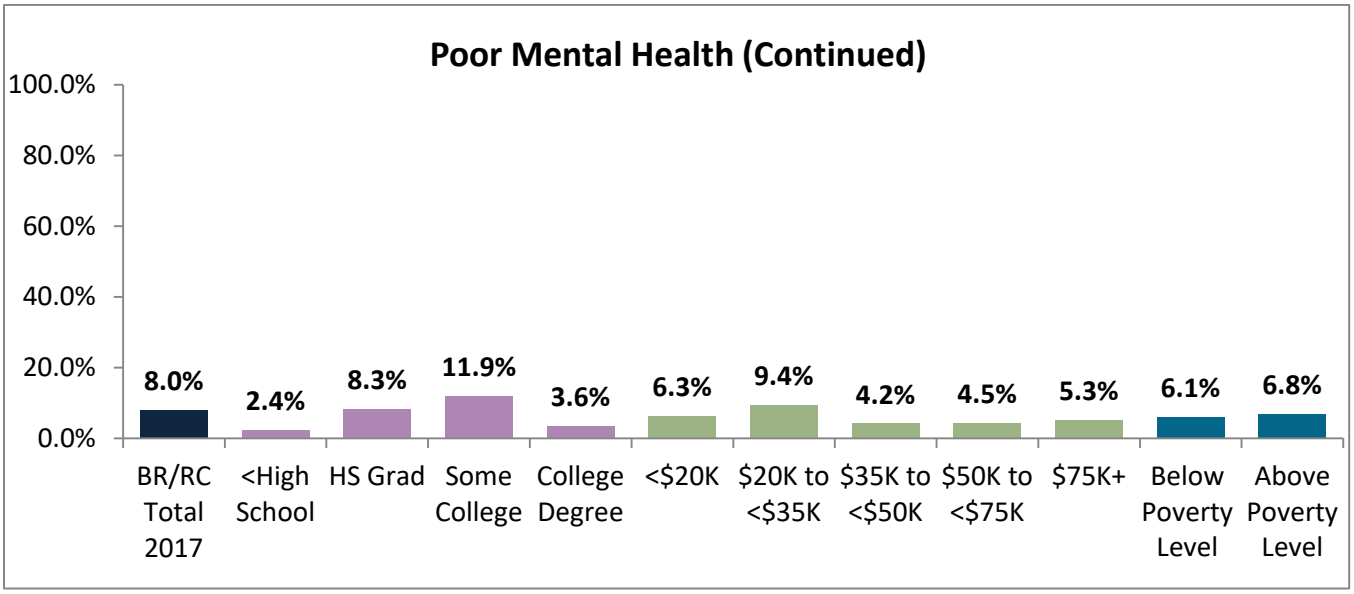


Source: SHBR Behavioral Risk Factor Survey, 2017, Q18.1-Q18.6: During the past 30 days, about how often did you feel….?
Note: those adults who scored 12 or higher on the Kessler 6 instrument.

Mental Health (Continued)

- Nearly one in twelve (8.0%) SHBR area adults have poor mental health, meaning they experienced fourteen or more days of poor mental health, which includes stress, depression, and problems with emotions, during the past 30 days.
- Poor mental health is much more prevalent among non-White adults than White adults, and is more common among those ages 18-24 compared to those who are older.

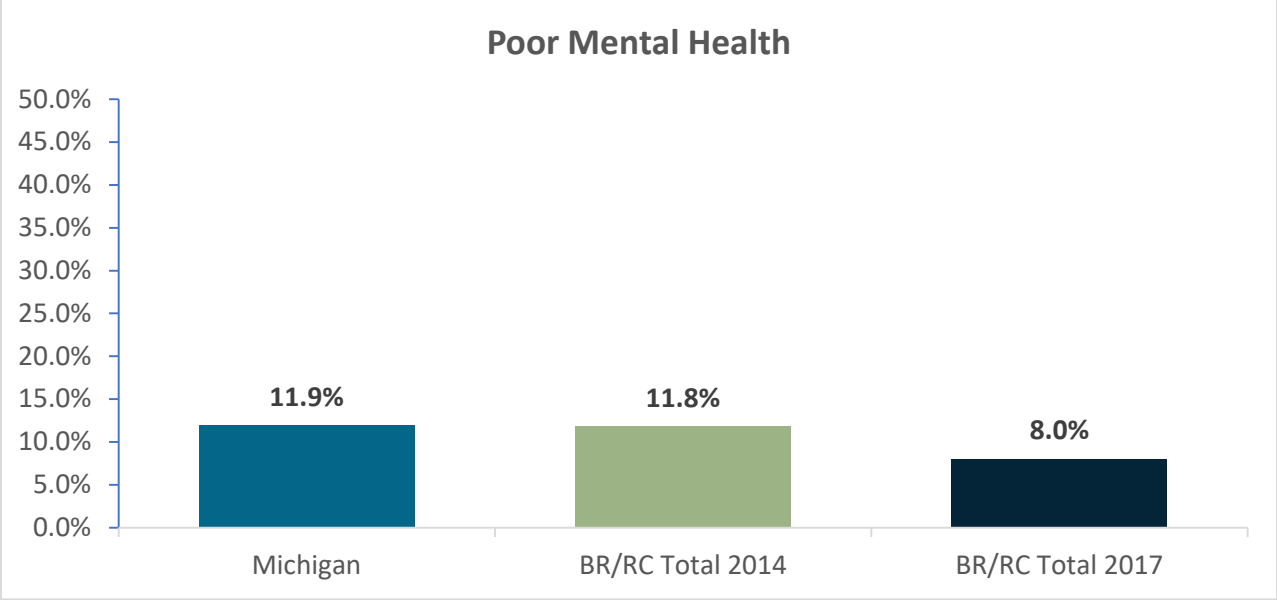




Source: SHBR Behavioral Risk Factor Survey, 2017, Q2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good? (n=1003).
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their mental health was not good.

Mental Health (Continued)

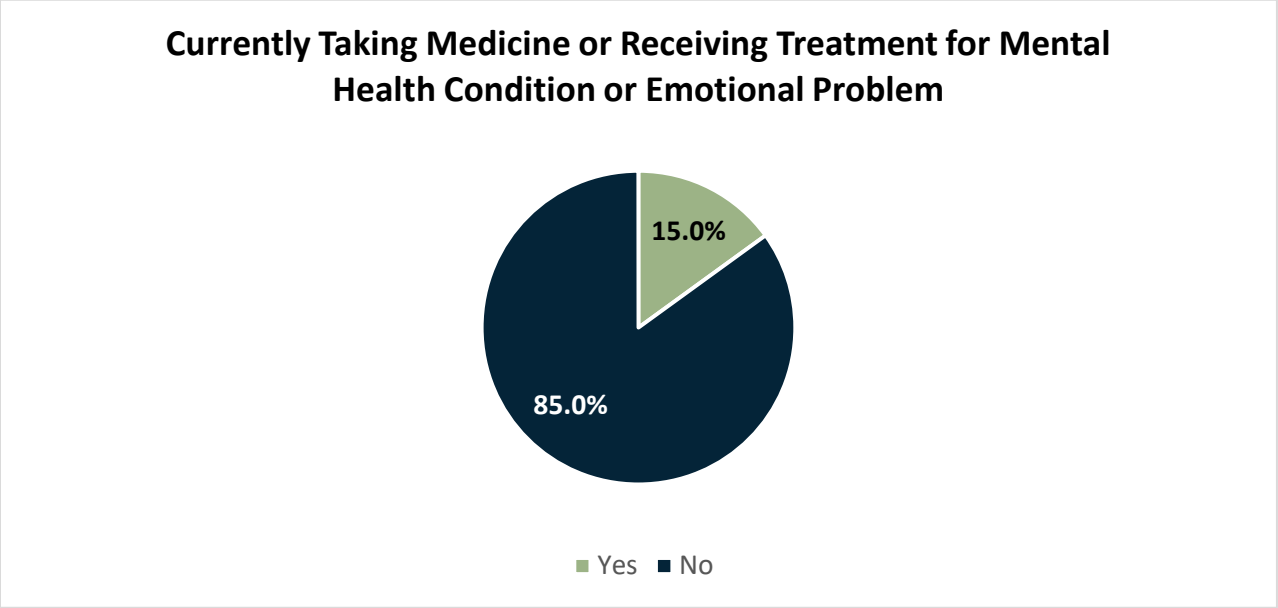
The prevalence of poor mental health has decreased since the last CHNA and is lower than the statewide proportion.

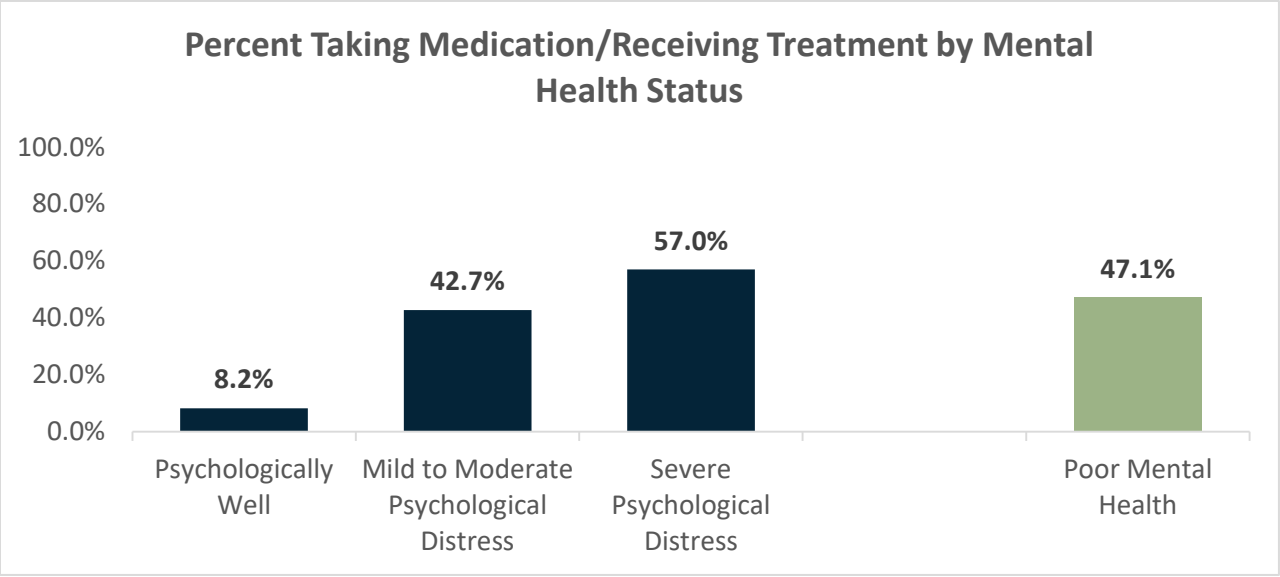


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.

Mental Health (Continued)

- Of all SHBR area adults, 15.0% currently take medication or receive treatment for a mental health condition or emotional problem.
- However, many of those who could benefit most from medication and/or treatment are not getting it: fewer than half of those reporting poor mental health (47.1%) or classified as having "mild to moderate psychological distress" (42.7%), and only 57.0% of those classified as having "severe psychological distress," currently take medication and/or receive treatment for their mental health condition.

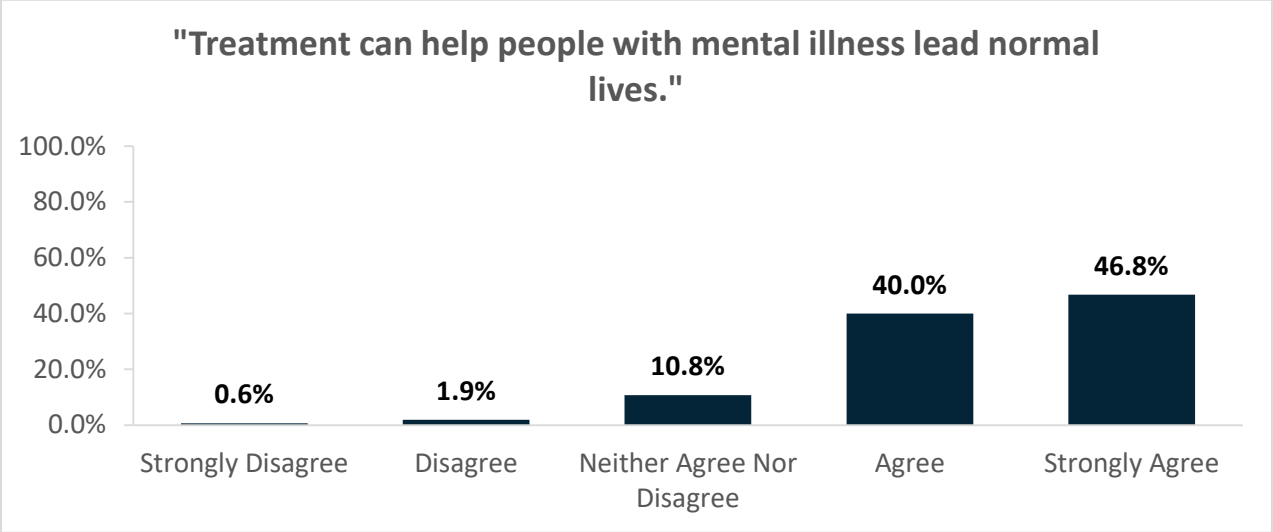


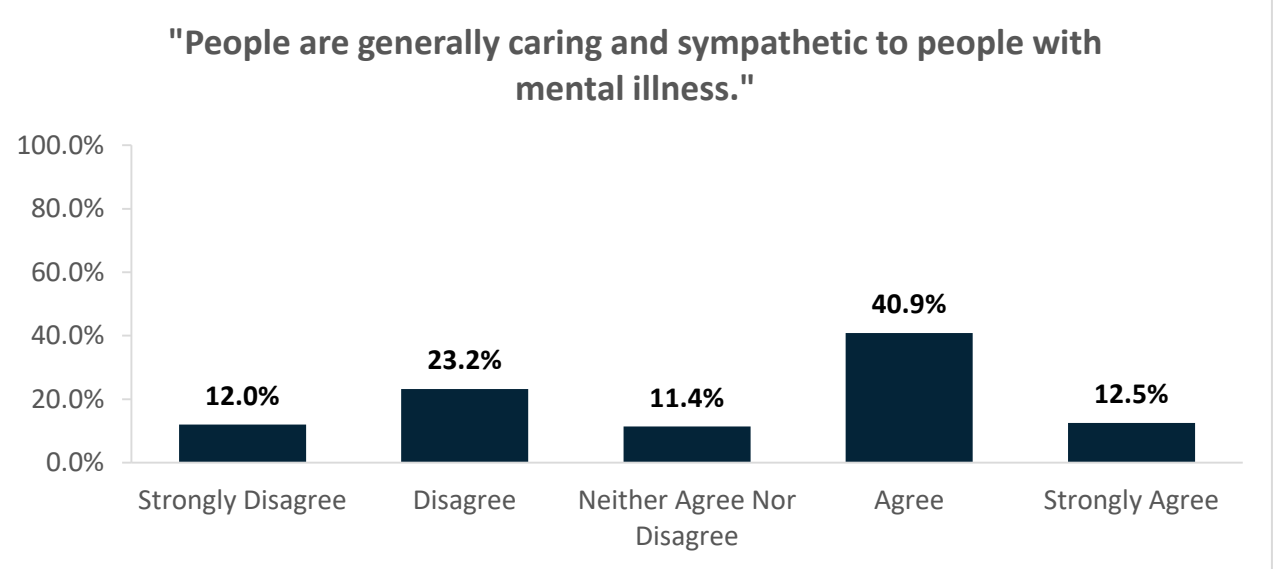


Source: SHBR Behavioral Risk Factor Survey, 2017, Q18.7: Are you now taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problem? (n=1001).

Mental Health (Continued)

- Even though more than eight in ten (86.8%) area adults believe treatment can help people with mental illness lead normal lives, just about half (53.4%) think people are generally caring and sympathetic to people with mental illness, and this percentage drops to 18.5% among those with severe psychological distress.
- This continued stigma may be the reason why more people don't seek treatment even though they could benefit from it.

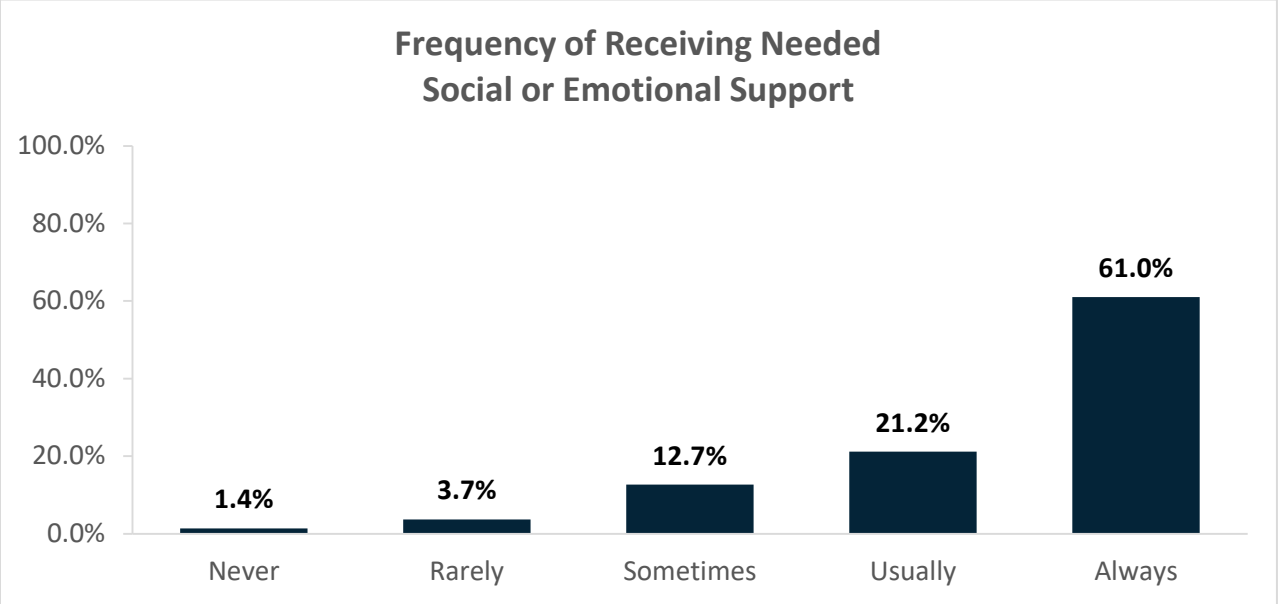




Source: SHBR Behavioral Risk Factor Survey, 2017, Q18.8: What is your level of agreement with the following statement? "Treatment can help people with mental illness lead normal lives." Do you – agree slightly or strongly, or disagree slightly or strongly? (n=982); Q18:9: What is your level of agreement 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=982).

Mental Health (Continued)

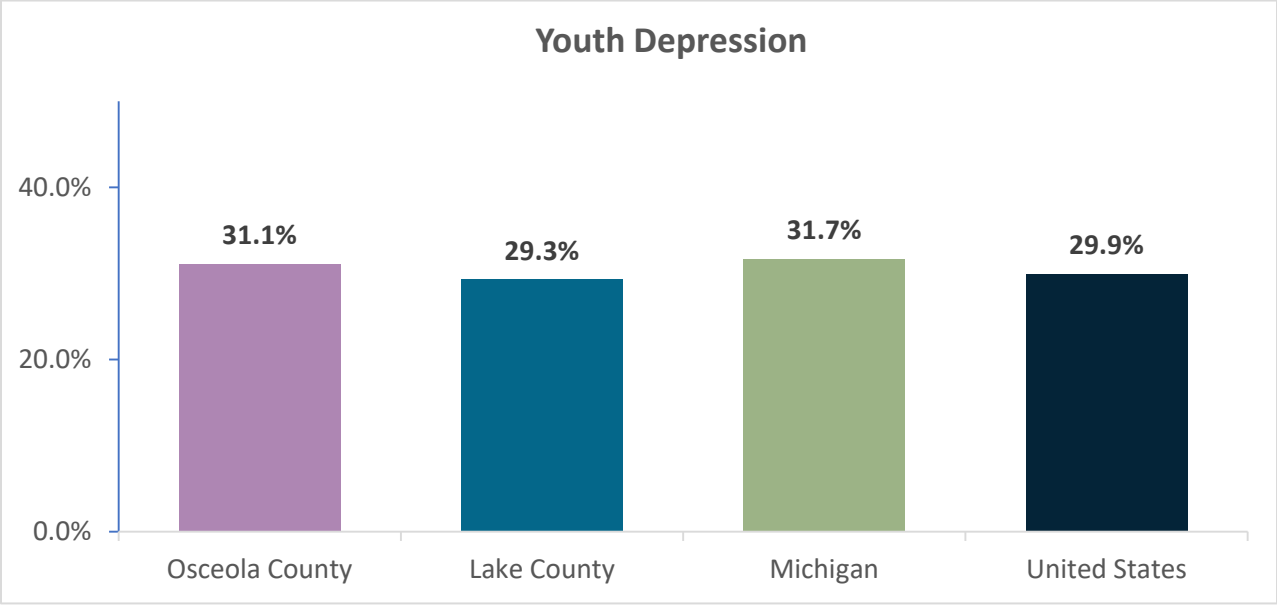
More than eight in ten (82.2%) area adults “always” or “usually” receive the social or emotional support they need.



Source: SHBR Behavioral Risk Factor Survey, 2017, Q18.10: How often do you get the social and emotional support you need? (n=991).

Mental Health (Continued)

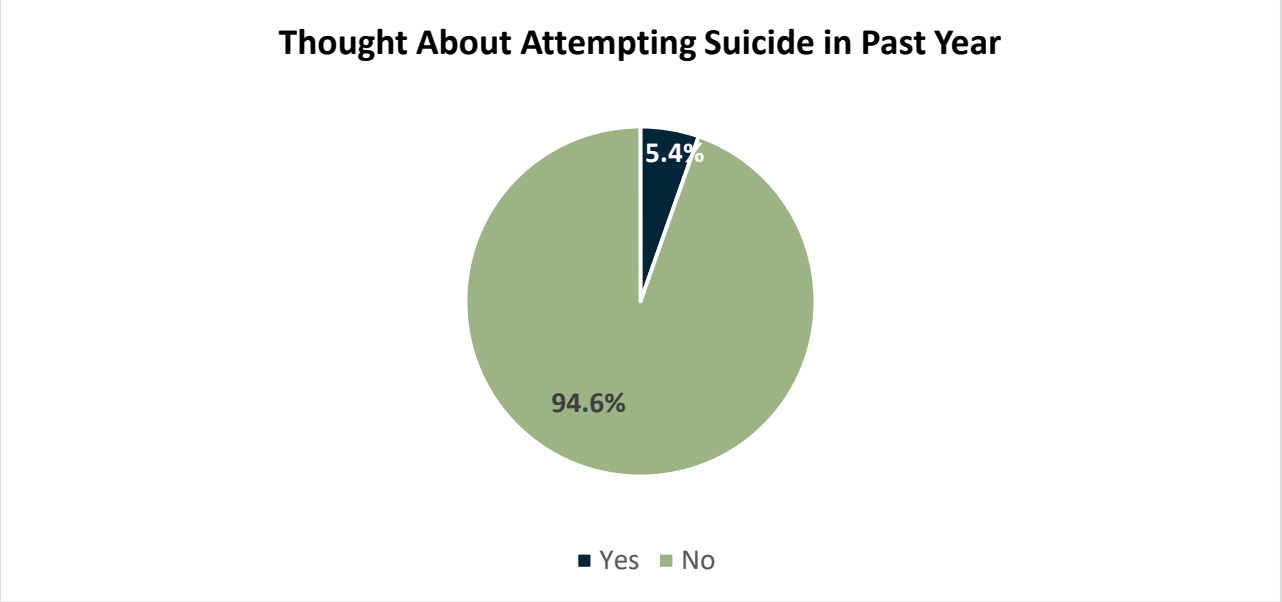
- More than three in ten (31.1%) Osceola youth report depression during the past year, which is slightly higher than the national rate but lower than the state rate.
- In Lake County, 29.3% of youth report depression in the past year.



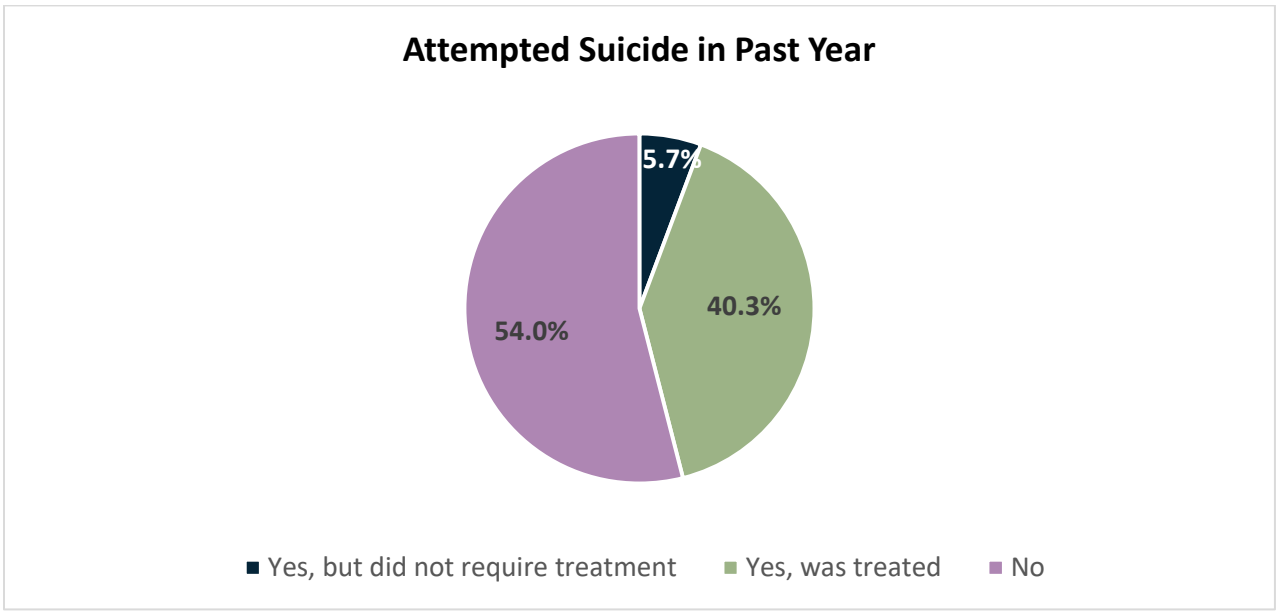
Source: For Osceola and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Suicide

More than one in twenty (5.4%) SHBR area adults have thought about attempting suicide in the past year, and of those, 46.0% actually attempted suicide in the past year.



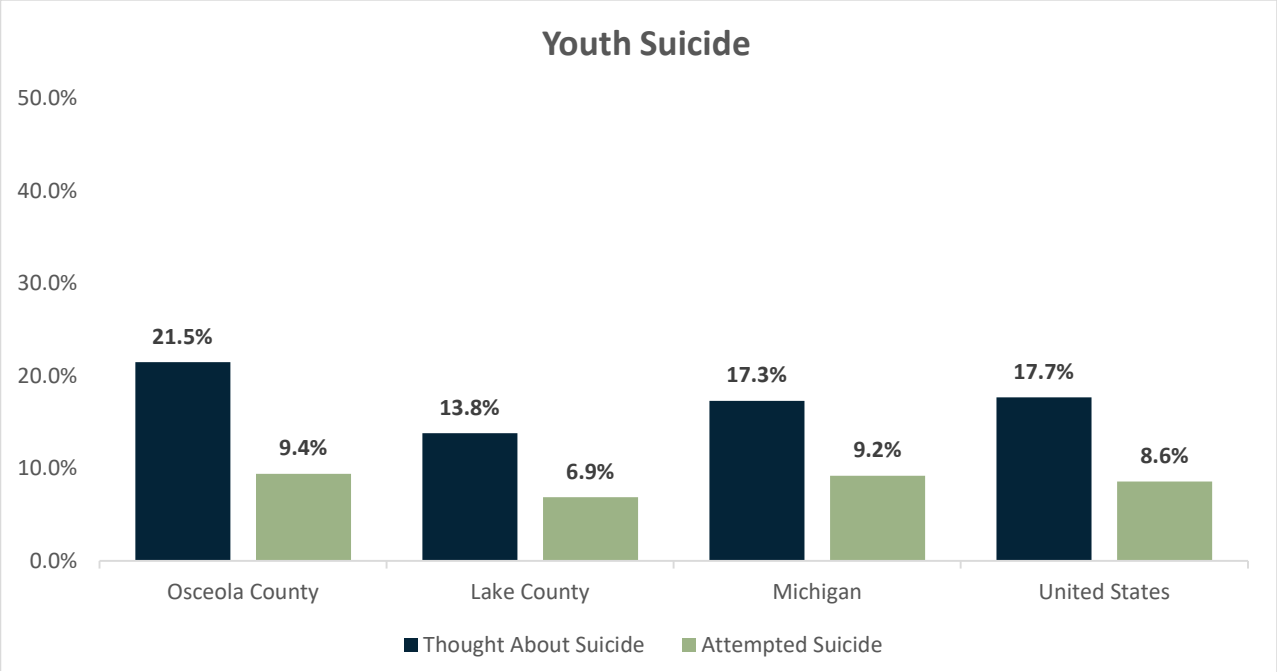
Source: SHBR Behavioral Risk Factor Survey, 2017, Q20.1: Has there been a time in the past 12 months when you thought of taking your own life? (n=983).



Source: SHBR 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=28).
Note: Base represents those who thought of taking their own life in past year.

Suicide (Continued)

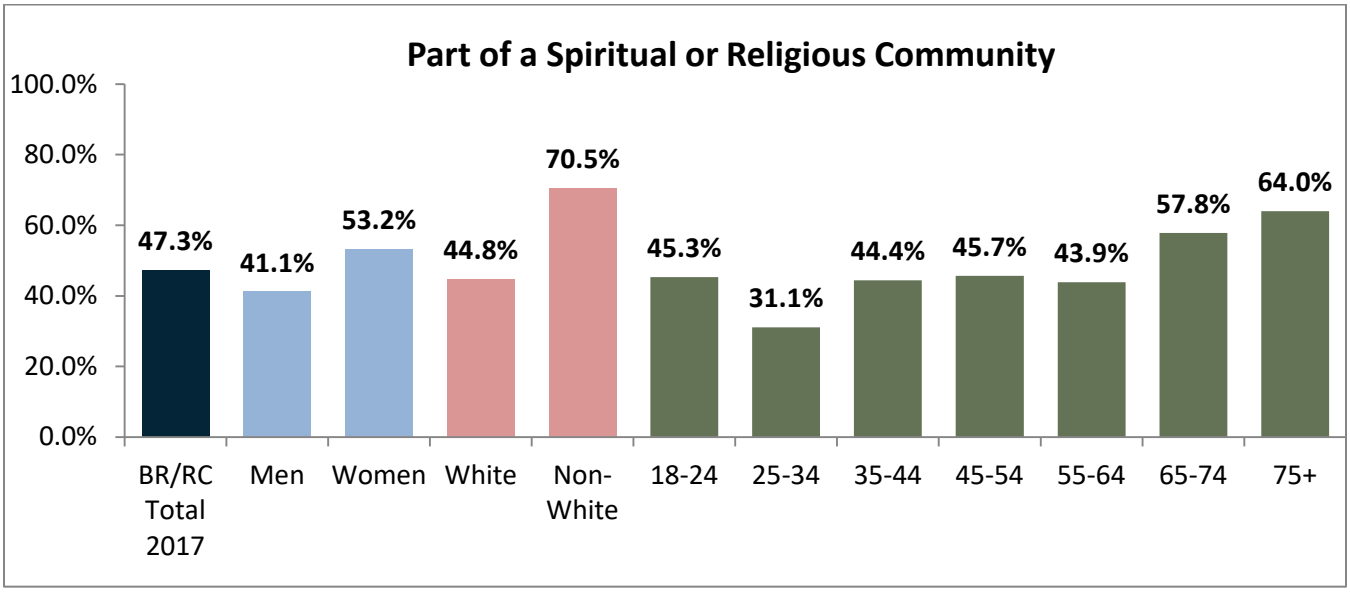
- More than one in five (21.5%) Osceola County youth have thought about committing suicide in the past year, and more than one in eleven (9.4%) have attempted suicide. Both of these rates are higher than state and national rates.
- Lake County has lower rates of youth thinking about or attempting suicide compared to Osceola County, Michigan, and the U.S.

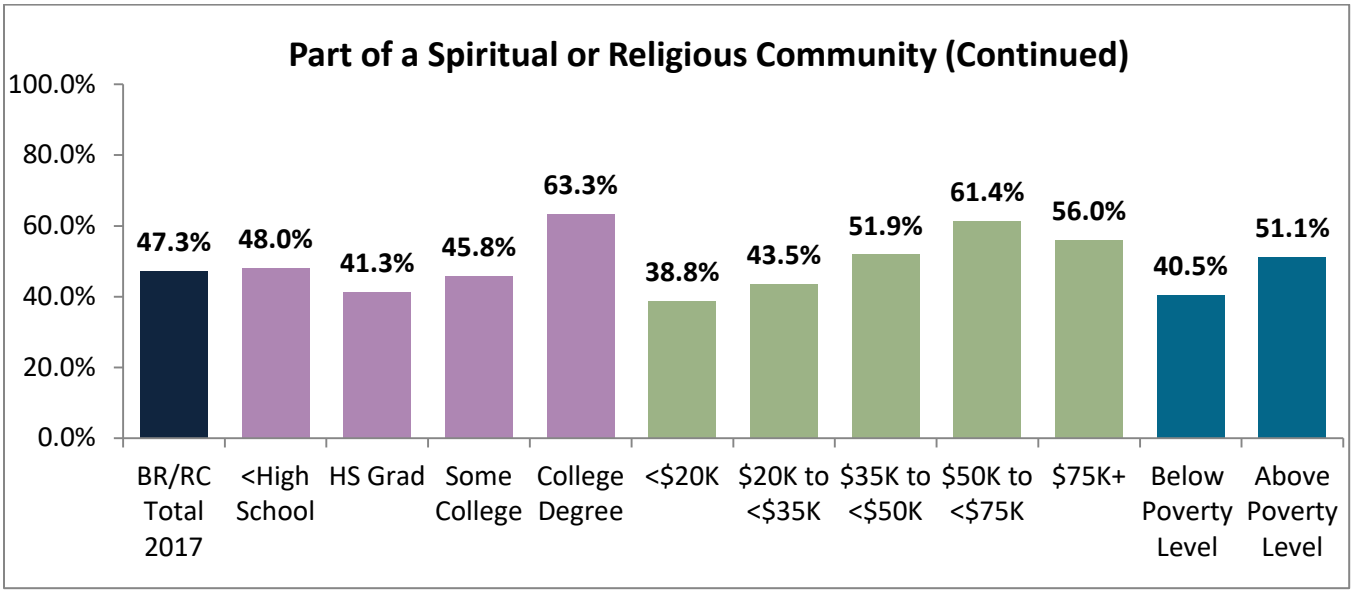


Source: For Osceola and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Spirituality

- Nearly half of area adults (47.3%) are part of a spiritual or religious community.
- Those most likely to be part of a spiritual or religious community are those who are non-White, have a college degree, are older (age 65+), and have higher incomes (at least $50k).





Source: SHBR Behavioral Risk Factor Survey, 2017, Q18.11: Are you part of a spiritual or religious community? (n=991).

Spirituality (Continued)

- Area adults who are part of a spiritual or religious community fare better on a number of health outcomes vs. those adults who are not part of a spiritual or religious community.

	Part of Spiritual or Religious Community	
	Yes	No
General health is fair/poor	17.2%	21.6%
Poor physical health	9.2%	16.0%
Poor mental health	6.1%	9.8%
Chronic pain	23.0%	35.7%
Current smoker	9.5%	33.5%
No physical activity	22.3%	34.3%
Binge drinker	8.2%	14.5%

CHRONIC CONDITIONS

Prevalence of Chronic Health Conditions

- For seven of the ten chronic conditions measured, the prevalence is higher for the SHBR service area compared to the state and nation.
- Further, the prevalence of arthritis, diabetes, current asthma, skin cancer and other cancer, angina, and stroke are higher than they were in the last CHNA iteration.

Prevalence of Chronic Conditions				
	SHBR Area 2014	SHBR Area 2017	Michigan	U.S.
Arthritis	29.9%	34.7%	30.0%	25.8%
Pre-diabetes	--	24.2%	--	--
Lifetime Asthma	18.1%	17.0%	15.7%	14.0%
Diabetes	10.2%	14.4%	10.7%	10.8%
Current asthma	12.8%	14.1%	10.2%	9.3%
COPD	10.0%	9.9%	7.7%	6.3%
Other (non-skin) cancer	6.3%	8.9%	7.0%	6.7%
Angina/coronary heart disease	4.2%	4.4%	4.6%	4.1%
Stroke	3.3%	4.4%	3.3%	3.1%
Skin cancer	3.8%	4.3%	6.1%	5.9%
Heart attack	4.8%	4.1%	4.7%	4.4%

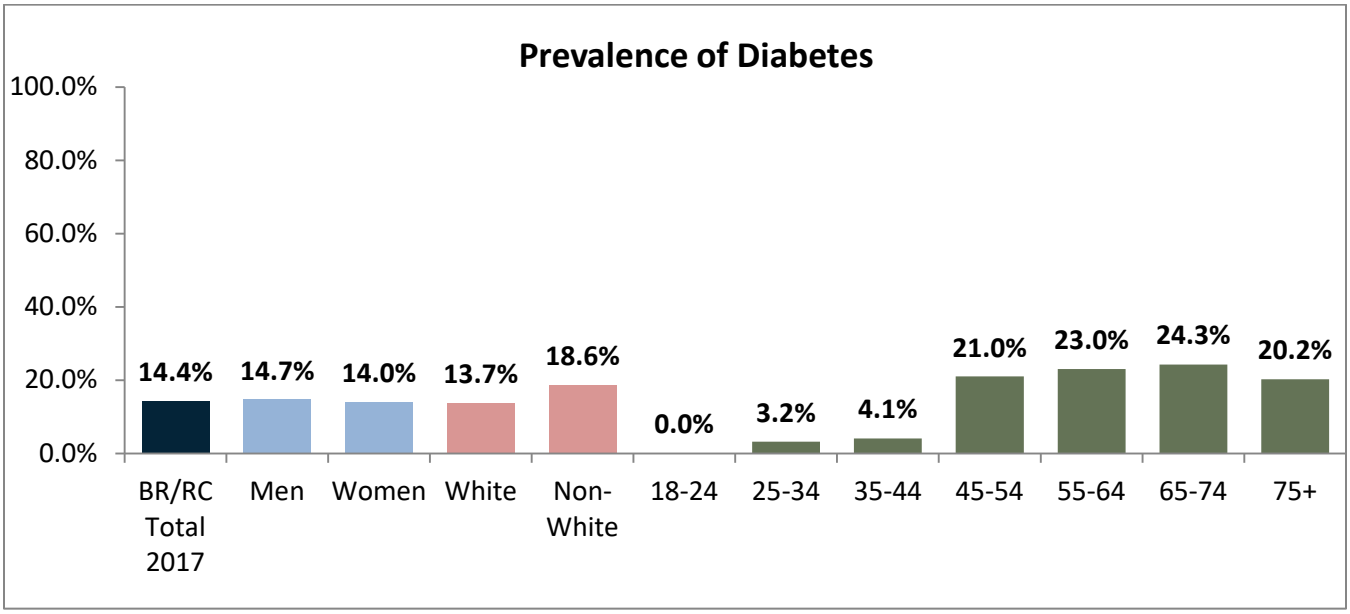
Source: SHBR Behavioral Risk Factor Survey, 2014, 2017, Q4.1-4.11: Has a doctor, nurse, or other health professional EVER told you that you had [condition]?

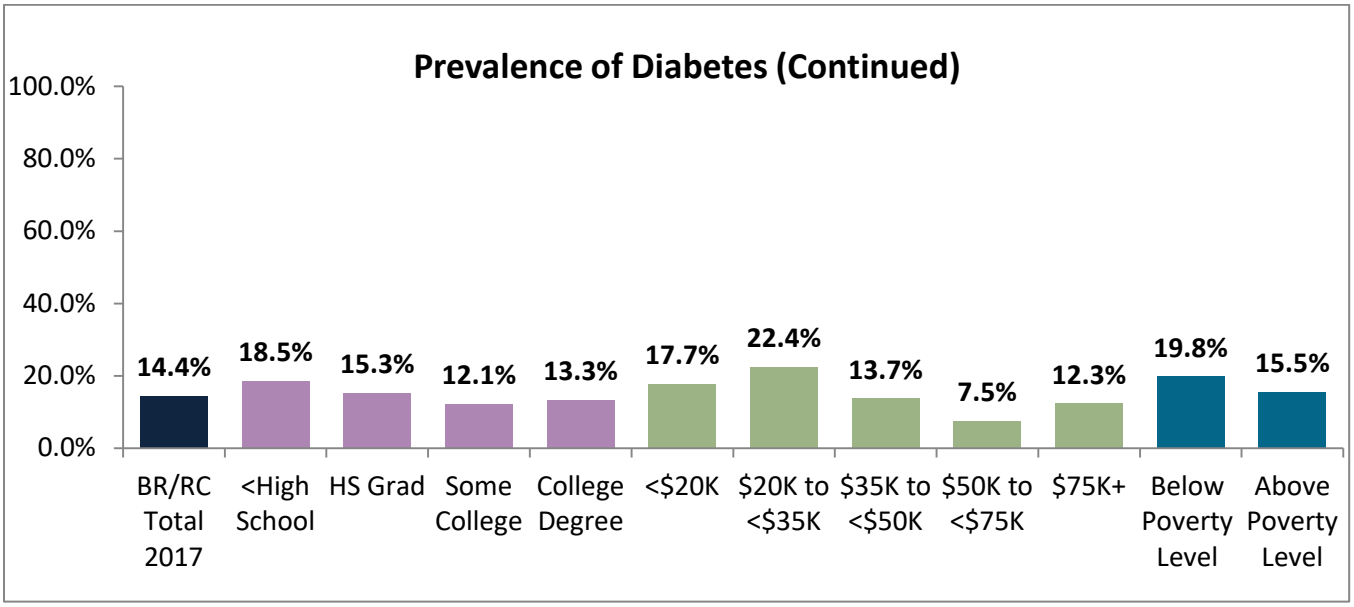
● = SHBR area is best

● = SHBR area is worst

Diabetes

- Roughly one in seven (14.4%) area adults have been told by a health care professional that they have diabetes.
- The prevalence of diabetes is greater for those who are older (age 45+), those living below poverty level, non-White adults, those who did not graduate high school, and those with lower household incomes (less than $35k).

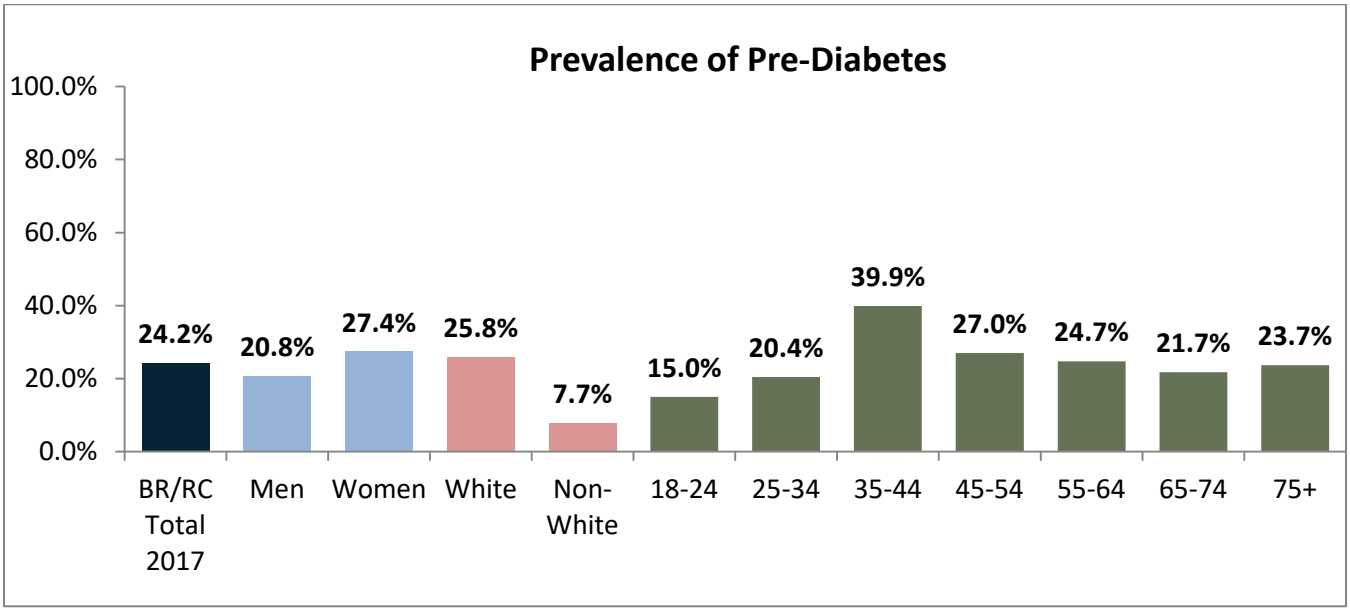


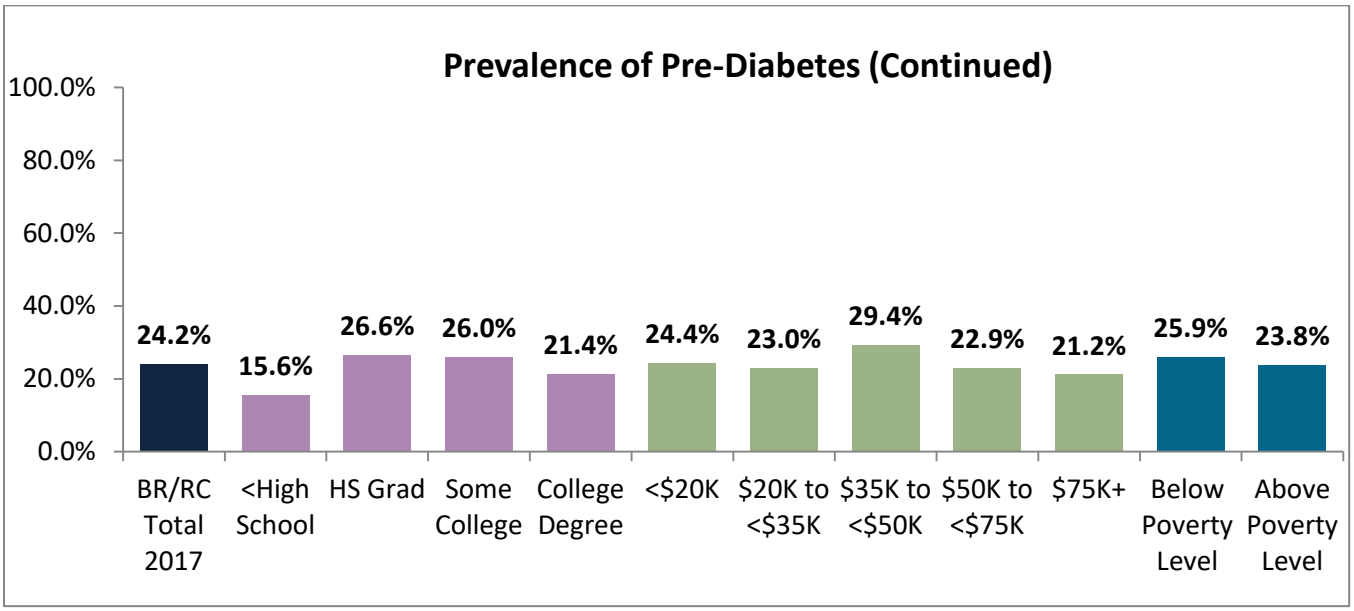


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.3: Has a doctor, nurse, or other health professional EVER told you that you had diabetes? (n=1003).
Note: excludes women who had diabetes only during pregnancy.

Pre-Diabetes

- Additionally, nearly one-fourth (24.2%) of SHBR area adults have been told by a health care professional that they have pre- or borderline diabetes.
- The prevalence of pre-diabetes is much higher in White adults than in non-White adults.

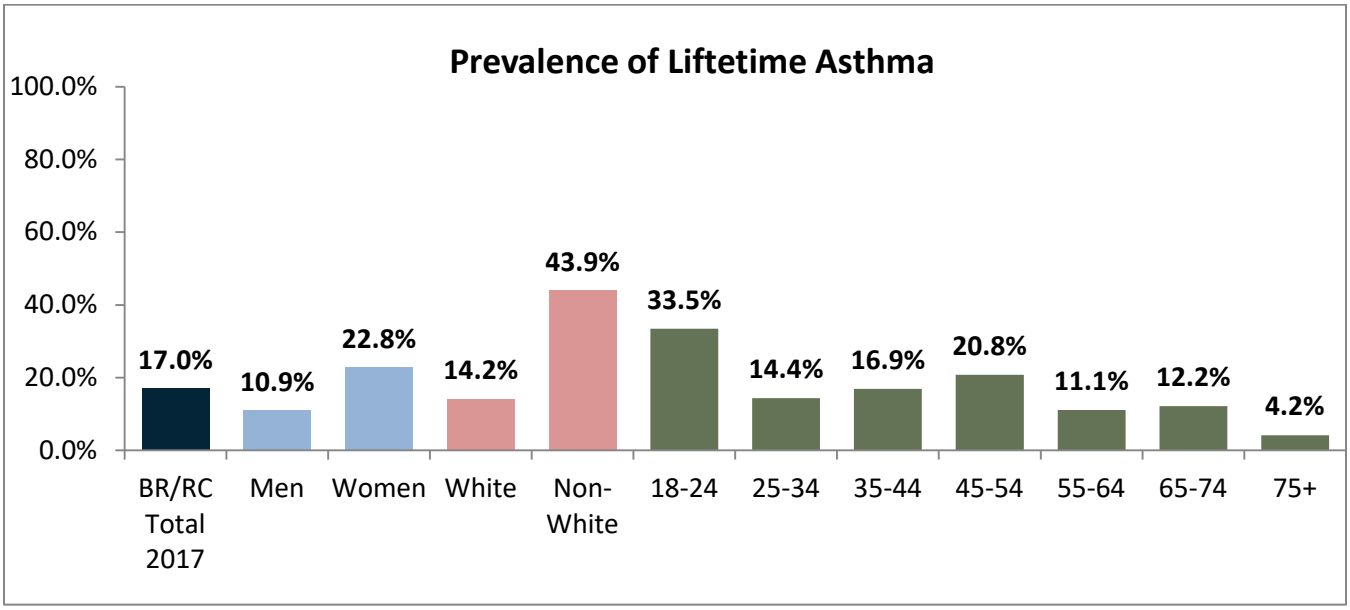


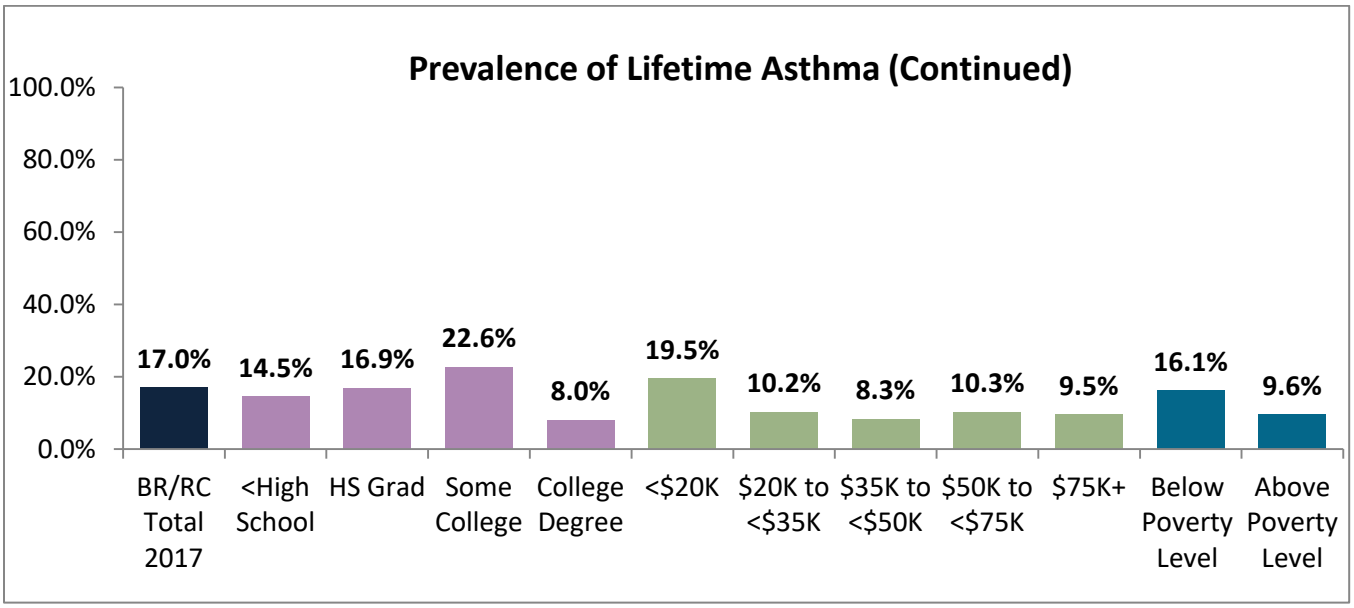


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.3: Has a doctor, nurse, or other health professional EVER told you that you had pre-diabetes or borderline diabetes? (n=824).
Note: excludes those who currently have diabetes.

