SPECTRUM HEALTH

Community Health Needs Assessment for:

Newaygo County General Hospital Association d/b/a Spectrum Health Gerber Memorial

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 GERBER MEMORIAL HOSPITAL

Community Health Needs Assessment

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February 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 Gerber Memorial Hospital (SHGM) 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 Gerber Memorial 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 SHGM 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 SHGM.

More specific objectives include measuring:

- The overall health climate, or landscape, of the regions served by SHGM, including, primarily, Newaygo County, but also portions of Lake, Muskegon, and Oceana 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 Gerber Memorial 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**	**6**
Key Informants	**Online Survey**	**Physicians, Nurses, Dentists, Pharmacists, Social Workers**	**72**
Community Residents (Underserved)	**Self-Administered (Paper) Survey**	**Vulnerable and underserved sub-populations**	**210**
Community Residents	**Telephone Survey (BRFS)**	**SHGM area adults (18+)**	**568**

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 6 Key Stakeholders invited to participate, all 6 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 20.0% from 90 in 2014 to 72 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 210 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 568 SHGM area adults (age 18+) via telephone. The response rate was 31%.

Disproportionate stratified random sampling (DSS) was used to ensure results could be generalized to the larger SHGM 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 568 completed surveys:

- 252 are cell phone completes (44.4%), and 316 are landline phone completes (55.6%)
- 175 are cell-phone-only households (30.8%)
- 148 are landline-only households (26.1%)
- 245 have both cell and landline numbers (43.1%)

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 SHGM 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 SHGM 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 568, at a 95% confidence level, is +/- 5.0% or better. This calculation is based on a population of roughly 36,828 Newaygo County residents alone who are 18 years or older, according to the 2016 U.S. Census estimate. The population of SHGM's service area is even larger when areas of Lake, Muskegon, and Oceana county were included.

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

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

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

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

It should be noted that if the respondent said "don't know" or refused to answer any of the ACEs items then they were not included in the ACEs analyses by groups. This decision was made because the researchers believe that coding "don't know" or "refused" answers as zero and then including them in one of the three groups could possibly create an inaccurate picture of the extent to which adverse childhood experiences exist in the population of SHGM 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, SHGM area adults, and SHGM 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 SHGM area.

EXECUTIVE SUMMARY & KEY FINDINGS

Executive Summary & Key Findings

In general, the findings from the 2017 Community Health Needs Assessment portray the Spectrum Health Gerber Memorial area as a community faced with many economic, social, and health challenges. However, community members also see improvement in many areas 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 SHGM area is considered to be a caring, giving, and philanthropic community. Although resources are more limited compared to other areas, the robust volunteer force and strong collaborative spirit among people and organizations have made up for many resource shortcomings.

It is a very safe community with low levels of violent crime and homicide. Poverty levels and the unemployment rate are higher compared to the state and the nation but the latter has decreased substantially over the past several years. The community could also benefit from a boost in the educational achievement of its residents.

Environmentally, the area is clean and offers a plethora of outdoor spaces such as national parks, lakes, paths for walking/hiking, and biking trails that invite activity. Additionally, with many farms nearby and the farmer's markets throughout the warmer months, there is generous access to healthy food for those who can afford it. In sum, the SHGM area possesses some of the social and community characteristics that Key Stakeholders say distinguish a community as "healthy."

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

Area residents also report good health and relatively low levels of psychological distress. They have slightly shorter life expectancy and have higher mortality rates (adult, child, infant) than residents across Michigan or the U.S.

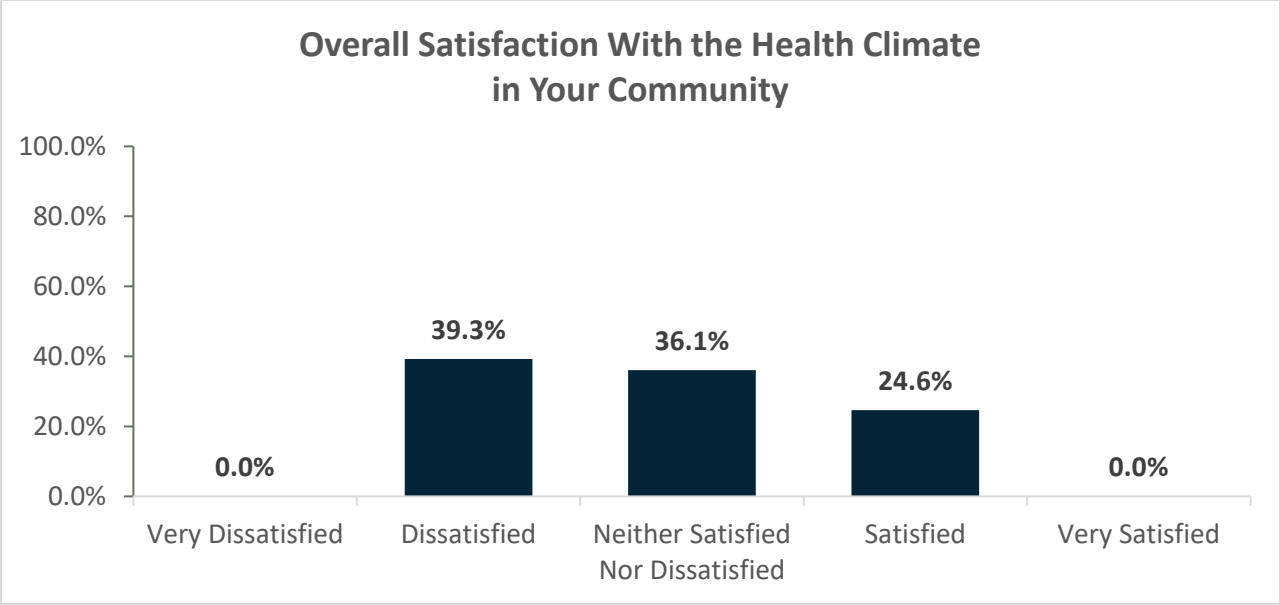
The prevalence of chronic conditions is high relative to the state and the nation. Additionally, the prevalence of many of the chronic conditions measured, including diabetes, is up from the last CHNA iteration in 2014.

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

With regard to SHGM area youth, rates of smoking and binge drinking are lower than rates for youth across Michigan, but rates for sexual activity and teen births are higher in the SHGM region compared to those across Michigan.

Executive Summary & Key Findings (Continued)

All of that said, only one-fourth (24.6%) of Key Informants – the very people on the ground working in or around the field of health care – are satisfied with the overall health climate in the SHGM area, demonstrating that there is substantial room for improvement, and their comments indicate concerns across several areas.



Satisfied	**Resources are here**, people just **need to know about them** and then they **need help accessing them**. I believe **I can access the care I need at the time I need it for urgent needs**. I also **have resources in the larger communities around me for specialty services**.
Neither satisfied nor dissatisfied	I feel the **patients that come in do not have the care they need**, but as a member of the community **I am satisfied with my care and resources**. **We are on the right path** with programs and offerings available **but there is still a long way to go**.
Dissatisfied	There is **limited availability of providers**, **barriers to access** related to **transportation** and **finances**, **lack of accountability** on the patient's part. Just so **difficult to even get in for an appointment with PCP office**.

Source: SHGM 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=61); Q11a: Why do you say that? Please be as detailed as possible.

Executive Summary & Key Findings (Continued)

What follows are nine key findings and discussions on each:

- **KEY FINDING [Significant Health Need] #1**: Obesity and weight issues – a sizeable majority of area adults are either overweight or obese, and this can lead to other major health problems
- **KEY FINDING [Significant Health Need] #2**: 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] #3**: Substance use and abuse – smoking continues to be a problem, and opioid addiction and the abuse of prescription drugs have become more problematic
- **KEY FINDING [Significant Health Need] #4**: Health care access – is an issue for everyone because of a lack of providers (both primary care and specialty care) and a lack of specific programs and services
- **KEY FINDING [Significant Health Need] #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 & Key Findings (Continued)

Key Finding [Significant Health Needs] #1: Obesity and weight issues – a sizeable majority of adults are either overweight or obese and this proportion is higher than it was in 2014.

- Prevalence data demonstrates:
  - 71.3% of adults are either overweight (38.4%) or obese (32.9%) in the SHGM area
  - The prevalence of obesity is higher in the SHGM area than across Michigan or the U.S.
  - 16.7% and 23.3% of youth (grades 8-12) are obese in Newaygo and Lake counties, respectively; these rates are also higher compared to Michigan or the U.S.

- Area adults consider obesity to be the top heath issue in the community, and Key Stakeholders and Key Informants consider obesity to be a pressing or concerning health issue in the SHGM area primarily because:
  - Prevalence is high and not improving
  - Obesity is comorbid with other chronic conditions or negative outcomes such as diabetes, sleep apnea, joint problems, hypertension, heart disease, and stroke

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

- Compounding the problem is the fact that many adults who are overweight or obese view themselves more favorably so there may be less urgency for them to attempt to lose weight.
  - Only 27.9% of obese adults view themselves as "very overweight" and 52.5% of overweight adults view themselves as "about the right weight"
  - 21.4% and 67.2% of obese and overweight adults, respectively, are currently **not** attempting to lose weight

- Area residents could use more guidance on ways to address their weight since area health care professionals seem to be failing in this area.
  - 83.3% of overweight adults and 48.3% of obese adults report that health professionals have **not** given them advice about their weight

- Almost half (46.2%) of Key Informants say that programs targeting obesity reduction are lacking in the community.

Executive Summary & Key Findings (Continued)

Key Finding [Significant Health Needs] #2: Mental health – especially access to treatment, continues to be a critical issue and hasn't improved from since 2014.

- Prevalence data demonstrates:
  - 22.7% of area adults are considered to have mild to severe psychological distress per the Kessler 6 Mental Health Scale, and this is up from 19.3% in 2014
  - 6.4% of adults report poor mental health – meaning they experienced 14 or more days, out of the previous 30, in which their mental health was not good due to stress, depression, and problems with emotions
  - 34.0% and 29.3% of youth in Newaygo and Lake counties, respectively, report depression; the former rate is higher than the state or national rates
  - 11.9% of adults say that growing up they lived with someone who was depressed, mentally ill, or suicidal

- Key Stakeholders and Key Informants consider issues surrounding mental health to be pressing or concerning in the SHGM area and cite four major reasons for their concern:
  - Lack of programs, services, and resources to address all mental health issues, from mild to severe
  - Lack of trained clinical staff with expertise in mental health, specifically psychiatrists
  - Social factors, or social determinants of health, such as poverty and low educational standards that impact a person's mental health
  - Continued stigma attached to mental illness, which may prevent many people from seeking, and receiving, needed care

- 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

- It is concerning that sizeable proportions of people who currently suffer from some form of mental illness are not undergoing treatment or taking medication, and there hasn't been much improvement since 2014.
  - For example, half (51.6%) of adults who report poor mental health, and one-third 934.6%) 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 not seek treatment that would benefit them?
  - The answer may partly lie in the continued stigma mentioned above: just half (54.7%) of adults think people are caring and sympathetic toward people with mental illness

Key Finding [Significant Health Needs] #2: Mental health – especially access to treatment, continues to be a critical issue and hasn't improved from since 2014. (Continued)

- In absolute terms, the suicide rates for both adults and youth are low; however, the proportions of youth that both think about suicide and attempt suicide, are higher than the rates for adults.
  - More worrisome is that the rate for attempting suicide among Newaygo County youth is higher than the state or national rates

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

> Well, if the access issue went away, in terms of enhancement of psychiatric services, I think the expansion of that would help with "connecting the head with the body." This would succeed in reducing the prevalence, or perhaps preventing, in some ways, mild and moderate behavioral health conditions becoming more severe. Utilizing TeleMed would also help reduce consumer barriers, such as travel. – *Key Stakeholder*

Executive Summary & Key Findings (Continued)

Key Finding [Significant Health Needs] #3: Substance use and abuse – smoking, opioid addiction, and the abuse of prescription drugs have become more problematic since 2014.

- Substance abuse, which is often co-morbid with mental illness, is identified as the most concerning issues among Key Informants and a top concern of Key Stakeholders and underserved residents.

- Prevalence data demonstrates:
  - 26.3% of adults currently smoke cigarettes, a rate higher than the last CHNA in 2014 and higher than the state and national rates
  - 8.2% of youth in Newaygo County and 9.6% of youth in Lake County currently smoke cigarettes
  - 5.8% of adults are heavy drinkers and 11.1% are binge drinkers, rates that have actually improved since 2014 and are lower than state and national rates
  - 9.3% of youth in Newaygo County and 8.7% of youth in Lake County engaged in binge drinking
  - 24.6% of adults know someone who has taken prescription drugs to get high
  - 23.3% adults lived with someone while growing up who abused substances

- Key Stakeholders and Key Informants cite four major reasons for their concern about substance abuse:
  - Prevalence; Key Stakeholders and Key Informants believe smoking, alcohol abuse, illicit drug abuse, and prescription drug abuse exist on a large scale throughout the community
  - Lack of treatment options for substance abuse; Key Informants cite substance abuse treatment as the service most lacking in the community and are dissatisfied with the community's response to any substance abuse issue
  - Opioid use and prescription drug abuse are interrelated, as people become addicted to prescription medication and then have to turn to illicit opiates to avoid withdrawals
  - Substance abuse often leads to other life problems or health risks, such as sexual and domestic violence, homelessness, babies being born with withdrawal symptoms, ER visits, overdoses, and death

- Further, 62.1% of area adults believe there is a prescription drug abuse problem in the community.
  - Of these, almost all (94.9%) believe prescription opiates are abused
  - Roughly three-fourths believe there is abuse of prescription stimulants/amphetamines (75.4%) and depressants (72.6%)

- Over half (55.2%) of area adults think that illicit methamphetamines are abused and almost half think there is abuse of heroin (48.1%) and marijuana (47.6%).

- Exposure to second-hand smoke is an issue in the community:
  - More than one-fourth (27.2%) of area adults report smoking inside their home and this rises to 31.9% for households with children under age 18 in the home
  - 61.1% of smokers and 15.0% of non-smokers report smoking takes place in their home

Executive Summary & Key Findings (Continued)

Key Finding [Significant Health Needs] #3: Substance use and abuse – smoking, opioid addiction, and the abuse of prescription drugs have become more problematic since 2014. (Continued)

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

For smoking, I think in the long term, you would see childhood asthma cases drop. I think the number of ED visits would probably drop from less substance abuse. If there was no smoking, in the long run it would help decrease the number of chronic disease cases that we would have. Now, that's hard to quantify because you don't know, but smoking is a huge risk factor for a lot of issues. – *Key Stakeholder*

In terms of substance abuse, you're just saving lives - in essence, getting people to break that cycle of addiction. – *Key Stakeholder*

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*

Executive Summary & Key Findings (Continued)

Key Finding [Significant Health Needs] #4: Health care access – is an issue for everyone because of a lack of providers (both primary care and specialty care) and lack of specific programs and services.

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

- Prevalence data demonstrates:
  - There are far fewer MDs and DOs per capita in Newaygo (39.7) and Lake (8.8) counties compared to Michigan (80.6)
  - 9.2% of all adults have no health care provider (no medical home) and this proportion rises to 11.4% for underserved adults
  - 9.2% of all area adults aged 18-64 have no health insurance and this proportion rises to 32.4% for adults without a high school diploma
  - 18.3% of all adults have Medicaid for their health insurance, compared to 56.1% for underserved adults
  - 50.5% of children under age 18 in Newaygo County and 67.7% of children in Lake County are insured under Medicaid
  - 9.9% of area adults had to skip or stretch their medication in the past year in order to save on costs
  - 17.0% 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 (40.4%) underserved adults had trouble meeting their own, or their family's, health care needs in the past two years
  - Almost two-thirds (65.8%) of underserved adults report that they, or a family member, has visited the ER/ED at least once in the past year; 38.7% 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
  - 19.2% are not confident in navigating the health care system and 46.5% are only somewhat confident
  - 22.3% "often" or "always" have someone else help them read medical materials

Executive Summary & Key Findings (Continued)

Key Finding [Significant Health Needs] #4: Health care access – is an issue for everyone because of a lack of providers (both primary care and specialty care) and lack of specific programs and services. (Continued)

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

- In addition to the lack of services for mental health, substance abuse, and obesity reduction touched on previously, Key Informants report the programs and services most lacking include:
  - Primary care, mental health treatment, and dental care for the uninsured/underinsured
  - 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
  - Specialty programs such as neurology, pediatric specialty services, urgent care services, geriatrics, dermatology, gastrointestinal, and assisted living services

- Underserved residents report the programs and services most lacking include:
  - Gyms, exercise facilities, or fitness classes that are free or at a reduced cost, especially in winter months
  - Nutrition classes or programs that teach low income families how to stretch their resources to obtain healthy food, and teach ways to prepare and cook healthy food, as well as alternative diets (e.g., vegetarian, vegan)
  - Better access to adult education (e.g., GED, college courses)
  - Better/more affordable access to food, such as farmer's markets, food trucks, food pantries, access to free food

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

> Having more exposure to what primary care is and having an adequate pool to be able to replace my aging staff who are near retirement - that would make all these problems go away. If they were paid adequately - if our payers would have the ability to pay instead of reimbursement - all of that, a lot of things would probably go away. – *Key Stakeholder*

Executive Summary & Key Findings (Continued)

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

- The prevalence for 9 of the 10 chronic conditions measured this CHNA iteration are higher compared to state or national prevalence rates.
  - Further, the prevalence is higher for 9 of the 10 chronic conditions this time compared to CHNA results from 2014

- Prevalence data demonstrates:
  - 33.6% of area adults suffer from chronic pain
  - 33.2% of area adults have arthritis
  - 13.9% currently have asthma
  - 13.9% of area adults have diabetes and an additional 28.5% have pre-diabetes
  - 10.6% have, or have had, some type of cardiovascular disease (heart attack, angina/CHD, stroke)
  - 9.7% have COPD
  - 6.3% of area adults have, or have had, skin cancer and 8.9% report other (non-skin) cancer

- The cancer death rate is higher in Newaygo County than the state or national rates and the death rate from heart disease is higher in Lake County vs. the state or national rates.

- Because the cancer diagnosis rate is lower in Newaygo 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?

- The death rate from chronic lower respiratory diseases is much higher in Newaygo County compared to the rate for Michigan or the U.S.

- According to area adults, cancer is the third most important health problem in their community today (behind obesity and substance abuse) and the second most important health issue according to Key Informants (behind obesity).

Executive Summary & Key Findings (Continued)

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

- Prevalence data demonstrates:
  - Infant and child mortality rates are higher in Newaygo County compared to state and national rates
  - Confirmed victims of child abuse/neglect rates are higher in Newaygo 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, or eligible for free or reduced priced school lunches are higher in both Newaygo and Lake counties compared to Michigan or the U.S.
  - Over half (55.9%) of single-female families with children under five years old from Newaygo County, and nearly nine in ten (87.2%) from Lake County, live in poverty
  - 22.8% of area adults experienced emotional abuse growing up, a rate twice as high as the U.S. rate
  - Moreover, 15.6% experienced physical abuse and 6.9% experienced sexual abuse while growing up
  - The proportion of children age 19-35 months who are fully immunized is far lower in both Newaygo and Lake counties compared to the state or national proportions

- Lake County women are more likely to receive late or no prenatal care, or are less likely to receive prenatal care in the first trimester, compared to women across Michigan or the U.S.

- One third (32.2%) of Newaygo County youth and half (51.7%) of Lake County youth have had sexual intercourse; the latter rate is higher than the state or national rates.

- More than one-fourth (28.5%) of Newaygo 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 the state or national rates.

- The rates for teen births (age 15-19) in both Newaygo and Lake counties are higher than the rates in Michigan or the U.S.

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

Executive Summary & Key Findings (Continued)

Key Finding [Significant Health Needs] #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 they negatively impact the health of residents experiencing it.

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

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

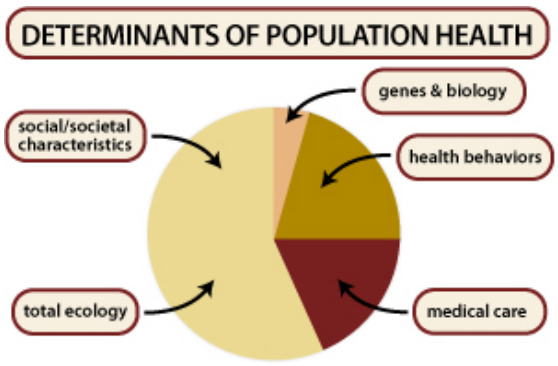
Executive Summary & Key Findings (Continued)

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

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

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

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



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

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

- There is also a direct relationship between health outcomes and both education and income. Positive outcomes are more prevalent among adults with higher levels of education and adults from households with higher income levels, while negative outcomes are more prevalent among those with less education and lower incomes. Examples of this disparity include:
  - General health status
  - Physical health and chronic pain
  - Having blood cholesterol checked
  - Mental health and/or psychological distress
  - Being part of a spiritual or religious community
  - Experiencing barriers to care (e.g., transportation, cost)
  - Chronic diseases such as pre-diabetes, diabetes, arthritis, or any cardiovascular disease
  - Health risk behaviors such as fruit and vegetable consumption, smoking, physical activity
  - 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
  - Risk behaviors such as smoking cigarettes and binge drinking
  - Lack of having a personal health care provider (medical home)
  - 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, poor physical health, and activity limitation
  - Having chronic diseases like diabetes, arthritis, cancer, cardiovascular disease, and COPD
  - Having chronic pain
  - Having high blood pressure and high cholesterol

Key Finding [Significant Health Needs] #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 high cholesterol
    - Engage in risk behaviors such as eating fewer fruits and vegetables
    - Have chronic diseases such as diabetes and heart disease
    - Resist preventive practices such as visiting a dentist
    - Lack health insurance or a personal health care provider
  - Women are more likely than men to:
    - Be at a healthy weight
    - Take medication for their HBP
    - Have blood cholesterol checked
    - Be part of a spiritual or religious community
    - Have poor mental health and/or psychological distress
    - Have a health care provider (medical home) and have health insurance
    - Stretch or skip medication supply to save on costs
    - Have chronic conditions such as pre-diabetes, asthma, arthritis,

- There are also links between race and outcomes.
  - Compared to non-White adults, White adults are more likely to:
    - Have high cholesterol and take medication for it
    - Take medication for HBP
    - Have chronic conditions such as diabetes, cancer (both skin and non-skin), COPD, and arthritis
    - Engage in risk behaviors such binge drinking
    - Visit a dentist
    - Have poor mental health
  - Conversely, compared to White adults, Non-White adults are more likely to:
    - Consume adequate amounts of fruits and vegetables
    - Have poor physical health and chronic pain
    - Have chronic conditions such as pre-diabetes, asthma, cardiovascular disease
    - Be part of a spiritual or religious community
    - Have cholesterol checked
    - Stretch or skip their medication supply to save on costs
    - Experience transportation barriers
    - Experience psychological distress
    - Have a personal health care provider (medical home)
    - Have health insurance

DETAILED FINDINGS

SOCIAL INDICATORS

Demographics of Newaygo County

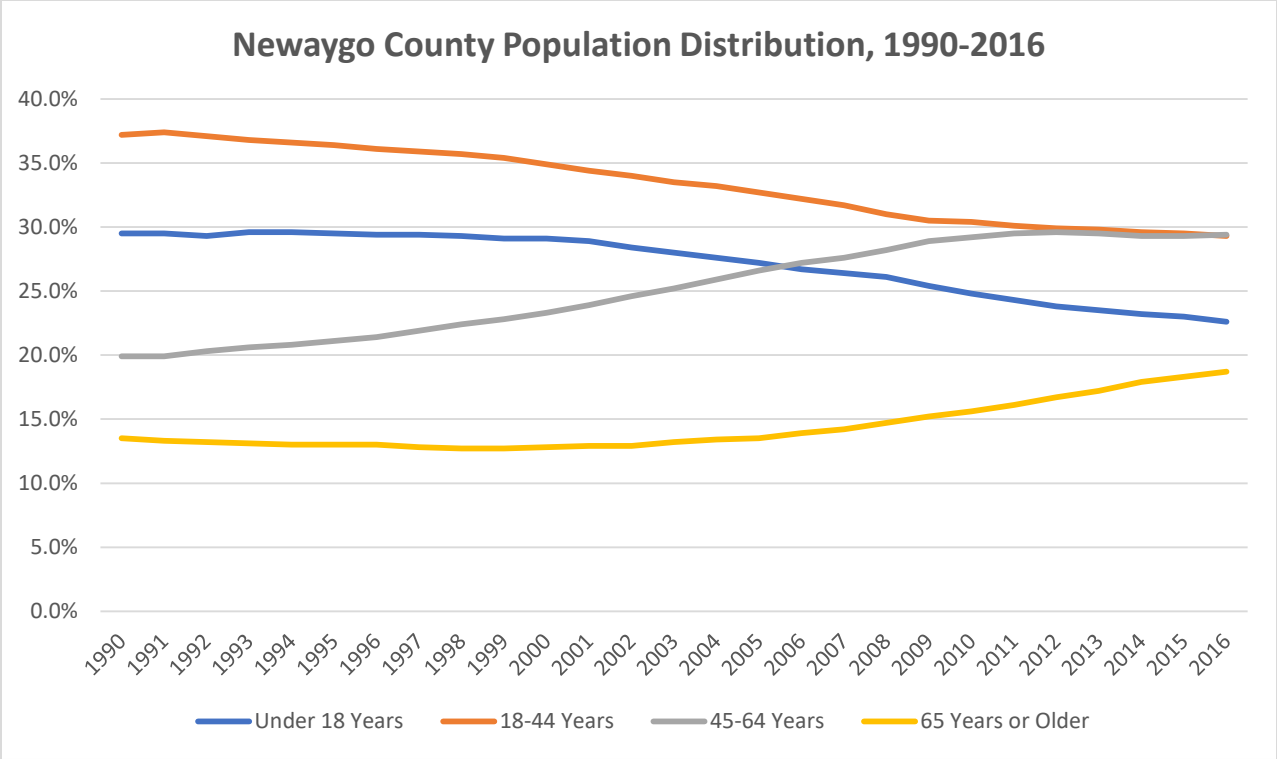
When observing the racial and ethnic population distributions within Newaygo County, it is evident that the vast majority of residents are White (90.7%), while 5.7 are Hispanic/Latino and 1.3% are Black/African American.

Newaygo County Demographic Characteristics: Gender and Race		
	N	%
Gender		
Male	24,143	50.3%
Female	23,814	49.7%
Race/Ethnicity		
White/Caucasian	43,505	90.7%
Hispanic/Latino	2,747	5.7%
Black/African American	632	1.3%
American Indian/Alaskan Native	238	0.5%
Asian	165	0.3%
Some other race	10	<0.1%
Two or More Races	660	1.4%

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

Demographics of Newaygo County (Continued)

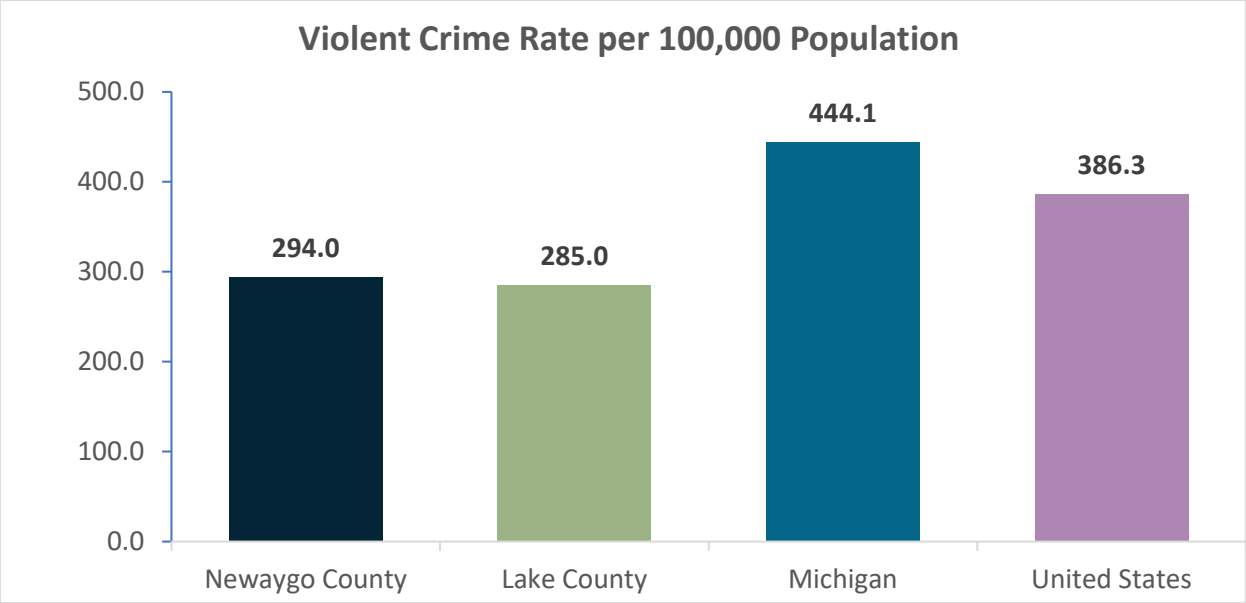
- The age distribution of Newaygo County has shifted toward an older population over time. In 1990, residents aged 45-64 comprised 19.9% of the population compared to 29.4% in 2016.
- Moreover, the proportion of adults aged 18-44 has declined over time: this group comprised 37.2% of the population of Mecosta County in 1990 compared to 29.3% in 2016.



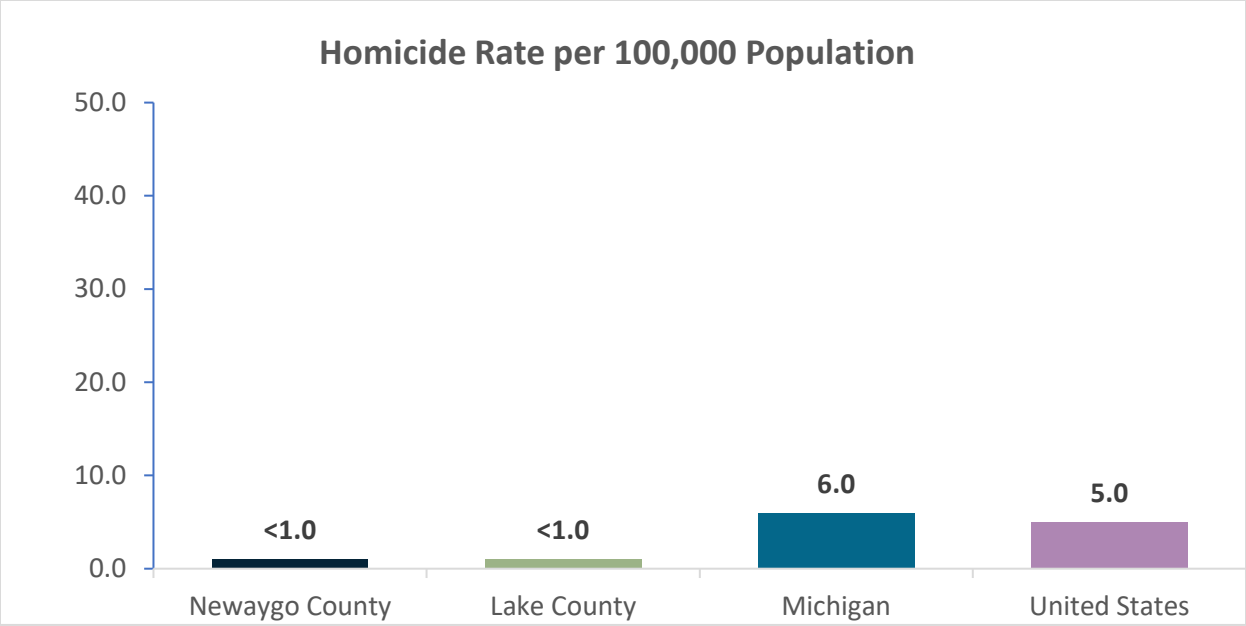
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics.

Crime Rates

The rates for both violent crime and homicide are far lower in Newaygo and Lake counties compared to Michigan or the United States. Still, an average of almost 300 violent crimes take place, per 100,000 people, in both counties.



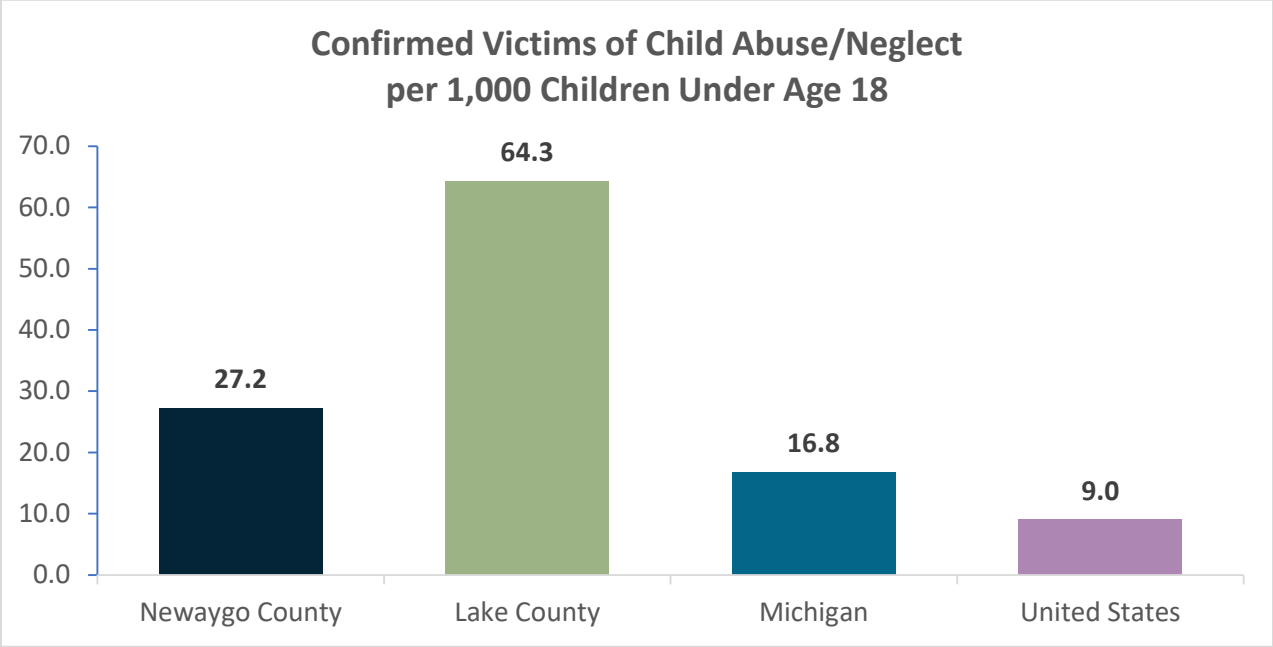
Source: County Health Rankings, 2012-2014.



Source: County Health Rankings, 2012-2014.

Crime Rates (Continued)

- Confirmed child abuse and neglect rates are much higher in both Newaygo and Lake counties compared to the rates in Michigan or across the U.S. The rate is extremely high in Lake County, where 64 children out of 1,000 suffer from abuse or neglect.



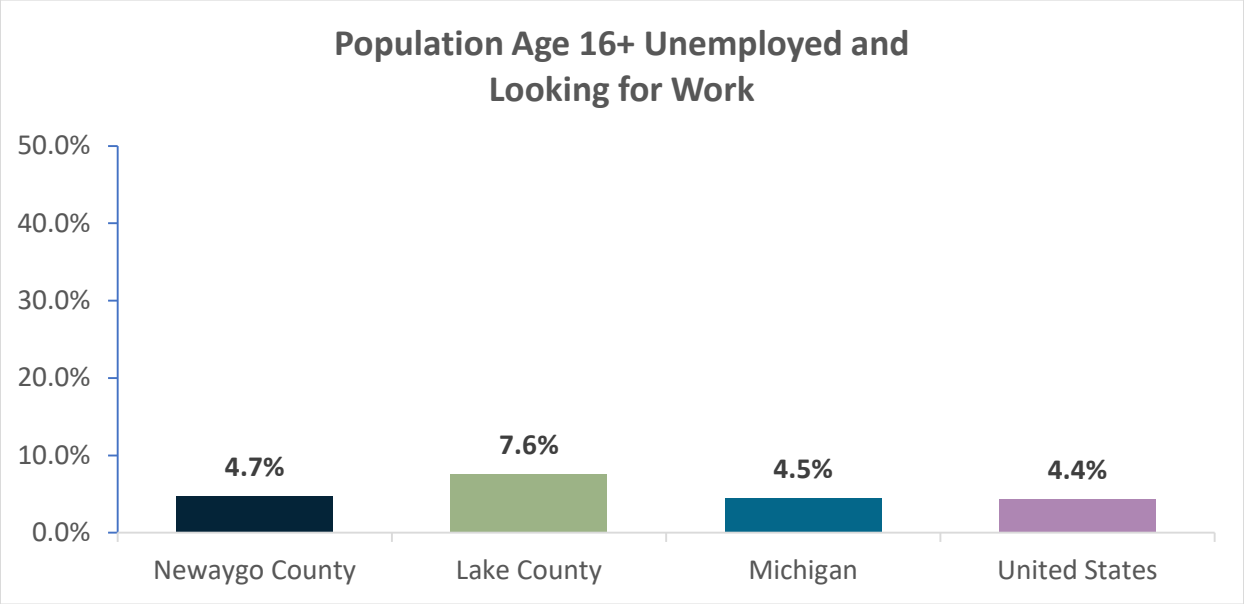
Source: County Health Rankings, 2012-2014.

- Of the 53 Key Informants who rated the prevalence of various health behavior issues in the community in the Key Informant Online Survey, 69.8% believe child abuse and neglect is “somewhat” or “very” prevalent. However, only 36.9% of Key Informants are “somewhat” or “very” satisfied with the community response to child abuse and neglect.

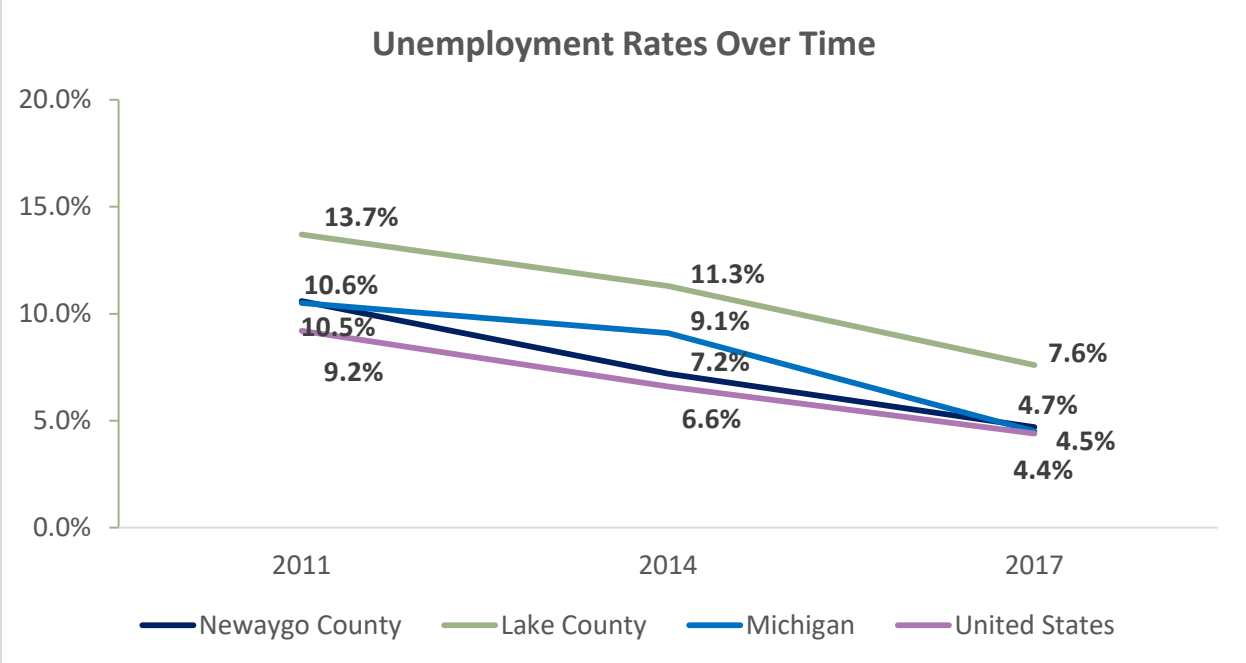
Unemployment

- The most recent unemployment rate for Newaygo County is slightly higher than the rates for Michigan and the U.S., while the rate in Lake County is much higher than the rate in Newaygo County, Michigan or the U.S. The unemployment for all regions has dropped significantly since 2011.

- The current unemployment rate is not considered to be a societal issue in Newaygo County or to have a negative impact on the health of area residents as it was perceived in years past.



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



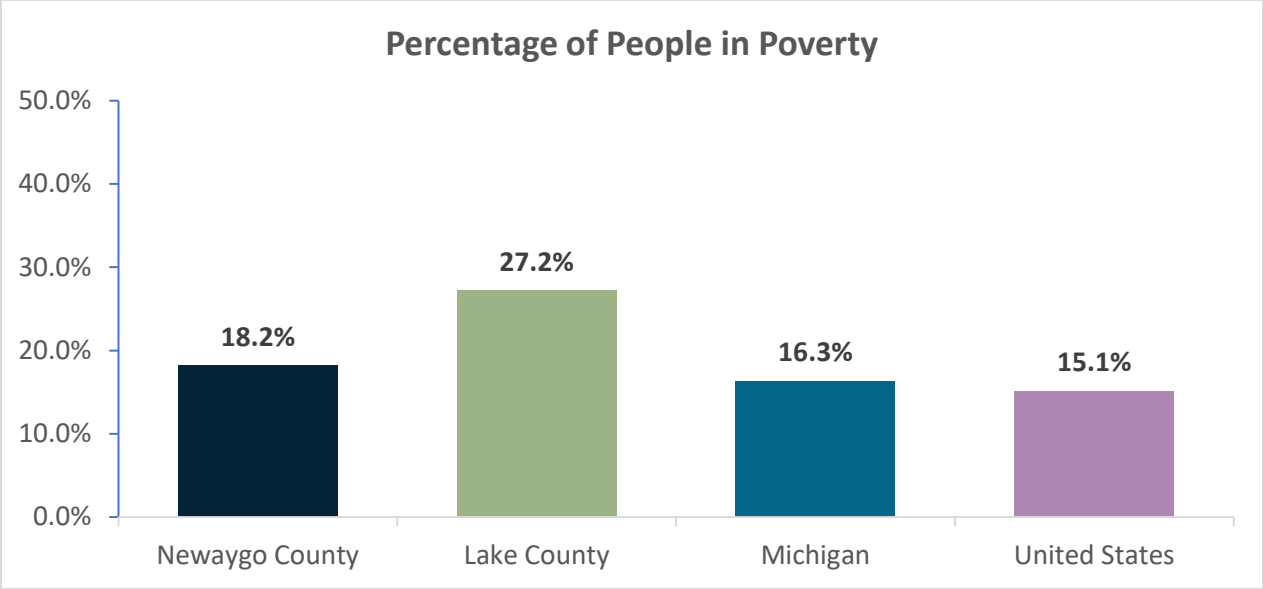
Source: Bureau of Labor Statistics, Local Area Unemployment Statistics 2011, 2014, 2017

Poverty

- Poverty is a critical social problem in the Spectrum Health Gerber Memorial area because it is not only prevalent but the impact it has on other domains of life is enormous. Key Stakeholders, Key Informants and underserved residents all reported on the impact of poverty:

> The whole issue of poverty affects so many different areas that prevents our community from being healthy 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 ways that aren't good**. So, we have quite a drug problem here, **drug trafficking** problem. 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*
>
> Rural isolationism, coupled with no public transportation limits access to healthcare. Combine this with high **poverty** and low levels of education, and it is a **very concerning health picture** for the Newaygo County community. – *Key Informant*
>
> **Obesity** is a problem in every community, but more recently it seems to **increase** along **with** our increased low-income and **poverty levels**. – *Key Informant*
>
> **Concentrated poverty**, lack of knowledge [**make it hard for people to be healthy**]. – *Underserved Resident*

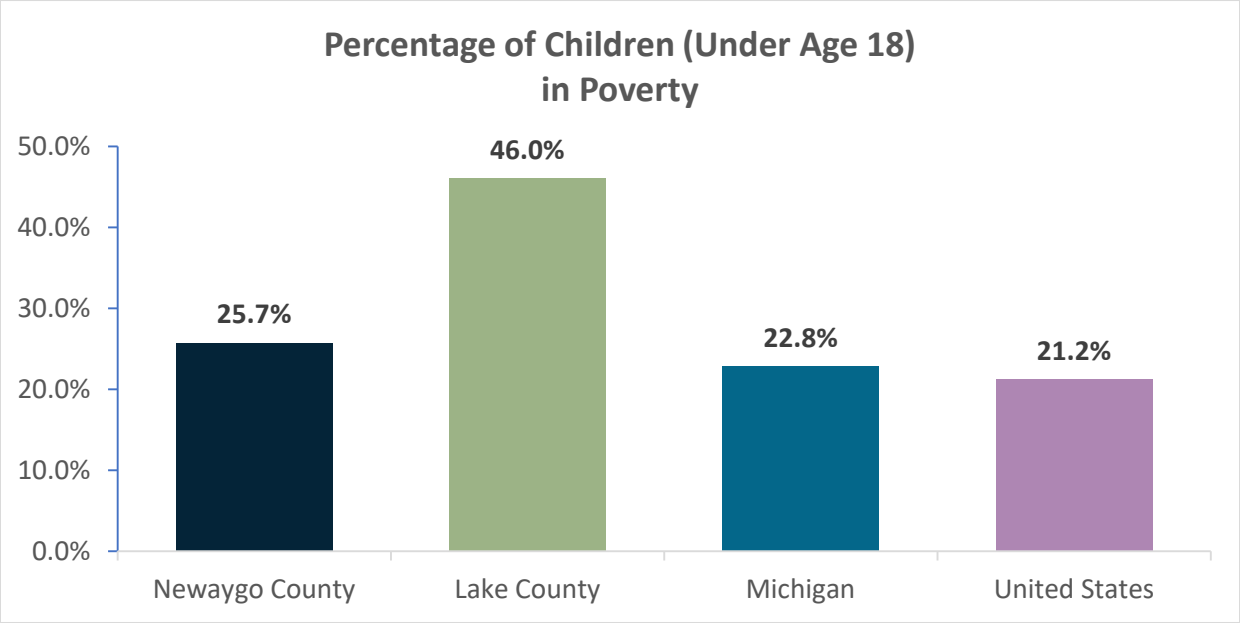
- Nearly one in five Newaygo County residents, and more than one in four Lake County residents, live in poverty, rates higher than in the state or the nation.



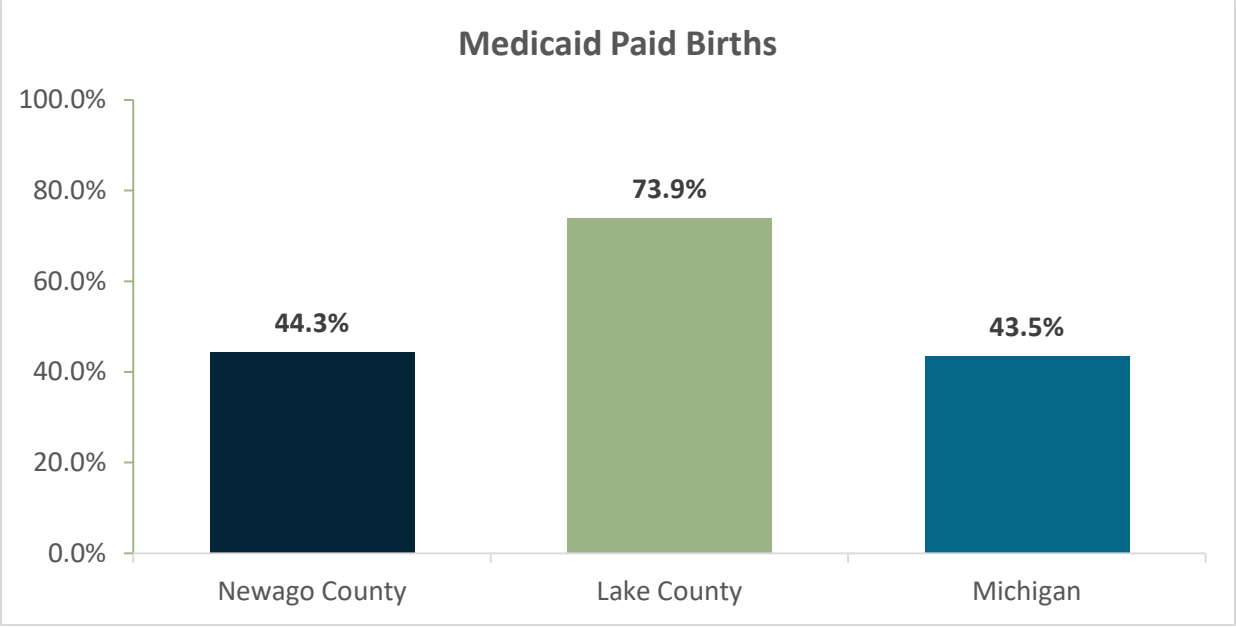
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.

Poverty (Continued)

- One in four children in Newaygo County live in poverty, while almost half of Lake County children live in poverty; the latter rate being more than double the state or national rates.
- More than four in ten births in Newaygo County are covered by Medicaid, while almost three-fourths of Lake County births are covered by Medicaid.



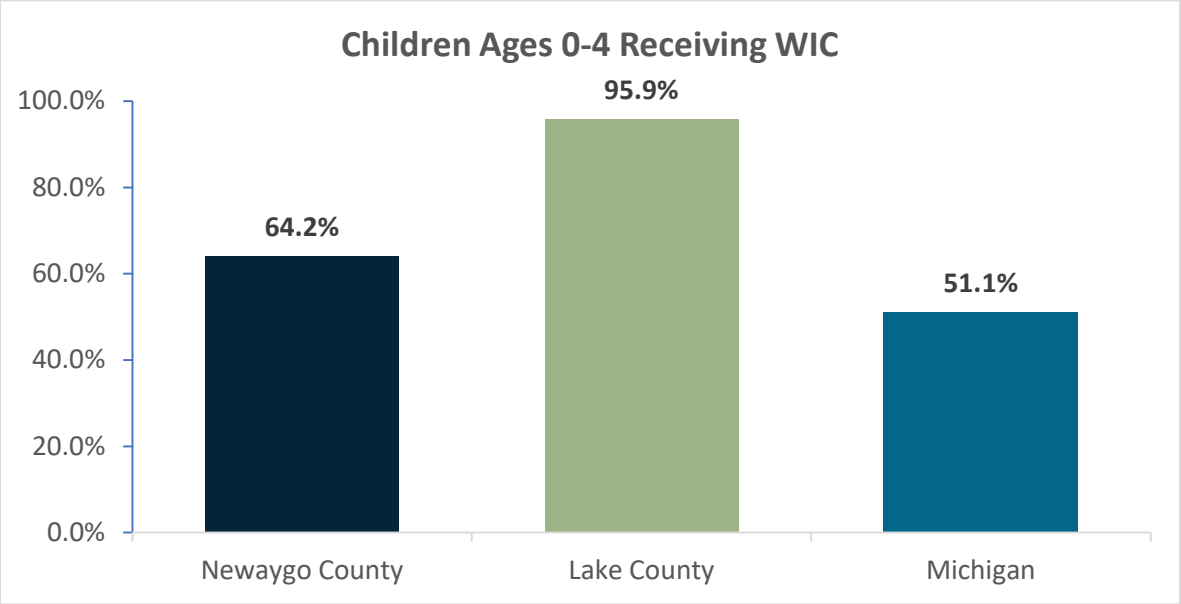
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.



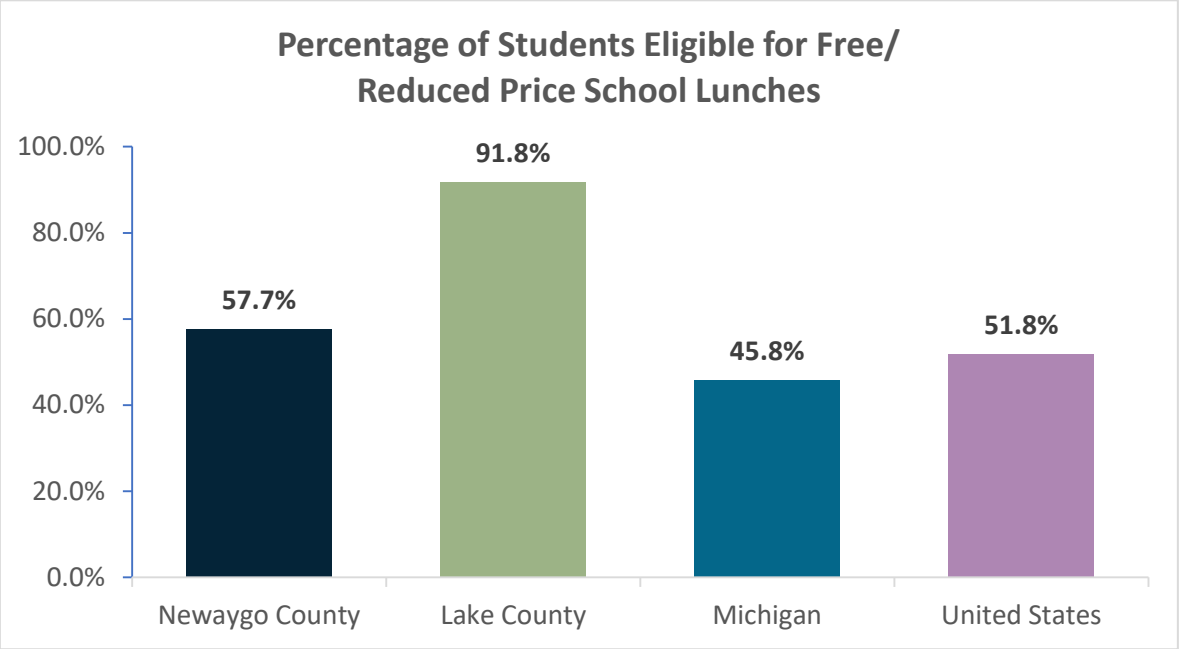
Source: Kid's Count Data Book, 2015.

Poverty (Continued)

- Almost two-thirds of Newaygo children four years old or younger receive WIC assistance, while almost all Lake County children of the same age receive WIC.
- Further, almost six in ten Newaygo students, and more than nine in ten Lake County students, are eligible for free or reduced priced school lunches.



Source: Kid's Count Data Book, 2015.



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

Poverty (Continued)

- The proportion of families from Newaygo and Lake counties living in poverty is higher than in the state or the nation.
- Married couple families are less likely to be living in poverty compared to single-female households.
- Over half of single-female families with children under five years old from Newaygo County, and nearly nine in ten from Lake County, live in poverty.