Asthma

- Roughly one in six (17.0%) area adults have ever been told by a health care professional that they had asthma.
- The prevalence of lifetime asthma is much greater among non-Whites than Whites, among women compared to men, among those ages 18-24 compared to older adults, and among those with household incomes less than $20k compared to those with higher incomes.

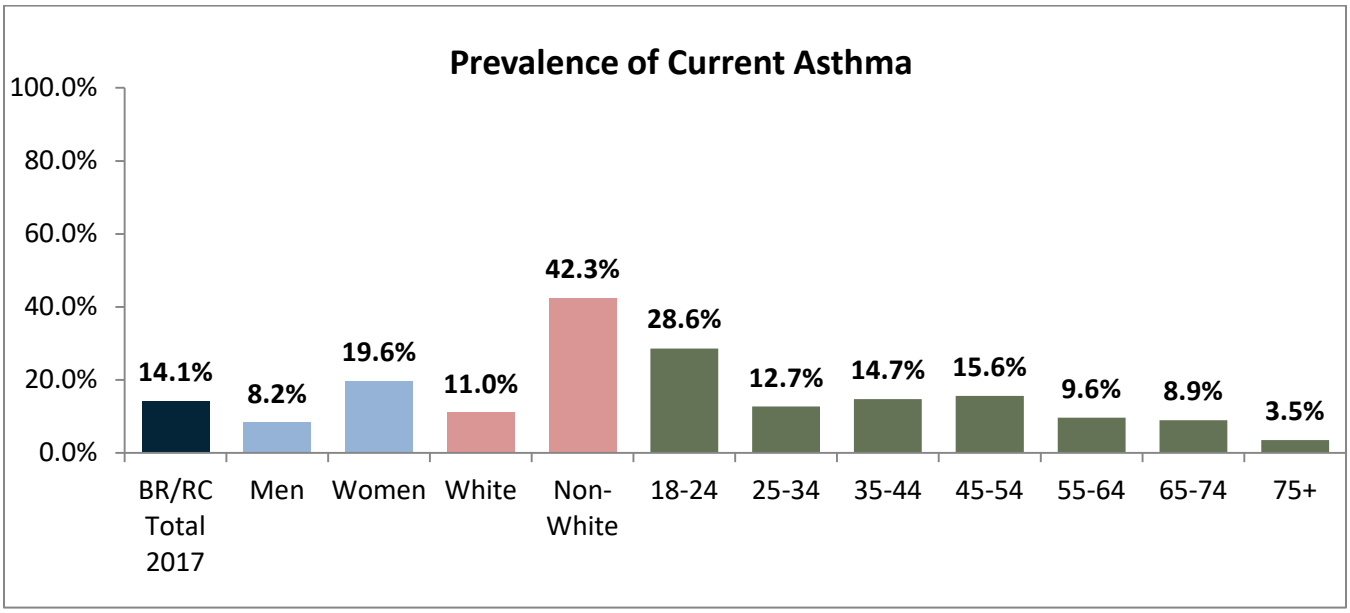


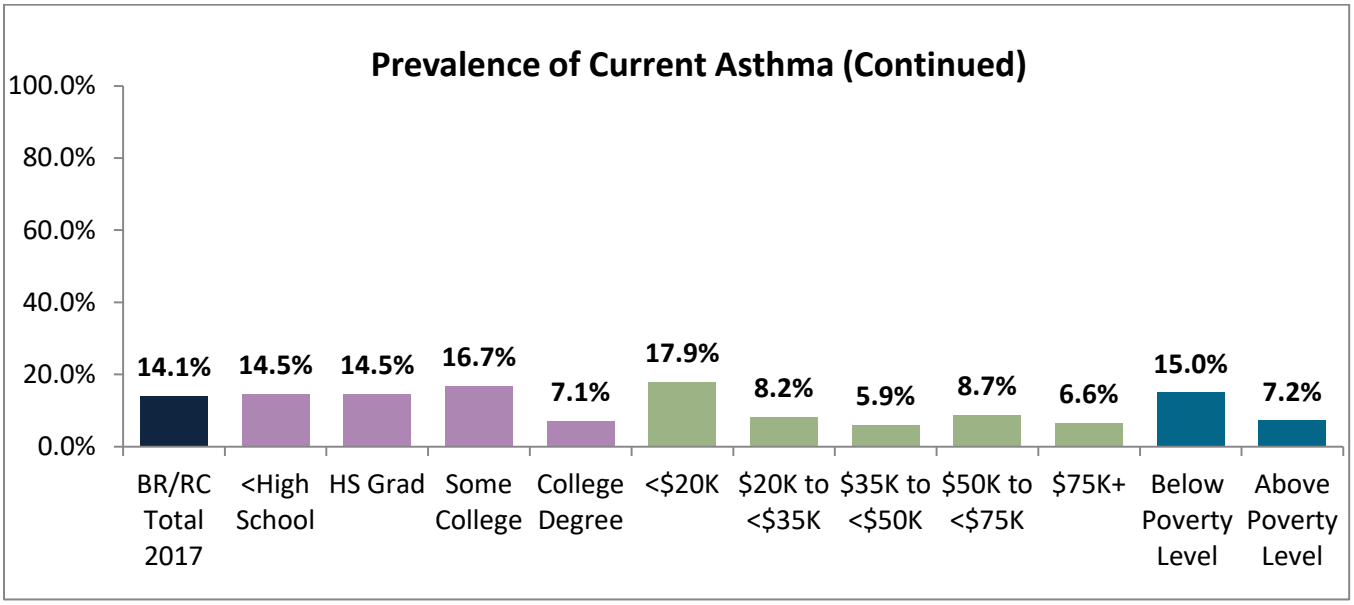


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.1: Has a doctor, nurse, or other health professional EVER told you that you had asthma? (n=1001).

Asthma (Continued)

- Roughly one in seven (14.1%) area adults currently have asthma.
- As with lifetime asthma, the prevalence of current asthma is much greater among non-Whites than Whites, among women compared to men, among those ages 18-24 compared to older adults, and among those with household incomes less than $20k compared to those with higher incomes.

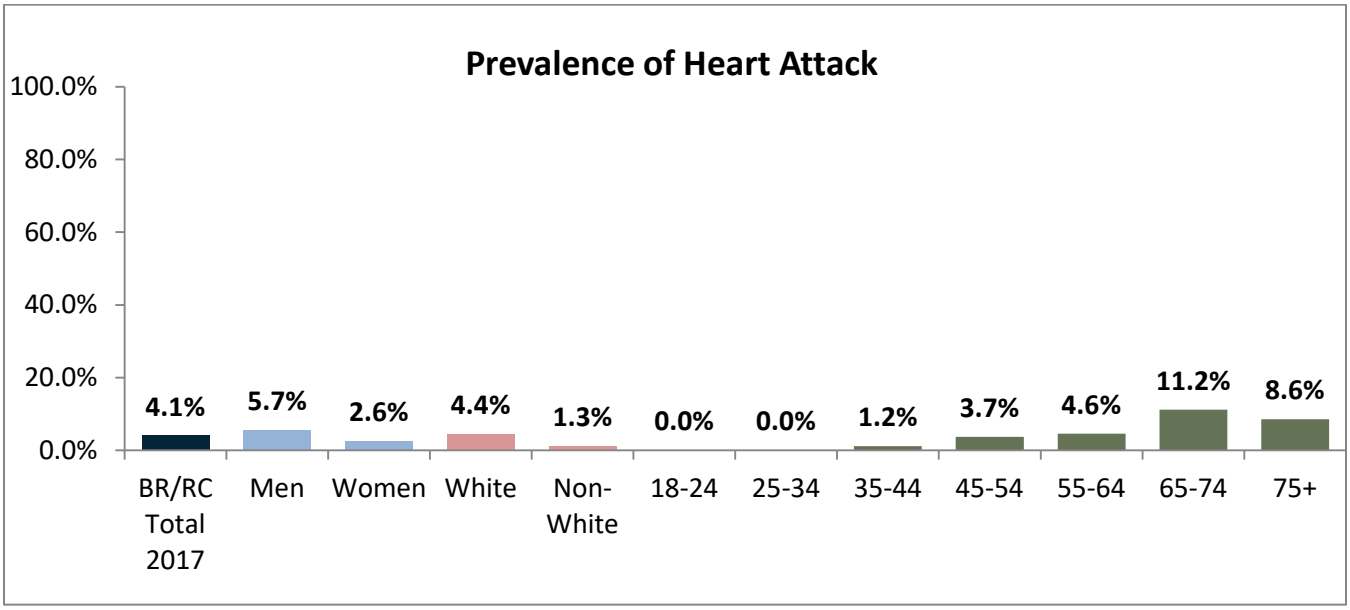


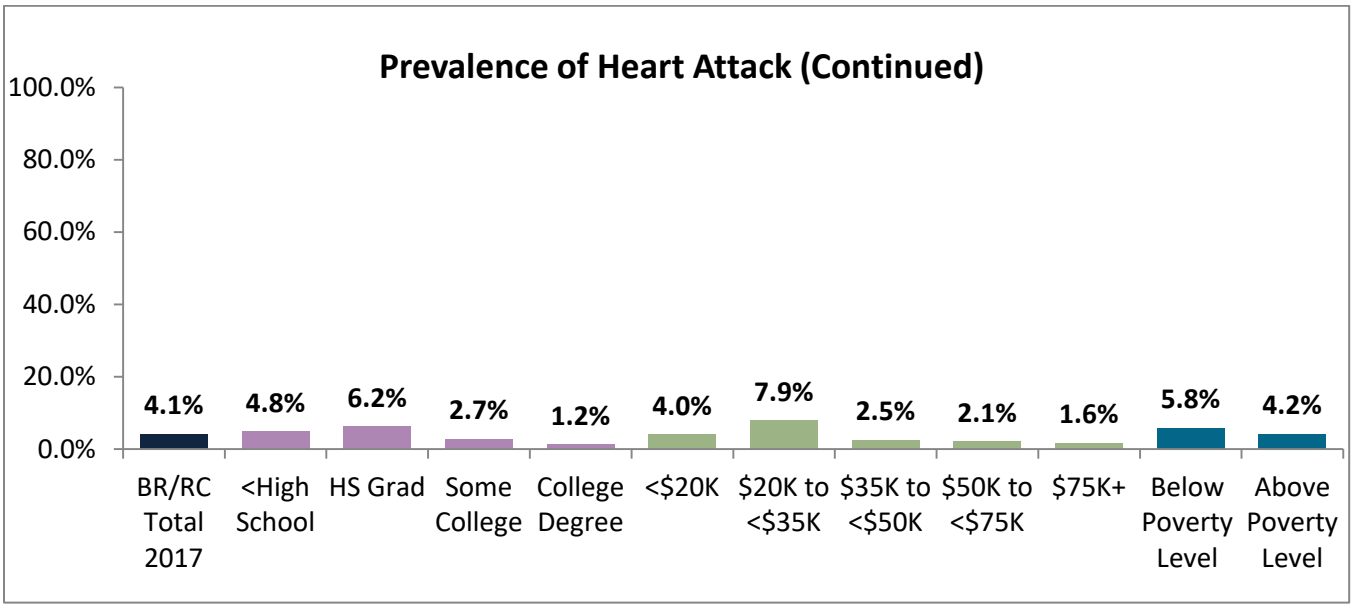


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.2: Do you still have asthma?
Note: based on all adults (n=1000).

Cardiovascular Disease and Stroke

- The prevalence of heart attack in the SHBR area is low overall (4.1%) but is highest among those age 65+.
- In addition, the prevalence of heart attack is higher among men than women, among Whites compared to non-Whites, among those with no college compared to those with higher education levels, and among those with incomes less than $35k compared to those with higher incomes.

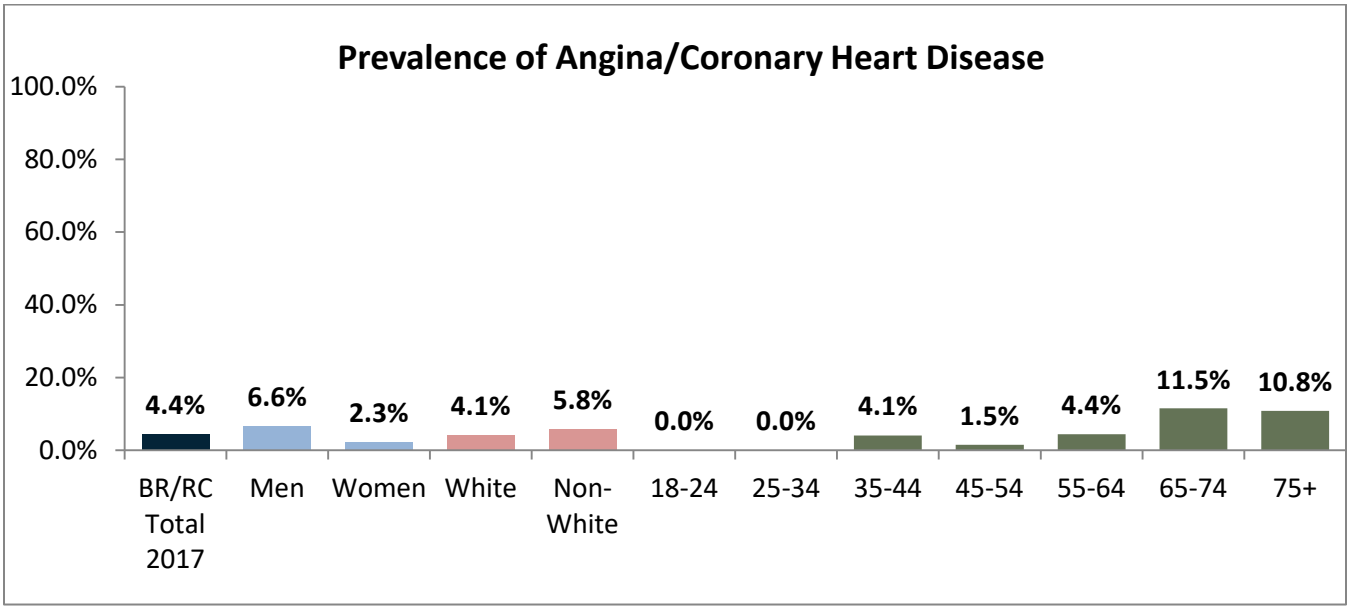


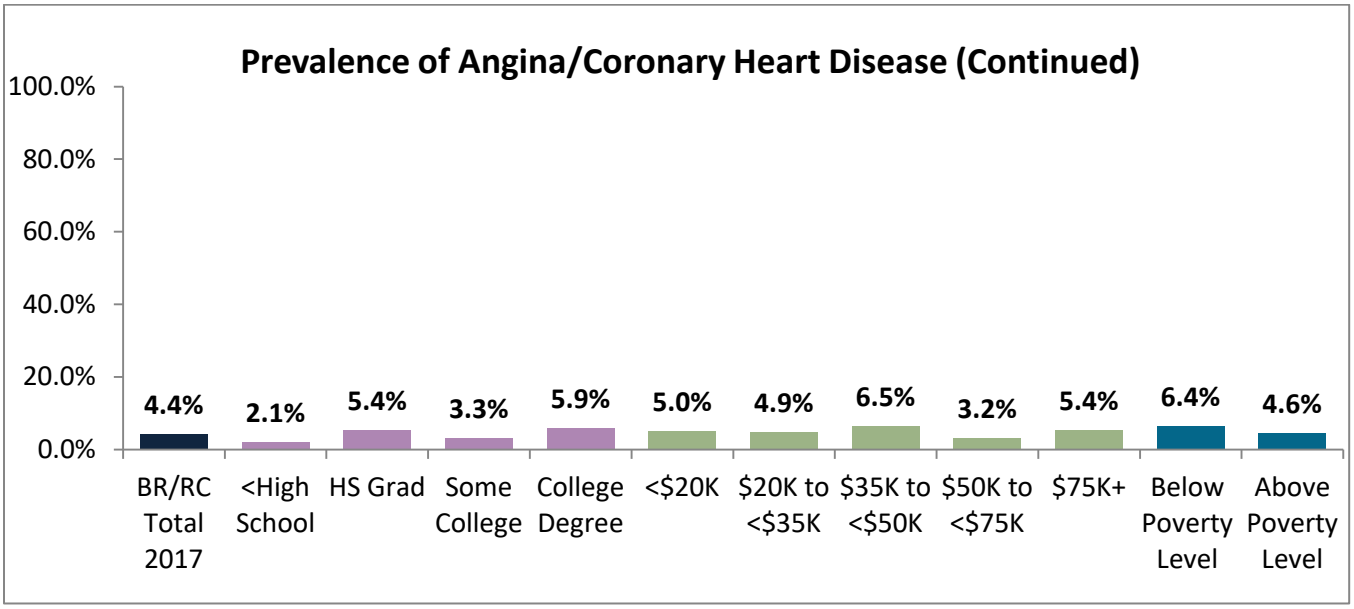


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.5: Has a doctor, nurse, or other health professional EVER told you that you had a heart attack also called a myocardial infarction? (n=1000).

Cardiovascular Disease and Stroke (Continued)

- Like heart attack, the prevalence of angina/coronary heart disease is low overall (4.4%) but is highest among those age 65+.
- In addition, the prevalence of angina/coronary heart disease is higher among men than women.

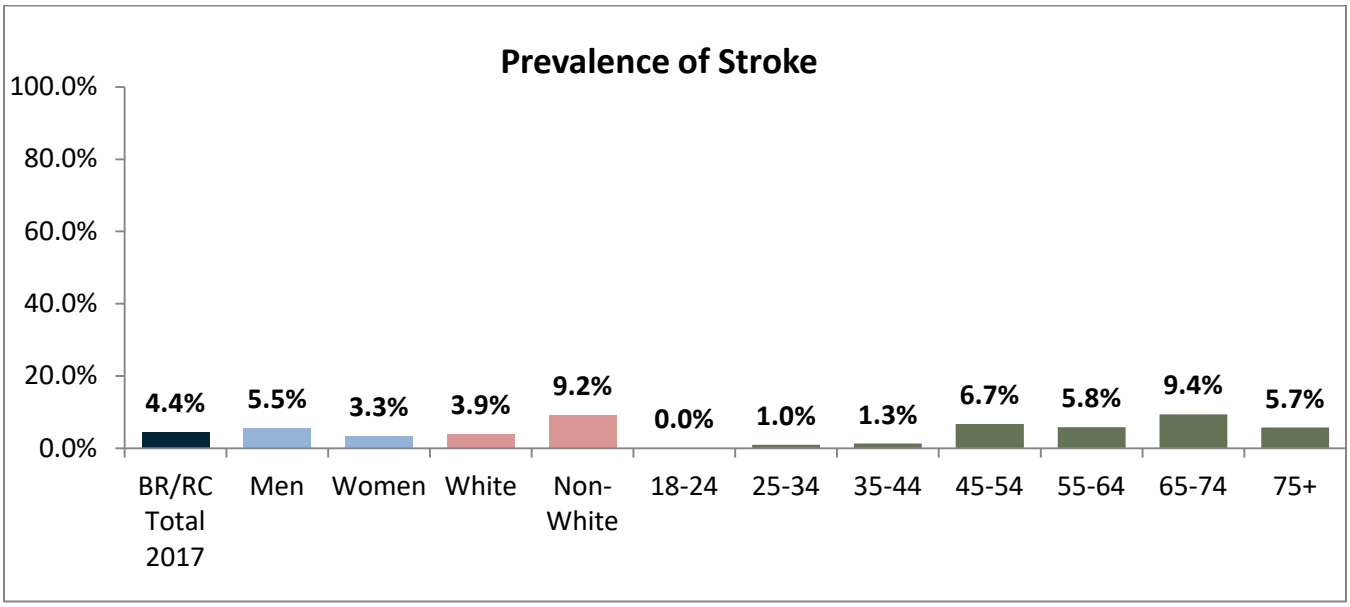


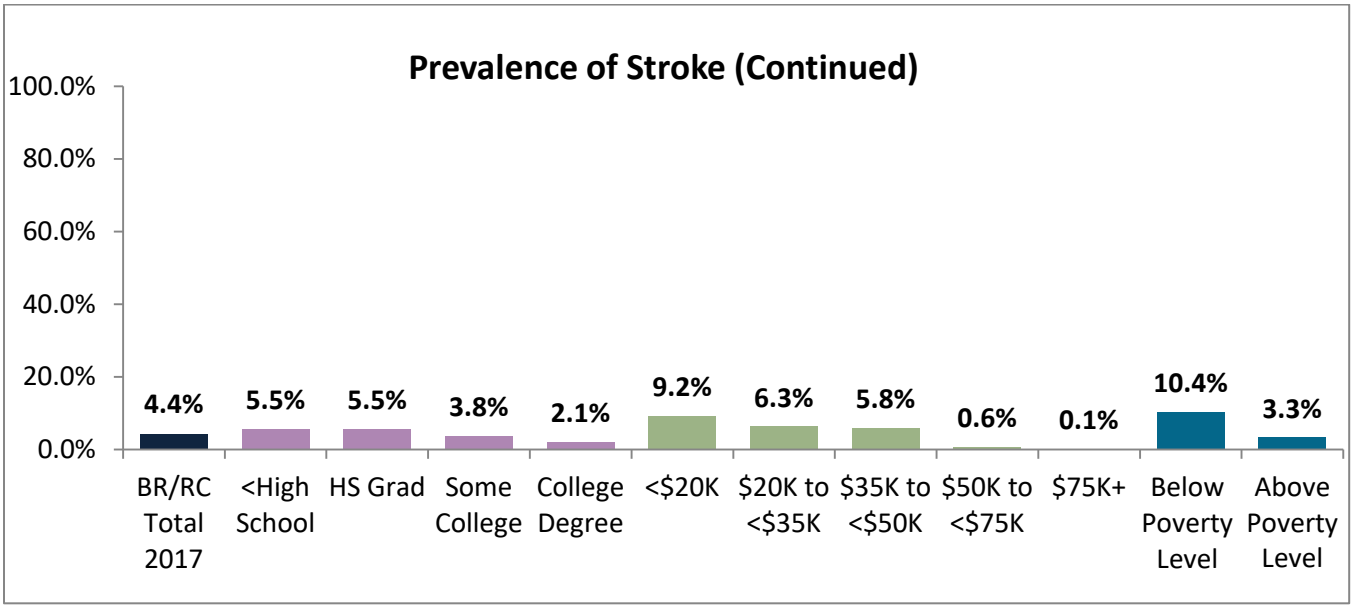


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.6: Has a doctor, nurse, or other health professional EVER told you that you had angina or coronary heart disease? (n=999).

Cardiovascular Disease and Stroke (Continued)

The prevalence of stroke is higher among non-Whites than Whites, higher among those age 45+, and higher in the lowest income groups compared to upper income groups.

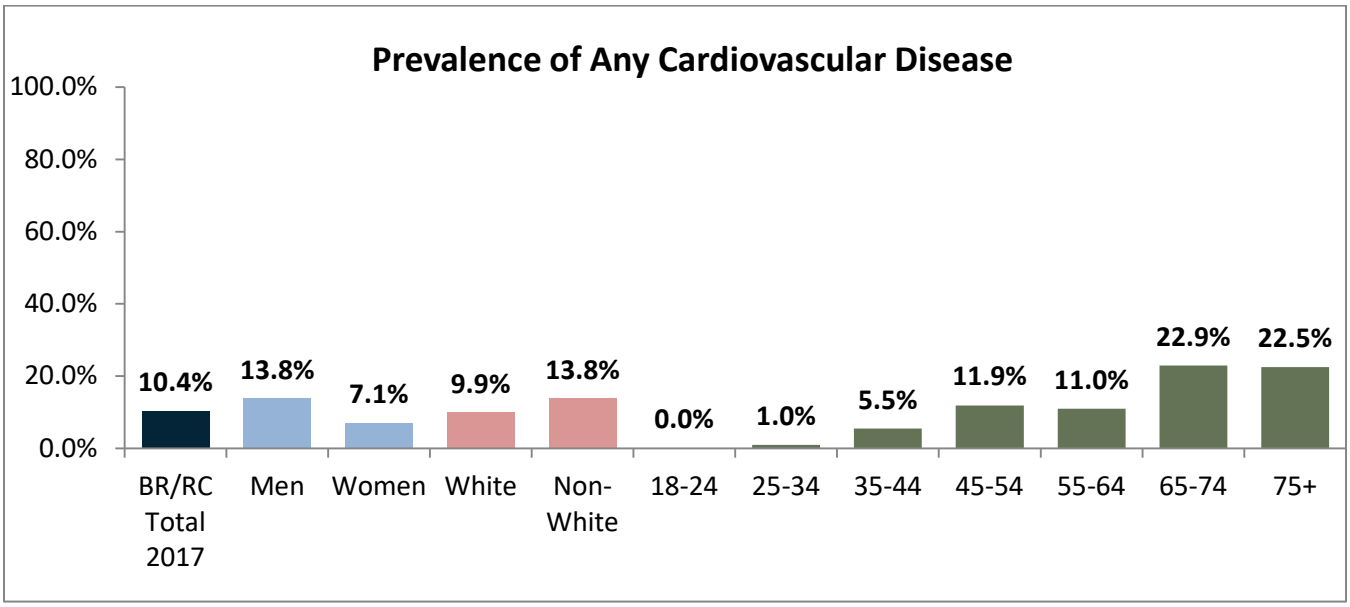


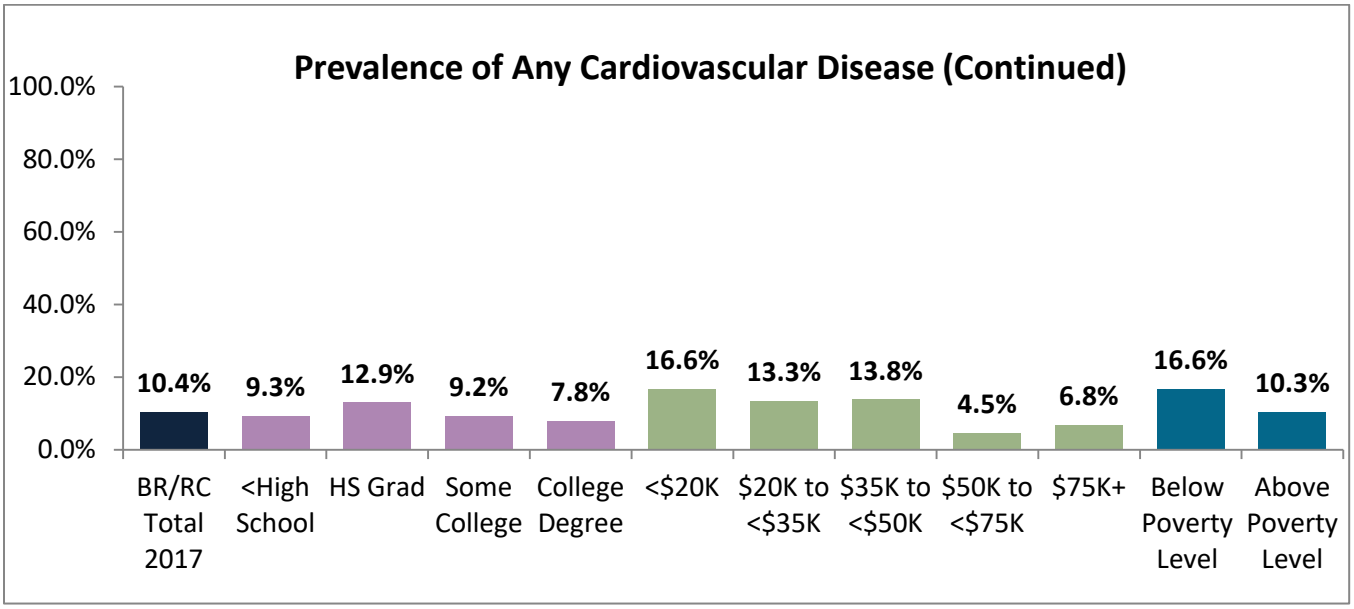


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.7: Has a doctor, nurse, or other health professional EVER told you that you had a stroke? (n=1001).

Cardiovascular Disease and Stroke (Continued)

- Roughly one in ten (10.4%) area adults have had a heart attack, angina/CHD, and/or a stroke.
- The highest prevalence of cardiovascular disease is found in the highest age groups (age 65+) and the lowest income groups (less than $20k/below poverty level).
- Men are nearly twice as likely to have cardiovascular disease compared to women.

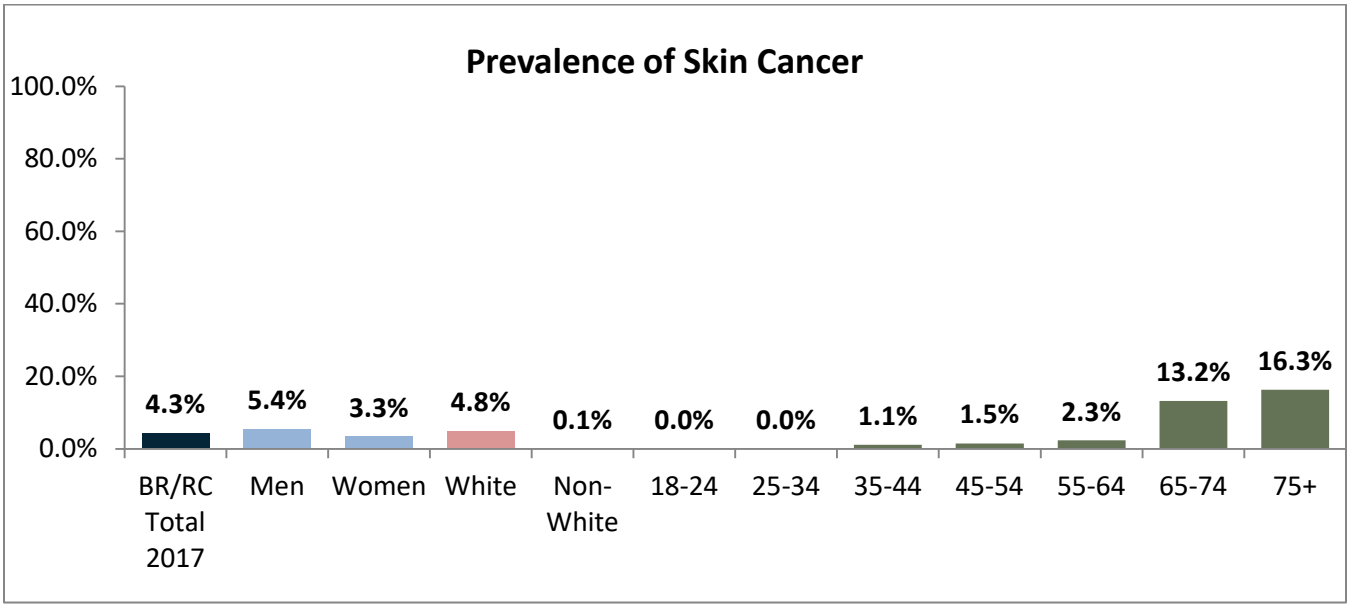


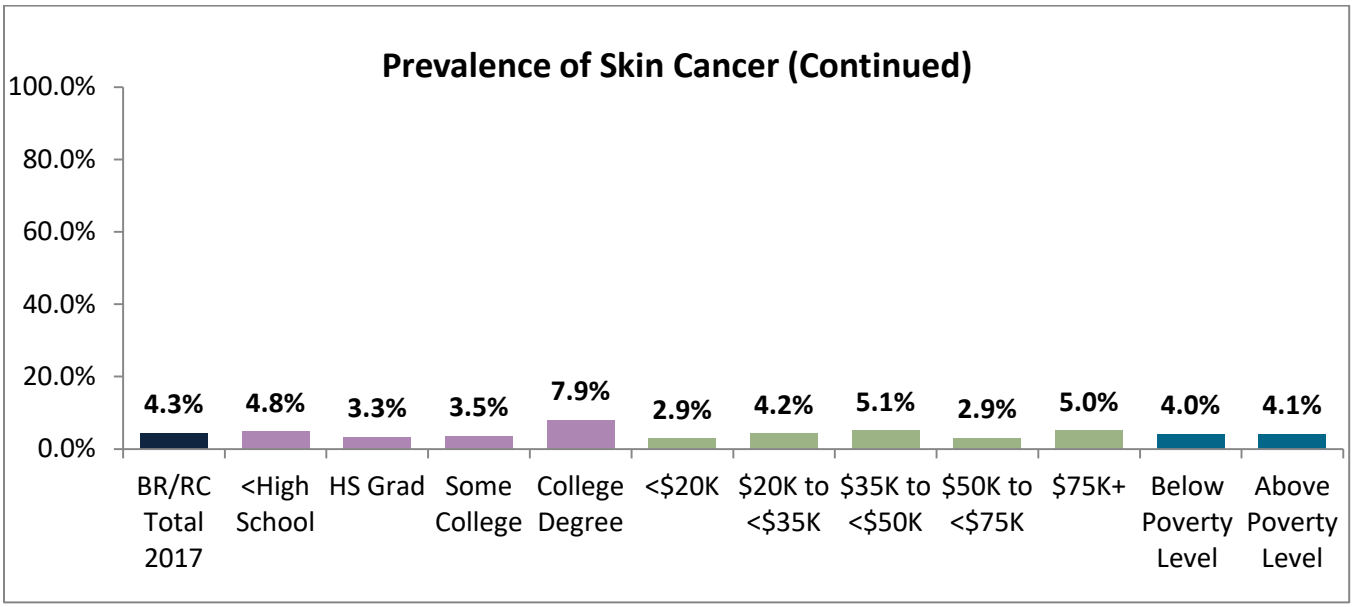


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.5/Q4.6/Q4.7.
Note: among all adults, the percentage who have had some form of cardiovascular disease (heart attack, angina/CHD, stroke). (n=999).

Cancer

- Fewer than one in twenty (4.3%) SHBR area adults have had skin cancer.
- Skin cancer is most common among those age 65 or older, and it is far more common among White adults than non-White adults.

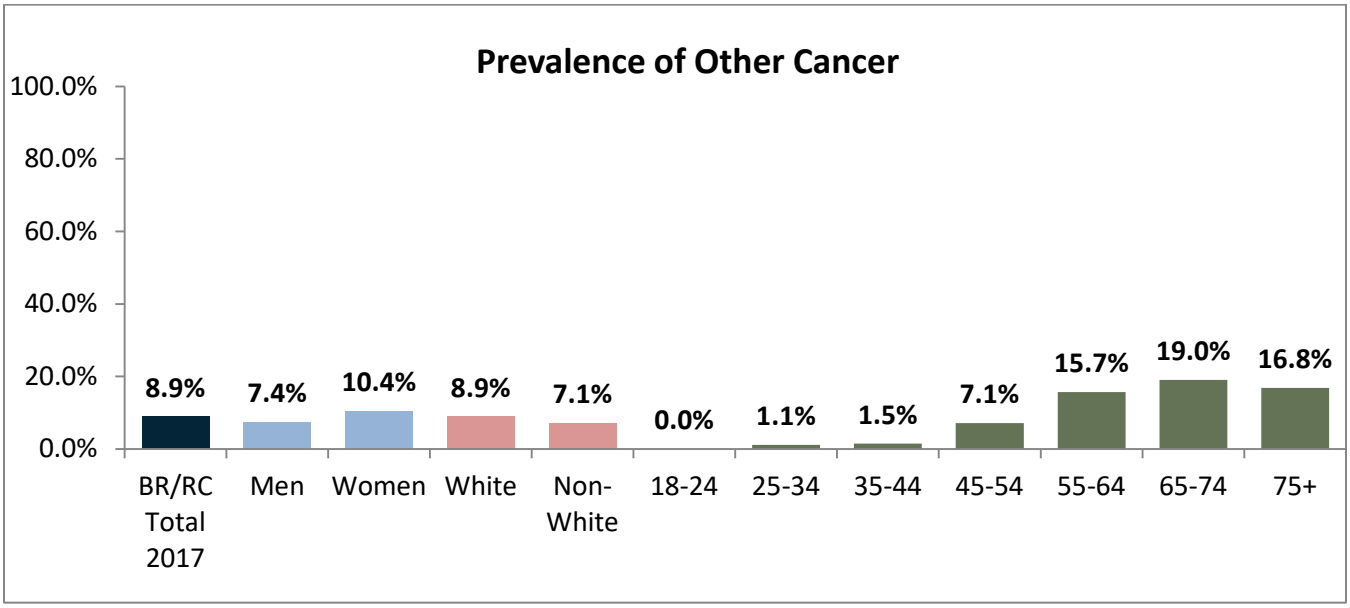


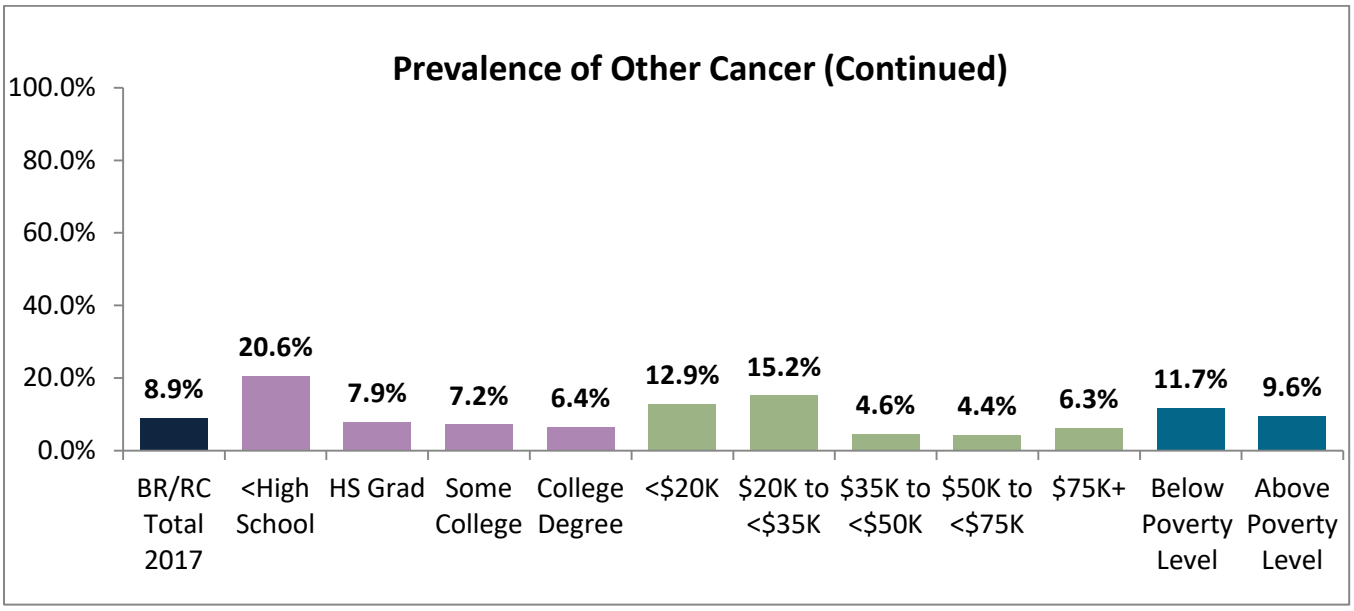


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.8: Has a doctor, nurse, or other health professional EVER told you that you had skin cancer? (n=1000).

Cancer (Continued)

- Nearly one in eleven (8.9%) area adults have had another form of cancer. Adults age 55+ are far more likely to have had non-skin forms of cancer compared to younger adults.
- In addition, those without a high school diploma and those in the lowest income groups (less than $35k) are more likely to have had non-skin cancer than those with higher education and/or income levels.

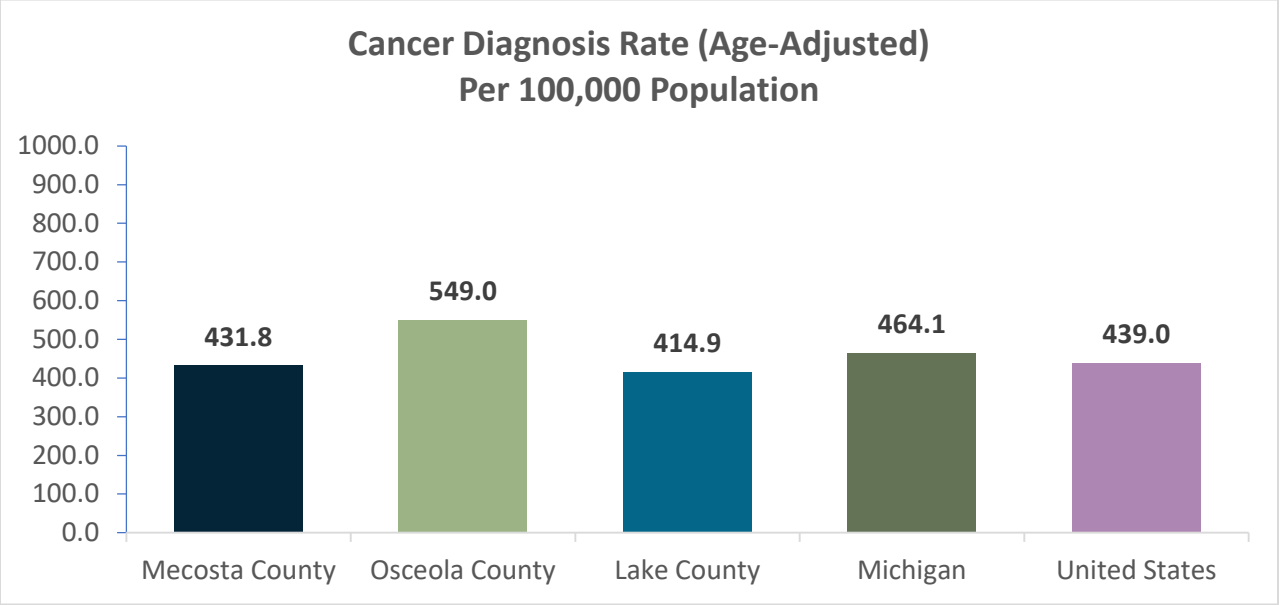




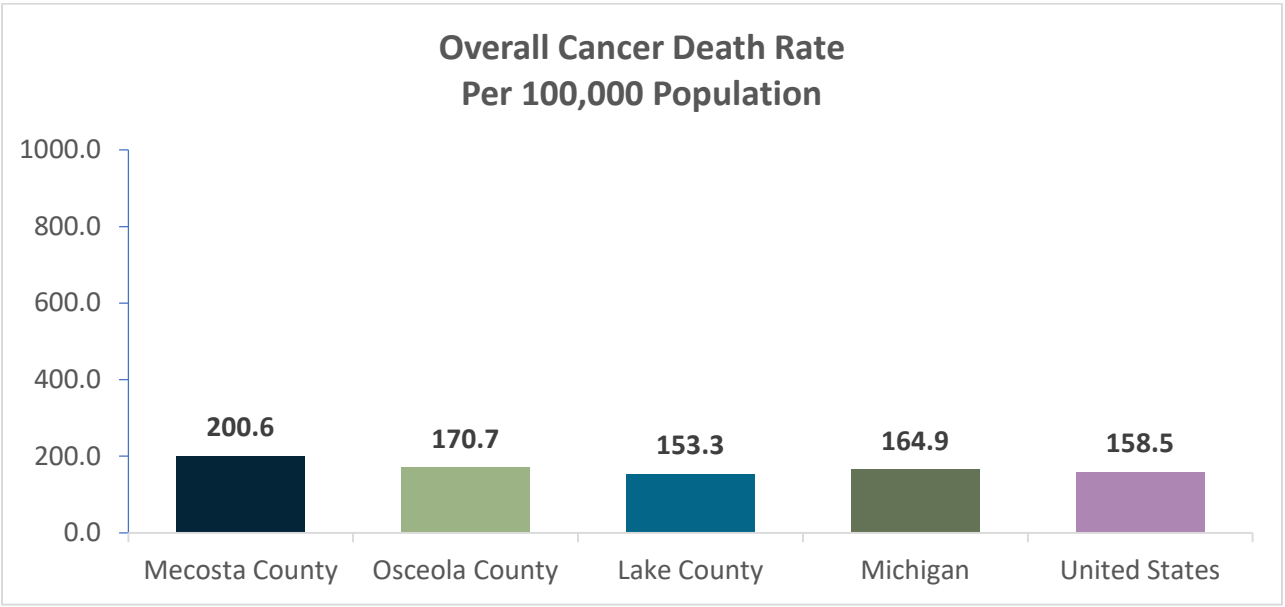
Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.9: Has a doctor, nurse, or other health professional EVER told you that you had any other types of cancer? (n=1002).

Cancer (Continued)

- Osceola County has a higher cancer diagnosis rate compared to Mecosta and Lake counties as well as the state and nation overall.
- Both Mecosta and Osceola counties have a higher cancer death rate than Lake County, Michigan, and the U.S.



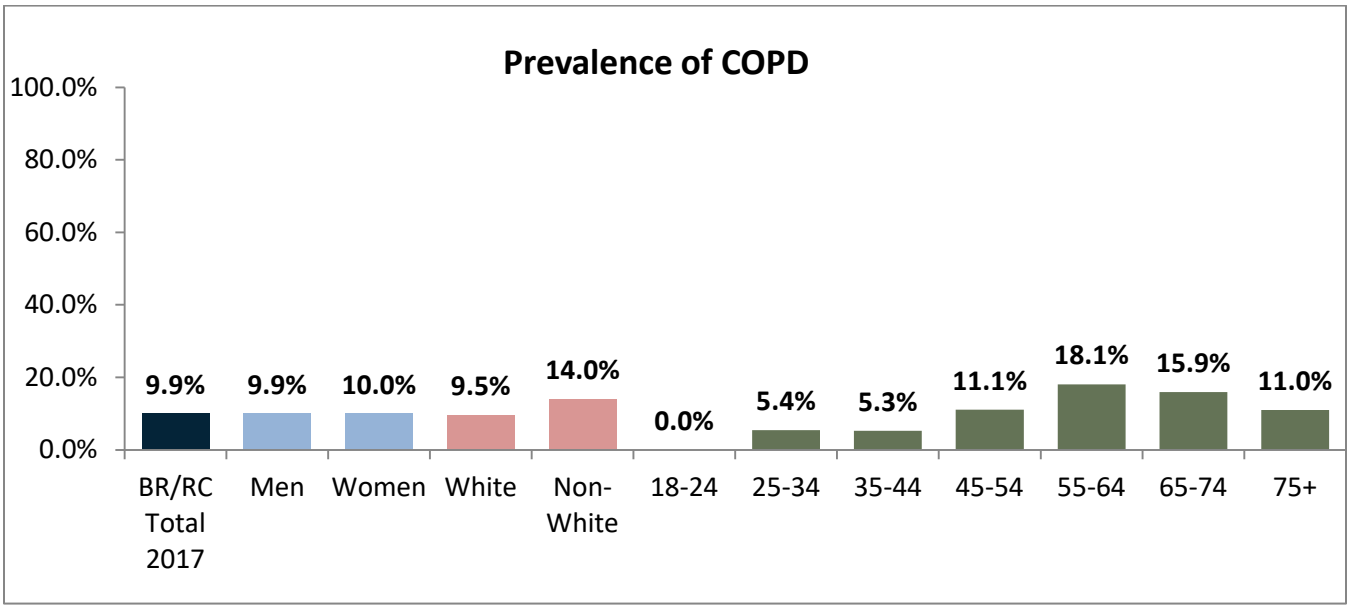
Source: MDCH Cancer Incidence Files. Counties and MI 2010-2015 5-year average, US: Kaiser Family Foundation Health Facts, 2013.

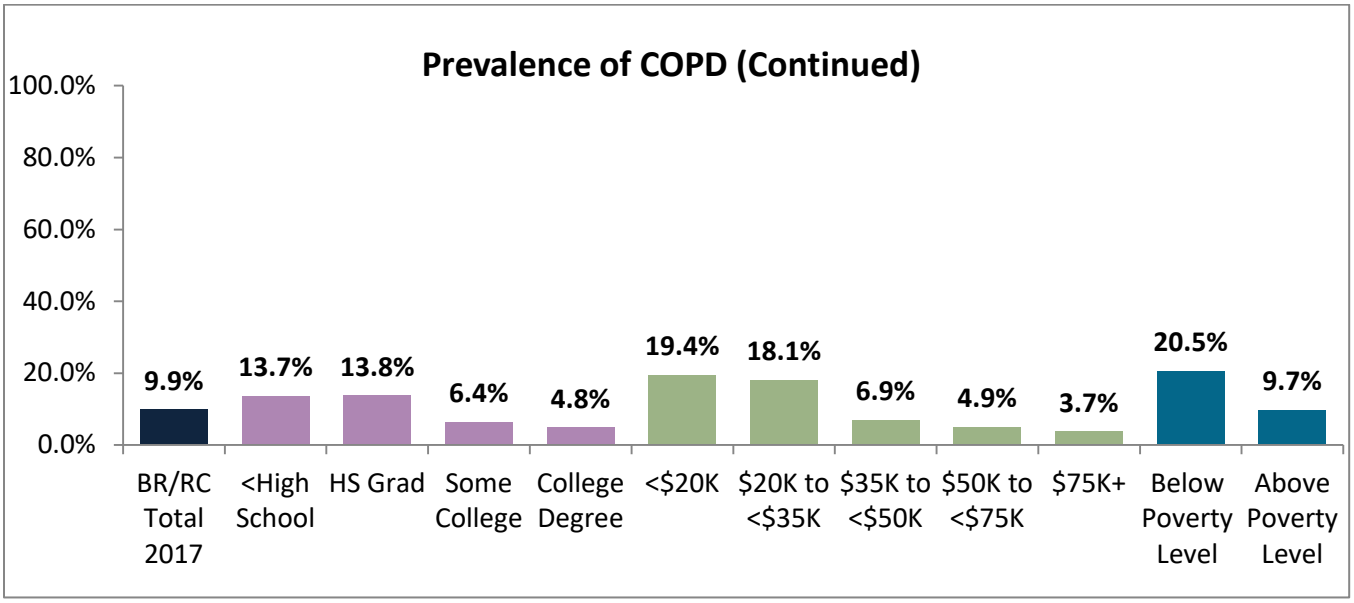


Source: MDHHS counties, MI, and U.S., 2015.

COPD

- One in ten (9.9%) area adults have chronic obstructive pulmonary disease (COPD). Among those who are below the poverty level, the proportion rises to one in five (20.5%).
- COPD is also more prevalent among those with incomes less than $35k, older adults (age 45+), those with lower education levels (high school or lower), and non-White adults.