Poverty Levels				
	Newaygo County	Lake County	Michigan	U.S.
All Families				
With children under age 18	**23.0%**	**40.5%**	**19.4%**	**17.4%**
With children under age 5	**27.7%**	**50.6%**	**25.2%**	**21.8%**
Total	**13.8%**	**18.7%**	**11.5%**	**11.0%**
Married Couple Families				
With children under age 18	**13.5%**	**16.5%**	**8.1%**	**7.9%**
With children under age 5	**17.1%**	**28.0%**	**11.1%**	**10.3%**
Total	**8.6%**	**9.8%**	**5.2%**	**5.5%**
Single Female Families				
With children under age 18	**55.2%**	**76.5%**	**44.3%**	**39.7%**
With children under age 5	**55.9%**	**87.2%**	**57.3%**	**51.7%**
Total	**43.4%**	**56.5%**	**32.9%**	**29.9%**

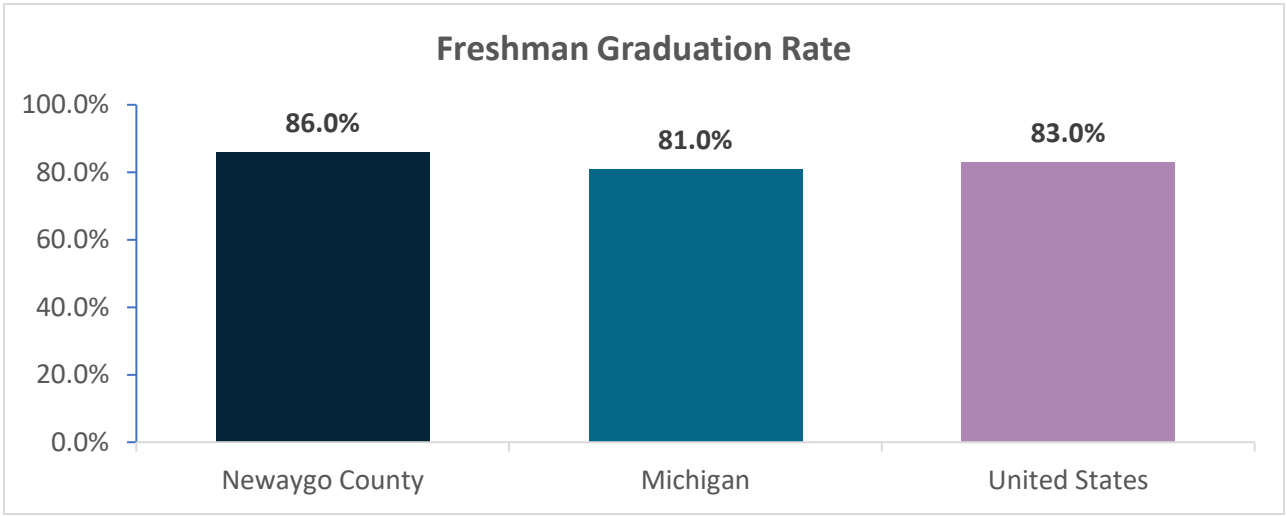
Source: U.S. Census Bureau, 2012-2016, 5-Year American Community Survey.

Education

- Greater proportions of men and women in both Newaygo and Lake counties have failed to graduate from high school in comparison to Michigan or the U.S.
- Moreover, fewer men and women from these counties graduate college; only 13.2% and 8.9% of Newaygo County and Lake County men, respectively, have a Bachelor's degree or beyond.
- On the other hand, the freshman graduation rate is higher in Newaygo County vs. Michigan or the U.S.

Educational Level (Among Adults Age 25+)								
	Men				Women			
	Newaygo County	Lake County	Michigan	U.S.	Newaygo County	Lake County	Michigan	U.S.
Did Not Graduate High School	18.5%	21.8%	10.5%	13.5%	12.9%	17.1%	9.2%	12.1%
High School Graduate, GED, or Alternative	41.9%	43.6%	30.1%	28.4%	39.5%	41.5%	28.7%	26.8%
Some College, No Degree	21.5%	22.0%	23.6%	20.5%	23.6%	23.8%	23.7%	21.0%
Associate's Degree	6.4%	5.4%	8.0%	7.3%	10.0%	10.0%	10.4%	9.1%
Bachelor's Degree	9.2%	5.5%	16.9%	18.8%	10.3%	6.1%	17.1%	19.2%
Master's Degree	3.2%	2.5%	7.2%	7.5%	4.3%	2.5%	8.6%	8.9%
Professional School Degree	0.5%	0.4%	2.1%	2.4%	0.5%	0.3%	1.2%	1.6%
Doctorate Degree	0.3%	0.5%	1.5%	1.7%	0.5%	0.3%	0.9%	1.1%

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 health include a wealth of natural resources that make it easier to be active, safe (low crime), and farmer's markets offering healthy food, for those who can afford it.

Natural resources are conducive to recreation and outdoor activities	I think there's a lot of positive when you just talk about **rural communities**, and they attract the people who are drawn to them. It's a lot less than the other amenities, but the **lakes**, the **hunting**, the **fishing** seems to be our calling card when we try to **recruit physicians** and others to the community. – *Key Stakeholder* We have the **Muskegon River** that flows through; there's a lot of **lakes**, so people can go out and **swim** and **kayak**. There's some **trails**; they can get out and do that. – *Key Stakeholder* Newaygo County is known for its **clean natural resources** (lakes, rivers, forests, etc.) and **several outdoor activities**. – *Key Informant* Having the **river for watersports**, **trails for biking and walking**. – *Underserved Resident*
Farmer's markets	There are a lot of **farmer's markets and access to fruits and vegetables** – *Key Stakeholder* **Farmer's markets** and local farms are **resources for healthy food**, however, it does not seem that the coordination is always there to get the resources to community members. – *Key Informant*
Safe community	Feeling **safe enough to walk around town**. – *Underserved Resident*

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

Environmental Factors (Continued)

There are two major environmental factors that negatively impact the health of residents in Newaygo and Lake counties: lack of housing (both affordable and decent/adequate) and lack of affordable and healthy food options (while unhealthy options remain prevalent).

Lack of affordable housing/substandard housing	Housing is an issue - **substandard housing** and the **lack of affordable housing** in Newaygo County, and it's not just the lack for the poor; we have professions who've moved to the county and have a difficult time finding a house. – *Key Stakeholder* Rural residents without good access to care maintain the **generational cycle of poverty due to** loss of jobs and **loss of housing**. – *Key Informant* I think **affordable housing** is an issue in our jurisdiction. It has an **economic impact** because you constantly hear from employers that are complaining because they **can't attract new employees to the area** because they don't have housing for them. – *Key Stakeholder* It's really **hard to find good rental property**. There's just not good adequate housing for lower-income people, either in Newaygo or in Lake County. It is a huge barrier for our population, so th**ey tend to live in some pretty bad places**. There's **plumbing issues**, and we had some senior citizens **without running water** and **broken pipes** from the winter, they **don't have electricity**. There are **people living in tents**, people **living in shacks**. You just wouldn't think it would happen in this day, but it does. It happens in Newaygo County and in Lake County. – *Key Stakeholder*
Lack of affordable and healthy food/too many unhealthy food options	This county has a large number of people with diabetes out of control, **food trucks and pantries stock foods high in carbohydrates and unhealthy** for people in general, but very unhealthy for persons with diabetes. – *Key Informant* 1. **Difficult access to healthy food choices** due to rural areas, long transportation to larger grocery stores - often the local gas station is the 'grocery' go to. 2. **Lack of education and hands on experience in cooking** non-processed whole foods. 3. **Impression that healthy foods are more expensive**. 4. **Poor food choices in school cafeterias**, poor modeling. 5. Influence of **advertising of fast foods and convenience foods**, desserts, high sugar drinks, etc. – *Key Informant* Fast food is too easy to get, and at times it's cheaper than making a whole meal. – *Underserved Resident*

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

Adverse Childhood Experiences

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.

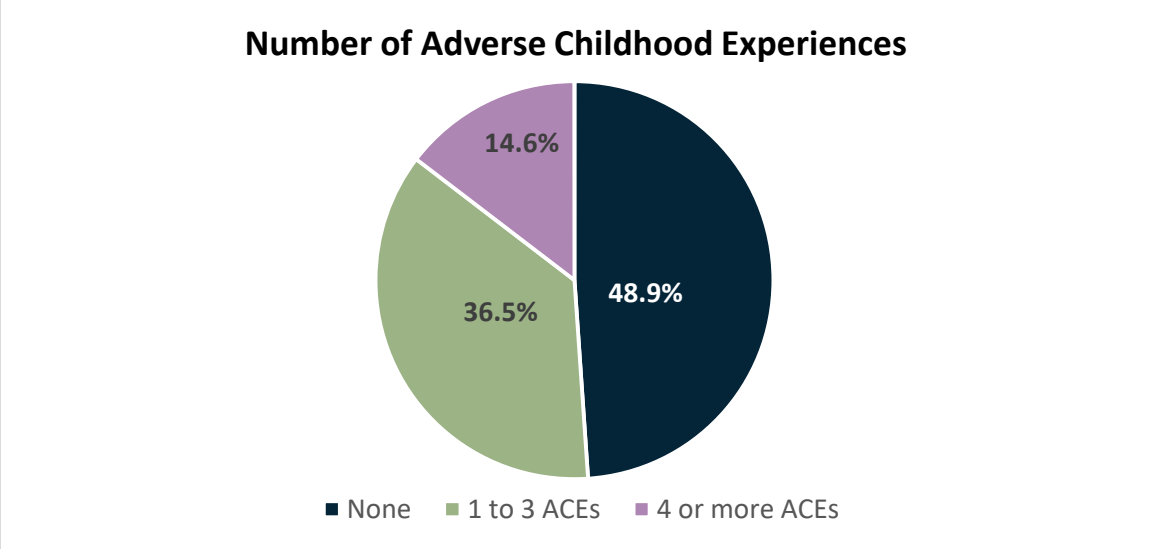
ACE Questions	Percent of People with Each ACE					
	SHGM Area			United States		
	Total	Women	Men	Total	Women	Men
Did a parent or other adult in the household often swear at you, insult you, put you down, or humiliate you, **OR**, act in a way that made you afraid that you might be physically hurt? (n=543)	22.8%	25.3%	20.1%	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=542)	15.6%	14.5%	16.8%	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=542)	6.9%	11.3%	2.4%	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=540)	11.8%	16.7%	6.8%	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=543)	6.2%	7.3%	5.0%	9.9%	9.2%	10.7%
Were your parents ever separated or divorced? (n=540)	23.5%	30.3%	16.5%	23.3%	24.5%	21.8%
Was your mother or stepmother often pushed, grabbed, slapped, or had something thrown at her, **OR**, Sometimes or often kicked, bitten, hit with a fist, or hit with something hard, **OR**, ever repeatedly hit over at least a few minutes or threatened with a gun or knife? (n=533)	9.8%	12.5%	6.9%	12.7%	13.7%	11.5%
Did you live with anyone who was a problem drinker or alcoholic or who used street drugs? (n=545)	23.3%	27.9%	18.6%	26.9%	29.5%	23.8%
Was a household member depressed or mentally ill or did a household member attempt suicide? (n=543)	11.9%	14.8%	8.6%	19.4%	23.3%	14.8%
Did a household member go to prison? (n=542)	5.0%	5.4%	4.5%	4.7%	5.2%	4.1%

ABUSE | NEGLECT | HOUSEHOLD CHALLENGES

Source: BRFS Survey for SHGM respondents, 2017; Self-Administered Survey, 2017; Centers for Disease Control and Prevention, Kaiser Permanente. The ACE Study Survey Data, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2016.

Adverse Childhood Experiences (Continued)

- More than half (51.1%) of SHGM area residents have experienced at least one adverse childhood experience and 14.6% 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 SHGM respondents, 2017. (n=525)

	Number of ACEs		
	None	1-3	4 or More
General health is fair/poor	12.9%	28.1%	26.7%
Poor physical health	9.2%	16.3%	32.3%
Have had cardiovascular disease (heart attack, angina/CHD, or stroke)	9.3%	6.9%	25.9%
Have asthma	7.0%	10.6%	28.4%
Suffer from chronic pain	29.5%	29.7%	64.4%
Current smoker	20.7%	26.3%	52.2%
Binge drinker	11.6%	11.0%	14.5%
Obesity	23.8%	39.9%	34.6%
Mild to severe mental illness (Kessler 6)	11.9%	19.2%	48.6%
Thought of committing suicide in past year	0.5%	7.2%	14.8%

COMMUNITY CHARACTERISTICS

Characteristics of a Healthy Community

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

- ✓ Accessible health care (dental, mental, physical)
- ✓ Access to quality education
- ✓ Access to farm-to-table food/nutrition/healthy food
- ✓ Accessible transportation
- ✓ Chronic disease is in check
- ✓ Clean air
- ✓ Collaborative (working together for a common good)
- ✓ Communicative
- ✓ Diverse/celebrates diversity
- ✓ Free from ground contaminates
- ✓ High skilled labor force
- ✓ Jobs (well-paying)/strong industry/low unemployment
- ✓ Opportunities for outdoor exercise (biking/walking trails, waterways)
- ✓ Reduced hospitalizations/ER visits
- ✓ Risk factors are manageable (limited substance abuse)
- ✓ Safe/low crime rates
- ✓ Supportive

With regard to the SHGM service area, Key Stakeholders believe local communities are somewhere between healthy and unhealthy, but certainly there is an attempt to improve the health and health care landscape.

I don't think they're horrible; I don't think they're great, either, so I think that they have **some areas where they're fairly healthy**. I think **Newaygo collaborates really well**, so that's a huge benefit for us.

Statistically, we're getting better. I think there are **segments of people that have access and economic means**; I think they're doing very well, and I think **those that have economic stress - those living in poverty - transportation and other issues become things that impact their lives**.

I think **they're trying to get there**. I think 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 a scenario that's going to take some time, and it's going to take some realization by some of the **partners** that they can't do it themselves and they **need to be part of a larger group effort**.

I think we **strive to be healthy** with the **limited resources** that we have, but our economy - we're one of the, if not the, **poorest county in the state**. I believe that our **poverty rates are much higher than other areas for the size**, so I would say that we are not healthy.

I think we're **moving there**. Healthy community - really, I don't see as a goal, more of just a **process and a journey**, to be quite frank - not trying to be vague, but it's a process, just like if I used the term "**recovery**," and I would equate the same with a healthy community. **The community is in recovery**.

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=6); Q2a: Is the SHGM service area made up of healthy communities? (n=6)

Characteristics That Make the SHGM Area Healthy

Characteristics that make the SHGM service areas healthy communities are: (1) a collaborative spirit manifested by agencies and organizations coordinating programs and services, (2) committed and caring residents who want to see improvement in the community, and (3) a movement towards persuading residents to live healthier lifestyles through increased activity and better dietary habits.

Collaboration and coordination	In terms of the **collaborative culture** and the fact that they're **targeting specific areas**, whether it's **childhood obesity**, **substance abuse**, **tobacco use** - those types of things. I think we've made a lot of inroads into getting some **collaboration with other community entities**, such as **District Health Department #10** and **TrueNorth**, **working together** and **improving** the **health**. Our motto is: "Improving the health of the population, one patient at a time." We have **TrueNorth**. We have a lot of nonprofits that **coordinate** and **work together**. There's a lot of **very engaged stakeholders** and a lot of **collaboration**. There's a lot of **getting things done** and trying to move the ball.
Committed and caring people	I think probably the only thing that makes Lake County healthy is the few **committed people**, and **churches** are a really big piece in that. They're really **committed to communication and support** of their people.
Movement toward getting residents to live healthier lifestyles	I see on the continuum of physical activity, the **development of trails**, **encouragement of exercise**, and not necessarily just going to a health club, but moving in general - walking - **promotion of walking**. I see pockets of that. **Community gardens** - development in terms of **fostering eating fresh vegetables** and **fruit**. I see the North Country Trail and that communities are trying to promote themselves relative to tourism, but simultaneously, they want to **make the community in general aware of what resources they have** and to use, such as hiking and biking and that type of thing.

Source: Key Stakeholder In-Depth Interviews: Q2b: What makes the SHGM service areas healthy communities? (n=6)

Community Strengths

Key Stakeholders believe the community foundations are the greatest strength or resources upon which to build programs or initiatives to address health needs or issues. Additional resources include the Tamarac Wellness Center which focuses on prevention through better health and nutrition, and the Baldwin Promise (and a similar program in Newaygo County) which, through a trust fund, helps young adults pursue Bachelor's degrees.

Community Foundations	We have **two community foundations in Newaygo County**. The **Gerber Foundation** has been a benefit and a resource to the community, especially in the areas of younger children health needs. We also have the **Fremont Area Community Foundation**, and it services primarily Newaygo County, but there is the **Lake County Community Foundation** whose administrative piece comes from the Fremont Area Community Foundation. It's a very small foundation in Lake County but **very beneficial to the community**. The Fremont Area Community Foundation is active and involved in Newaygo County trying to **address needs, poverty, health needs, and educational needs**. We do **have foundation dollars**. **Each of the communities has a local community foundation**, but the grant amounts that you're going to get from there are probably anywhere from two to three thousand dollars, so it's not a huge amount of money. In Newaygo County, you're fortunate because you've got the **Gerber Foundation** as well as the **Fremont Area Community Foundation**, **two large-funding entities**.
Tamarac Wellness Center	With **Tamarac** - our health, wellness, and nutrition center - our **goal is to make sure that people have the opportunity to participate in those programs regardless of their ability to pay**, and in order to do that, one of the things we're looking at is creating an endowment fund that would have specific annual distributions to work towards helping to subsidize Tamarac memberships for people.
The Baldwin Promise	There's the **Promise** here in Baldwin that **helps kids once they graduate to get a couple years of college in**. It's pretty awesome. So, there is a **trust fund for students who want to pursue college degrees**. They can go to West Shore Community College to get training for a trade or an Associate's Degree. Then if they decide to pursue a bachelor's **after that they are able to transfer to Hope College and get their bachelor's degree**. Our graduation rates have improved over the last six years.

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=6)

Characteristics That Make the SHGM Area Unhealthy

- Conversely, many characteristics that make the SHGM area unhealthy stem from the fact that it is a rural area and the by-product of that, such as poverty, lack of access to programs, services, transportation issues, and being less conducive to low impact physical activity such as walking.

- On the other hand, there is easier access to things such as unhealthy food and substance abuse (either legal or illegal) to escape the reality of the situation. Further, many families are trapped in pervasive and negative cycles via poverty that can be very difficult to escape.

Rural nature of the area	The simple fact that they're rural contributes to that. If you look at statistics, **rural communities tend to be less healthy**. You have **less access to health care**, again, in that broad sense. **Transportation** issues contribute to some of those where you don't have buses to get people around or get them access services. They're **not a walkable community**; you don't have any sidewalks and you don't have any pathways. You're walking on the curb if you're trying to get someplace. Our soil is a mix of a kind of a dirty sand so **things don't grow well**. Thus, we **don't have agricultural potential** here. We really rely on fishing as a tourist trade. Only a **small number of people really benefit** from that in the area.
Lack of access to affordable and healthy food	From a practical standpoint, we have a **lot of fast food** and **not a lot of healthy restaurant options**. It's a **very meat-and-potatoes**, agricultural kind of community - a lot of dairy, a lot of meat - not necessarily a lot of fruits and vegetables, even though we're in the middle of this beautiful countryside where there's all these farmers' markets.
Consequences of poverty	In data that came out of the schools, it shows the attitude towards smoking, drinking, drug use, etc. The **high level of poverty has a great impact** on that in terms of what **choices people have and make**. Sometimes, there's **very limited options**. Also, there's just kind of a **culture that is pervasive** within a particular family. Whether it's severe mental illness or addiction, it's **hard to break** that for families.
Prenatal choices	I think we still **have a high incidence of teenage births**. **Smoking** cessation has been something we've been really focused on recently, **especially with pregnant moms**. Those are areas where we're still **at or above the state and national averages**.

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

Resource Limitations

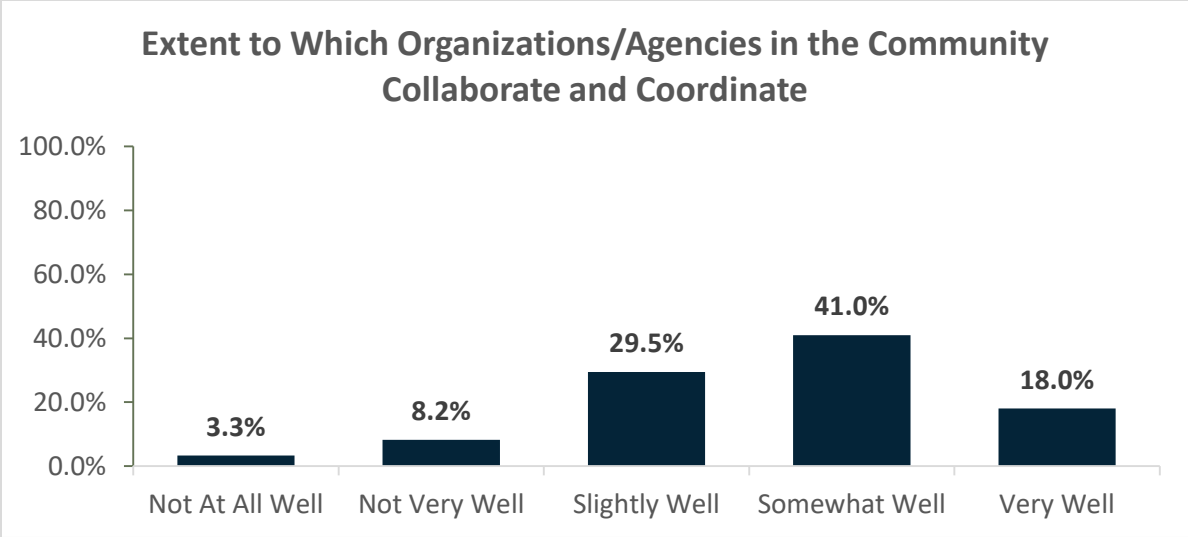
- Despite the fact that community foundations and their available funds are a resource strength, there are not enough funds to go around to address all of the issues facing SHGM area residents.
- Further, there are issues of how funds are distributed, especially with respect to whether the greatest needs are being addressed.
- Additionally, there are not enough bodies to assist in addressing needs.

Funding and funding issues	**Funding**. I guess that's one of the reasons I'd like to get this **endowment** because then I've got a community with some skin in the game. **Health care costs are going up, reimbursements are going down**. If we don't find another way to take care of these, to finance some of these **programs**, they're **going to go by the wayside**. I think the resource limitations are more about **silos** than the **funds**. Every county could use more funds, there's no doubt. However, when you get **funds and they're categorized for a specific system**, sometimes that creates an issue where it **doesn't meet the needs of the county**. For example, I think one of the things where we're lacking is prevention in all areas, in both counties.
Lack of staff/people	**Funding** and just **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** - that **resident involvement** in addressing these issues is an important piece that - we **need to figure out how to be successful with that**. **Funding**. The **shortages of primary care providers** - **succession planning**. **A lot of people are retiring**, and it's hard to get new people in and to work with them as mentors.

Source: Key Stakeholder In-Depth Interviews: Q8a: What are any resource limitations, if any? (n=6)

Collaboration and Coordination

- Six in ten (59.0%) Key Informants, and all six of the Key Stakeholders, report that area programs and services collaborate and coordinate "somewhat well" or "very well" together in order to make programs and services more accessible to area residents.
- Limited resources have forced community organizations and leaders to collaborate and coordinate well.



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=61/n=6)

Somewhat Well/Very Well

I think it has gotten much better, and I think it's 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 and 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** that we could better coordinate. – *Key Stakeholder*

There is a **long history of Newaygo County agencies working very well together**. This **community is limited in resources**. We **have to work together**. Time/money for staff to work on committees, etc., has been greatly cut over the years, but it is a must that we collaborate. – *Key Informant*

Not At All Well/Not Very Well

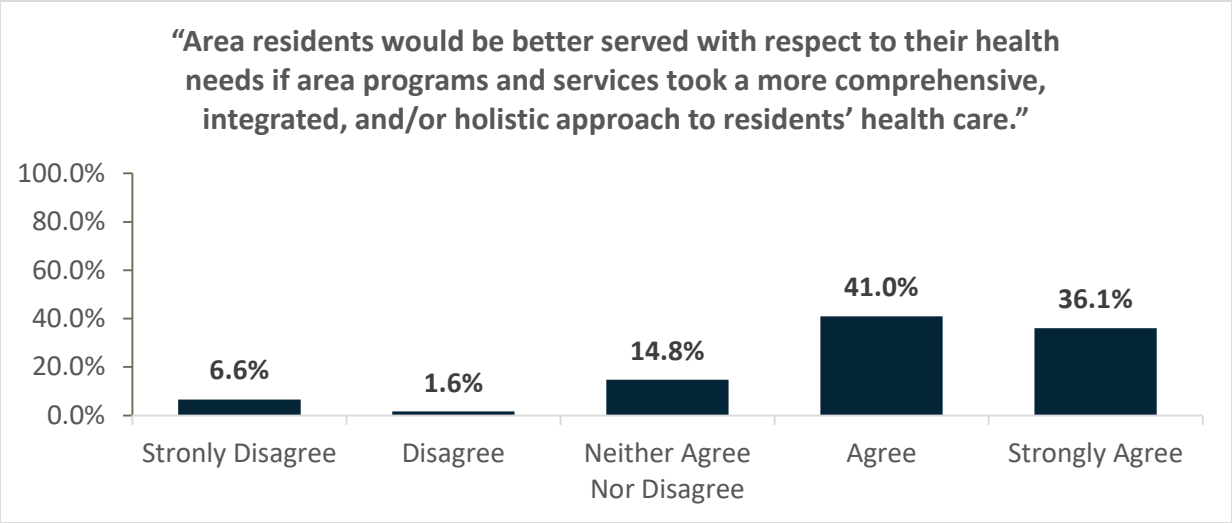
There seems to be a **lot of glory-grabbing agency leaders** trying to vie for limited grant funding, **won't train staff from other agencies** to help provide services, and **have non-clinical staff trying to manage programs that would benefit from clinical oversight** or input. – *Key Informant*

Poor communication and **follow through**. – *Key Informant*

Holistic/Biopsychosocial Approach

- All six Key Stakeholders report that area programs and services, at least to some extent, take a comprehensive, integrated, and/or holistic approach to serving the health and health care needs of area residents. Further, more than three-fourths (77.1%) of Key Informants believe area residents would be better served if local programs and services took this approach.

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



Source: 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=6); Key Informant Online Survey, Q10/Q10a: Please indicate your level of agreement with the following statement. Why do you say that? (n=61)

Thinking through some of the programs that we have, when we do **Healthy Minds, Healthy Bodies** at Spectrum, we're **looking at all aspects of health**. So, **financial**, **wellness**, **smoking**, **medical**, **housing**. I mean, we do try to kind of hit all those. There is a lot of work in the community, like from the foundation and **TrueNorth**, trying to **address education and poverty** - the **cycle of poverty** - trying to break that. – *Key Stakeholder*

A **holistic approach can make connections between situations and health behaviors**. – *Key Informant*

Coordinated efforts reduce duplication, **cost**, and **increase the likelihood of good outcomes**. – *Key Informant*

Instead of treating one illness or symptom **working with patients on complete care** would **create a better quality of life** and **creating healthier habits**. – *Key Informant*

We're working on that, yes. The term of connecting the head with the body, for example. Holistic health is growing but **it's dependent on all of us coming together and helping** by educating the services that each of us can provide and **how to we can overcome the gaps** from further integration or collaboration. Everyone is extremely busy, and the last thing we want is another meeting, but despite that, I think, the **folks come together**, and they recognize that that's just the way it is **because of the greater good**, and I do see that consistently in this community. – *Key Stakeholder*

Barriers to Care Coordination

- All Key Stakeholders believe there are barriers to care coordination, such as laws/policies/regulations/ bureaucratic red-tape, funding, communication, the distance between programs and services, lack of technology, individual agendas, and time.

I think **time** is always a barrier. I think sometimes our **policies**, directed from the state, can sometimes be a **barrier**. The **policies create silos**.

If you have **needs outside the service area**, that always makes it a bit more difficult to make those connections.

All the **laws**, all the **legal issues** that we've had that come up because we're trying to collaborate with each other and integrate. So, the legal barriers. Sometimes, there's **communication issues**. Some **financial**, but I would say the **biggest two are the legal barriers and the communication**.

Individual agendas. Potentially, **funding limitations**. You may have funds that are so narrowly focused that you can't do anything else.

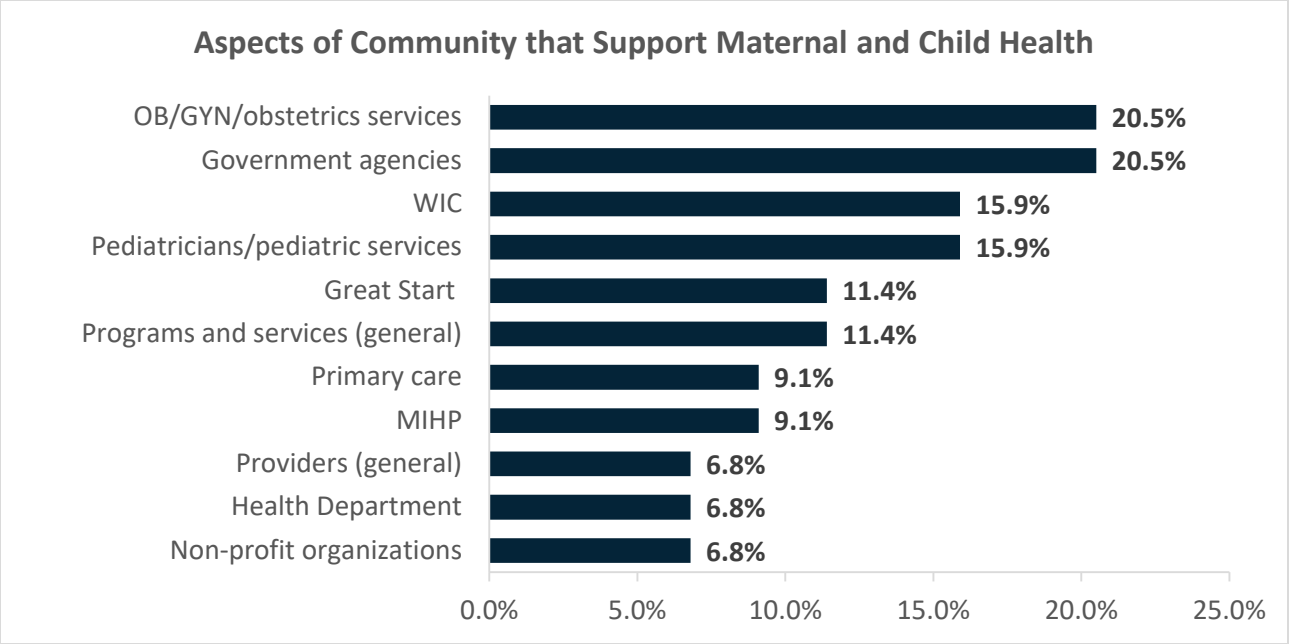
Absolutely. Just the **distances** between us. We'd like to really **bring more technology** on, and the health center has been working with the Big Rapids system on more innovative ways with telehealth. With reimbursements not there right now, and with limited resources, it's kind of hard to really put things into action. It's challenging because of the **distances** between us.

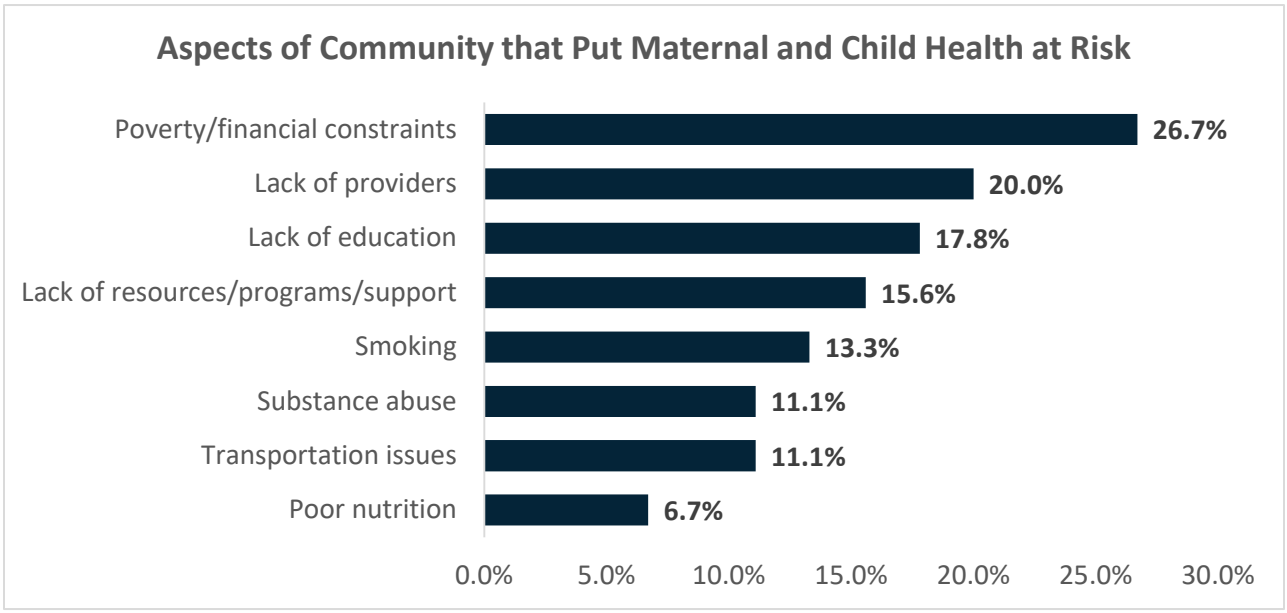
Transportation, **electronic health records**, our own **individual rules and regulations**. There's been steps at the state and national level to try to bridge that or reduce that, such as the Governor and MDHHS endorsed what I call more of a universal release, for example, with the primary purpose being the integration of care.

Source: Key Stakeholder Interviews, Q5d: Are there any barriers to care coordination? (n=6)

Maternal and Child Health

- Key Informants name OB/GYN services and government services as the top aspects of the community that support maternal and child health, followed WIC and pediatric services.
- Conversely, aspects that put maternal and child health at risk include poverty or financial restraints, as well as a lack of providers, education, and resources.



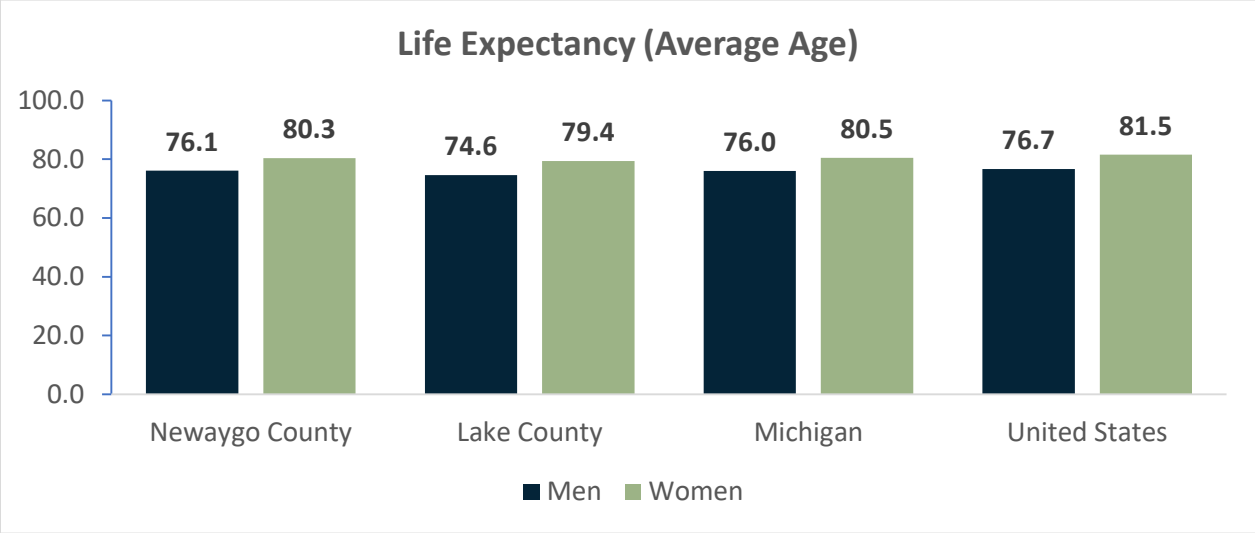


Source: SHGM Key Informant Online Survey, 2017, Q13: What about this community supports maternal and child (age birth-18) health? Please be as detailed as possible. (n=45); Q14: What about this community puts maternal and child (age birth-18) health at risk? Please be as detailed as possible. (n=45)

HEALTH STATUS INDICATORS

Life Expectancy and Years of Potential Life Lost

- Women in both Lake and Newaygo counties have lower life expectancy rates (when adjusted for age) compared to women across Michigan or the U.S., and men do not fare much better.
- Compared to residents in Newaygo County or across Michigan, residents of Lake County are more likely to lose years of potential life overall, and due to malignant neoplasms or heart disease.
- Residents of Newaygo County are more likely than Michigan residents to lose years of life due to heart disease, accidents, or chronic lower respiratory disease.



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

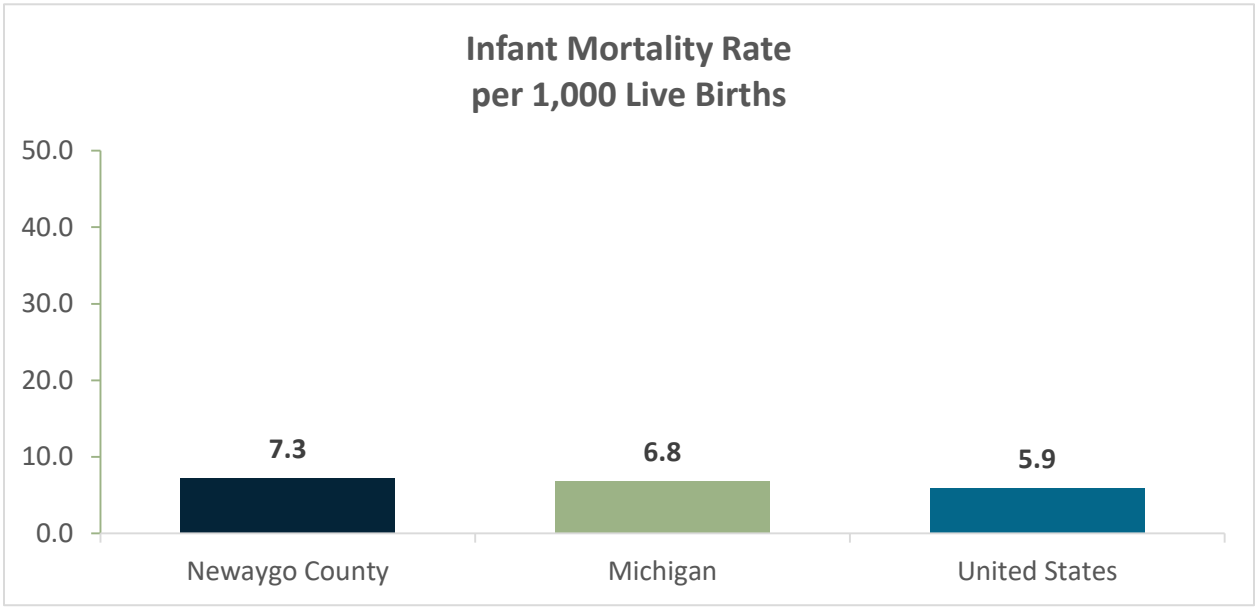
Rates of Years of Potential Life Lost (YPLL) (Below Age 75)

	Michigan		Lake County		Newaygo County	
	Rank	Rate	Rank	Rate	Rank	Rate
All Causes		7697.6		9312.8		7569.6
Malignant neoplasms (All)	1	1620.8	1	2245.2	3	1207.4
Diseases of the heart	2	1276.0	1	2245.2	2	1320.3
Accidents	3	1136.4		**	1	1555.0
Drug induced deaths	4	791.0		**		**
Intentional self-harm (Suicide)	5	428.4		**		**
Chronic lower respiratory diseases	6	255.4		**	4	451.4

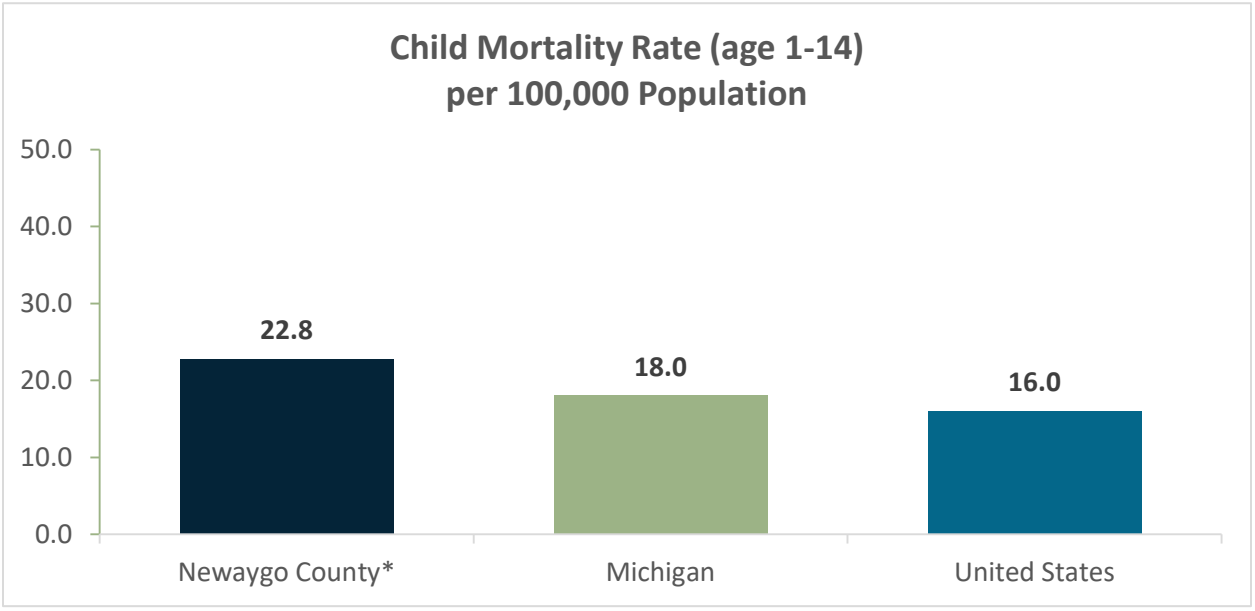
Source: Michigan DHHS, Division of Vital Records and Health Statistics, Geocoded Michigan Death Certificate Registry, 2015.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

Mortality Rates

Newago County's infant and child mortality rates are higher than the state or the national rates.



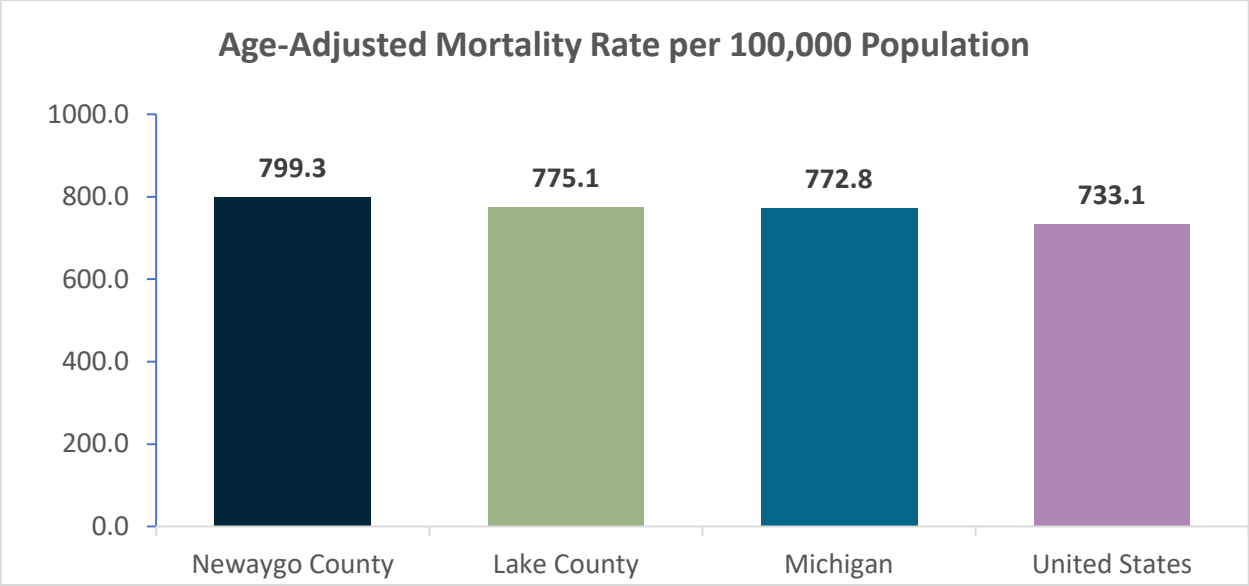
Source: Michigan DHHS, Division of Vital Records and Health Statistics, 2014.
Note: Lake County not included because it had fewer than six cases in 2014.



Source: Michigan DHHS, Division of Vital Records and Health Statistics, MI and US, 2015, *Newaygo County, 2013, the most recent year with eligible data. Note: Lake County not included because it had fewer than six cases in 2014.

Mortality Rates (Continued)

The age-adjusted mortality rates for both Newago and Lake counties are higher than the state or the national rates.



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

Leading Causes of Death

- Heart disease and cancer are the leading causes of death in Lake County, Newaygo County, the state, and the nation.
- Compared to the other regions in the table below, the death rate for heart disease is highest in Lake County and the death rate for cancer is highest is Newaygo County.
- The death rate for chronic lower respiratory diseases is much higher in Newaygo County compared to the state or national rates.
- The death rate for cancer in both Lake and Newaygo counties decreased from the last CHNA iteration in 2014, while the death rates for heart disease, chronic lower respiratory disease, and unintentional injuries increased in Newaygo County over the same period.

	Michigan		United States		Lake County		Newaygo County	
	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate
Heart Disease	1	195.5	1	168.5	1	198.7	1	192.7
Cancer	2	164.9	2	158.5	2	153.3	2	177.8
Chronic Lower Respiratory Diseases	3	46.7	4	41.6		**	3	77.7
Unintentional Injuries	4	42.9	3	43.2		**	4	57.1
Stroke	5	36.8	5	37.6		**	5	33.1
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	13.6	10	13.3		**		**
All Other Causes		190.1		191.1		214.7		165.7

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

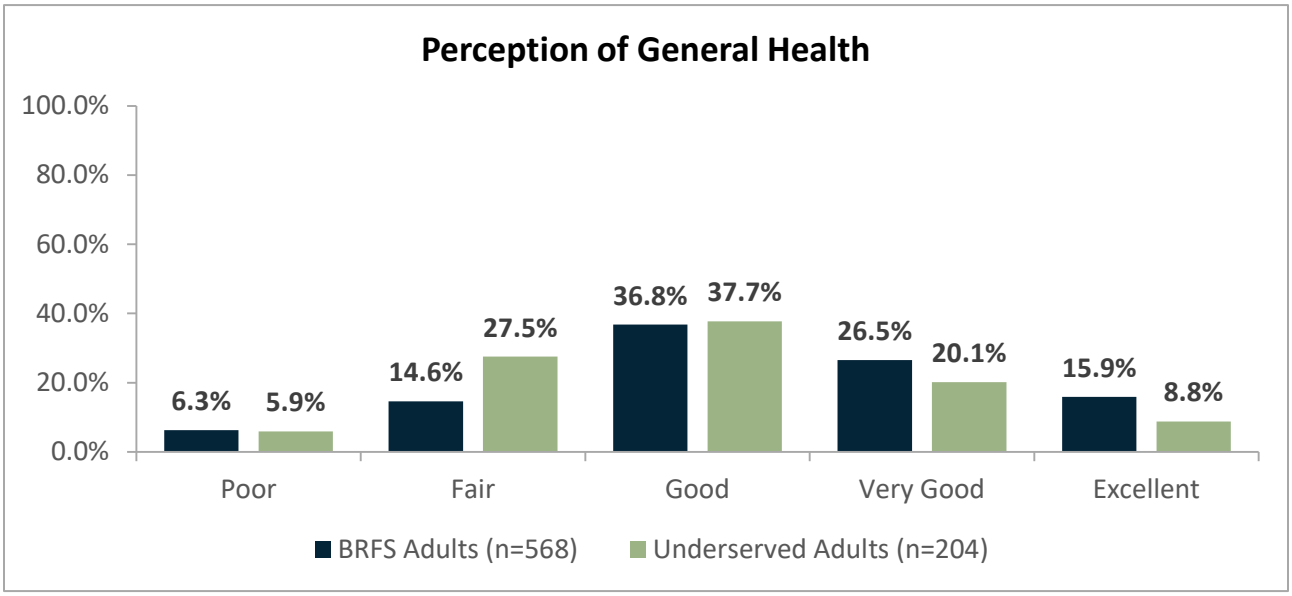
- Preventable hospitalizations are more common in Lake County compared to Newaygo County or the state.
- Congestive heart failure and bacterial pneumonia are the leading causes of preventable hospitalization in both counties and across Michigan, but the proportion for both conditions are higher in both counties compared to the state.
- Residents of Lake County are more likely to be hospitalized for chronic obstructive pulmonary disease than residents in Newaygo County or across Michigan.
- On the other hand, residents across Michigan are more likely to be hospitalized for kidney/urinary infections, compared to residents in Lake or Newaygo counties.

	Michigan		Lake County		Newaygo County	
	Rank	% of All Preventable Hospitalizations	Rank	% of All Preventable Hospitalizations	Rank	% of All Preventable Hospitalizations
Congestive Heart Failure	**1**	**14.0%**	**2**	**16.8%**	**1**	**17.8%**
Bacterial Pneumonia	**2**	**9.7%**	**1**	**18.8%**	**2**	**13.5%**
Chronic Obstructive Pulmonary Disease	**3**	**9.1%**	**3**	**12.9%**	**5**	**6.2%**
Kidney/Urinary Infections	**4**	**6.8%**	**7**	**2.6%**	**7**	**4.2%**
Cellulitis	**5**	**6.5%**	**5**	**5.8%**	**3**	**7.0%**
Diabetes	**6**	**5.9%**	**4**	**6.5%**	**4**	**6.5%**
Asthma	**7**	**5.3%**	**6**	**3.6%**	**8**	**3.7%**
Grand Mal and Other Epileptic Conditions	**8**	**3.3%**	**7**	**2.6%**	**6**	**5.5%**
Dehydration	**9**	**1.8%**	**	**	**10**	1.5%
Gastroenteritis	**10**	**1.7%**	**9**	**2.3%**		**
Convulsions			**10**	**1.6%**	**9**	**2.6%**
All Other Ambulatory Care Sensitive Conditions		**36.1%**		**26.5%**		**31.5%**
Preventable Hospitalizations as a % of All Hospitalizations		**19.9%**		**21.3%**		**14.8%**

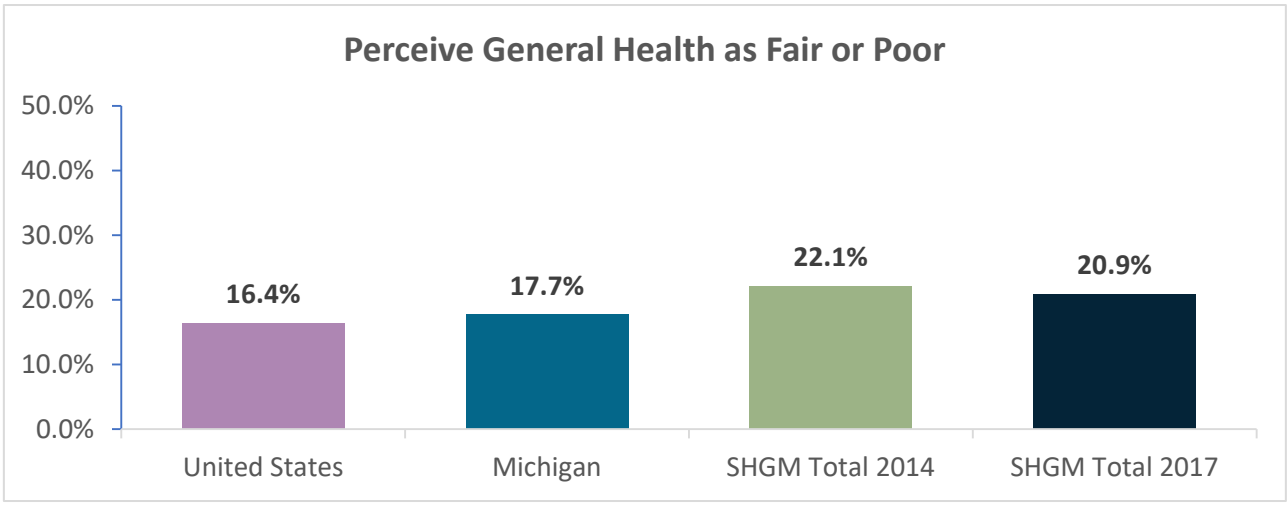
Source: MDHHS Resident Inpatient Files, Division of Vital Records. Counties and MI, 2014.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

General Health Status

- One in five (20.9%) SHGM area adults reports fair or poor general health; this proportion increases to 33.4% for underserved adults.
- The proportion of area adults reporting fair or poor health has improved slightly since the last CHNA but is still higher than the state or national proportion.



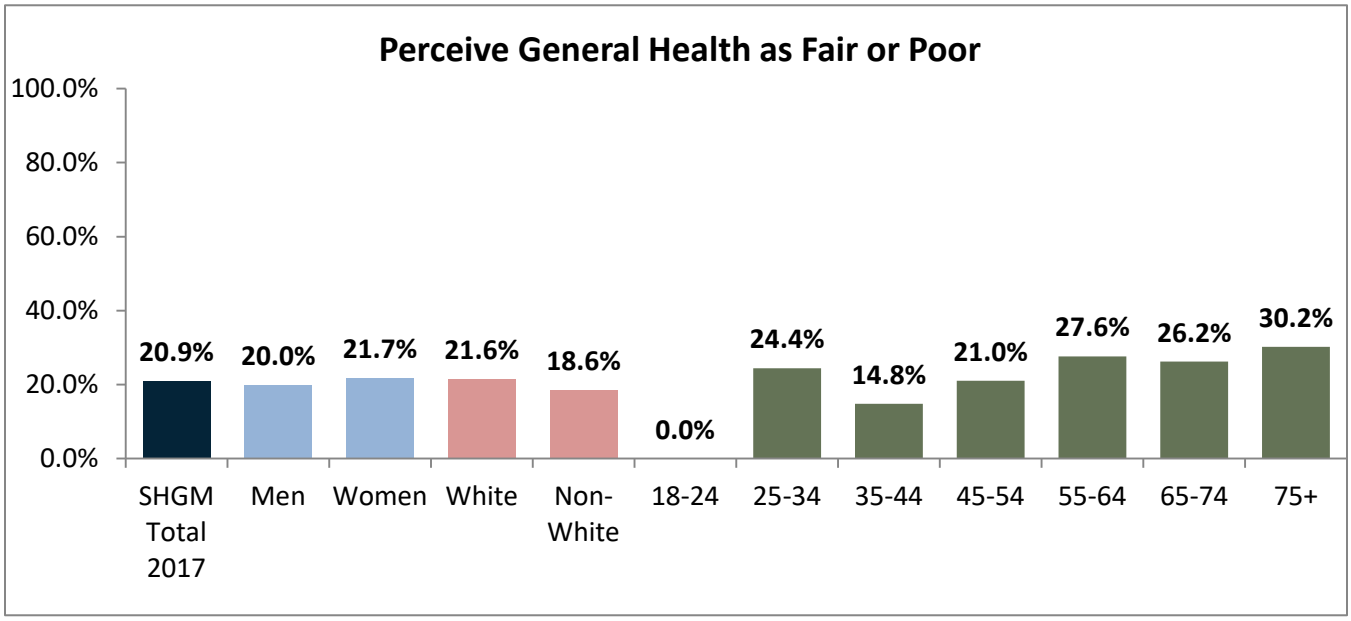
Source: SHGM Behavioral Risk Factor Survey, 2017, Q1.2/SHGM Underserved Resident Survey, 2017, Q1: Would you say your general health is excellent, very good, good, fair, or poor?