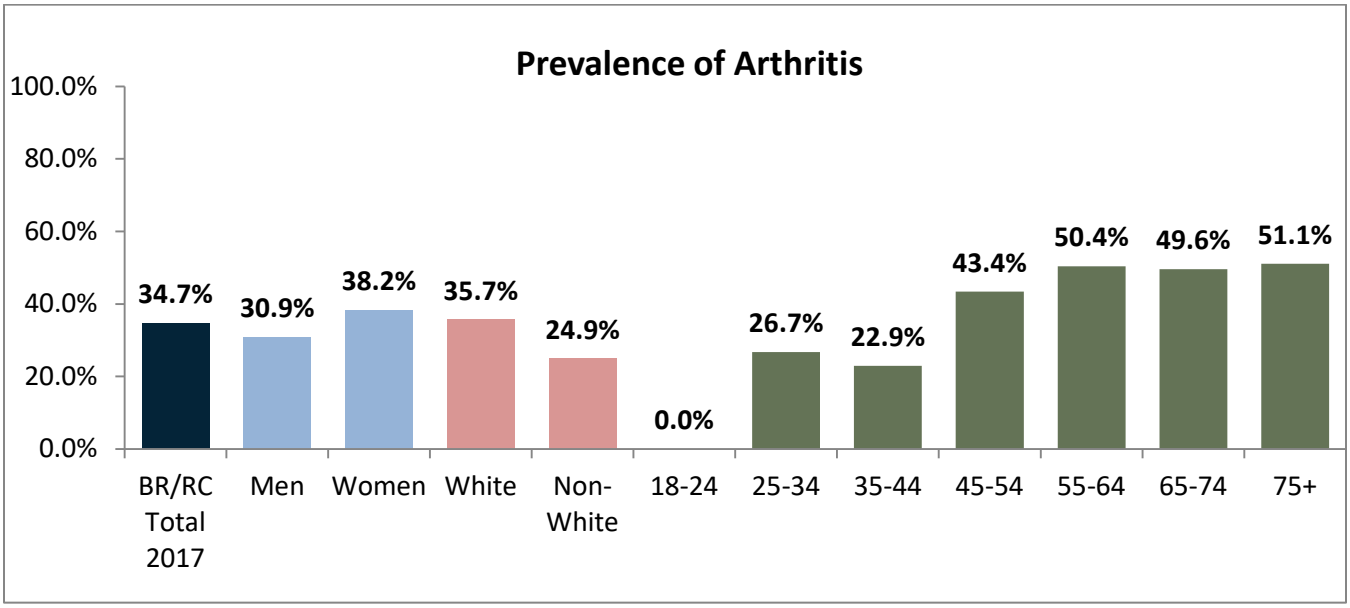


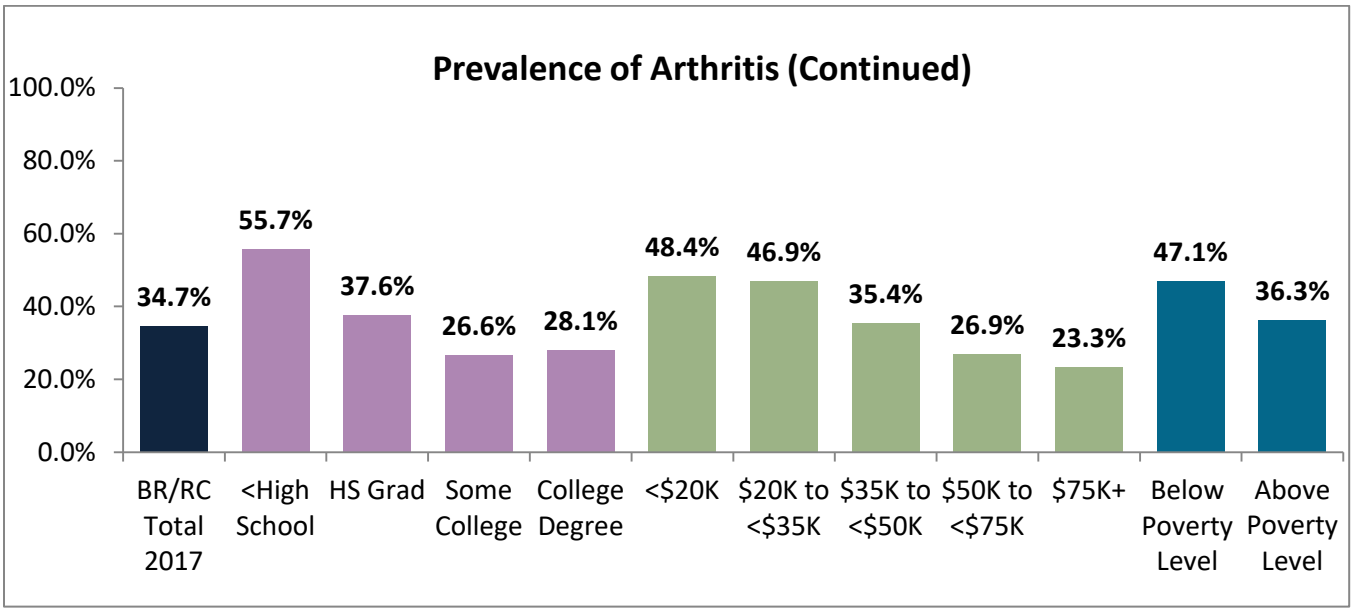


Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.10: Has a doctor, nurse, or other health professional EVER told you that you had COPD (chronic obstructive pulmonary disease), emphysema or chronic bronchitis? (n=1003).

Arthritis

- Overall, roughly one-third (34.7%) of area adults have arthritis, and half of those age 55+ have the condition.
- Arthritis is more common in women than men, in Whites compared to non-Whites, in those with no high school diploma compared to those with more education, and in those with household income less than $35k compared to those with higher incomes.

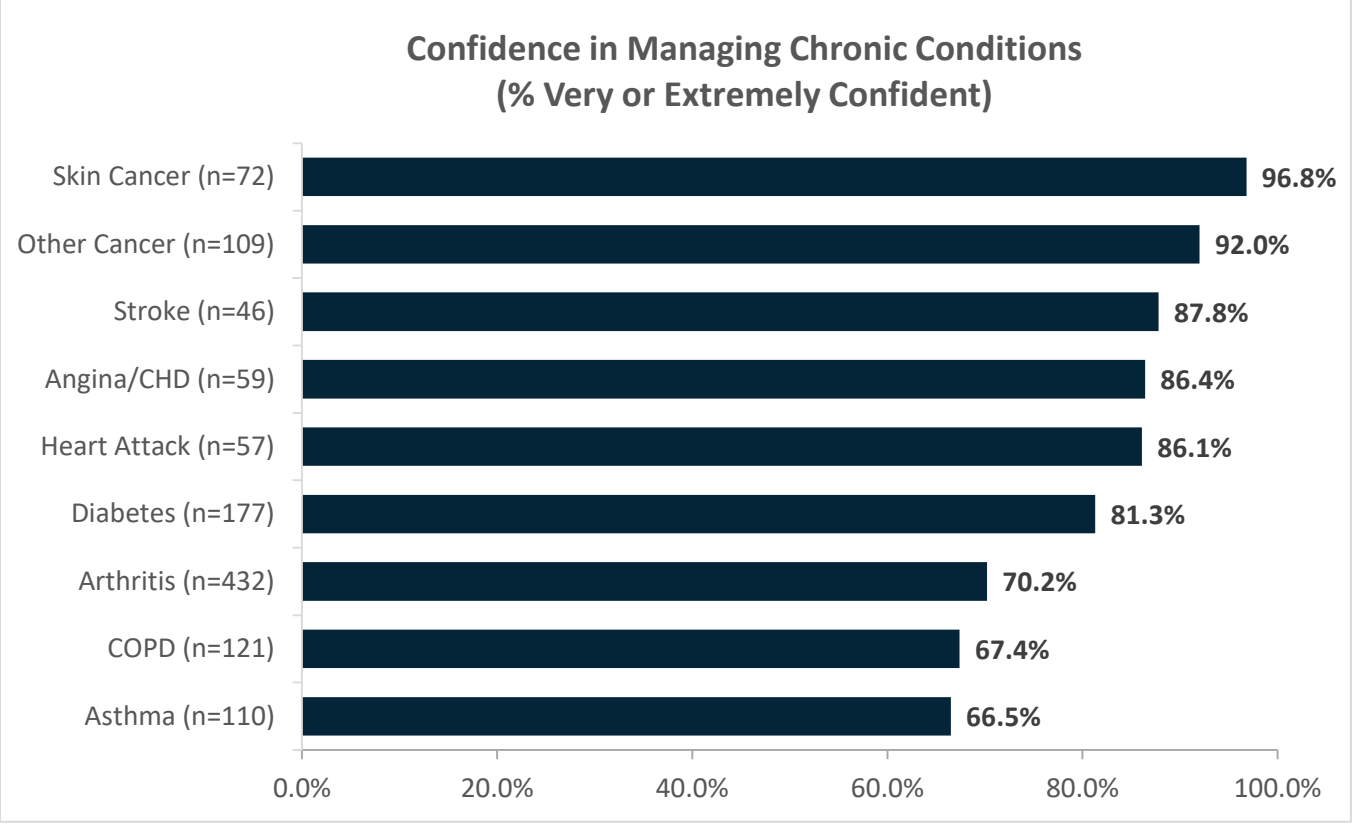




Source: SHBR Behavioral Risk Factor Survey, 2017, Q4.11: Has a doctor, nurse, or other health professional EVER told you that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia? (n=999).

Management of Chronic Conditions

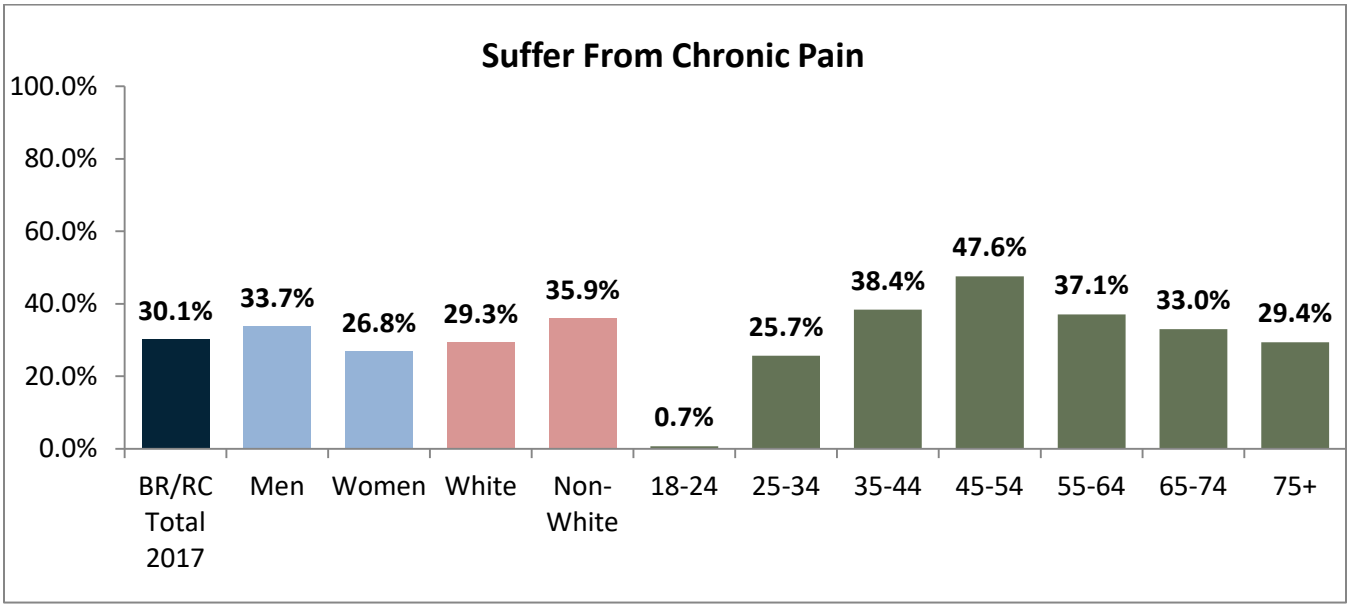
- A majority of adults with chronic conditions are highly confident that they can do everything necessary to manage their condition, with proportions being lowest for asthma, COPD, and arthritis.
- Barriers to confidence include having too many chronic conditions to manage, inadequacy of programs and services, cost of managing the condition, difficulty in remembering, and difficulty being mobile due to chronic conditions.

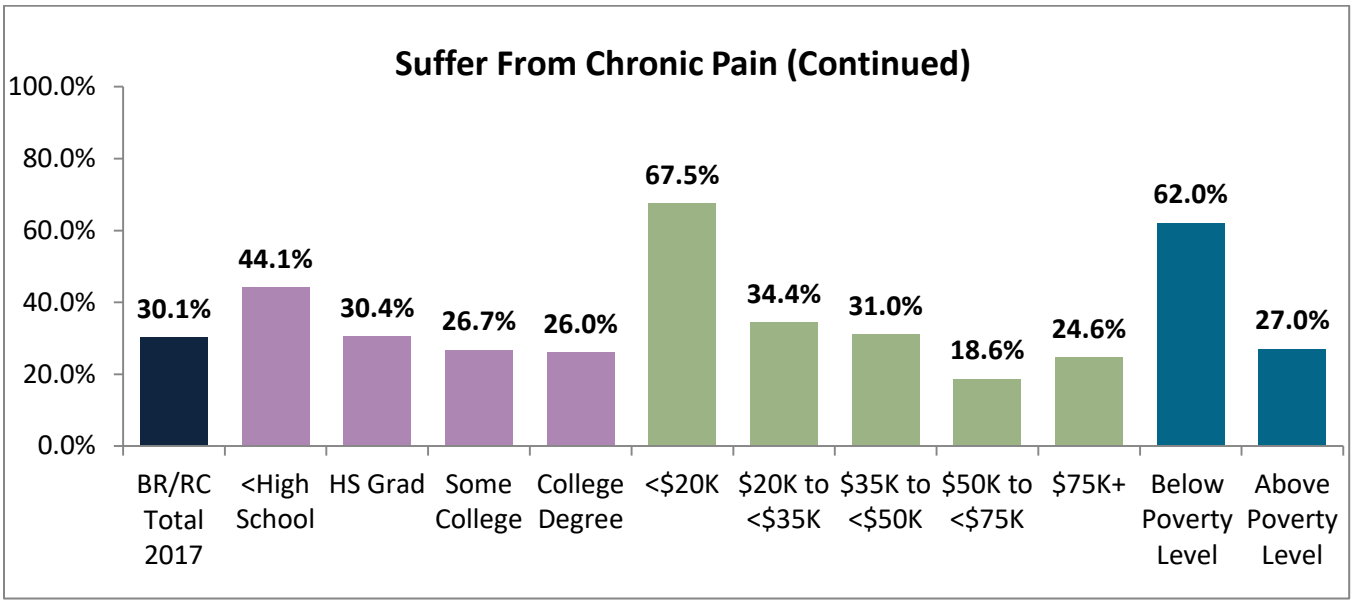


Source: SHBR Behavioral Risk Factor Survey, 2017, Q5.1: Having an illness often means doing different tasks and activities to manage your condition. How confident are you that you can do all the things necessary to manage your [insert condition]? Would you say you are not at all confident, not very confident, 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

- Three in ten area adults suffer from chronic pain. Chronic pain is most common among those below the poverty level and/or with the lowest household incomes (less than $20k), and it is more common among those with no high school diploma compared to those with more education.
- Two-thirds (65.9%) of those with chronic pain report that their pain is well managed.

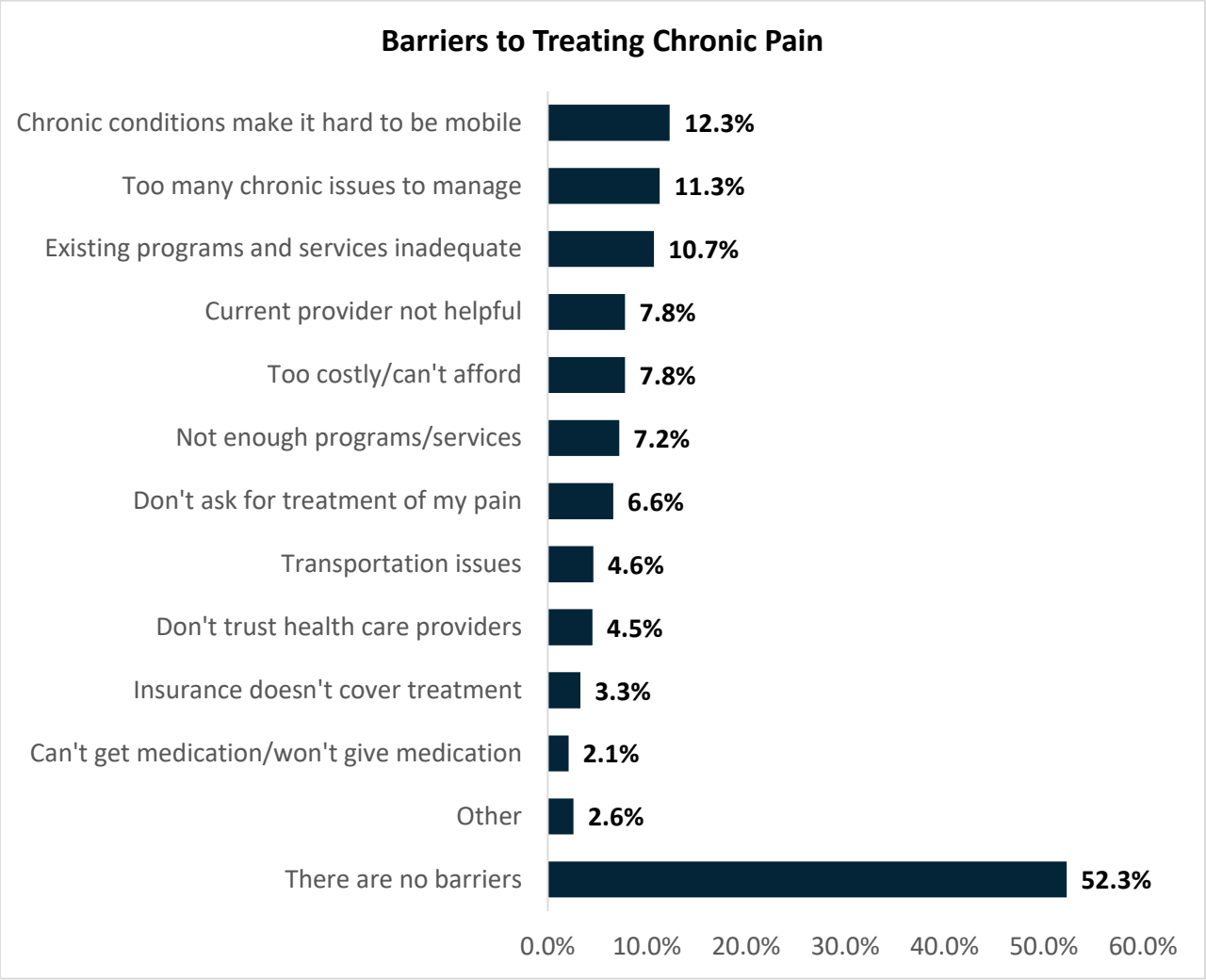




Source: SHBR Behavioral Risk Factor Survey, 2017, Q8.1: Do you suffer from any type of chronic pain; that is, pain that occurs constantly or flares up frequently? (n=1002); Q8.1: (If yes) Do you feel your pain is managed well? (n=318).

Barriers to Treating Chronic Pain

Nearly half of those who suffer from chronic pain report barriers to treating their pain. The top barriers are: compromised mobility due to chronic conditions, having an unmanageable number of chronic issues, and the inadequacy and/or lack of programs and services.



Source: SHBR Behavioral Risk Factor Survey, 2017, Q8.3: What are some of the barriers to treating your pain? (n=321).
Note: The proportion of adults who reported they suffer from chronic pain.

HEALTH CARE ACCESS

Overall State of Health Care Access in the Community

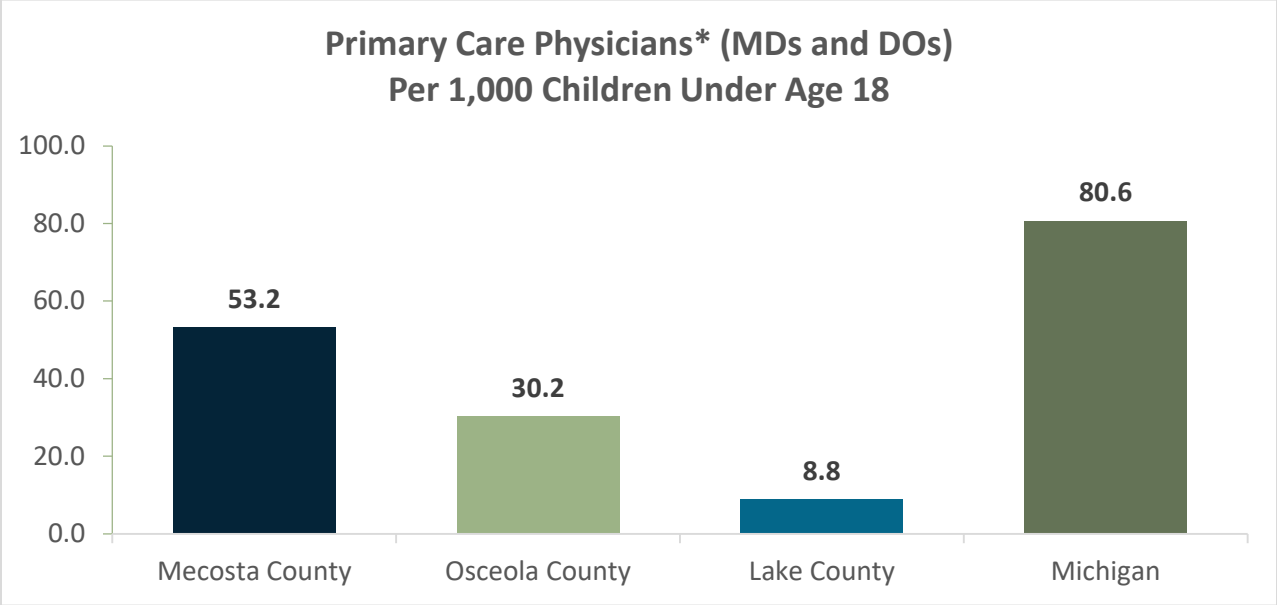
- Despite increased coverage for residents under the Affordable Care Act and the Healthy Michigan Plan, Key Stakeholders and Key Informants report several roadblocks to health care access, including an insufficient number of providers (primary care, specialty care, and mental health/behavioral health), a lack of transportation, and an inability to afford spend-downs, copays, and deductibles.
- For underserved populations in particular, barriers are often financial but can also include transportation challenges and a reduced pool of providers.
- Several steps have been taken to address barriers, such as adding providers in some areas and taking a holistic approach to patient care to get at the root cause of access challenges.

Lack of providers	Each community **could probably use another three to four, maybe five, primary care providers**. – *Key Stakeholder* Where we **lack** is a good network of **specialists.** – *Key Stakeholder* There just are a **limited amount of mental health resources** because we are rural. – *Key Stakeholder*
Transportation challenges	A lot of **people don't have cars…There's not Uber or Lyft**. There's really **not a good bus system**. A lot of the roads are not fabulous, so it's tough. – *Key Stakeholder* Many of the **insurance companies will pay for transportation**; however, they require 3 days' notice to schedule. We have had cases where patients needed to be seen same day however **due to this 3 day rule were not able to come in for care**. – *Key Informant*
Cost of care	I think there are **people with insurance** that **can't use it because of the deductibles and copay costs**. – *Key Stakeholder*
Barriers for underserved residents	**Elderly individuals can't meet their spend-down**, and so they're **choosing between going to the doctor and getting their prescription**. – *Key Stakeholder* Many people are **underinsured** and **cannot afford co-pays and deductibles.** – *Key Informant* **Not enough HCP** that will **accept low payment**. – *Key Informant*
Access improvements	We have **recruited close to two dozen providers in the last two years**. – *Key Stakeholder* I think **the dental piece**, to some extent, **is being addressed**. – *Key Stakeholder* We're **trying to integrate behavioral health and physical health** together… So, someone's not taking their blood pressure medication - why is it? Is it they just forget, or is it because they can't afford to buy their medication? – *Key Stakeholder*

Source: SHBR Key Stakeholder Interviews, 2017, Various questions (n=5); Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in the community? Q1a: Why do you think it's a problem in your community? (n=46).

Health Care Providers

- All three SHBR service area counties have considerably lower PCPs (MDs and DOs) per capita compared to Michigan overall. Lake County's rate is by far the lowest, with only about one-tenth the number of PCPs per capita as the state.
- Key Stakeholder and Key Informant comments support this data.



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

I think, in general, it's just hard to recruit primary care; we're just not producing them. A lot of the **residents really aren't choosing primary care as their career choice** and go into specialties. – *Key Stakeholder*

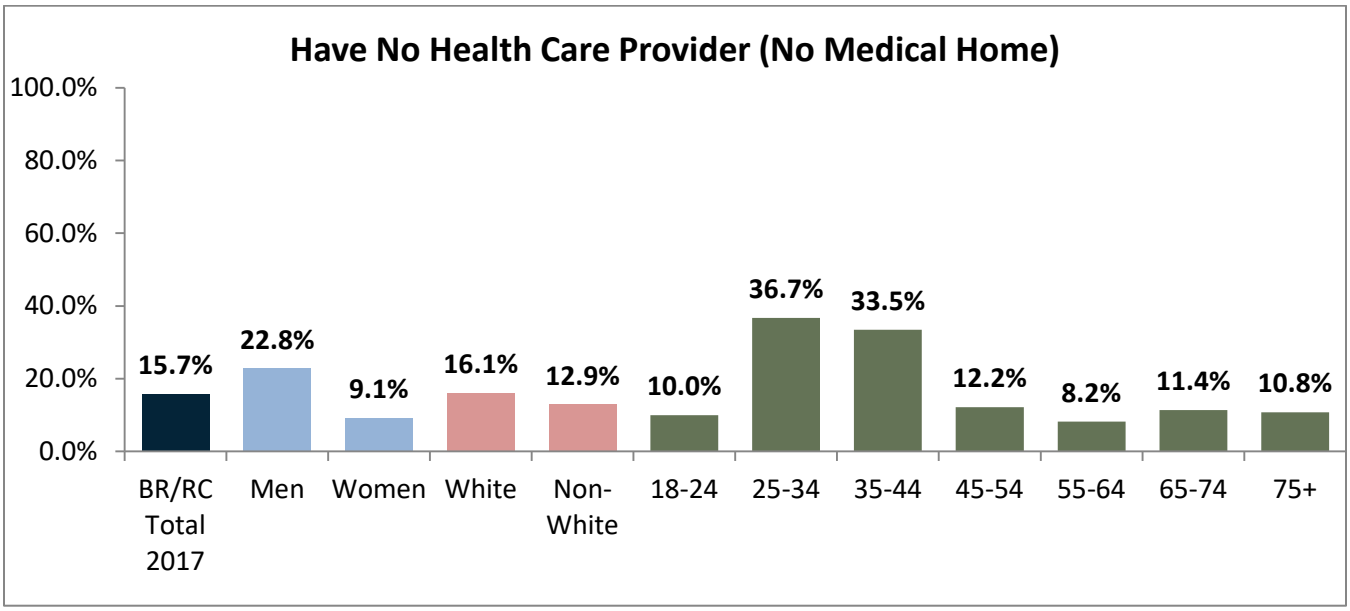
They do have [incentives] because of our poverty area, so **you can get your loans paid off if you work in a rural community for a while, but then usually they leave**. – *Key Stakeholder*

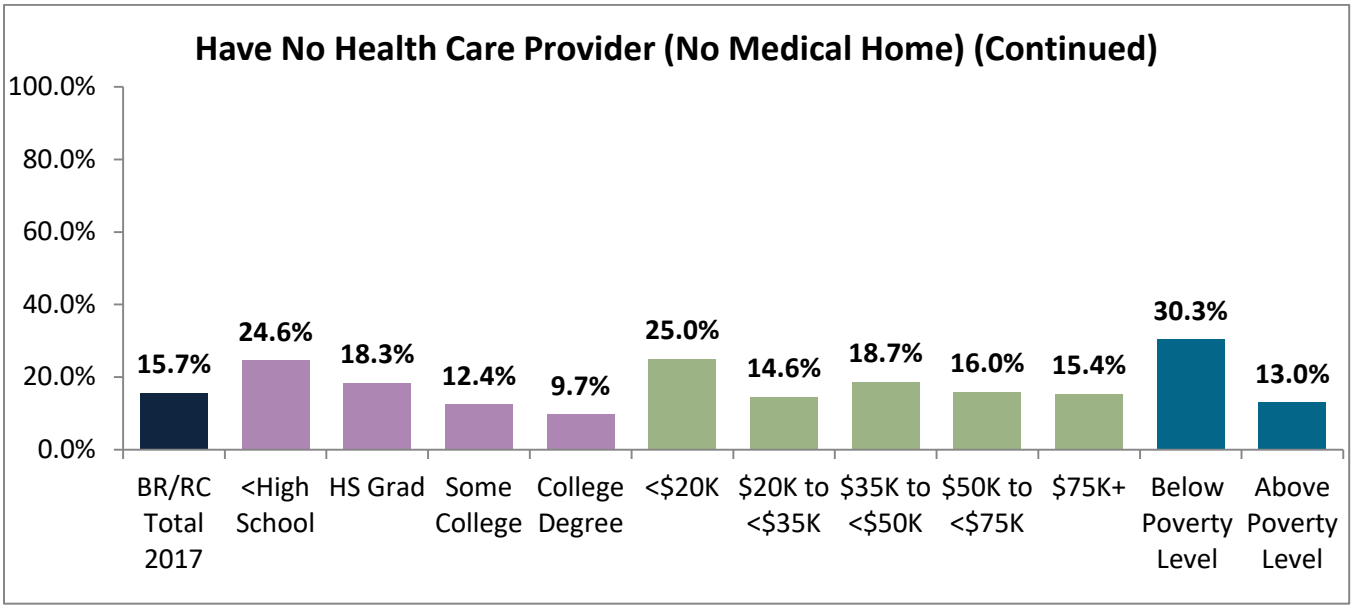
For some offices, patients have to **wait over a year for a new patient appointment**. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q3a: Is there a wide variety/choice of primary health care providers? (n=5); SHBR Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in the community? Q1a: Why do you think it's a problem in your community? Please be as detailed as possible. (n=46).

Health Care Providers (Continued)

- Nearly one in six (15.7%) SHBR area adults have no personal health care provider, and this proportion rises to 20.0% for underserved adults.
- Among adults ages 25-44, and among adults below poverty level, more than three in ten do not have a PCP.
- In addition, men are less likely to have a PCP than women, and those with lower education levels are less likely to have a PCP than those with more education.

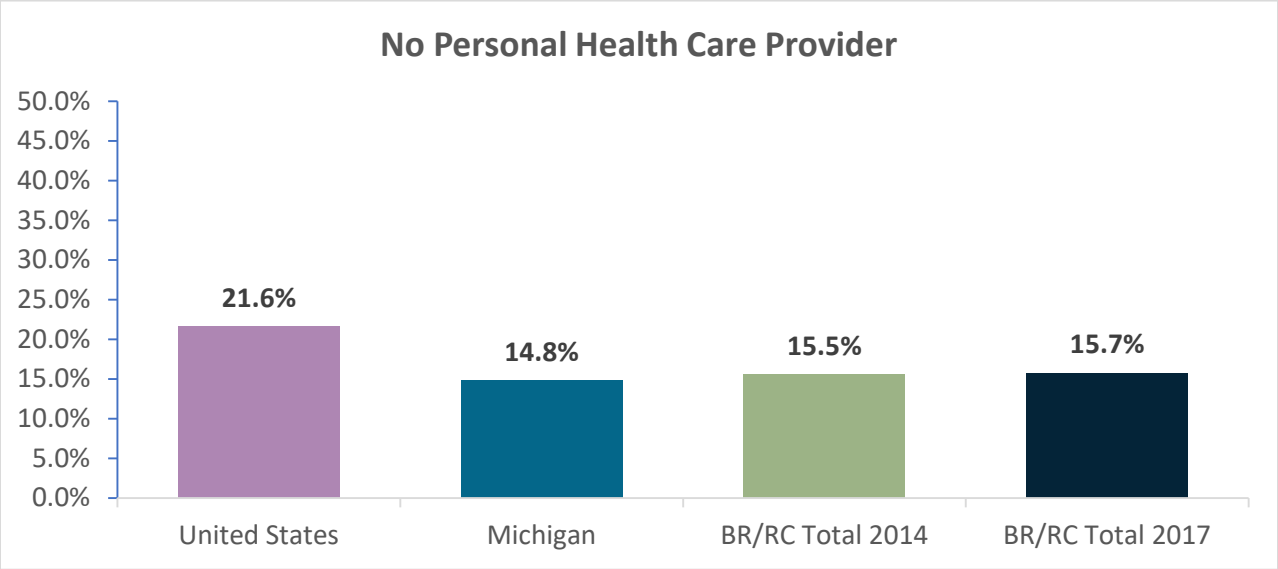




Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.4: Do you have one person you think of as your personal doctor or health care provider? (n=565).

Health Care Providers (Continued)

The proportion of area adults with no personal health care provider has increased slightly since the last CHNA and is higher than the state proportion, although lower than the national rate.

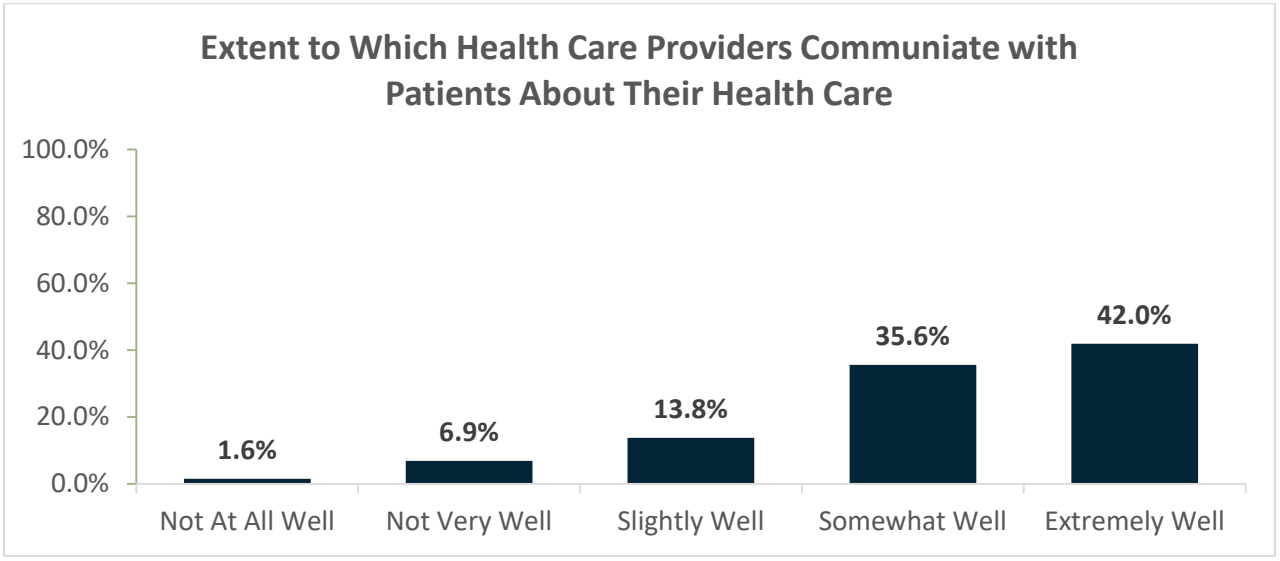


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.

Health Care Providers (Continued)

- Underserved residents want providers who are good communicators (taking time to listen/answer questions/explain thoroughly), honest, personable (caring/compassionate/friendly), helpful, competent/knowledgeable, focused on prevention, affordable, and available.
- A large majority (77.6%) of underserved residents believe health care providers communicate with them well.

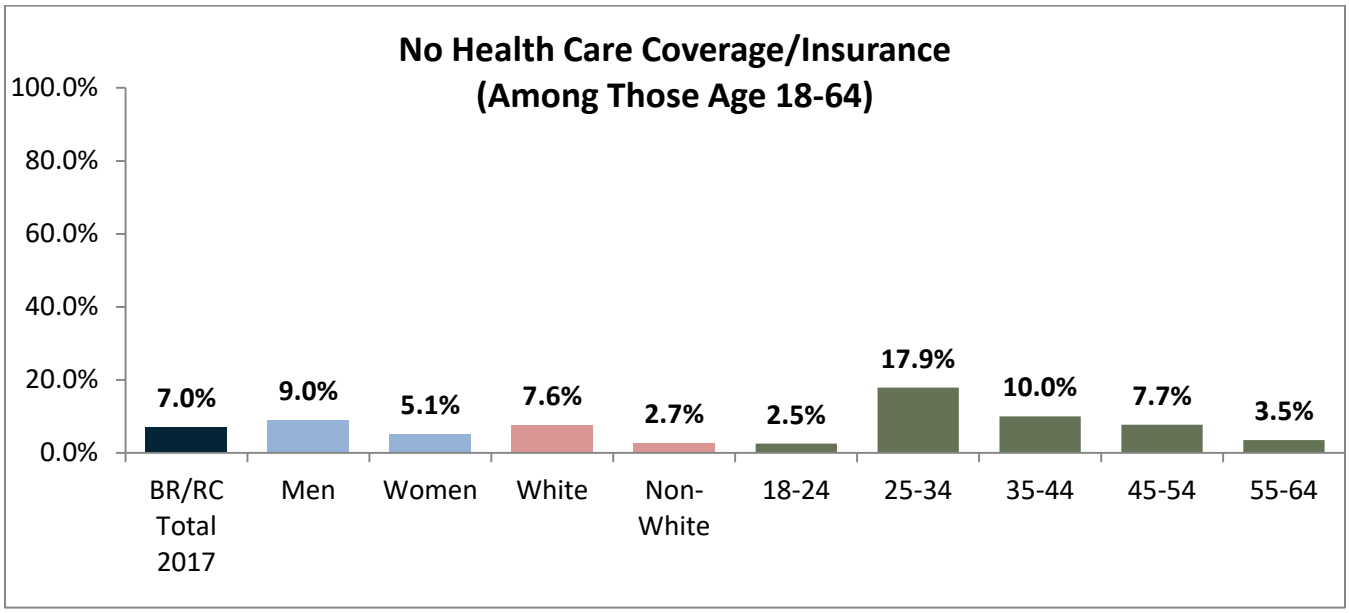
Source: SHBR Underserved Resident Survey, 2017, Q3: What is the most important quality you look for in a health care provider? Please be as detailed as possible. (n=197).

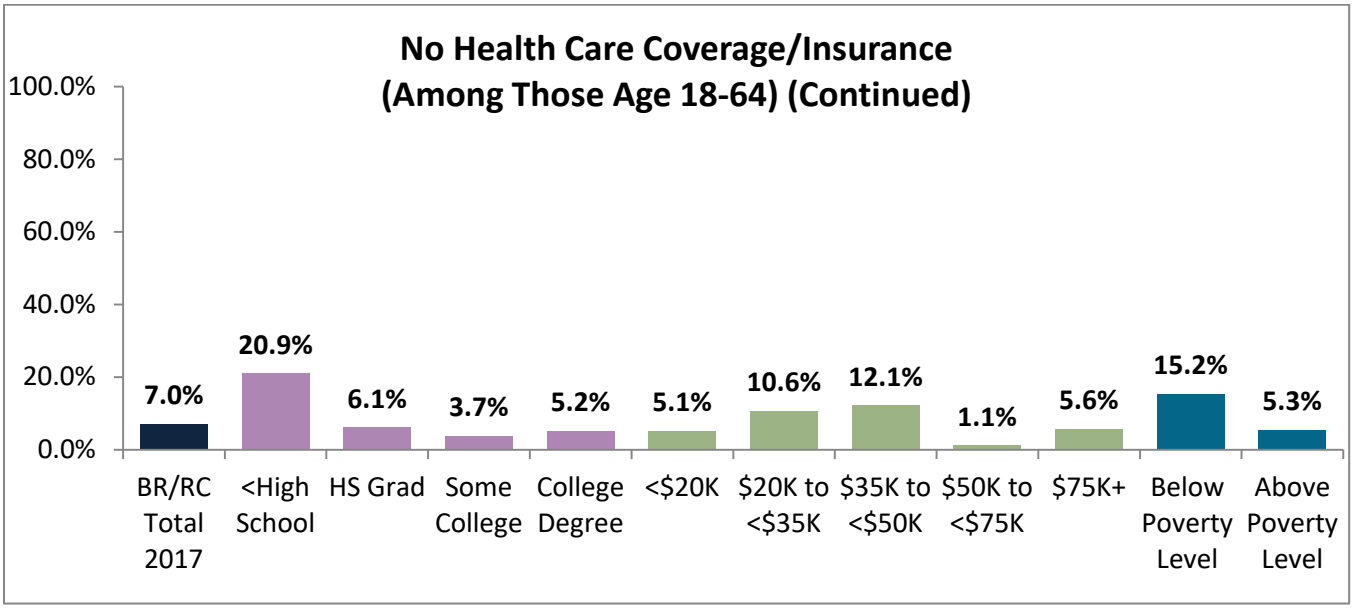


Source: SHBR Underserved Resident Survey, 2017, Q8: How well do you feel health care providers communicate with you about your health care? (n=188).

Health Care Coverage

- Among SHBR area adults ages 18-64, 7.0% have no health care coverage or insurance; this rate has improved from 2014 (13.3%) and is better than the state (12.0%) and national (12.3%) rates.
- Groups most likely to be without health care coverage are those who are without a high school diploma, adults ages 25-34, and those living below the poverty level.





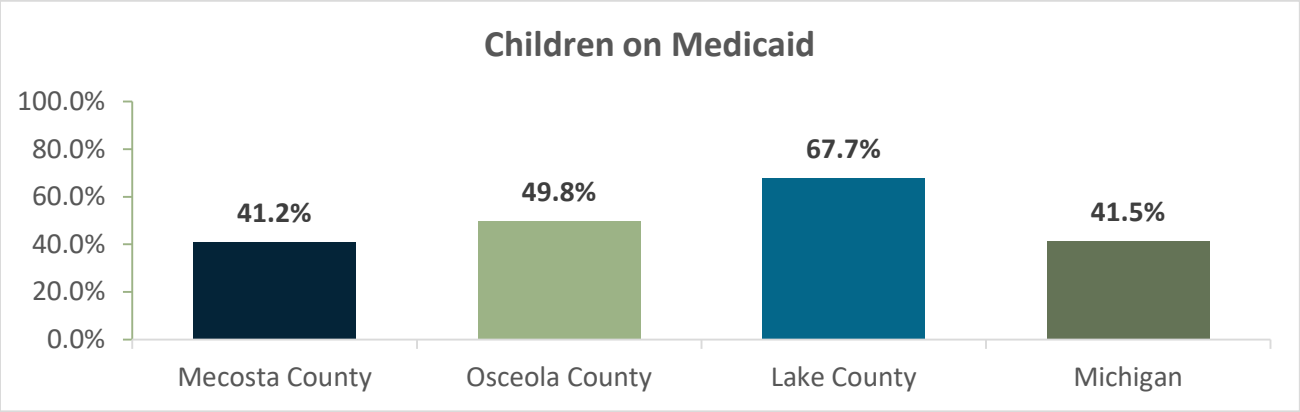
Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.1: Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare or Indian Health Service? (n=542).
Note: among adults aged 18 to 64.

Health Care Coverage (Continued)

- The most common source of health coverage for adults in the general population is a plan purchased through an employer or union. For underserved adults, however, the most common source is Medicaid or another state program, accounting for half (50.5%) of this population's health coverage.
- Osceola County and especially Lake County have higher percentages of children on Medicaid than Michigan overall.

	Primary Source of Health Coverage of All Adults	
	BRFS (n=1000)	Underserved* (n=194)
A plan purchased through an employer or union	34.7%	16.5%
Medicare	25.4%	40.2%
A plan that you or another family member buys on your own	15.4%	7.2%
Medicaid or other state program	17.0%	50.5%
Tricare, VA, or military	1.4%	2.1%
Medicare supplement	NA	11.3%
Other	0.4%	7.2%
None	5.7%	6.7%

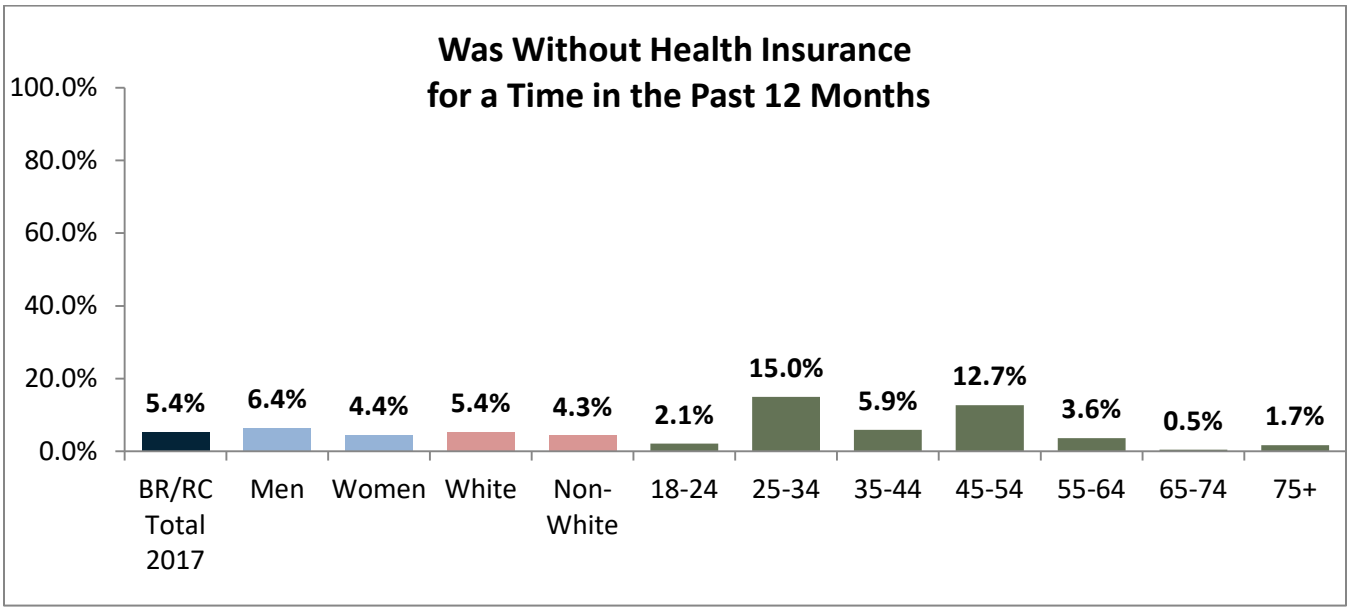
Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.2: What is the primary source of your health care coverage? Is it…?; SHBR Underserved Resident Survey, 2017, Q9: Which of these describes your health insurance situation? *Note: multiple response question.

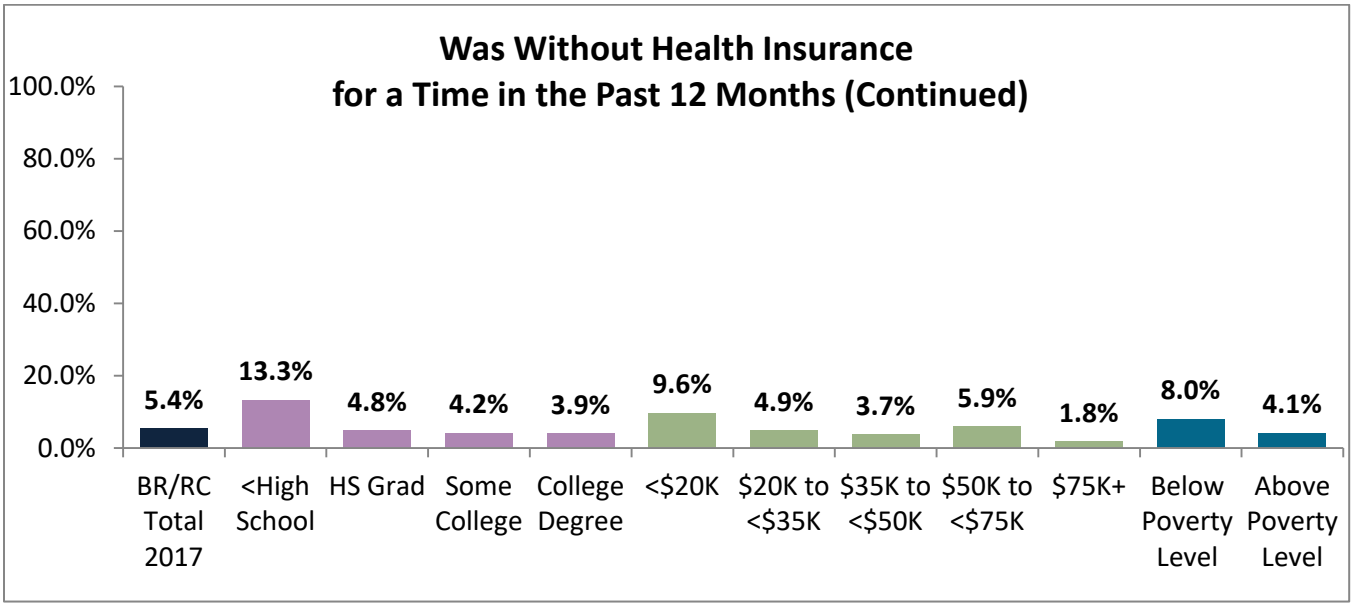


Source: Kids Count Data Book, 2016.

Health Care Coverage (Continued)

- Among area adults with health insurance, 5.4% went without insurance at some time during the past year.
- Those most likely to have gone without insurance at some point are those ages 25-34 and those without a high school diploma.

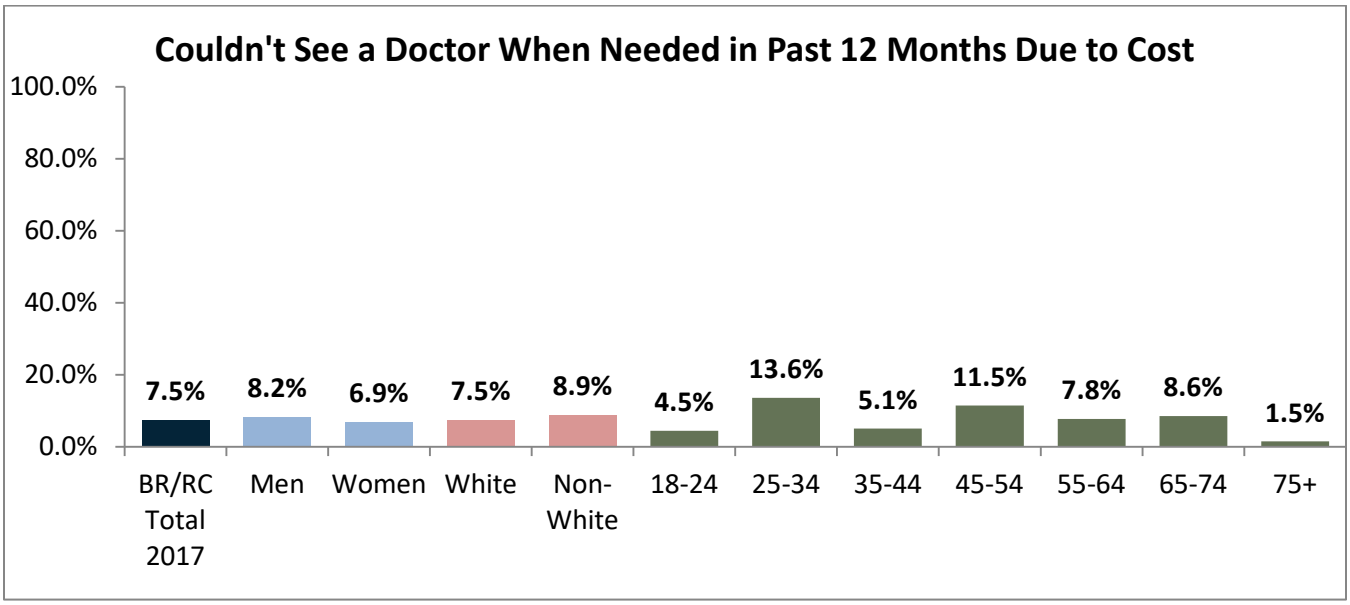


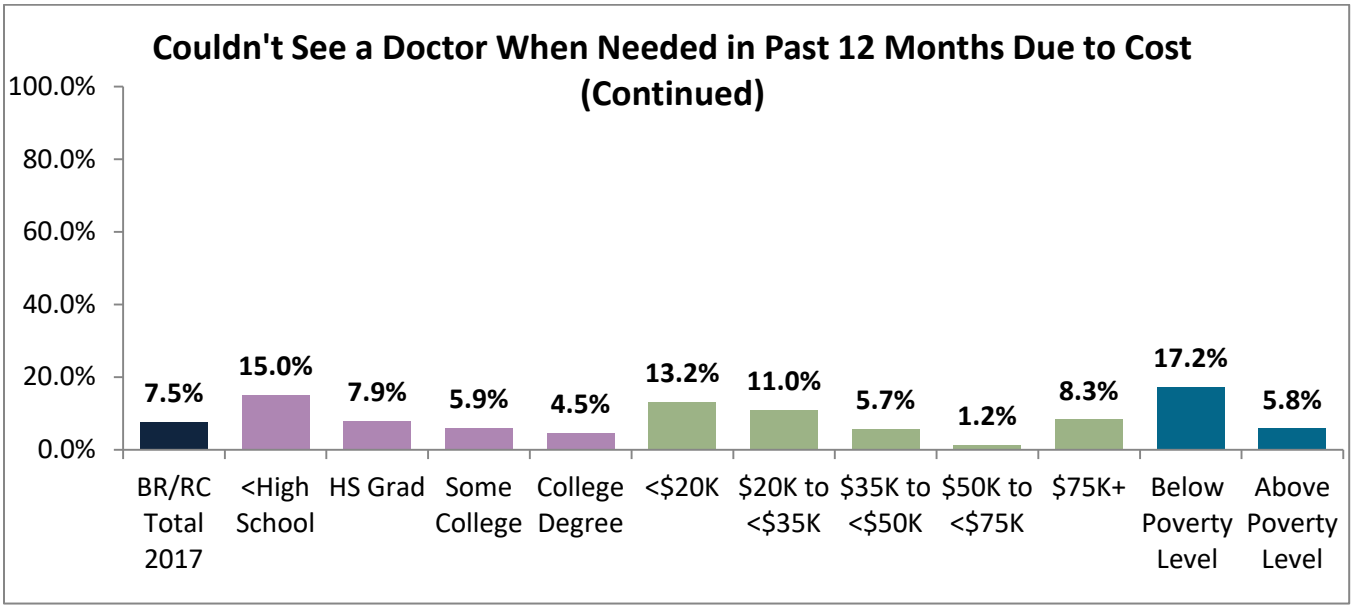


Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.3: In the past 12 months was there any time when you did not have any health insurance or coverage? (n=964).
Note: among all adults who had health insurance.

Problems Receiving Health Care

- Among all SHBR area adults, 7.5% have foregone a needed doctor visit in the past year due to cost; this rate has improved from 2014 (11.4%) and is better than the state (12.7%) and national (12.0%) rates.
- This percentage more than doubles for those below the poverty level, where 17.2% have foregone a doctor visit in the past year due to cost.

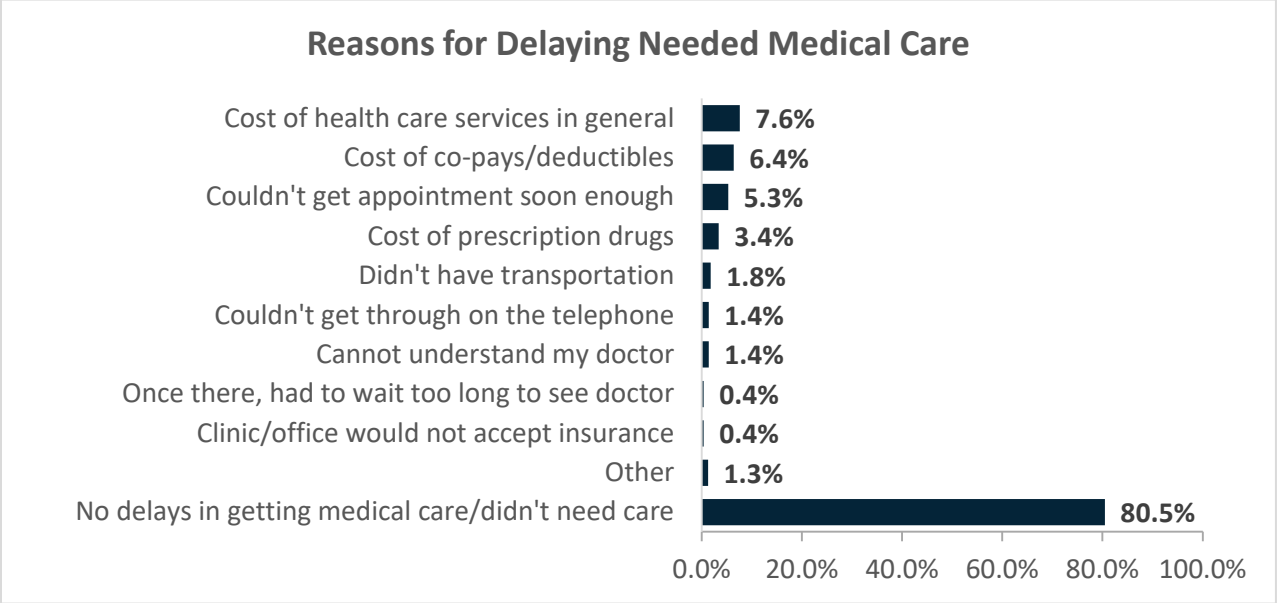




Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.5: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost? (n=1001).

Problems Receiving Health Care (Continued)

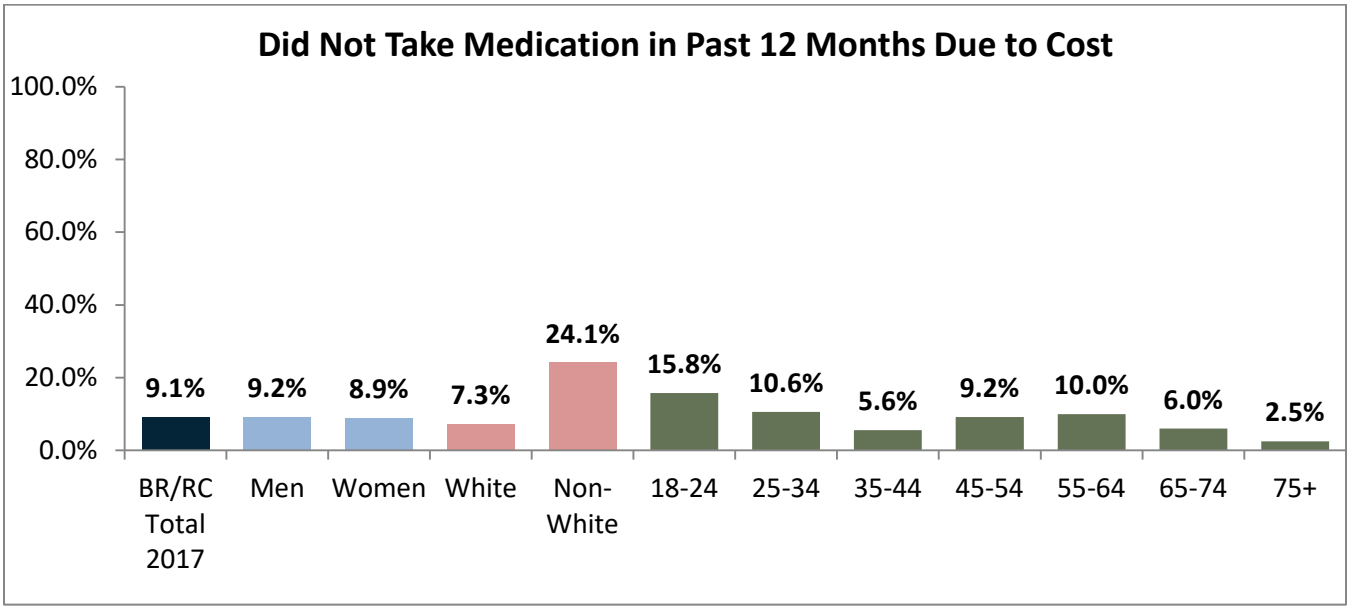
- Eight in ten area adults did not experience any delays in getting needed medical care in the past year.
- Among those who did experience delays, cost of care was the top reason (including general cost of services, cost of copays/deductibles, and prescription costs), followed by the inability to obtain a timely appointment.

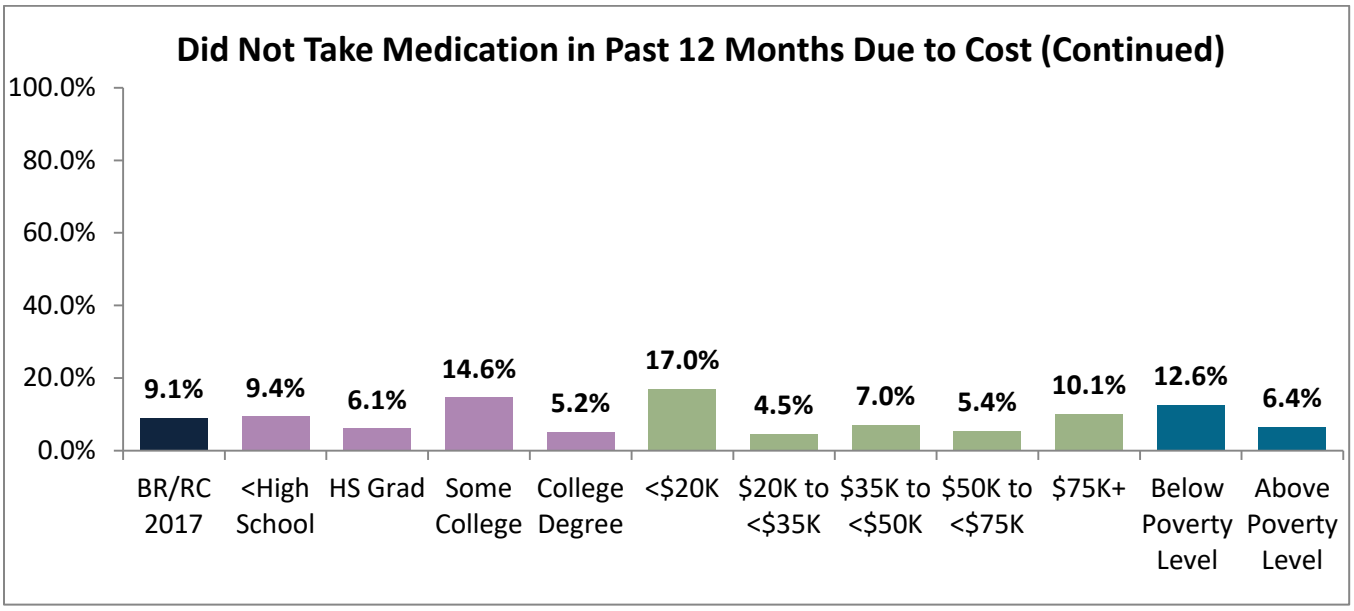


Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.6: There are many reasons why people delay getting needed medical care. Have you delayed getting needed medical care for any of the following reasons in the past 12 months? (n=1001).

Problems Receiving Health Care (Continued)

- One in eleven (9.1%) SHBR area adults did not take their medication as prescribed due to cost at some point in the past year, and the percentage rises to 27.6% among underserved adults.
- Non-Whites are much more likely than Whites to have been impacted by prescription costs, and those with household incomes less than $20k are more likely to have been impacted than those with higher incomes.

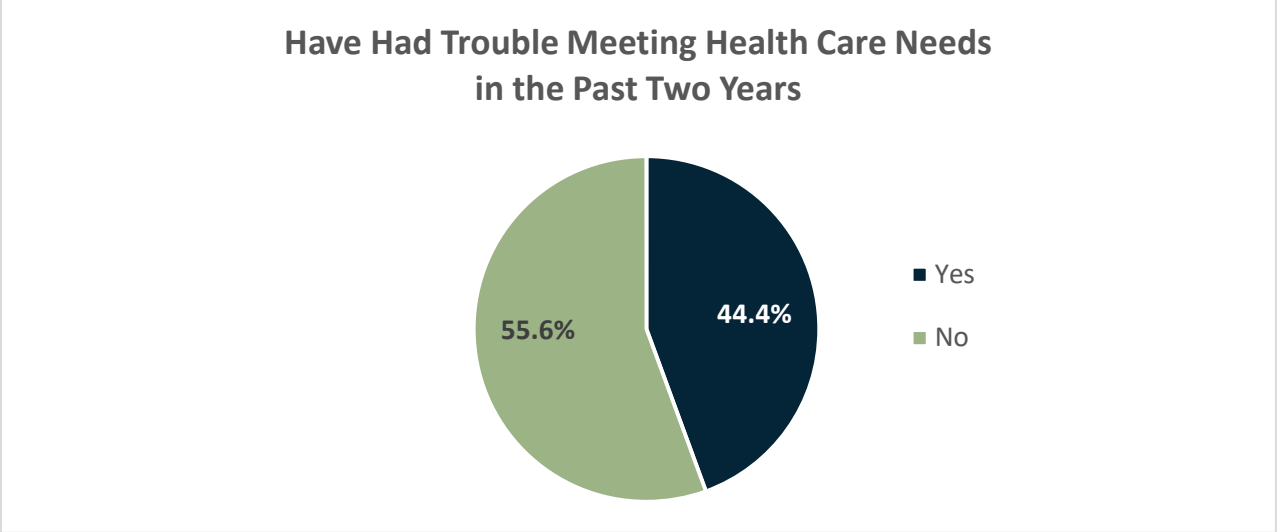




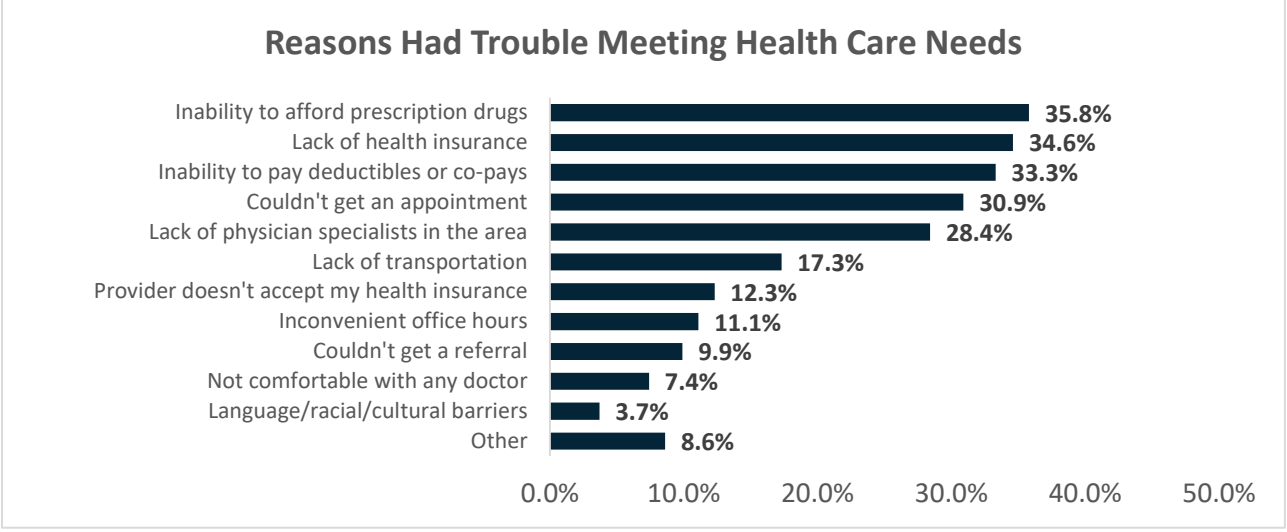
Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.7: Was there a time in the past 12 months when you did not take your medication as prescribed, such as skipping doses or splitting pills, in order to save on costs? Do not include over-the-counter (OTC) medication. (n=1004); Underserved Resident Survey, 2017, Q12: Have you ever skipped your medication, or stretched your supply of medication, in order to save costs? (n=181).

Problems Receiving Health Care (Continued)

- Nearly half (44.4%) of underserved residents have had trouble meeting the health care needs of themselves and/or their family in the past two years.
- Those who had trouble meeting health care needs cited barriers similar to those expressed by the population in general, with the top barriers being cost (cost of prescriptions, deductibles, and copays; lack of insurance), inability to get an appointment, lack of specialists in the area, and lack of transportation.



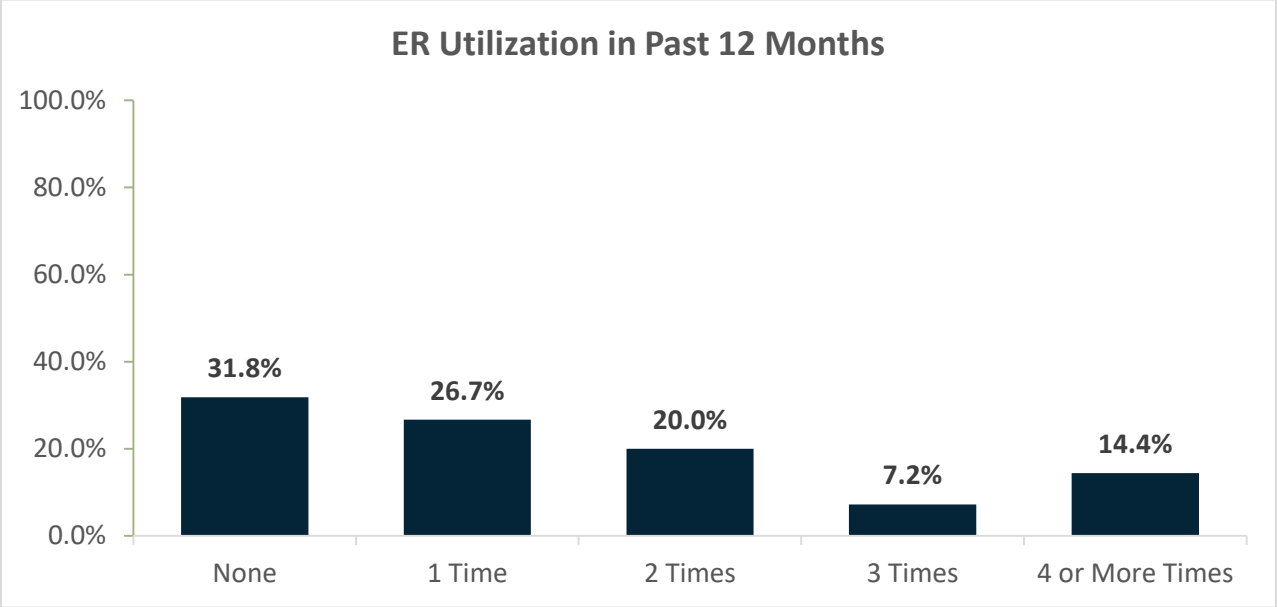
Source: SHBR Underserved Resident Survey, 2017, Q10: In the past two years, was there a time when you had trouble meeting the health care needs of you and your family? (n=196).



Source: SHBR 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=81).
Note: among those who had trouble meeting health care needs of themselves/their family.

Problems Receiving Health Care (Continued)

- Among underserved residents, nearly seven in ten (68.3%) report that they and/or an immediate family member have visited the emergency room (ER) in the past year, and 21.6% report three or more visits.
- Comments made by area health professionals support the notion that ER visits occur more often than is warranted, due to a shortage of area physicians.



Source: SHBR 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=195).

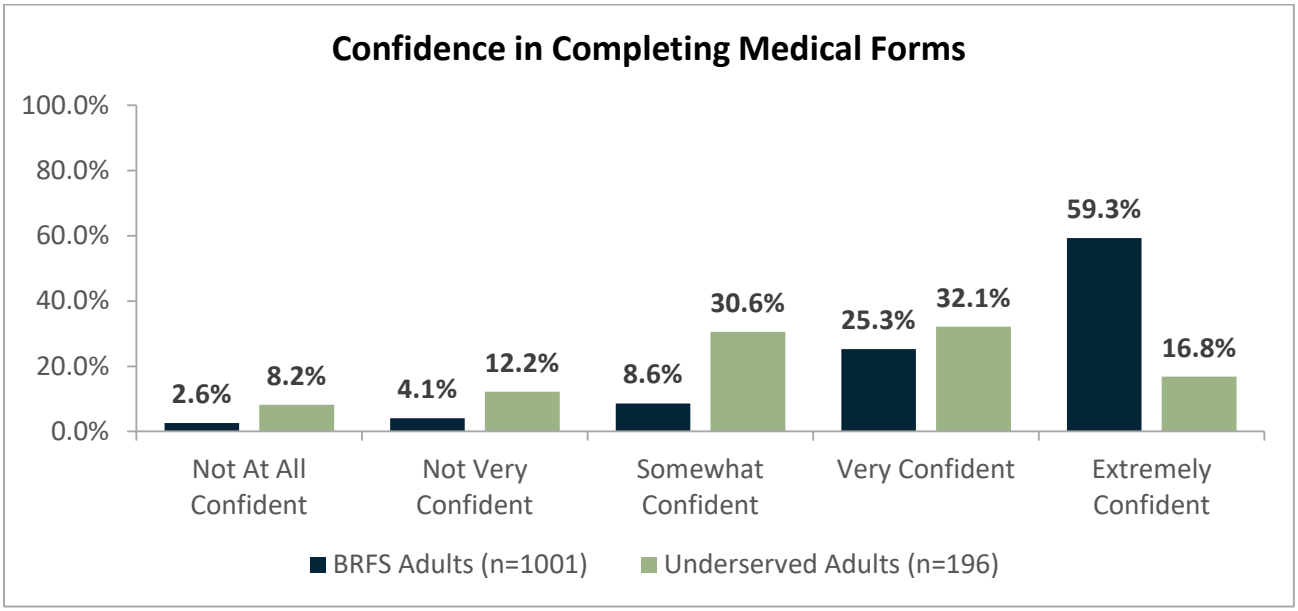
We have a **shortage of primary care physicians**, so often **they're told to go to the emergency room for things that you shouldn't be going to the emergency room for**. – *Key Stakeholder*

Roughly **25,000 visits to SHBR ER** and **14,000 visits to SHRC ER** because **people can't get into their PCP**. – *Key Informant*

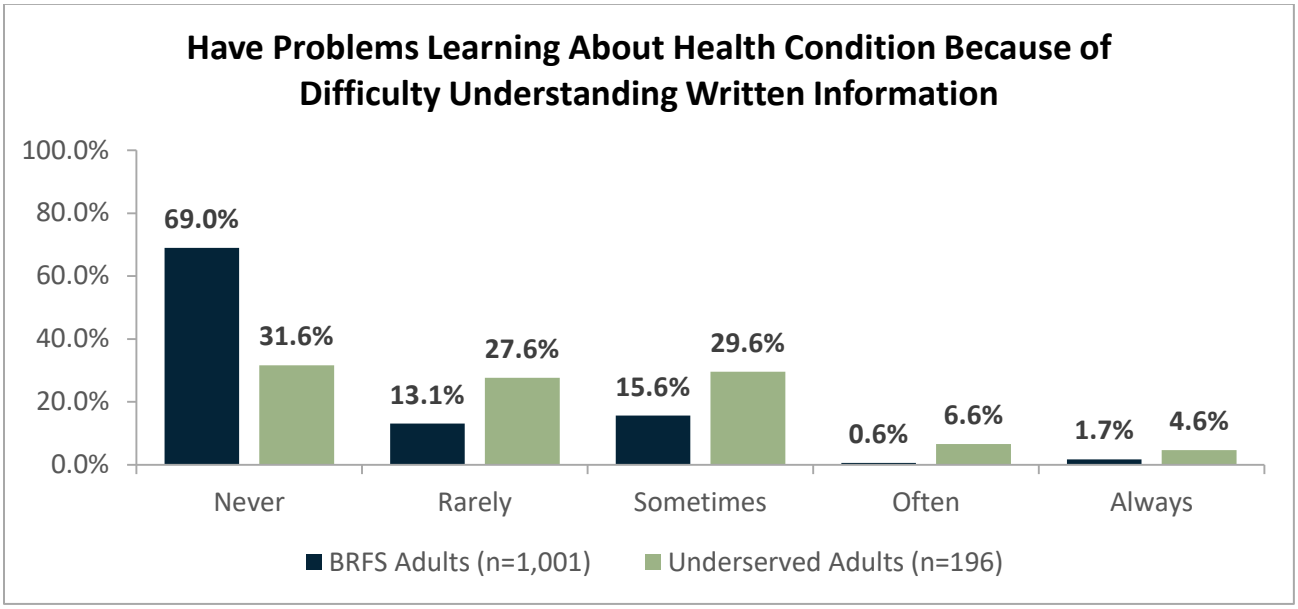
No urgent care clinic, doctor's offices full. **Many use the ED as a doctor office**. – *Key Informant*

Health Literacy

Underserved residents are more challenged when it comes to health literacy compared to adults in the general population. For example, 84.6% of adults in the general population are very or extremely confident in completing medical forms, compared to 48.9% of underserved residents.



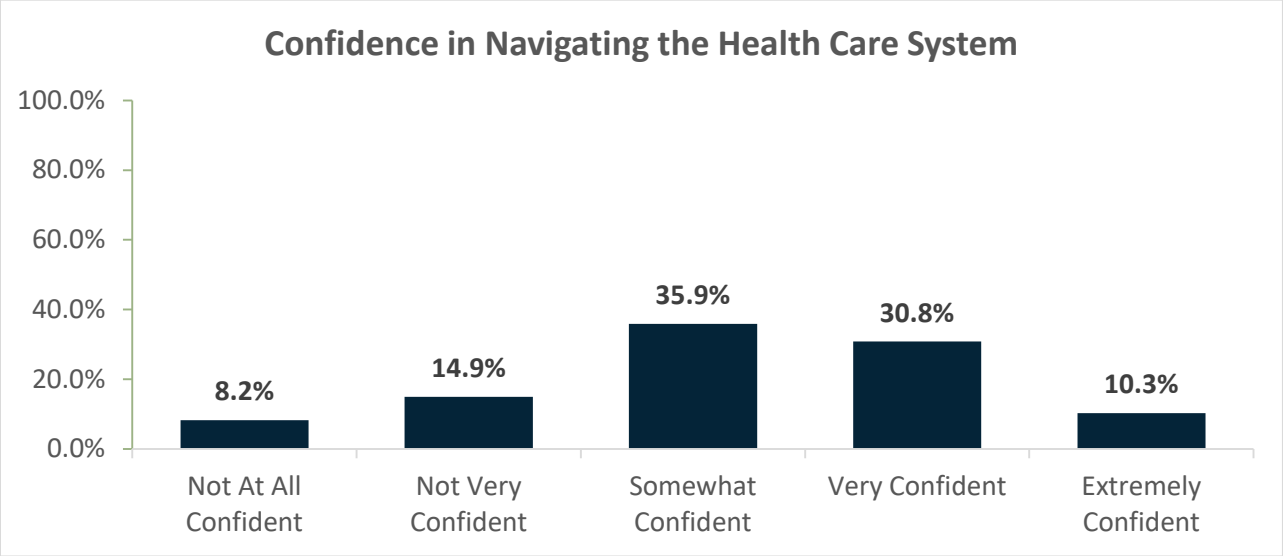
Source: SHBR Behavioral Risk Factor Survey, 2017, Q9.1/ SHBR Underserved Resident Survey, 2017, Q19: How confident are you in filling out medical forms by yourself? For example, insurance forms, questionnaires, and doctor's office forms. Would you say….?



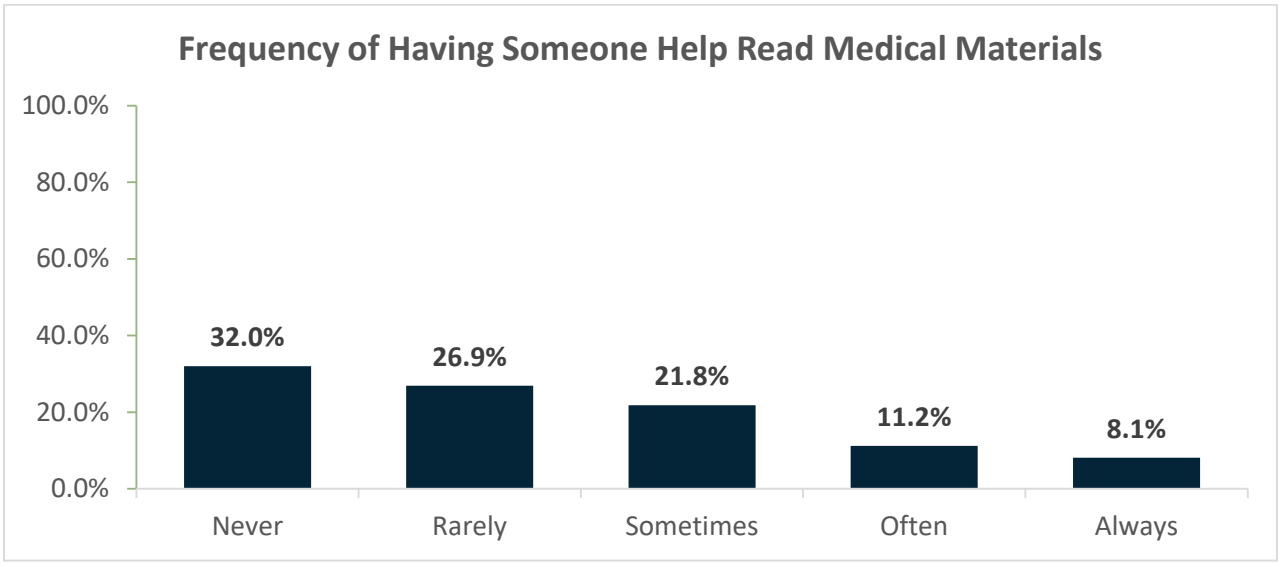
Source: SHBR Behavioral Risk Factor Survey, 2017, Q9.2/ SHBR Underserved Resident Survey, 2017, Q21: How often do you have problems learning about your health condition because of difficulty in understanding written information? Would you say…?

Health Literacy (Continued)

- More than one in five (23.1%) underserved residents are not confident in navigating the health care system, and an additional 35.9% are only somewhat confident.
- Further, 19.3% always or often seek help from someone else when reading medical materials.



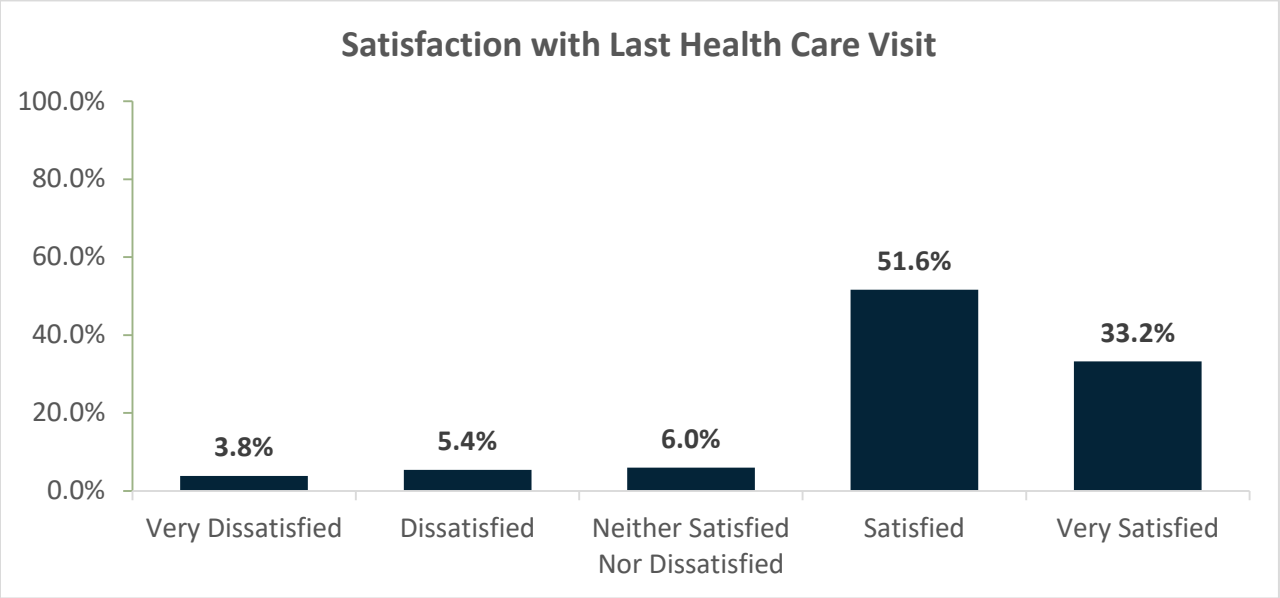
Source: SHBR Underserved Resident Survey, 2017, Q18: How confident are you that you can successfully navigate the health care system? By navigating the health care system, we mean knowing: how to use your health plan or insurance, what your plan covers, how to read your statements, where to go for services, how to find a primary care provider, what your options are for treatment, etc. Would you say…? (n=195).



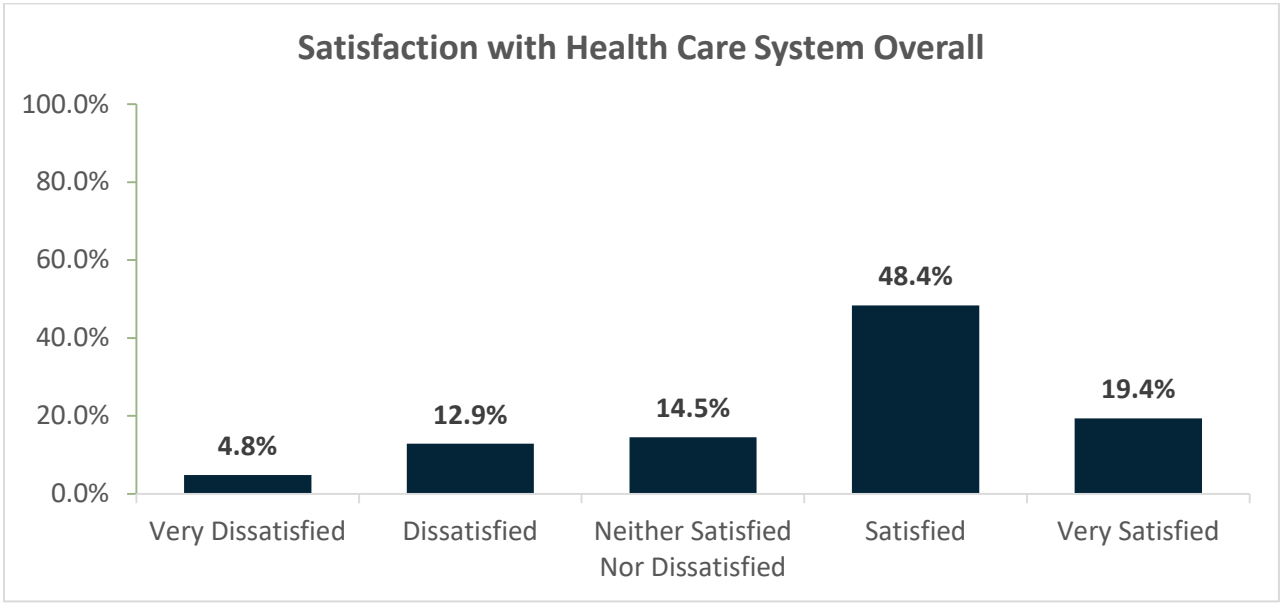
Source: SHBR Underserved Resident Survey, 2017, Q20: How often do you have someone help you read medical materials? For example, a family member, friend, caregiver, doctor, nurse, or other health professional? Would you say…? (n=197).

Satisfaction with Health Care System

The large majority (84.8%) of underserved residents are satisfied with their last health care visit, and two-thirds (67.8%) are satisfied with the health care system overall.



Source: SHBR Underserved Resident Survey, 2017, Q4: How satisfied were you with your last visit for health care? (n=184).



Source: SHBR Underserved Resident Survey, 2017, Q6: How satisfied are you with the health care system overall? (n=186).

Satisfaction with Health Care System (Continued)

Underserved residents cite attentiveness/concern for their issues, thorough communication/ explanations, quality of care, and prompt service as reasons for satisfaction with their last health care visit.

Attentiveness/ Concern	They are generous and **care about your well-being**. Provider was **caring** and **took time with her care**. My doctor was very **attentive to my concern** and needs.
Communication/ Explanation	My doctor **gave me all the information** I need. He was **very good at telling me what is going on** with me.
Quality of care	**Everything was taken care of** the way it was supposed to be.
Prompt service	I was seen on time. I **didn't wait long** for the nurse or doctor to see me. My **diagnosis was quick**. Appointment was timely and **wait times were reasonable**.

Source: SHBR Underserved Resident Survey, 2017, Q5: Why do you say that? Please be as detailed as possible. (n=78).

Satisfaction with Health Care System (Continued)

The few underserved residents who expressed dissatisfaction with their last health care visit cited reasons such as poor treatment, pushy providers, high cost, lack of clear answers, and lack of a resolution.

Doctors are very busy and **push you out the door**.

Tried to force a treatment I didn't want.

Health care is **unaffordable** and medicines are addictive.

Answers are **unclear.**

Didn't get a health care **answer**.

Source: SHBR Underserved Resident Survey, 2017, Q5: Why do you say that? Please be as detailed as possible. (n=78).

Satisfaction with Health Care System (Continued)

Underserved residents cite quality of services, attentive/caring providers, and service accessibility (affordable, access to insurance, proximity of care, availability of appointments) as positive aspects of the health care system overall.

Quality of services	Because they **take good care of me**. Good **follow through**.
Attentive/caring providers	Because they all **care about patients**. Very **friendly and nice**.
Accessibility	I'm satisfied because I receive quality care that is **affordable**. My son and I haven't gone a day without being **qualified for health insurance**. I am **close to the facilities** - except GR. When I call **I can get in**.

Source: SHBR Underserved Resident Survey, 2017, Q7: Why do you say that? Please be as detailed as possible. (n=78).

Satisfaction with Health Care System (Continued)

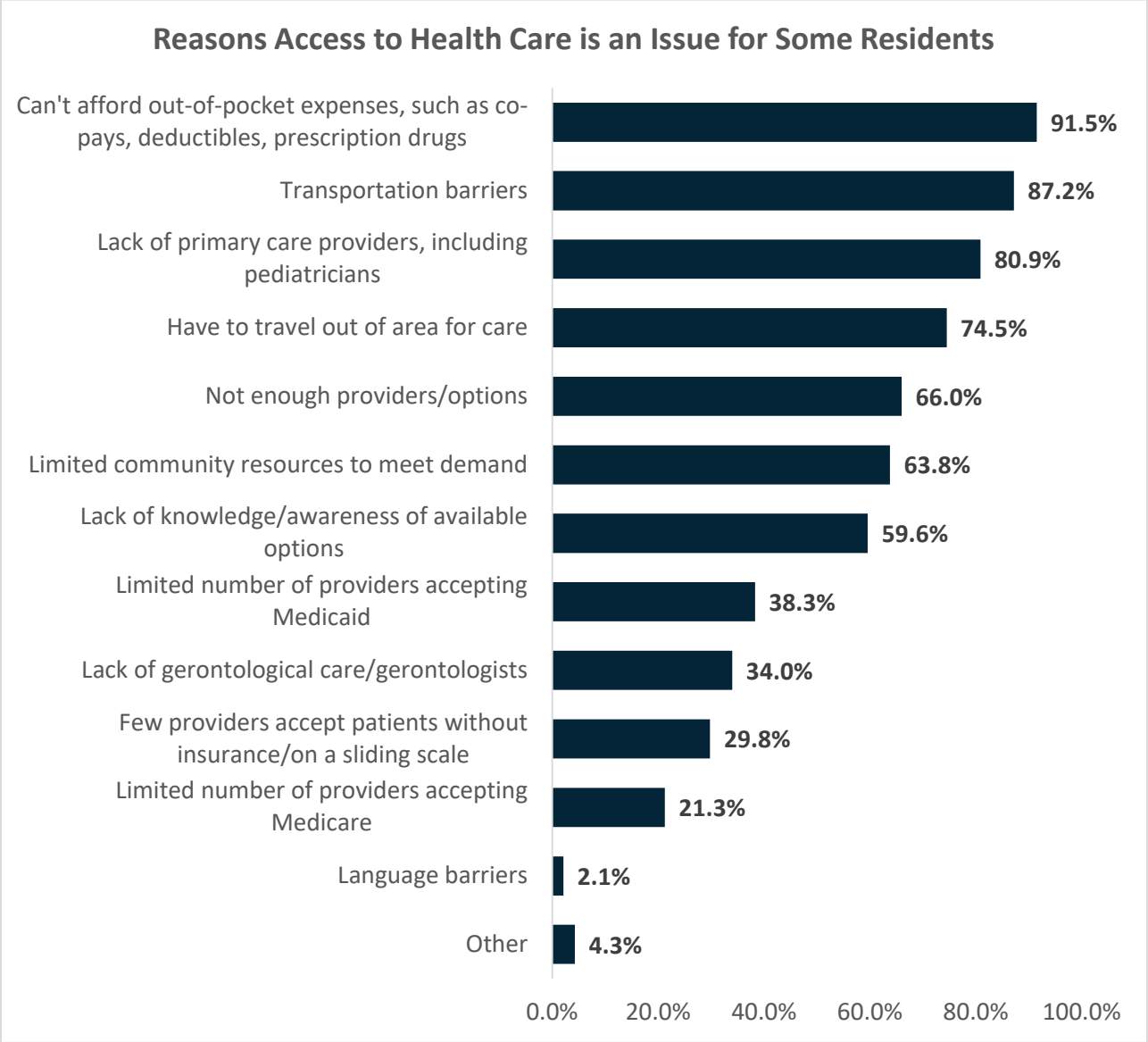
Conversely, aspects of dissatisfaction with the health care system among underserved residents include a shortage of providers, high costs, a model based on profit rather than patient care and prevention, and the system's confusing/complex nature.

Shortage of providers	**Specialists are usually far away**. No transportation and I don't drive. Takes **too long to get an appointment.** **Need more doctors.** Health care is available to all but doctors are needed to fill this demand.
High costs	Care is **expensive.** **Costing more money** than I have ever spent, $7000.00 so far this year.
Poor model/Profit focused/Lack of prevention focus	Healthcare is based off what insurance you have, meaning **some don't get the help they need**. Overall the **system needs a wordly change** in food intake and **unnecessary medicines**. Every health care system **should include natural foods and treatments**.
Complex	Too much **paperwork.** **Entities** in the same system **don't communicate**.

Source: SHBR Underserved Resident Survey, 2017, Q7: Why do you say that? Please be as detailed as possible. (n=78).

Barriers to Health Care

- Nearly all (97.9%) Key Informants believe access to health care is a critical issue for some residents in the community.
- The most widely-reported barriers to care are inability to afford out-of-pocket expenses, transportation issues, lack of primary care providers, and the need to travel out of the area for care.

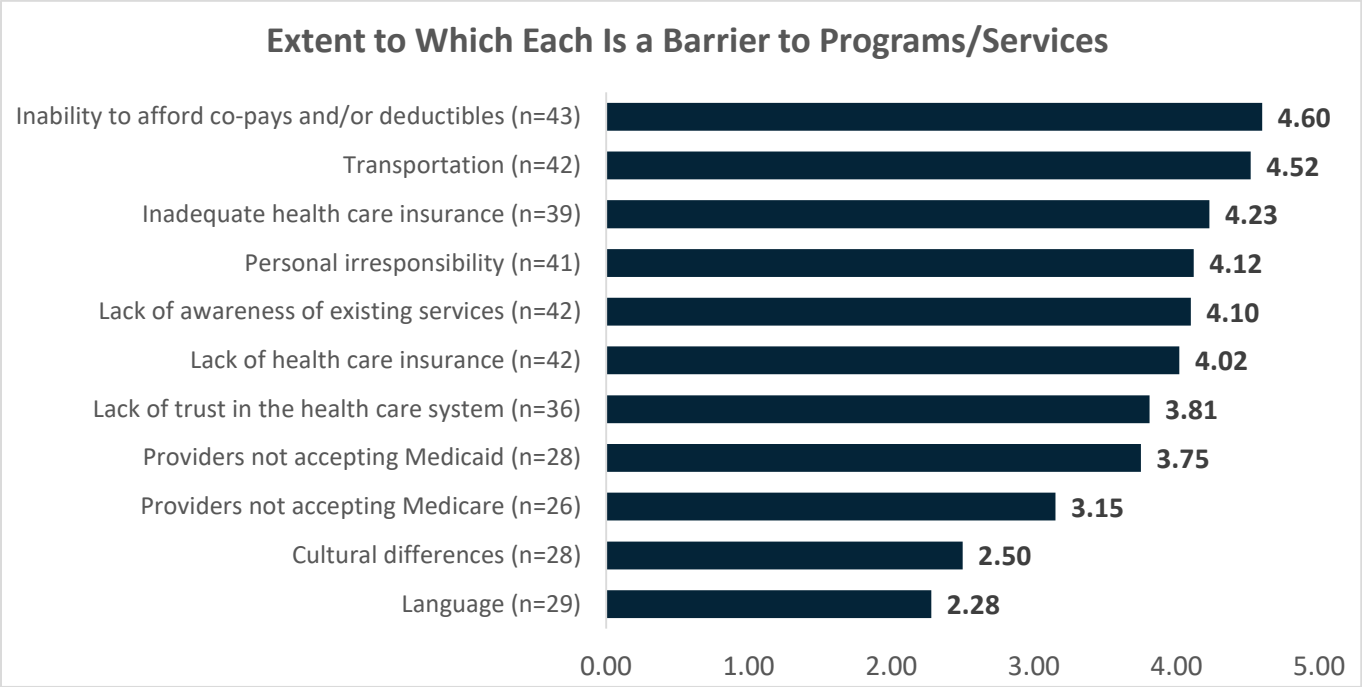


Source: SHBR Key Informant Online Survey, 2017, Q4: Do you believe that access to health care is a critical issue for some residents in your community? (n=48); Q4a (If yes) In your opinion, why is access to health care an issue for some residents in your community? (n=47).

Barriers to Health Care (Continued)

- When Key Informants were asked to rate the extent to which various factors are barriers to health care, the two that rose to the top were 1) inability to afford copays/deductibles and 2) transportation, followed by inadequate insurance, personal irresponsibility, lack of awareness of services, and lack of insurance.

- In addition, Key Stakeholders note that language and cultural barriers can be an issue for some residents.



Source: SHBR 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.

If I have a spend-down, I technically have coverage for prescription and for medical. It's not necessarily lack of access or lack of receiving that benefit; **it's the spend-down or the deductible that's getting in my way** of care. – *Key Stakeholder*

One of my concerns is that we'll continue to see deficits in [transportation] because there's **changes to that emergency medical transport** through the Department **coming up in our budget this year,** so where we can provide transportation for clients who have Medicaid, **that may be further limited**. – *Key Stakeholder*

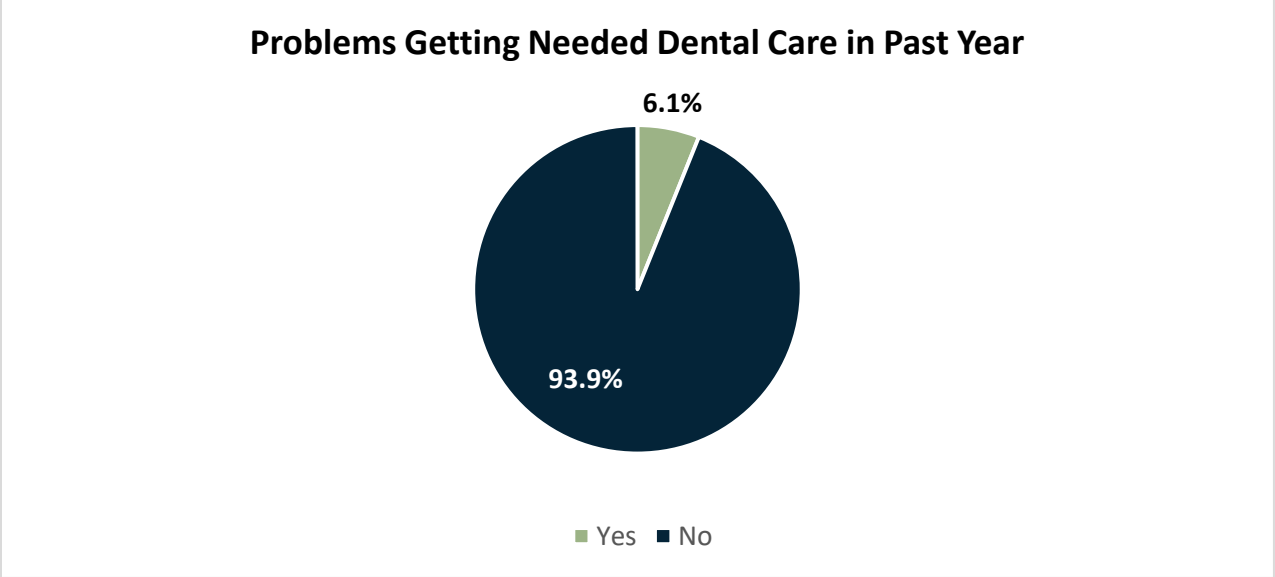
There are always going to be **a segment of the population** that, for whatever reason, **just don't know about them or refuse to access dental services**. – *Key Stakeholder*

There's **not a lot** in the way **of providers who are Hispanic or Spanish-speaking**, and that may be a barrier, particularly [for the migrant population]. – *Key Stakeholder*

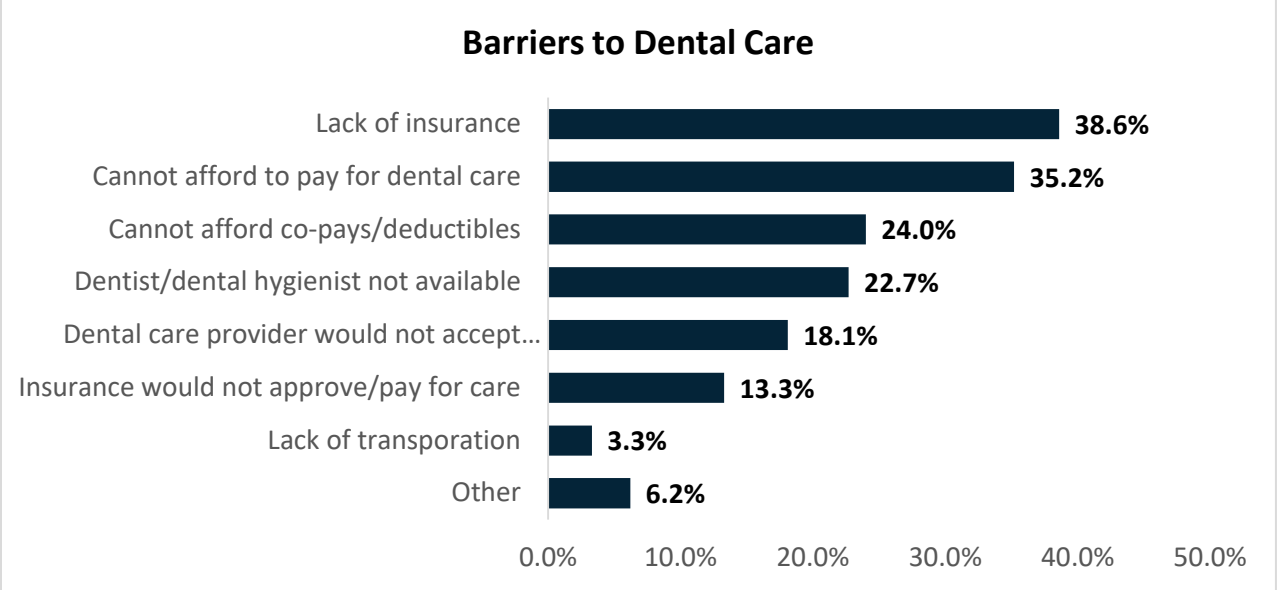
Source: SHBR Key Stakeholder Interviews, 2017, Q7: Are there any barriers or obstacles to health care programs/services in your community?' Q7a: (If yes) What are they? (n=5).