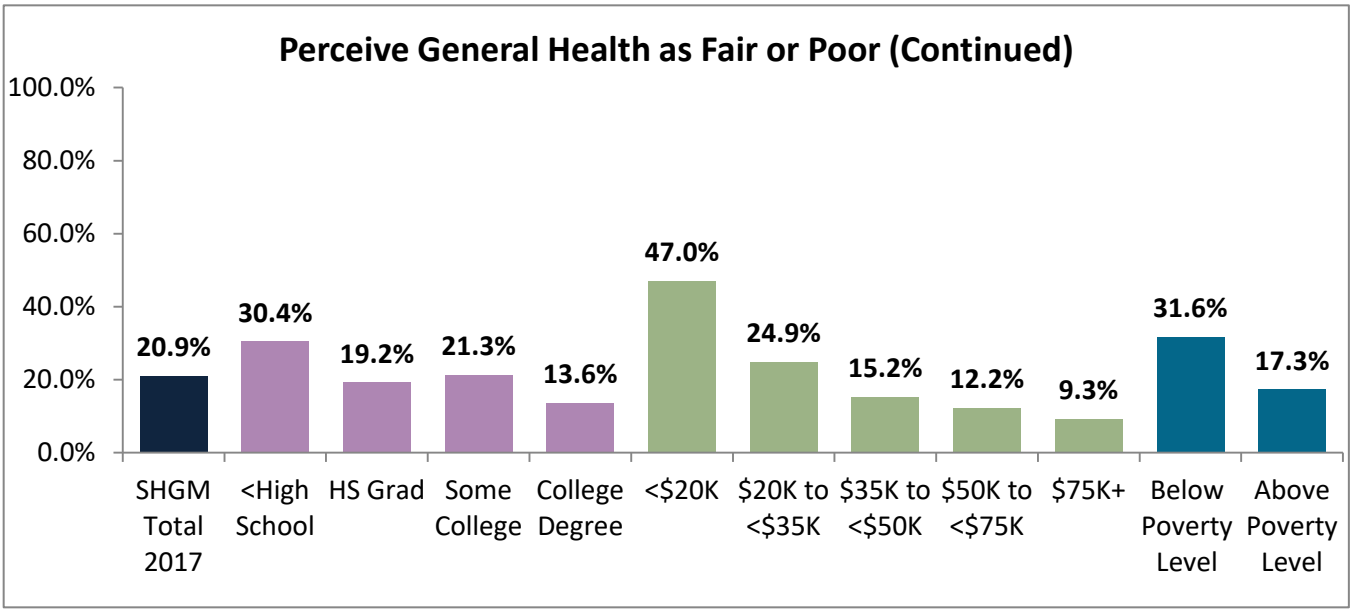


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017, Q1.2.
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 level of education and household income.
- Adults living below the poverty line are more likely to report fair or poor health than adults above the poverty line.

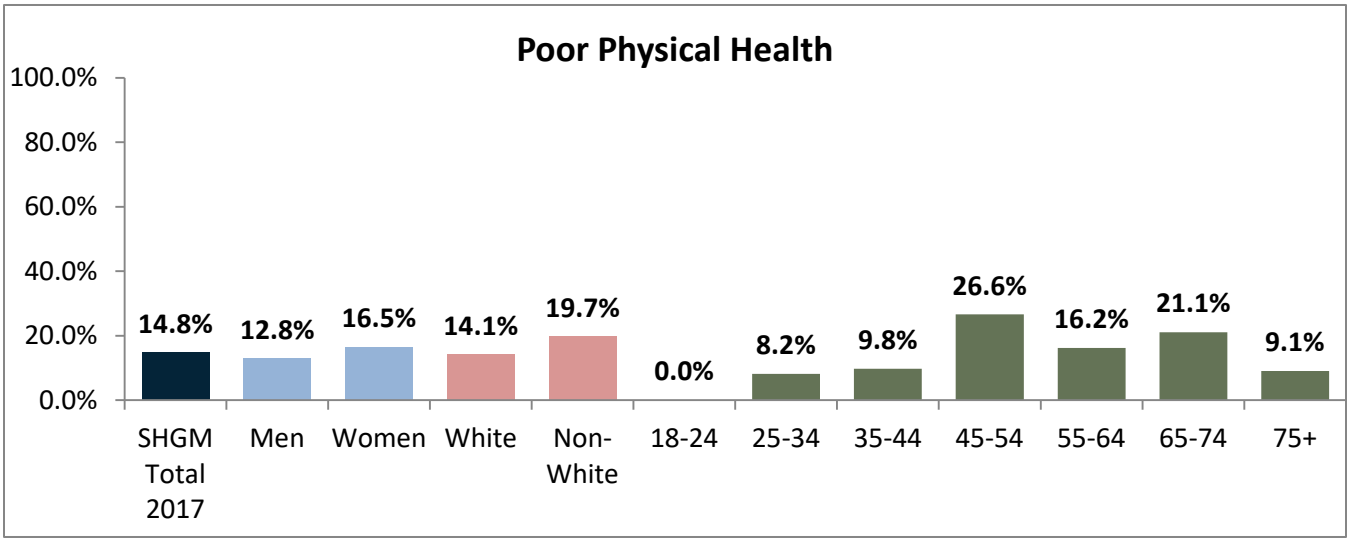


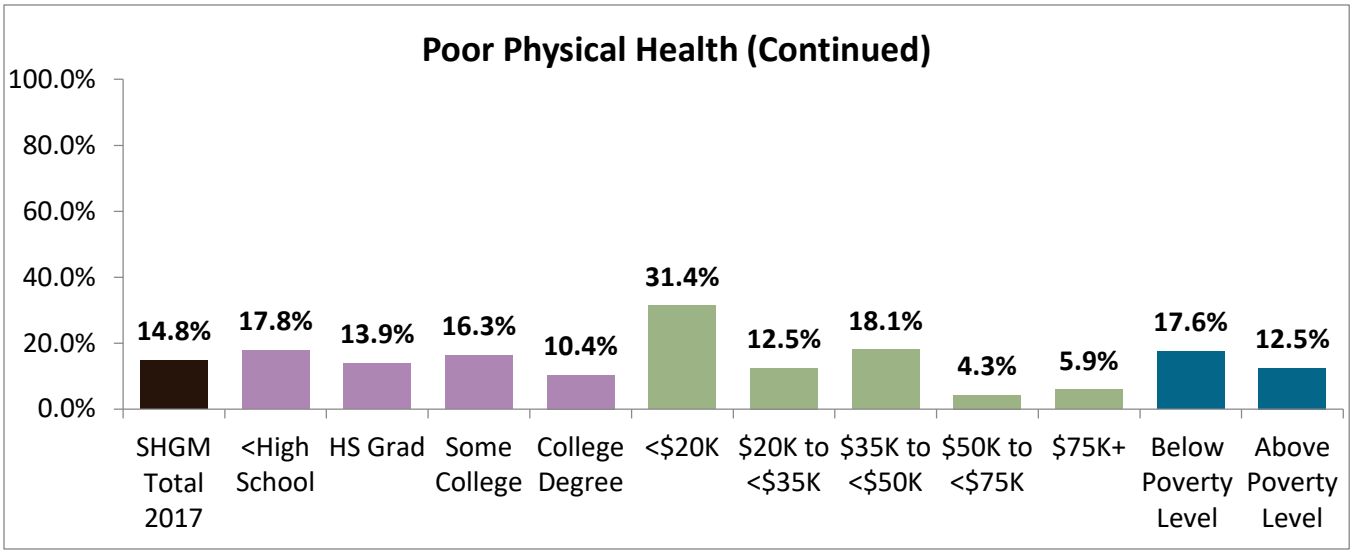


Source: SHGM Behavioral Risk Factor Survey, 2017, Q1.2.

Physical Health Status

- Almost one in seven SHGM area adults have poor physical health, which means they experienced fourteen or more days of poor physical health, which includes physical illness and injury, during the past 30 days.
- The prevalence of poor physical health is lowest among adults age 18-24, those with a college degree, and/or those with household incomes of $50K or more.
- Further, women and non-White adults experience poor physical health slightly more than men and White adults, respectively.

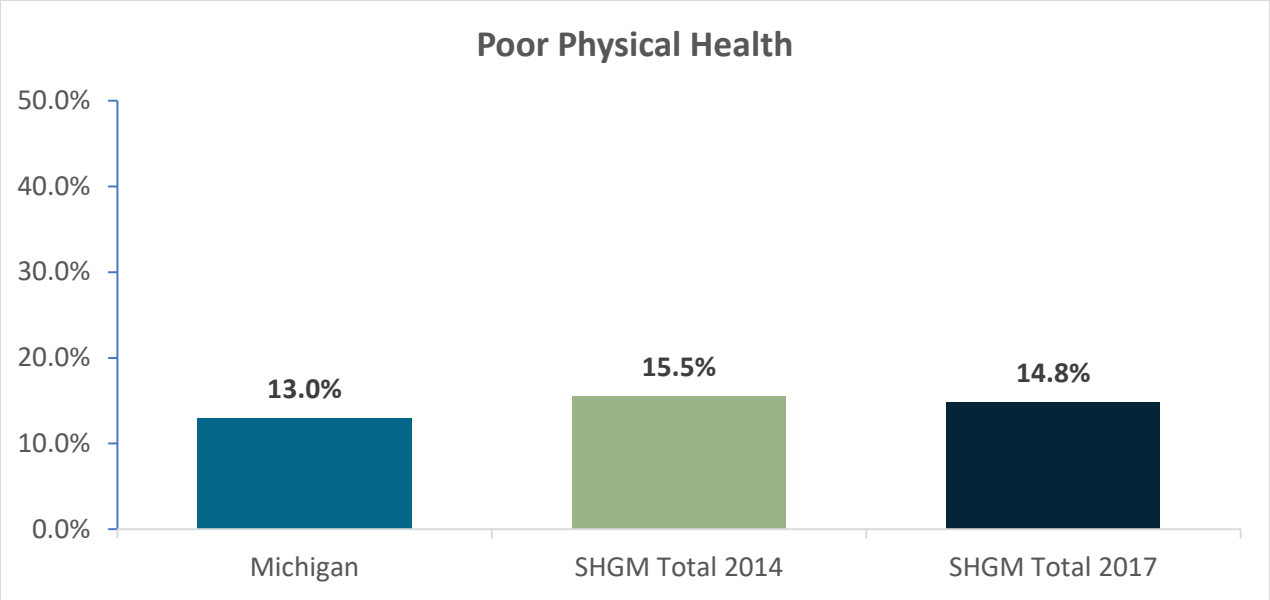




Source: SHGM Behavioral Risk Factor Survey, 2017, Q2.1: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? (n=566)
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes physical illness and injury

Physical Health Status (Continued)

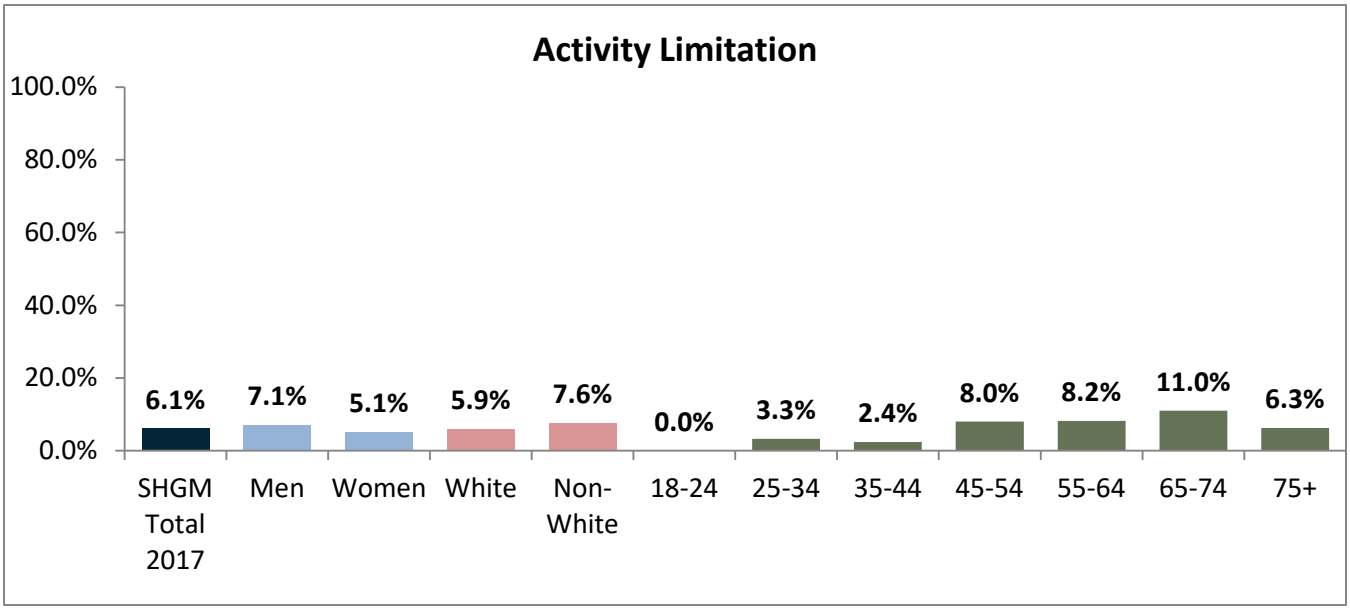
The proportion of area adults who have poor physical health has improved slightly since the last CHNA but it still higher than the state proportion.

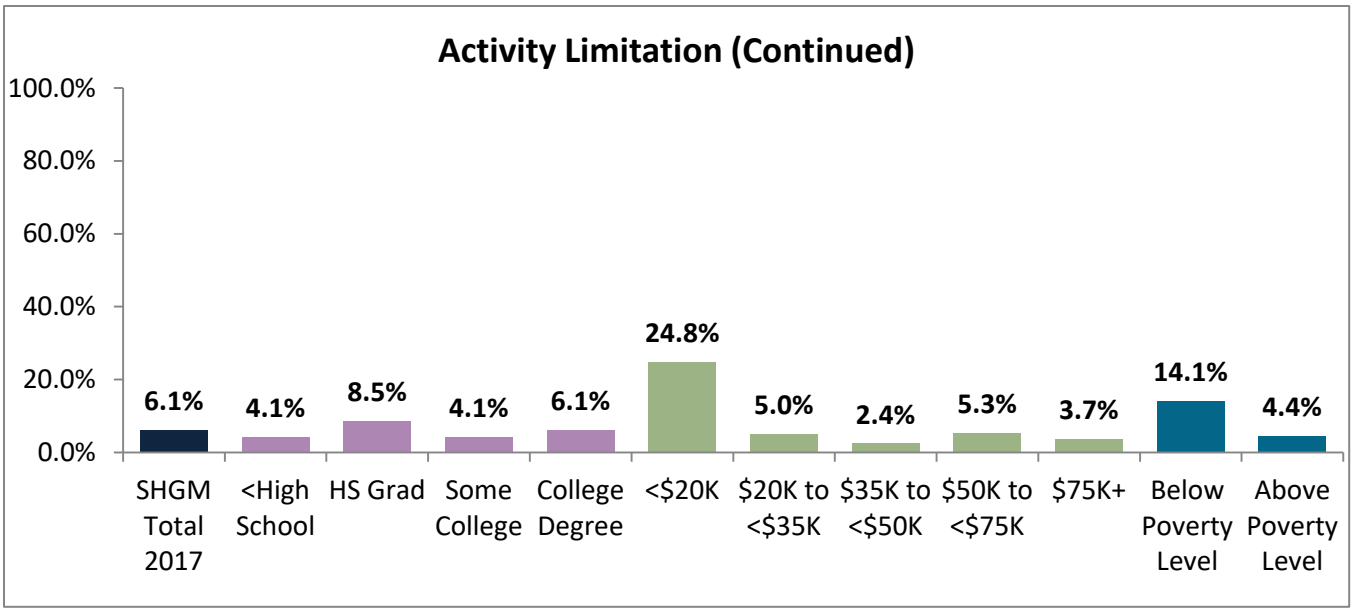


Source: Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017, Q2.1.
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their physical health was not good, which includes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

Activity Limitation

- Overall, 6.1% of area adults are prevented from doing their usual activities (e.g., self-care, work, recreation) for fourteen or more days during the past month due to poor physical or mental health.
- The largest proportions of adults who experience activity limitation are found among the poorest adults.

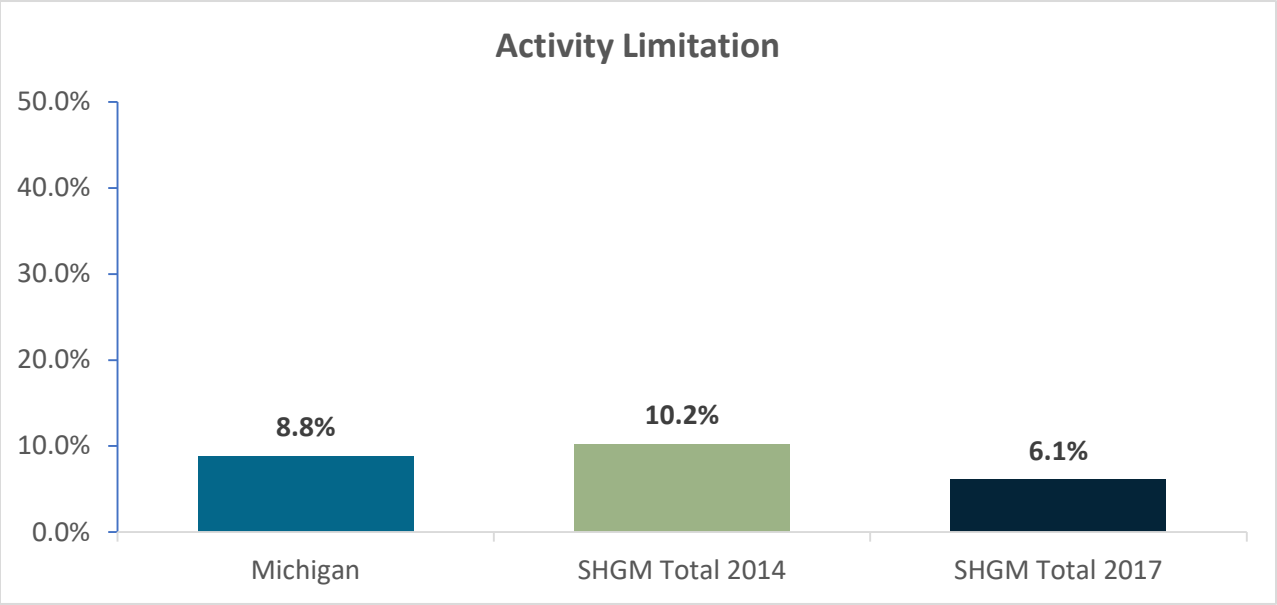




Source: SHGM Behavioral Risk Factor Survey, 2017, Q2.3: During the past 30 days, for about how many days did poor physical or mental health keep you from doing your usual activities, such as self-care, work, or recreation? (n=568)
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which either poor physical health or poor mental health kept them from doing their usual activities, such as self-care, work, and recreation.

Activity Limitation (Continued)

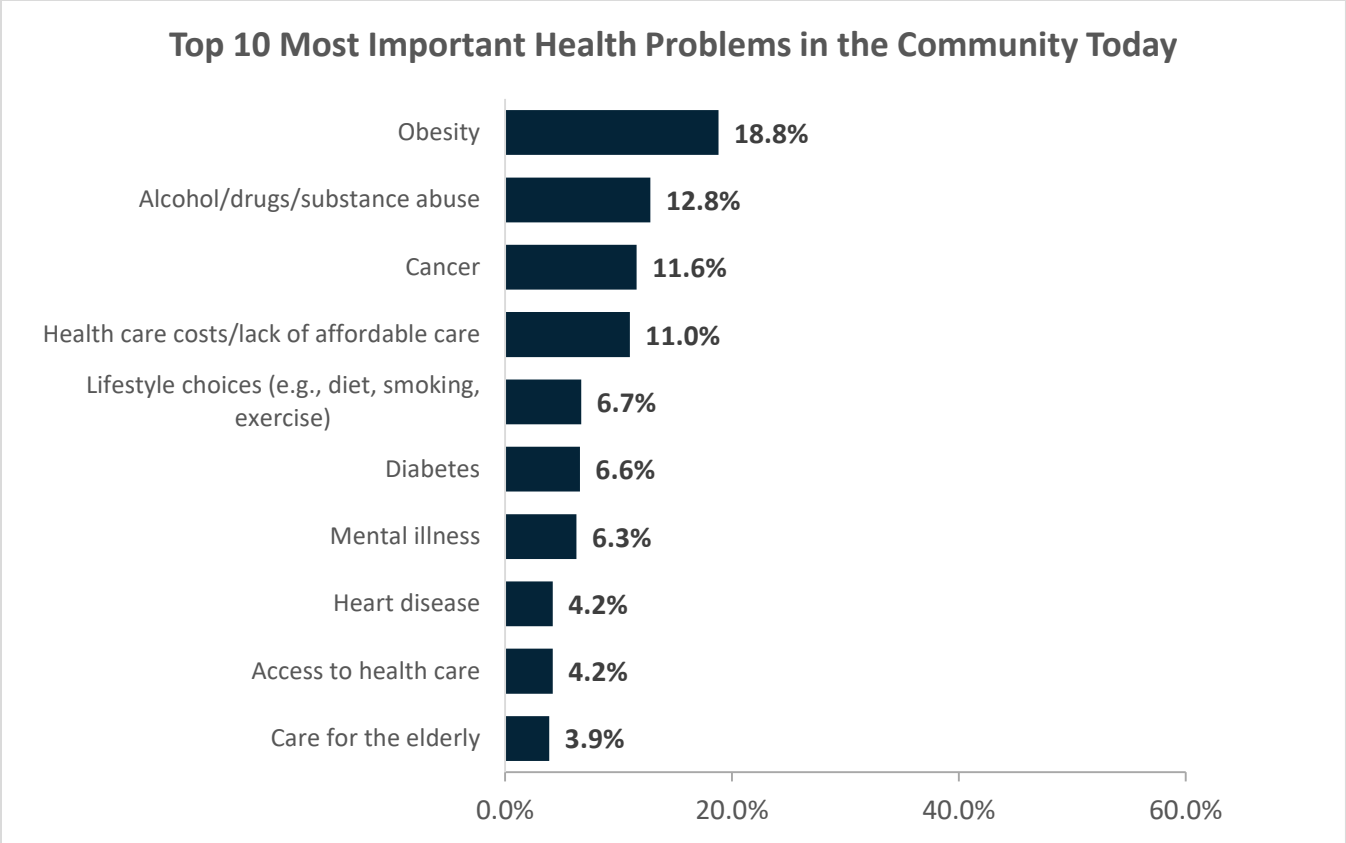
The proportion of area adults whose activity is limited has improved since the last CHNA and is lower than the state proportion.



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

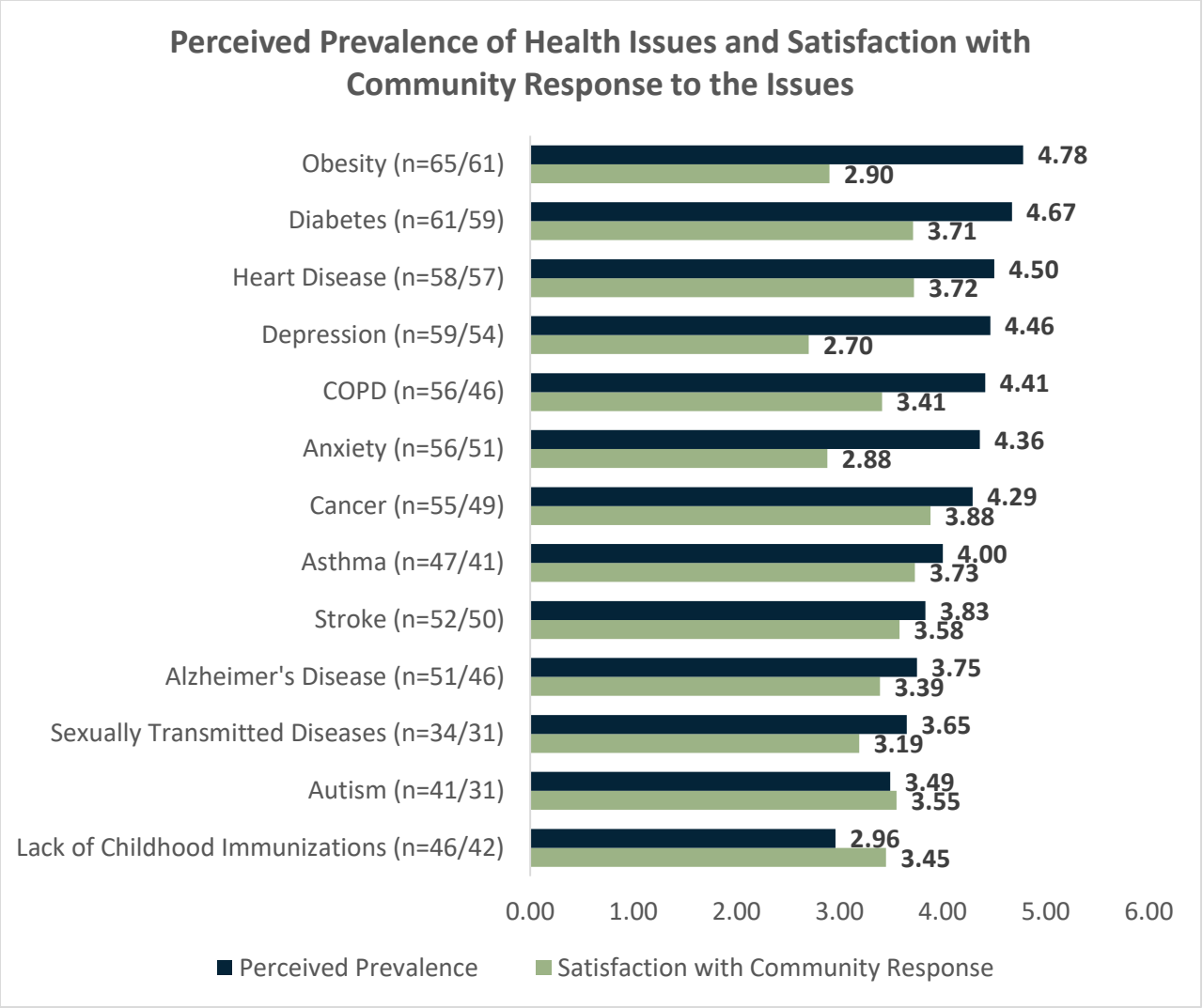
Area adults consider obesity to be the top health problem in the SHGM area, followed by substance abuse, cancer, and the cost of health care.



Source: SHGM Behavioral Risk Factor Survey, 2017, Q1.1: What do you feel is the most important health problem in your community today? (n=520)

Most Prevalent Health Issues in the Community

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



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

Most Prevalent Health Issues in the Community (Continued)

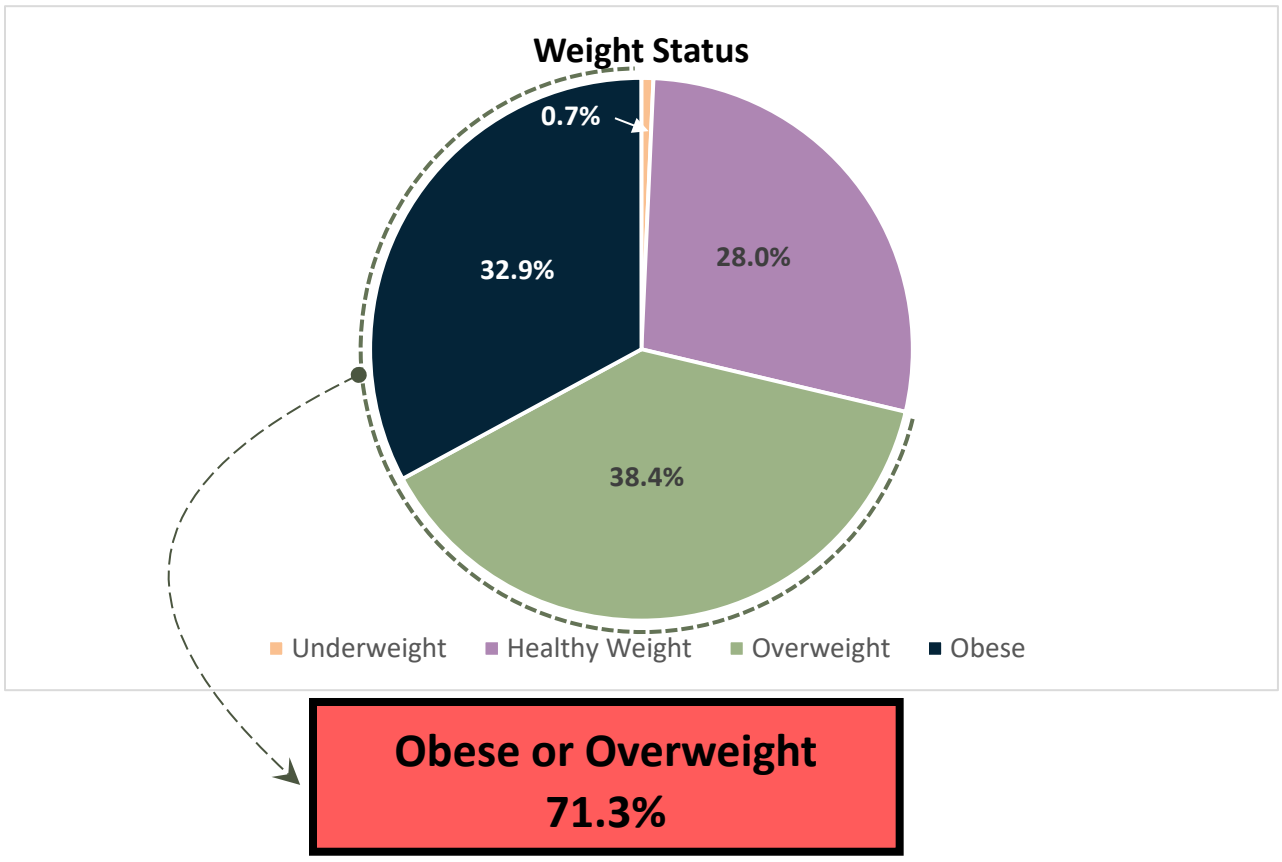
When asked to comment on any additional health issues that they deem prevalent in the community, Key Informants mentioned teen pregnancy, access to affordable health care, lack of mental health care, transportation, among others:

- ✓ Teen pregnancy (3)
- ✓ Access to (affordable) healthcare (2)
- ✓ A growing number of those with chronic diseases
- ✓ Alzheimer's, dementia
- ✓ Difficult placement in rehab for our behavior/suicidal patients
- ✓ Elder access to care
- ✓ Chronic pain
- ✓ Critical shortage of health professionals working and living in Newaygo County
- ✓ Guns and safety risk to children/others
- ✓ Injuries due to traumatic accidents (snowmobile, farm, etc.)
- ✓ Lack of addressing social determinants
- ✓ Lack of mental health care
- ✓ Lower Limb amputation due to diabetes and smoking
- ✓ Maternal child care can be lacking
- ✓ Mental health is a major concern and has access to care needs
- ✓ Transportation for low income
- ✓ Transportation can be an issue for individuals, many individuals do not have family support in the community

Source: SHGM Key Informant Online Survey, 2017, Q2b: What additional health issues are prevalent in your community, if any? (n=24)

Weight Status

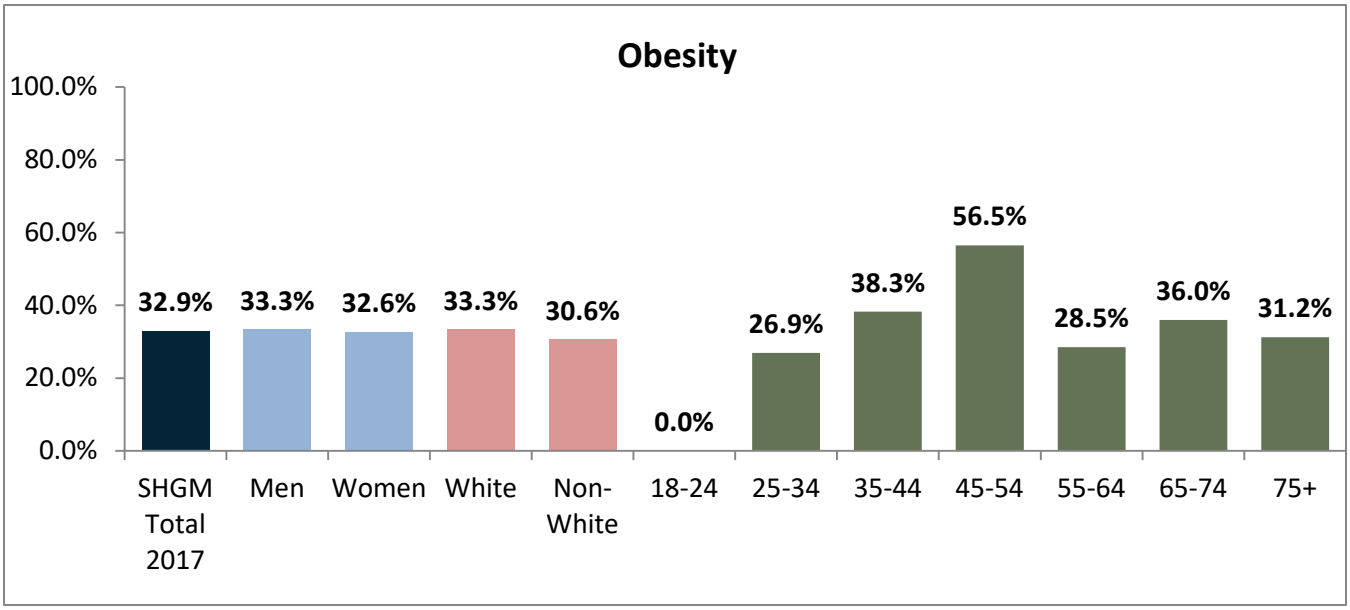
One-third (32.9%) of area adults are obese per their BMI score, while an additional 38.4% are overweight; all told, 71.3% area adults are either overweight or obese.

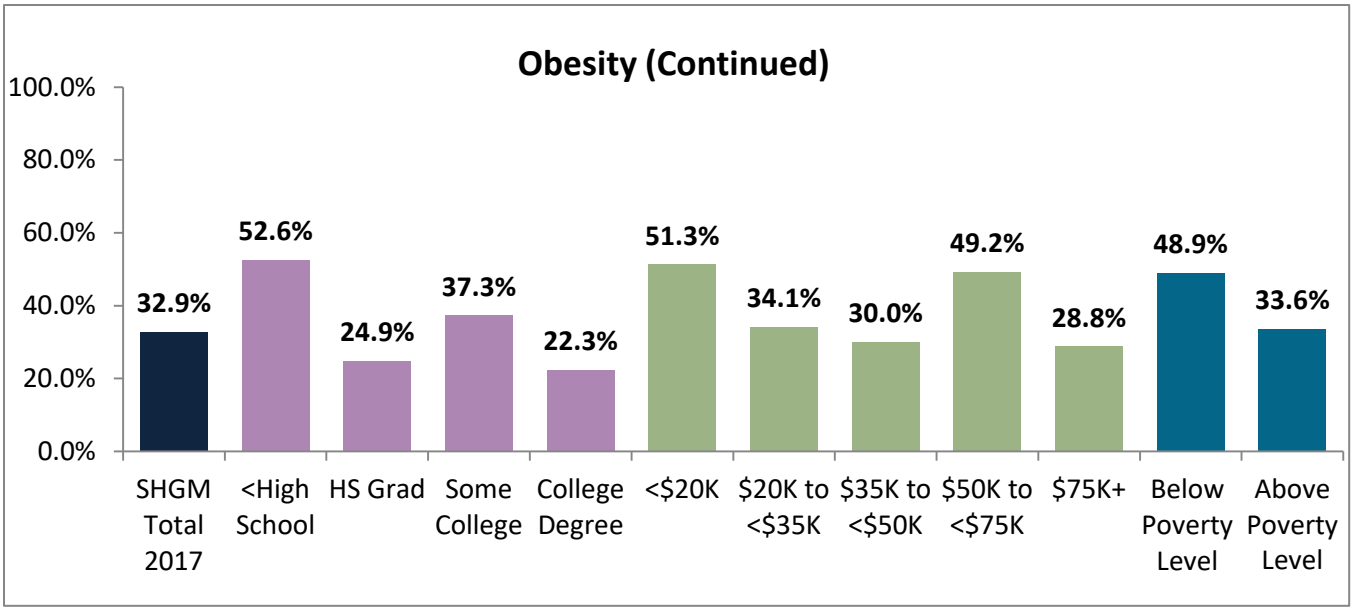


Source: SHGM Behavioral Risk Factor Survey, 2017, Q12.9: About how much do you weigh without shoes? Q12.10: About how tall are you without shoes? (n=547)
Note: BMI, body mass index, is defined as weight (in kilograms) divided by height (in meters) squared [weight in kg/(height in meters)2]. Weight and height were self-reported. Pregnant women were excluded. Obese = the proportion of adults whose BMI was greater than or equal to 30.0; overweight = the proportion of adults whose BMI was greater than or equal to 25.0, but less than 30.0; healthy weight = the proportion of adults whose BMI was greater than or equal to 18.5, but less than 25.0; underweight = the proportion of adults whose BMI was less than 18.5.

Weight Status (Continued)

- Obesity is more common in adults with less than a high school diploma compared to adults with more education, and more common among those living below the poverty line vs. those living above it.
- Obesity is least common among the youngest adults (age 18-24) and/or those with a college degree.

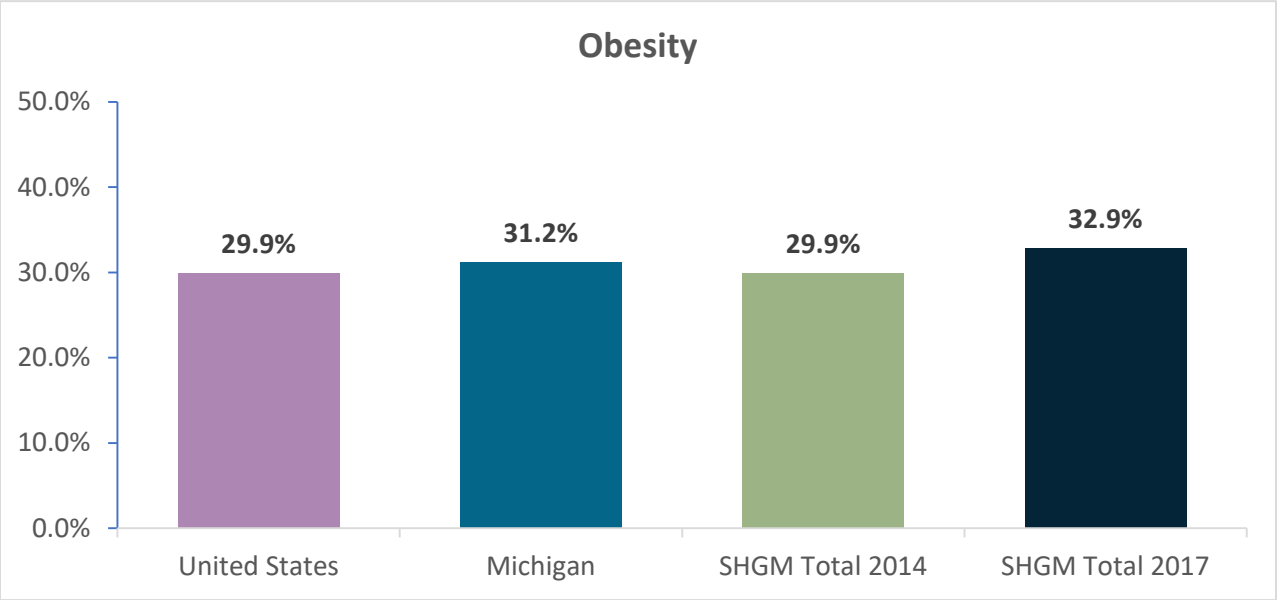




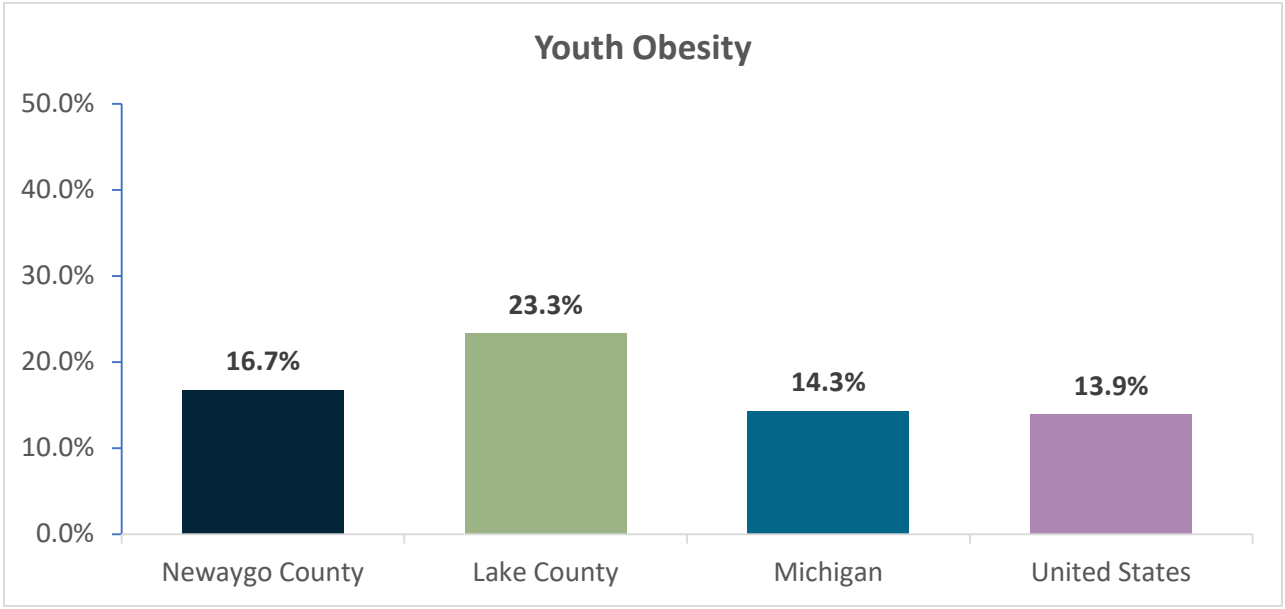
Source: SHGM Behavioral Risk Factor Survey, 2017. (n=547)
Note: the proportion of adults whose BMI was greater than or equal to 30.0.

Weight Status (Continued)

- The proportion of obese adults and youth in the SHGM area is greater than the proportions across Michigan or the U.S.
- The proportion of obese adults has increased since the last CHNA.



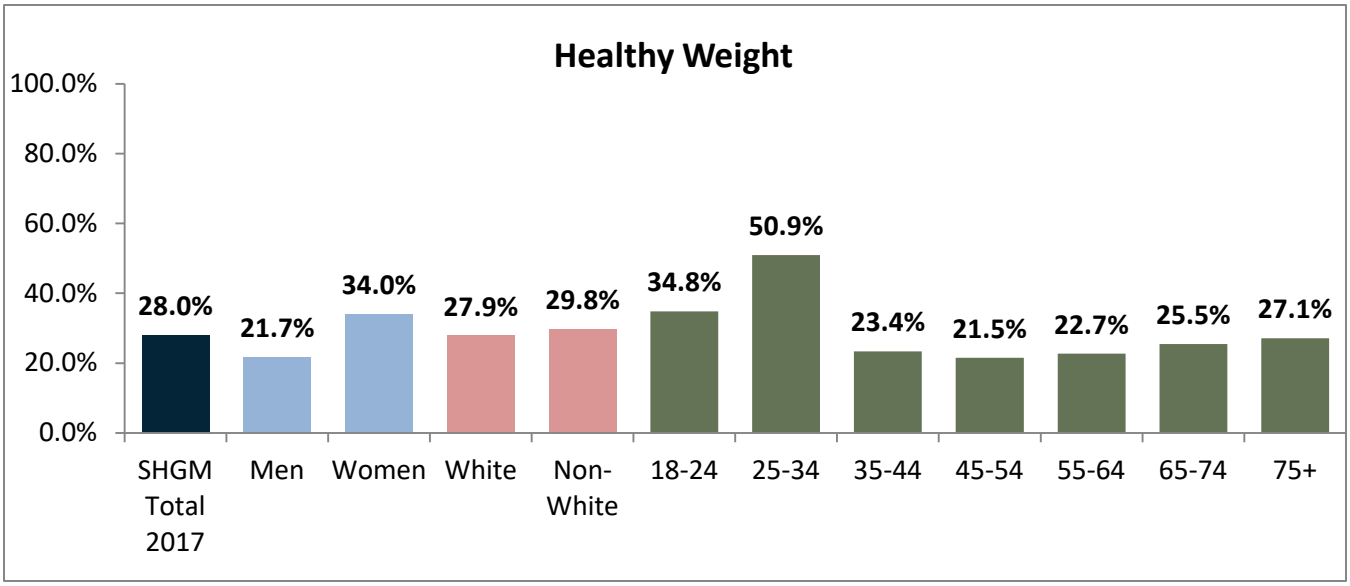
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016;
Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017.
Note: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

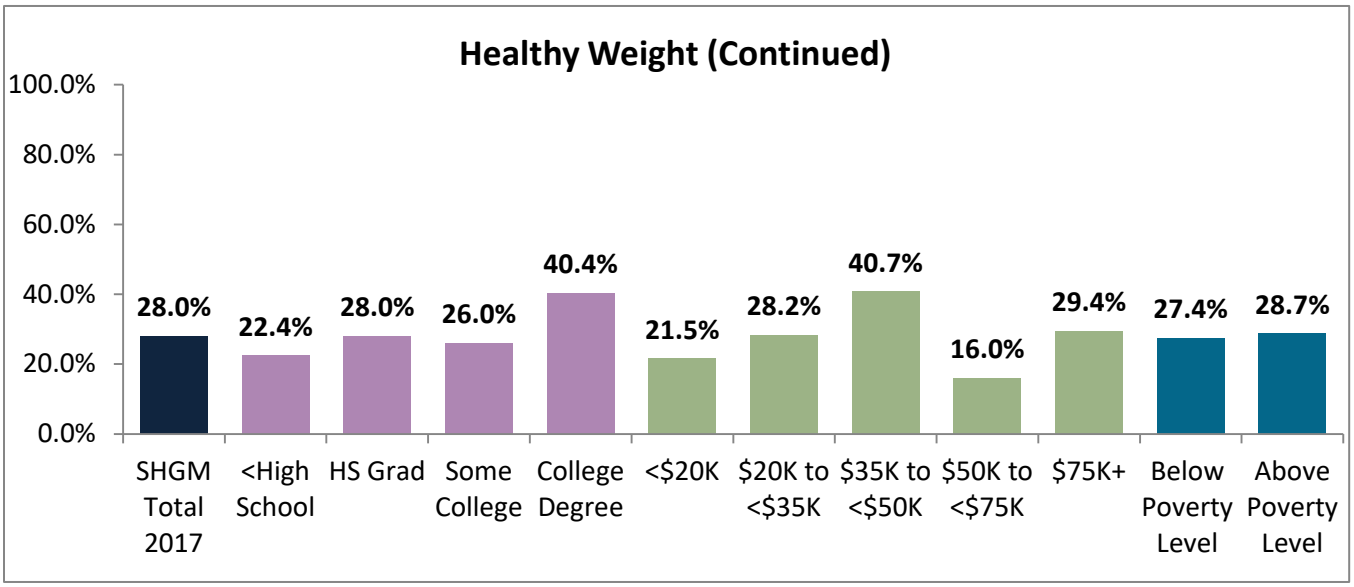


Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Weight Status (Continued)

- More than one-fourth (28.0%) of area adults are at a healthy weight per their BMI.
- More women are at a healthy weight compared to men, and the youngest (18-34) adults are more often at a healthy weight compared to adults age 35+.
- Adults with a college degree are more likely to be at a healthy weight than adults with less education.





Source: SHGM Behavioral Risk Factor Survey, 2017, (n=547).
Note: the proportion of adults whose BMI was greater than or equal to 18.5, but less than 25.0.

Weight Status (Continued)

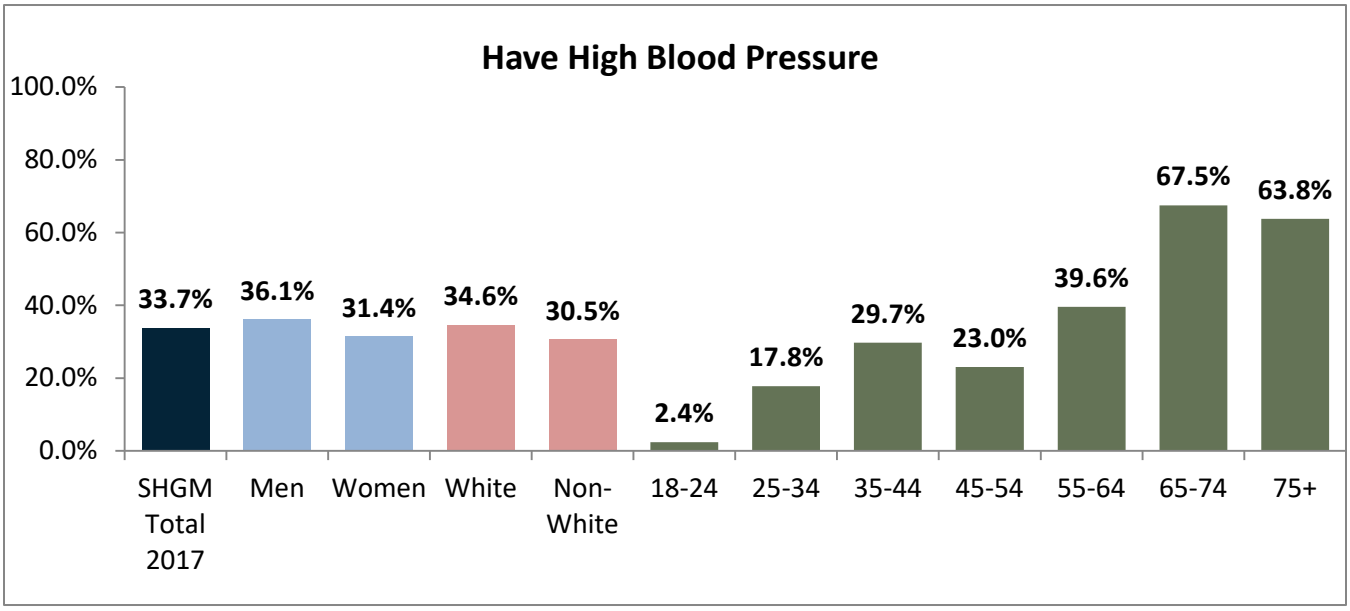
Key Stakeholders and Key Informants consider obesity to be one of the most pressing or concerning health issues in the SHGM area, not only because it's highly prevalent, but more importantly: (1) it's highly co-morbid with other conditions, or negative outcomes, such as diabetes, heart disease and high blood pressure, (2) it is partly a by-product of an environment because of lack of affordable healthy food, lack of places to be active, and crippling poverty, and (3) it can often be prevented through lifestyle changes in diet, exercise, and avoidance of alcohol.

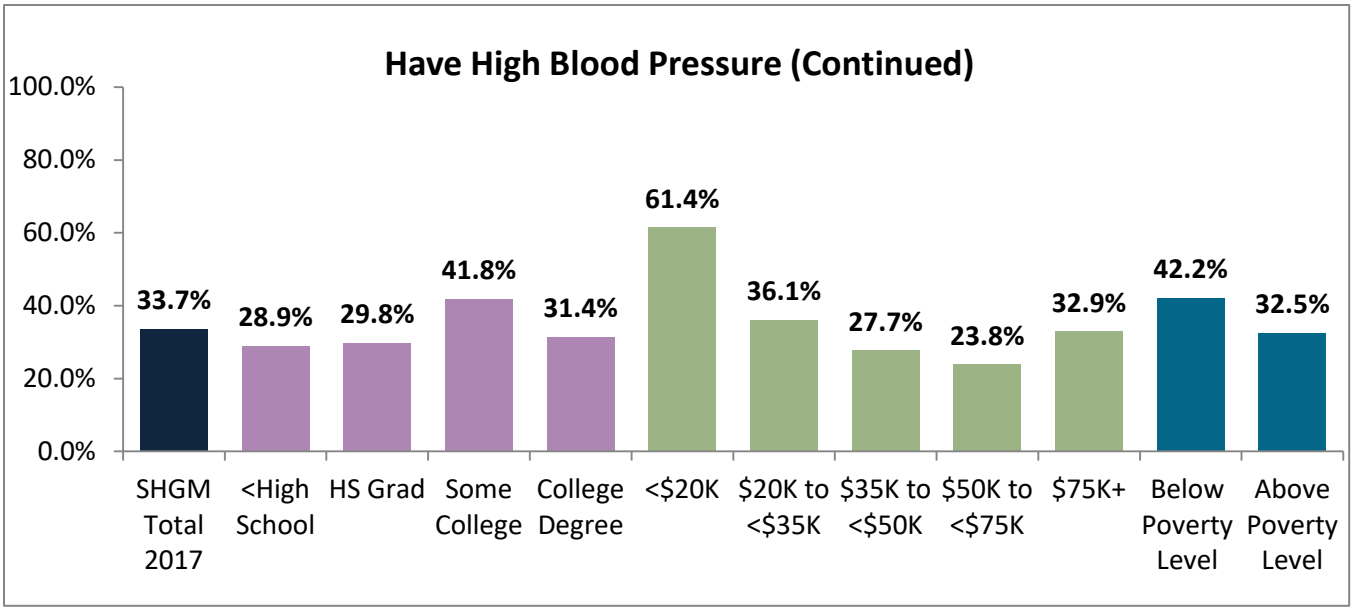
Co-morbidity	[Obesity is related to] **Hypertension**, **diabetes**, **hyperlipidemia**, **heart disease**, **sleep apnea**, **atrial fibrillation**. – *Key Informant* We are low in the rankings on this indicator within the State, and it is a **contributing factor in many related conditions** such as **diabetes**. –*Key Informant* It contributes to many health issues such as **heart disease**, **high blood pressure**, and **joint problems**. – *Key Stakeholder*
Product of environment	**Too many fast food eateries**, **limited affordable recreational activities** (lack of good safe walking places, limited swimming pool access, etc.). – *Key Informant* It's a problem in every community, but more recently it **seems to increase along with our increased low-income / poverty levels.** – *Key Stakeholder* Our **community is spread** out and once you get out **not all areas are walkable**. – *Key Informant* **Limited access to resources**, **low cost healthy food**, **education regarding nutrition**, and an **unsupportive environment for physical activity** (walkable city). – *Key Informant*
Lifestyle choices	**Poor nutrition at home** in the **schools** coupled with **lack of physical activity**. – *Key Stakeholder* Obesity is a problem in our community, in part, because many are lower income, **have poor diet**, and **minimal exercise**. This is exacerbated by a **culture of complacency** in the general population. – *Key Informant*

Source: SHGM 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=6); SHGM 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=72).