Barriers to Dental Care

Few (6.1%) area adults had problems getting needed dental care in the past year, but among those who did, the top barriers were financial – lack of insurance, inability to afford dental care in general, and inability to afford copays/deductibles.



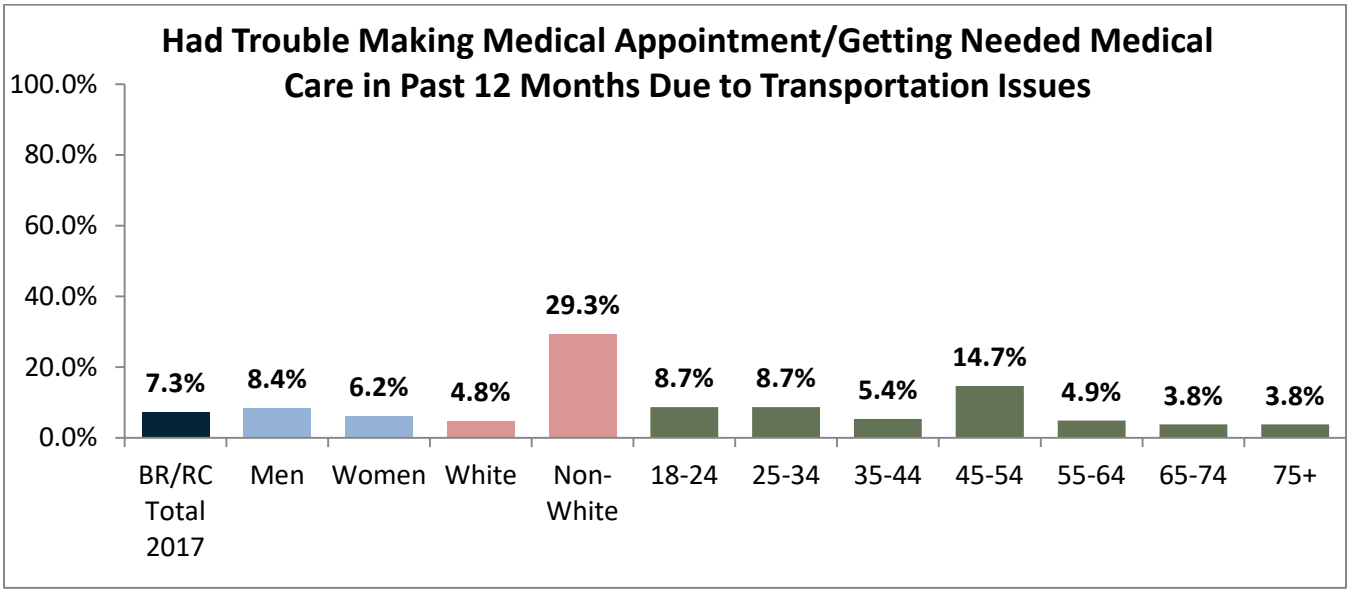
Source: SHBR Behavioral Risk Factor Survey, 2017, Q19.2: In the past 12 months, have you had problems getting needed dental care? (n=997).

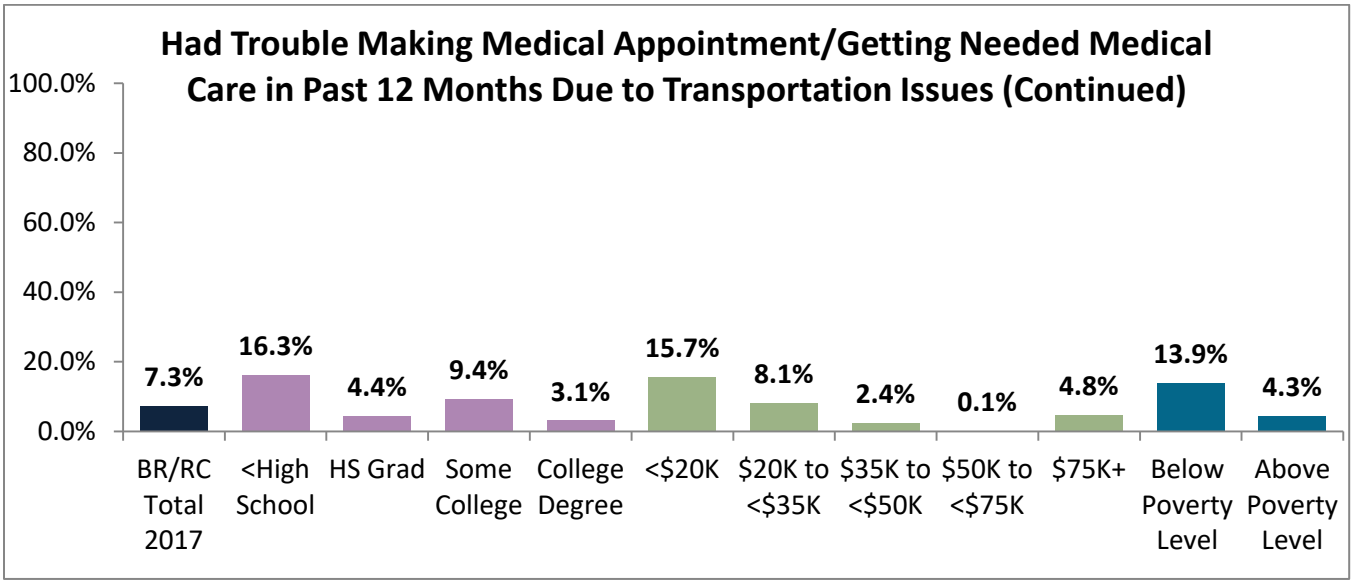


Source: SHBR Behavioral Risk Factor Survey, 2017, Q19.3: (If yes) Please provide the reason(s) for the difficulty in getting dental care. (Multiple response) (n=62).

Transportation as a Barrier to Care

- One in fourteen (7.3%) SHBR area adults had trouble making a medical appointment or getting needed medical care in the past year due to transportation issues.
- Among non-White adults, nearly three in ten (29.3%) had transportation issues.
- In addition, those with less than a high school diploma and/or with household incomes less than $20k were more likely to have had transportation issues.

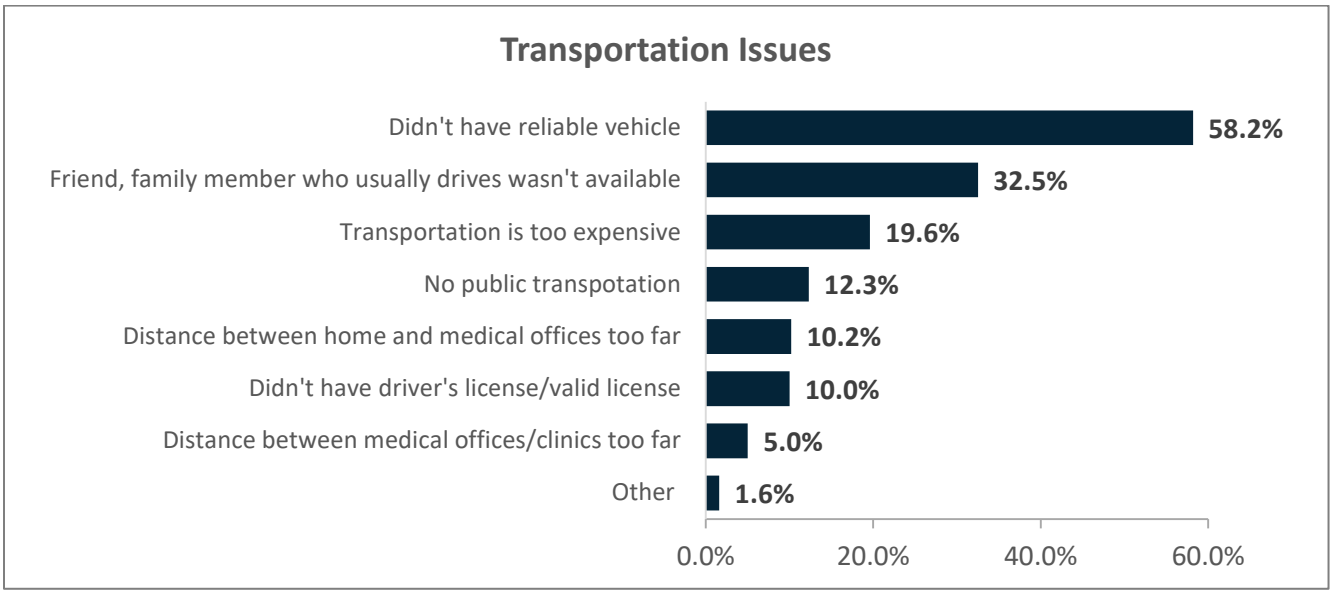




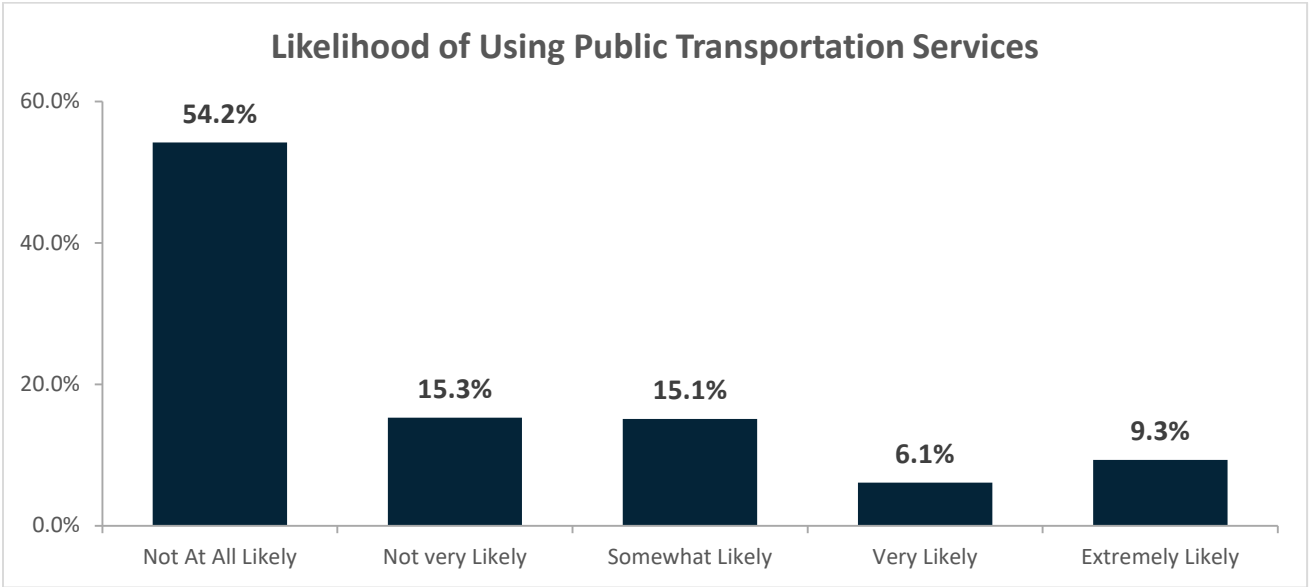
Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.8: In the past 12 months, did you have trouble making a medical appointment or getting needed medical care because of transportation issues? (n=1004).

Transportation as a Barrier to Care (Continued)

- Among those who had transportation issues, lack of a reliable vehicle was, by far, the top barrier, followed by lack of availability of the friends/family members who usually drive them.
- When all area adults were asked how likely they would be to use public transportation if it were available, seven in ten (69.5%) said they were not likely.



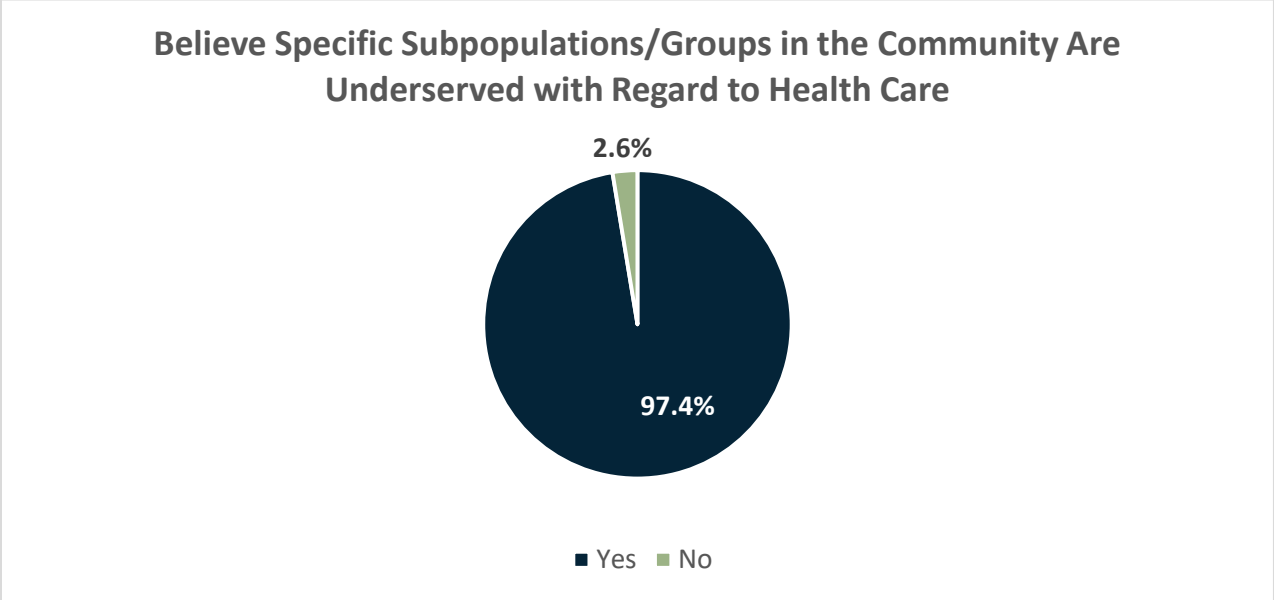
Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.9: (If yes) What were the transportation issues? (Multiple response) (n=62).

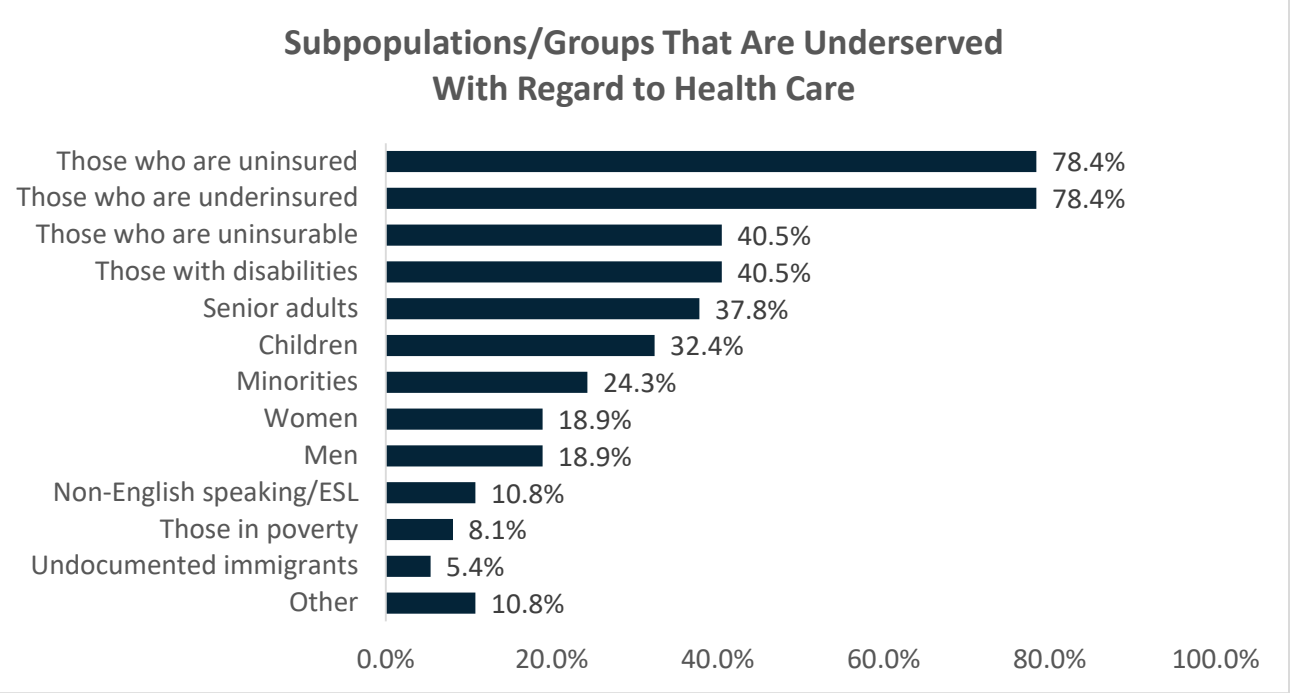


Source: SHBR Behavioral Risk Factor Survey, 2017, Q3.10: If public transportation were made more available (e.g., community vans, Uber, buses, etc.), how likely would you use these services? Are you….? (n=992).

Underserved Subpopulations

Nearly all (97.4%) Key Informants believe specific subpopulations or groups within the community are underserved with regard to health care. Those who are uninsured or underinsured are most widely reported as underserved.





Source: SHBR 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=38); Q5a: (If yes) Which of the following subpopulations are underserved? (n=37).

Effectiveness of Existing Programs and Services

Key Stakeholders believe the existing programs and services in the SHBR area meet the needs and demands of area residents somewhat to very well. On the positive side, collaboration is strong and there have been service improvements in some areas; however, on other fronts, such as provider access, there is room for growth.

Our **emergency department** does fabulous. We **did a whole process improvement** - took a year and a half - and their flow, their customer satisfaction, their volume all works well. **Their quality metrics are solid**, and it's way different than it was, so that's **incredibly positive.**

We try everything we can do to try to collaborate and bring resources in. As far as our neighboring hospitals, they've all been helpful, and we have community meetings to talk about chronic illness and develop strategies, so we **try to have good, positive relationships**. **We work on screenings together**. We **work on these Needs Assessments** together, and then we **work in teams** in these small communities, both in Newaygo and in Lake County, to address some of the larger issues together, and **that includes the Health Department**, **Community Mental Health**, the area **hospitals**, those involved with domestic violence, like **Cove**, and also our **clergy** in the area, as well as the **criminal justice system**. We all try to sit down and work on these problems together.

I've been around many communities because I do a lot of state initiatives, and so I hear about the coordination of care and the relationships, and a lot of times relationships are strained, like between DHHS and CMH or hospital systems or law enforcement, but **we have excellent relationships**, and **we participate on a lot of joint initiatives to help individuals** within the community.

There are **limitations regarding accessibility**, particularly **for pediatricians**. There are kids out there that need care that can't necessarily get in right away.

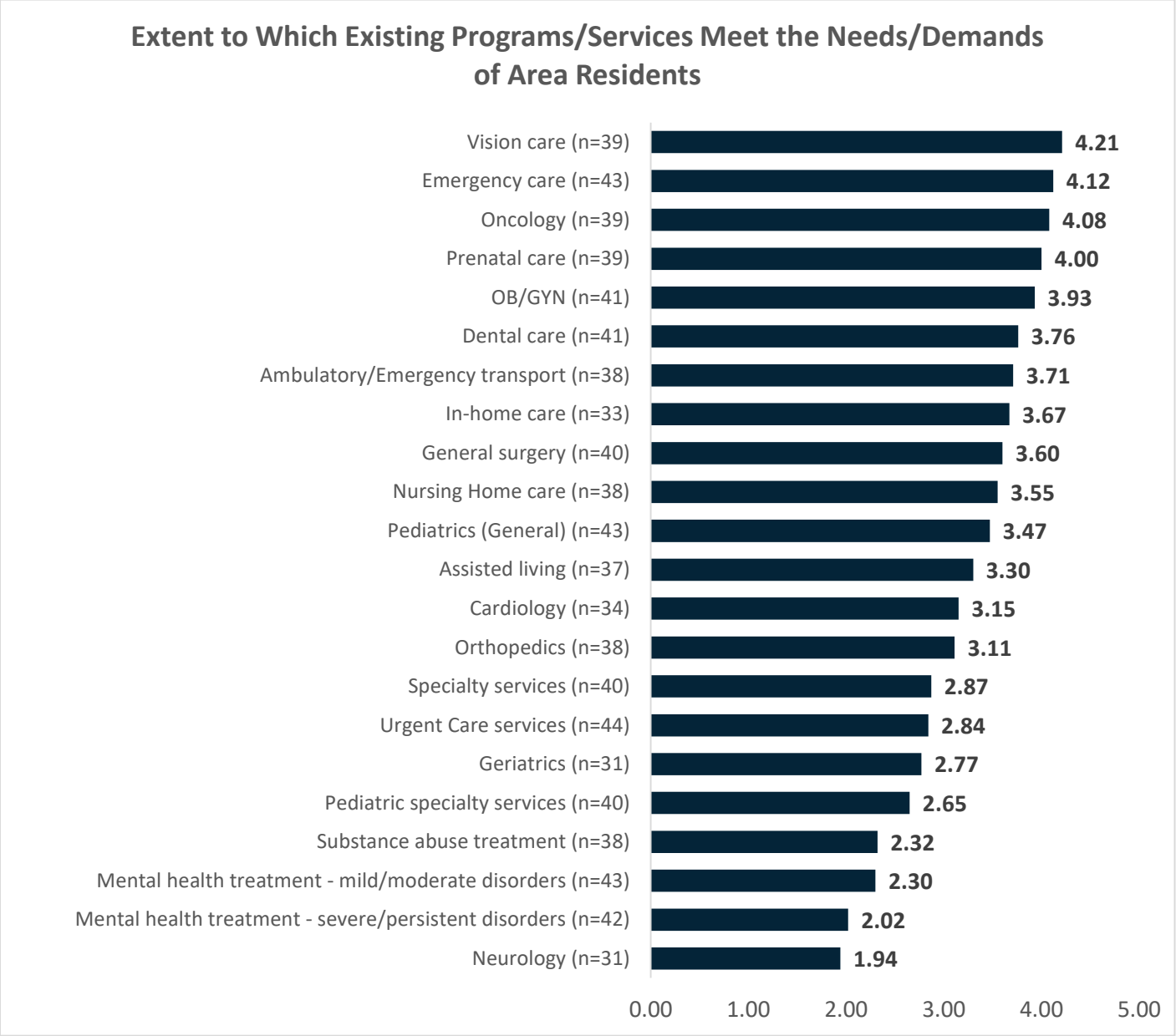
It [**would be] nice to be able to go the doctor and** then if I also need to go to **a mental health appointment** [it would be **in the same location**].

I think sometimes **we'll put programs in place based on what we think is best** for the community **versus what the residents think is best**…and I think that we have to also take into consideration what do they feel is of importance in the community…While we might spend a bunch of resources on trying to create healthy eating opportunities, the vast majority of the community may not be able to take advantage of them because they can't get to them [due to lack of transportation].

Source: SHBR 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 say that? (n=5).

Gaps in Programs and Services

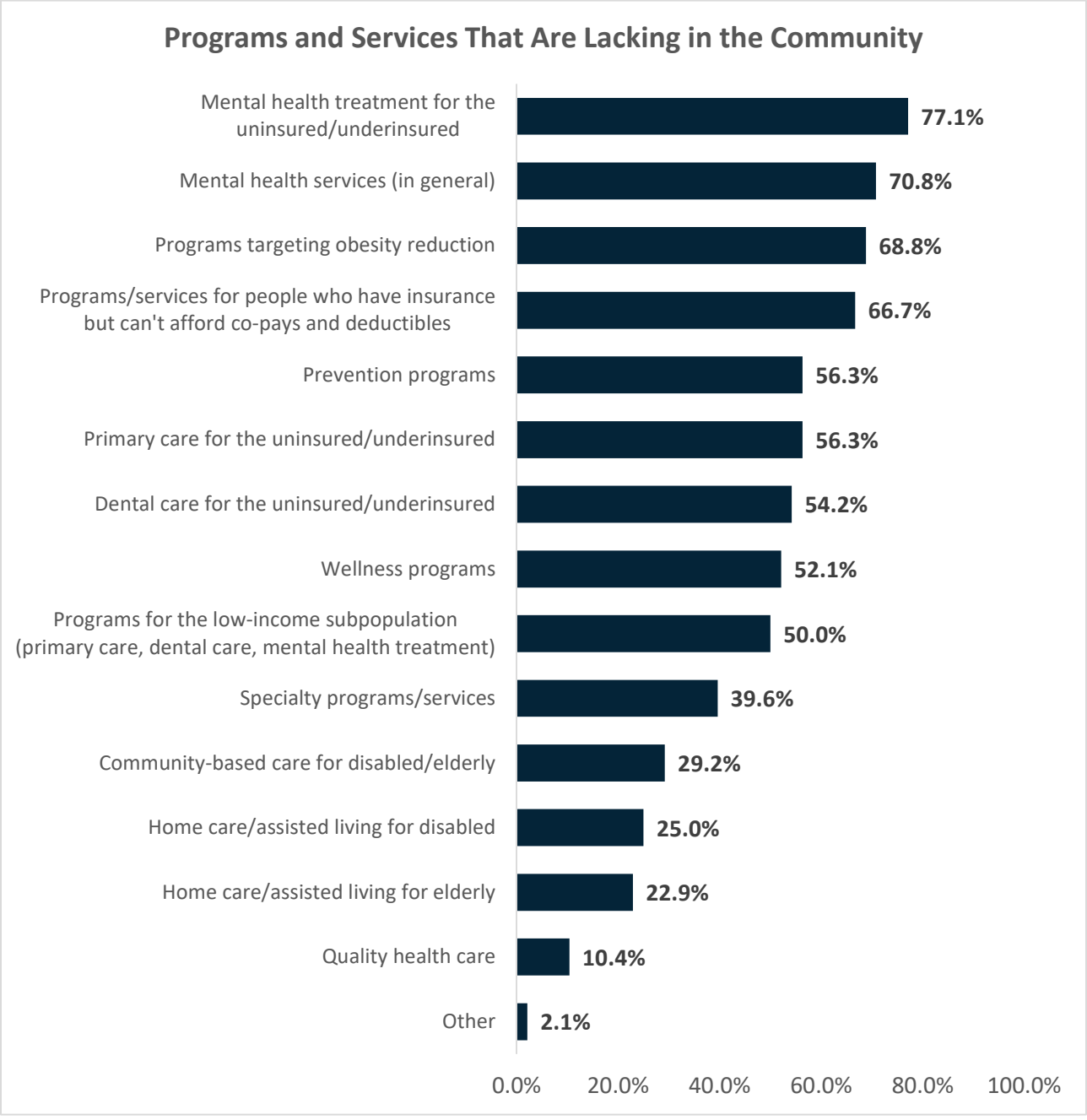
- According to Key Informants, the programs and services that best meet the needs and demands of area residents are vision care, emergency care, oncology, prenatal care, and OB/GYN.
- Conversely, neurology, mental health treatment (mild/moderate/severe), substance abuse treatment, pediatric specialty services, geriatrics, urgent care, and specialty services in general do not meet the needs and demands of area residents well.



Source: SHBR 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.

Specific Programs and Services Lacking in the Community

A majority of Key Informants agree that the community lacks mental health services, services for uninsured/underinsured (mental health, primary care, dental care), programs targeting obesity reduction, programs/services for people who have insurance but can't afford copays/deductibles, and programs aimed at wellness and prevention.



Source: SHBR Key Informant Online Survey, 2017, Q7: What programs and services are lacking in the community, if any? (n=53).

Specific Programs and Services Lacking in the Community (Continued)

Key Informants name many types of specialty services that are lacking in the community, including cardiology, psychiatry/mental health, neurology, and orthopedics.

- ✓ Cardiology (6)
- ✓ Psychiatry/Mental health (5)
- ✓ Neurology (4)
- ✓ Orthopedics (4)
- ✓ All specialty services (3)
- ✓ Pediatrics (3)
- ✓ Pulmonology (3)
- ✓ Urology (3)
- ✓ Endocrinology/Diabetes (2)
- ✓ Gerontology (2)
- ✓ Dental/Free or low cost dental (2)
- ✓ Renal (2)
- ✓ Smoking cessation
- ✓ ENT
- ✓ Urgent care
- ✓ Gastroenterology
- ✓ Oncology/Cancer treatment
- ✓ Rheumatology
- ✓ Substance abuse
- ✓ Nephrology
- ✓ Maternal child care

Most are **only available** in Grand Rapids or **one day a week in Big Rapids**, which makes for **long wait times**.

Neurology, cardiology, renal, urology, ENT. All **services only come up 1 day a week**.

No ortho doctors. Patients **having to go out of area** or **wait for appointments/procedures**.

Source: SHBR Key Informant Online Survey, 2017, Q6a: What specialty services are currently lacking in your community? (n=25).

Specific Programs and Services Lacking in the Community (Continued)

Underserved residents cite numerous programs, services, and classes that they would like to have but that are lacking in the community, with the top mentions being weight loss/nutrition classes and mental health services.

- ✓ Classes on dieting/nutrition/weight loss (6)
- ✓ Mental health help/CMH (3)
- ✓ Urgent care (2)
- ✓ Doctors (general)
- ✓ Farmers markets
- ✓ Programs to show children that going to the doctor is fun/not scary
- ✓ Evening classes
- ✓ Financial programs
- ✓ Programs within fast food places/workout facilities
- ✓ Specialists
- ✓ Gym access
- ✓ Free prenatals at every pharmacy
- ✓ Exercise classes
- ✓ Acupuncture
- ✓ Programs (health food choices) for college students to prevent weight gain
- ✓ Wellness programs
- ✓ Transportation for elderly and unemployed

Source: SHBR 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=78).

Specific Programs and Services Lacking in the Community (Continued)

Like Key Informants and Underserved Residents, Key Stakeholders report that the community lacks programs and services related to mental health. Various services for children, including residential treatment programs, child assessment services, and substance abuse intervention programs, were also cited as lacking, as are specialist services and programs/services that foster physical activity and healthy eating.

What is really **lacking are services for mental health**. We do cognitive behavioral therapy, but there's a lot of other kinds of things that we probably need, and there's always the gray area of "What is Community Mental Health - what is their domain and what isn't?" That moves a lot, and part of that is because of revenues and what Community Mental Health has to work with for their internal resources, because **they're funded through the General Fund in the State [and] they've had a lot of cuts**.

One of them is **counseling - outpatient therapy**. We **have to go to Grand Rapids or Cadillac**, especially private insurance.

We had 19 children that were placed out of county because **we didn't have any placements in county, like residential placements**. We don't have **treatment foster care…**There hasn't been good outcomes for residential treatment, so **we're working on initiatives to keep children in our county**.

We **don't have a child assessment center**, so we don't have interviews or forensic interview or child sexual abuse evaluations. We **have to send children to DeVos down in Grand Rapids; it's pretty disruptive**. We're **in the process of developing one**, and Spectrum has been great and on-board with that.

Very early teen education, **substance abuse interventions for teens** particularly. We have a pretty significant use issue that's kind of brushed under the rug, probably mostly in Mecosta County for teen population.

Services that are lacking are **cardiovascular**, **ENT**, **GI**, **neuro** - are probably biggest ones. **Urology** is another one. **Dermatology** and **psychiatry**.

Dental - I guess that is probably another area.

If you look at **physical activity opportunities, in the winter months**, I think it would be nice to have more options for those type of things.

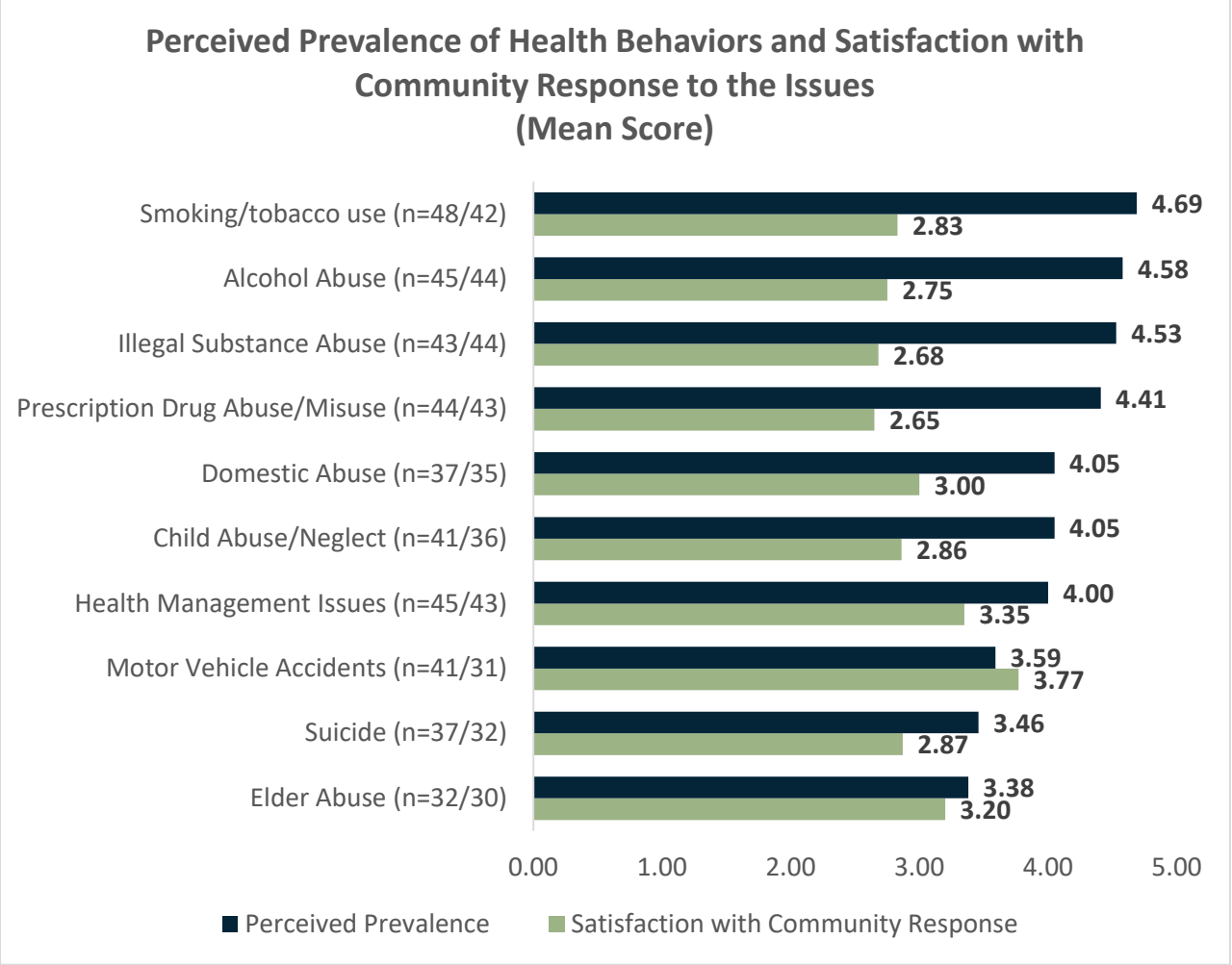
I think it would be nice to have **better access to some farmers' markets and fresh fruits and vegetables** in some of our communities [and] **education on what to do with those things**. As an example, in our WIC program…if you bring something like a squash or an eggplant, they have no idea what to do with those…If they don't know what to do with it, they're not going to take it - they're not going to use it.

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

RISK BEHAVIOR INDICATORS

Most Prevalent Risk Behaviors in the Community

- According to Key Informants, the top four most prevalent health behavior issues in the SHBR area are the same as they were in 2014: Smoking/tobacco use, alcohol abuse, illegal substance abuse, and prescription drug abuse. Further, Key Informants are least satisfied with the community's response to these four issues.
- Domestic abuse, child abuse/neglect, and health management issues are also perceived as prevalent in the community.



Source: SHBR 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?
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 Risk Behaviors in the Community (Continued)

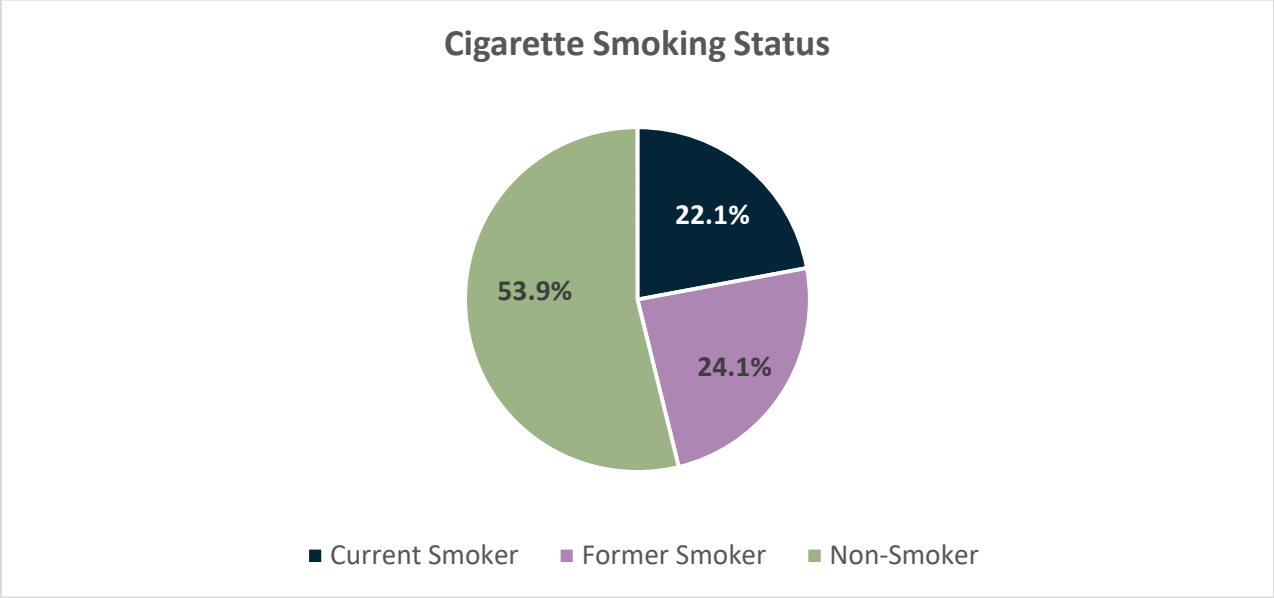
When asked to name any additional health behaviors that are prevalent in the community, Key Informants reported poor nutrition and lack of physical activity, among others.

- ✓ Poor nutrition/Inadequate fruit and vegetable consumption/Fast food (3)
- ✓ No leisure time physical activity/Lack of exercise programs for children or adults (2)
- ✓ Large amounts of programs for good healthcare regime that go largely unattended
- ✓ Teen pregnancy
- ✓ Sexual risk behaviors among the university population
- ✓ Poor dental hygiene
- ✓ High transiency leading to spread of bed bugs
- ✓ Poor health literacy – people not understanding when and how to seek services
- ✓ Self-treatment, sharing medications, etc.

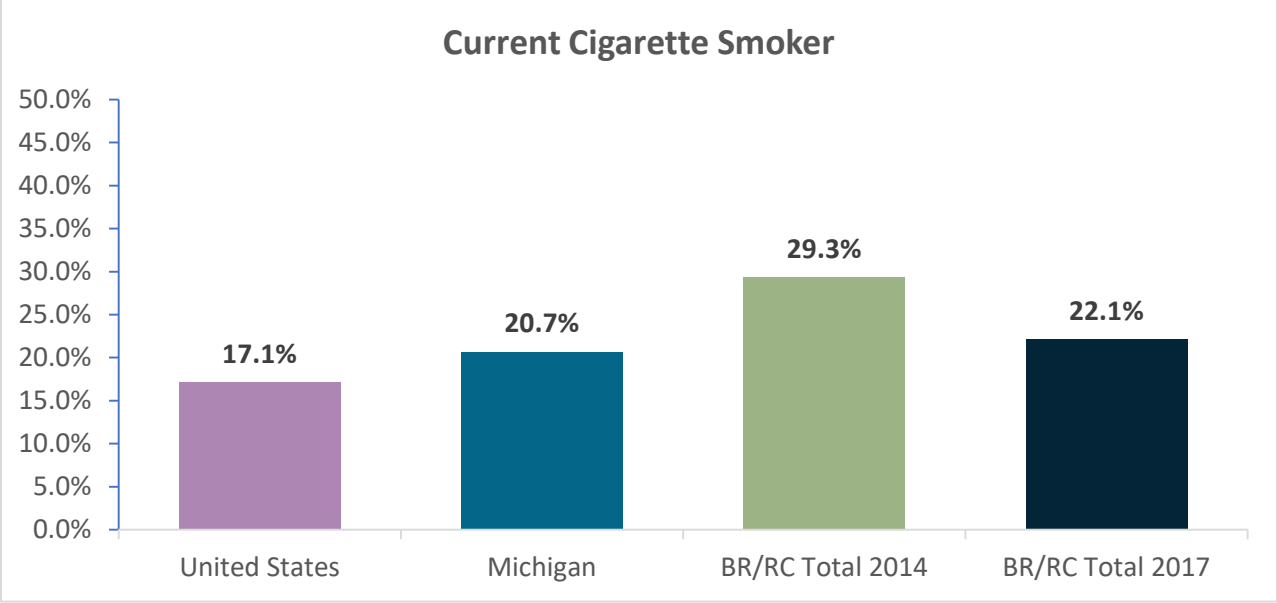
Source: SHBR Key Informant Online Survey, 2017, Q3b: What additional health behaviors are prevalent in your community, if any? (n=17).

Smoking and Tobacco Use

More than two in ten (22.1%) SHBR area adults are current smokers. While this rate is higher than state and national rates, it is considerably lower than in 2014.



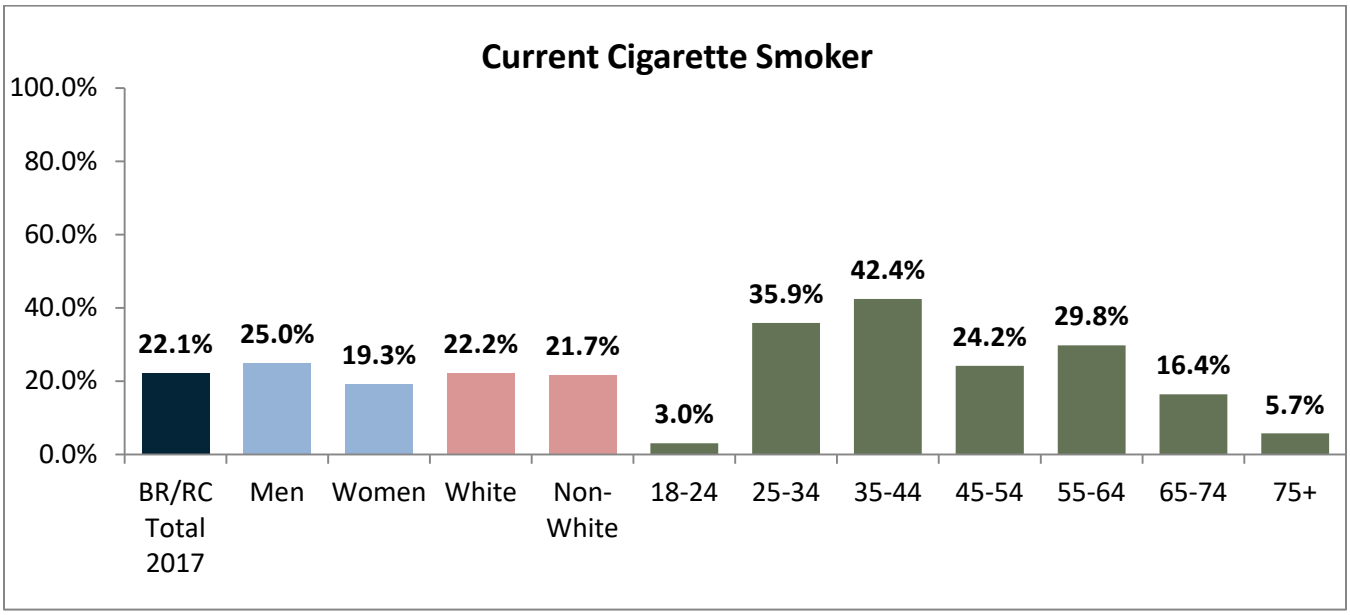
Source: SHBR Behavioral Risk Factor Survey, 2017, Q10.1: Have you smoked at least 100 cigarettes in your entire life? (n=1004); q10.2: Do you now smoke every day, some days, or not at all? (n=591).
Note: current smoker = among all adults, the proportion reporting that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

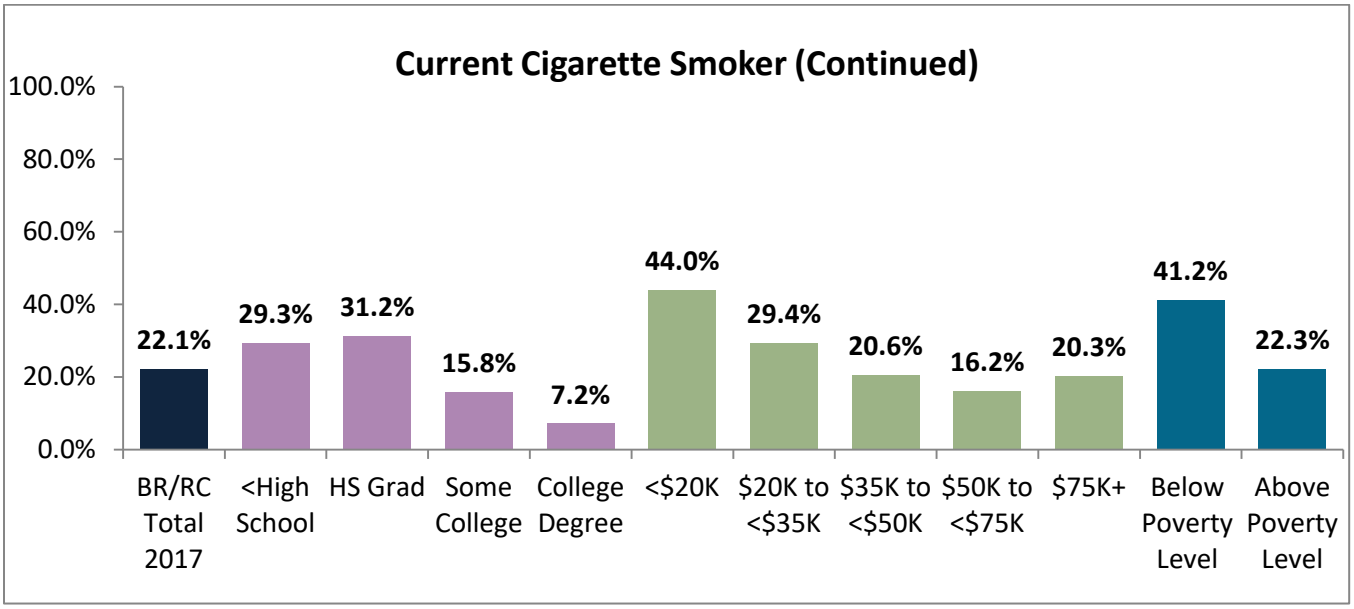


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.

Smoking and Tobacco Use (Continued)

Cigarette smoking is most prevalent among adults ages 25-44 and those with household incomes less than $20k. It is also more prevalent among those without any college education compared to those with at least some college.

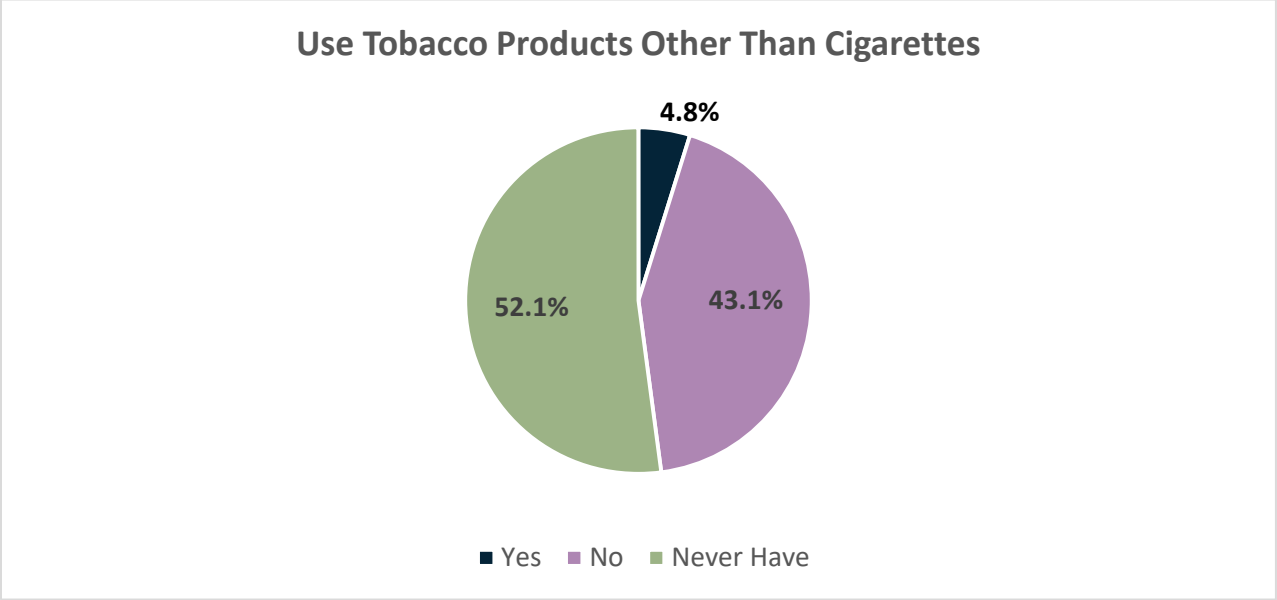




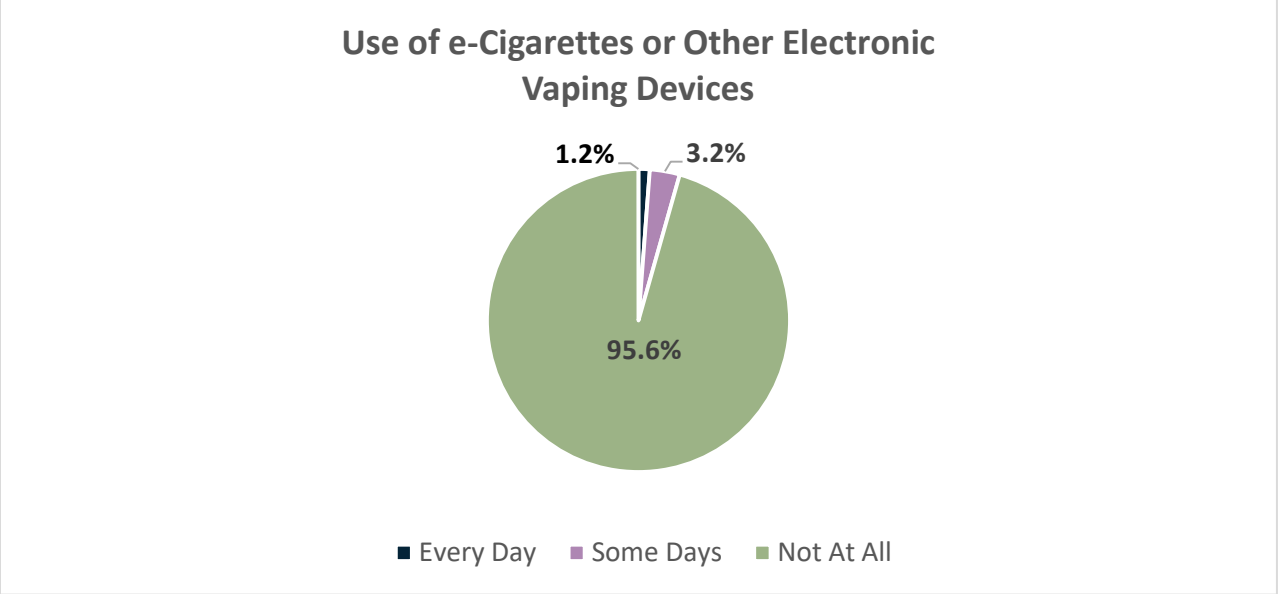
Source: SHBR Behavioral Risk Factor Survey, 2017, Q10.1/Q10.2, status = smoker. (n=1002).