Hypertension

- One-third (33.7%) of area adults has high blood pressure, and not surprisingly, it is more prevalent with age.
- It is also more common in those with lower incomes where the rate almost doubles for those with household incomes below $20K.

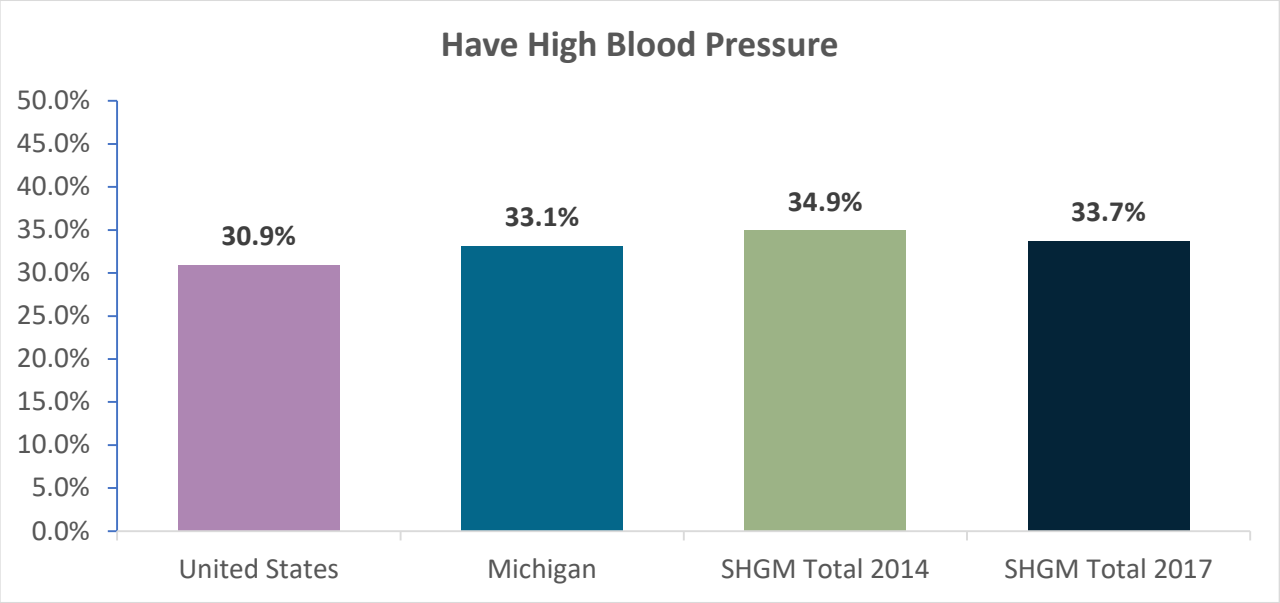




Source: SHGM Behavioral Risk Factor Survey, 2017, Q6.1: Have you EVER been told by a doctor, nurse, or other health professional that you have high blood pressure? (n=567).
Note: adults who reported they were told by a health care professional that they had high blood pressure. Does not include women who were told they had high blood pressure only during pregnancy.

Hypertension (Continued)

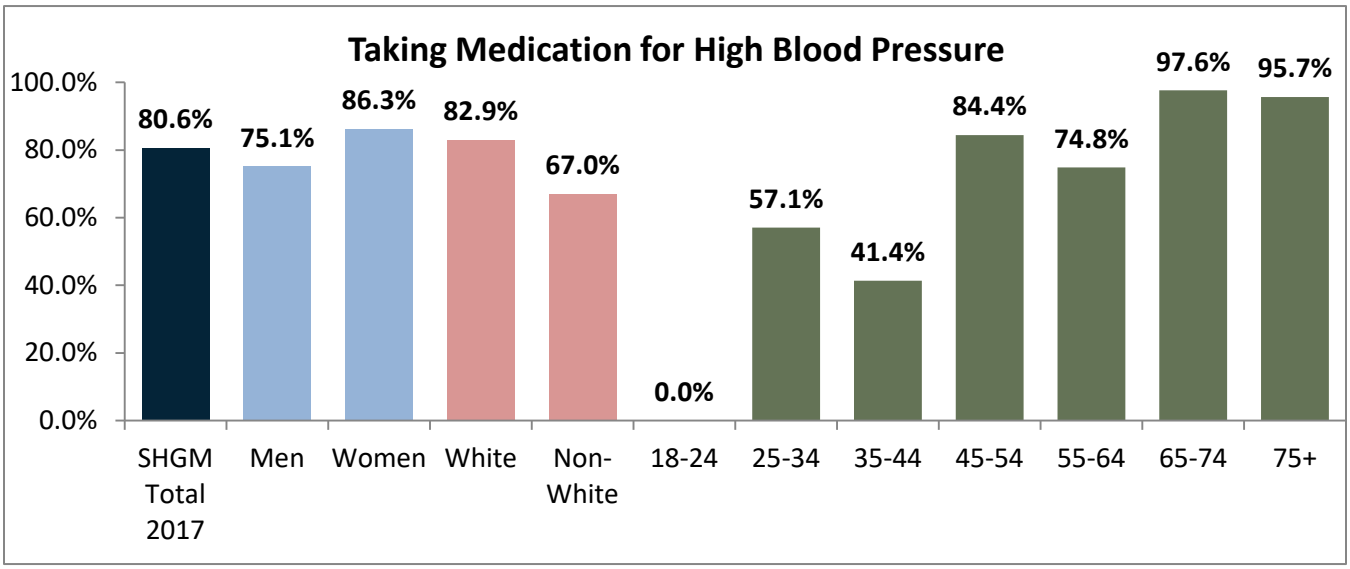
- Although the proportion of adults with high blood pressure in the SHGM area has dropped slightly since the last CHNA, it is still higher than the state or national rates.

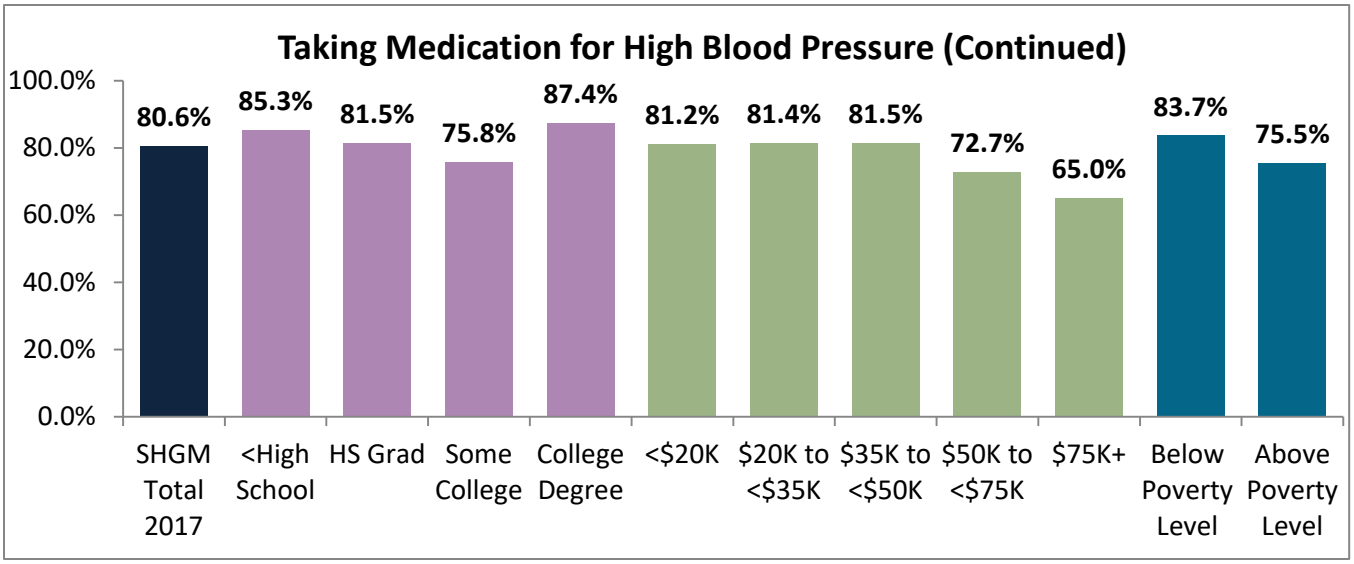


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017.

Hypertension (Continued)

- Among area adults who have high blood pressure, eight in ten (80.6%) are taking medication for their condition and this is up from the last CHNA (75.0%)
- Men and non-White adults are less likely to take HBP medication than women and White adults, respectively.
- Younger adults (age 18-44) are far less likely to take HBP medication than older adults.

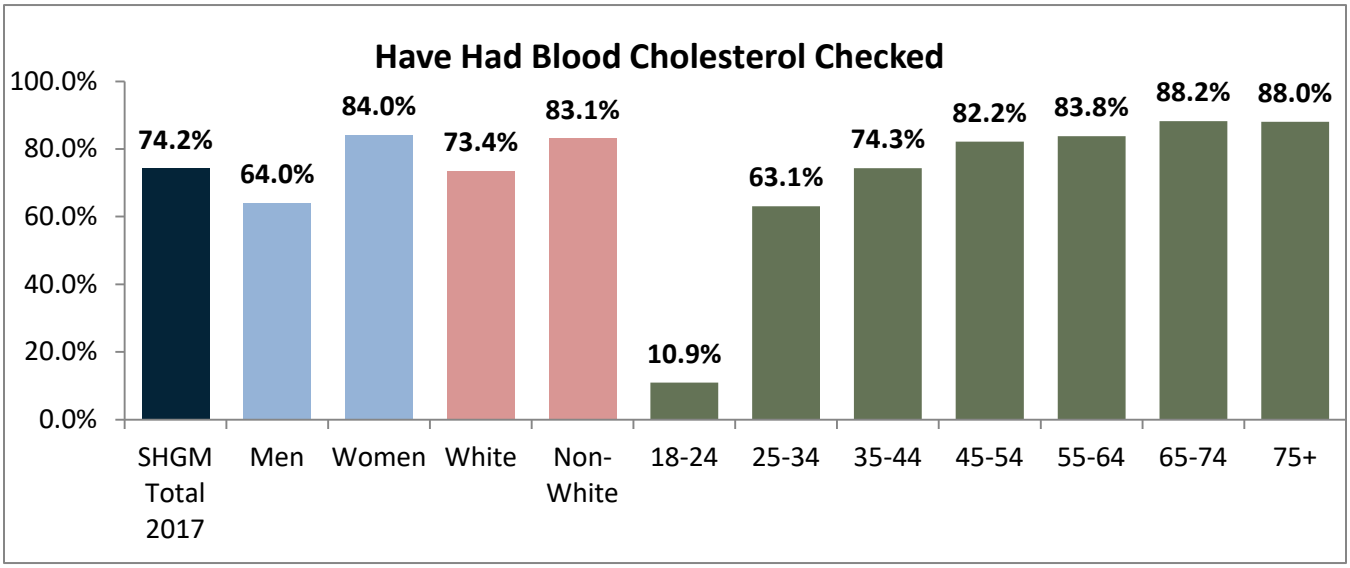


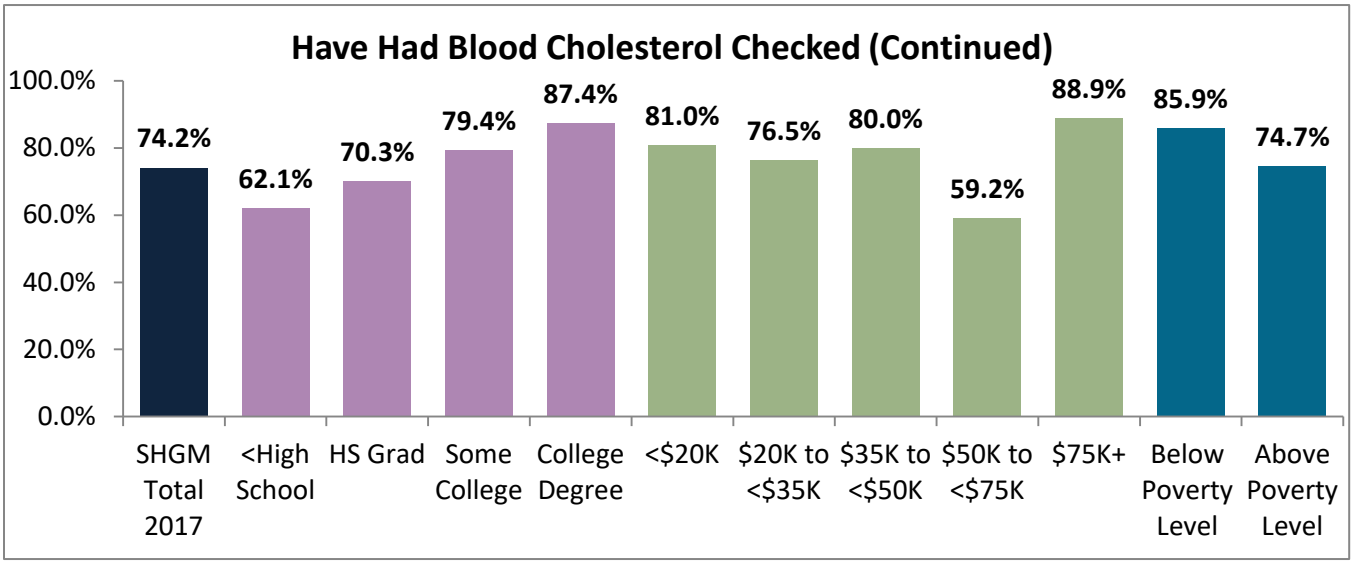


Source: SHGM Behavioral Risk Factor Survey, 2017, Q6.2: Are you currently taking medicine for your high blood pressure? (n=263).
Note: adults who reported they were told by a health care professional that they had high blood pressure.

Cholesterol

- Three-fourths (74.2%) of SHGM area adults have had their cholesterol checked and the likelihood of this preventive practice occurring is directly related to education and age.
- Men and White adults are less likely to have had their cholesterol checked than women and non-White adults, respectively.

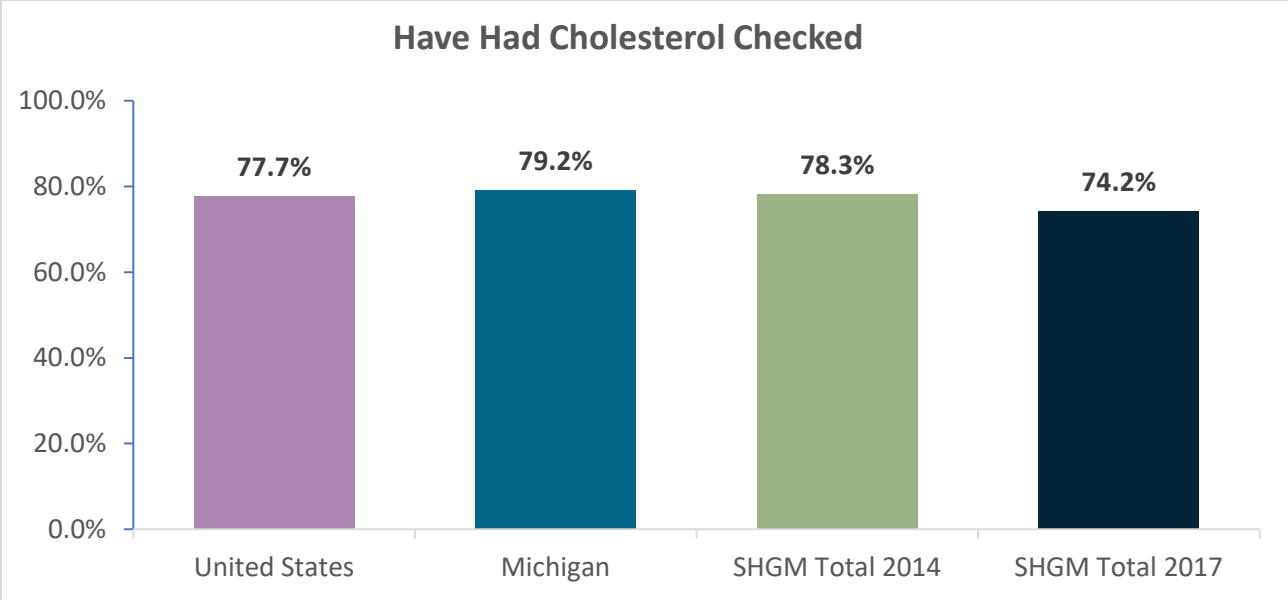




Source: SHGM Behavioral Risk Factor Survey, 2017, Q7.1: Blood cholesterol is a fatty substance found in the blood. Have you EVER had your blood cholesterol checked? (n=556).

Cholesterol (Continued)

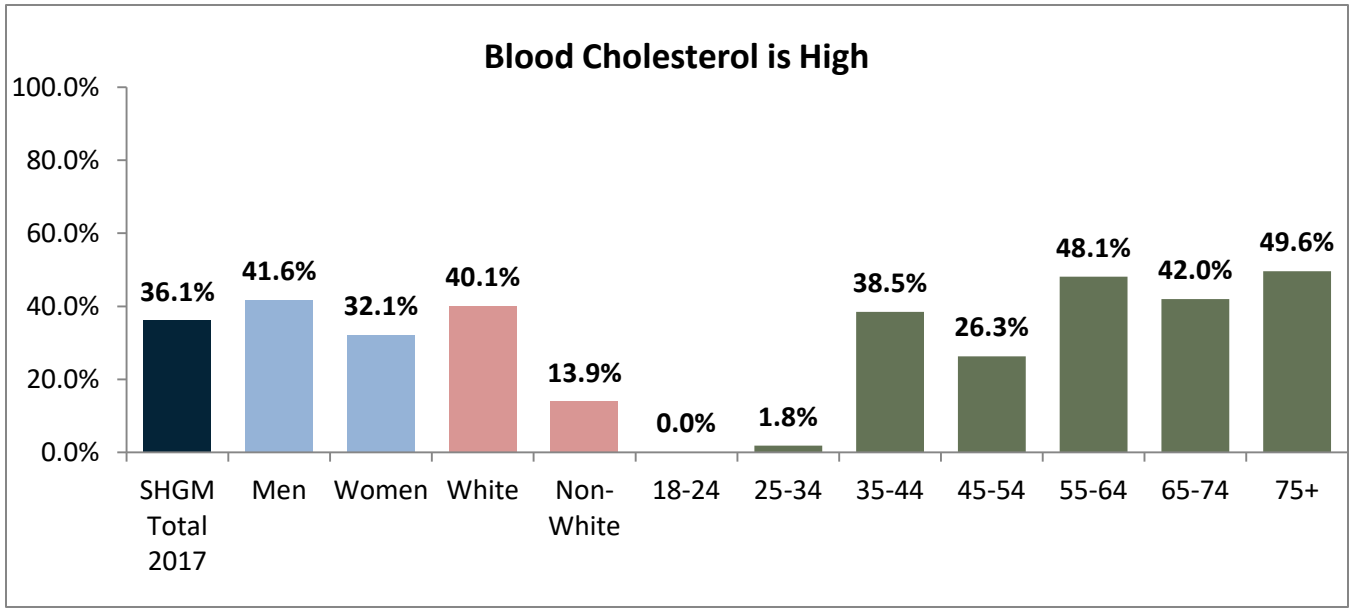
- Fewer SHGM area adults have their cholesterol checked compared to adults across the state or the nation.
- The proportion of adults who have their cholesterol checked has decreased since the last CHNA.

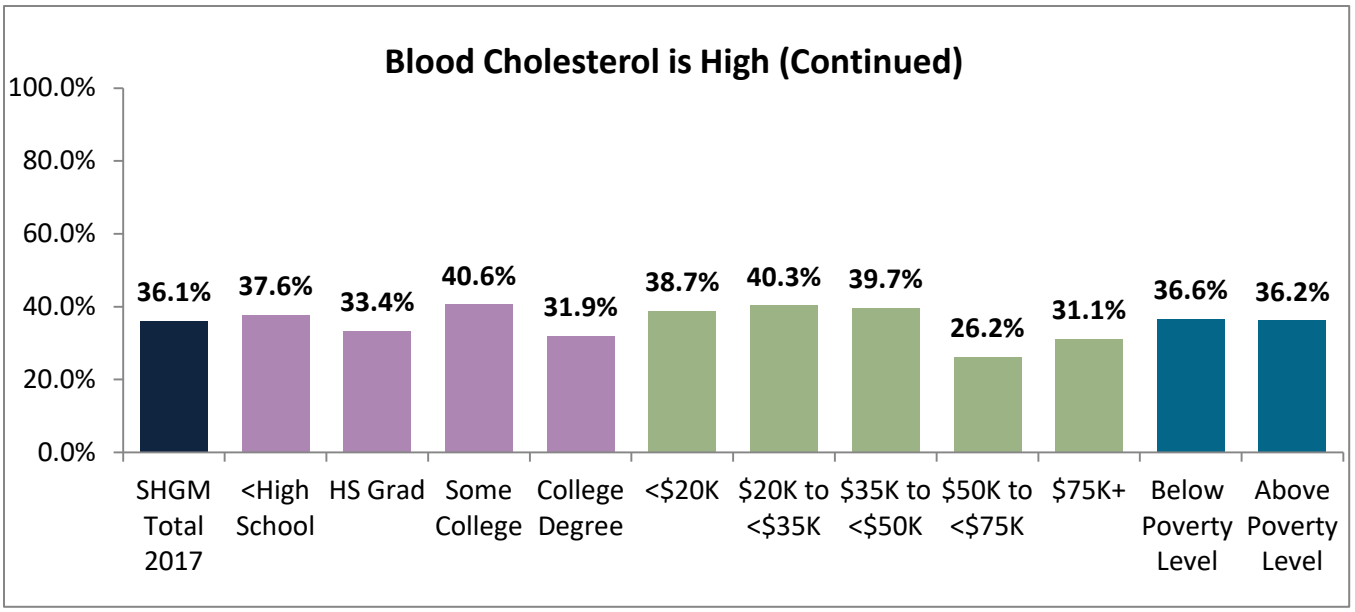


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017.

Cholesterol (Continued)

- More than one-third (36.1%) of SHGM area adults who have had their cholesterol checked have been told their blood cholesterol is high.
- Women and non-White adults are less likely to have high blood cholesterol than men and White adults, respectively.

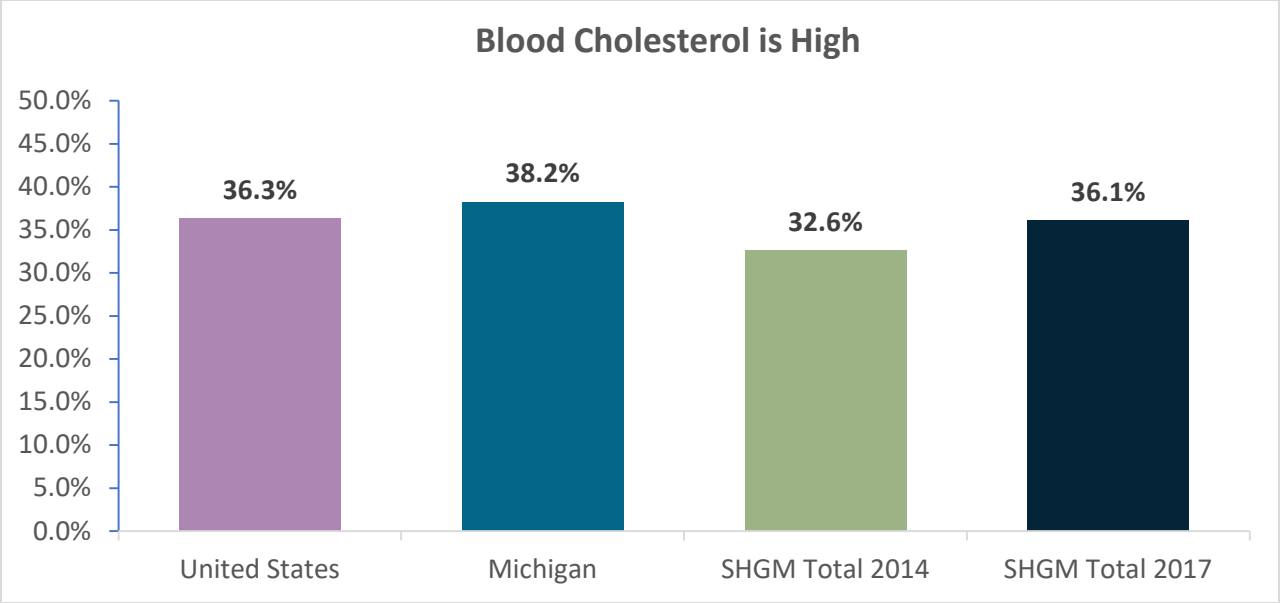




Source: SHGM Behavioral Risk Factor Survey, 2017, Q7.2: Have you EVER been told by a doctor, nurse or other health professional that your blood cholesterol is high? (n=455).
Note: adults who reported they have had their blood cholesterol checked.

Cholesterol (Continued)

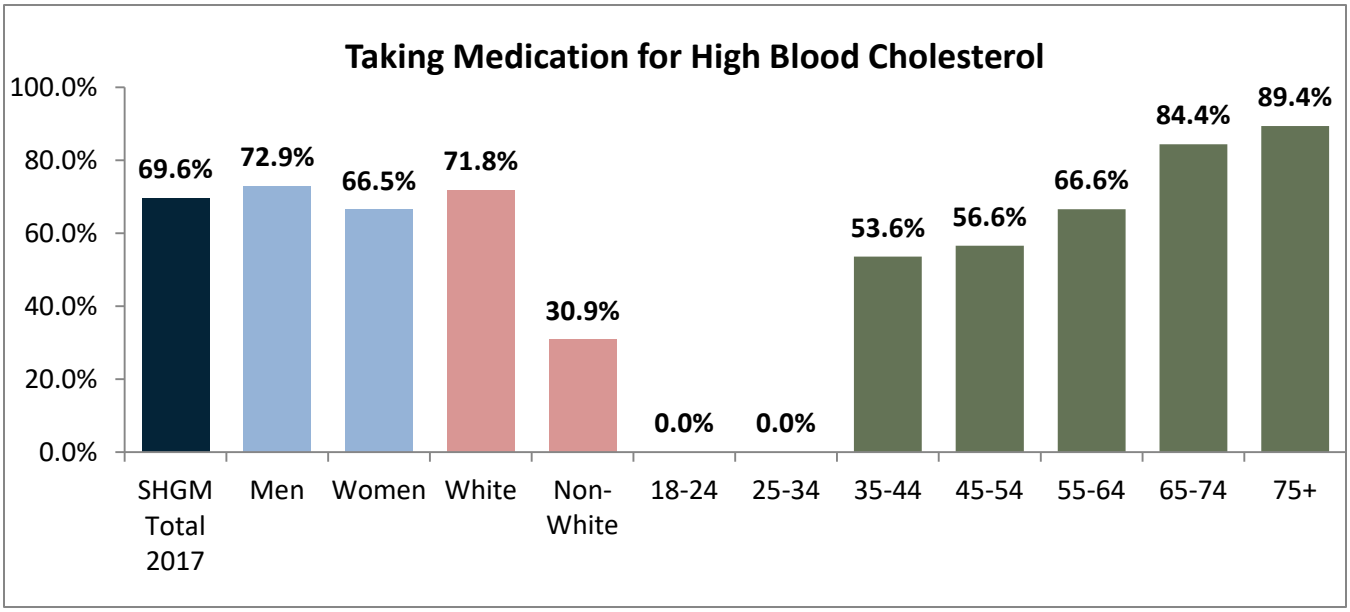
Fewer SHGM area adults have high cholesterol compared to adults across the state or the nation; however, the proportion of adults who have high cholesterol has increased since the last CHNA.

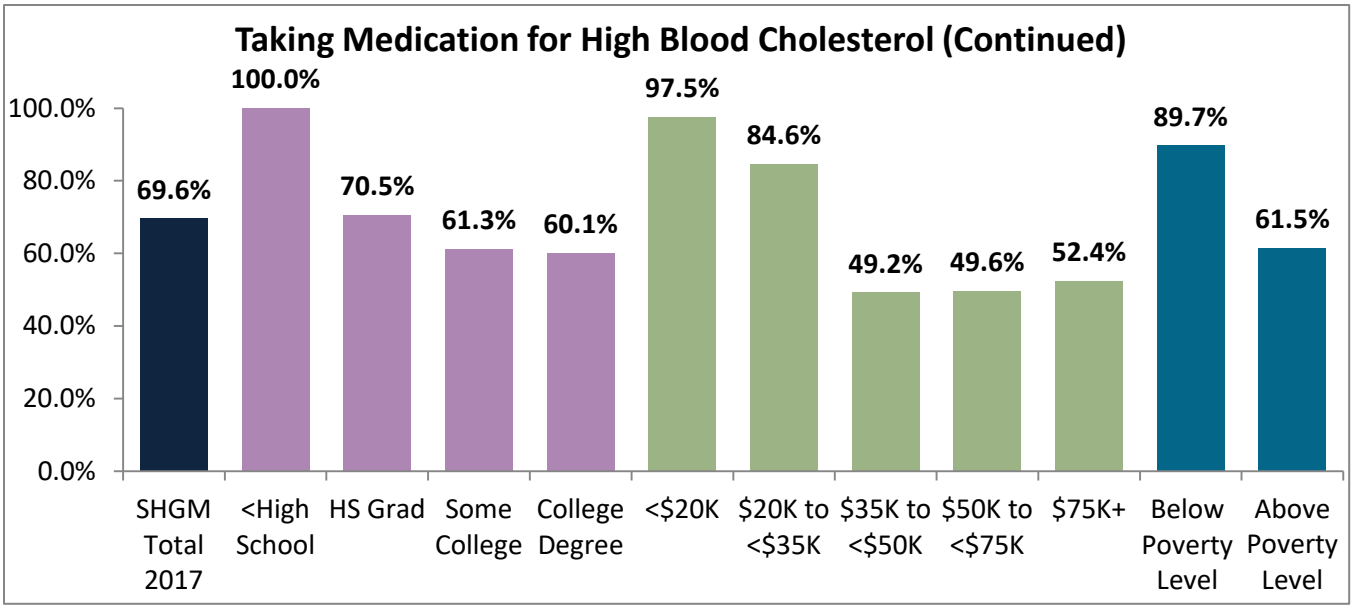


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017.

Cholesterol (Continued)

- Seven in ten (69.6%) area adults who have high cholesterol currently take medication for their condition.
- Non-White adults are far less likely to take cholesterol medication compared to White adults.
- The chances of adults taking medication for high cholesterol increases with age.





Source: SHGM Behavioral Risk Factor Survey, 2017, Q7.3: Are you currently taking medicine for your high cholesterol? (n=186).
Note: adults who reported they have high blood cholesterol.

Mental Health

Key Stakeholders and Key Informants offer countless reasons why mental/behavioral health is their top concern, but four main themes rise to the top. First, there is a lack of resources to deal with the problem. Second, there is a lack of trained personnel to serve people with these issues, especially psychiatrists. Third, there are societal factors, or social determinants of health, such as poverty and low educational standards, that clearly impact resident's mental health. Fourth, there is still a stigma attached to mental illness, which may explain its lower priority status.

Lack of resources	Our **available resources have changed** and it's **more restricted**. **Mental health** is being **managed more in the primary care setting**. – *Key Informant* We **lack significant resources** in this area and **most people do not know where to turn to for support**. – *Key Informant* **Resources are limited**, **must drive to find diverse care**. – *Key Stakeholder*
Lack of therapists/ psychiatrists	**Limited psychiatric services**; service for the mental health is **limited to the severe mentally ill and/or intellectually or developmentally disabled**, and if you're **mild or moderate you'll have to drive out of the county**. – *Key Stakeholder* **Difficult to find specific mental health care and specialists** to **manage medication**, etc. – *Key Stakeholder* **Limited access** to **care** - whether because of **distance to offices** or **lack of mental health providers**. – *Key Informant*
Societal factors	**Poverty**, **lack of employment**. – *Key Informant* Many poor **social determinants of health** in the community (**poverty**, **education**, etc.). – *Key Informant*
Stigma	**Mental illness is treated differently than physical health** concerns. It is **prioritized lower**, and it is **stigmatized**. – *Key Informant* **Still significant stigma around mental health** in our community (**not talked about by members of the community or the professionals working in the field**) – *Key Stakeholder*

Source: Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in your community, especially the underserved? (n=6); Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in your community? (n=72); Key Informant Online Survey, 2017, Q1a: Why do you think it's a problem in your community? Please be as detailed as possible. (n=72)

Mental Health (Continued)

- More than three-fourths (77.3%) of area adults are considered to be mentally healthy, or psychologically well, according to the Kessler 6 Psychological Distress Questionnaire.*
- Conversely, 19.0% experience mild to moderate psychological distress and 3.7% are severely distressed.

	During the Past 30 Days, About How Often Did You….					
Frequency of Feeling	**Feel Nervous (n=564)**	**Feel Hopeless (n=562)**	**Feel Restless or Fidgety (n=564)**	**Feel So Depressed That Nothing Could Cheer You Up (n=564)**	**Feel That Everything Is an Effort (n=562)**	**Feel Worthless (n=561)**
None of the time	**58.2%**	**80.0%**	**53.7%**	**82.6%**	**65.2%**	**86.7%**
A Little	**20.3%**	**8.5%**	**18.8%**	**6.5%**	**13.7%**	**4.4%**
Some of the time	**13.5%**	**8.9%**	**17.9%**	**9.1%**	**11.8%**	**6.4%**
Most of the time	**4.7%**	**2.0%**	**4.0%**	**1.1%**	**5.1%**	**1.3%**
All of the time	**3.2%**	**0.6%**	**5.7%**	**0.8%**	**4.3%**	**1.2%**

Mentally Healthy/Psychologically Well = 77.3%

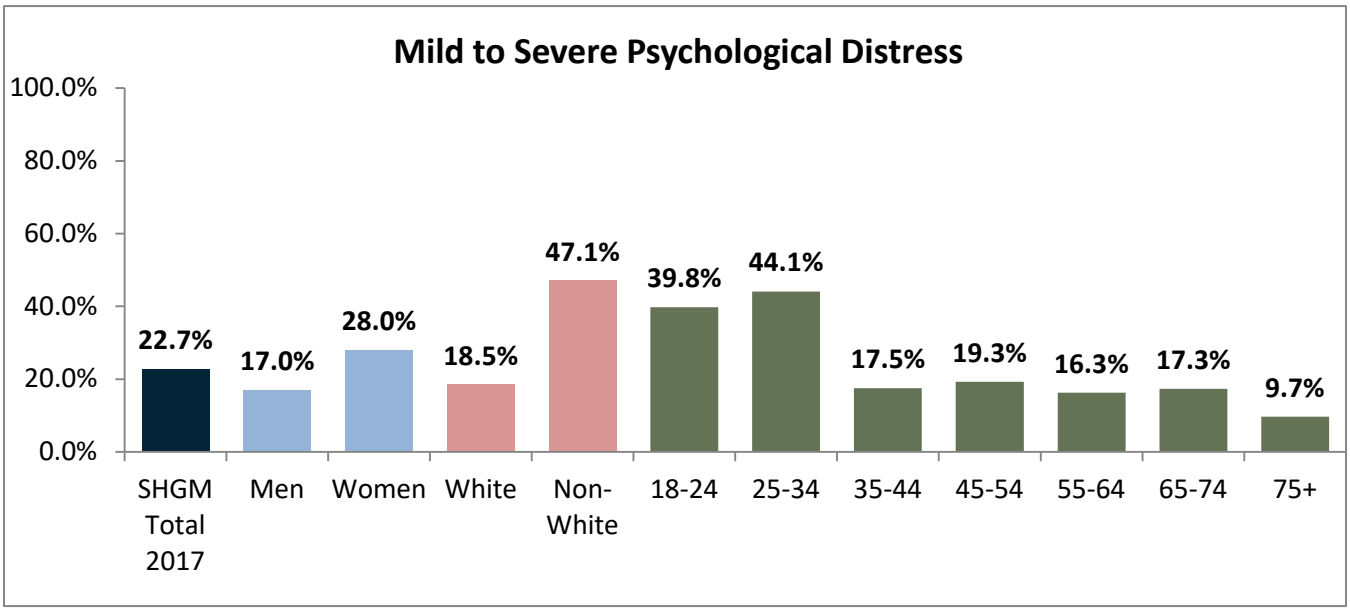
Mild to Moderate Psychological Distress = 19.0%

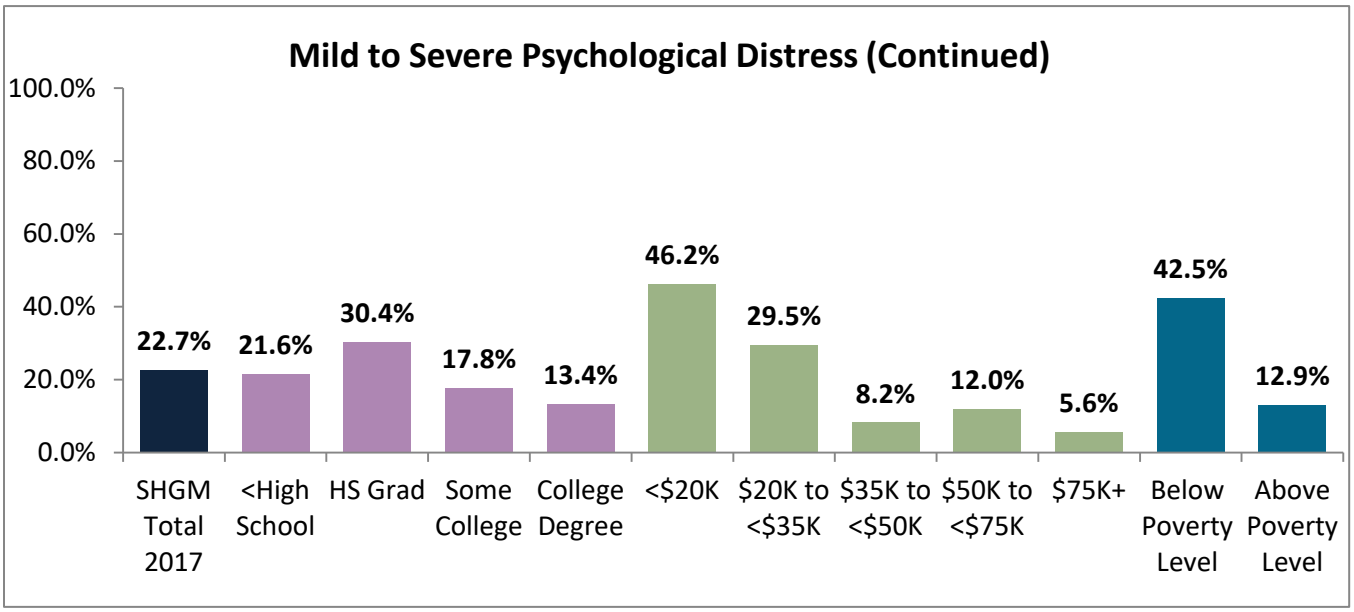
Severe Psychological Distress = 3.7%

Source: SHGM Behavioral Risk Factor Survey, 2017, Q18.1-Q18.6: During the past 30 days, about how often did you feel….? (n=555).
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 SHGM area adults, the groups most likely to have mild to severe psychological distress include those who: are younger (< age 35), are non-White, are women, have less than a college education, and have household incomes less than $35K. To this last point, one glaring difference is between those who live below the poverty line (42.5%) and those who live above it (12.9%).

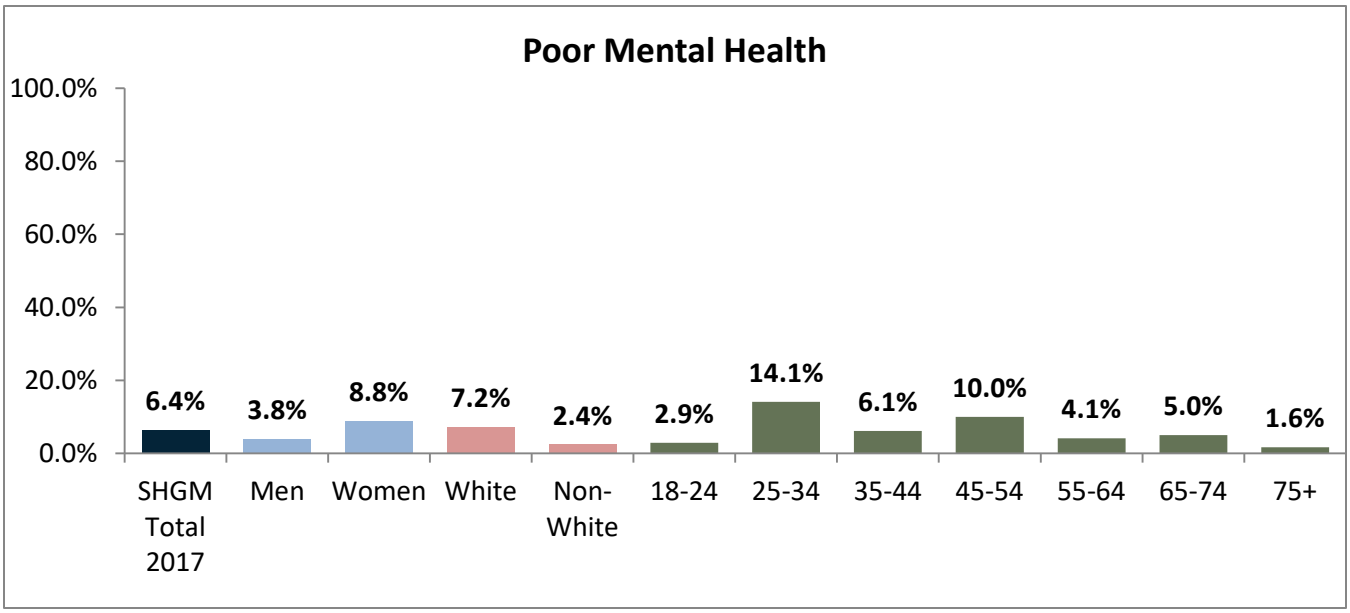


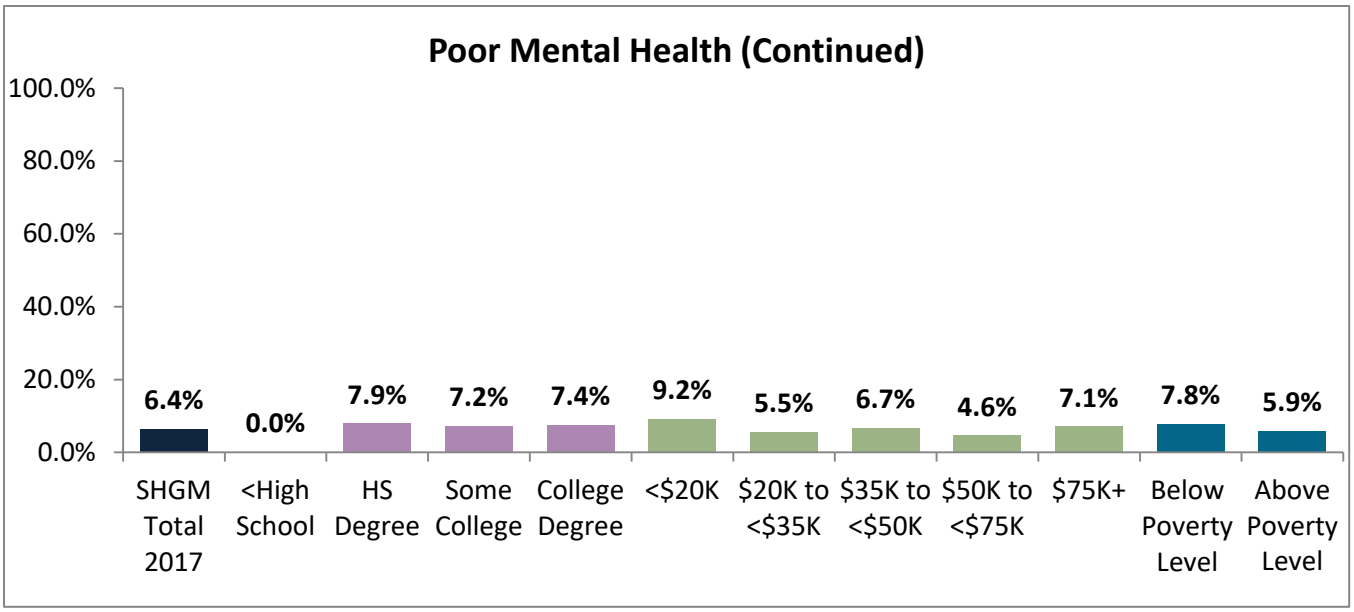


Source: SHGM Behavioral Risk Factor Survey, 2017, Q18.1-Q18.6: During the past 30 days, about how often did you feel….?
Note: those adults who scored 12 or higher on the Kessler 6 instrument.

Mental Health (Continued)

- Among SHGM area adults, 6.4% have poor mental health, which means they experienced fourteen or more days in which their mental health was not good, which includes stress, depression, and problems with emotions, during the past 30 days.
- The prevalence of poor mental health is highest among adults aged 25-34, and higher among women and White adults compared to men and non-White adults, respectively.

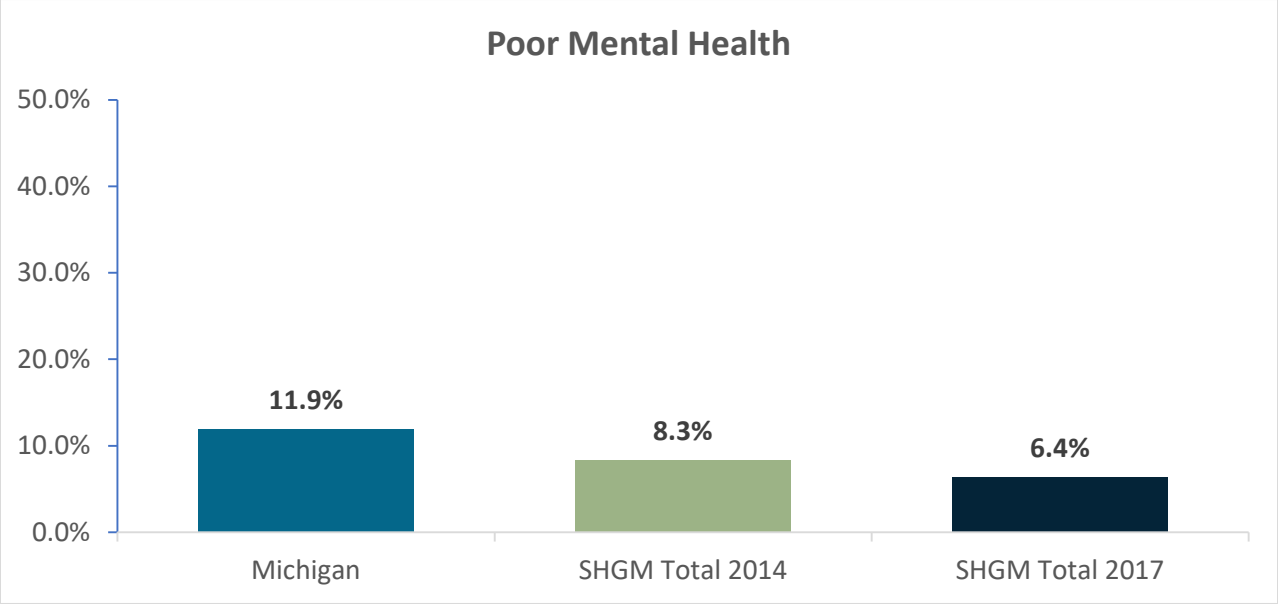




Source: SHGM Behavioral Risk Factor Survey, 2017, Q2.2: Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good? (n=566).
Note: The proportion of adults who reported 14 or more days, out of the previous 30, on which their mental health was not good, which includes stress, depression, and problems with emotions.

Mental Health (Continued)

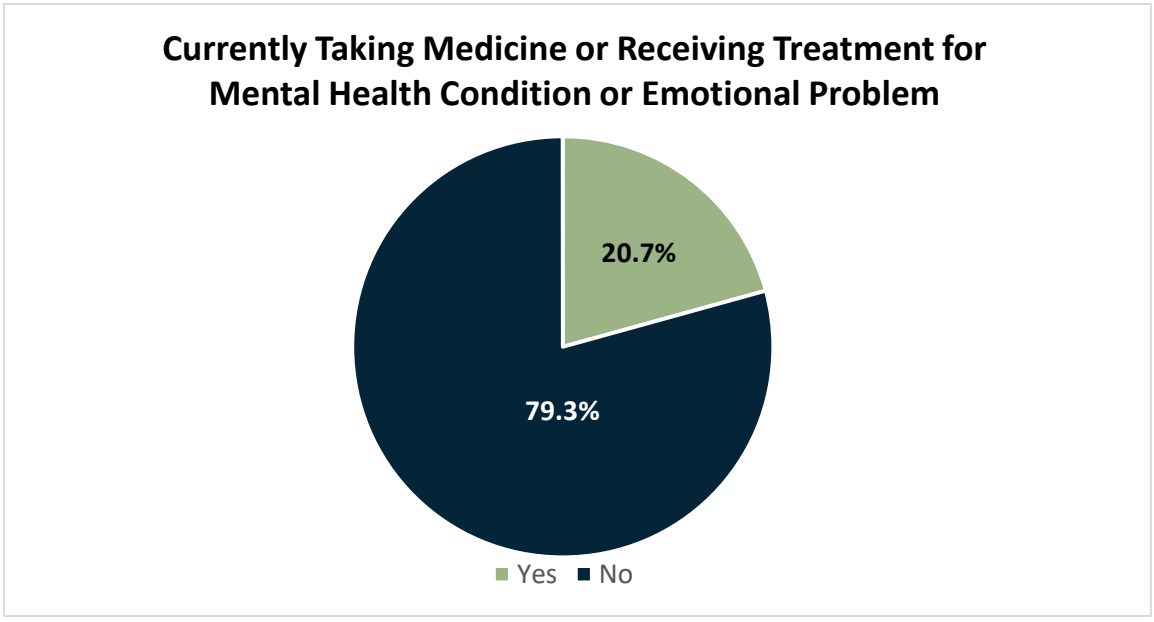
- The prevalence of poor mental health among SHGM area adults is lower this iteration of the CHNA and lower than the state's prevalence rate.

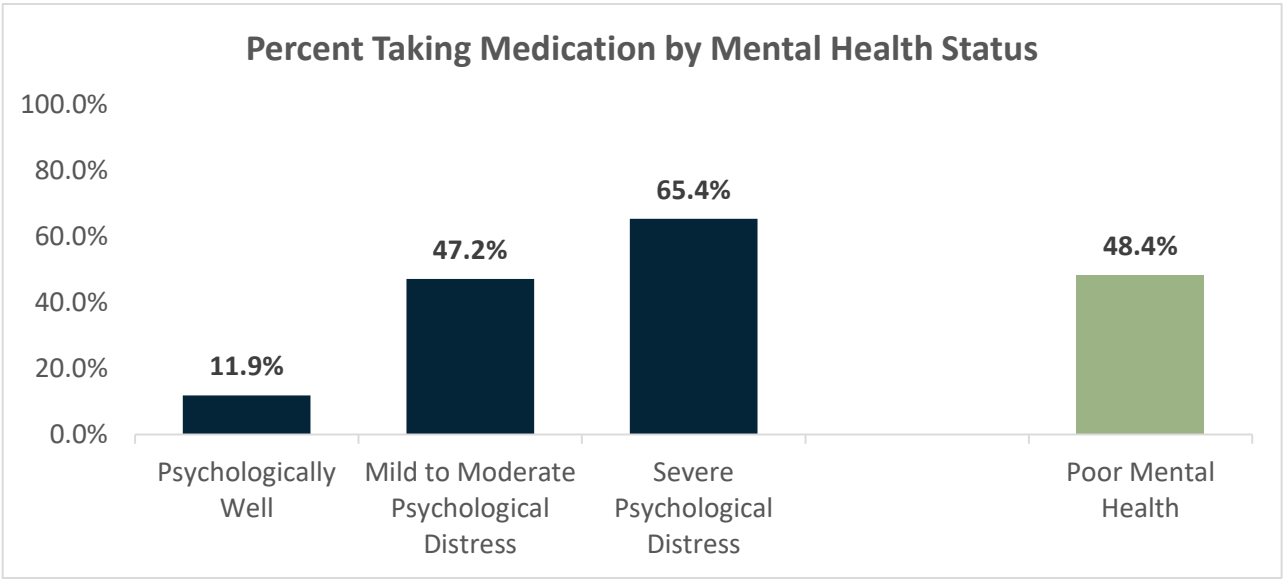


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017.

Mental Health (Continued)

- Of all SHGM area adults, 20.7% currently take medication or receive treatment for a mental health condition or emotional problem.
- However, many of those who could benefit the most from medication/treatment are not getting it: less than half of those classified as having "mild to moderate psychological distress" (47.2%) or reporting poor mental health (48.4%), as well as 65.4% of those classified as having "severe psychological distress" currently take medication and/or receive treatment for their mental health issues.



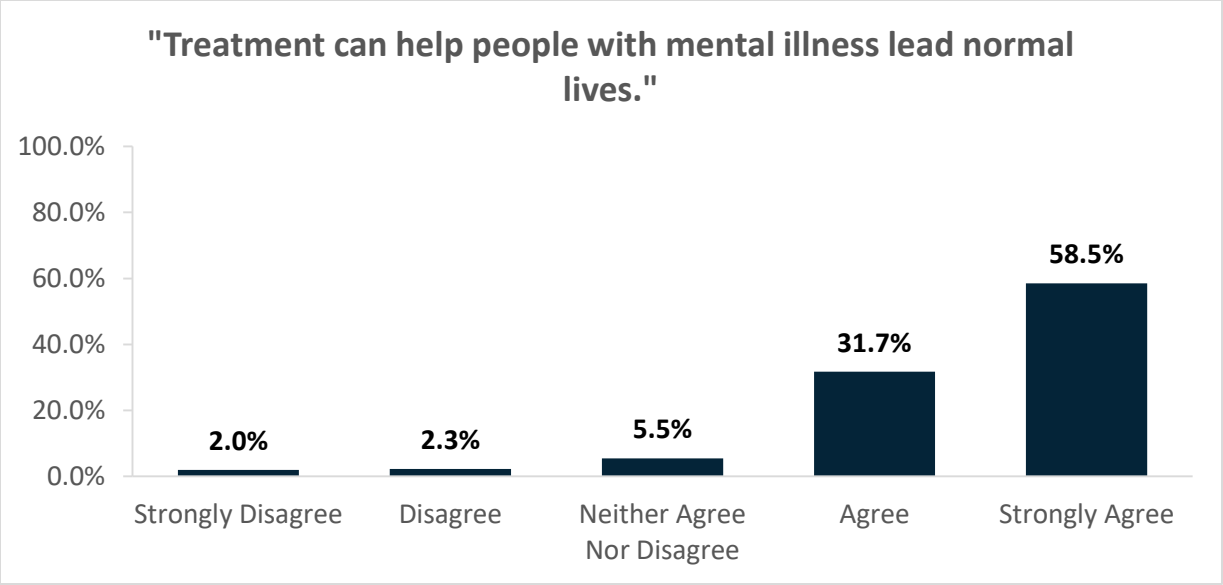


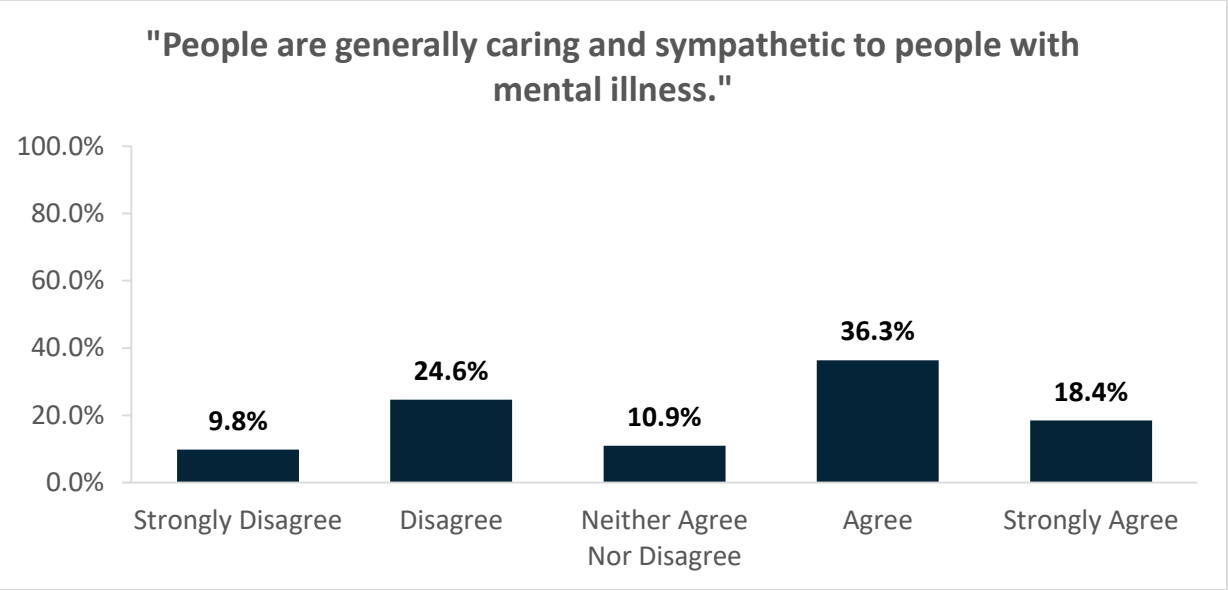
Source: SHGM Behavioral Risk Factor Survey, 2017, Q18.7: Are you now taking medicine or receiving treatment from a doctor or other health professional for any type of mental health condition or emotional problem? (n=565).

Mental Health (Continued)

- Even though nine in ten (90.2%) area adults believe treatment can help people with mental illness lead normal lives, just half (54.7%) think people are generally caring and sympathetic to people with mental illness, and this drops to 39.8% among those with severe psychological distress.

- This continued stigma could be the reason more people don't seek treatment even though they could benefit from it.

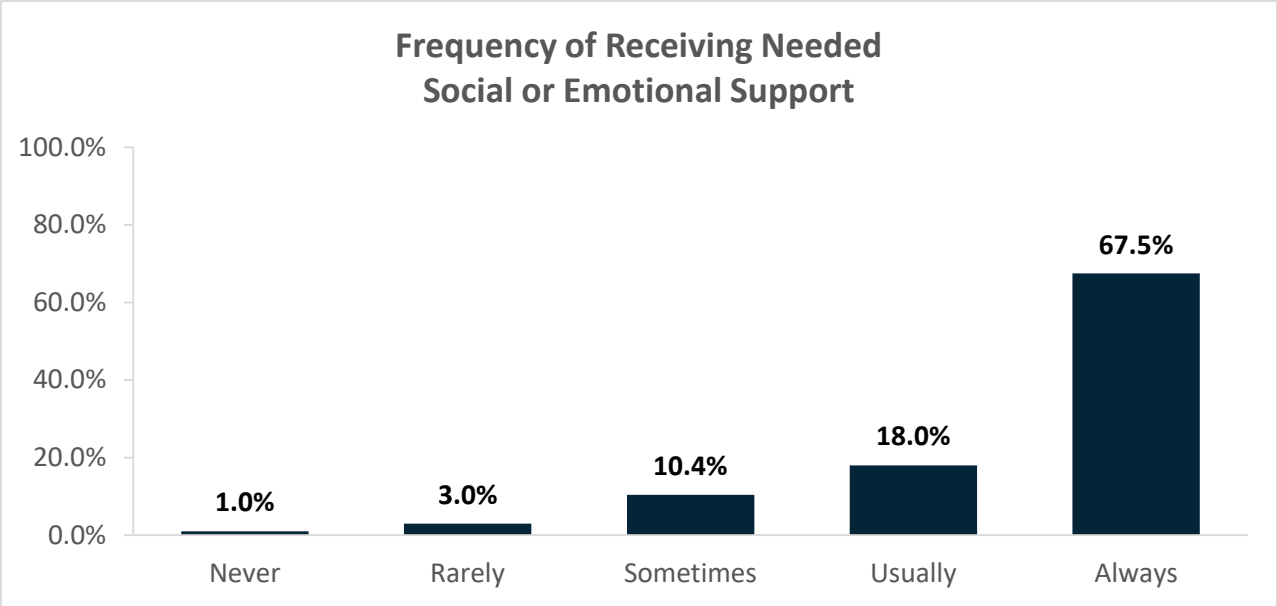




Source: SHGM Behavioral Risk Factor Survey, 2017, Q18.8: What is your level of agreement with the following statement? "Treatment can help people with mental illness lead normal lives." Do you – agree slightly or strongly, or disagree slightly or strongly? (n=550); Q18:9: What is your level of agreement 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=548)

Mental Health (Continued)

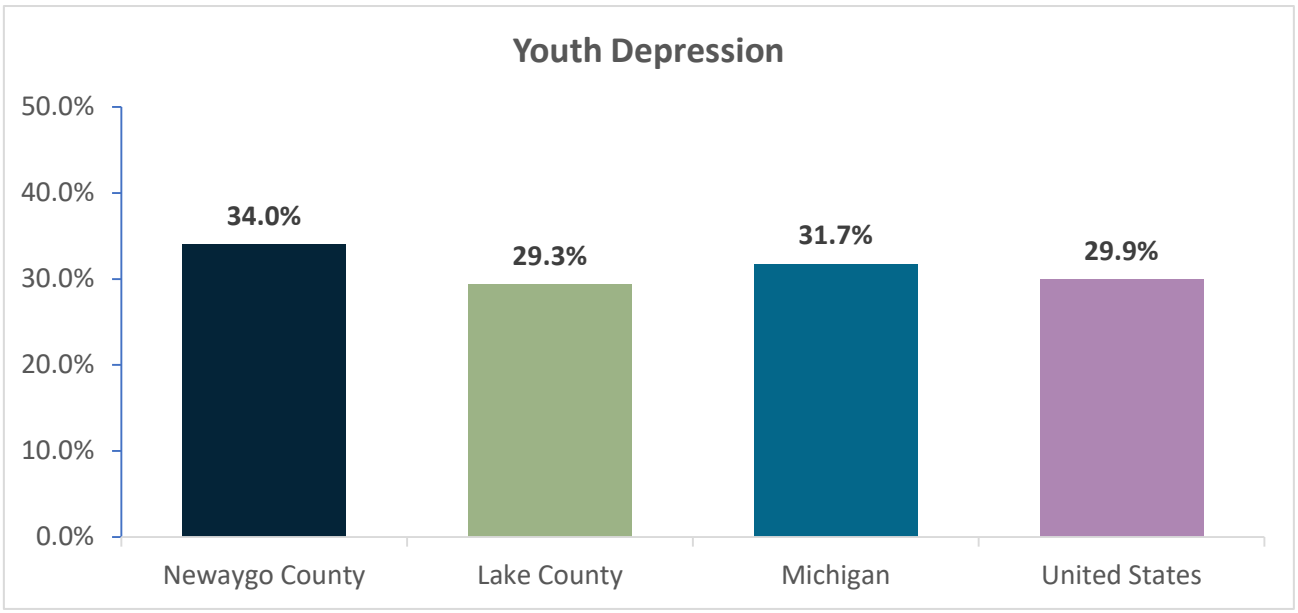
- The vast majority (85.5%) of area adults “usually” or “always” receive the social or emotional support that they need.



Source: SHGM Behavioral Risk Factor Survey, 2017, Q18.10: How often do you get the social and emotional support you need? (n=558).

Mental Health (Continued)

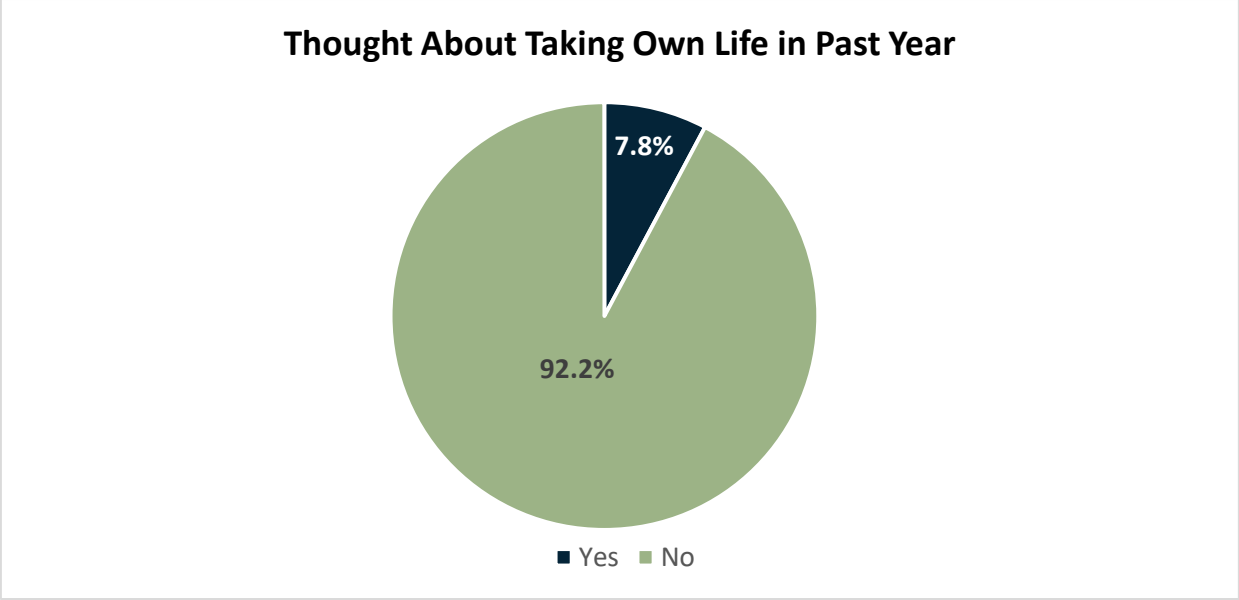
- One-third (34.0%) of Newaygo County youth report depression during the past year, a rate higher than state or national rates.
- Additionally, three in ten (29.3%) Lake County youth have reported depression in the past year.



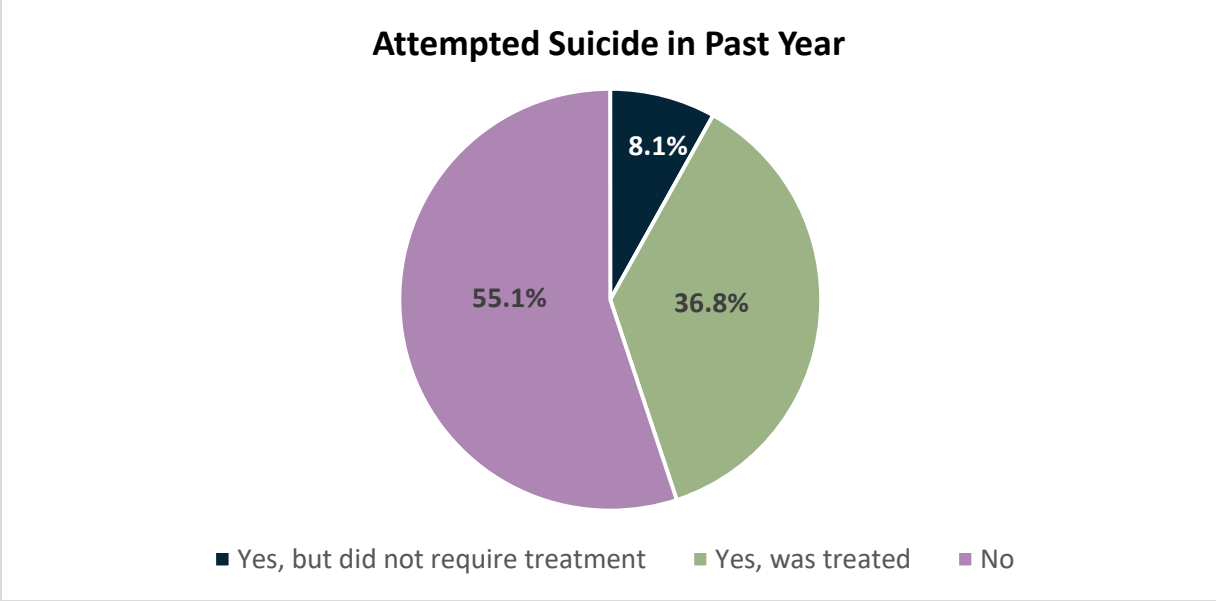
Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Suicide

Nearly one in thirteen (7.8%) SHGM area adults have thought about committing suicide in the past year, and of those 44.9% actually attempted suicide in the past year.



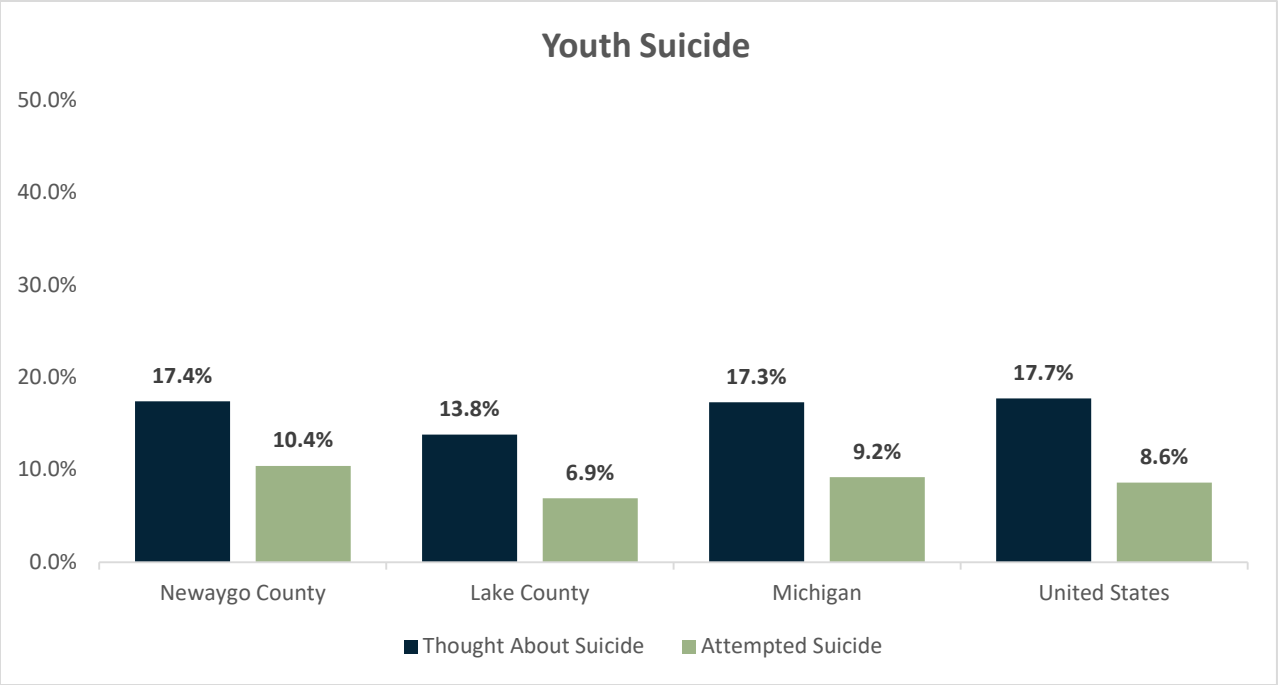
Source: SHGM Behavioral Risk Factor Survey, 2017, Q20.1: Has there been a time in the past 12 months when you thought of taking your own life? (n=552).



Source: SHGM 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=22).
Note: among those who said they thought about taking their own life in the past year.

Suicide (Continued)

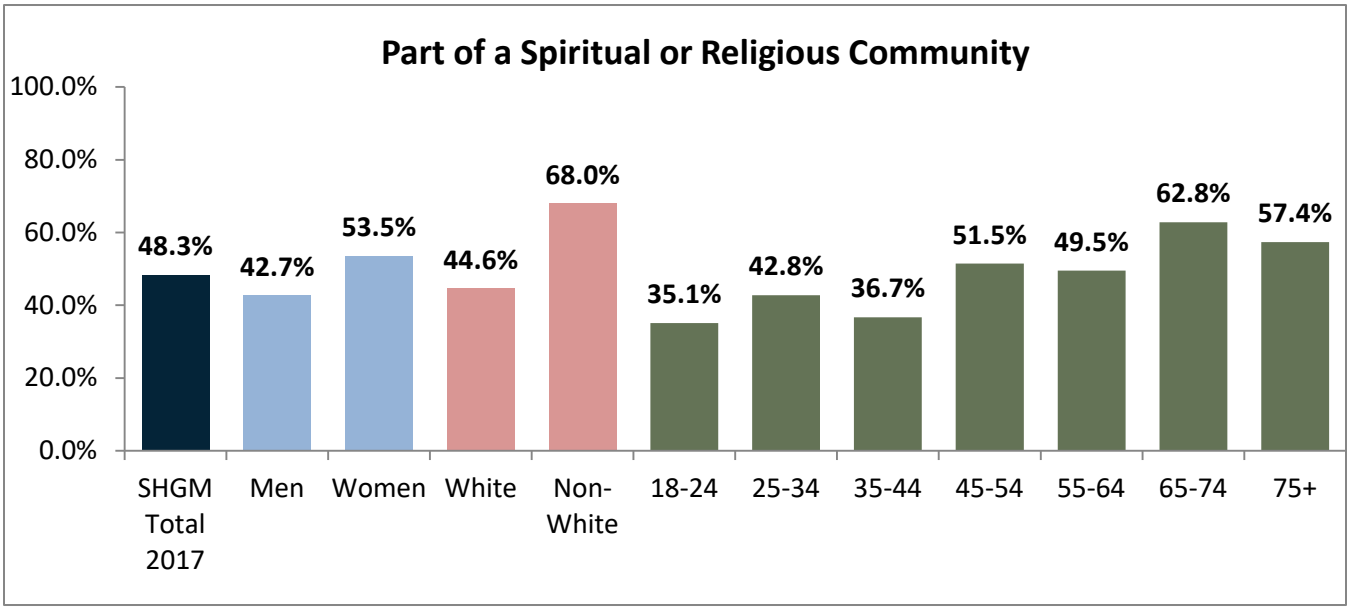
- Almost one in six (17.4%) Newaygo County youth have thought about committing suicide in the past year, a rate similar to the state or national rates.
- One in ten (10.4%) Newaygo County youth have actually attempted suicide, a rate higher than the state or national rates.
- Lake County has lower youth rates of thinking about, or attempting, suicide compared to Newaygo County, Michigan, or the U.S.

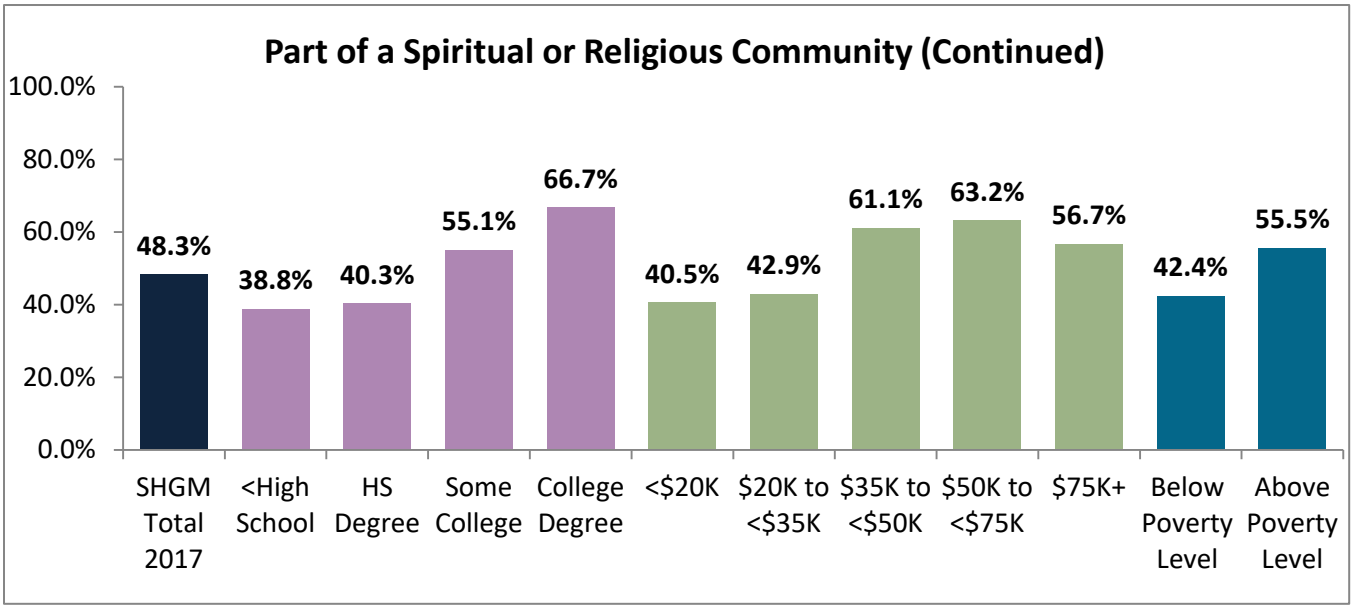


Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Spirituality

- Nearly half (48.3%) of area adults are part of a spiritual or religious community.
- Those most likely to be part of a spiritual or religious community are: non-White, older (age 45+), college educated, and have higher incomes ($35K+).





Source: SHGM Behavioral Risk Factor Survey, 2017, Q18.11: Are you part of a spiritual or religious community? (n=561).

Spirituality (Continued)

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

	Part of Spiritual or Religious Community	
	Yes	No
General health is fair/poor	18.6%	23.2%
Poor physical health	10.6%	18.8%
Poor mental health	4.2%	8.4%
Chronic pain	27.4%	39.7%
Current smoker	13.6%	38.1%
No physical activity	25.3%	35.4%
Heavy drinker	2.4%	8.9%
Binge drinker	6.9%	15.0%

CHRONIC CONDITIONS

Prevalence of Chronic Health Conditions

- The prevalence of nine of the ten chronic conditions measured in 2017 is higher among SHGM area adults compared to the prevalence among adults across the state or nation.
- Further, the prevalence of all of the conditions measured, with the exception of angina/CHD, is higher this CHNA iteration compared to 2014.

Prevalence of Chronic Conditions				
	SHGM Area 2014	**SHGM Area 2017**	**Michigan**	**U.S.**
Arthritis	**28.9%**	● **33.2%**	**30.0%**	**25.8%**
Pre-diabetes	**--**	**28.5%**	--	--
Lifetime asthma	**13.1%**	● **18.2%**	**15.7%**	**14.0%**
Diabetes	**12.2%**	● **13.9%**	**10.7%**	**10.8%**
Current asthma	**9.4%**	● **13.9%**	**10.2%**	**9.3%**
COPD	**7.6%**	● **9.7%**	**7.7%**	**6.3%**
Other (non-skin) cancer	**7.8%**	● **8.9%**	**7.0%**	**6.7%**
Skin cancer	**4.7%**	● **6.3%**	**6.1%**	**5.9%**
Stroke	**4.4%**	● **6.0%**	**3.3%**	**3.1%**
Heart attack	**4.4%**	● **5.1%**	**4.7%**	**4.4%**
Angina/coronary heart disease	**4.0%**	● **3.0%**	**4.6%**	**4.1%**

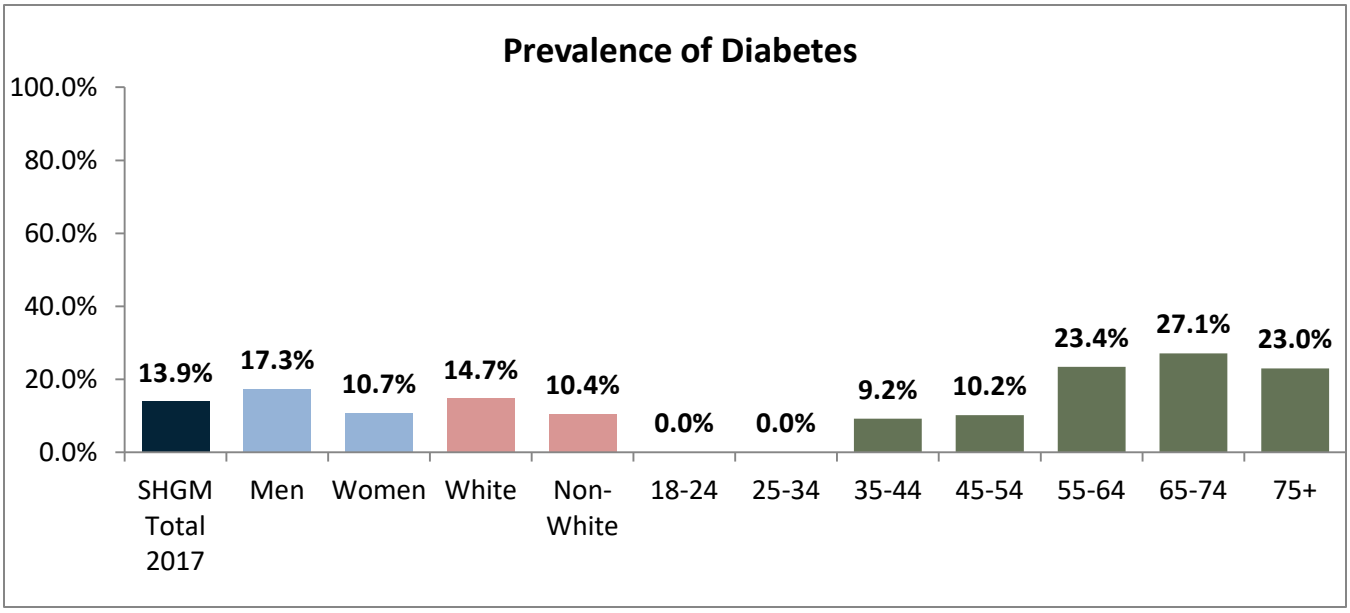
● = SHGM area is best compared to MI and U.S.

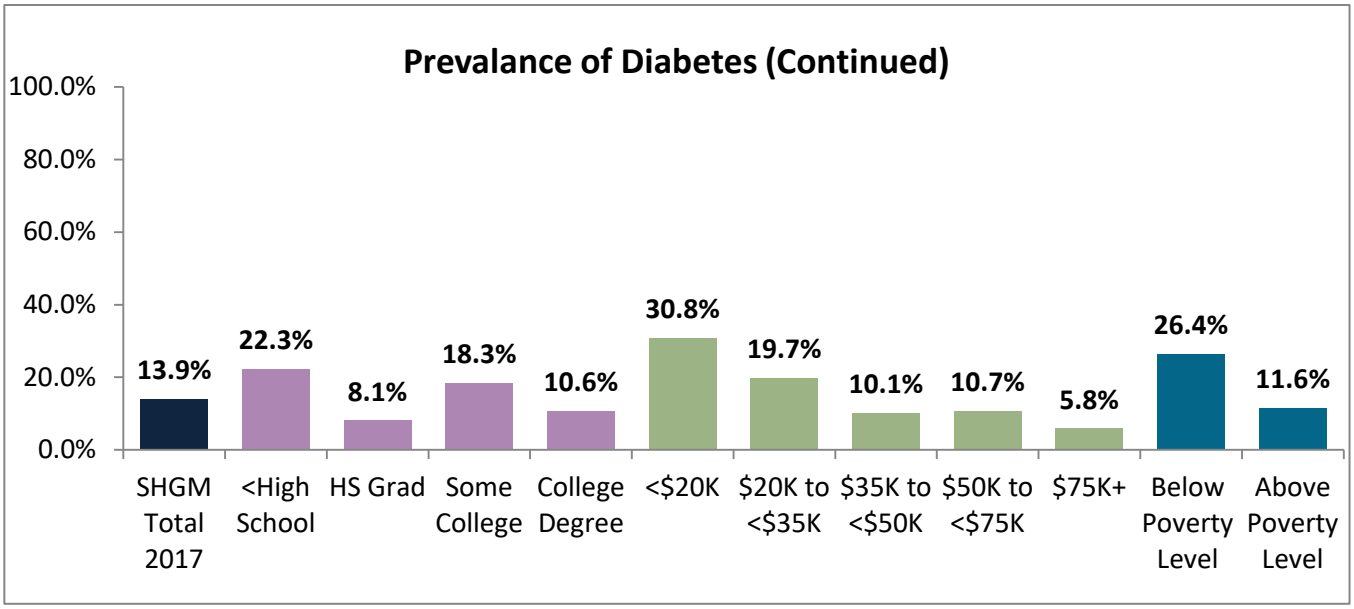
● = SHGM area is worst compared to MI and U.S.

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

Diabetes

- Roughly one in seven (13.9%) area adults have been told by a health care professional that they have diabetes.
- The prevalence of diabetes is greater for older adults (55+), men, those with less than a high school diploma, those with incomes less than $35K, and those living in poverty.

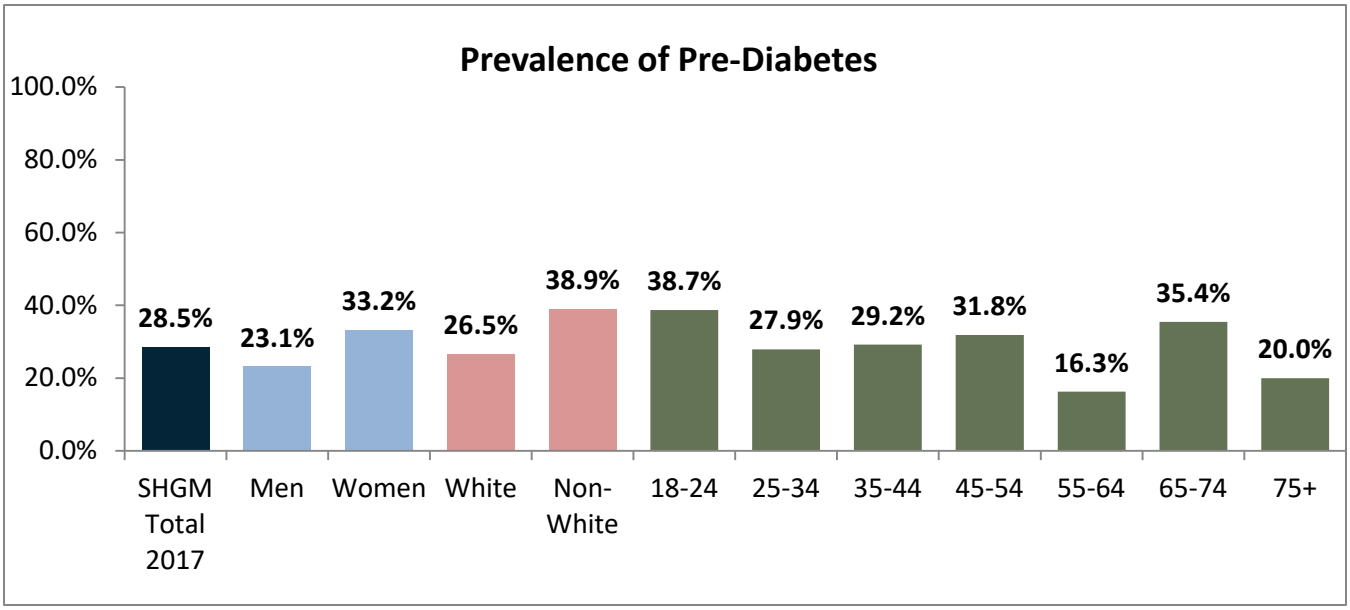


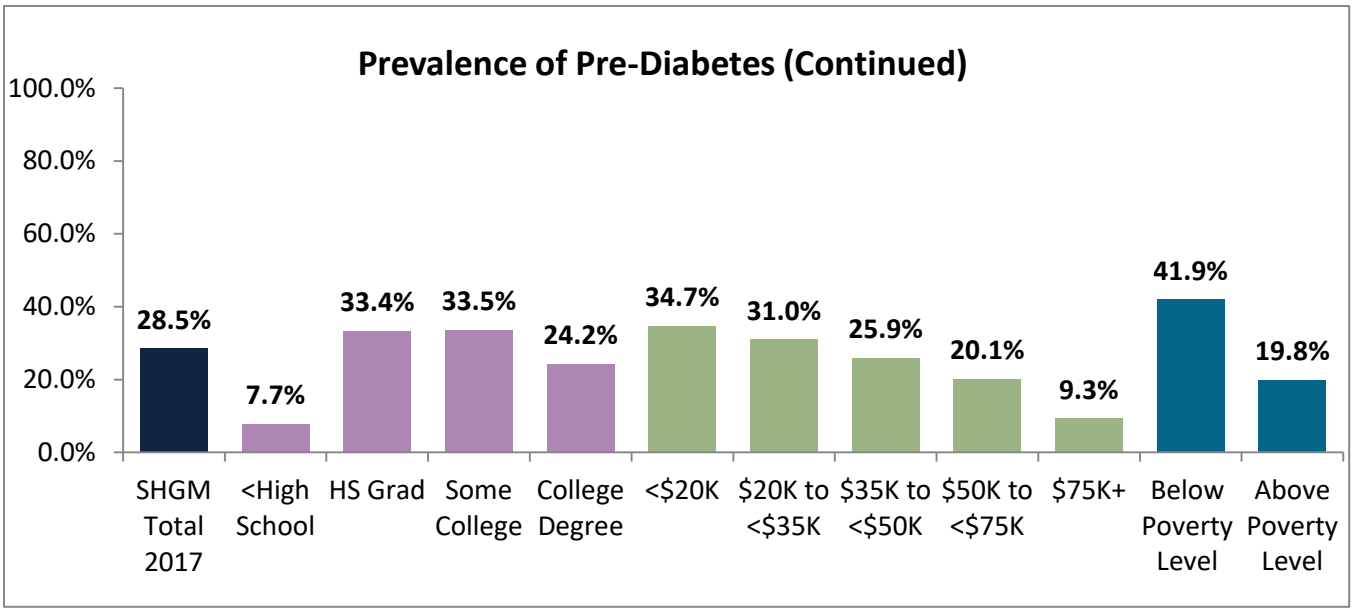


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.3: Has a doctor, nurse, or other health professional EVER told you that you had diabetes? (n=567).
Note: excludes women who had diabetes only during pregnancy.

Pre-Diabetes

- Additionally, more than one-fourth (28.5%) of SHGM area adults has been told by a health care professional that they have pre-, or borderline, diabetes.
- The prevalence of pre-diabetes is greater for females, non-White adults, those with incomes under $35K, and those living in poverty.

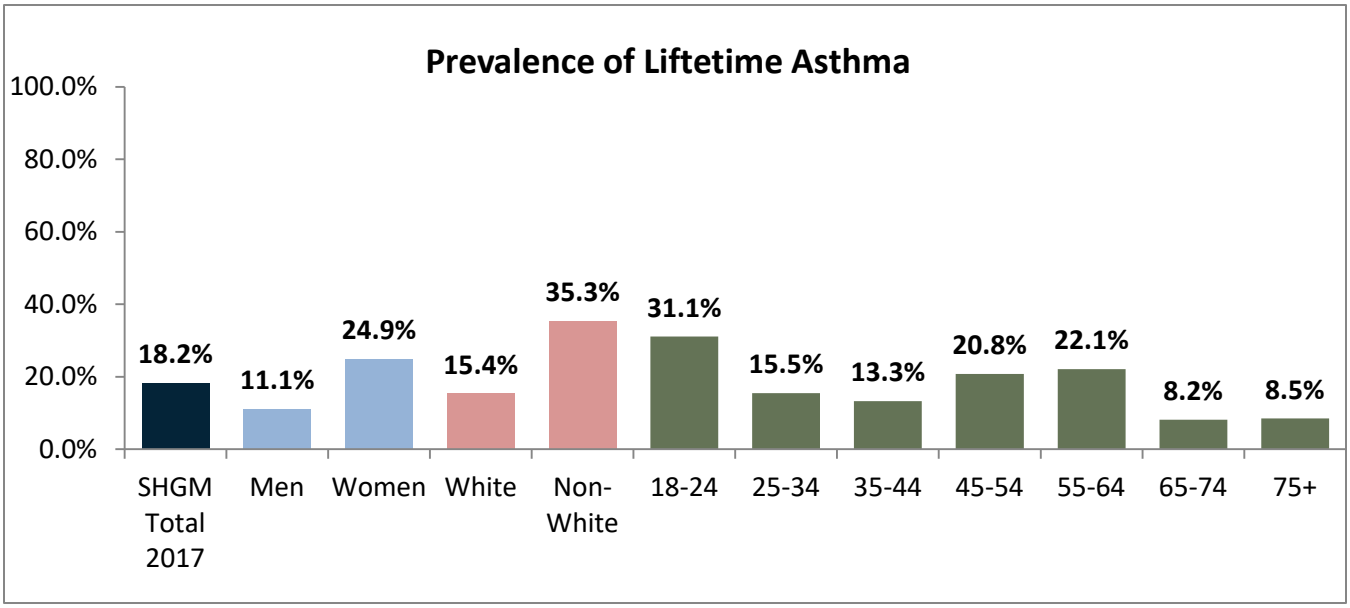


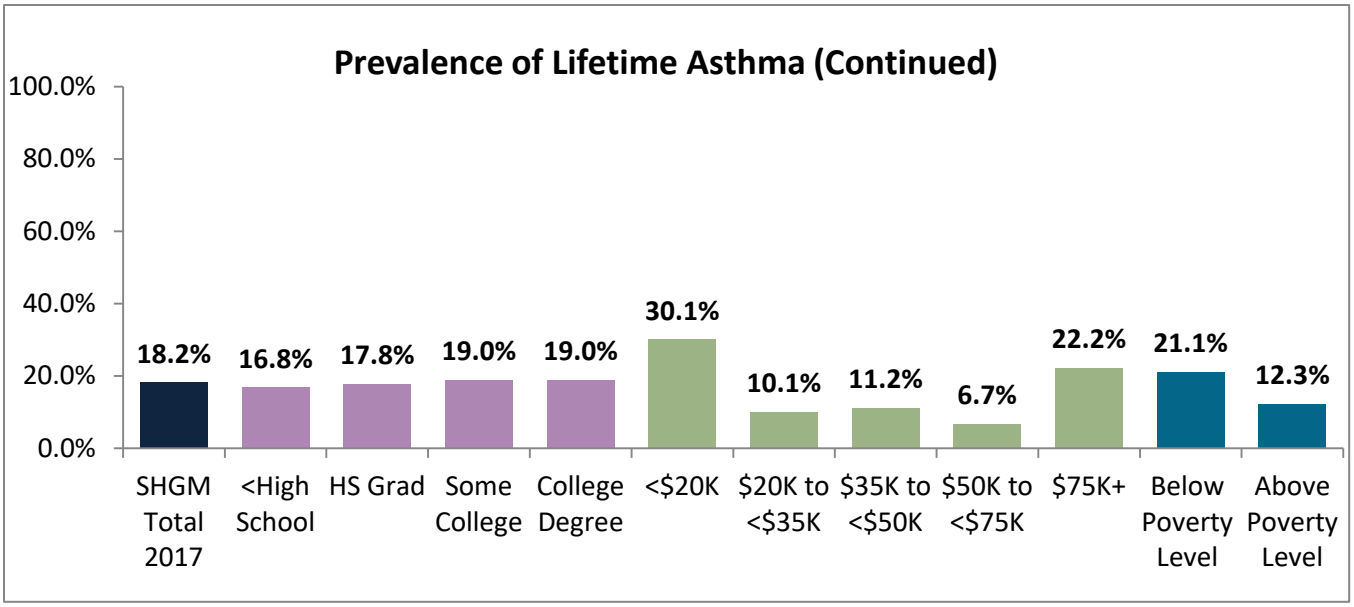


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.3: Has a doctor, nurse, or other health professional EVER told you that you had pre-diabetes or borderline diabetes? (n=472).
Note: excludes those who currently have diabetes.

Asthma

- Roughly one in five (18.2%) area adults have been told by a health care professional at some point in their life that they had asthma.
- The prevalence of lifetime asthma is greater for women, non-White adults, those with incomes less than $20K, and those living in poverty.

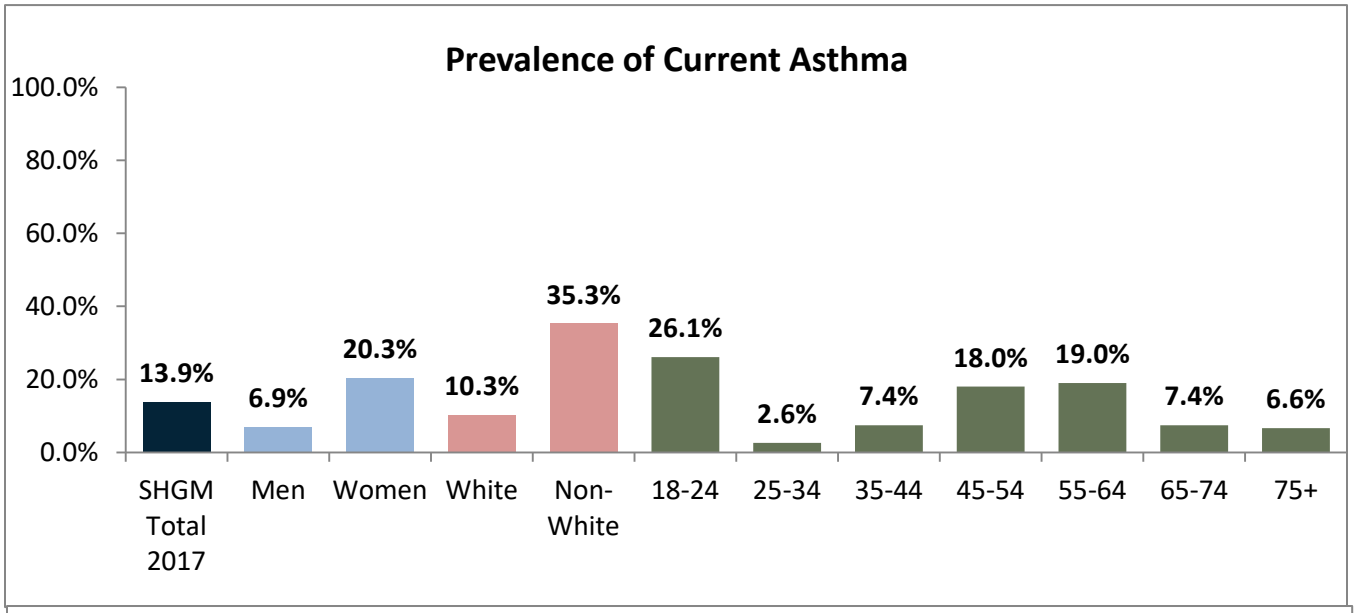


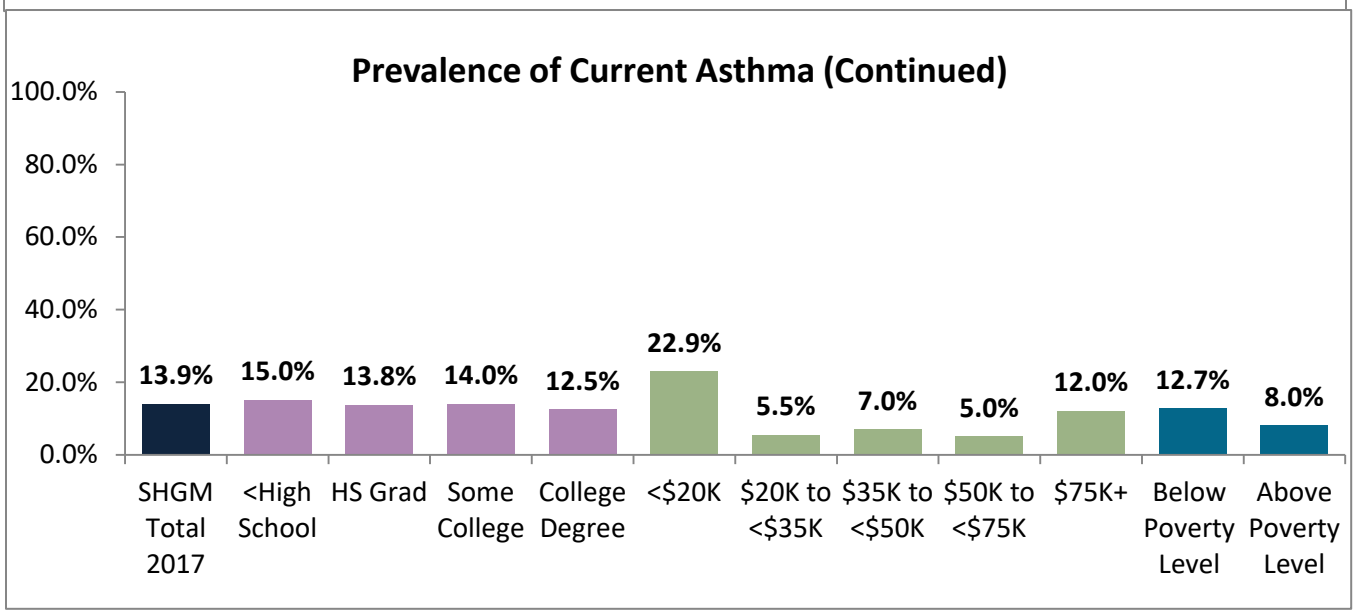


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.1: Has a doctor, nurse, or other health professional EVER told you that you had asthma? (n=565).

Asthma (Continued)

- Roughly one in seven (13.9%) area adults currently have asthma.
- Like lifetime asthma, the prevalence of those who currently have asthma is greater for women, non-White adults, those with incomes less than $20K, and among the youngest adults (age 18-24).

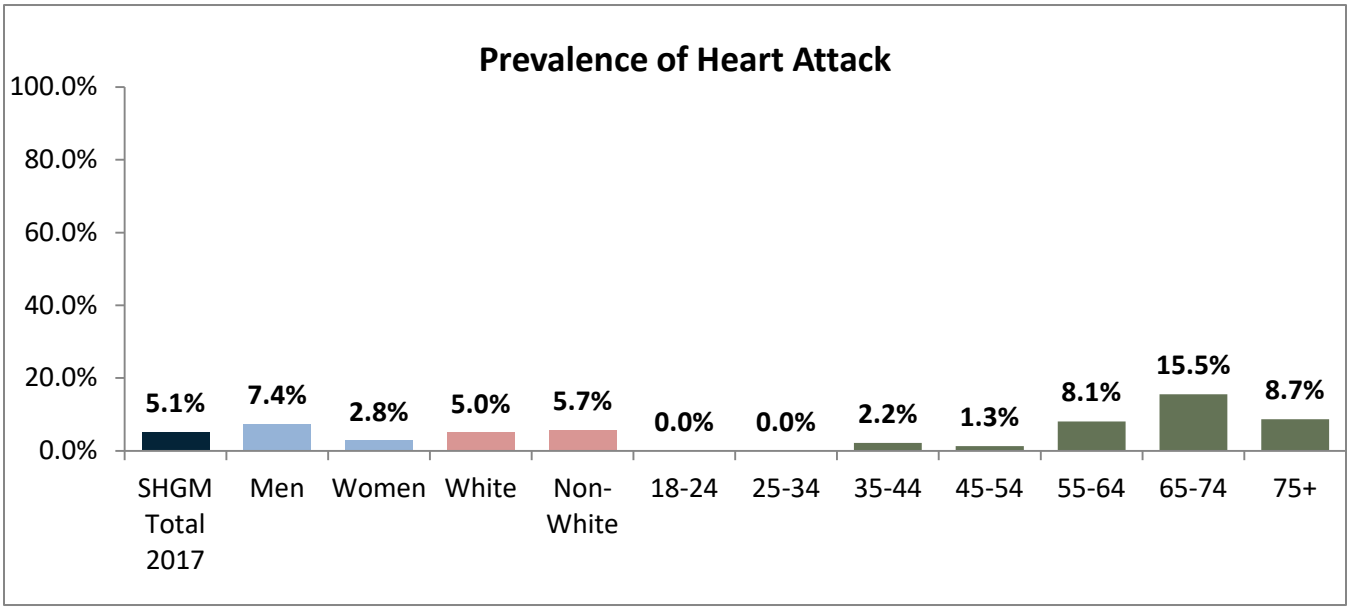


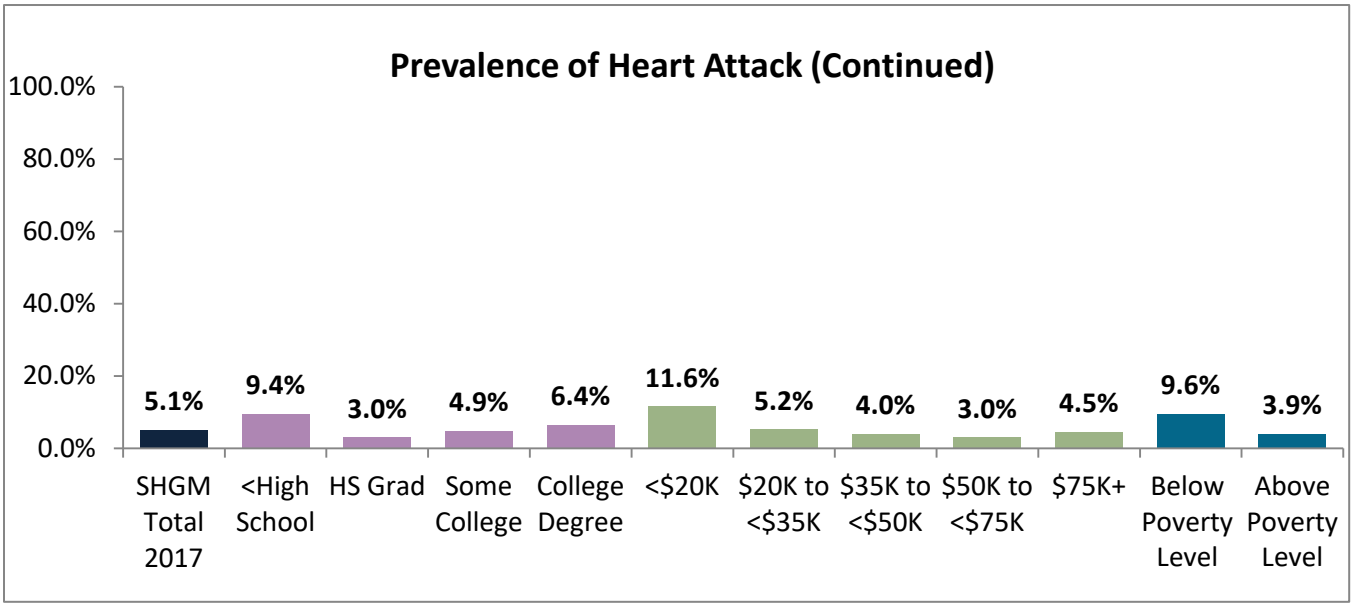


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.2: Do you still have asthma? (n=88).
Note: based on all adults, (n=564).

Cardiovascular Disease and Stroke

- The prevalence of having a heart attack is low (5.1%) but most likely to occur among the oldest adults (55+).
- Prevalence is higher in: men compared to women, those with less than a high school diploma compared to those with more education, and those in the lowest income group compared to those with higher incomes.

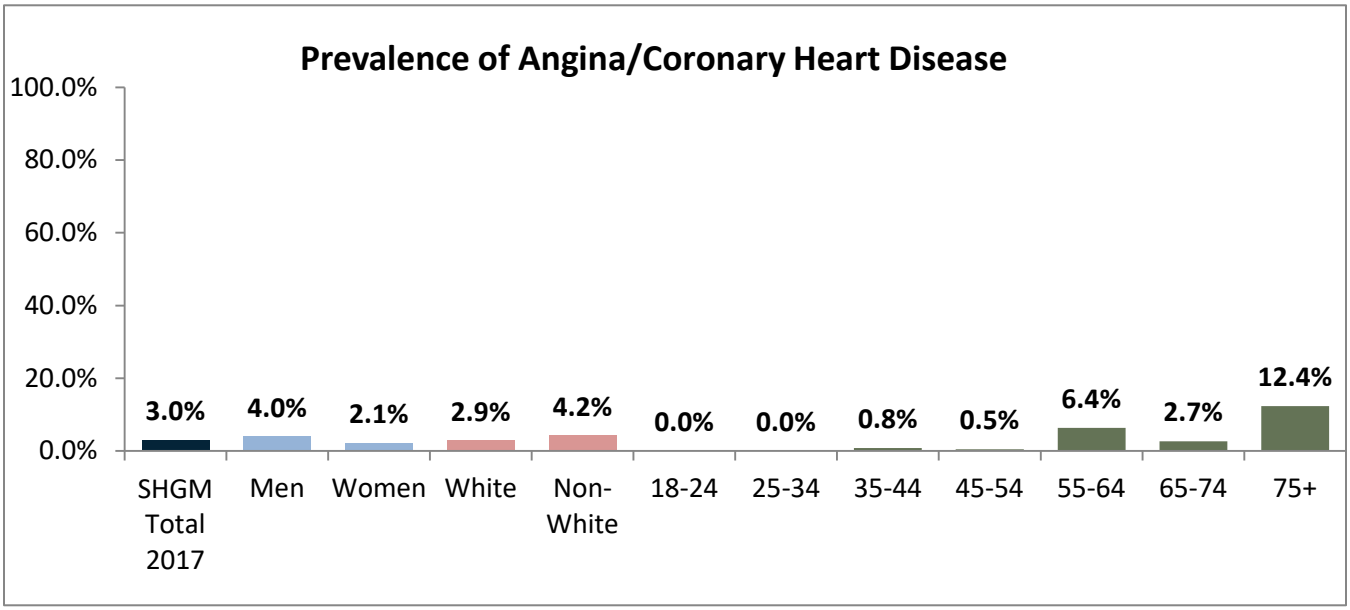


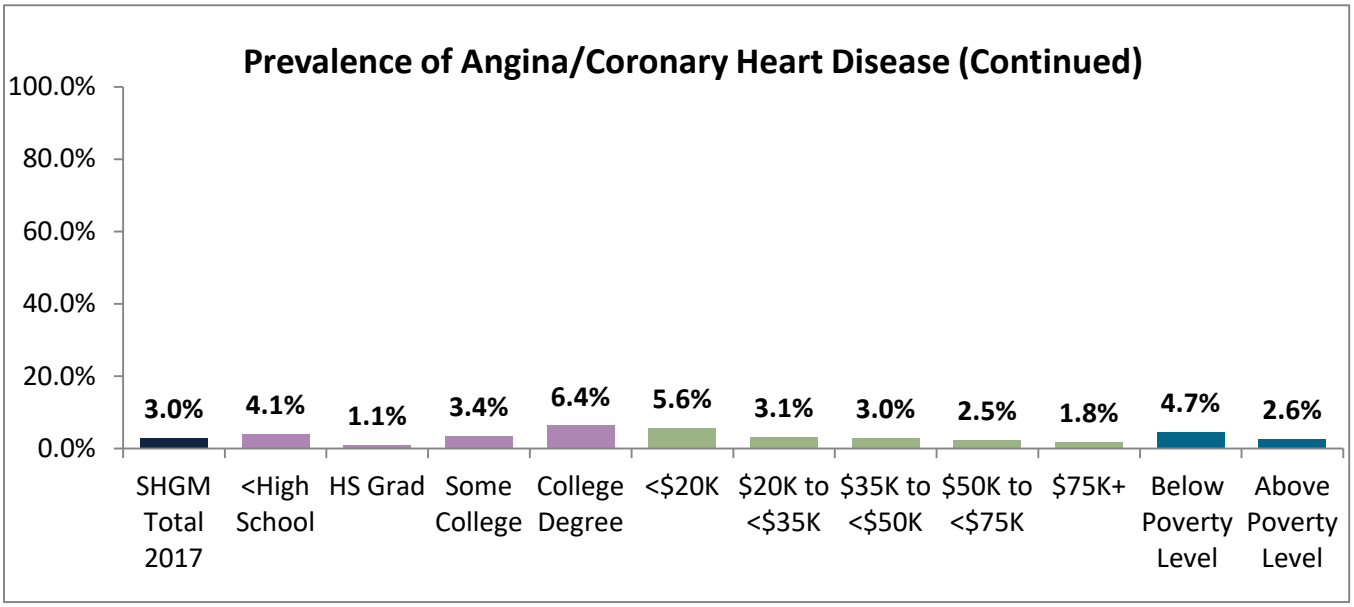


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.5: Has a doctor, nurse, or other health professional EVER told you that you had a heart attack also called a myocardial infarction? (n=567).