Smoking and Tobacco Use (Continued)

Fewer than one in twenty (4.8%) area adults use tobacco products other than cigarettes, and a similar proportion (4.4%) use e-cigarettes or vaping devices.



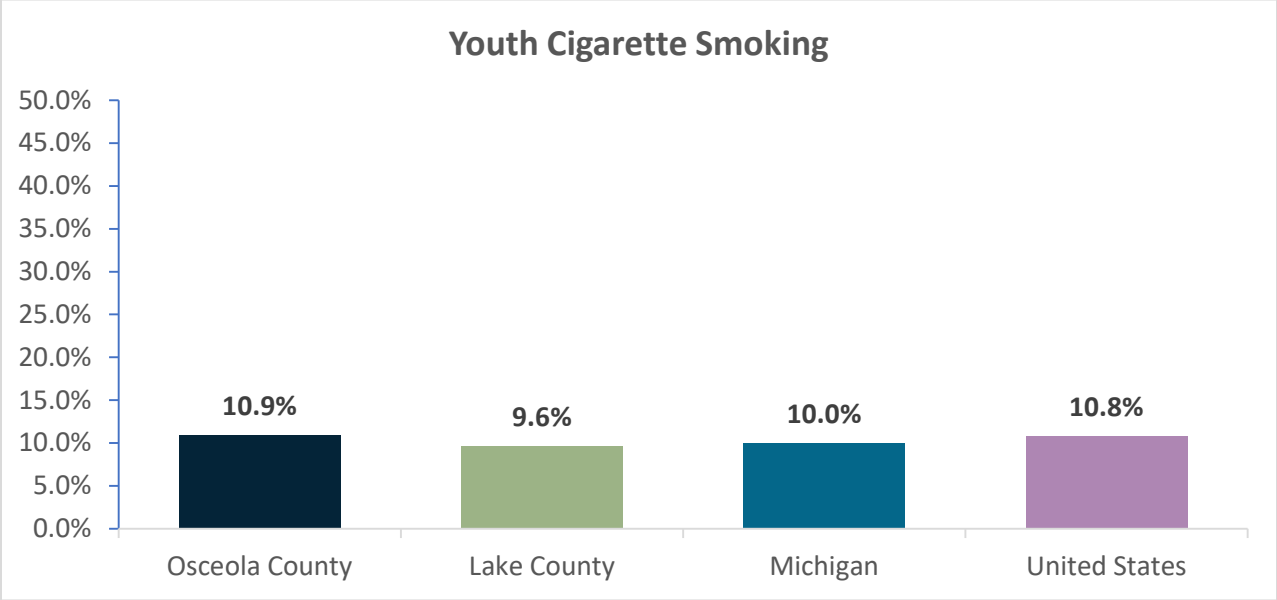
Source: SHBR Behavioral Risk Factor Survey, 2017, Q10.3: Do you currently use any tobacco products other than cigarettes, such as chew, snuff, cigars, pipes, bidis, kreteks or any other tobacco product? (n=997).



Source: SHBR 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=1004).

Smoking and Tobacco Use (Continued)

Nearly one in nine Osceola County youth smoke cigarettes, a rate higher than state and national rates. While Lake County's rate is lower than the state and nation, it still represents nearly one in ten youth.



Source: Osceola and Lake counties, Michigan Profile for Healthy Youth (MiPhy), 2013-2014; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.No data available for Mecosta County.

[There is a] lack of education on risks of smoking. **History of smoking in families**. **Easy access to tobacco** products. Schools **not addressing the rate of teenage smoking**. – *Key Informant*

Smoking and Tobacco Use (Continued)

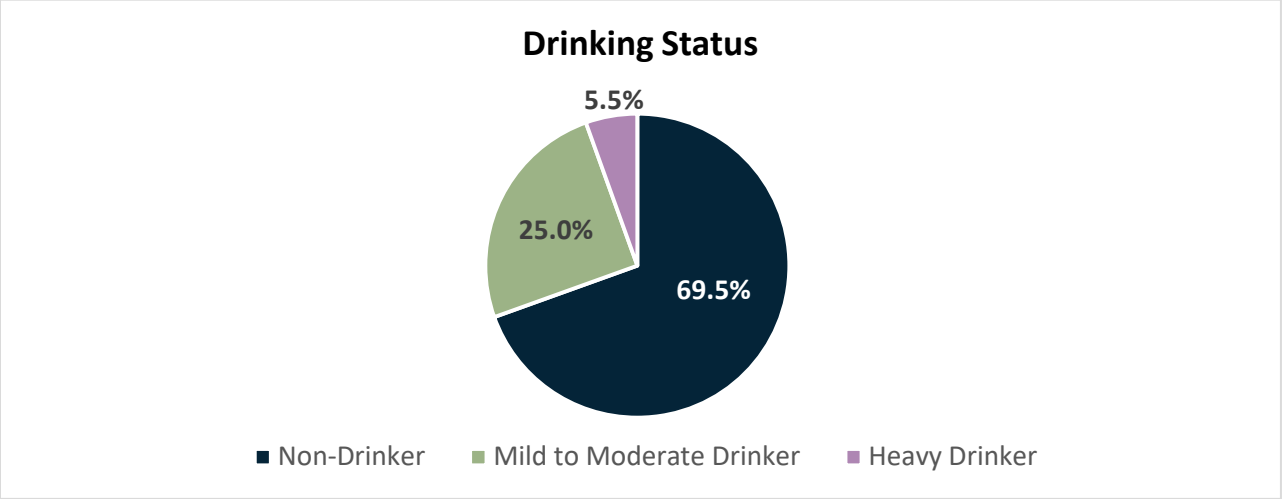
- More than one-fourth (27.3%) of area adults report that smoking takes place in their home, and among households with children the percentage is slightly higher – 28.7%.
- Among non-smoking area adults, 14.9% are exposed to smoking in their home.

	Smoking in the Home				
	Total (n=1004)	Have Children in the Home (n=177)	No Children in the Home (n=824)	Non-Smokers (n=812)	Smokers (n=192)
None	72.7%	71.3%	73.0%	85.1%	28.7%
1 person	17.0%	15.4%	17.5%	9.2%	44.6%
2 or more people	10.3%	13.3%	9.5%	5.7%	26.7%

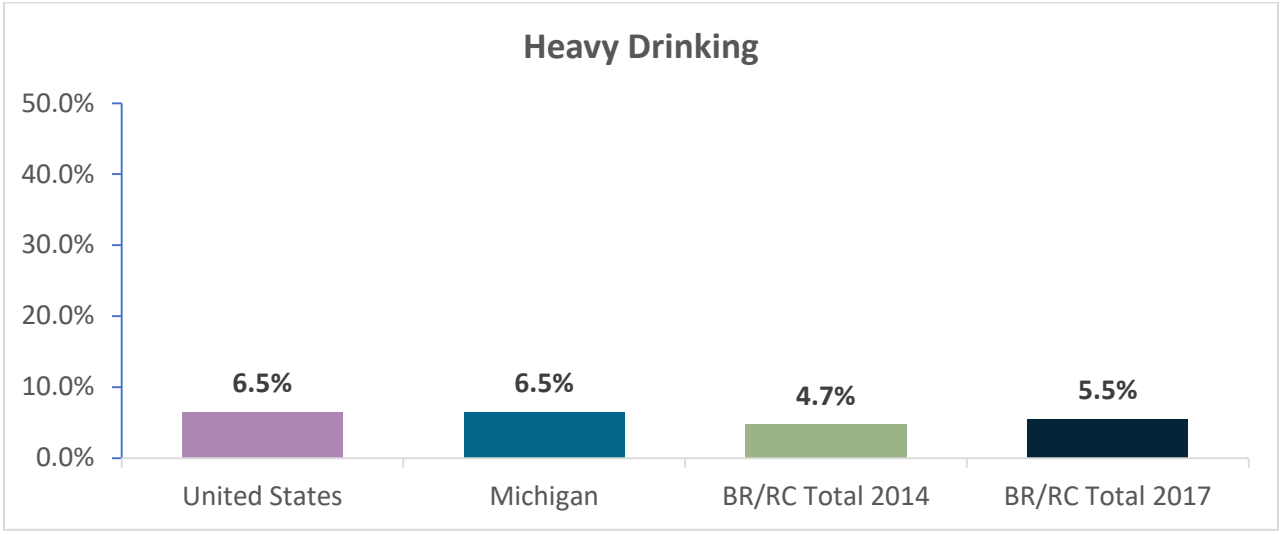
Source: SHBR Behavioral Risk Factor Survey, 2017, Q10.4: Now I would like to ask you a few questions about smoking where you live. How many people that live with you smoke cigarettes, cigars, little cigars, pipes, water pipes, hookah, or any other tobacco products in the home?

Alcohol Use

- Among area adults, 69.5% are considered non-drinkers because they have not consumed alcohol within the past month, while 25.0% are mild to moderate drinkers and 5.5% are considered heavy drinkers.
- The prevalence of heavy drinking among area adults, while lower than state and national rates, has increased since 2014.



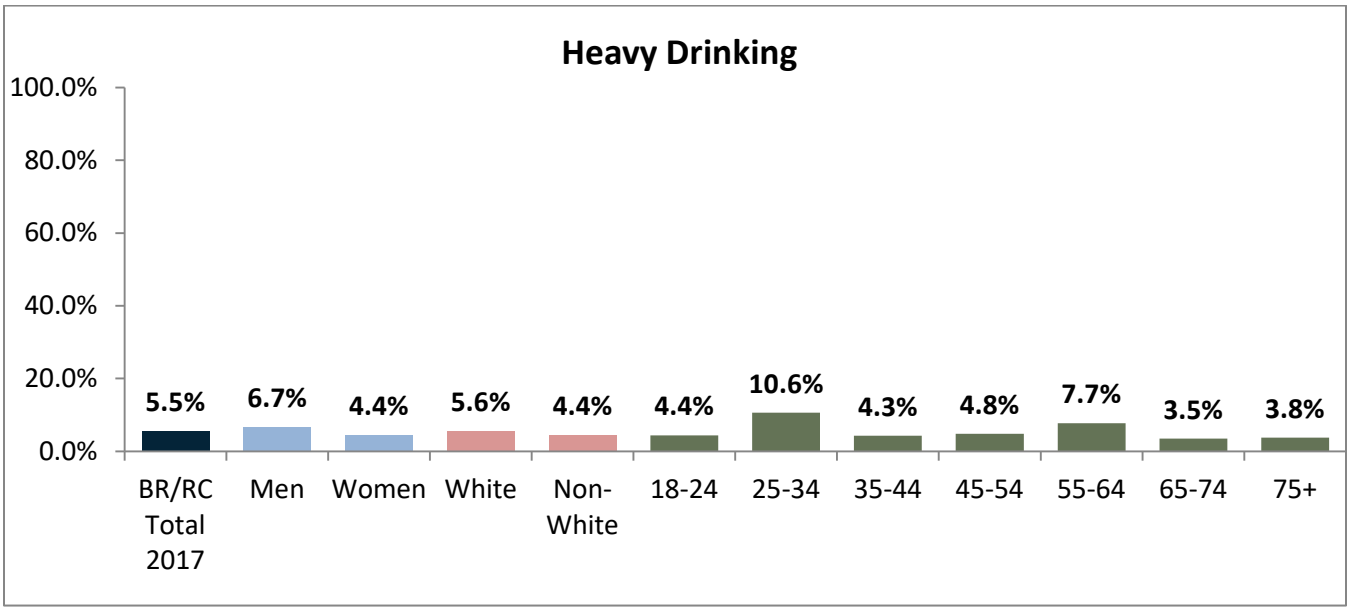
Source: SHBR Behavioral Risk Factor Survey, 2017, Q17.1: During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor? (n=994); Q17.2: One drink is equivalent to a 12-ounce beer, a 5-ounce glass of 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=318). 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.

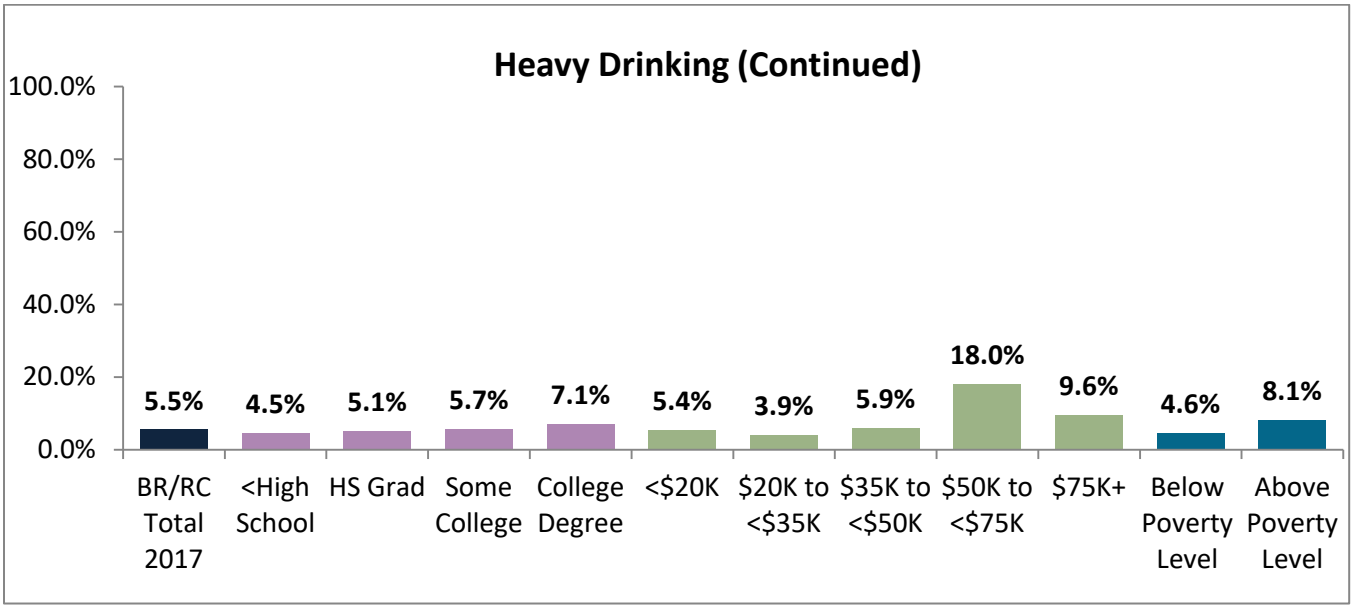


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014, 2017.

Alcohol Use (Continued)

Among SHBR area adults, men are more likely to be heavy drinkers than women. In addition, the incidence of heavy drinking rises with level of education.

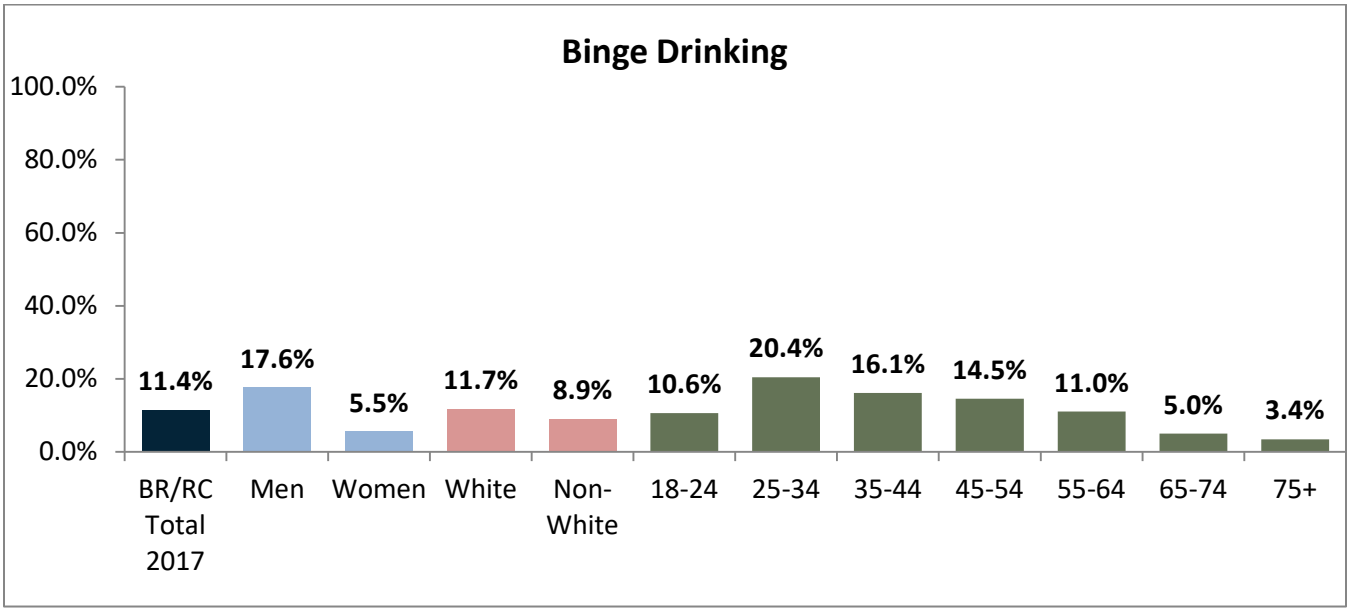


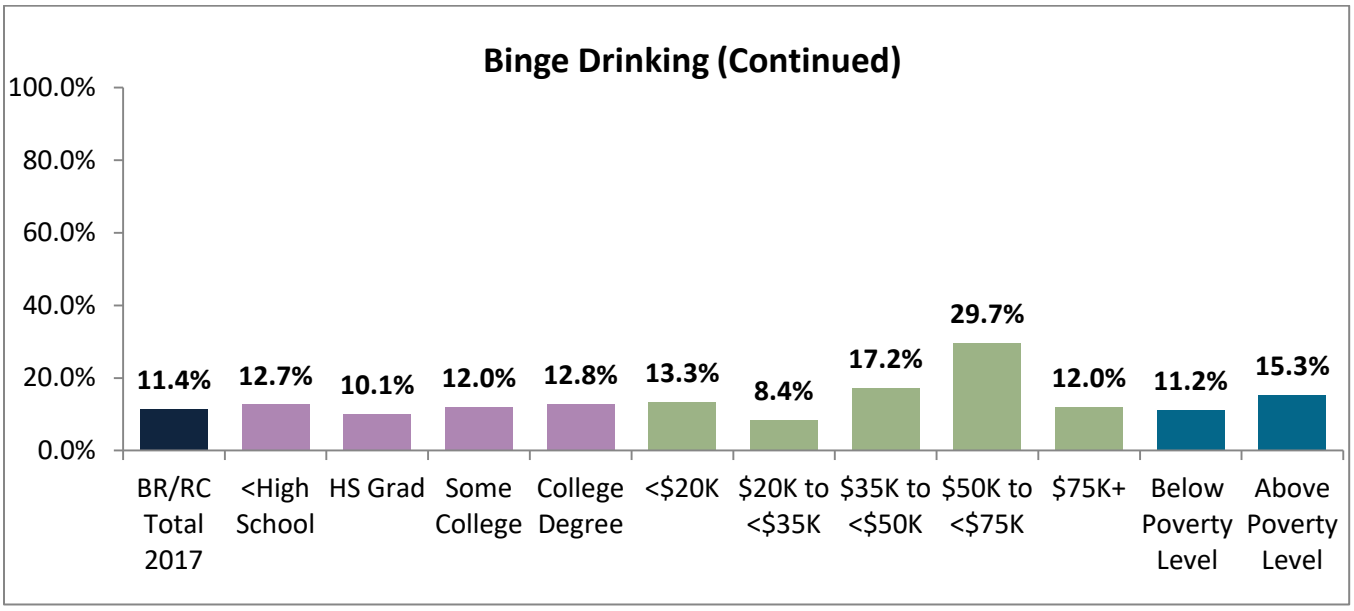


Source: SHBR Behavioral Risk Factor Survey, 2017, Q17.1: During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor? (n=994); Q17.2: One drink is equivalent to a 12-ounce beer, a 5-ounce glass of 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=318). 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 nine (11.4%) area adults engage in binge drinking, with men being more than three times as likely to engage in binge drinking as women.
- Adults ages 25-34 are more likely to engage in binge drinking than other age groups.

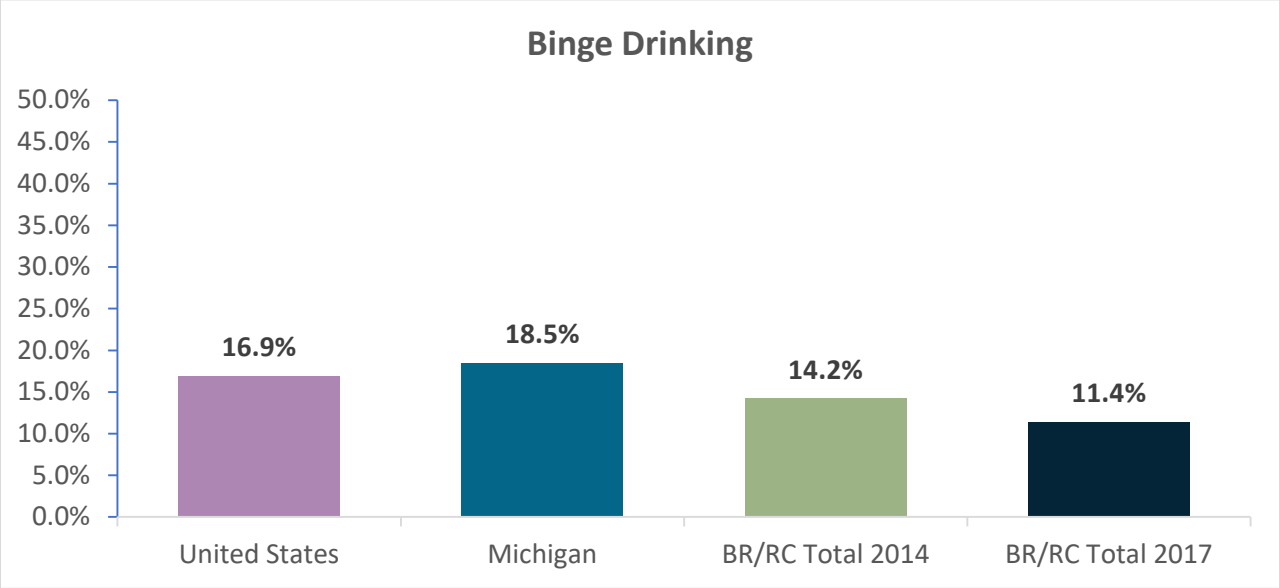




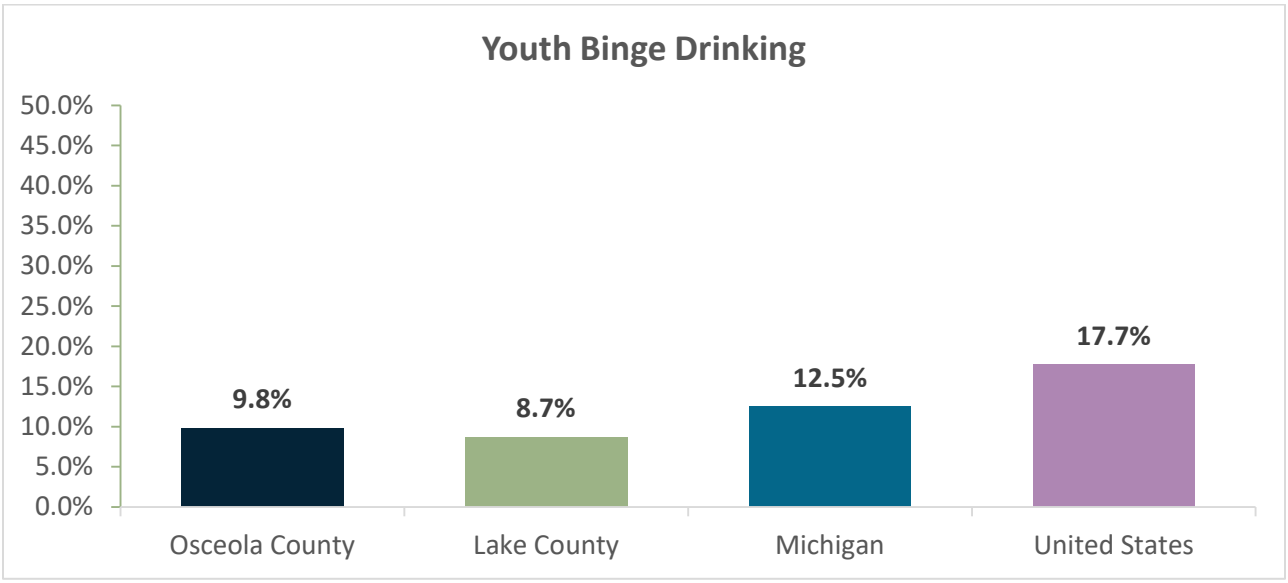
Source: SHBR Behavioral Risk Factor Survey, 2017, Q17.3: Considering all types of alcoholic beverages, how many times during the past 30 days did you have X (CATI X = 5 for men, X = 4 for women) or more drinks on an occasion? (n=991).
Note: among all adults, the proportion who reported consuming five 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 and youth, the prevalence of binge drinking is lower than state and national rates.
- Further, the rate of binge drinking among area adults has decreased since 2014.



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; SHBR Behavioral Risk Factor Survey, 2014, 2017.



Source: For Osceola and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.
Note: No data available for Mecosta County.

Substance Abuse

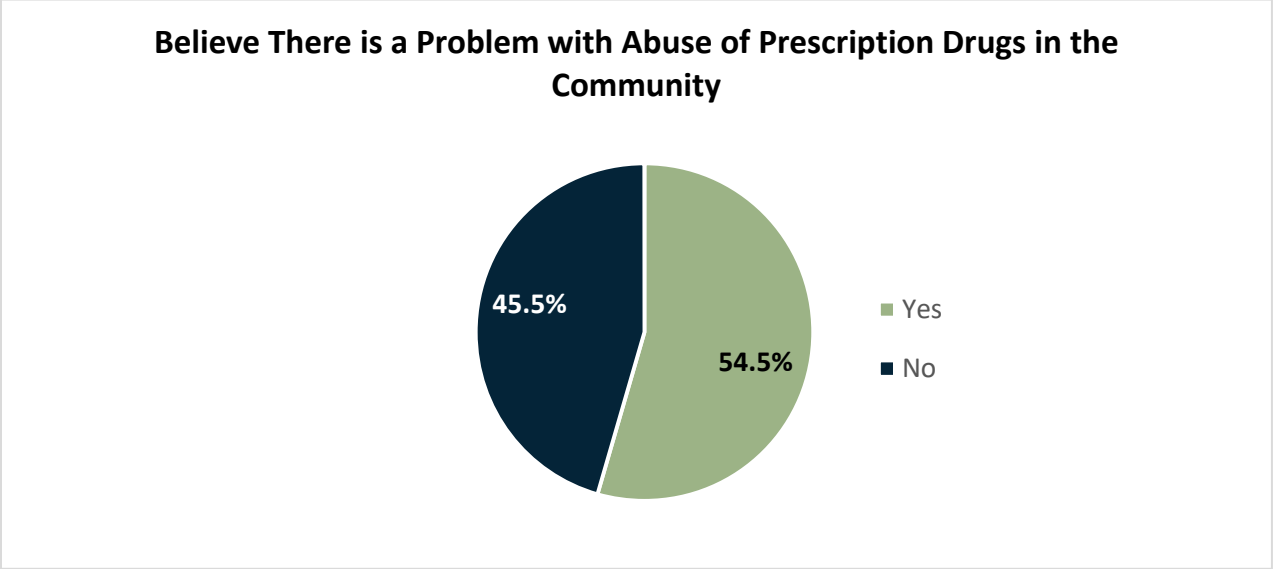
Substance abuse is deemed one of the most pressing health issues in the SHBR area by both Key Stakeholders and Key Informants. These health care professionals discuss the pervasiveness of substance abuse in the community and point to numerous factors that contribute to the problem, including over-prescription of pain medication, a lack of treatment resources, ease of access to drugs among youth, and a culture of drug acceptance which is exacerbated with a college campus nearby.

Over-prescription of pain medication	The **over-prescription of various narcotics** and very addictive medication that then leads to methadone treatment and transportation to methadone treatment and **loss of jobs and employment** – it's **such a significant problem impacting us** here. – *Key Stakeholder* Opioid misuse is everywhere; however, we still have **PCP prescribing large quantities of opioids** and there is **no treatment center** in the area. – *Key Informant*
Lack of treatment resources	[There is a] **lack of treatment options**. [We need] **inpatient treatment**. Actual **drug counselors** and other substance abuse professionals. – *Key Informant* We have **so many drug seekers**. It's a hard issue to handle with **so little resources**. – *Key Informant*
Ease of access	**Drugs way too easy to get**. Need to figure out why kids feel they need them in the first place. Sad feelings, etc. – *Key Informant* We have **people that come up specifically because they know that they can sell drugs in our community**. I know that they have a task force that has caught some, but this needs to be increased. The abuse in our town is widespread. – *Key Informant*
Culture of drug acceptance	A **majority of the clients I work with disclose marijuana use** and do not consider the negative effect in which its use can result. It's **almost a 'normal' thing to use**. – *Key Informant* **Partying is 'normal' for kids and adults**. – *Key Informant* **Drug abuse** [is a problem] because **we are close to a college**. – *Key Informant*

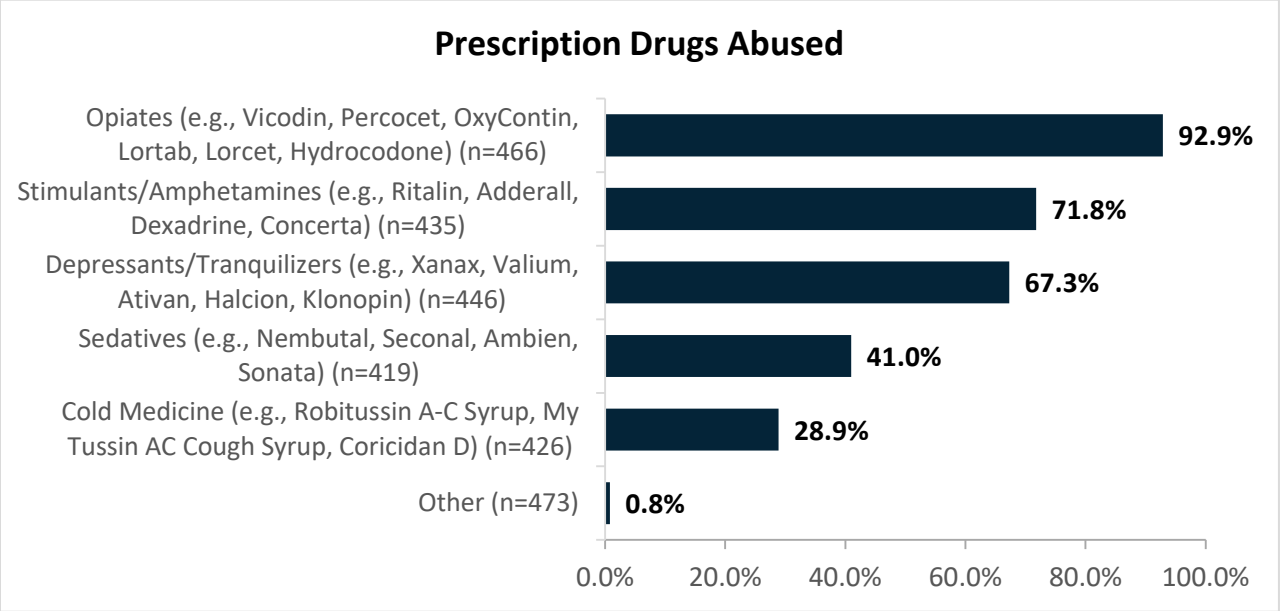
Source: SHBR Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in the community, especially the underserved? (n=5); Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in the community? Q1a: Why do you think it's a problem in the community? Please be as detailed as possible. (n=46).

Substance Abuse (Continued)

- More than half (54.5%) of area adults believe there is a problem with abuse of prescription drugs in the community, and of those, more than nine in ten (92.9%) believe prescription opiates are abused.
- In addition, more than two-thirds believe prescription stimulants and depressants are abused.



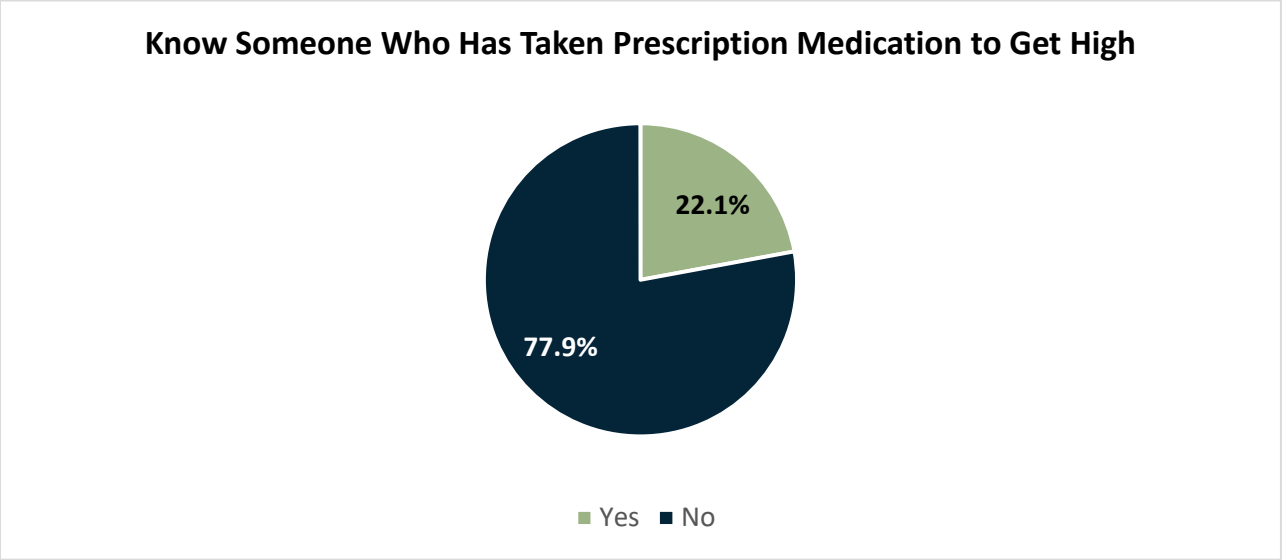
Source: SHBR Behavioral Risk Factor Survey, 2017, Q11.1: Do you believe there is a problem in your community with the abuse of prescription medication (e.g., Oxycontin)? (n=901).



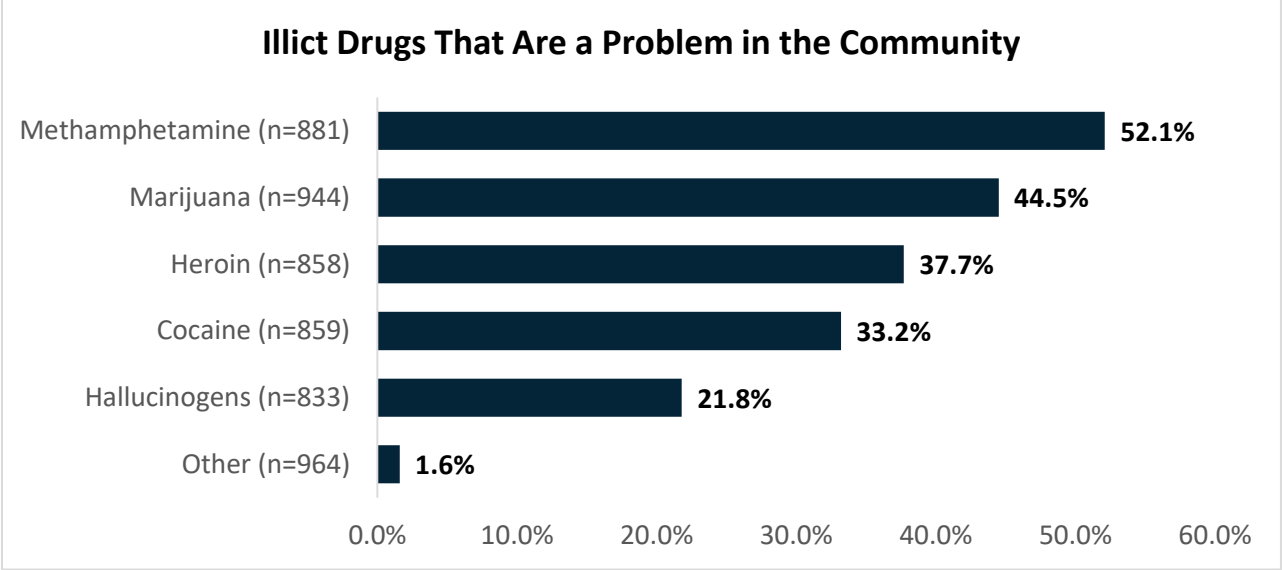
Source: SHBR Behavioral Risk Factor Survey, 2017, Q11.2-q11.7: Which prescription drugs do you feel are abused in your community?

Substance Abuse (Continued)

- More than one in five (22.1%) area adults report that they know someone who has taken prescription medication to get high.
- More than half of area adults believe that use of methamphetamines is a problem in the community, and nearly half believe use of marijuana is a problem.



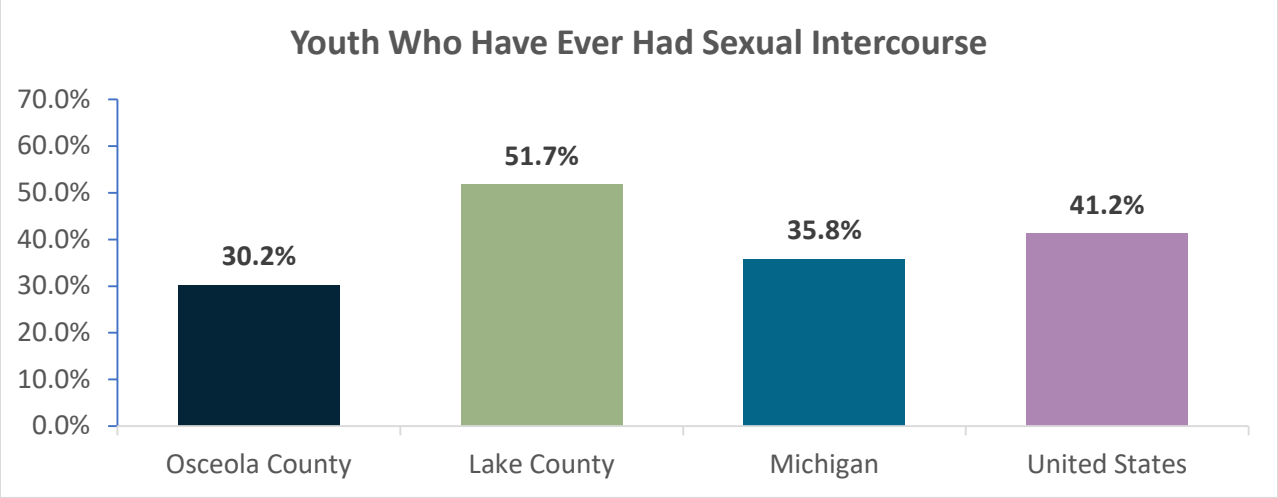
Source: SHBR Behavioral Risk Factor Survey, 2017, Q11.8: Do you know someone who has taken prescription medication, such as Oxycontin, to get high? (n=991).



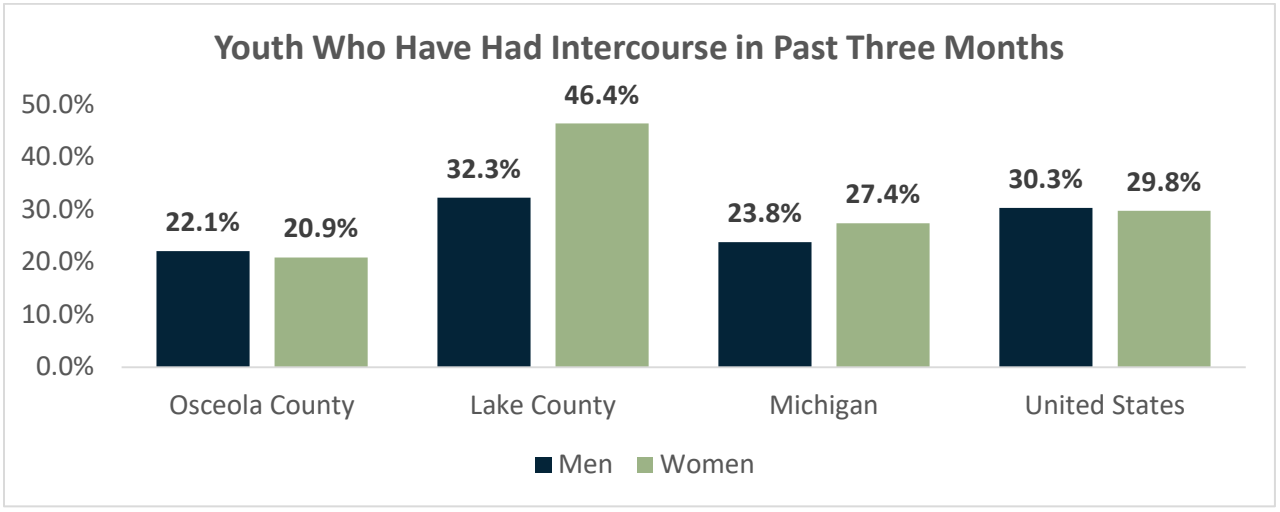
Source: SHBR Behavioral Risk Factor Survey, 2017, Q11.9-Q11.14: With regard to the use of the following drugs, which do you think are a problem in your community today?

Teenage Sexual Activity

- More than half (51.7%) of Lake County youth report having had sexual intercourse, a rate higher than state and national rates. In Osceola County, three in ten (30.2%) have had sexual intercourse, lower than state and national rates.
- Among Lake County youth, women are more likely than men (46.4% vs. 32.3%) to have had sexual intercourse in the past three months.



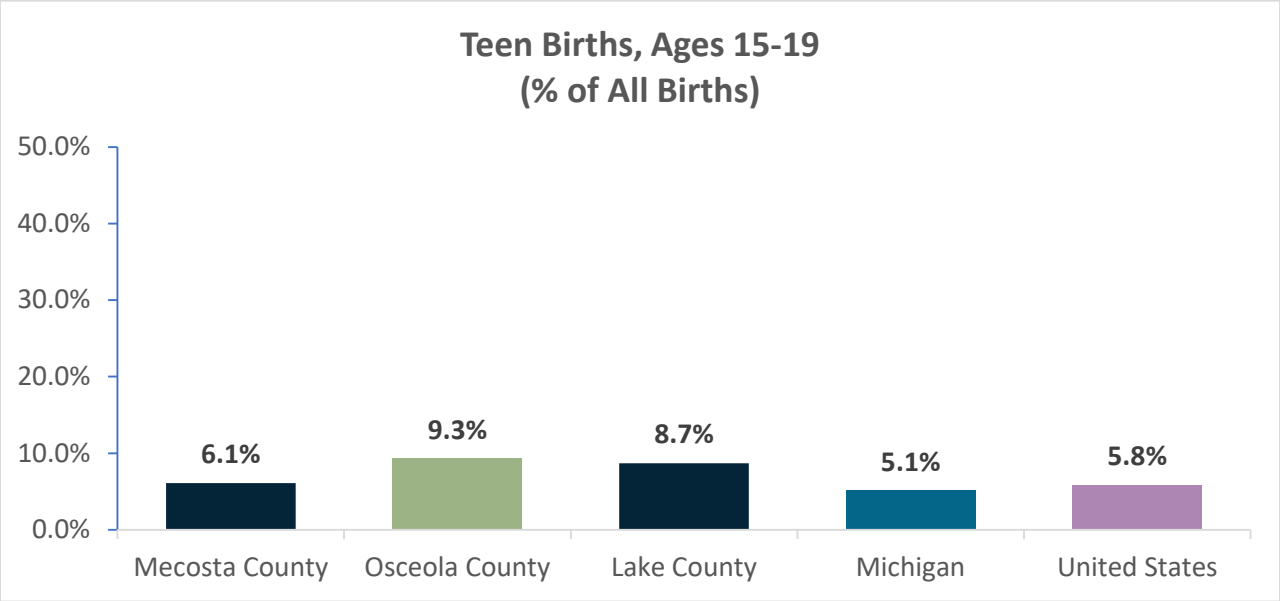
Source: For Osceola and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.
Note: No data available for Mecosta County.



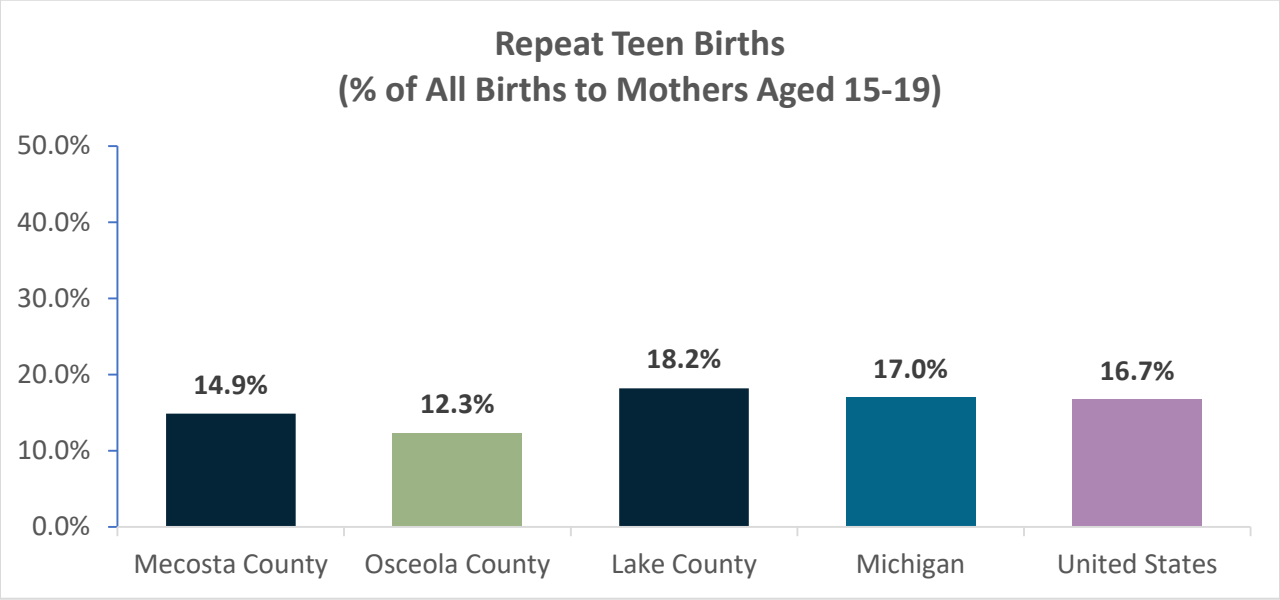
Source: For Osceola and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.
Note: No data available for Mecosta County.

Teenage Sexual Activity (Continued)

- Osceola, Lake, and Mecosta counties all have higher rates of teen births as a percentage of all births compared to the state and nation.
- Lake County has a higher rate of repeat teen births than Michigan and the U.S., while Mecosta and Osceola counties have lower rates than the state and nation.



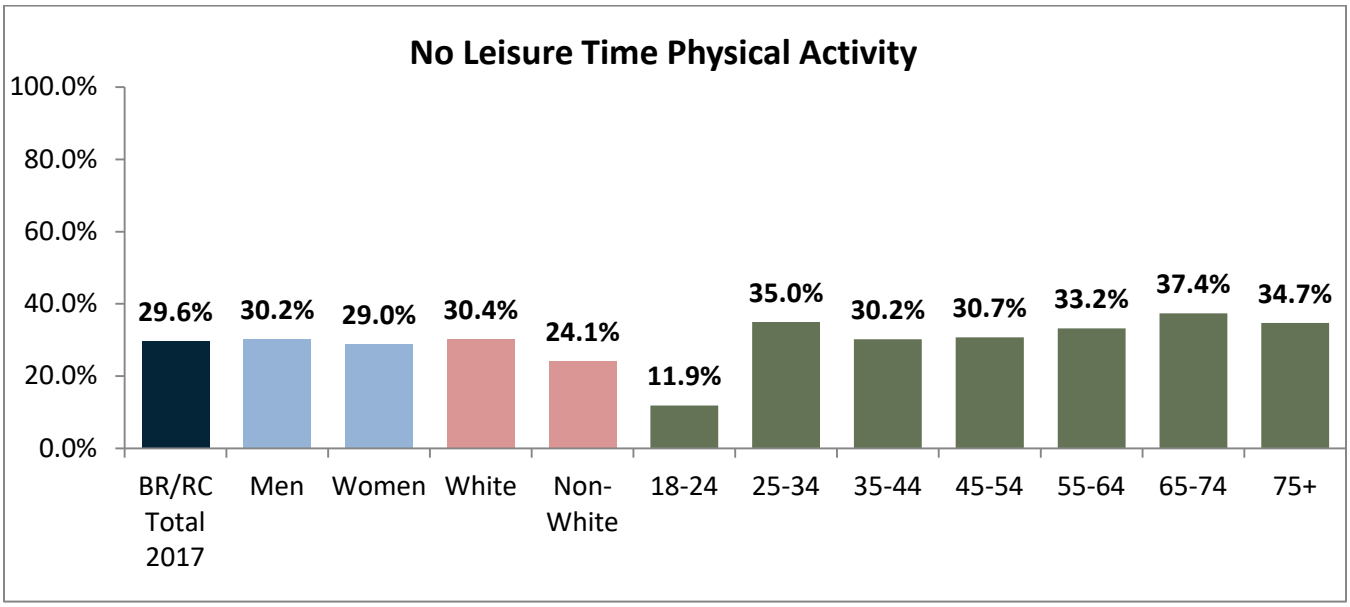
Source: For counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

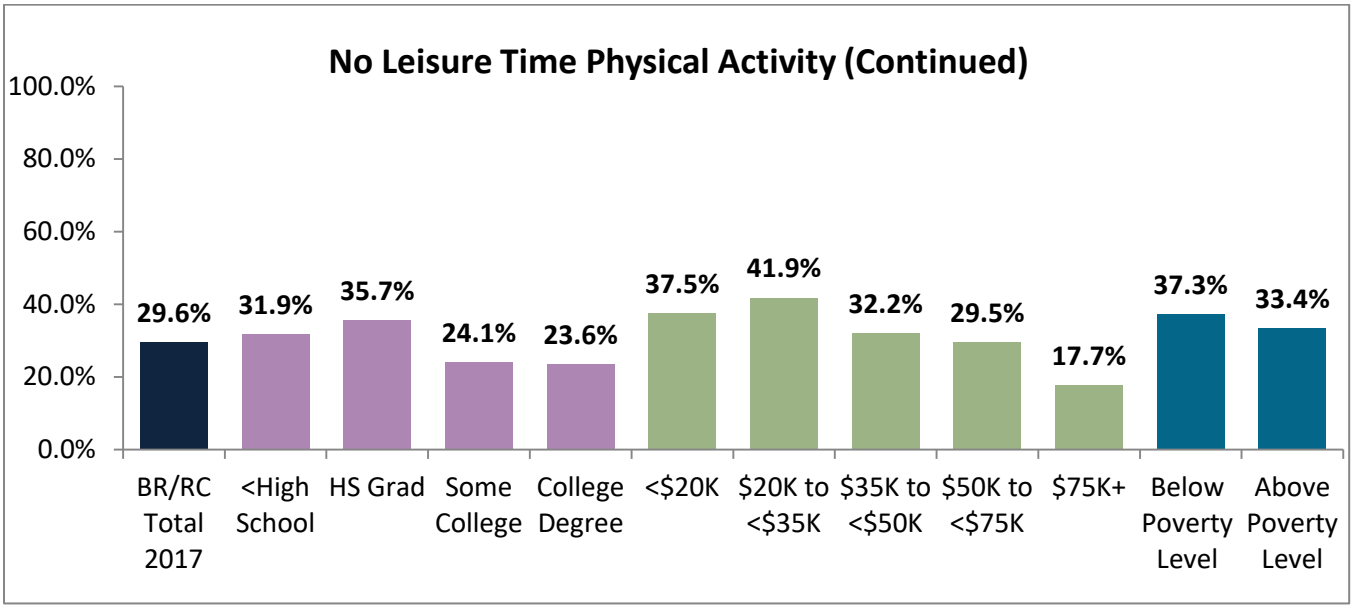


Source: For counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Physical Activity

- Three in ten (29.6%) area adults do not participate in leisure time physical activity.
- Lack of leisure time physical activity is more widespread among White adults than non-White adults. In addition, those with lower education (no college) and/or income levels (less than $35k) are more likely to have no leisure time physical activity than those with higher education and/or income levels.

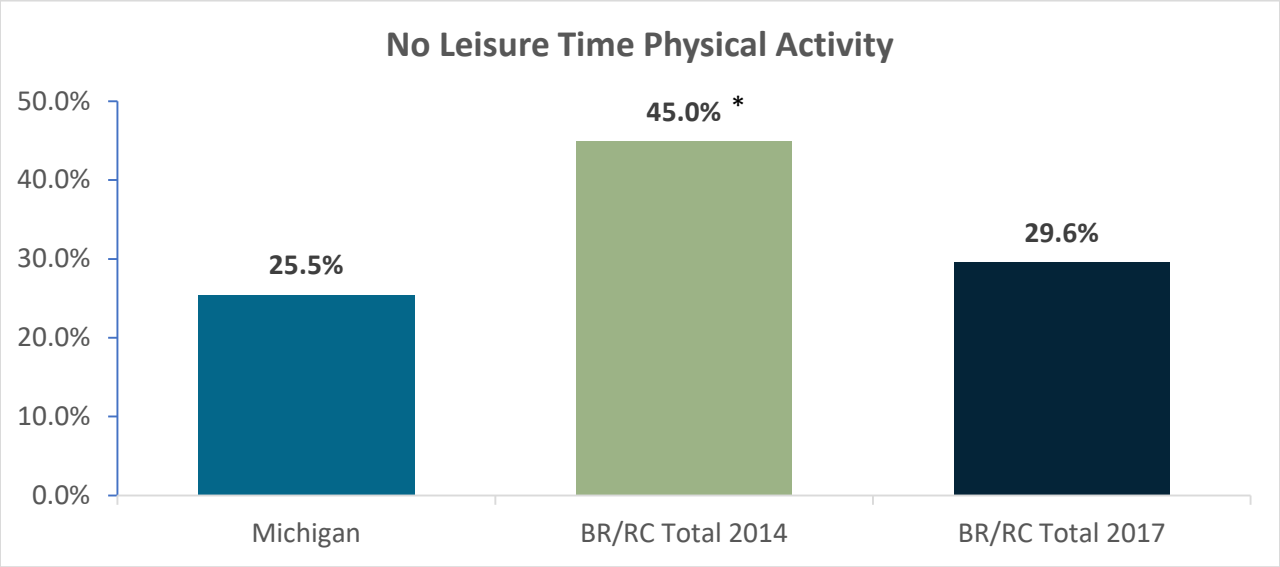




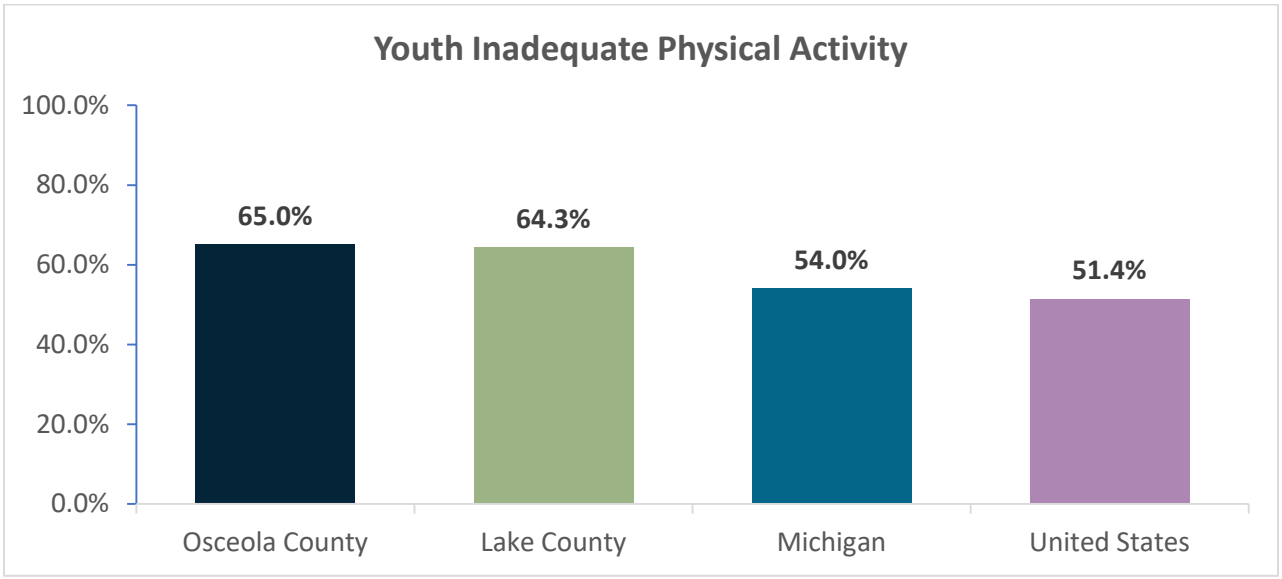
Source: SHBR Behavioral Risk Factor Survey, 2017, Q16.1: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise? (n=996).

Physical Activity (Continued)

- SHBR area adults are less active than adults across Michigan.
- In addition, nearly two-thirds of Osceola County and Lake County youth do not get adequate amounts of physical activity, and these rates are higher than state and national rates.



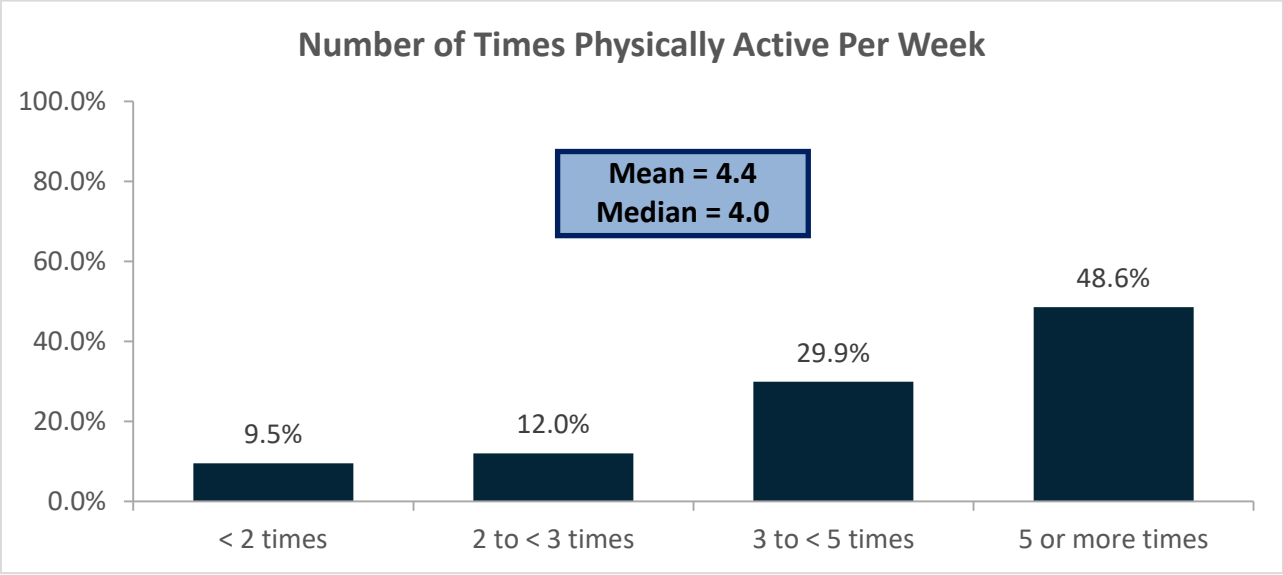
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016. *Note: this measure is much higher than what is typical due to the 2014 BRFS being conducted in the winter months.
Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHBR Behavioral Risk Factor Survey, 2014,



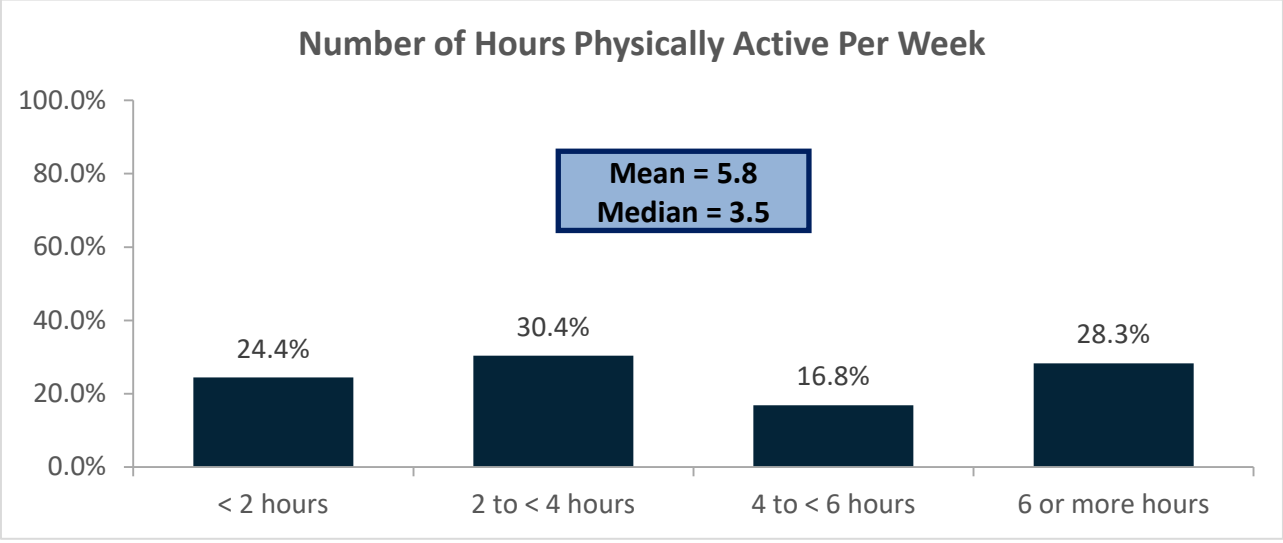
Source: For Osceola and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.
Note: No data available for Mecosta County.

Physical Activity (Continued)

- Among those who exercise, the large majority (78.5%) exercise at least three times per week.
- More than half (54.8%) exercise less than four hours per week, while 28.3% exercise for six or more hours.



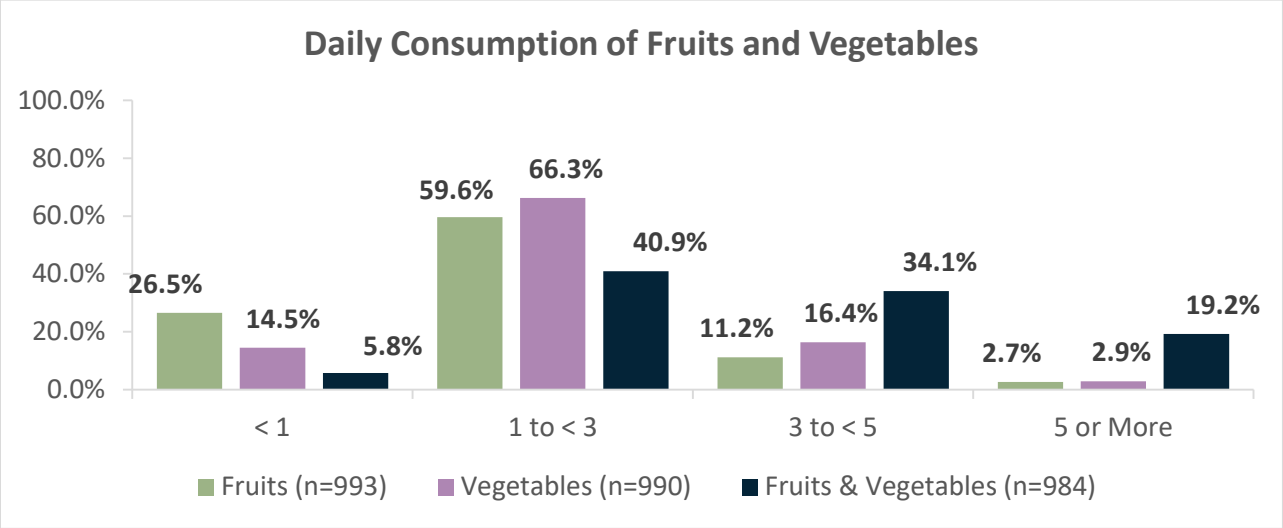
Source: SHBR Behavioral Risk Factor Survey, 2017, Q16.2: How many times per week or per month did you take part in physical activity during the past month? (n=649).



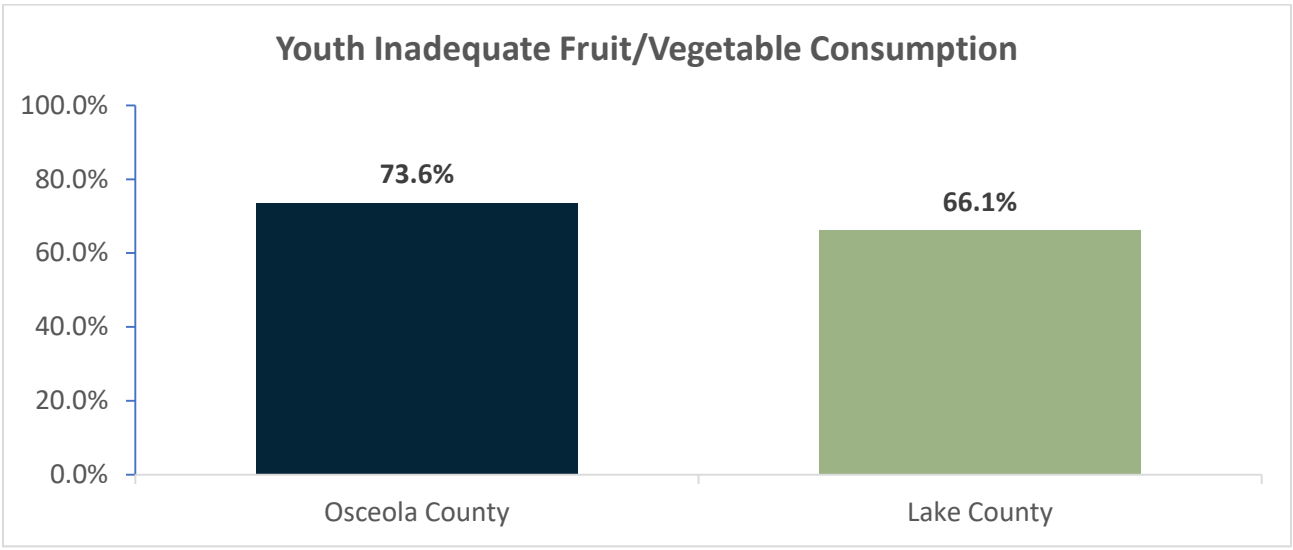
Source: SHBR Behavioral Risk Factor Survey, 2017, Q16.3: And when you took part in physical activity, for how many minutes or hours did you usually keep at it? (n=643).

Fruit and Vegetable Consumption

- About one in five (19.2%) SHBR area adults consume adequate amounts of fruits and vegetables per day, which is defined as five or more times per day. Roughly one quarter of Osceola County youth and one-third of Lake County youth consume adequate amounts.
- Among large majorities of area adults, both fruits and vegetables are each consumed fewer than three times per day.



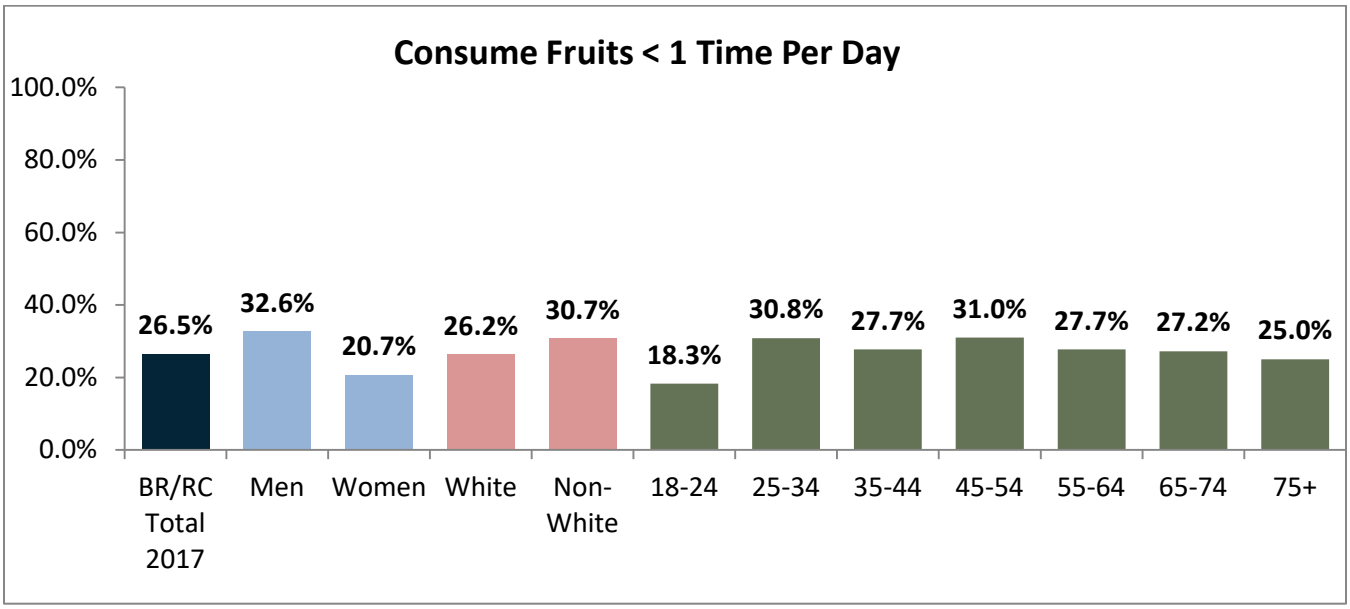
Source: SHBR Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.;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

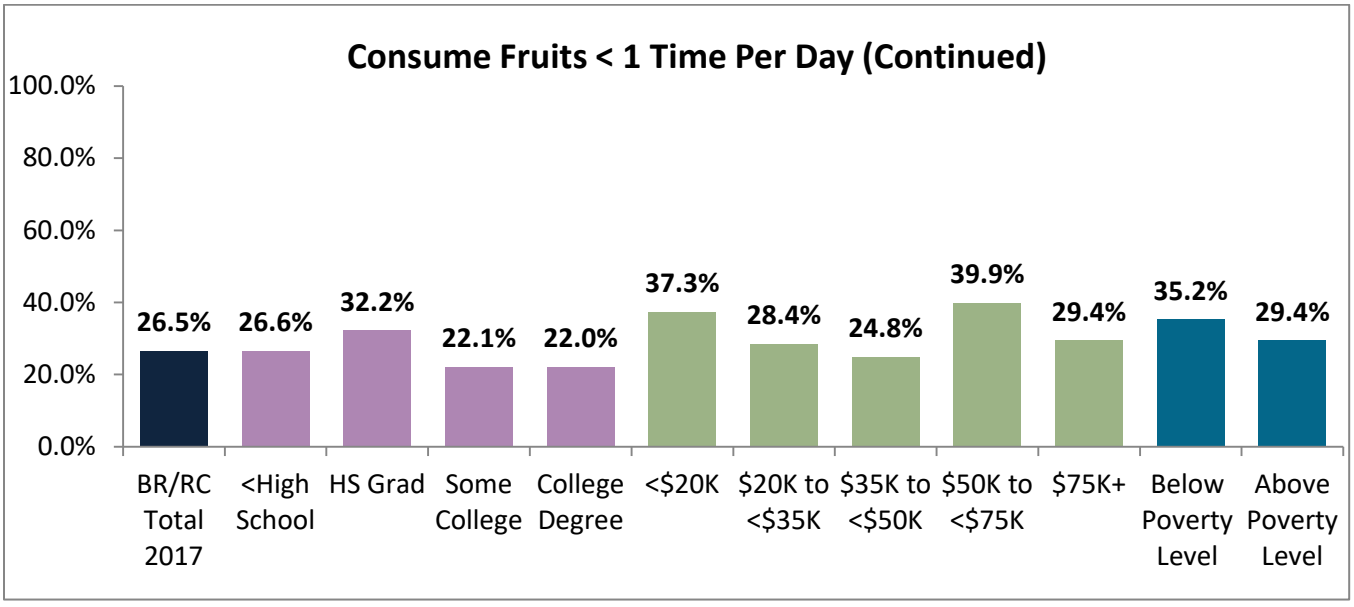


Source: Michigan Profile for Healthy Youth (MiPhy), 2015.

Fruit and Vegetable Consumption (Continued)

- More than one-quarter (26.5%) of area adults consume fruit less than one time per day on average.
- Men are more likely than women to consume fruit less than once per day. In addition, adults below the poverty level are more likely than those above the poverty level to consume fruit less than daily.

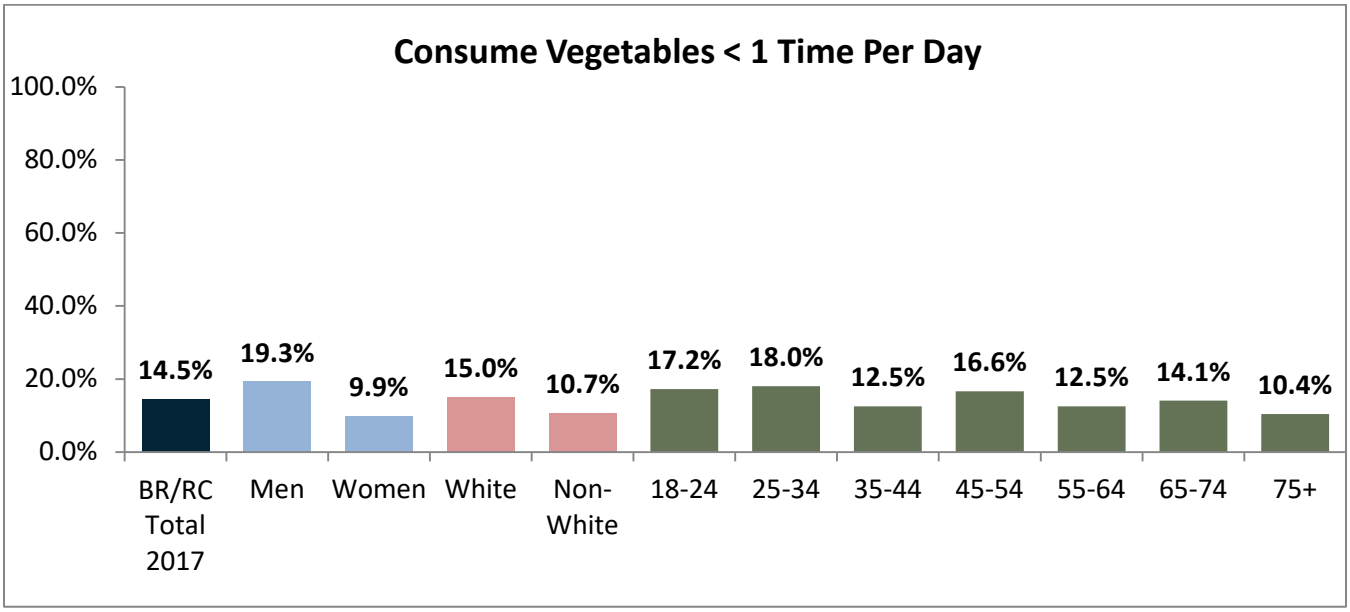


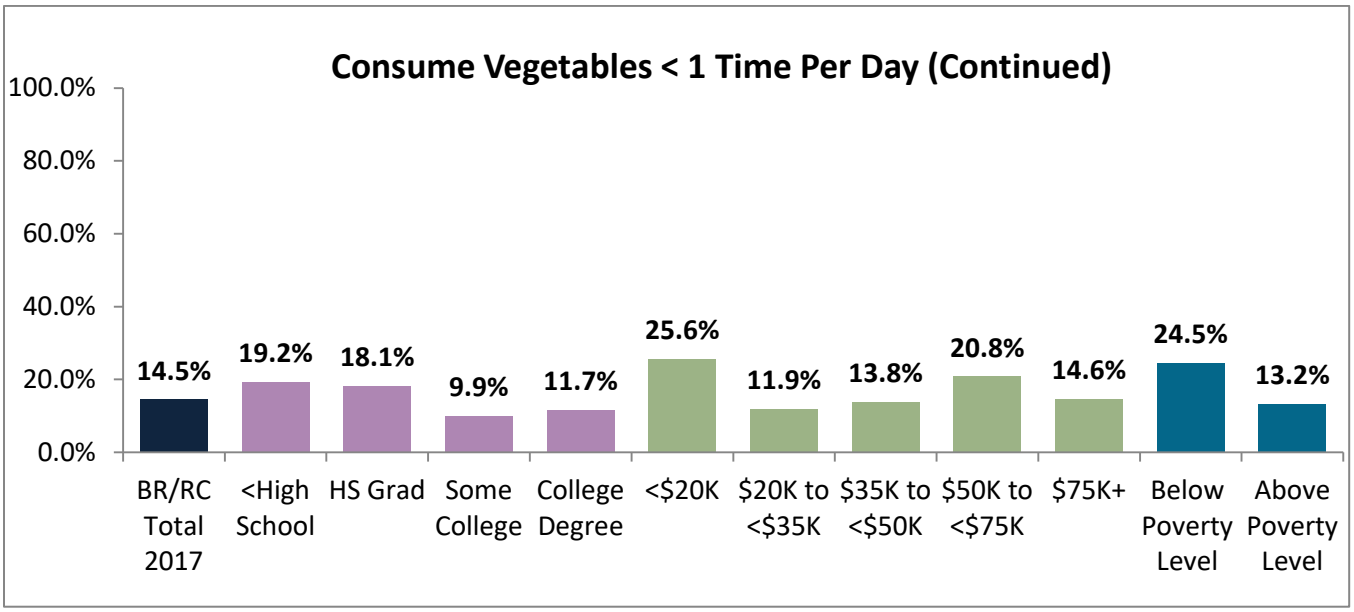


Source: SHBR Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.

Fruit and Vegetable Consumption (Continued)

- Roughly one in seven (14.5%) SHBR area adults consume vegetables less than one time per day on average.
- Men are more likely than women to consume vegetables less than daily. In addition, adults with no college education and/or below the poverty level are more likely to consume vegetables less than daily compared to those with at least some college and/or above the poverty level.

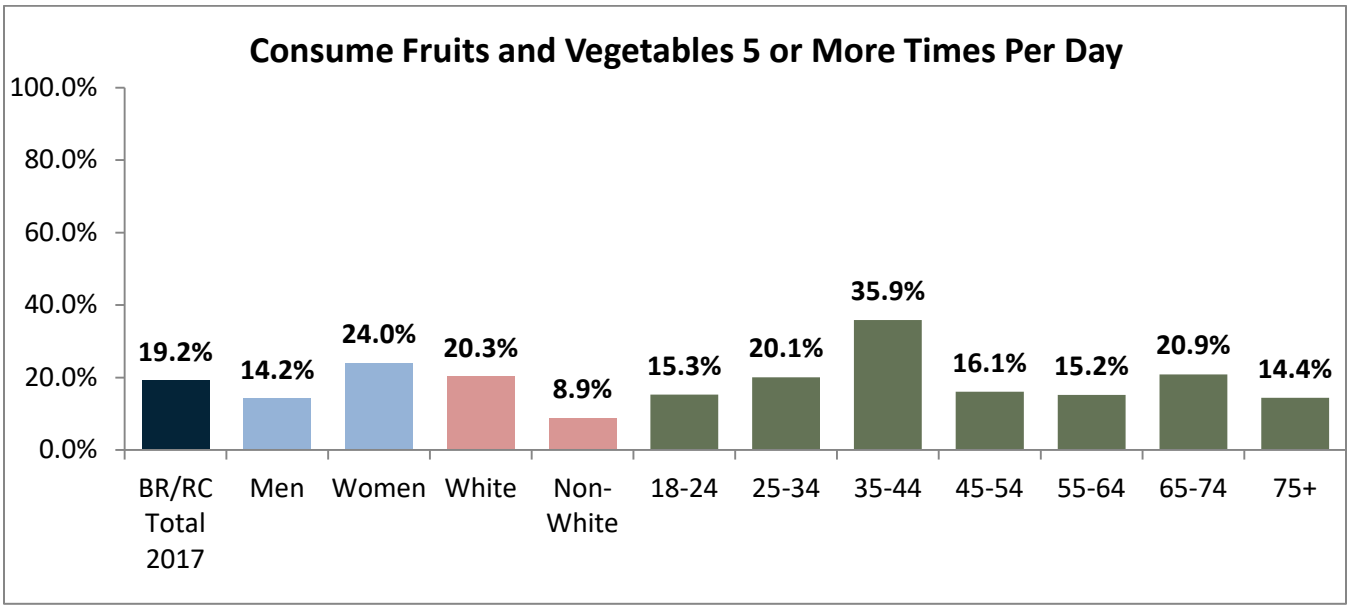


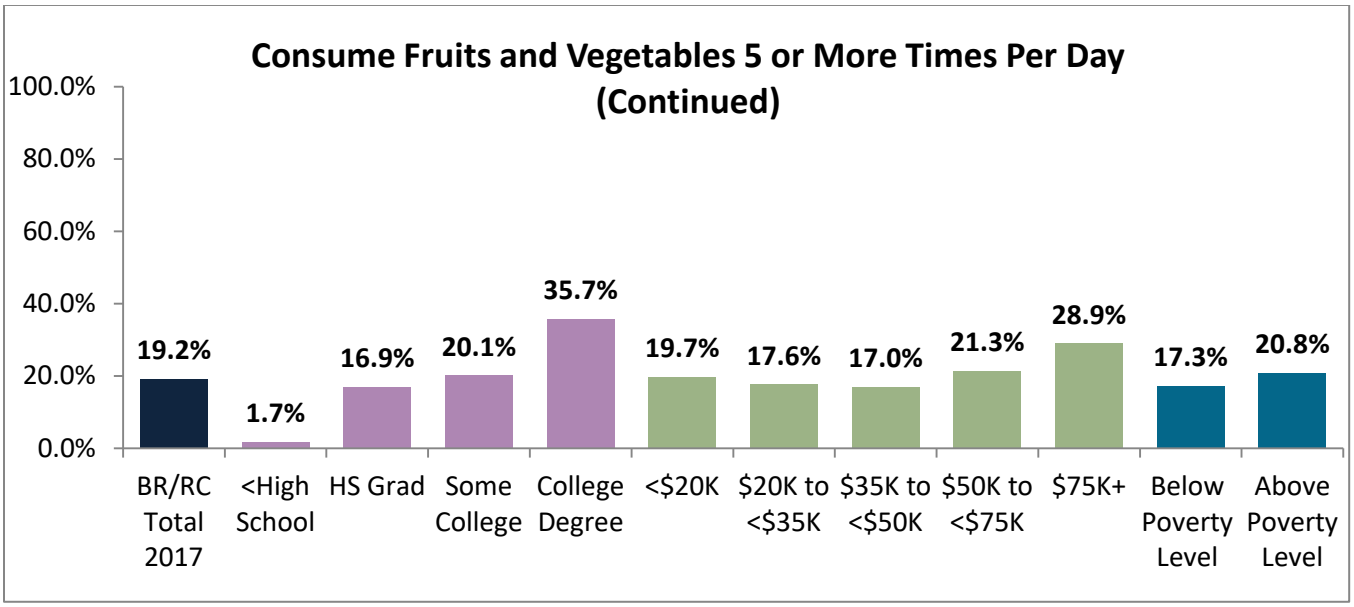


Source: SHBR Behavioral Risk Factor Survey, 2017, Q14.2: During the past month, how many times per day, week, or month did you eat vegetables for example broccoli, sweet potatoes, carrots, tomatoes, V-8 juice, corn, cooked or fresh leafy greens including romaine, chard, collard greens or spinach?

Fruit and Vegetable Consumption (Continued)

- Women and White adults are more likely than men and non-White adults, respectively, to consume adequate amounts of fruits and vegetables daily.
- Adequate consumption of fruits and vegetables is directly related to education levels; among adults with a college degree, 35.7% consume adequate amounts, compared to 1.7% of those with no high school diploma.

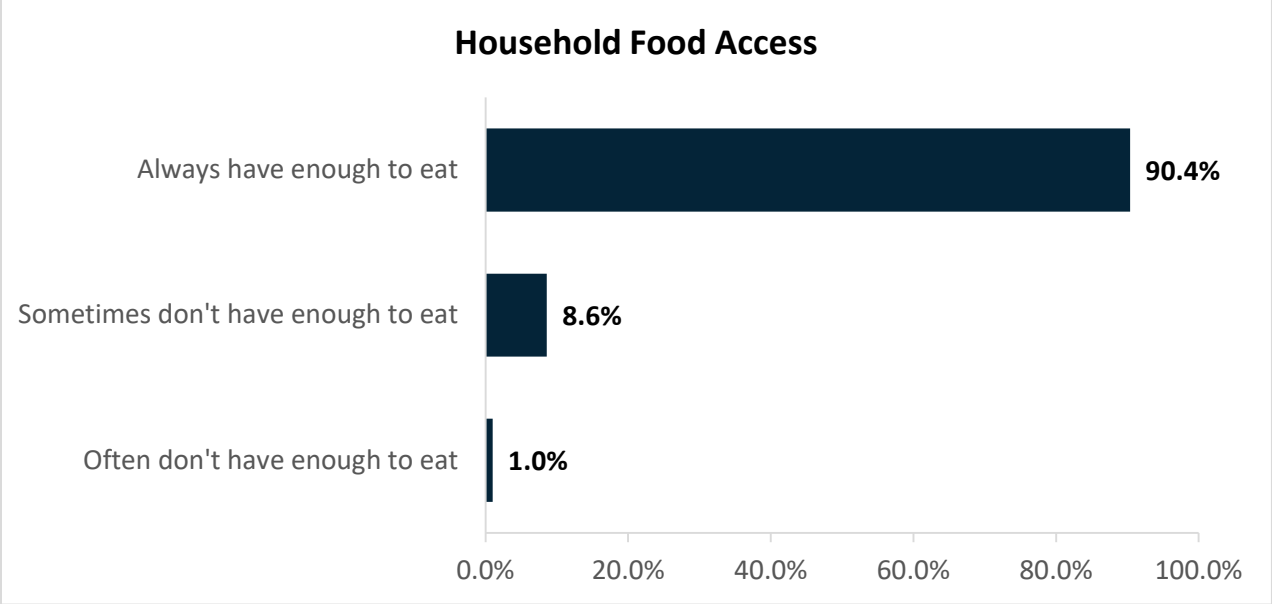




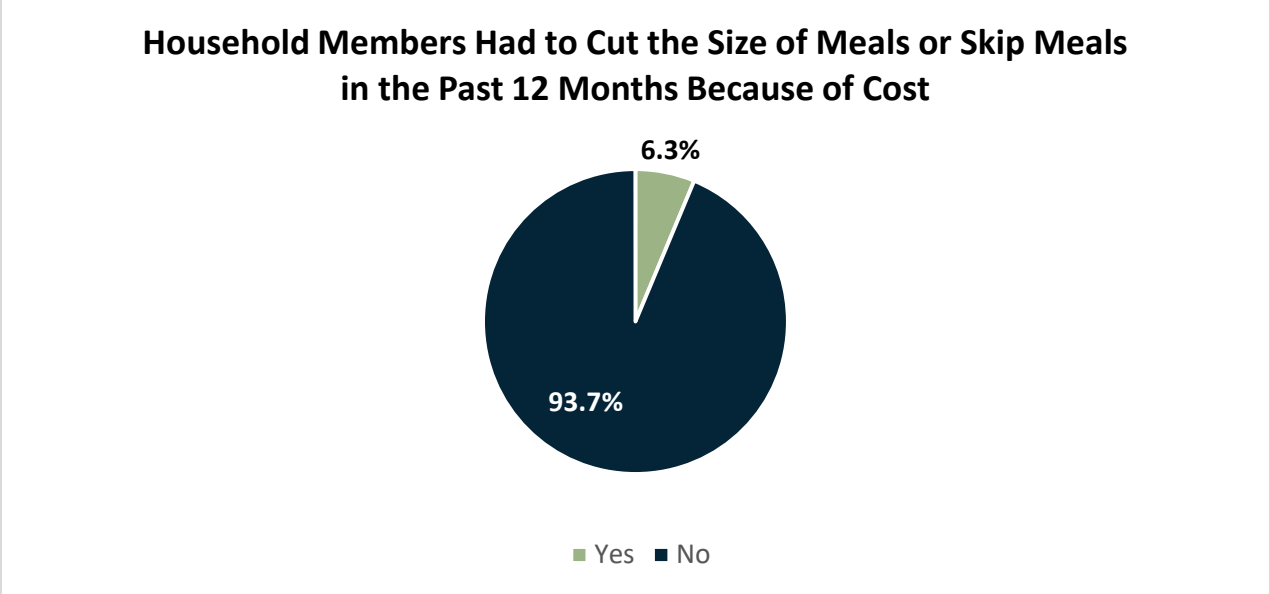
Source: SHBR Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.;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

Food Sufficiency

One in ten adults in the SHBR area report that they sometimes or often do not have enough to eat, and 6.3% say they or household members have cut the size of meals or skipped meals in the past year due to lack of money.



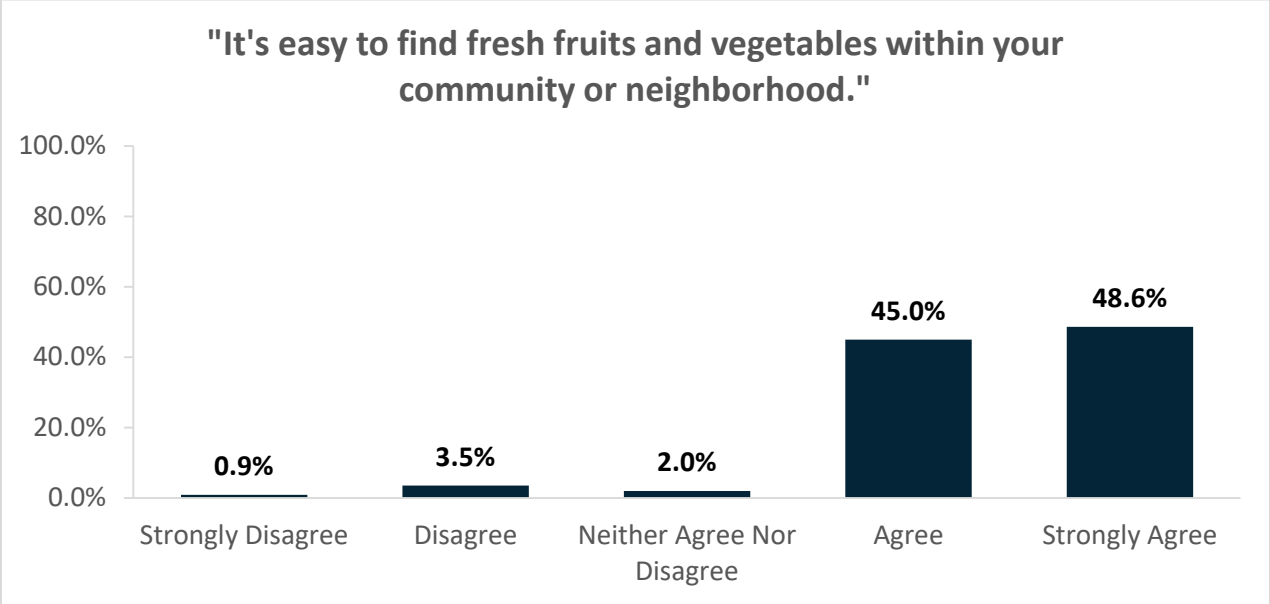
Source: SHBR Behavioral Risk Factor Survey, 2017, Q15.1: Which of the following statements best describes the food eaten in your household within the last 12 months? Would you say that…? (n=1002).



Source: SHBR 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=1003).

Food Sufficiency (Continued)

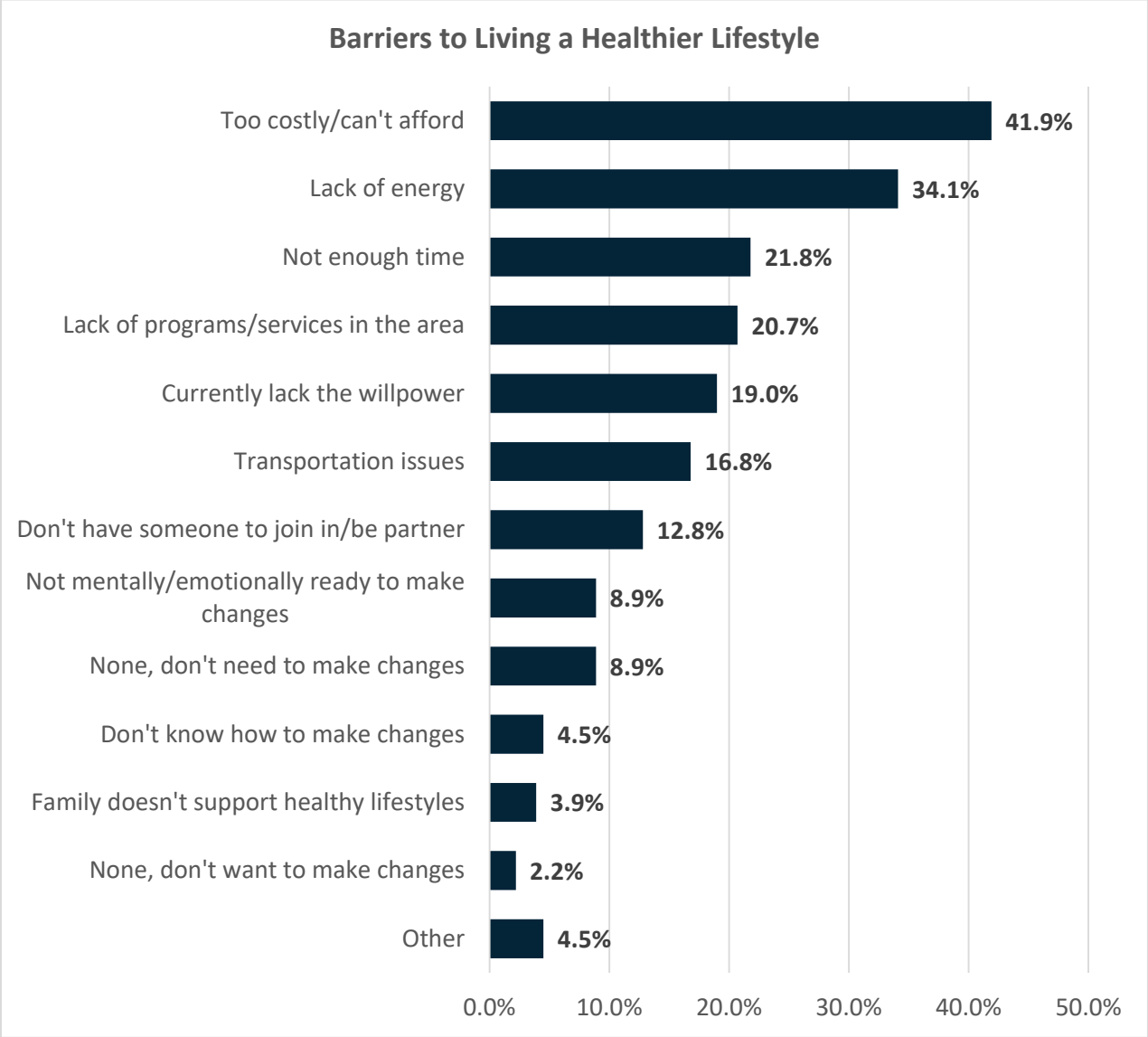
The vast majority of area adults (93.6%) say that it's easy to find fresh fruits and vegetables within their neighborhood or community.



Source: SHBR 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=990).

Barriers to Living a Healthier Lifestyle

Underserved residents most commonly identify cost and lack of energy as barriers to living a healthier lifestyle. Additional barriers include lack of time, lack of programs/services, lack of willpower, and transportation issues.

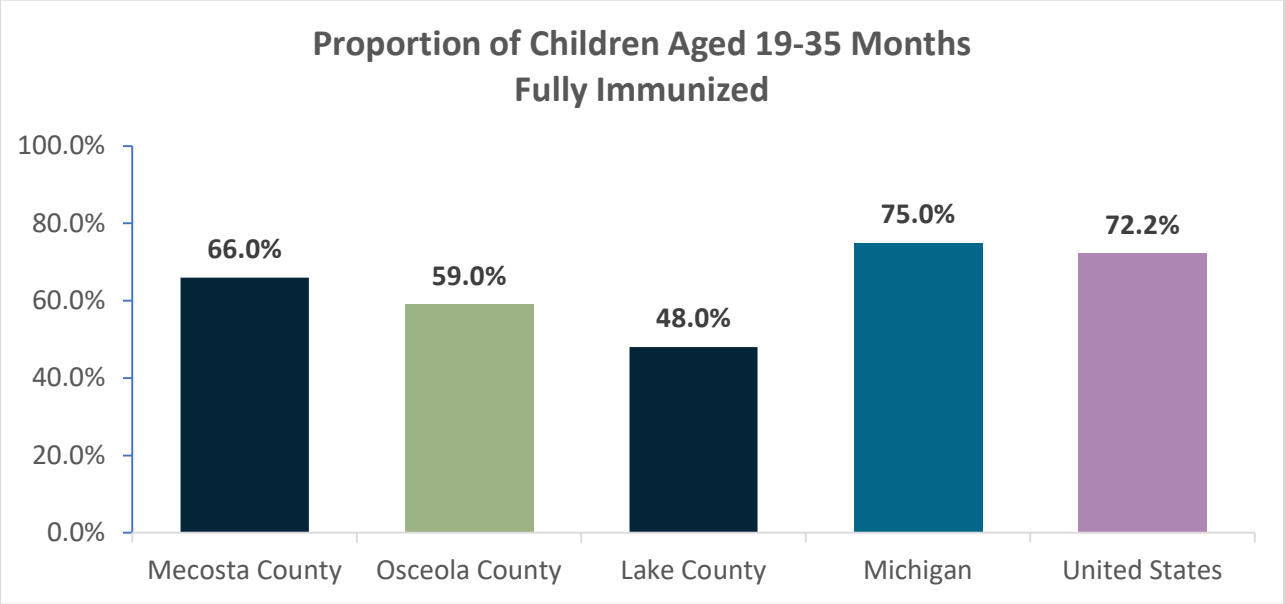


Source: SHBR Underserved Resident Survey, 2017, Q17: What are some of the barriers you face personally when trying to live a healthier lifestyle? (n=179).

CLINICAL PREVENTATIVE PRACTICES

Child Immunizations

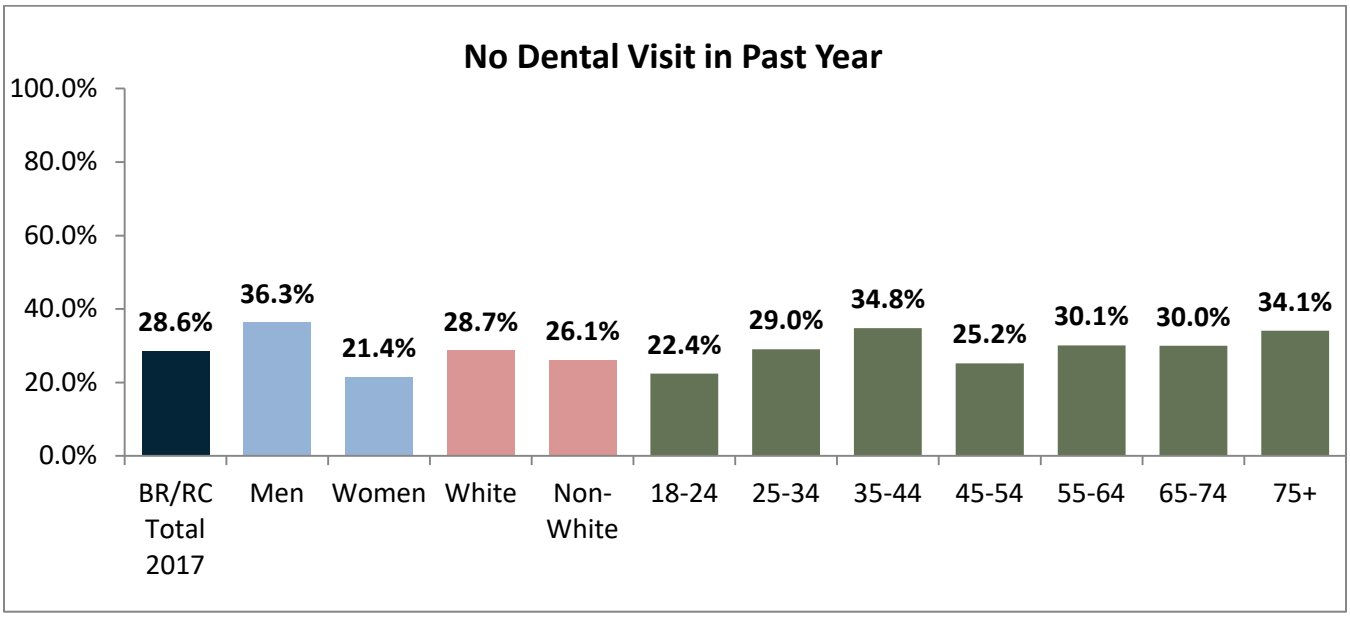
- Mecosta, Osceola, and Lake counties all have lower proportions of children ages 19-35 months who are fully immunized, compared to state and national rates. In Lake County, fewer than half (48.0%) of children in this age group are fully immunized.
- Although Key Informants do not consider lack of childhood immunizations as one of the more pressing or prevalent health issues in the community, some acknowledge that it is a problem.