Cardiovascular Disease and Stroke (Continued)

The prevalence of angina is low but is highest among those aged 75 or older.

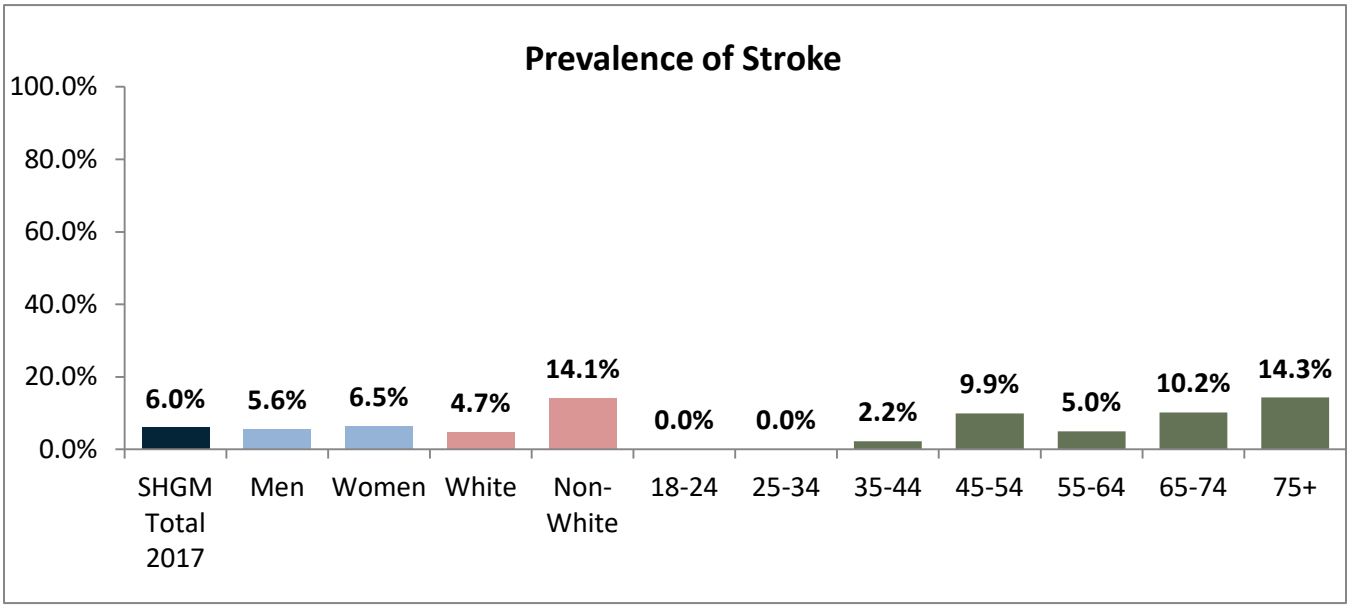


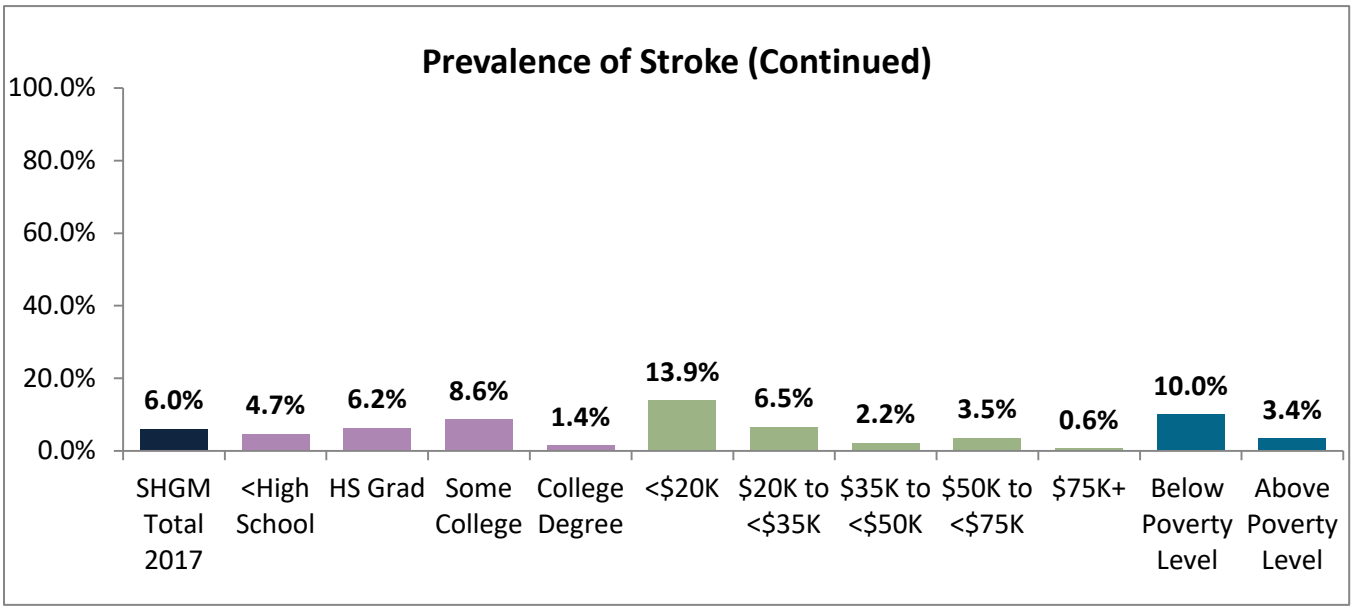


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.6: Has a doctor, nurse, or other health professional EVER told you that you had angina or coronary heart disease? (n=566).

Cardiovascular Disease and Stroke (Continued)

- In 2017, 6.0% of SHGM area adults reported they had been told by a health professional that they had a stroke at some point in their life.
- The prevalence of stroke is higher in non-White adults compared to White adults, higher for those aged 65+ compared to those younger, and highest in the lowest income groups.

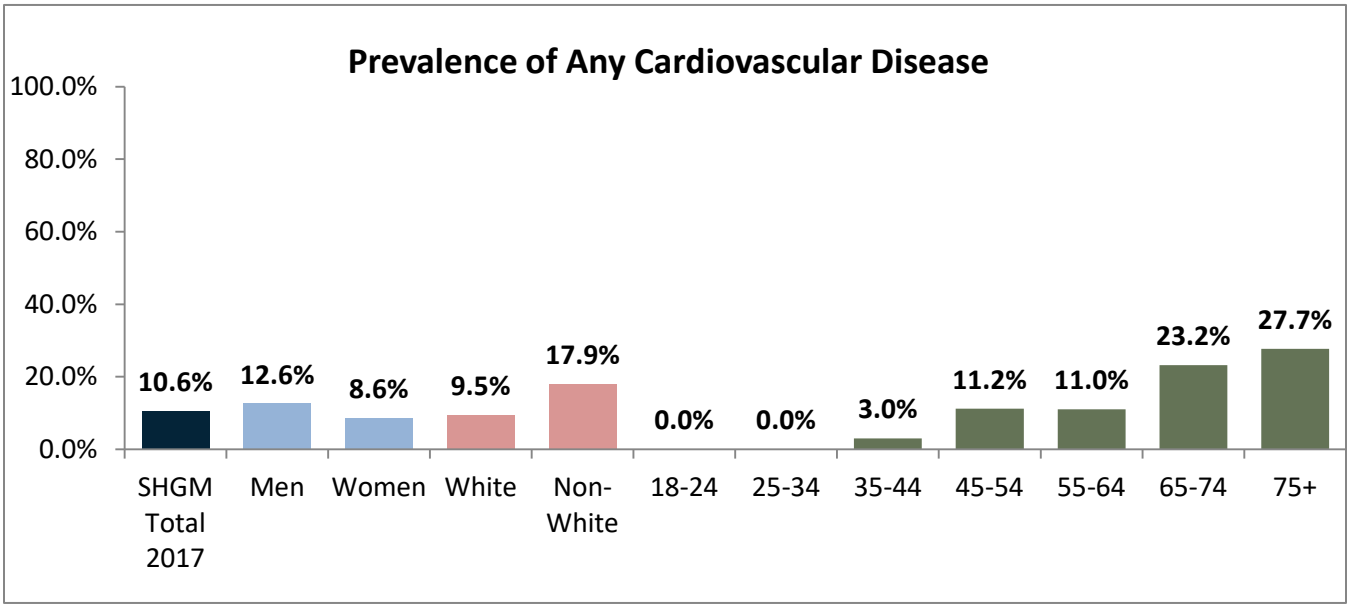


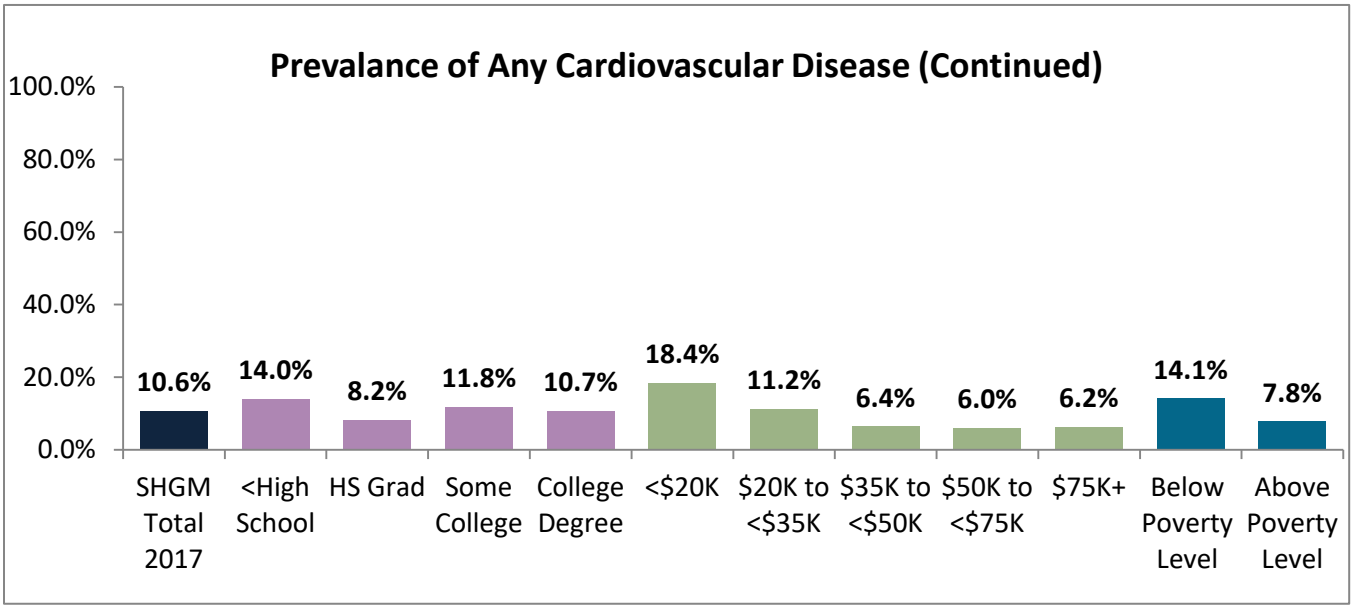


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.7: Has a doctor, nurse, or other health professional EVER told you that you had a stroke? (n=568).

Cardiovascular Disease and Stroke (Continued)

- One in ten (10.6%) area adults have had a heart attack, angina/CHD, and/or stroke.
- The highest prevalence of cardiovascular disease can be found in non-White adults, the highest age group (65+), and the lowest income groups.

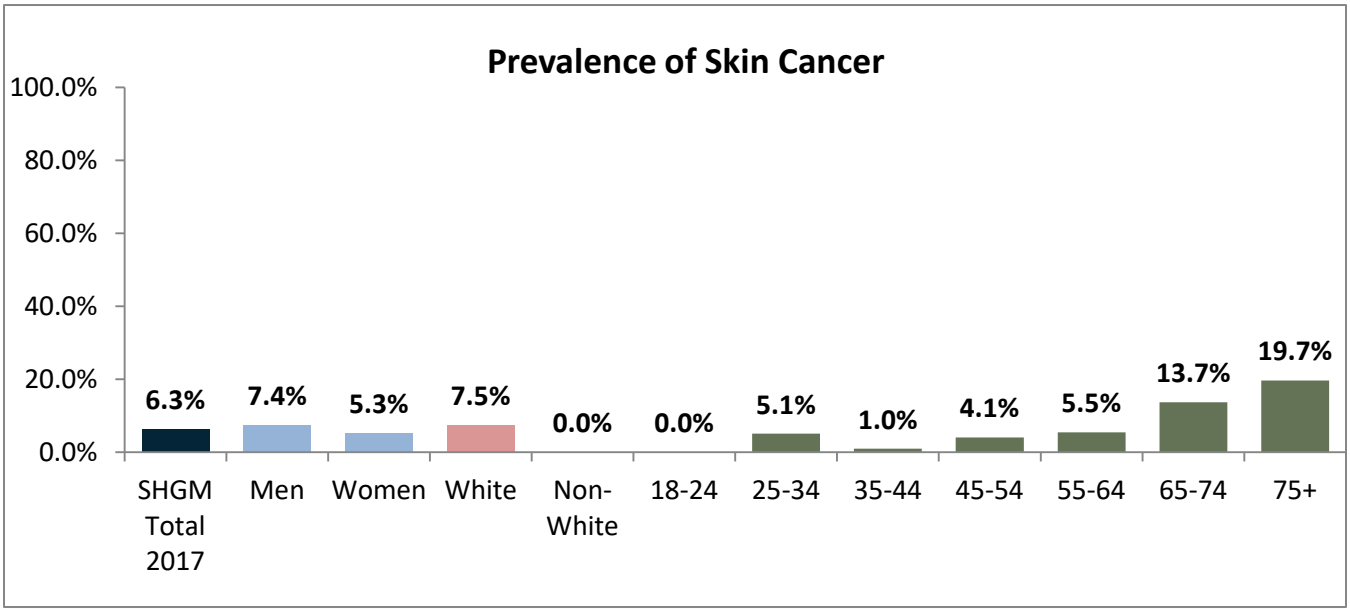


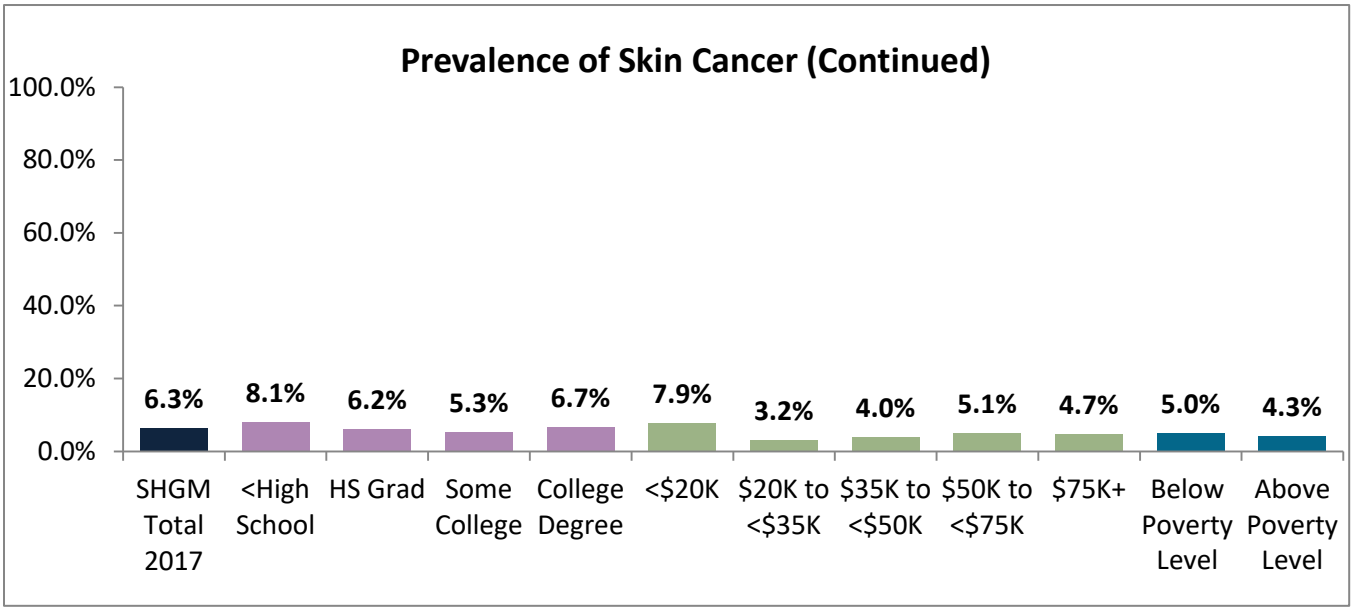


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.5/Q4.6/Q4.7.
Note: among all adults who have had some form of cardiovascular disease (heart attack, angina/CHD, stroke). (n=566)

Cancer

- One in sixteen (6.3%) SHGM area adults has skin cancer.
- The prevalence of skin cancer is higher among the oldest groups (65+) and is far more common in White adults compared to non-White adults.

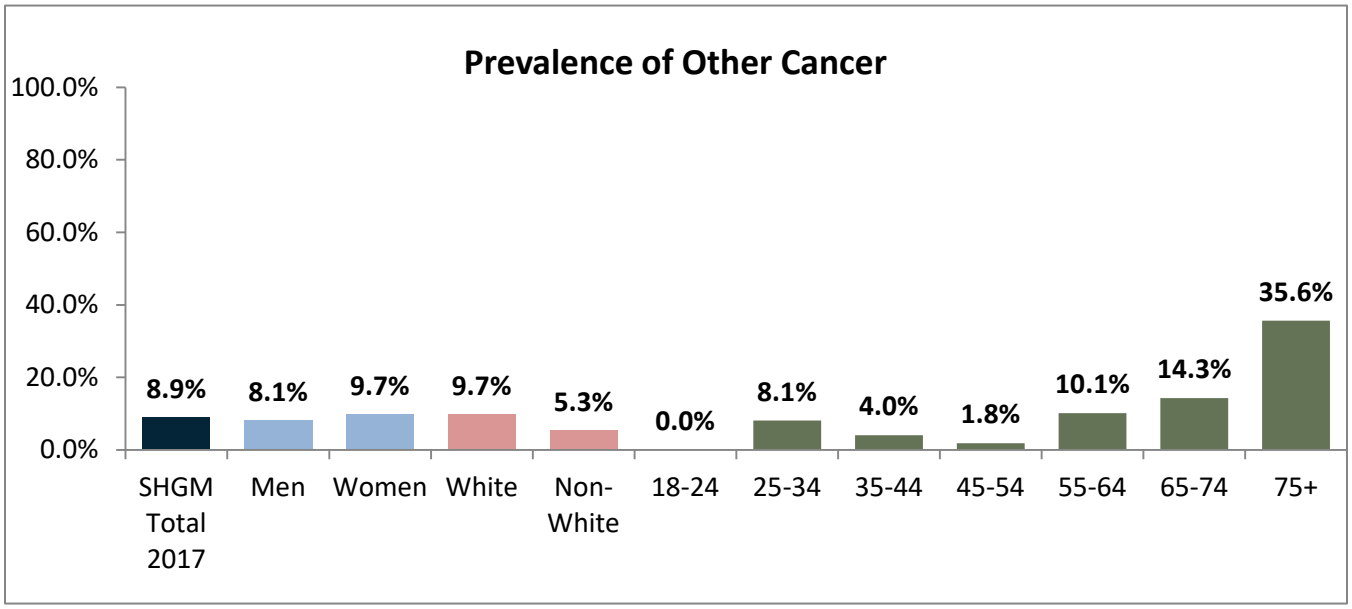


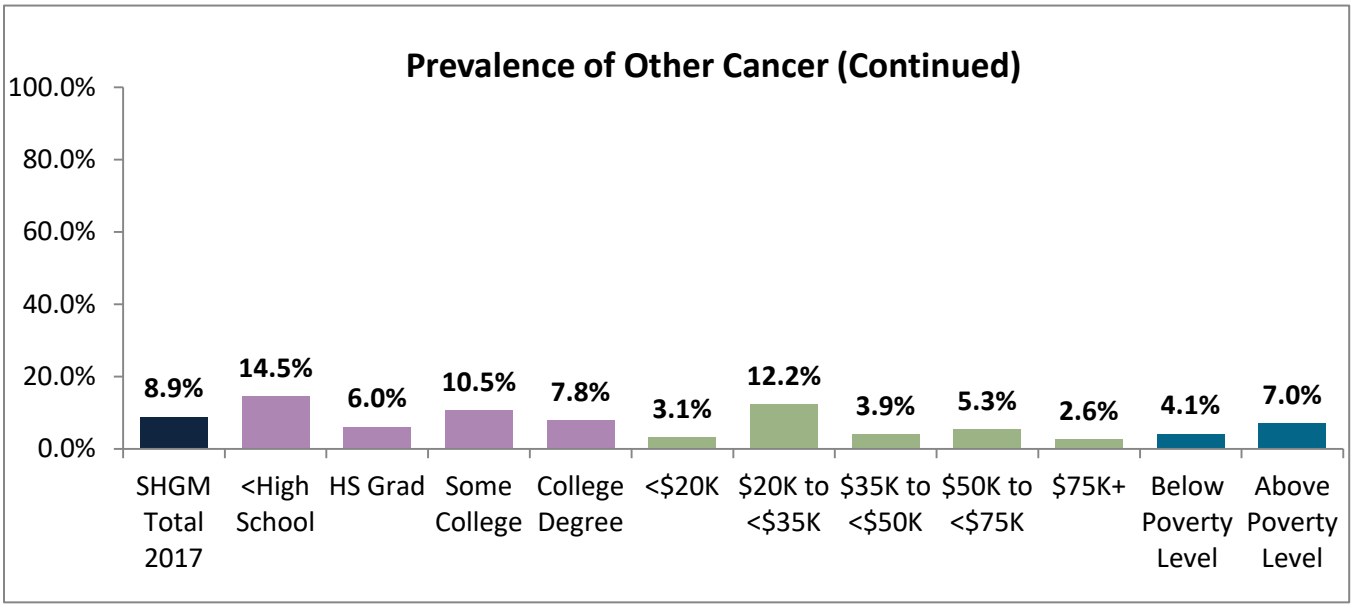


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.8: Has a doctor, nurse, or other health professional EVER told you that you had skin cancer? (n=567)

Cancer (Continued)

Roughly one in twelve (8.9%) area adults have been told they have other forms of cancer (non-skin), and this proportion rises dramatically with age, especially beginning around age 55.

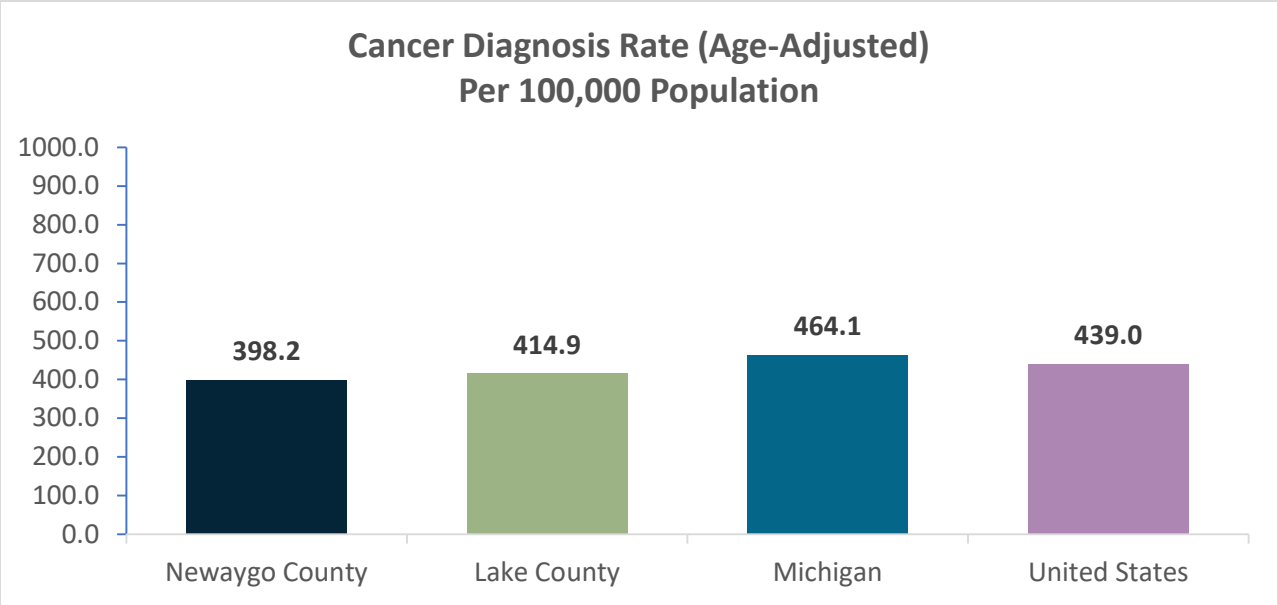




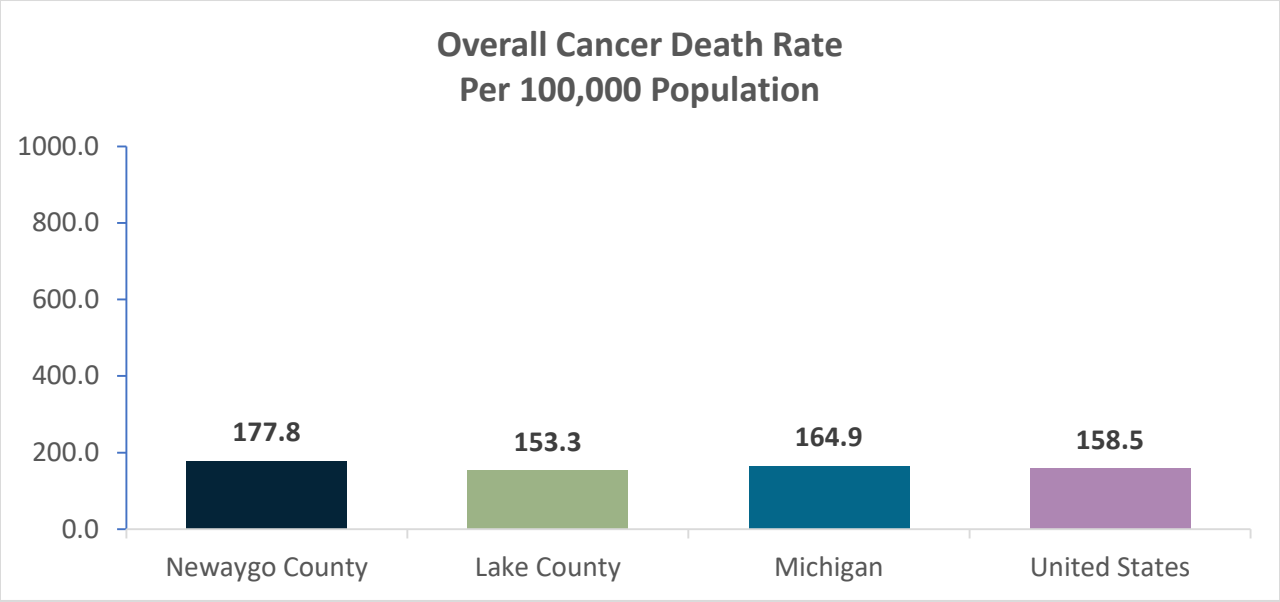
Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.9: Has a doctor, nurse, or other health professional EVER told you that you had any other types of cancer? (n=568).

Cancer (Continued)

- Compared to state and national cancer diagnosis rates, rates are lower in Newaygo and Lake counties.
- The cancer death rate is higher is Newaygo County compared to state and national rates.



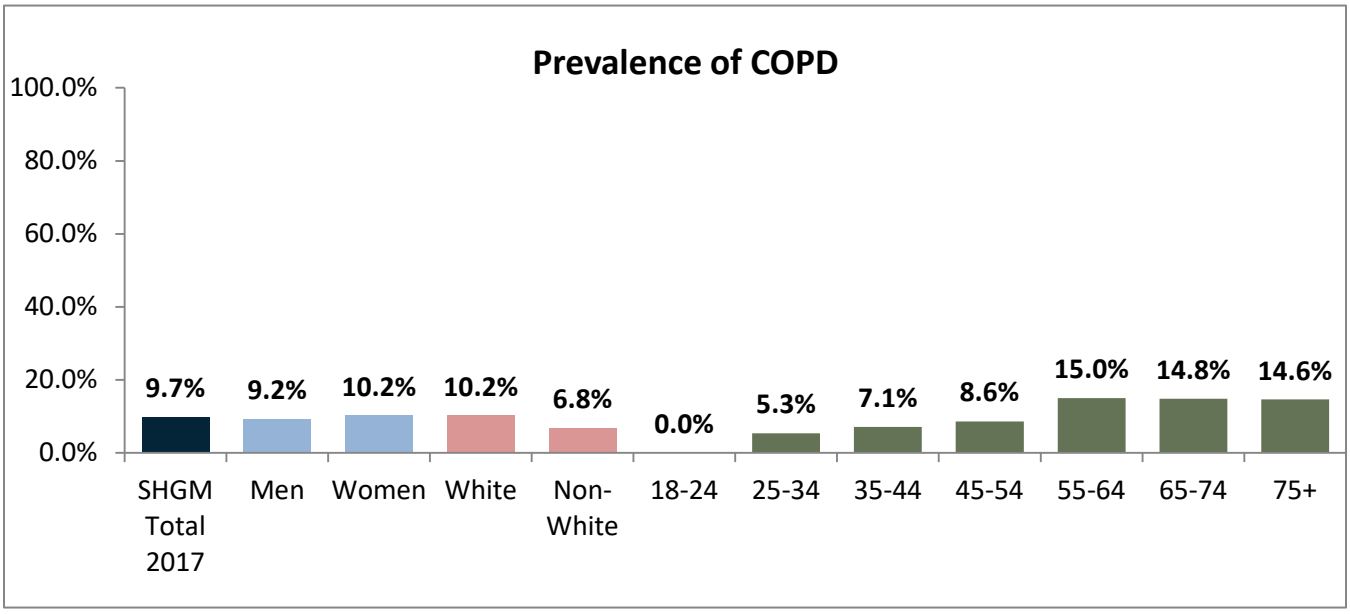
Source: MDCH Cancer Incidence Files. Counties and MI 2010-2015 5-year average, US: Kaiser Family Foundation Health Facts, 2013.

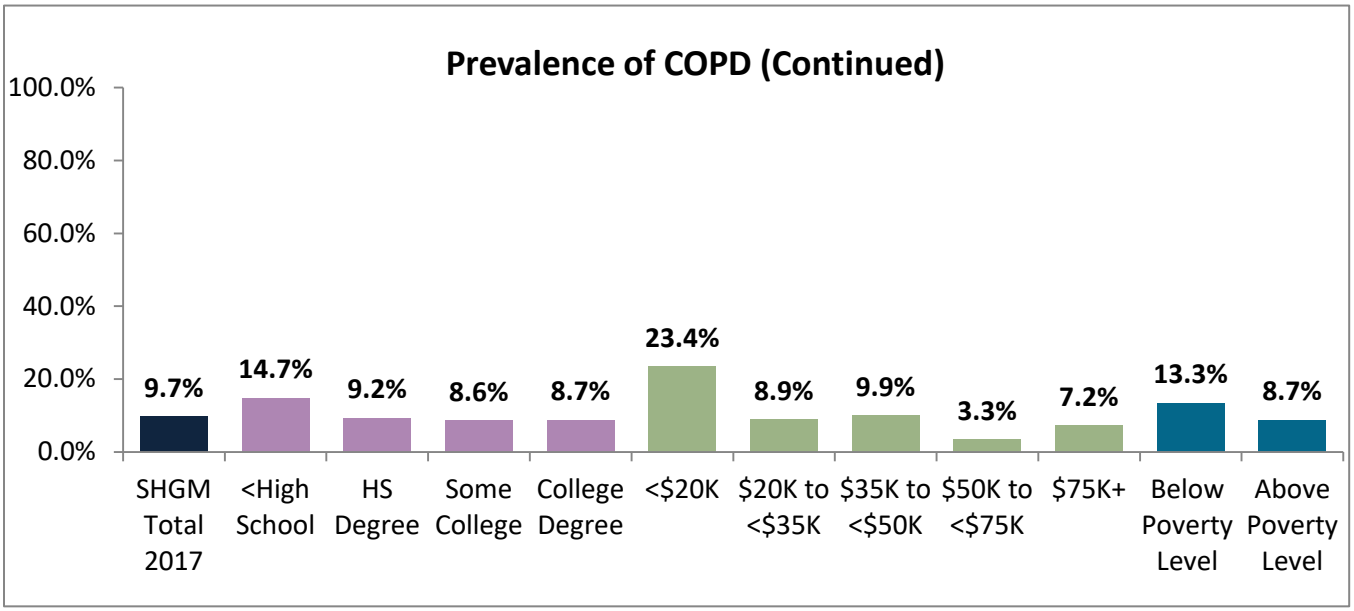


Source: MDHHS counties, MI, and U.S., 2015.

COPD

- One in ten (9.7%) area adults have chronic obstructive pulmonary disease (COPD).
- The disease is more common in adults who are older (55+) and/or who have low incomes.

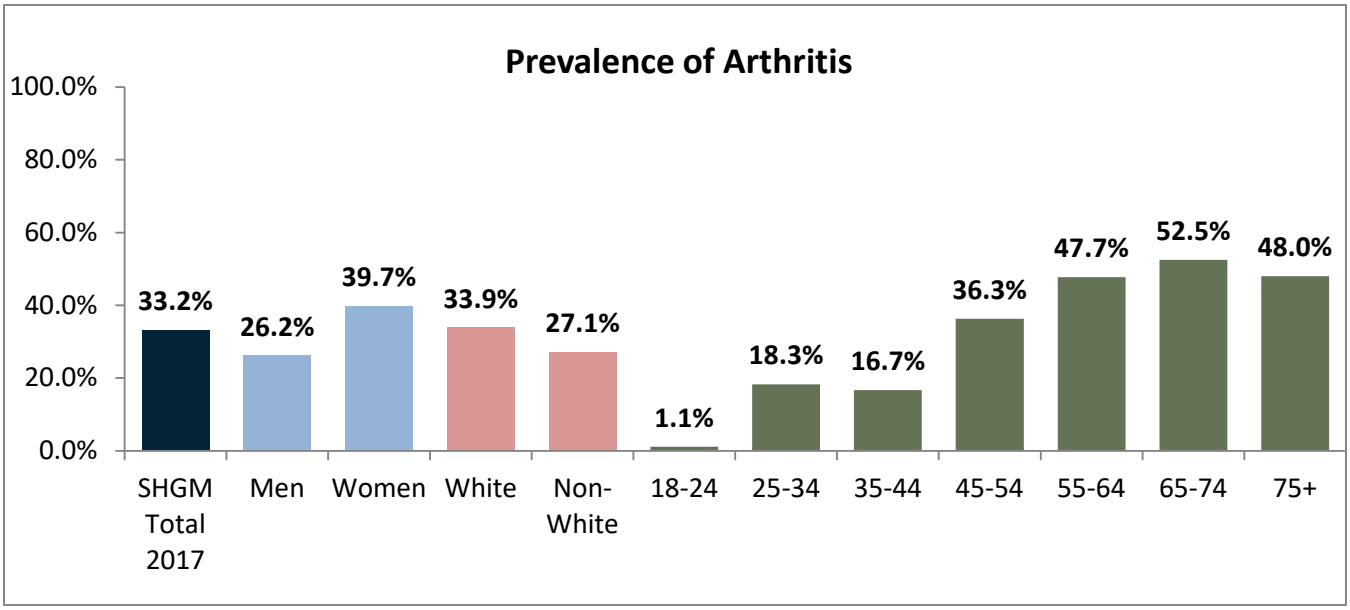


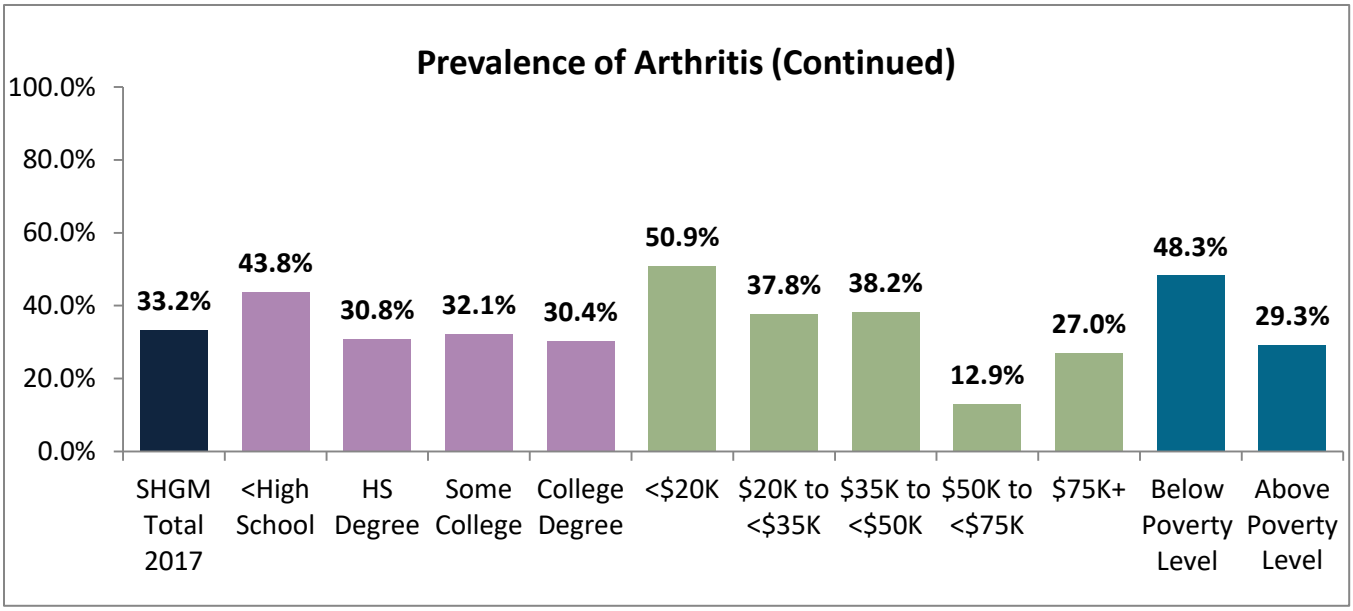


Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.10: Has a doctor, nurse, or other health professional EVER told you that you had COPD (chronic obstructive pulmonary disease), emphysema or chronic bronchitis? (n=565).

Arthritis

- One-third (33.2%) area adults have arthritis, and this is largely a condition that comes with age.
- The disease is also more common in women than men, more common in White adults compared to non-White adults, more common in adults with less than a high school education compared to those with more education, and more common among adults with incomes below $50K compared to adults with higher incomes.

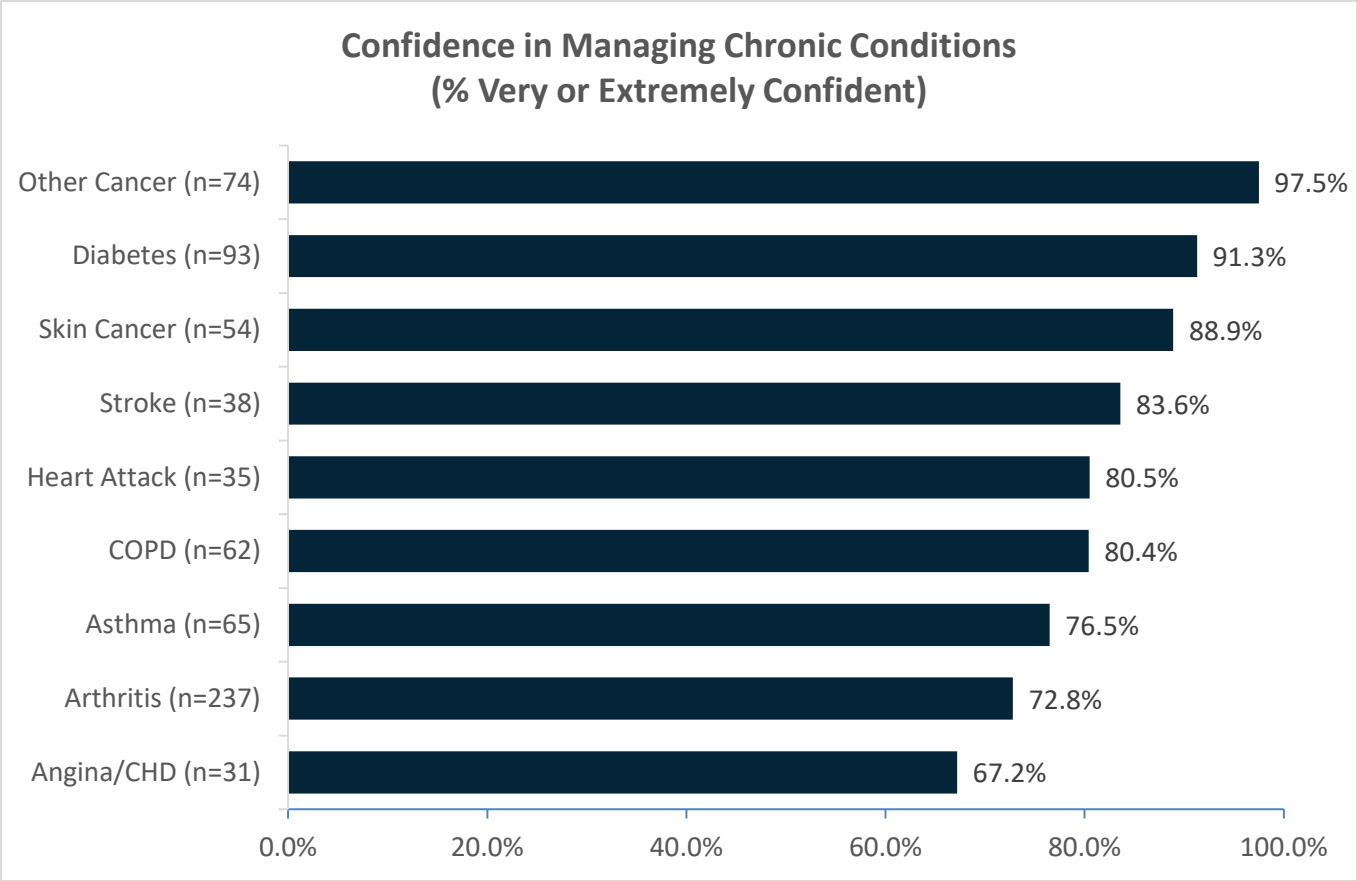




Source: SHGM Behavioral Risk Factor Survey, 2017, Q4.11: Has a doctor, nurse, or other health professional EVER told you that you have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia? (n=566).

Management of Chronic Conditions

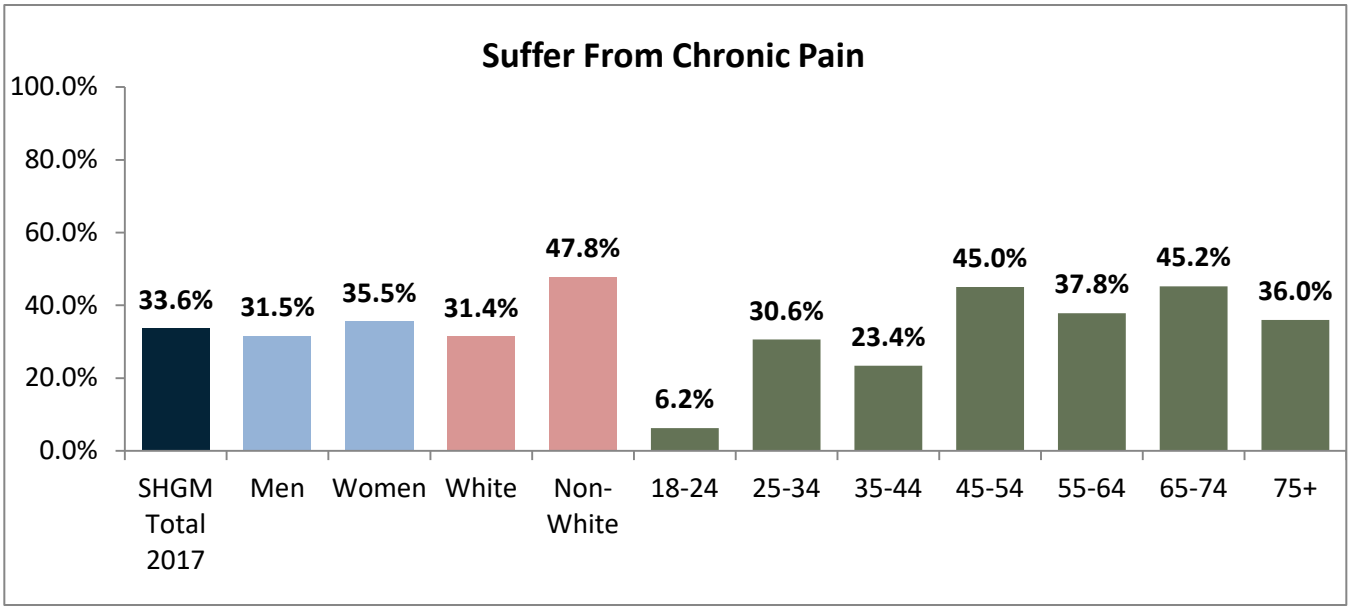
- A sizeable majority of adults with chronic conditions are confident that they can do all things necessary to manage their condition.
- The greatest barriers to confidence are inadequacy, or lack, of existing programs and services to assist them in managing their condition and/or having multiple chronic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

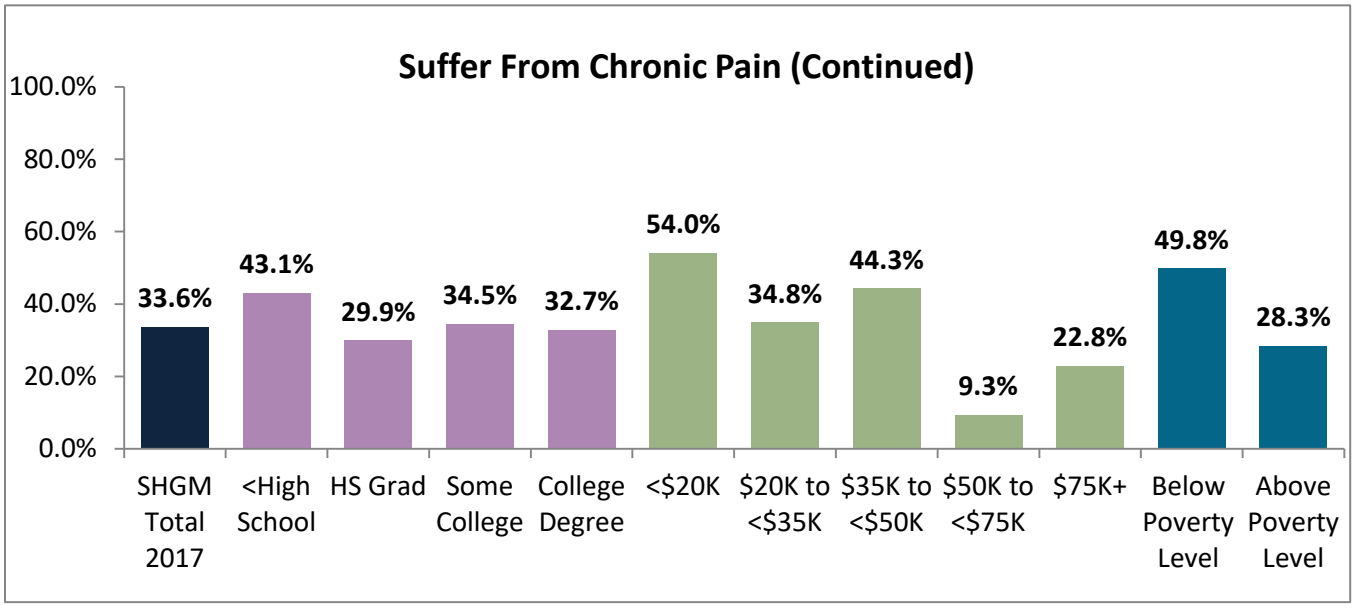


Source: SHGM Behavioral Risk Factor Survey, 2017, Q5.1: Having an illness often means doing different tasks and activities to manage your condition. How confident are you that you can do all the things necessary to manage your [insert condition]? Would you say you are not at all confident, not very confident,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

- One-third (33.6%) of area adults suffer from chronic pain, and it is more common among non-White adults than White adults, more common in adults with less than a high school education compared to those with more education, and more common in adults with incomes less than $50K compared to those with higher incomes.
- Two-thirds (68.5%) of those adults with chronic pain report their pain is managed well.

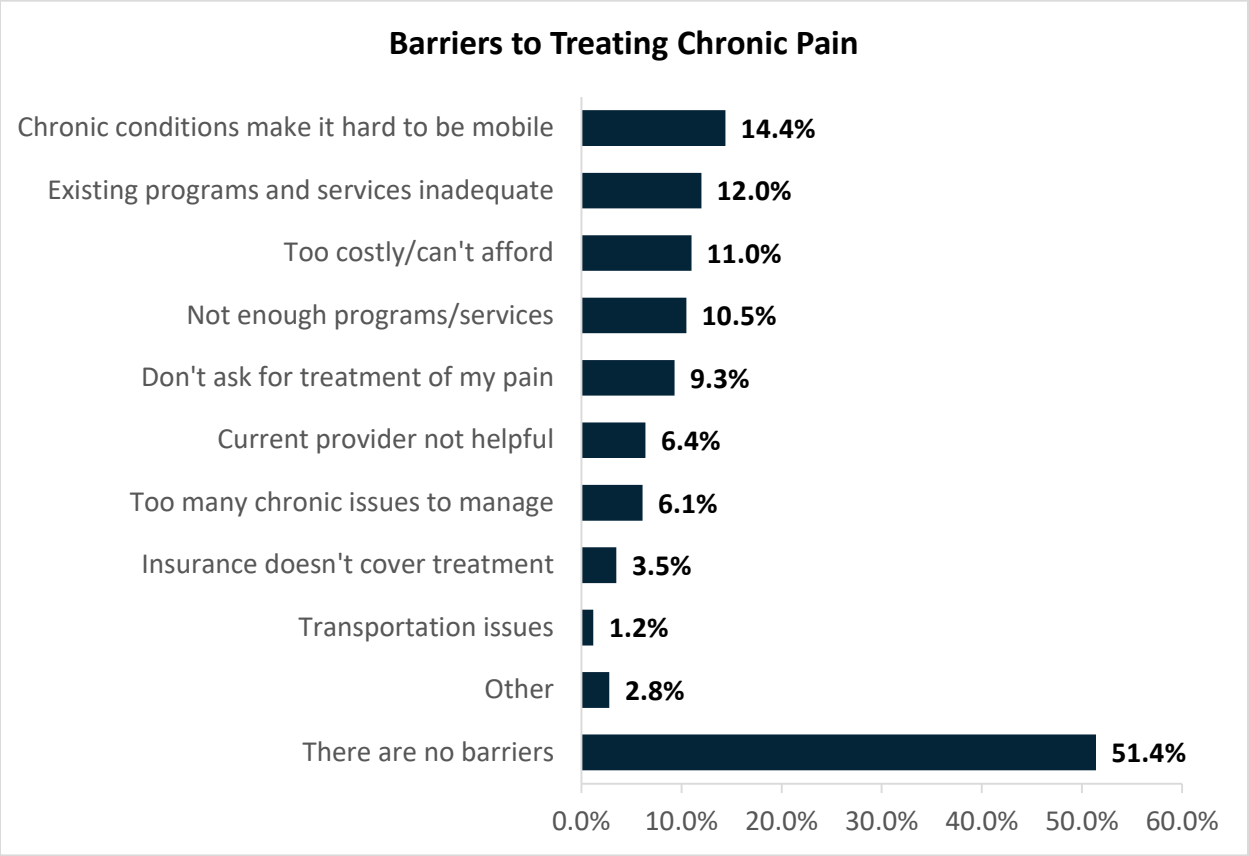




Source: SHGM Behavioral Risk Factor Survey, 2017, Q8.1: Do you suffer from any type of chronic pain; that is, pain that occurs constantly or flares up frequently? (n=567); Q8.1: (If yes) Do you feel your pain is managed well? (n=195).

Barriers to Treating Chronic Pain

Almost half (48.6%) of area adults suffering from chronic pain report myriad barriers to treating their pain, including: their condition makes it hard to be mobile; inadequate, or lack of, programs and services that could help them deal with their pain better; cost; ineffective providers; and too many chronic issues to manage.



Source: SHGM Behavioral Risk Factor Survey, 2017, Q8.3: What are some of barriers to treating your pain? (n=191)
Note: The proportion of adults who reported they suffer from chronic pain.

HEALTH CARE ACCESS

Overall State of Health Care Access in the Community

According to Key Stakeholders, despite increased coverage via the Affordable Care Act and Healthy Michigan Plan, there are still access to care issues; both primary care and specialty care. Several steps were taken to address these gaps, such as utilizing TeleMed, hiring more mid-level practitioners, and taking a more holistic approach to care by integrating services which would not only better address health issues but also be a more efficient model of care.