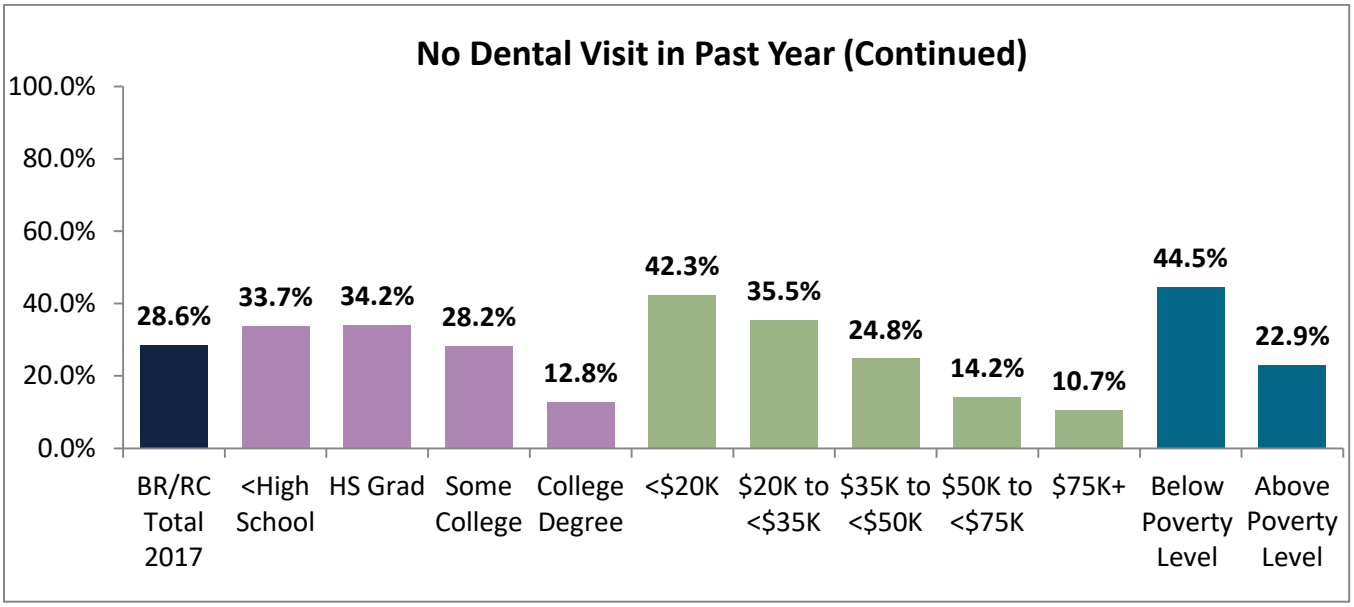


Source: Local and MI % from MICR June, 2017, National data at CDC National Immunization Survey, 2015.

Oral Health

- Nearly three in ten (28.6%) SHBR area adults have had no dental visit in the past year; this proportion is down from 33.8% in 2014.
- Men are more likely than women to have gone without a dental visit. Adults with less education or lower household incomes are more likely to have gone without a dental visit than adults with more education or higher household incomes, respectively.

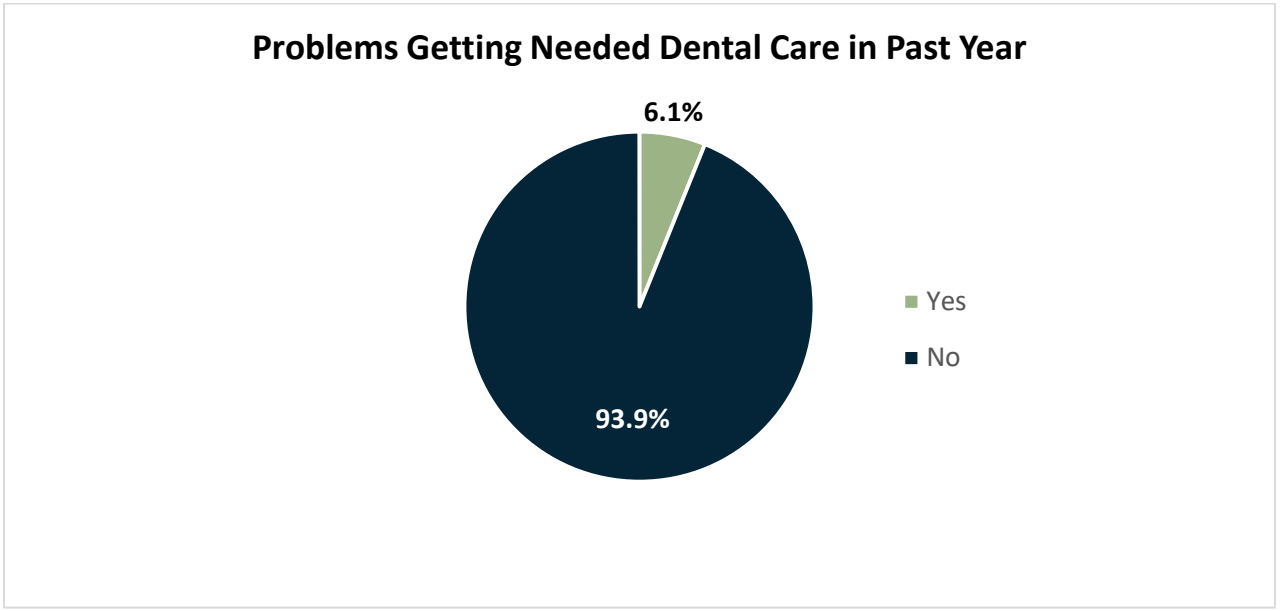




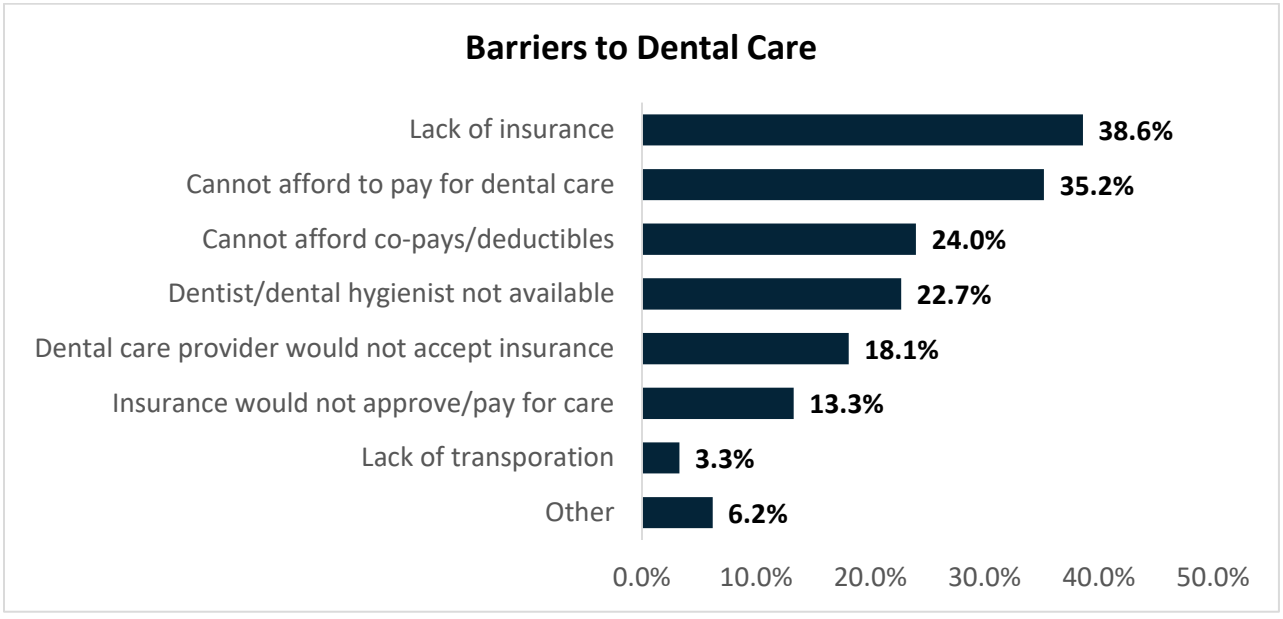
Source: SHBR Behavioral Risk Factor Survey, 2017, Q19.1: How long has it been since you last visited a dentist or a dental clinic for any reason? Include visits to dental specialists, such as orthodontists. (n=994).

Oral Health (Continued)

Few (6.1%) area adults have had problems getting needed dental care in the past year. Among those who did have trouble, the top barriers were lack of insurance and inability to pay for dental care or inability to cover the copays/deductibles.



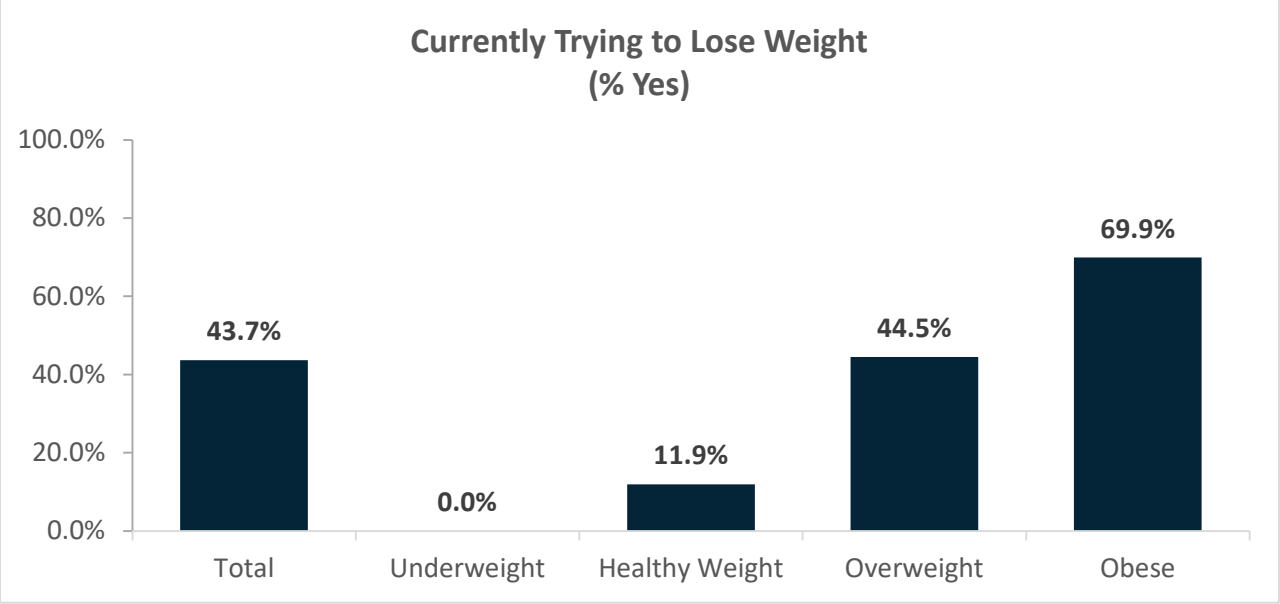
Source: SHBR Behavioral Risk Factor Survey, 2017, Q19.2: In the past 12 months, have you had problems getting needed dental care? (n=997).



Source: SHBR Behavioral Risk Factor Survey, 2017, Q19.3: Please provide the reason(s) for the difficulty in getting dental care. (Multiple response). (n=62).

Weight Control

- Just over four in ten of all area adults (43.7%) are currently trying to lose weight.
- Among overweight adults, fewer than half (44.5%) are trying to lose weight, while seven in ten (69.9%) obese adults are doing so. Many of those who are overweight or obese see themselves in a more favorable light; for example, nearly half (46.0%) of overweight adults consider their weight to be "about right," and more than half (56.3%) of obese adults consider themselves to be only slightly overweight.



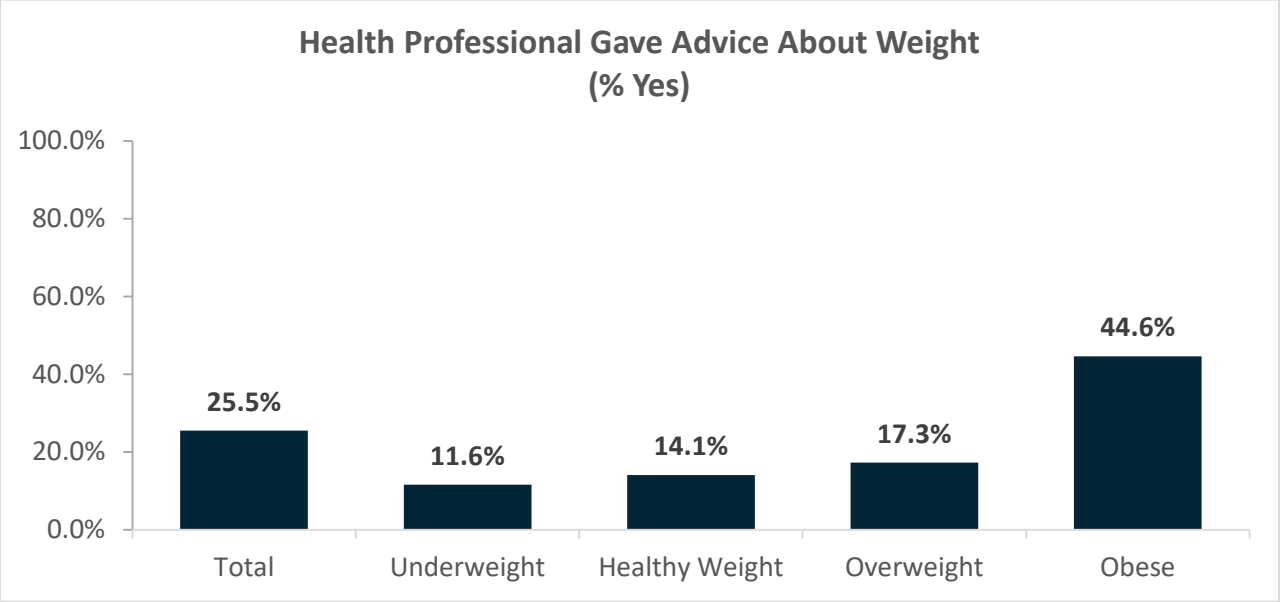
Source: SHBR Behavioral Risk Factor Survey, 2017, Q13.1: Are you currently trying to lose weight? (n=994).

	BMI Category				
	TOTAL (n=991)	**Obese (n=333)**	**Overweight (n=364)**	**Healthy weight (n=246)**	**Underweight (n=15)**
Underweight	4.2%	0.0%	0.3%	11.8%	52.2%
About the right weight	43.4%	15.0%	46.0%	77.3%	47.8%
Slightly overweight	41.4%	56.3%	52.1%	9.7%	0.0%
Very overweight	11.0%	28.7%	1.5%	1.2%	0.0%

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

Weight Control (Continued)

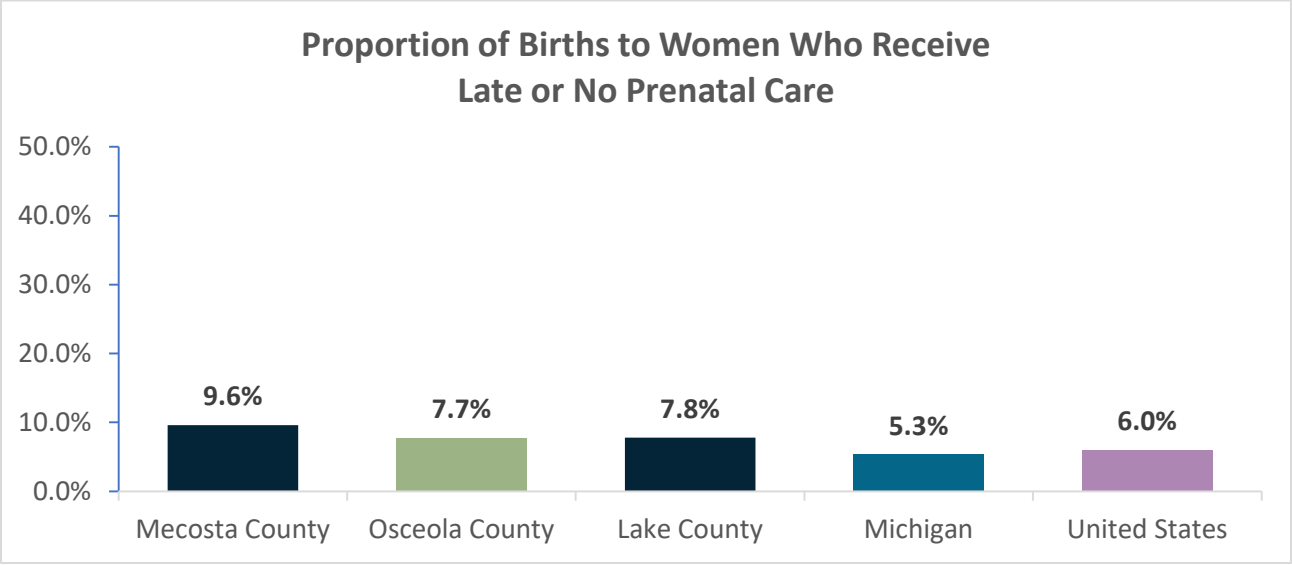
Considering that more than seven in ten adults in the SHBR area are either overweight or obese per this 2017 CHNA, it is surprising that only one-quarter of adults (25.5%) report receiving advice from a health care professional regarding their weight. Most notably, only 17.3% of overweight adults and 44.6% of obese adults report having received advice about their weight.



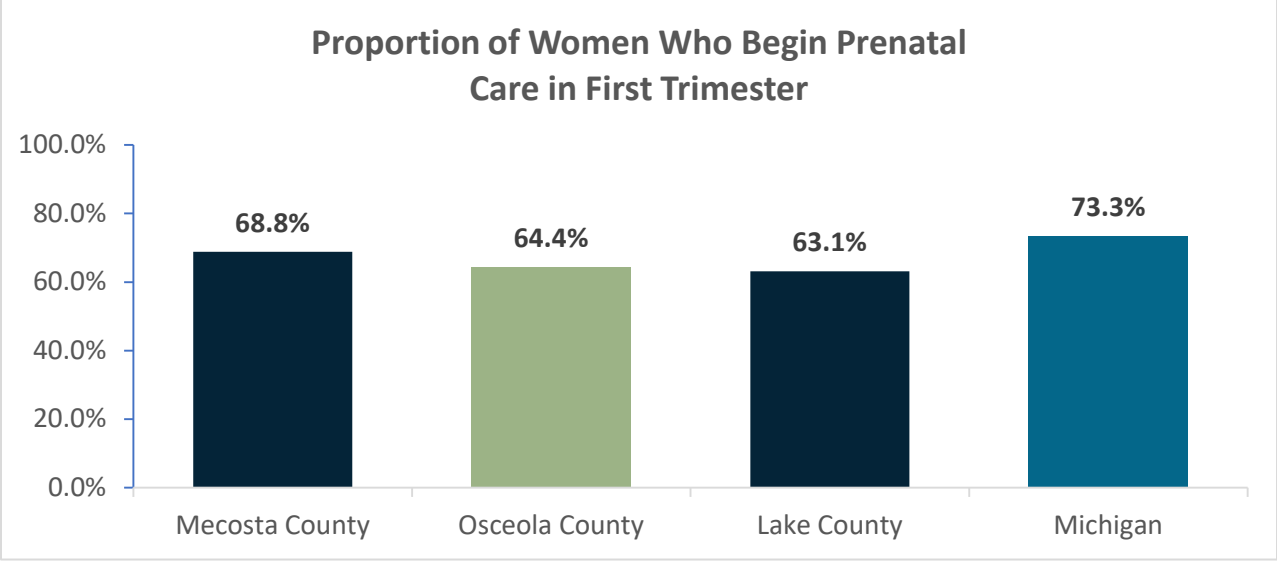
Source: SHBR Behavioral Risk Factor Survey, 2017, Q13.3: Has a doctor, nurse, or other health professional given you advice about your weight? (n=998).

Prenatal Care

- Fewer than one in ten women in Mecosta, Osceola, and Lake counties have late or no prenatal care; however, the rates in all three counties are slightly higher than the rates in Michigan and the U.S.
- In addition, more than three in ten women in all three counties do not receive prenatal care in the first trimester, a higher proportion than in Michigan overall.



Source: Kids Count Data Book, 2015.



Source: MDHHS Vital Records, counties and MI, 2015.

SOLUTIONS & STRATEGIES

Partnerships That Could Be Developed

Key Stakeholders and Key Informants discuss beneficial partnerships currently in place in the community and envision additional partnerships that could be developed to help address some of the community's pressing health needs. Examples of the latter include bringing physical and mental health services together under one roof, partnering with schools to promote healthy lifestyle choices, working with health care providers to address the prescription opioid epidemic, and bringing in transportation partners.

If we had something collaboratively **within clinics** to **offer mental health services** to patients, I think that would be a great collaborative. – *Key Stakeholder*

There's always **lots of opportunity**, and what comes to mind right now are huge issues with **substance abuse and treatment**; there's **very little resources for people once they're ready to move into a treatment** and then to retain them in a treatment program. I see that as a huge opportunity. And then, **mental health services - there's just not enough**. – *Key Stakeholder*

I'd like to promote regular **exercise** and more intensive **nutritional counseling**. I think that this needs to start at a very young age so **should be addressed in the schools as well as at extra-curricular activities**. – *Key Informant*

Provide education and **training to healthcare providers on opioids** and prescription drugs. – *Key Informant*

Partner with the county to expand transportation and provide tokens for transportation to and from appointments. – *Key Informant*

Coordinate with FSU to expand **counseling and social work** services to the community. – *Key Informant*

Expand **worksite wellness** programs. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q6: Are there any specific partnerships that could be developed to better meet a need? (n=5); SHBR Key Informant Online Survey, 2017, Q1c: What ideas do you have to resolve this issue (most pressing health issues or concerns)? (n=46).

Strategies Implemented Since Last CHNA

Key Stakeholders and Key Informants cite numerous initiatives that have resulted from the past two CHNAs and their corresponding implementation plans. These initiatives target health care access, diabetes, obesity, and substance abuse, among other issues.

Health care access	**School nurse program** has started. **More providers** have been added. **Emergency room** services have improved to offer **shorter wait times**. – *Key Informant* There are initiatives to **improve access to primary and specialty care**. – *Key Informant* **MedNow is really beneficial** to a rural community. – *Key Informant*
Diabetes	Diabetes was identified and **diabetes education is undergoing a transformation** to offer **more options** and **improve access**. – *Key Informant* **Pre-diabetes testing** is being performed more. A1C testing is being conducted at farmer's market. – *Key Informant* The **hospital** has a more robust **diabetes education** program. – *Key Informant*
Obesity	We brought in Michigan State Extension to help us with **cooking classes**. – *Key Stakeholder* Community **farmers markets** for healthier eating habits were put into place. – *Key Informant*
Substance abuse	**We're getting a DaVinci robot**, and our doctor who's been training on it – **[for] 50% of the people** that he does surgery on [he] **does not prescribe narcotics**…We do have a doctor who has a suboxone clinic…He's been very helpful with **educating both Big Rapids and Reed City about the behaviors and what triggers addiction** and has helped the medical staff and the nursing staff really understand this a little better. – *Key Stakeholder* In the ED, there is a **substance abuse grant** where they talk with potential clients and **encourage them to use 1016**. – *Key Informant* Opioid misuse was identified and we have implemented a **drug/needle take back**. There is a **local task force working with the physician practices to implement prescribing changes**. The **ED has implemented some protocols** to reduce opioid misuse as well. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q10 (n=5); SHBR Key Informant Online Survey, 2017, Q16 (n=46): There was a Community Health Needs Assessment conducted in your community back in 2014. What, if anything, has been done locally to address any issues relating to the health or healthcare of area residents?

Strategies Implemented Since Last CHNA (Continued)

Other initiatives implemented since the last CHNA include programs targeting tobacco use, teen pregnancy, mental health, and pain management. In addition, several respondents reported an increased atmosphere of collaboration, which they see as an important first step in tackling challenging issues and which is expected to be a precursor to further improvements.

Other miscellaneous issues	They are working on **smoking** issue and **adolescent pregnancy**. – *Key Informant* ED's have accepted **social work in the ED** 18 hours of the day **for increased mental health help.** – *Key Informant* **Helping the Whole You** speaker series. – *Key Informant* **Pain management** programs. – *Key Informant* There are initiatives to improve **prevention** methodologies and **senior/citizen fitness and health** promotion. – *Key Informant* Also offering more free **cancer screenings** throughout the year. – *Key Informant* There has been a **SANE program** started in the last two years out of the ED, and also there has been work done on **safe sleep…**Work being done on increasing access and knowledge base for those patients with **chronic disease; disease management** is being taught. – *Key Informant*
Increased collaboration	I question if three years is long enough to really see significant change. **I think the change you can see may be more on the part of partners getting involved**, but in terms of saying, "Okay, we're going to see an X percent decrease in obesity or diabetes" or some of those things, I think that's kind of unrealistic that that's going to happen in that period of time. I think there definitely have been **efforts to increase engagement in the existing collaboratives** and the groups towards the issues uncovered. – *Key Stakeholder* **Improved collaboration** with other agencies. Development of **community partners**. – *Key Informant* The **beginning conversations among community agencies** has improved as a result. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q10 (n=5); SHBR Key Informant Online Survey, 2017, Q16 (n=46): There was a Community Health Needs Assessment conducted in your community back in 2014. What, if anything, has been done locally to address any issues relating to the health or healthcare of area residents?

Resources Available to Meet Issues/Needs

- Key Stakeholders and Key Informants cite numerous resources currently in place to address some of the community's most pressing health concerns. In many cases, however, resources do not cover the full extent of the need and/or are limited to certain segments of the population, based on income level, insurance type, age, location, or other factors. For example, limited resources exist to address barriers to access (lack of providers, lack of transportation, cost of care) and substance abuse.
- Several health care professionals noted that in some cases the resources exist but the missing piece is either coordination of services or awareness that the resources exist.

Lack of providers	I would say **no [resources available]**. – *Key Stakeholder* We have very **limited specialty services** in the area to refer to. – *Key Stakeholder* Spectrum is **hiring more providers**, but we need them soon. – *Key Informant* There are new opportunities…through our new **Convenient Clinic and MedNow**. – *Key Informant*
Lack of transportation	**Commission on Aging**, **taxis** (**limited** hours and location), **MOTA** (**limited** hours). – *Key Informant*
Cost of care	**If you have workers who can connect with other agencies** – senior center or Community Mental Health – for a caseworker or assistance, then yes, **people are able to [get help for elderly who can't afford spend-down/copay**]. – *Key Stakeholder* Using the **Free Clinic**. – *Key Informant* Some community pharmacies offer **discounted drug programs** through their vendors. – *Key Informant*
Substance abuse	**We don't have adequate resources** to address that. Our resource is **sending people to the methadone clinic,** and that, frankly, **isn't working**. – *Key Stakeholder* Pain management – however, **not all insurances are accepted**. – *Key Informant* Mecosta/Osceola **Substance Abuse Coalition**. – *Key Informant* **Not as much [resources] as needed**. **Ten Sixteen** has great ideas that need implementing. **Must have total community buy in**. – *Key Informant* **WISE**, **CMH**, **DHHS**, **10/16**. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q1a: Are there adequate area resources available to address these issues? (n=5); SHBR 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=46).

Resources Available to Meet Issues/Needs (Continued)

Similarly, resources to address mental health and smoking are limited. On the other hand, area health professionals cite numerous resources in place to address the issues of obesity and chronic disease.

Mental health/Behavioral health	We could use **more behavioral health providers**. – *Key Stakeholder* **Inpatient treatment resources do not exist** in this community. Outpatient counseling is available through private counselors and organizations like ten-sixteen. **Community Mental Health** services are also available **for patients who qualify for Medicaid**. – *Key Informant*
Smoking	**Limited access to smoking cessation** programs - DHD #10 offers something but few people have knowledge of it. – *Key Informant*
Obesity	Spectrum Health Reed City Hospital's **pre-diabetes classes**, **Weightwatchers** programs, **rails to trails** for walking/biking. – *Key Informant* Free **dietician services** when insurance qualifies you. **Education** free at the community library. **Hospital gives cooking classes** for healthier eating at the farmer's market. – *Key Informant* **Certain Medicare plans will pay for exercise programs and participating gyms** (Silver Sneaker and/or Silver and Fit programs). – *Key Informant*
Chronic disease/Chronic condition management	I think **there are resources**; I think they **need to be better coordinated**. – *Key Stakeholder* We have a **cardiac and pulmonary rehab** that could help a lot of these patients out. There are **a lot of patients who do not know about this or due to limited resources (financial, Transportation) cannot make it** to a class. – *Key Informant* We have **diabetic educators**, but most people don't want to hear the truth. – *Key Informant* **FSU**, **MSU** extension office, **health department** all have outreach programs. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q1a: Are there adequate area resources available to address these issues? (n=5); SHBR 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=46).

Resources Available to Meet Issues/Needs (Continued)

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

- Baldwin Family Health
- Commission on Aging
- Community Mental Health for Central Michigan (CMH)
- Convenient Clinic (walk-in via Spectrum Health)
- Cooking classes via MSU extension
- Department of Health and Human Services (DHHS)
- Diabetes education programs
- District Health Department #10
- Farmer's markets
- Ferris State University
- Helping the Whole You speaker series
- Hope House Free Clinic
- Mecosta Health Services
- Mecosta-Osceola United Way
- MedNow and other technology to increased health care access
- MSU extension
- SANE program
- School nurse program
- Spectrum Health Big Rapids Hospital
- Spectrum Health Reed City Hospital
- Substance Abuse Coalition
- Women's Information Services, Inc. (WISE)

Suggested Strategies to Address Specific Issues/Needs

Key Stakeholders and Key Informants offer myriad suggestions to address the community's top health-related concerns and improve the area's overall health climate. For example, health care **access** may be improved through maximizing use of current provider resources, bringing in dial-a-ride services or Uber, opening additional free/low cost clinics, and improving visibility of existing services.

Maximize providers	**On-line scheduling** to fill in open PCP visits. – *Key Informant* **Longer hours** for doctor office after and before work. Urgent care/walk in on the **weekends**. – *Key Informant* More clinics having **virtual medicine rooms** so that when a provider is sick or on vacation that they can still come into the office and get care via computers that won't lose connection. – *Key Informant* **MedNow could be used for more specialties**. This would prevent [patients] from having to travel to other areas. – *Key Informant*
Transportation	I think a **countywide bus service** is probably ideal, like a dial-a-ride-type service in the counties, and if you could get that service to be able to **cross over county lines**, that would be huge. – *Key Stakeholder* **Uber ambulance type of service** for those that need a ride from the hospital after ER visit or discharge, something that would be available more and the cost would not be prohibitive. – *Key Informant* Assist the ambulance companies around the area to purchase **ambucabs/drivers**. Create a **neighbor to neighbor program** with specific and scheduled drivers for medical patients. Perhaps Spectrum could donate a **van for wheelchair patients** to be transported after hours. – *Key Informant*
Low-cost care	A **free clinic on the NE side of Greenville** because people still do not want outsiders in their homes. This could be a walk-in clinic with an emphasis on diabetes or other chronic diseases. – *Key Informant* More clinics that offer preventative check-ups at **reasonable rates,** clinics that are financially able to [be used] for urgent care without having to use ER, more **providers that take all insurances**. – *Key Informant*
Awareness	Improve communication of service availability – **more visibility**. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHBR Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=46); SHBR 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=46).

Suggested Strategies to Address Specific Issues/Needs (Continued)

Suggestions for addressing **substance abuse** in the community include building awareness among youth, partnering with health care providers to track prescription patterns, and increasing resources for inpatient and outpatient treatment programs.

Awareness	More emphasis on alcohol and drug **awareness and control among youth**. More **community buy in**. – *Key Informant* Utilize evidence-based practices to target the younger population to **break the belief that it's 'normal' or that everyone uses marijuana**. – *Key Informant*
Partnering with physicians to limit prescriptions	Provide **education and training to healthcare providers** on opioids and prescription drugs. – *Key Informant* Need to implement **CDC prescribing recommendations**. – *Key Informant* Less prescriptions for opioids. **Make ordering physicians aware when their ordering patterns diverge from norms.** – *Key Informant*
Treatment programs	**More substance abuse treatment programs** for individuals that want to get off drugs. I had a client that took two months to get in a program and due to her insurance she had to go all the way to Saginaw…**Individuals that want help should be able to get help** a little closer to home. – *Key Informant* Need to have some sort of **OP treatment program** for those with opioid issues. – *Key Informant* **More resources for drug and alcohol treatment**. Allowing an individual who is admitted for psych evaluation to at least spend the night at the hospital for observation. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=46); SHBR 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=46).

Suggested Strategies to Address Specific Issues/Needs (Continued)

Ideas for curbing **obesity** involve educating youth about the importance of a healthy lifestyle and promoting/increasing access to healthy foods, exercise opportunities, and weight loss programs.

Youth education	Education needs to **start in the elementary schools**. – *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**. We tend to grossly underfund these programs. – *Key Informant*
Healthy food access	**Access to healthy food** needs to be improved. – *Key Informant* More **fresh foods readily available to all**, not just who we classify as "in need." People who work full time struggle too. – *Key Informant*
Exercise opportunities	There is a need for **community wide activities geared toward getting people moving**. – *Key Informant* **Free exercise classes** that are fun and keep people wanting to come back…You would need to **add a caretaker for the young children** so no one would have an excuse and [offer them] more than just one time per day. – *Key Informant* Open a **YMCA or other affordable gym** for families. – *Key Informant*
Weight loss programs	I would encourage a **weight loss program** in Osceola or Mecosta county that helps with **diet control and weight management** with surgery being the last option. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHBR Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=46); SHBR 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=46).

Suggested Strategies to Address Specific Issues/Needs (Continued)

Area health care professionals' suggestions for addressing the community's **mental health** needs center on strengthening intervention and treatment options. Incorporating mental health services into primary care locations and using a case manager model are two specific ideas that share the common theme of recognizing and addressing mental health struggles early on via a more holistic approach to patient care. Bringing mental health struggles into the public eye is another suggestion, aimed at building awareness and reducing stigma.

Early intervention/ Holistic approach	**Greater access for children** to mental health services and supports **at a younger age**. – *Key Informant* Seek grant funding to establish multiple coaching 'centers' across the county to **teach coping techniques and provide mentoring to assist folks to manage stress** and mental health issues in a healthy way. – *Key Informant* **Early recognition of a potential mental health crisis** or possible addiction problem and prompt action are valuable. Increasing **access to resources like a care/case manager** could be helpful. Additionally, increasing referral resources (i.e. outpatient counseling, **inserting mental health services into primary care locations**, etc.) could be helpful. – *Key Informant* [We have] clients that can't get into Community Mental Health because they don't meet priority population - **if they were right there at the doctor's office**, and the doctor did a quick trauma screener and said, "Well, there's a lot going on. You know what? There's a clinician right down the hall; I'm going to refer you if you're inclined to do so." We don't have anything like that…I think there are adequate resources…it's just setting that up, and I think Spectrum has the platform or foundation from which to do that…I think the foundational pieces are there.– *Key Stakeholder*
Treatment	Mental health **emergency care at the hospital** (separate from the 'regular' ED). – *Key Informant* **More affordable** mental health services. – *Key Informant*
Awareness/Reduce stigma	I would love to see and be a part of **K9 for warriors** in our community. I would also like to see more **5k's and fundraisers for PTSD and the moneys raised put back into the community for education and support groups**. I think if these resources were made available and more education was out there, **you would see more people that come forward with their battles** and it would help in **decreasing the number of suicides, drug addictions, alcoholism**, etc. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHBR Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=46); SHBR 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=46).

Suggested Strategies to Address Specific Issues/Needs (Continued)

Key Informants and Key Stakeholders offer various suggestions to address other community health-related concerns, including chronic conditions, smoking, and poverty.

Chronic conditions	**Prediabetes can be reversed** to a normal health status….**Efforts put into screening community members for prediabetes**. After screening, provide education, weight reduction and increase in activity programs to reduce the prevalence. – *Key Informant* A way for **patients to be able to come to cardiac and pulmonary rehab** without having to have the burden of transportation cost. – *Key Informant*
Smoking	Offer **free smoking cessation** classes and resources. – *Key Informant* I'm concerned about the **number of pregnant women** I have worked with that **smoke throughout pregnancy**. I would like to **target those individuals – maybe something within MiHP**. – *Key Informant*
Poverty/Unemployment	A year-round **shelter or other emergency housing** option would address [housing challenges]. – *Key Informant* **Job skills** trainings. – *Key Informant*

Source: SHBR Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHBR Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=46); SHBR 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=46).

Suggested Strategies to Address Specific Issues/Needs (Continued)

In addition to the numerous suggestions offered to address specific health issues, Key Stakeholders and Key Informants discussed broad approaches that can lead to decreased incidence of disease, improved patient care, and more efficient use of resources. These approaches center on the ideas of prevention, collaboration, and holistic care. Proposed ideas include establishing comprehensive wellness centers with a broad range of offerings, expanding case management services, and improving coordination among service providers to avoid duplication of efforts.

Prevention/Wellness	An area for them to get care in one place. **Integrated care system**. A **facility to get help with obesity plus exercise, wellness center for therapy** and for target programs on health. – *Key Informant* Creating a **regional center of excellence where people can come to be proactive and manage their personal habits, their diets, exercise, and chronic diseases**. They should have access to dieticians, exercise experts, cooking classes, buying/obtaining fresh fruits and vegetables. We should help them with their medications and helpful supplements. – *Key Informant* A **sustained campaign** for many years **emphasizing wellness**. – *Key Informant* **Teach/educate youth** on the importance of having good health. – *Key Informant* We have several free meals sponsored by various churches in our community, typically attended by **lower socio-economic residents** who are less educated and have higher incidences of 'risky behavior.' This would be an opportune time to **provide information to these clients, e.g., instruction on label reading and then arrange shopping trips** with RD for 1:1 assistance. – *Key Informant*
Case management	**Patients are not compliant with the treatment plans** for a variety of reasons: financial concerns (costs of prescriptions, copays, etc.), transportation issues, education/comprehension issues, etc.…Patients with complex medical conditions or recent hospitalizations should be assigned to **a person who could help them coordinate appointments,** follow-up with them to **ensure they are following treatment plans, filling prescriptions, taking meds** as directed etc. and work through barriers with them **before they lead to a rehospitalization or worsened condition**. – *Key Informant*
Coordination of efforts	I think there are still situations where we have some competing forces or some duplication of efforts…**If we need program B, and you've got two people trying to do program A, can one of them do program B** so that we can have multiple things going instead of competing against each other for the same service? – *Key Stakeholder*

Source: SHBR Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=5); SHBR Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=46); SHBR 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=46).

APPENDIX

Participant Profiles

Key Stakeholder In-Depth Interviews

Administrator, Baldwin Family Health

Director, Community Mental Health

Director, Department of Health and Human Services

Health Officer, District Health Department #10

President, Spectrum Health Big Rapids Hospital/Spectrum Health Reed City Hospital

Key Informant Online Survey		
Social Worker (3)	Director, Clinical Nursing Services, ED and OB	MSN, RN, Infection Preventionist
Executive Director (2)	FNP	Nurse
Manager of Care Management/RN (2)	Foundation Director	Nursing Director
Physician (2)	Health Officer	Principal - elementary
Supervisor (2)	Health Planner	Professor
Cardiopulmonary Rehabilitation Lead	Hospital Director	Program Coordinator
Case Manager	Housing Resource Specialist (working with homeless)	Public Health Educator
Certified Professional Life Coach and Certified Grief Recovery Specialist	Local Government	Respiratory Therapist
City of Big Rapids employee	LPN	RN (retired)
CNO	Manager	RN working in Care Management
Director of Community Relations/PR and Marketing	Manager - Healthcare	Sales
Director, Clinical Nursing	Manager - Marketing and Communications	School Administrator

Participant Profiles (Continued)

Behavioral Risk Factor Survey (Telephone)					
	TOTAL		TOTAL		TOTAL
Gender	(n=1004)	Marital Status	(n=999)	Own or Rent	(n=992)
Male	48.7%	Married	50.4%	Own	81.4%
Female	51.3%	Divorced	9.8%	Rent	15.2%
Age	(n=998)	Widowed	4.8%	Other	3.5%
18 to 24	17.4%	Separated	0.5%	County	(n=1004)
25 to 34	9.7%	Never married	32.3%	Lake	13.1%
35 to 44	12.4%	Member of an unmarried couple	2.2%	Mecosta	45.9%
45 to 54	16.2%	Employment Status	(n=1002)	Montcalm	0.2%
55 to 64	20.3%	Employed for wages	40.0%	Newaygo	21.4%
65 to 74	14.7%	Self-employed	4.8%	Oceana	0.1%
75 or Older	9.3%	Out of work 1 year+	1.4%	Osceola	19.2%
Race/Ethnicity	(n=994)	Out of work <1 year	0.7%	Zip Code	(n=1004)
White/Caucasian	89.8%	Homemaker	2.6%	49304	7.7%
Black/African American	7.3%	Student	10.3%	49305	2.2%
Hispanic/Latino	1.3%	Retired	25.9%	49307	25.6%
Asian	0.2%	Unable to work	14.3%	49309	2.4%
Native American	1.0%	Education	(n=1000)	49312	1.2%
Pacific Islander	0.4%	Less than 9th grade	2.2%	49332	2.6%
Multiracial	0.1%	Grades 9 through 11	10.1%	49336	4.3%
Adults in Household	(n=1004)	High school grad/GED	39.2%	49337	5.4%
One	14.9%	College, 1 to 3 years	32.2%	49338	4.2%
Two	55.0%	College, 4+ yrs. (grad)	16.3%	49340	1.5%
Three	16.9%	Income	(n=753)	49342	1.5%
Four	7.8%	Less than $10K	8.3%	49346	5.4%
Five or more	5.4%	$10K to less than $15K	8.2%	49349	7.1%
Children in Household	(n=1001)	$15K to less than $20K	7.9%	49623	1.2%
None	77.8%	$20K to less than $25K	11.7%	49631	8.5%
One	6.7%	$25K to less than $35K	17.3%	49639	3.0%
Two	9.0%	$35K to less than $50K	19.7%	49642	2.4%
Three	4.9%	$50K to less than $75K	13.2%	49655	2.0%
Four or more	1.7%	$75K or more	13.6%	49677	10.1%
				49679	1.2%

Participant Profiles (Continued)

Underserved Resident Survey (Self-Administered)					
	TOTAL		TOTAL		TOTAL
Gender	(n=192)	Marital Status	(n=195)	Own or Rent	(n=190)
Male	25.0%	Married	30.8%	Own	46.3%
Female	75.0%	Divorced	22.6%	Rent	44.2%
Age	(n=196)	Widowed	14.9%	Other	9.5%
18 to 24	8.7%	Separated	4.1%	County	(n=193)
25 to 34	24.0%	Never married	23.6%	Kent	1.0%
35 to 44	10.2%	Member of an unmarried couple	4.1%	Lake	22.3%
45 to 54	10.7%	Employment Status	(n=194)	Mecosta	39.4%
55 to 64	14.8%	Employed for wages	27.8%	Osceola	37.3%
65 to 74	18.4%	Self-employed	5.7%	Zip Code	(n=181)
75 or Older	13.3%	Out of work 1 year+	3.6%	49304	12.7%
Race/Ethnicity	(n=196)	Out of work <1 year	5.2%	49305	1.7%
White/Caucasian	86.7%	Homemaker	6.2%	49307	23.8%
Black/African American	7.7%	Student	0.5%	49332	2.8%
Hispanic/Latino	1.0%	Retired	30.9%	49336	2.8%
Native American	0.5%	Unable to work	20.1%	49338	1.1%
Other	4.1%	Education	(n=195)	49340	1.7%
Adults in Household	(n=188)	Less than 9th grade	4.1%	49346	2.2%
One	36.7%	Grades 9 through 11	13.3%	49623	2.2%
Two	42.0%	High school grad/GED	42.1%	49631	14.4%
Three	10.6%	College, 1 to 3 years	25.6%	49632	1.1%
Four	8.0%	College, 4+ years (grad)	14.9%	49639	6.1%
Five or more	2.7%	Income	(n=191)	49642	2.2%
Children in Household (6-17)	(n=187)	Less than $10K	29.8%	49644	2.8%
None	70.1%	$10K to less than $15K	21.5%	49655	2.2%
One	11.2%	$15K to less than $20K	17.3%	49665	1.1%
Two or more	18.7%	$20K to less than $25K	6.3%	49677	13.3%
Children in Household (<6)	(n=184)	$25K to less than $35K	9.4%	49679	1.7%
None	73.9%	$35K to less than $50K	6.8%	48625, 49302, 49342, 49507, 49565, 49656, 49667, 49688	4.4%
One	19.0%	$50K to less than $75K	5.2%		
Two or more	7.1%	$75K or more	3.7%		

Previous Implementation Plan Impact Exhibit B

Spectrum Health Big Rapids 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 primary care provider availability within Spectrum Health by a variety of methods including, but not limited to: 1. Use telehealth visits from home or provider service locations to overcome long drives to see specialists or long waits to see primary care providers. 2. Evaluate the implementation of rapid assessment zone in which patients are treated and assessed using varying degrees of severity. A rapid assessment zone is a see and treat model of care that increases patient flow and improves the patient experience. It provides an area for the provider to ease backups during busy times. Create standardized assessment tool based on five levels of care where one being the most critical to five being least urgent.	1. 50 telehealth visits of any type completed by June 2016 2. Implement Rapid Assessment Zone by July 2016 This new way of assessing patients will improve patient satisfaction by providing the right level of treatment for minor illness and injuries. Wait times to be seen by a provider will be reduced as well as the total cycle time (from the start of the emergency visit to its conclusion).	1) There have been 1,730 telehealth visits. 2) Rapid Assessment Zones were explored and a decision was made not to implement. With the assistance of Process Improvement, it was recognized that both ED's did not have consistent surges in lower acuity volumes to support a Rapid Assessment Zone. Instead, process improvement initiatives were implemented to improve patient throughput times, including the creation of a high patient volume surge plan. These initiatives created a more efficient triage process, standardized a process to mobilize additional staff resources during periods of high volume and simplified the admission process from the ED, resulting in improved patient throughput times. The door to doc time was reduced by 27 minutes, median length of stay for lower acuity patients was reduced by 20 minutes and time from admit decision to ED discharge was reduced by 56 minutes.

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3. Prioritize physician recruitment strategies to fill physician shortages in rural areas of Mecosta, Lake and Osceola counties.	3. Increase the number of primary care providers by adding one per year for Big Rapids and Reed City Hospitals combined in 2016, 2017 and 2018	3. 2016 two family care providers resigned across SHBR & SHRCH, while two family care providers started practicing for a net neutral gain. Fiscal year 2017 ended with the addition of three family practice providers. To date, fiscal year 2018 three new family practice providers have started. 4) Convenient Care scheduled to open April 2, 2018.
Specific Health Need Goal	**Metric**	**Impact of Implementation Plan Strategy**
Access		
1. Use the telehealth visits described above and provide access to specialists through use of telehealth visits, including cardiology, oncology, wound care, infectious disease, behavioral health and vascular	1A. At least three specialties using telehealth, one by June 2016, another by July 2017, and a total of three by June 2018. 1B. Continue to recruit specialists to reflect the unique needs of the community. Further details forthcoming.	1A. To date there are 13 specialties using telehealth to provide patient care. These specialties are: Infectious Disease, Sleep Medicine, Hand Therapy, Vascular, Wound care, Inpatient Psych, Emergency Department Psych, School Nurse program, NICU consults and PICU consults. Scheduled before the end of June 2018, Ten16 Recovery Network and Pre-OP Assessment Clinic will come on line. 1B. In 2016, there were resignations and recruitment of specialist providers. The year ended with a net gain in the following specialties: Pediatrics and General Surgery. Fiscal year 2017 ended with loss of one pediatrician. To date, fiscal year 2018 has added Cardiology and Urology credentialed providers.
Increased Coordination		
Provide advance care planning and facilitator training that delivers individualized care to the chronically ill patient based on their beliefs and preferences. Use best practice program	1A. Identify and train physician champions, site leads and facilitators for Advance Care Planning in the Rehab and Nursing Center and Susan P. Wheat lake Regional Cancer Center by July 2016.	1A-B-C) This initiative is unachievable because Rehab and Nursing Center and Susan P. Wheat lake Regional Cancer Center are located in Osceola County. This initiative is aligned with the Community Needs Assessment associated with Spectrum Health Reed City Hospital. A change in the target group for

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from Gunderson Lutheran-Respecting Choices Model.	Identify and implement Advance Care Planning to two additional hospital departments by 2017. 1B. Provide Advanced Care Planning to 50 Rehab and Nursing, Susan P. Wheat lake Regional Cancer Center and Family Practice patients by July 2017. 1C. Track and measure the 50 patients from 2017 to see if we reviewed and followed their plan of care, when applicable.	Advance Care Planning is in process. The focus changed to provide Advance Care Planning for staff and their families. To date, two site leads have been identified and a readiness assessment has been completed. The assessment focused on Spectrum Health Big Rapids and Reed City Emergency Department Staff. Planning for the implementation phase 1 is underway.
Specific Health Need Goal	**Metric**	**Impact of Implementation Plan Strategy**
Healthier Lifestyle & Awareness		
Spectrum Health Big Rapids and Reed City Hospitals and Ferris State University are working together as an ad hoc committee to explore current state of diabetes care in Mecosta, Lake and Osceola Counties. 1. Work collaboratively to explore best practices and design programs that should be offered within Spectrum Health affiliated offices such as med reconciliation, foot care, eye care, etc.	1. Establish baselines in 2016 for foot care, med reconciliation, education and eye care and increase by 10% each year in 2017 and 2018	1) A baseline was established for diabetic patients. • Fiscal year 2016 monofilament testing occurred in 29% of patients. Fiscal year 2017 saw a small percent increase to a total of 30% of patients being tested. Fiscal year 2018 testing has increased to 44%. • Fiscal year 2016 medication reconciliation 97.9% completed. Fiscal year 2017 saw small decrease to 93.3%.

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		Fiscal year 2018 seen a small decrease to 92%. • A baseline of 1,111 patients received Diabetic and Medical Nutrition Therapy education fiscal year 2016. Fiscal year 2017 saw a 60% increase or 1,771 patients. This increase was partially the result of staff in place after a 100% staff turnover in fiscal year 2016. To date fiscal year 2018, 887 patients received Diabetic and Medical Nutrition Therapy. 2018 fiscal year is on pace to for a slight increase over fiscal year 2017 patient volumes. • Fiscal year 2016 eye exams occurred in 25.7% of patients. Fiscal year 2017 saw a 36% increase to a total of 35% of patients completing an exam. Fiscal year 2018 has seen an increase to 44% testing. 2) A baseline was established for the number of individuals participating in diabetes prevention programs. Fiscal year ending June 2016 a total of 15 patients attended the CDC's diabetes prevention program. Fiscal year ending 2017 a total of 20 patients attended the CDC's diabetes prevention program. Another 9 patients attend prediabetes class. To date fiscal year 2018, 6 patients attended CDC's diabetes prevention program. Another 16 patients attend prediabetes classes.
2. CDC's diabetes prevention programs target youth and adults who are pre-diabetic and are at risk for getting diabetes. It offers education on how to teach them to change their lifestyle and behaviors.	2. Establish baselines in 2016 for BMI and A1C and decrease by 5% each year in 2017 and 2018	
Specific Health Need Goal	**Metric**	**Impact of Implementation Plan Strategy**
Education		
1. Develop a successful pain management program for the excessive and inappropriate use of opiates in our primary service area. Patients seeking opiates for diversion, recreation or sales	1. Identify success metrics as this work continues through July 2018.	In 2016, a partnership was created with Ten16 Recovery Network. Together we have offered medication and needle take back events and have placed a wellness advocate within the ER. To date, eight medication and needle events collected 943.1 pounds of medication and needles while serving 439

Spectrum Health Big Rapids Hospital

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arrive in our emergency rooms and in our primary care offices.		community members. Three medication and needle take back events are scheduled prior to June 2018. To date, the Wellness Advocate screened 229 ER patients referring 52 to treatment and another 102 to peer support groups. By June 2018, deployment of telehealth will expand the availability of the Wellness Advocate service from 3-days to 6-days a week. A committee was created to develop initiatives impacting the use of opiates. In May, 2017, an addiction specialist educated physicians and nursing staff. Fiscal year 2018, ER providers and department staff were educated on a revised practice to limit the duration of prescribed opioids to less than a three day supply for all discharged adults. Opioids are no longer prescribed to pediatrics. Provider and healthcare team education on Opioid Legislation is scheduled for March 2018. Regional education event for providers and healthcare team members on Prescribing in the Opioid Epidemic is scheduled for May 2018.