There are **limited psychiatric services**. There's not a private provider in the community, and that's been a longstanding gap we have tried to address. Our scope in service for the **mental health is limited to the severe mentally ill and/or intellectually or developmentally disabled**. The psychiatric services for **mild and moderate** - folks **have to go out of the county to get that if they need psychiatric services**. I do know that Spectrum has attempted more recently to address that by having at least consultative services available through **TeleMed**. They're trying to bridge some of that gap, but still, the **majority of prescribing for psychotropic meds for the mild and moderate in particular is through the primary care physician**. – *Key Stakeholder*

In **Newaygo**, we really have **seen some improvements** over the last couple of years, and **access is improved**. A good example is we've really **targeted our children and families in foster care** and made a concerted effort to pay attention to that and reaching out and making those partnerships. I think that there are **more providers and diverse providers**. One of the things that's beneficial for both counties that's new is the **TeleMed**; that's beneficial when you don't have access, and you're out in the middle of the woods, but you're not feeling well, so I think that's also been an asset in increasing access. – *Key Stakeholder*

I'd say **it's improved**, but at the same time, we **have great difficulty at recruiting physicians** - **primary care physicians**. **That's been offset by the recruitment of other APPs, physician assistants and nurse practitioners**, so that overall, we **have a lot more open time slots**. In the very near future, we're opening another convenient care clinic where it's a walk-in clinic, and I think that's going to have a significant impact on people's access to care. – *Key Stakeholder*

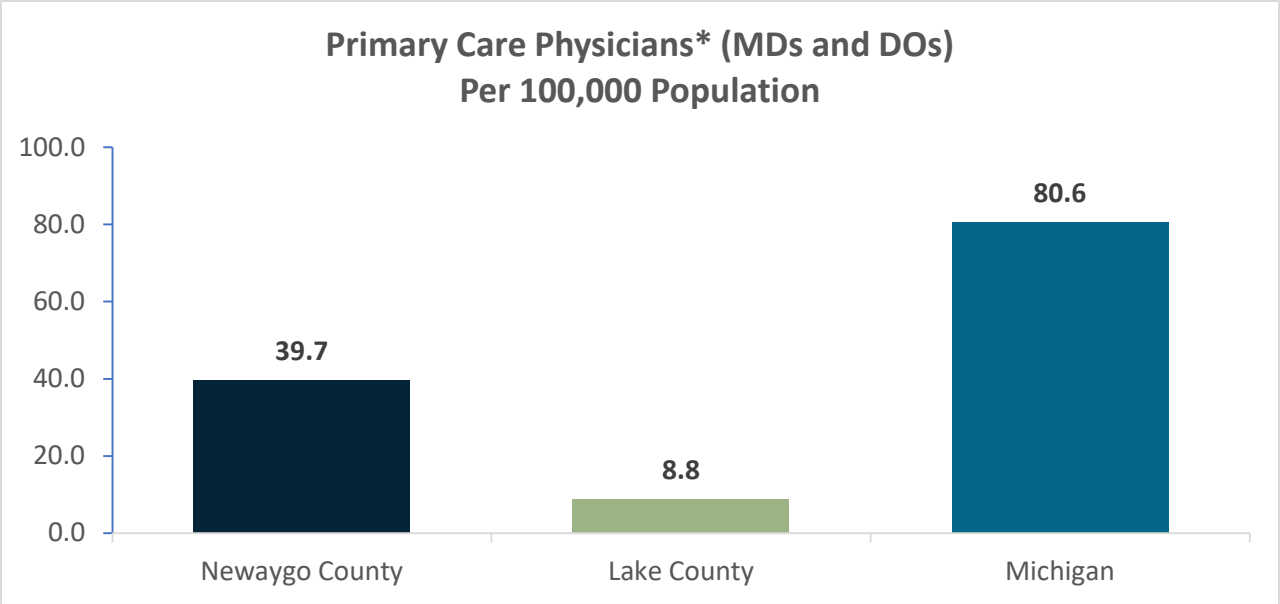
Where we **lack is a good network of specialists**, so **patients have to travel quite far** - 45 minutes to an hour or longer, depending on how close they are to the county borders, and so **specialty care is an issue**. – *Key Stakeholder*

The **behavioral health** piece, which is probably a combination of **not enough providers** or **not having coverage to be able to access what is available** to them are some of the problems. Now, when you look at some of the things that communities have done to try to make themselves healthier, there have been some **integration efforts** – we are trying to **integrate behavioral health and physical health together** and trying to address some of the issues and getting at some of those **psychosocial issues** that are out there. So, someone's not taking their blood pressure medication - why is that? Is it they just forget, or is it because they can't afford to buy their medication because they have to buy food, they have to buy bus tokens, or they have to put gas in their car, or their electricity is going to be shut off, and they have to use that money to pay for that? – *Key Stakeholder*

Source: Key Stakeholder Interviews, 2017, Q3: Describe the current state of health care access in the community. (n=6)

Health Care Providers

- There are far fewer primary care physicians (MDs or DOs) per capita in Newaygo and Lake counties compared to the state rate. In fact, the state rate for primary care physicians is almost ten times the rate for Lake County.
- Key Stakeholder comments support this data.



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

Limited, especially if you want to get into primary care. I think if you're an **established patient, it's easier to get in**. Our **provider-to-member-of-the-population ratio is pretty low**, so we have **more people than we have providers to take care of them**. It can be difficult to get into an office, so a lot of **people will use the ER as their primary care place**. – *Key Stakeholder*

I think each **community could probably use another three to four**, maybe **five**, **primary care providers** in their communities to see patients. – *Key Stakeholder*

There are **no doctors accepting new patients right now**. Since people **don't have a PCP they go to the emergency room** for care. And those that do have PCP's are **not able to get appointment times** so they also go to the ER for care. – *Key Informant*

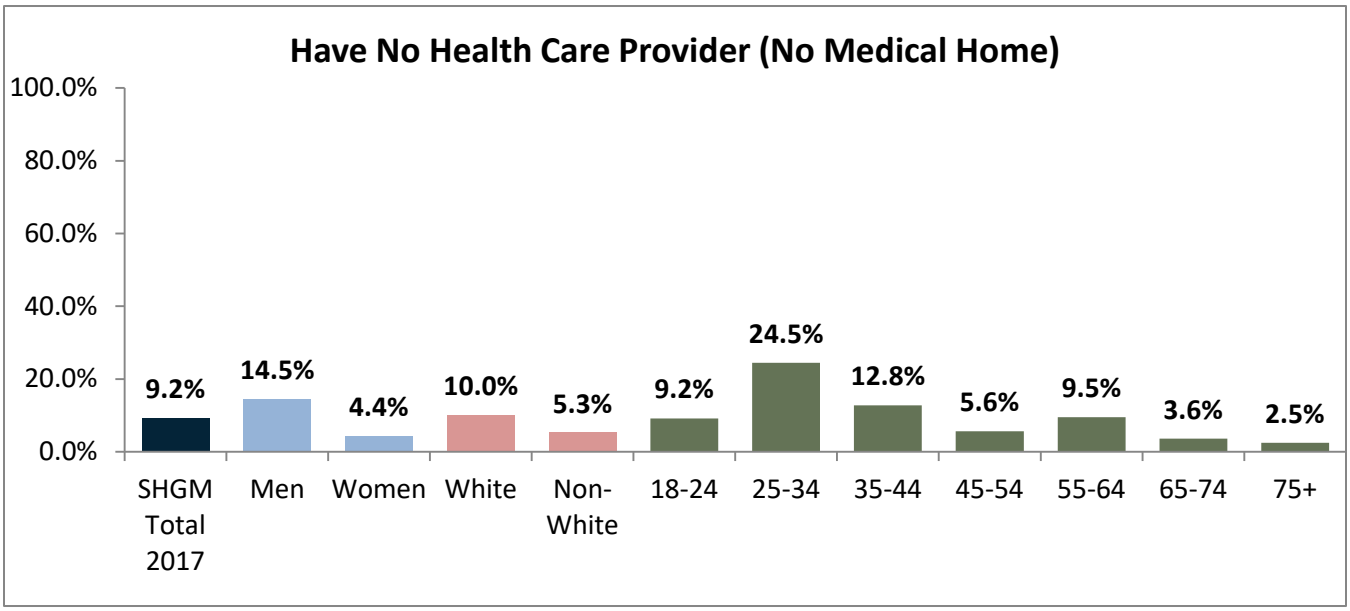
Providers have left the county at a rate faster than they are being recruited, which has created an access crisis. – *Key Informant*

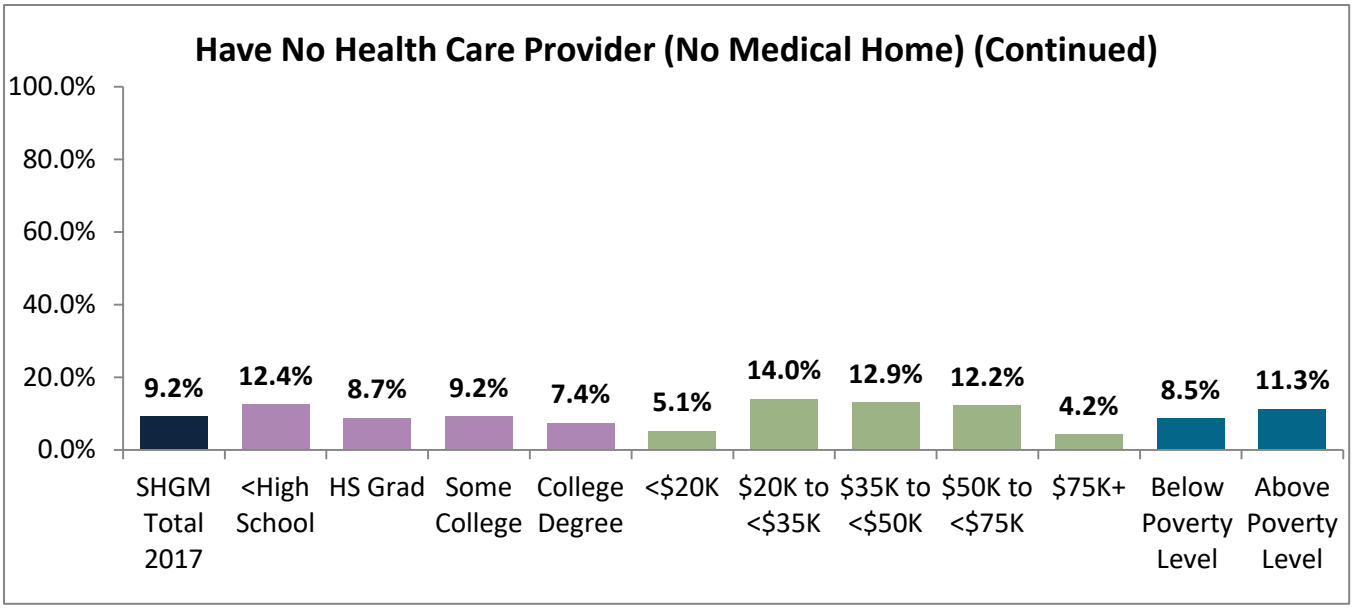
Again, a **national problem but it seems worse in our rural areas**. Some providers do not wish to bring their family to rural America. – *Key Informant*

Source: SHGM Key Stakeholder Interviews, 2017, Q3a: Is there a wide variety/choice of primary health care providers? (n=6); SHGM Key Informant Online Survey, 2017, Q1a: Why do you think [lack of providers] is a problem in the community? Please be as detailed as possible. (n=15)

Health Care Providers (Continued)

- Almost one in ten (9.2%) SHGM area adults have no personal health care provider, and this rises to 11.4% for underserved adults.
- Men and White adults are more likely to lack a PCP than women and non-White adults, respectively.

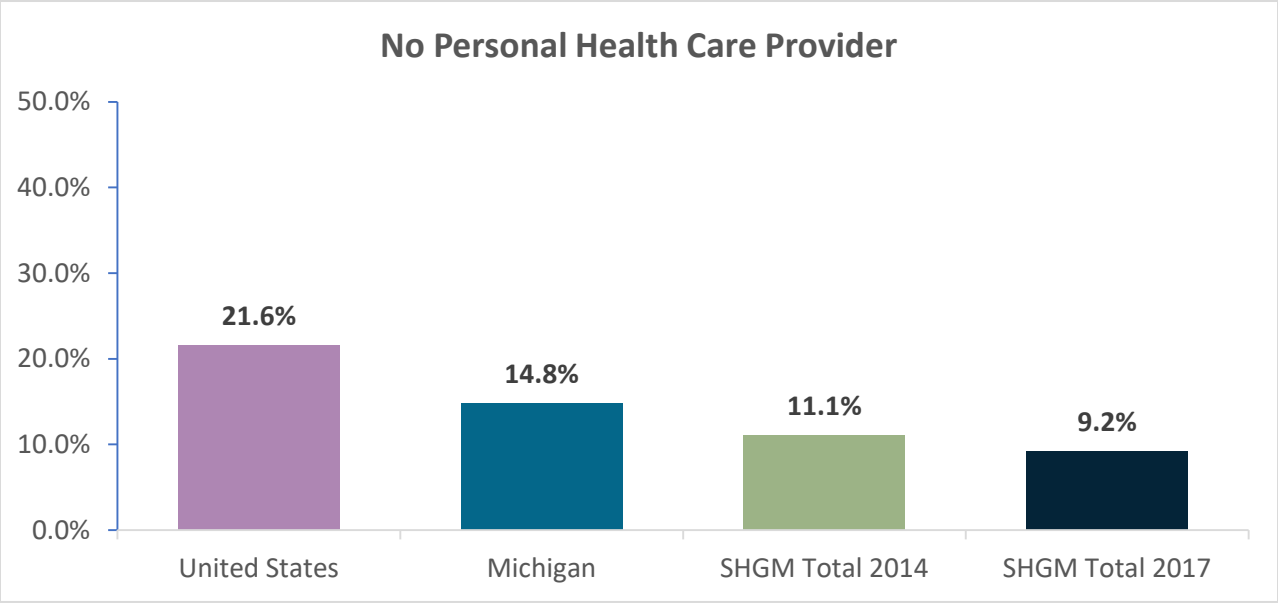




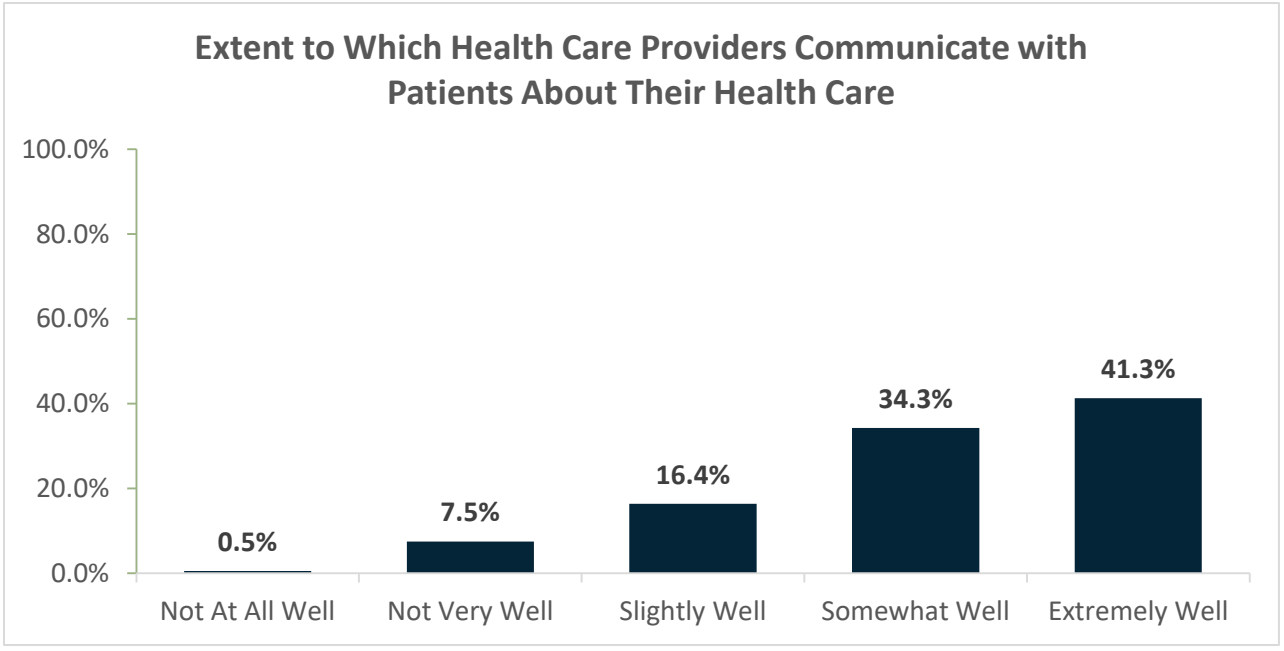
Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.4: Do you have one person you think of as your personal doctor or health care provider? (n=565).

Health Care Providers (Continued)

- The proportion of area adults with no personal health care provider has improved since the last CHNA in 2014 and continues to be better than state and national proportions.
- A large majority (75.6%) of underserved adults believe health care providers communicate with them well.



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; SHGM Behavioral Risk Factor Survey, 2014, 2017.



Source: SHGM Underserved Resident Survey, 2017, Q8: How well do you feel health care providers communicate with you about your health care? (n=201)

Health Care Providers (Continued)

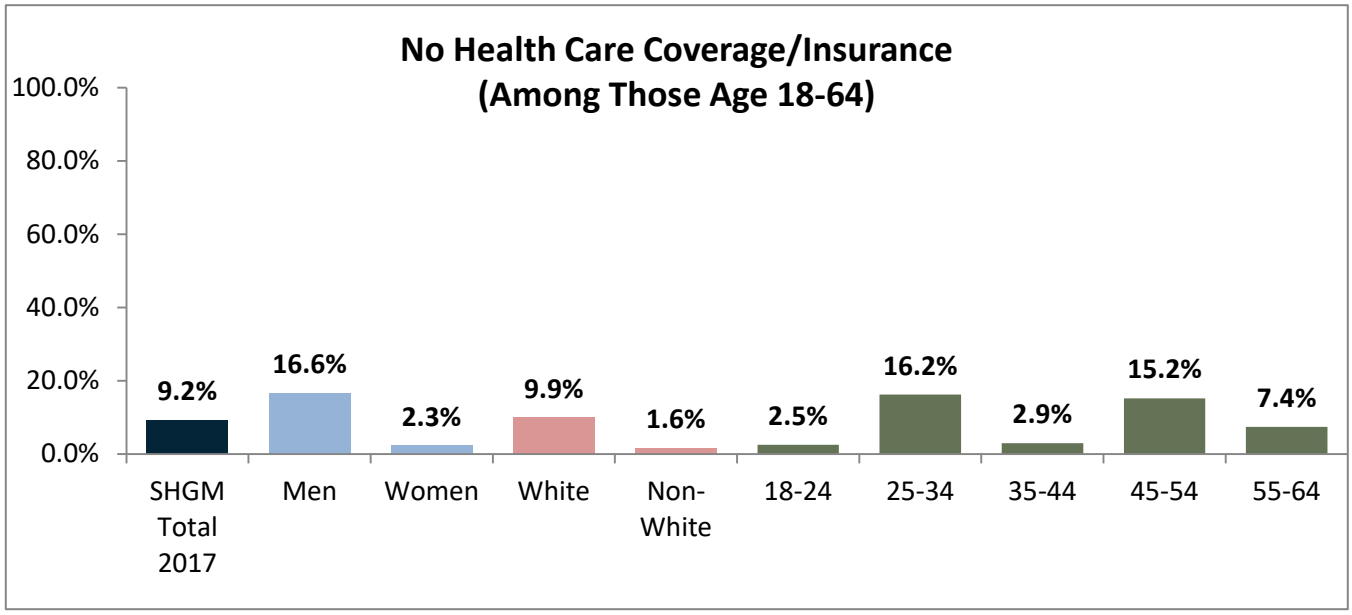
- Underserved residents seek providers who are: good listeners, knowledgeable, caring, honest, friendly, accessible and available to see them, and thorough. Being a good listener also means they should communicate well; they should ask questions and answer questions, be attentive, and explain things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

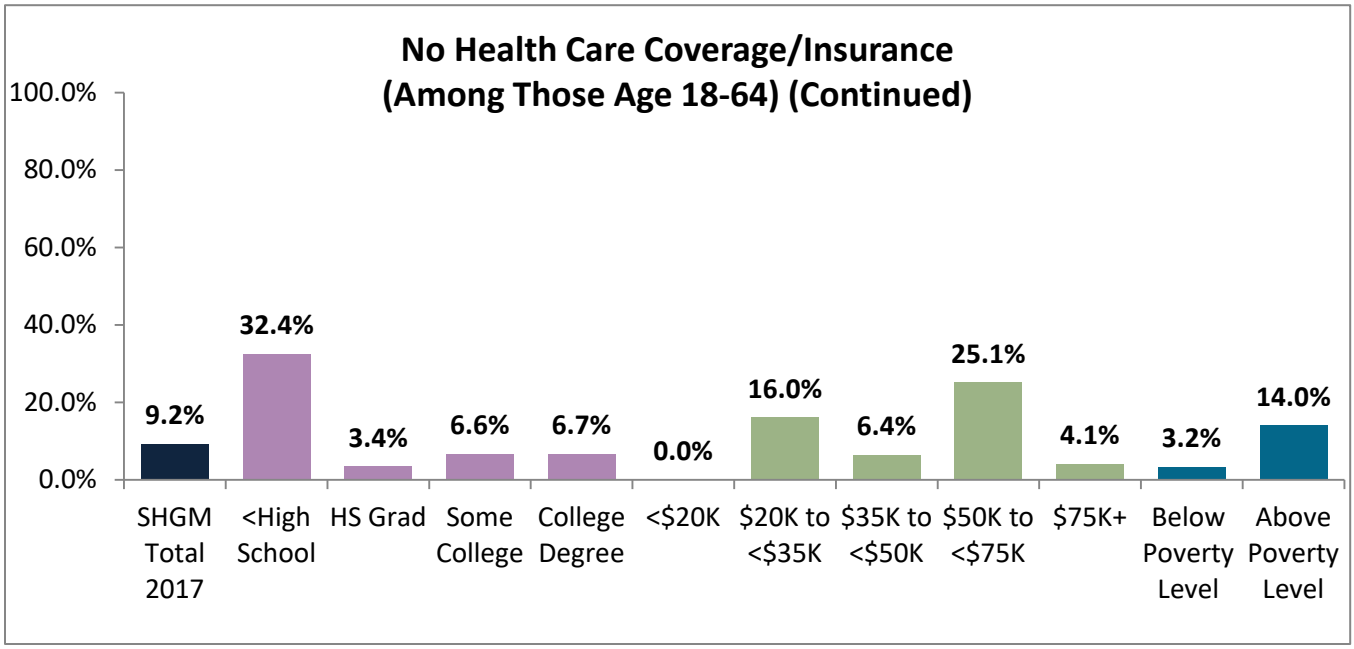
- Moreover, but not mentioned as frequently, are desired provider qualities such as being open to alternative treatment and therapies, a focus on prevention and wellness, and working with patients collaboratively to craft the best treatment plan.

Source: SHGM 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=158)

Health Care Coverage

- Among SHGM area adults aged 18-64, 9.2% have no health care coverage or insurance, and this proportion increases to 32.4% for adults without a high school diploma.
- The rate of uninsured adults aged 18-64 has remained virtually unchanged since 2014 (9.3%) but is still better than the state (12.0%) or national (12.3%) rates.
- Men are less likely to have health insurance than women.





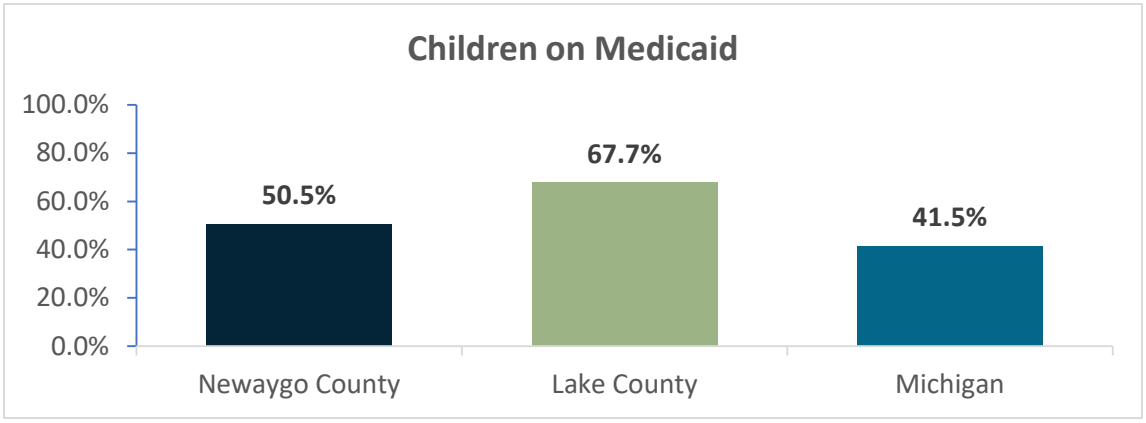
Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.1: Do you have any kind of health care coverage, including health insurance, prepaid plans such as HMOs, or government plans such as Medicare or Indian Health Service? (n=334). Note: among adults aged 18 to 64.

Health Care Coverage (Continued)

- More often, the primary source of health coverage for adults in the general population, is a plan purchased through an employer or union.
- This differs markedly from underserved adults, who are more likely to have Medicaid (56.1%) than any other coverage, by far
- More children are on Medicaid in Newaygo and Lake counties compared to Michigan.

	Primary Source of Health Coverage of All Adults	
	BRFS (n=565)	Underserved* (n=198)
A plan purchased through an employer or union	39.5%	12.1%
Medicare	26.6%	37.9%
A plan that you or another family member buys on your own	6.3%	6.1%
Medicaid or other state program	18.3%	56.1%
Tricare, VA, or military	1.7%	1.5%
Medicare supplement	NA	9.1%
None	7.6%	3.0%

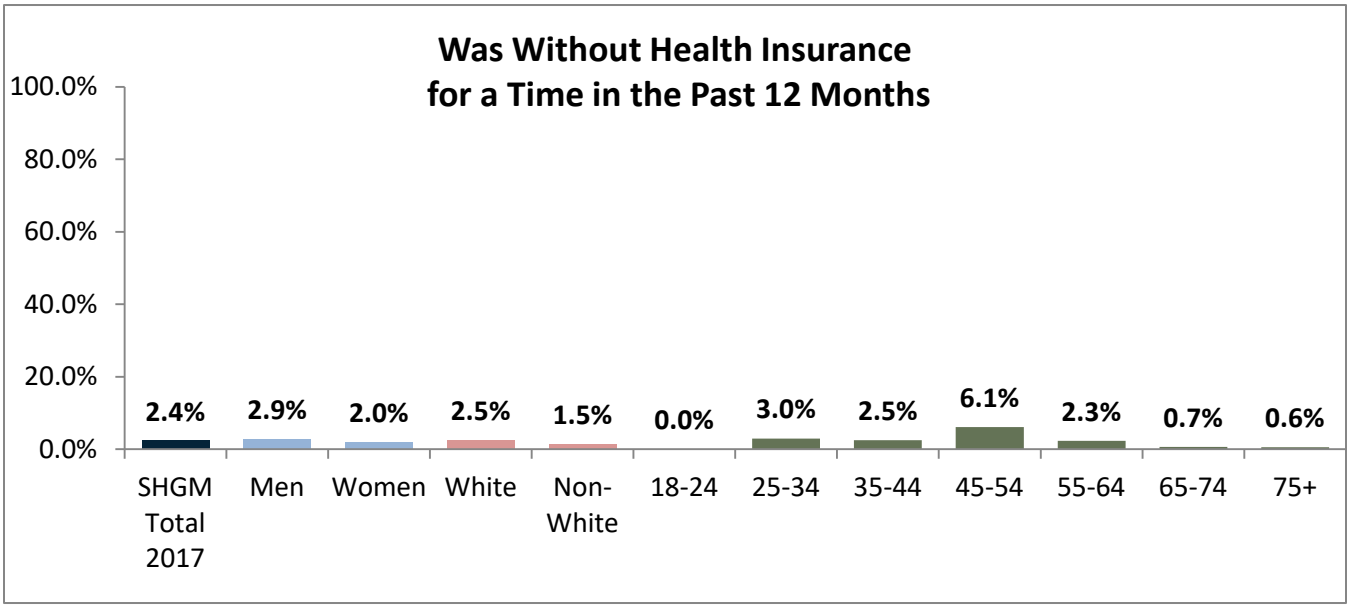
Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.2: What is the primary source of your health care coverage? Is it…?; SHGM Underserved Resident Survey, 2017, Q9: Which of these describes your health insurance situation? *Note: multiple response question.

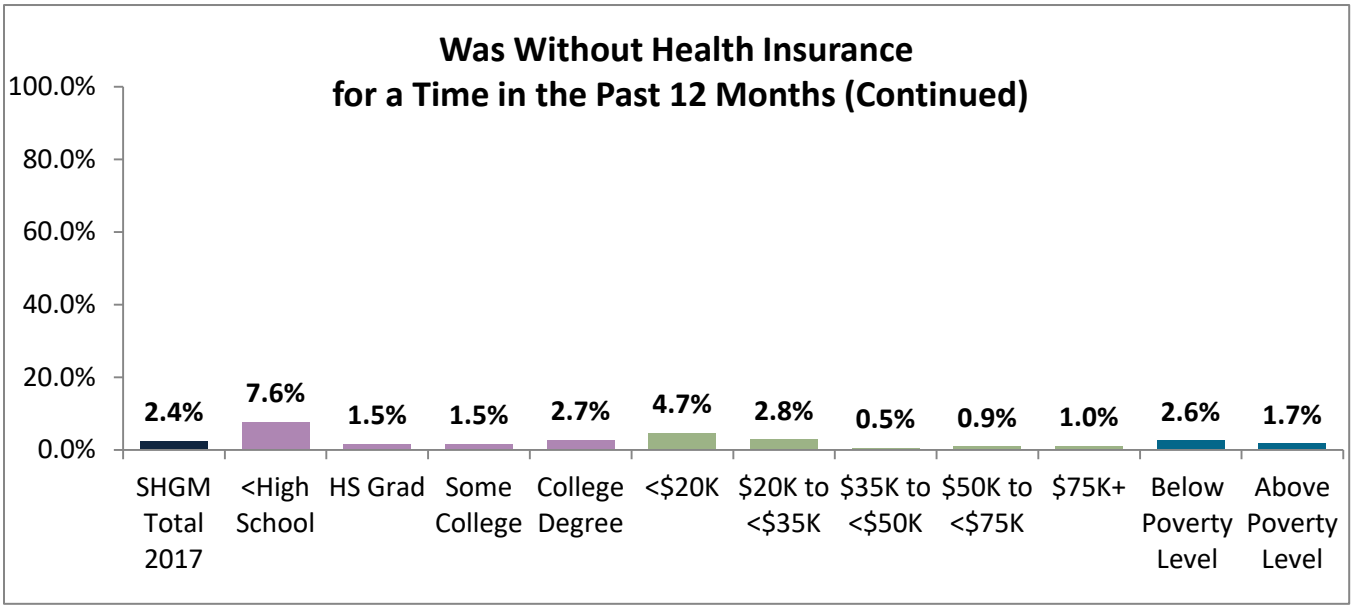


Source: Kids Count Data Book, 2016.

Health Care Coverage (Continued)

Among area adults with health insurance, 2.4% went without insurance at some time during the past year, and this proportion rose to 7.6% for those without a high school diploma.

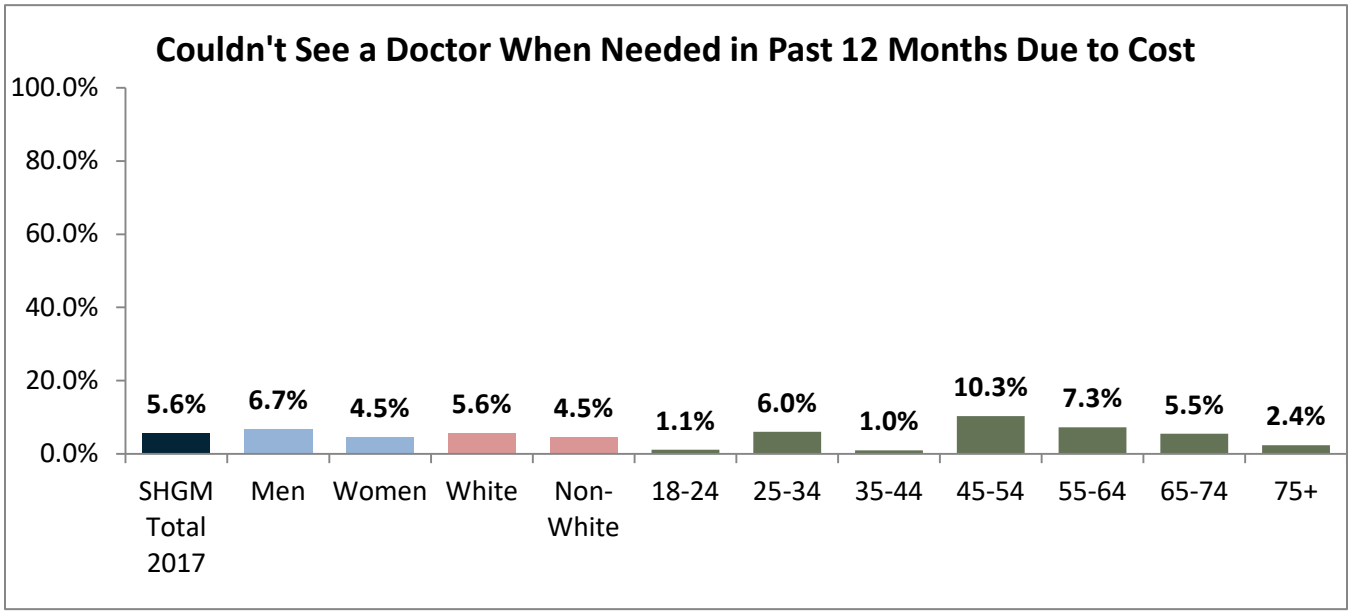


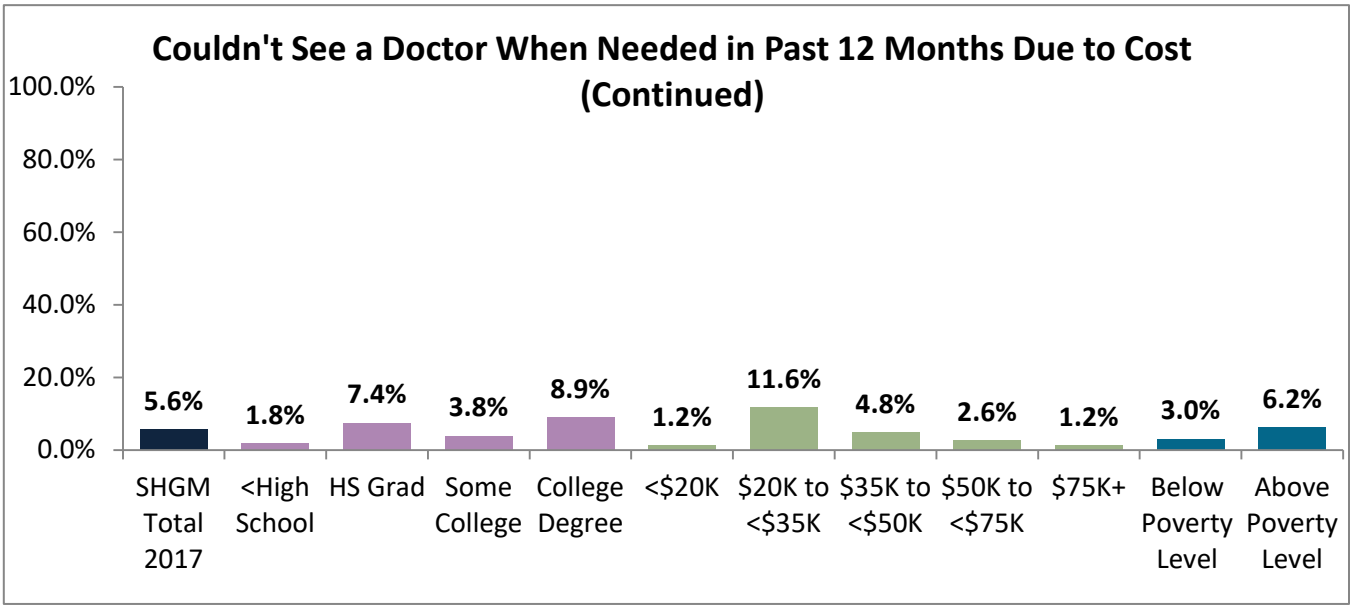


Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.3: In the past 12 months was there any time when you did not have any health insurance or coverage? (n=535)
Note: among all adults who had health insurance.

Problems Receiving Health Care

- Among all SHGM area adults, 5.6% have foregone health care in the past year due to cost.
- This rate is lower than in 2014 (9.1%) and lower than the state (12.7%) and national rates (12.0%)

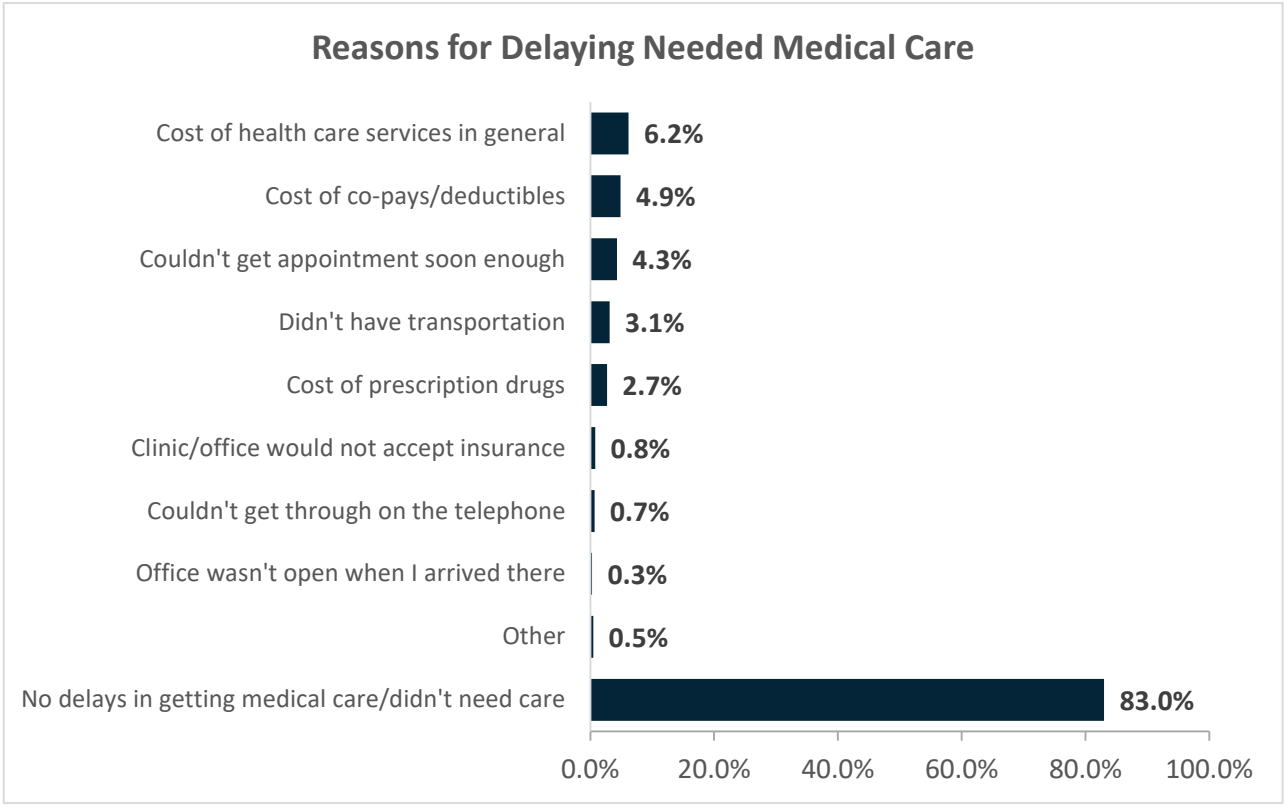




Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.5: Was there a time in the past 12 months when you needed to see a doctor but could not because of cost? (n=566)

Problems Receiving Health Care (Continued)

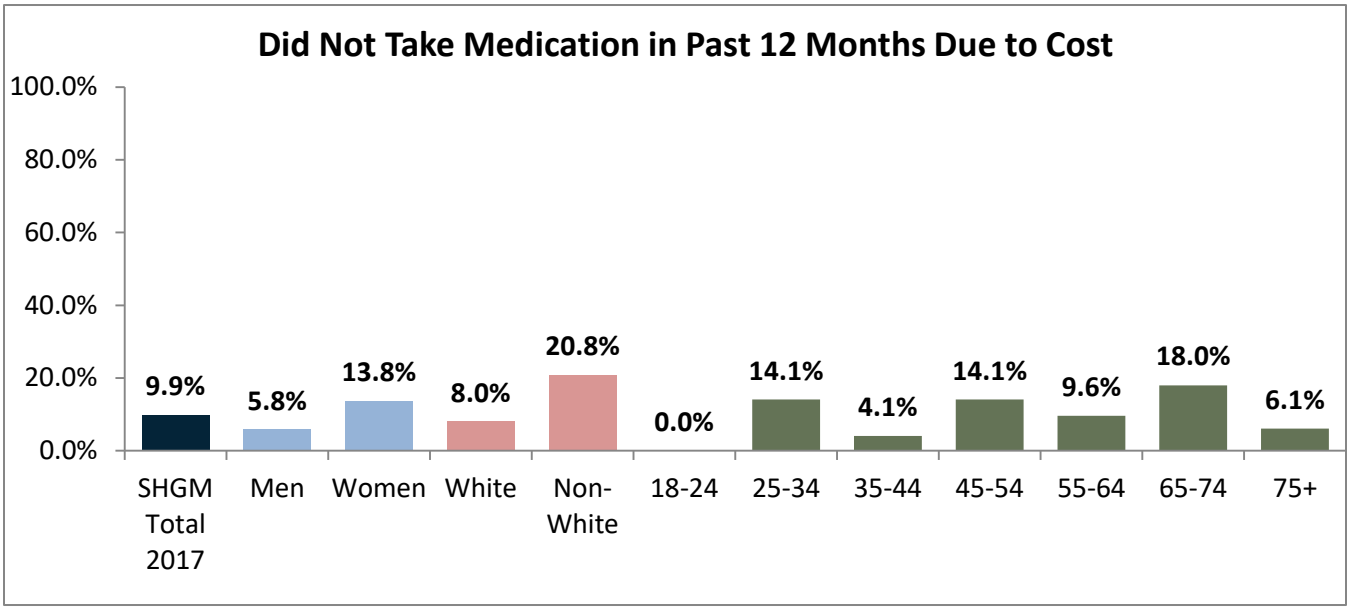
Eight in ten (83.0%) area adults did not experience delays in receiving needed medical care in the past year, but those who did cite general health care costs; inability to afford out-of-pocket expenses such as co-pays and deductibles; and inability to get a timely appointment as top barriers to needed care.

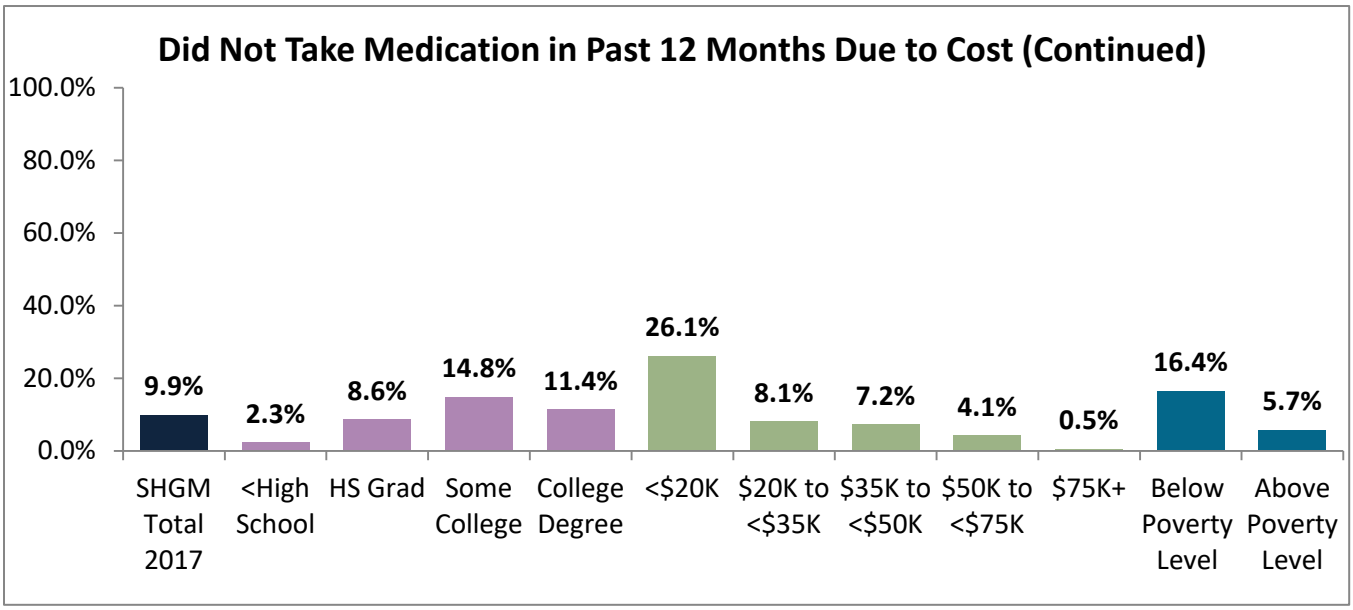


Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.6: There are many reasons why people delay getting needed medical care. Have you delayed getting needed medical care for any of the following reasons in the past 12 months? (n=565)

Problems Receiving Health Care (Continued)

- One in ten (9.9%) adults did not take their medication as prescribed due to costs, and this proportion rises to 28.6% for underserved adults.
- Prescription costs tend to impact women more than men, non-White adults more than White adults, and residents in the lowest income groups.

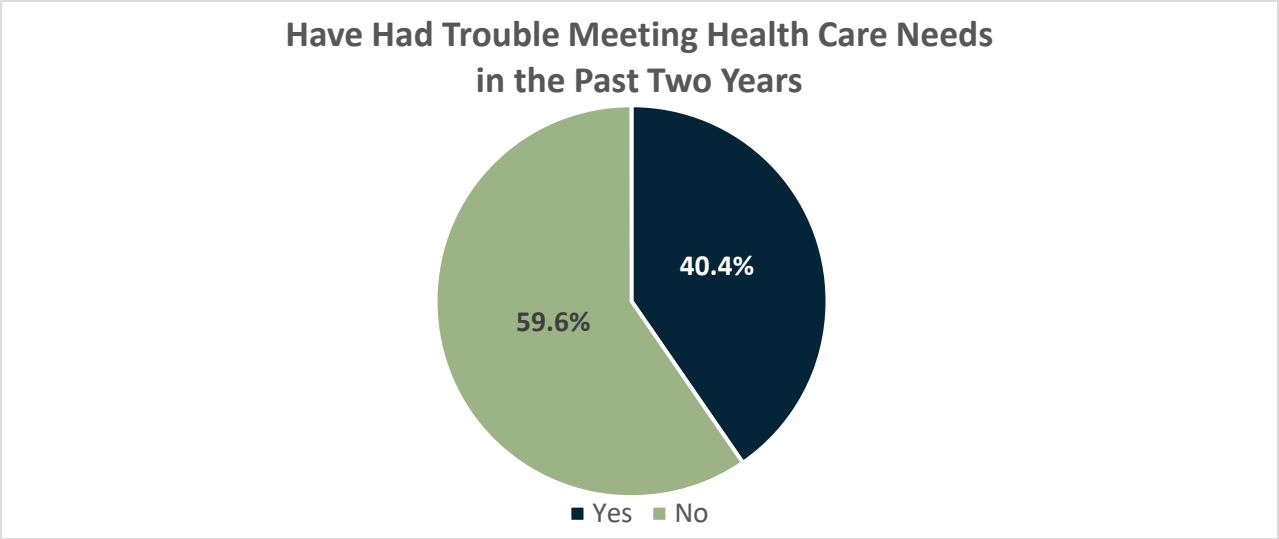




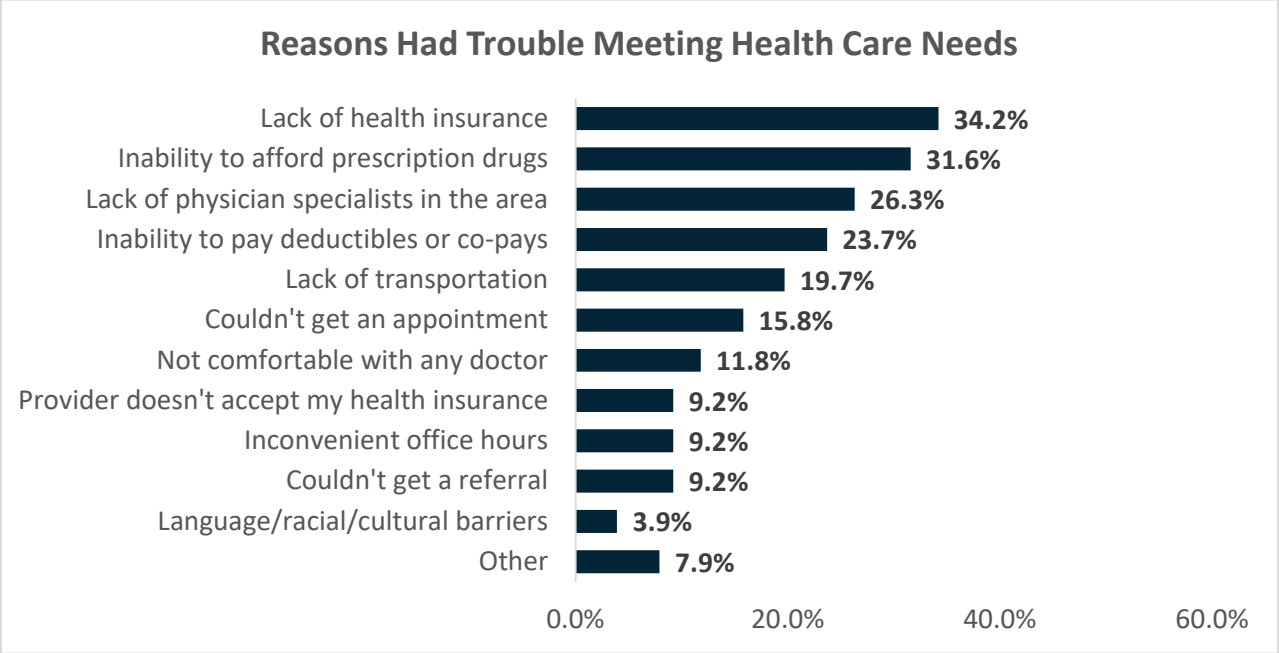
Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.7: Was there a time in the past 12 months when you did not take your medication as prescribed, such as skipping doses or splitting pills, in order to save on costs? Do not include over-the-counter (OTC) medication. (n=567); Underserved Resident Survey, 2017, Q12: Have you ever skipped your medication, or stretched your supply of medication, in order to save costs? (n=189)

Problems Receiving Health Care (Continued)

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



Source: SHGM 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=193)

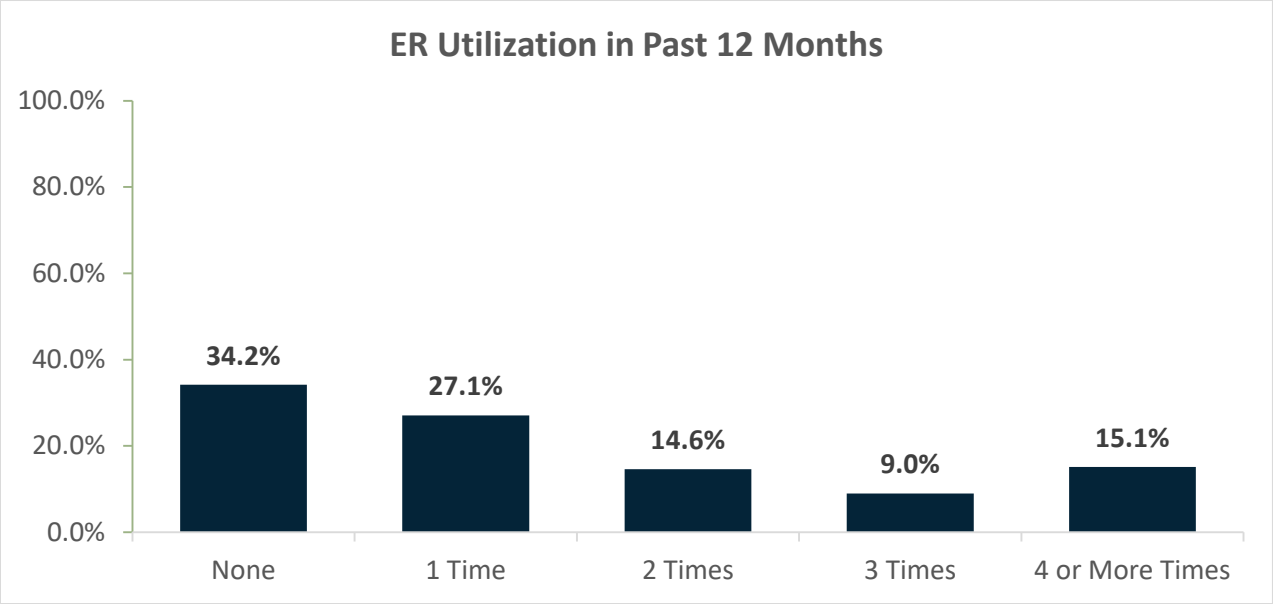


Source: SHGM Underserved Resident Survey, 2017, Q11: What are some of the reasons you had trouble meeting the health care needs of you and your family? (n=76)
Note: among those who had trouble meeting health care needs of themselves/their family.

Problems Receiving Health Care (Continued)

- Among underserved adults, almost two-thirds (65.8%) report either they or an immediate family member have visited the Emergency Room (ER) in the past year, and one-fourth (24.1%) visited three or more times.

- Key Stakeholder and Key Informant comments support the notion that ER/ED use occurs far more often than is warranted either because the circumstances are unavoidable or they are the result of mental health and/or substance abuse issues for which treatment is lacking.



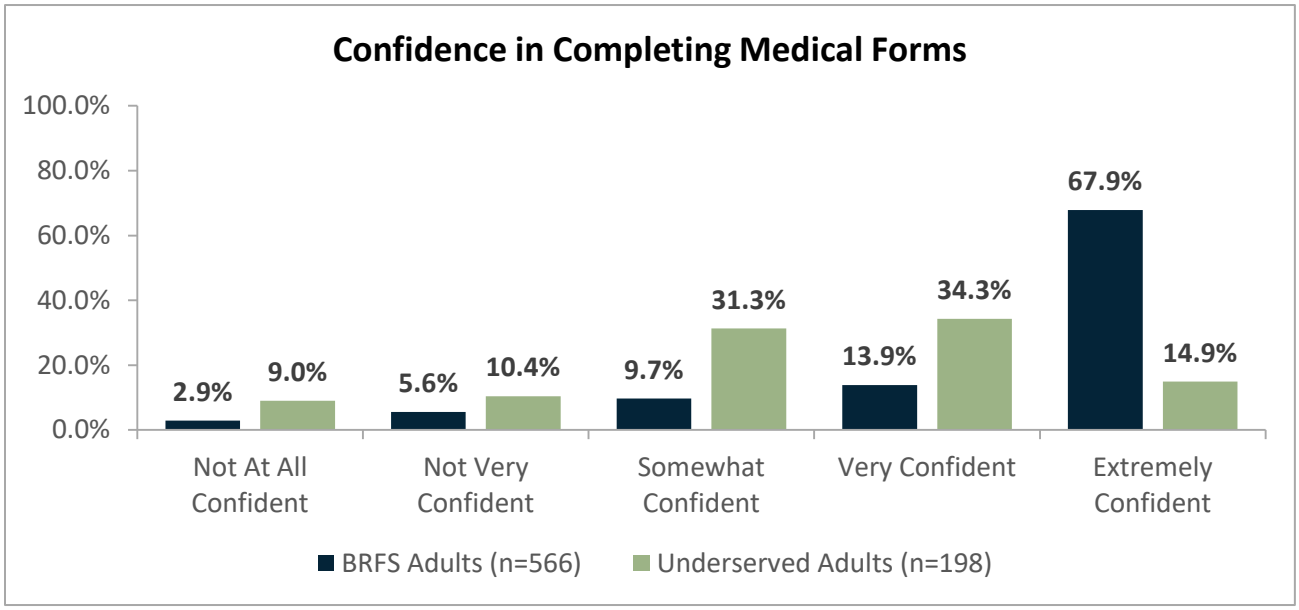
Source: SHGM Underserved Resident Survey, 2017, Q13: In the past 12 months, how many times have you, or an immediate family member, visited the Emergency Room (ER)? (n=199)

Unfortunately, a lot of people still use our emergency department. **For a county of 50,000 people**, we had **29,000 ED visits last year**, so obviously they're coming from more than just our county, but that's a lot when your service area is 50,000. – *Key Stakeholder*

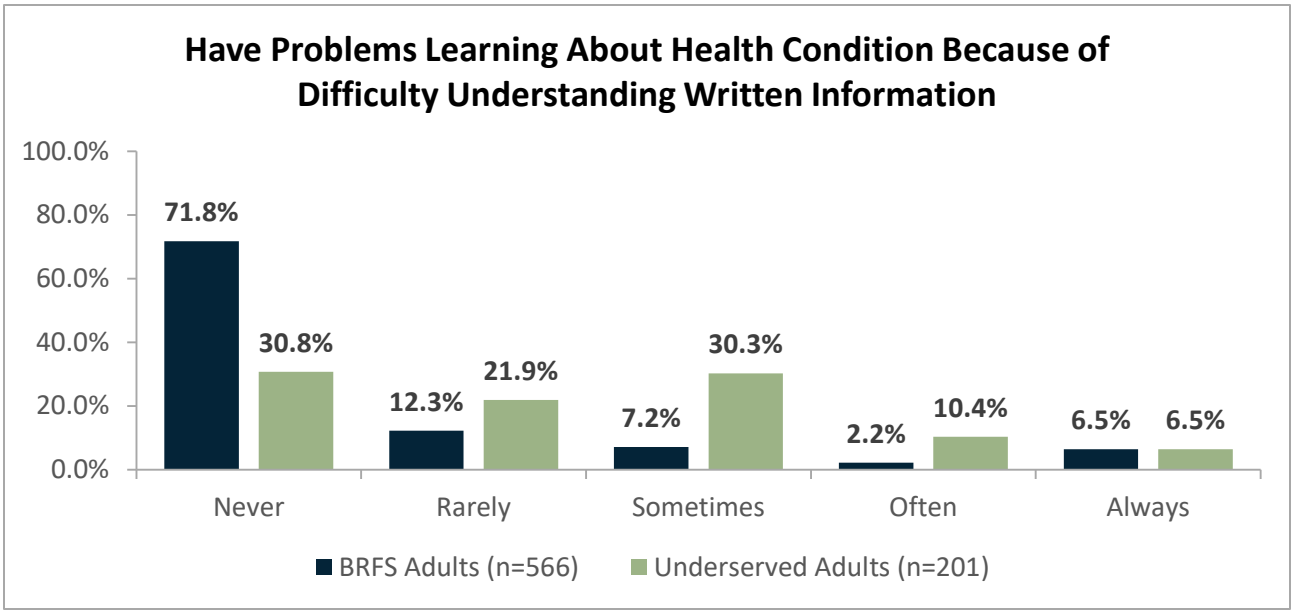
Promotion and increased use of MedNow and convenient care should help **alleviate** access to care and expensive, **unneeded use of the emergency department**. – *Key Informant*

Health Literacy

Underserved adults are more challenged when it comes to health literacy compared to adults in the general population. For example, 81.8% adults in the general population are very or extremely confident in completing medical forms compared to 49.2% of underserved adults.



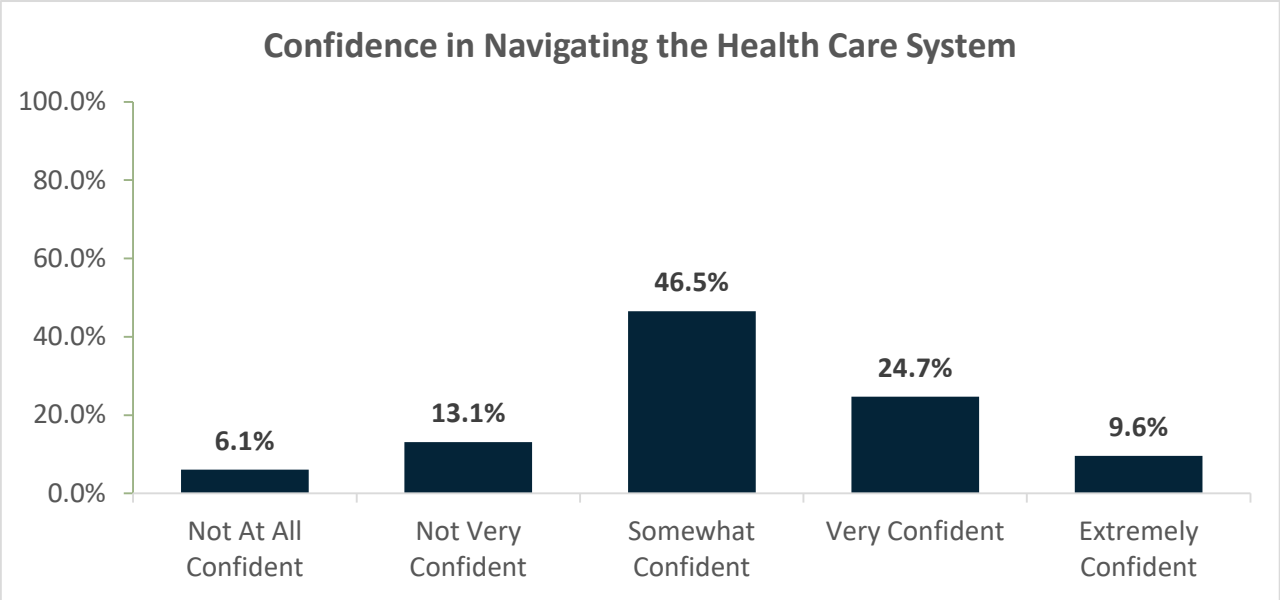
Source: SHGM Behavioral Risk Factor Survey, 2017, Q9.1/SHGM Underserved Resident Survey, 2017, Q19: How confident are you in filling out medical forms by yourself? For example, insurance forms, questionnaires, and doctor's office forms. Would you say….?



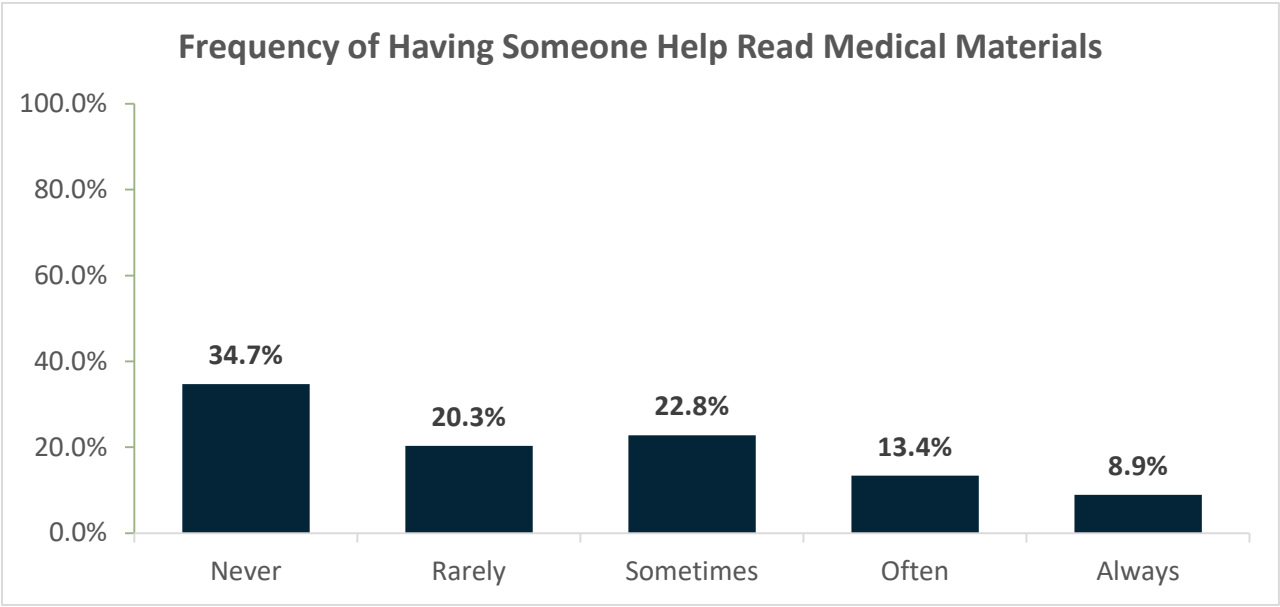
Source: SHGM Behavioral Risk Factor Survey, 2017, Q9.2/SHGM Underserved Resident Survey, 2017, Q21: How often do you have problems learning about your health condition because of difficulty in understanding written information? Would you say…?

Health Literacy (Continued)

- One in five (19.2%) underserved adults are not confident in navigating the health care system and an additional 46.5% are only somewhat confident.
- Further, 22.3% require someone to help them, often or always, read medical materials.



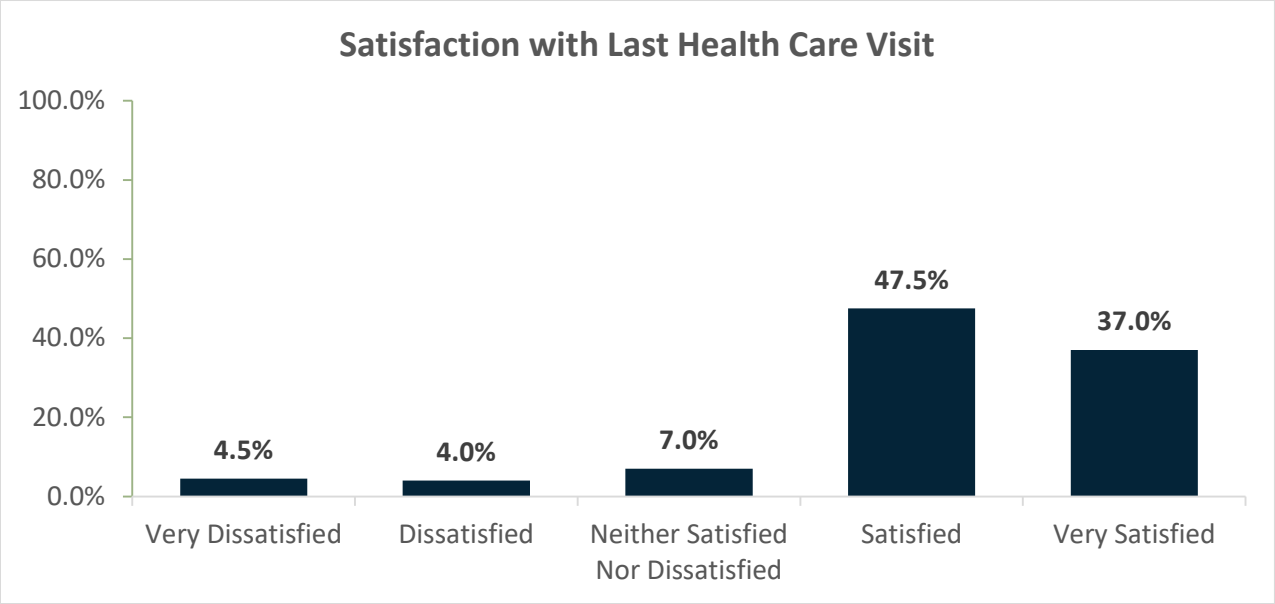
Source: SHGM Underserved Resident Survey, 2017, Q18: How confident are you that you can successfully navigate the health care system? By navigating the health care system, we mean knowing: how to use your health plan or insurance, what your plan covers, how to read your statements, where to go for services, how to find a primary care provider, what your options are for treatment, etc. Would you say…? (n=198)



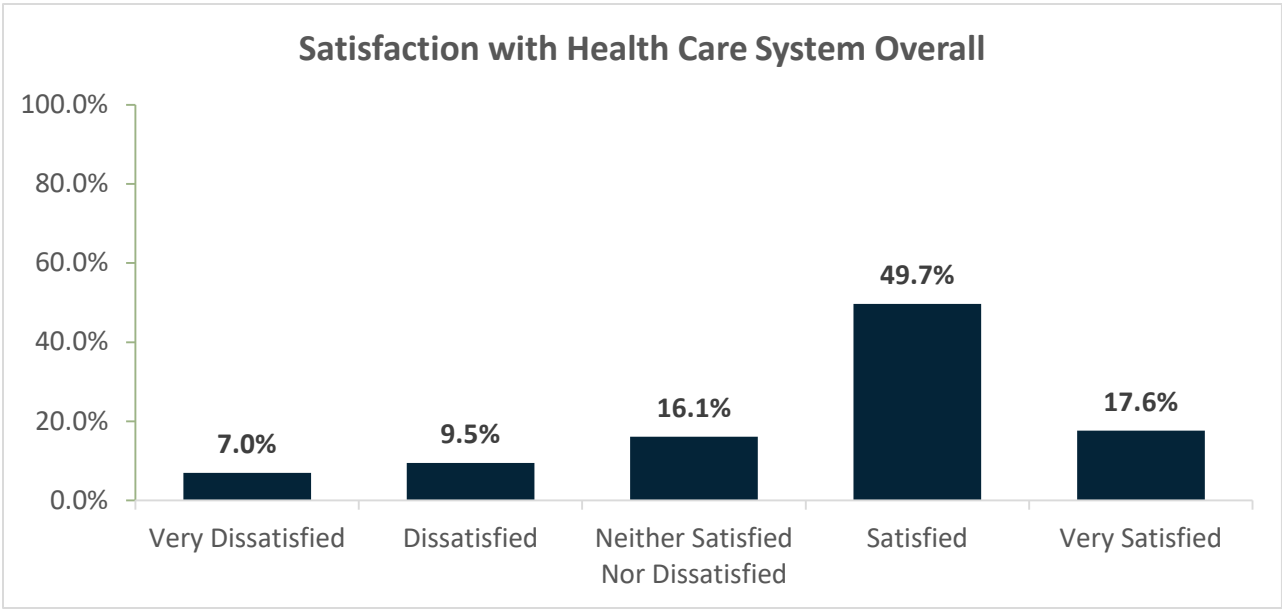
Source: SHGM Underserved Resident Survey, 2017, Q20: How often do you have someone help you read medical materials? For example, a family member, friend, caregiver, doctor, nurse, or other health professional? Would you say…? (n=201)

Satisfaction with Health Care System

The vast majority (84.5%) of underserved adults are satisfied with their last health care visit and two-thirds (67.3%) are satisfied with the health care system overall.



Source: SHGM Underserved Resident Survey, 2017, Q4: How satisfied were you with your last visit for health care? (n=200)



Source: SHGM Underserved Resident Survey, 2017, Q6: How satisfied are you with the health care system overall? (n=199)

Satisfaction with Health Care System (Continued)

Underserved residents who are satisfied with their last health care visit cite the quality of care, providers offering solutions to problems, attentive providers who listen, and being able to easily schedule an appointment and get in to see the provider when necessary as reasons for satisfaction.

Quality of care	I feel my doctor not only **cares for my health but cares for who I am as a person**. I feel he wants me at my best and **even cares about my family**. – *Underserved Resident* I felt my doctor **took the time to perform** a **thorough exam** and **diagnosis**. – *Underserved Resident* Have been seeing my doctor for quite some time and **am quite at ease around her**. **It's like going to visit a friend**. – *Underserved Resident*
Offers solutions/meet needs	They **helped me figure out what kind of birth control to get**. – *Underserved Resident* My doctor **listens to my concerns**, **offers advice**, usually has **several options for me to consider**. – *Underserved Resident* My health care provider **assisted me in quitting smoking**. – *Underserved Resident*
Attentive providers	**Very kind** and **understanding** about my concerns and **listens** to how I feel about the home I am in. – *Underserved Resident* My HCP talks to me about what is going on in my life that may not seem to have any connection to what is affecting me medically. – *Underserved Resident*
Easily accessible	I was **able to get an appointment within a week** of when I called. The doctor **listened to me and answered my questions**. – *Underserved Resident*

Source: SHGM Underserved Resident Survey, 2017, Q5: (If satisfied with last health care visit) Why do you say that? Please be as detailed as possible. (n=110)

Satisfaction with Health Care System (Continued)

Conversely, those dissatisfied with their last health care visit cite incorrect or ineffective treatment, wait times that were too long, and incompetent, rude or pushy providers as reasons for dissatisfaction.

Incorrect/no treatment	I have degenerative disk disease and arthritis from my neck to my lower back. I was diagnosed 4/2017 (WCFHC). Baldwin FHC **tells me there is nothing wrong**. If there is nothing wrong then **why am I in pain every day**, all day and why do my limbs go numb? I honestly **feel that some of these "Doctors" are just in it for the money** and they really **do not care about their patients**. This needs to change. – *Underserved Resident* She **couldn't tell what was wrong for about five appointments** and said, "**it's probably nothing**." – *Underserved Resident* **Still sick** - 2 visits in 2 months - **still not well**. – *Underserved Resident*
Wait time	My **doctor is always 20-30 minutes late**, and is not that great of a listener, but Spectrum (Fremont) doesn't have a lot of options. – *Underserved Resident* Took a **real long time before doctor came in**. – *Underserved Resident*
Incompetent staff/rude	After having my son, staff was **rude to me** and my family, **waited hours before offering to clean my son up**. **Denied me pain medication during labor** and delivery. – *Underserved Resident* The **doctors** were **too pushy**. – *Underserved Resident* **Doctors think there is a pill for everything** and **never follow up**. – *Underserved Resident*

Source: SHGM Underserved Resident Survey, 2017, Q5: (If dissatisfied with last health care visit) Why do you say that? Please be as detailed as possible. (n=16)

Satisfaction with Health Care System (Continued)

Underserved residents who are satisfied with the health care system overall value their health insurance, the quality of care they receive, the attentive and caring providers, and the accessibility of care when they need it.

Good insurance	I have **Medicaid and Medicare** and it **covers all my needs**. – *Underserved Resident* I have a **Medicare Supplemental** insurance and it **covers what Medicare doesn't**. – *Underserved Resident* I have Blue Cross Blue Shield Plan F and it **covers everything so far**. – *Underserved Resident* I don't see a provider often, but when I have, I felt it went well. **Truly my insurance is good and that is what determines my satisfaction overall with my health care provider**. – *Underserved Resident*
Quality of care	Because I am **pleased with the care I receive**. – *Underserved Resident* My doctor's office **always takes care of my family's needs** and we've never had a problem with them. – *Underserved Resident* Everywhere I've been recently the **staff is great** and the **systems are good**. – *Underserved Resident*
Attentive providers	**Doctors takes time with the patients**. Very **knowledgeable**. – *Underserved Resident* Does a **good job checking on a health problem** and **takes their time**. – *Underserved Resident* They are **understanding no matter how small the issue is**. – *Underserved Resident*
Easily accessible	I am **able to see the doctor**. There is an **online portal to view my information**. – *Underserved Resident*

Source: SHGM Underserved Resident Survey, 2017, Q7: (If satisfied with the health care system) Why do you say that? Please be as detailed as possible. (n=99)

Satisfaction with Health Care System (Continued)

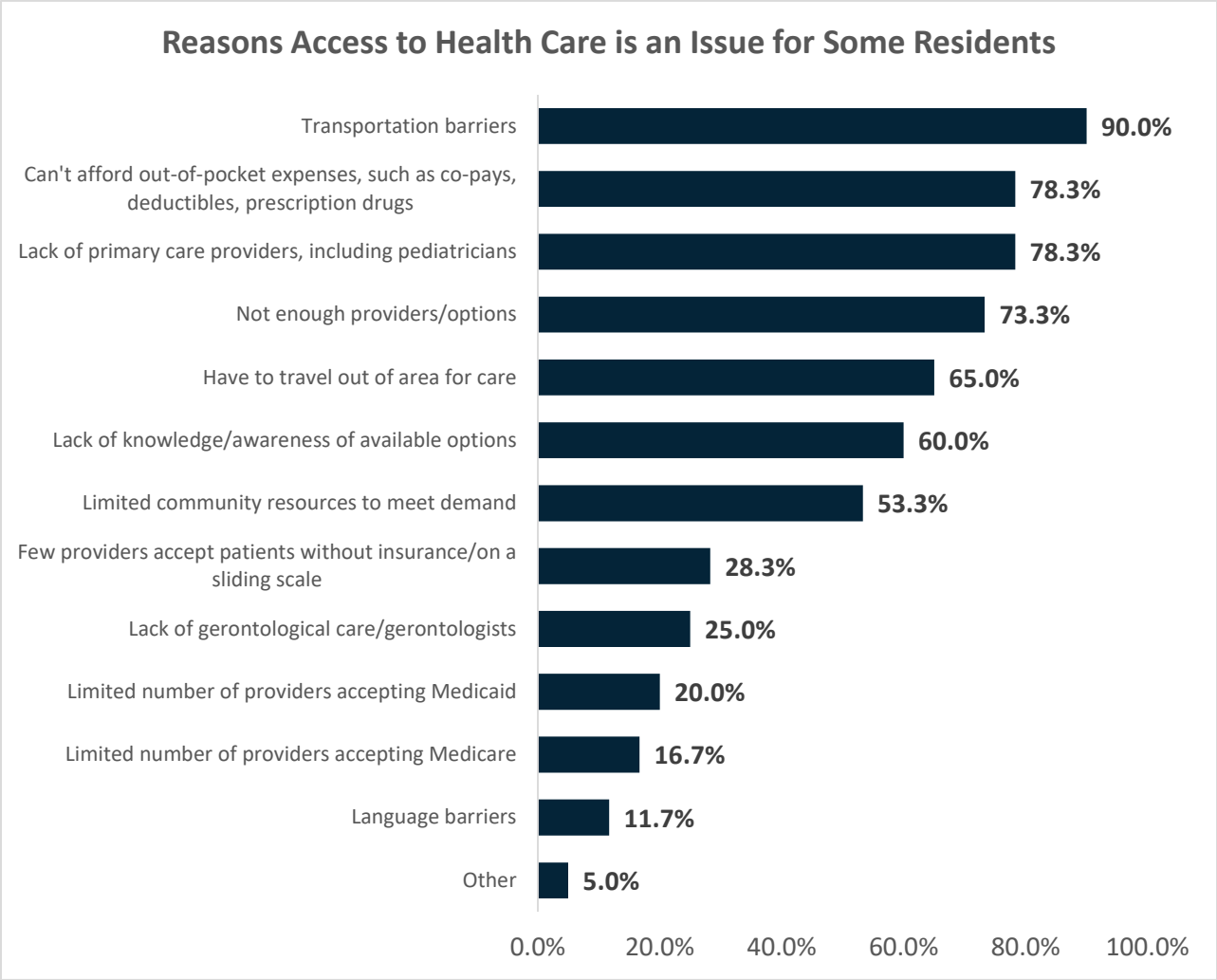
Conversely, those dissatisfied see a system that is all about profit at the expense of quality of care, provider's lack of bedside manner, incorrect diagnosis or treatment, a system that is very costly, wait times that are too long, and an overall system that is overwhelming because of its complexity.

Bad model/for profit	Its **focus is money** - billable services - **seeing as many patients as possible** - **not the individual**. – *Underserved Resident* They just seem to be **more about money than anything**. – *Underserved Resident* There is **no tolerance for natural**, **holistic**, **integrated managed care**. – *Underserved Resident*
Flawed doctor/patient relationship	Some **"Doctors" don't seem to care**. They are **always in a rush** and **don't want to listen**. – *Underserved Resident* They **don't treat us very well**. **No bedside manner** and they **don't care**. – *Underserved Resident*
Complicated/complex	It's **overwhelming**, **long waits for good doctors**, *billing comes from everywhere*! Especially surgery bills. You **don't ever get down to the bottom line**. – Underserved Resident
Incorrect/negligent treatment	During my daughter's NICU stay, **doctors messed with her feedings**, **withheld information**. – *Underserved Resident*
Cost	**Visits cost too much**. **Tests are expensive**. **Drugs too expensive**. – *Underserved Resident*
Wait times too long	It is a **rat race to get an appointment**, when I'm sick I **can't get in for weeks**, and **billing is never accurate**. – *Underserved Resident*

Source: SHGM Underserved Resident Survey, 2017, Q7: (If dissatisfied with the health care system) Why do you say that? Please be as detailed as possible. (n=32)

Barriers to Health Care

- Almost all (96.8%) Key Informants believe access to health care is a critical issue for some residents in the community.
- Nine in ten (90.0%) believe the top barrier to care for this group is transportation issues.
- Other major barriers are the inability to afford out-of-pocket expenses such as co-pays, deductibles, spend-downs, and prescription drugs; lack of providers; lack of programs and services; and lack of awareness of the programs and services that currently exist.

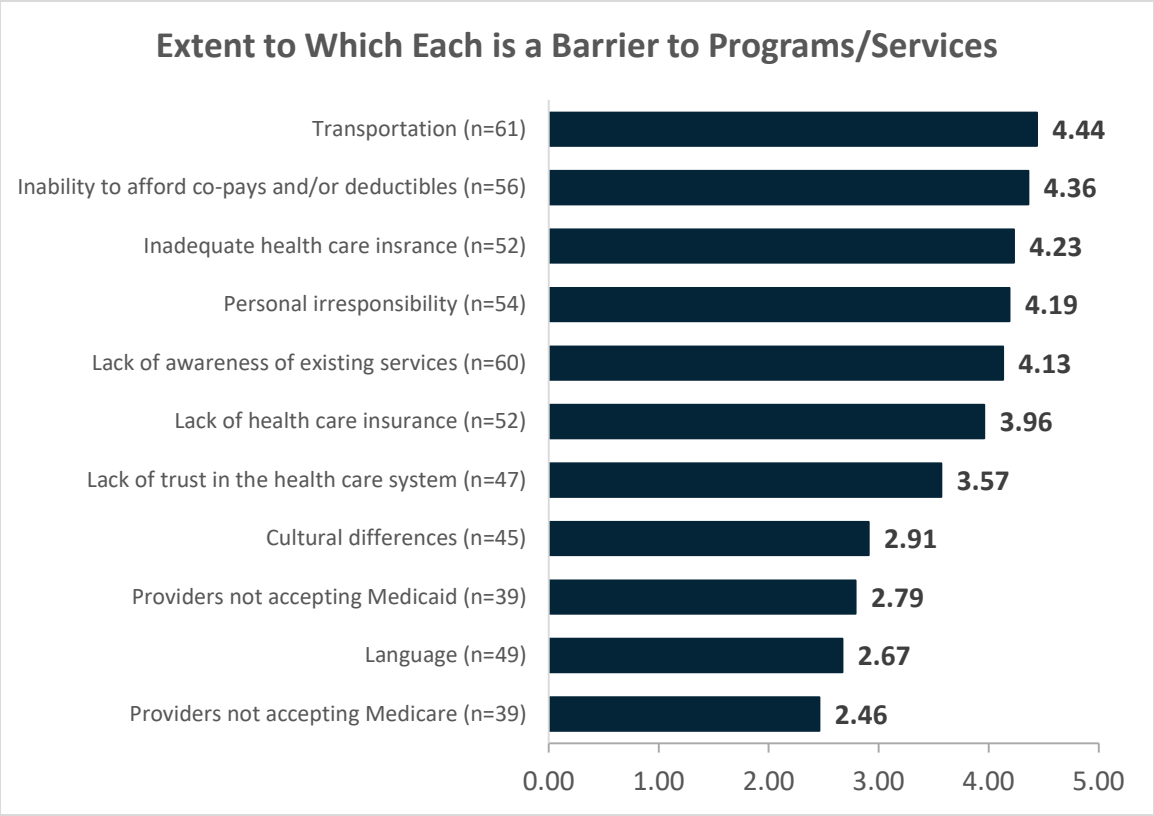


Source: SHGM Key Informant Online Survey, 2017, Q4: Do you believe that access to health care is a critical issue for some residents in your community? (n=63); Q4a (If yes) In your opinion, why is access to health care an issue for some residents in your community? (n=60)

Barriers to Health Care (Continued)

- When rating the extent to which something is a barrier to health care, Key Informants, again, place transportation at the top, followed by an inability to afford out-of-pocket costs, inadequate insurance, personal irresponsibility, and lack of awareness of existing programs/services.

- Key Stakeholders also highlight the cultural barriers in terms of distrust of the system.



Source: SHGM 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.

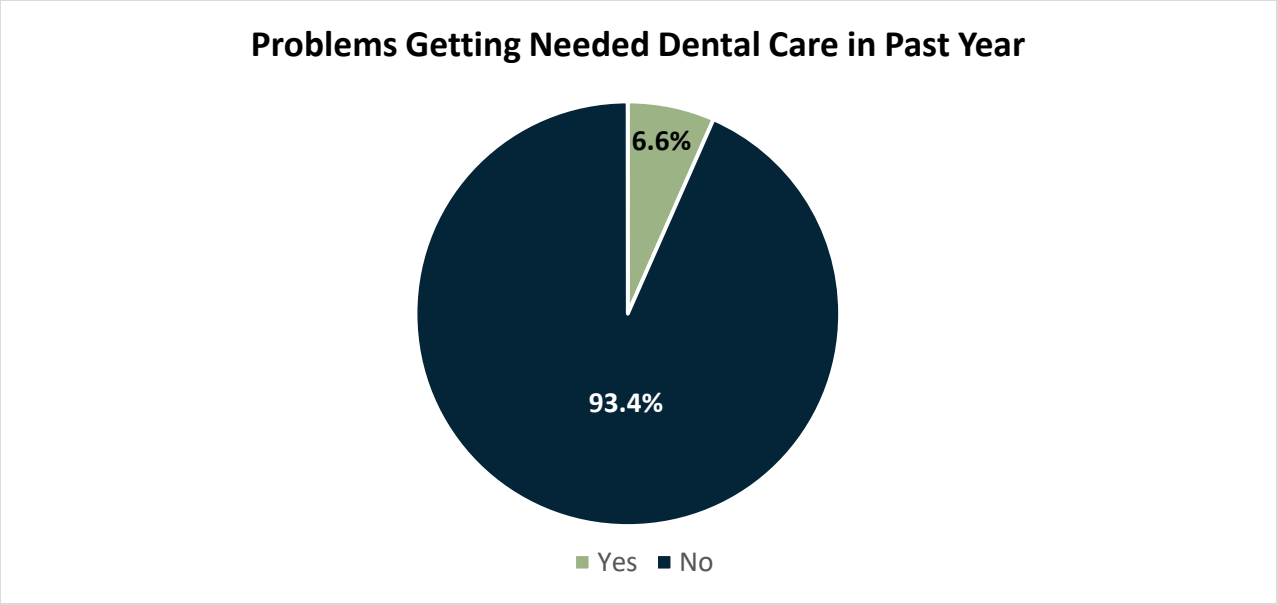
Definitely **transportation** has been an issue that's been talked about in our county for the ten years I've been here. **Lack of awareness of existing services** falls into the **health care literacy**. We'll find cases where **people don't know how to access the system or don't seek health care because they've had bad experiences** somewhere along the line that has had an impact on their decision whether to go seek medical treatment or not. If you're poor, you have no access; you don't know the symptoms of something or what's going on, and you just say, "It'll go away" or something like that. – *Key Stakeholder*

Transportation is an issue. So, we're doing a project with **My Way to Thrive**, and one of the things that we did is we did some in-depth interviews with some of the people that use services at TrueNorth to try to understand some of their needs and issues, and what came out of that was a **cultural distrust of health care** as far as **having had a bad experience** with it and also it's **too complex and people don't know how to navigate it**, and so they just kind of give up and don't try to access it anymore, so being too complicated, being too intimidating, having bad experiences with it; we definitely hear and see that out in the community. – *Key Stakeholder*

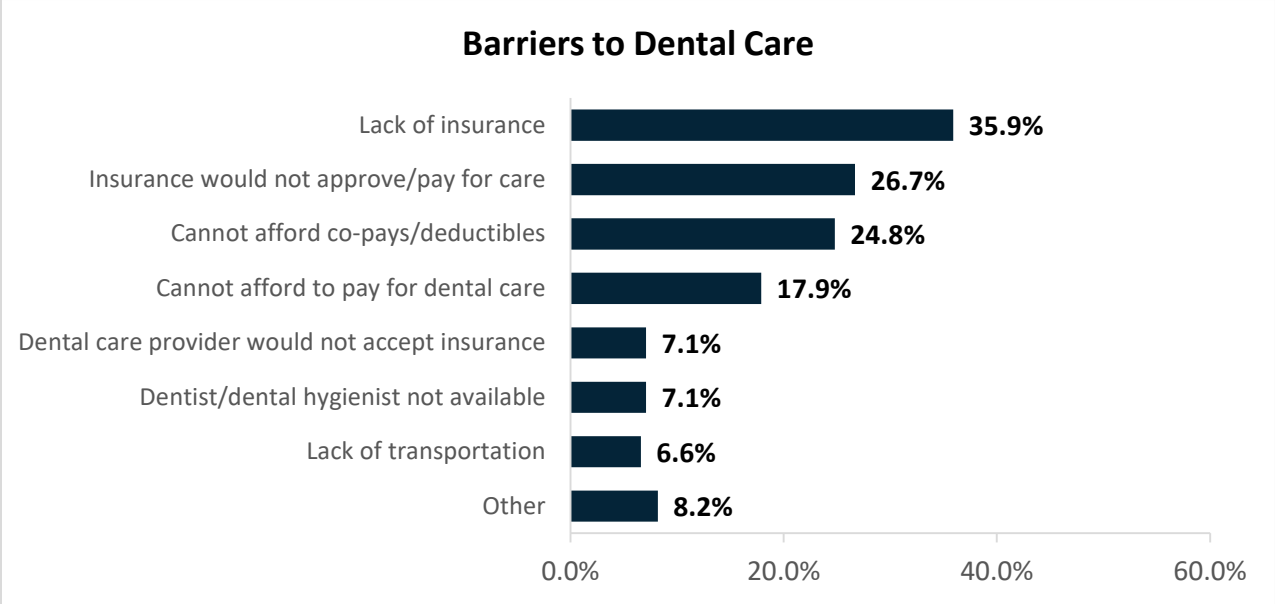
Source: SHGM Key Stakeholder Interviews, 2017, Q7: Are there any barriers or obstacles to health care programs/services in your community?' Q7a: (If yes) What are they? (n=6)

Barriers to Dental Care

Few (6.6%) area adults had problems receiving needed dental care in the past year, but those who did reported lack of insurance, having insurance that wouldn't cover procedures, and the inability to afford co-pays and deductibles as the top obstacles to care.



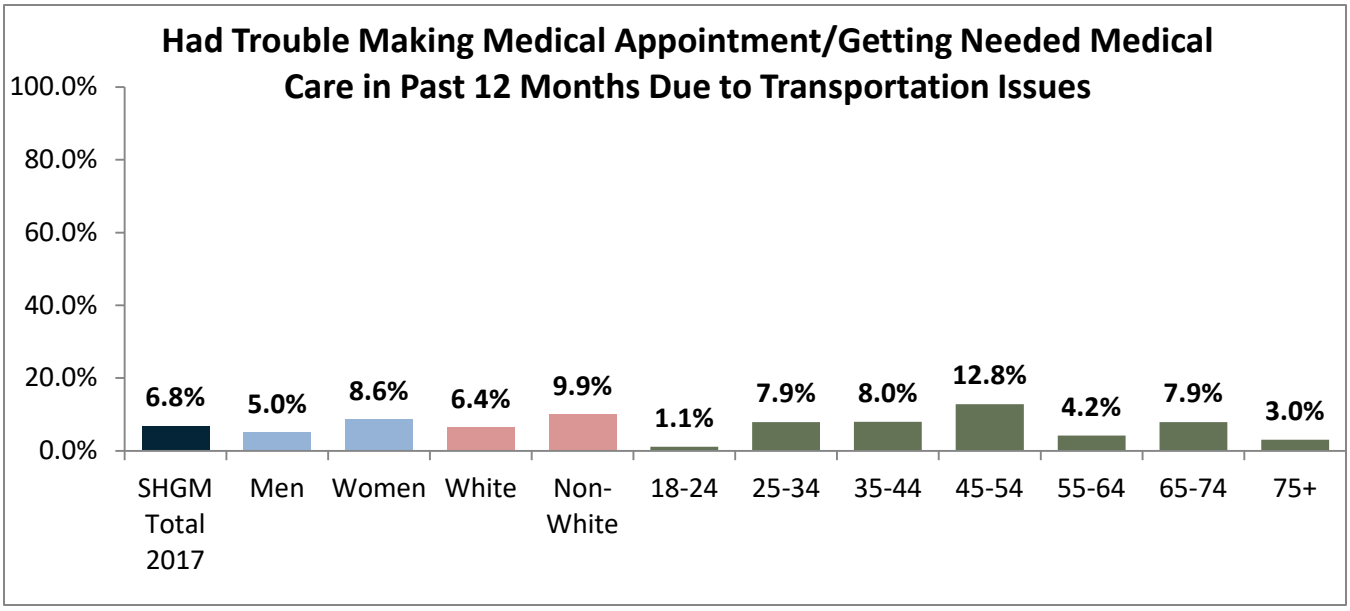
Source: SHGM Behavioral Risk Factor Survey, 2017, Q19.2: In the past 12 months, have you had problems getting needed dental care? (n=560)

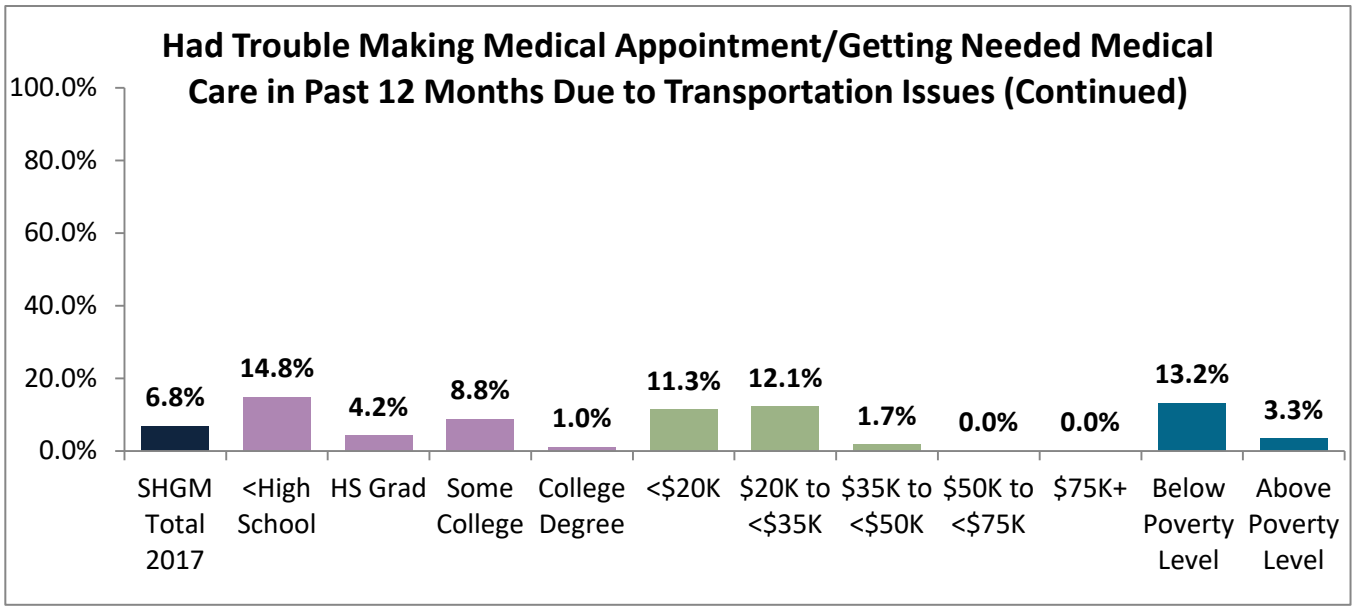


Source: SHGM Behavioral Risk Factor Survey, 2017, Q19.3: (If yes) Please provide the reason(s) for the difficulty in getting dental care. (Multiple response) (n=35)

Transportation as a Barrier to Care

- Almost one in fifteen (6.8%) SHGM area adults had trouble making a medical appointment or getting needed medical care in the past year because of transportation issues.
- Those most likely to have transportation issues come from groups that are women, are non-White, have less than a high school diploma, and have incomes below $35K.

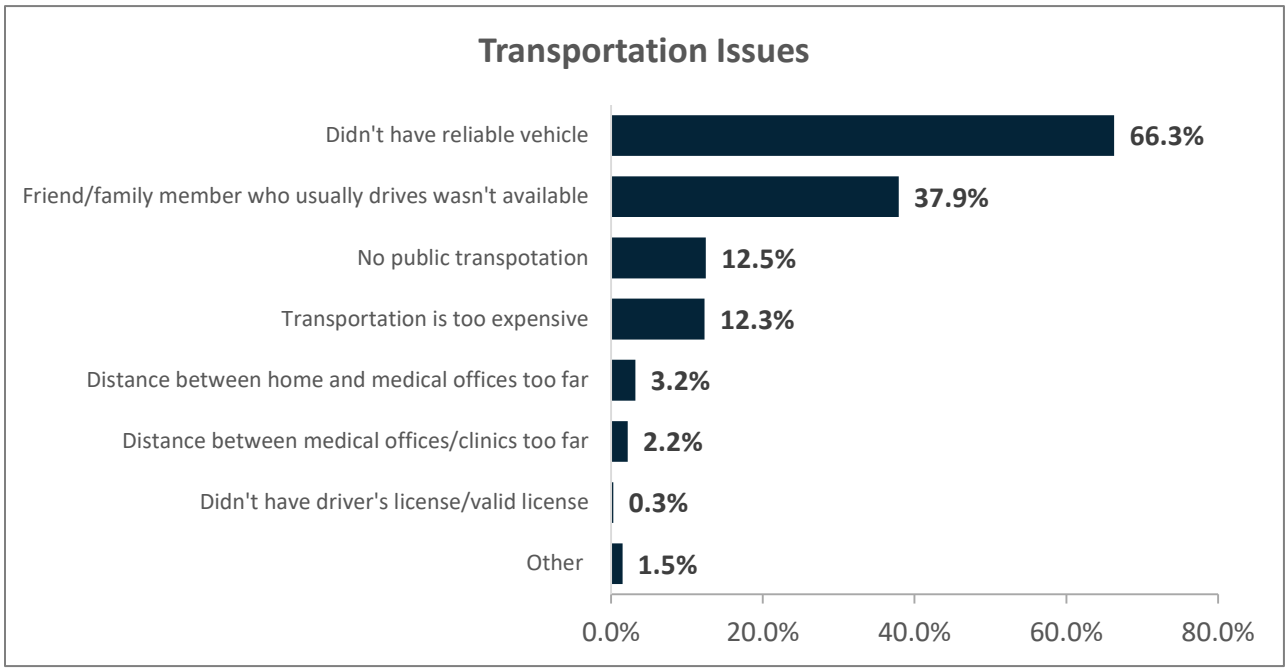




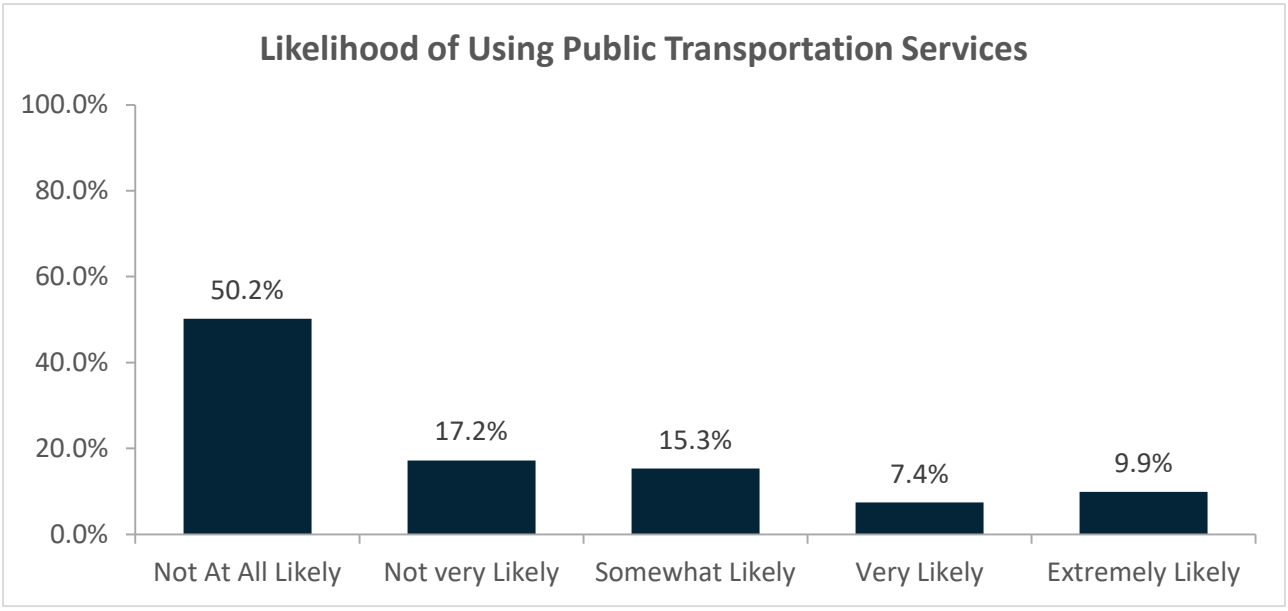
Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.8: In the past 12 months, did you have trouble making a medical appointment or getting needed medical care because of transportation issues? (n=568)

Transportation as a Barrier to Care (Continued)

- Among those who had transportation issues, lack of a reliable vehicle was, by far, the main barrier, followed by family or friends being unavailable.
- When all area adults were asked how likely they were to use public transportation if it were available, two-thirds (67.4%) said not likely.



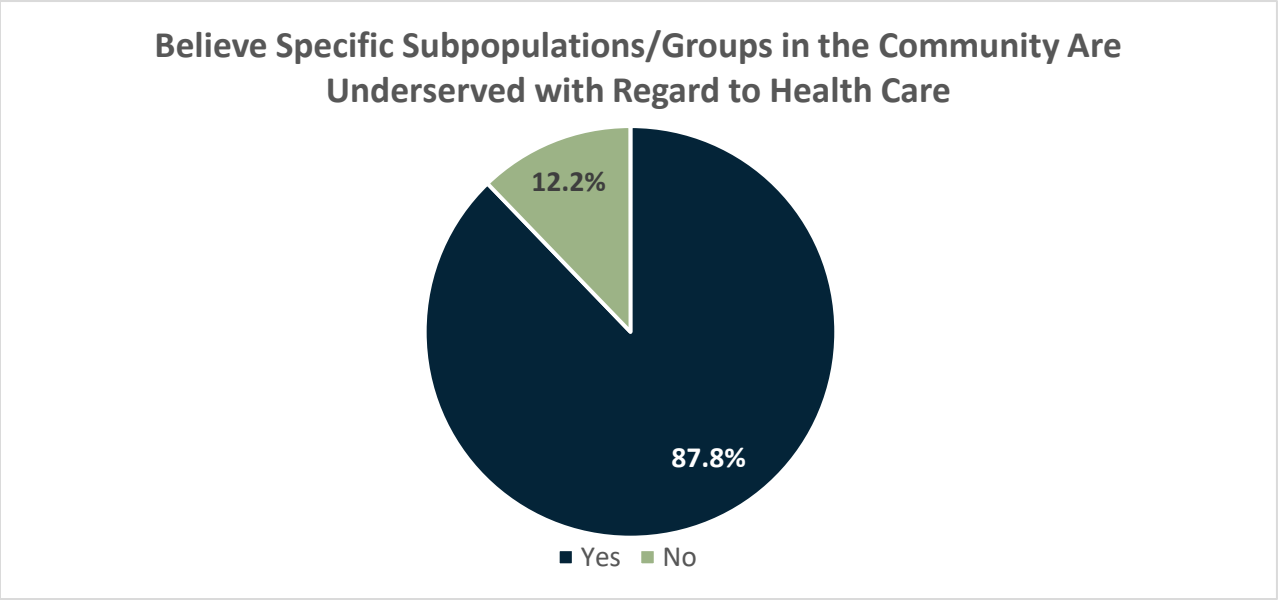
Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.9: (If yes) What were the transportation issues? (Multiple response) (n=33)

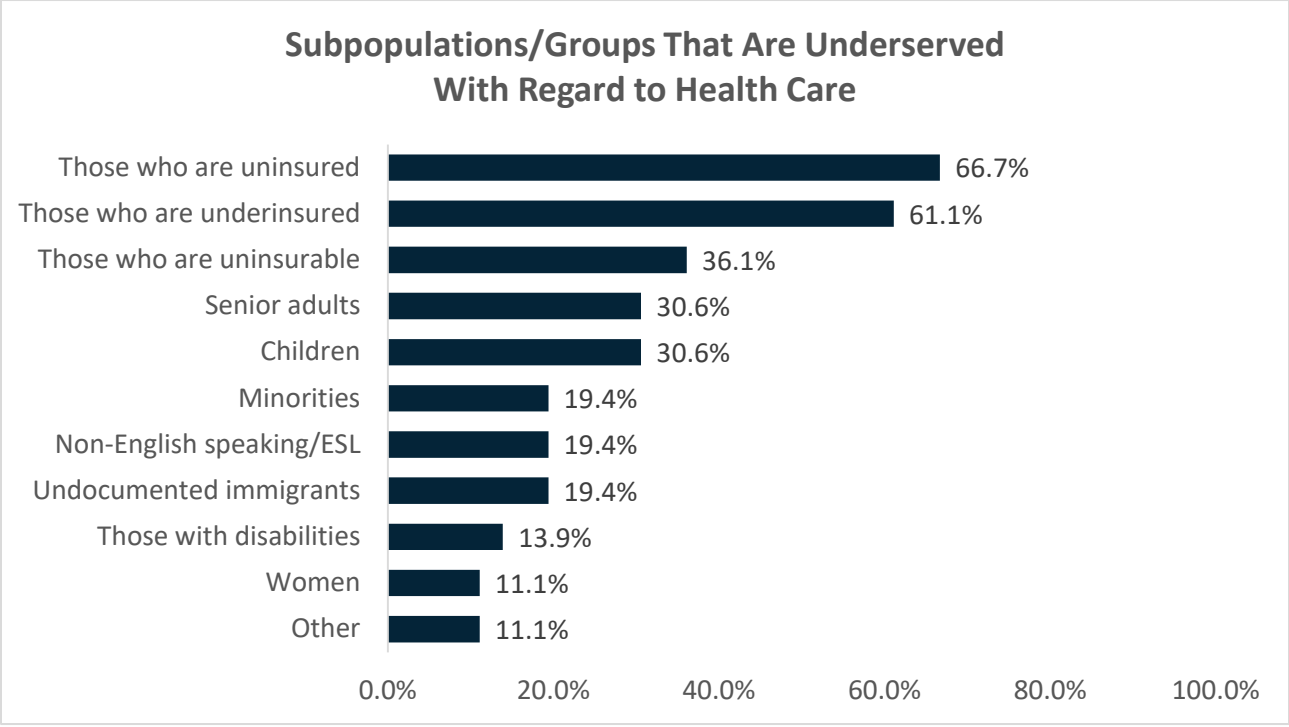


Source: SHGM Behavioral Risk Factor Survey, 2017, Q3.10: If public transportation were made more available (e.g., community vans, Uber, buses, etc.), how likely would you use these services? Are you….? (n=552)

Underserved Subpopulations

Nearly nine in ten (87.8%) Key Informants believe specific subpopulations, or groups, in the community are underserved with regard to health care, and those most underserved are the uninsured and the underinsured.





Source: SHGM 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=41); Q5a: (If yes) Which of the following subpopulations are underserved? (n=36)

Underserved Subpopulations (Continued)

Key Stakeholders and Key Informants believe access to health care programs and services is a critical issue for vulnerable and/or underserved subpopulations, because in addition to experiencing obstacles receiving care even when they have coverage, there are numerous other barriers preventing them from living optimally healthy lives. In addition to lack of services for mental health and substance abuse, there is a dearth of dental services for underserved residents.

Insurance not utilized because of out-of-pocket expenses	**No one is addressing the underinsured with huge copays and deductibles issues**. We don't have enough providers for those in our community who are seeking care. How would we handle it if everyone who needs care, but doesn't seek it due to copays/deductibles, were to try to get services? – *Key Informant* **Spend-down is a problem because of the formula**. I understand the formula but I don't agree with it. In other words, **they have to meet that spend-down in order to get Medicaid services**, **many of which can't do that, so they're basically uninsured**. That's a systemic issue statewide. – *Key Informant* **People wait until they are very sick before presenting due to co-pays**, **deductibles**, etc. – *Key Stakeholder* Promises of ACA of reduced premium and easy access have not been fulfilled. **Deductibles are causing families to make choices between basic needs and healthcare treatment**. – *Key Informant* The **working middle class is pinched**. **Insurance is too expensive**, **care is too expensive**. So, **they delay care**. – *Key Stakeholder*
Too many barriers to overcome	Large population who is underserved because of **insurance barriers**, **transportation**, **stigma**, etc. – *Key Informant* For those who are unemployed or underemployed or are on disability, the lack of daily schedule leads to **poor sleep**, **poor diet**, **isolation**, and a **spirit of discouragement** and **disappointment** mingled with **warped entitlement**. – *Key Informant*
Lack of treatment options for dental care/mental health	The majority of our clientele, of course, is Medicare and Medicaid. **Medicare doesn't pay for any dental** - or not very much of it anyhow; **that's always an issue**. – *Key Stakeholder* We **need to partner with universities** to provide vision and **dental clinics** locally to address **uninsured/underinsured persons who can't afford care** or copays/deductibles are too high. – *Key Informant*

Source: SHGM Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in your community, especially the underserved? (n=6); Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in the community? (n=72); Q1a: Why do you think it's a problem in your community? (n=72)

Effectiveness of Existing Programs and Services

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

- That said, there is an opportunity to strengthen these partnerships by obtaining feedback from area residents, the consumers, as to what they deem important to health and health care.

I think the **coordination** and the **communication** with the group that we have, LiveWell, has been beneficial.

I think we have a **continuum of care within our system** with **home care**. We do have **two nursing homes** (skilled nursing facilities) in our community, and we also have one of our physicians who services the facilities as well - the medical director sees patients. So, I think we have a pretty **good connection through post-acute care**.

We've done a lot in the last three years. **We're in the schools**, we're **targeting smoking** but we're just in the launching stage. I think that there's probably a lot of **people** within the community that are **disengaged that we haven't figured out a way to reach**, so we may be doing a lot for the kids that are in school and a lot for the people that want to smoke and come in to health care, but the **people that are on the periphery that maybe aren't engaged** with health care. We **haven't figured out a way to outreach to any of them**.

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 for the community or what the residents think is best for them, and I think we have to also **take into consideration what they feel is important** in the community. For example, we may think that healthy eating is a great need in the community, but the majority of the community can't take advantage of these healthy eating opportunities because of various barriers (e.g., transportation).

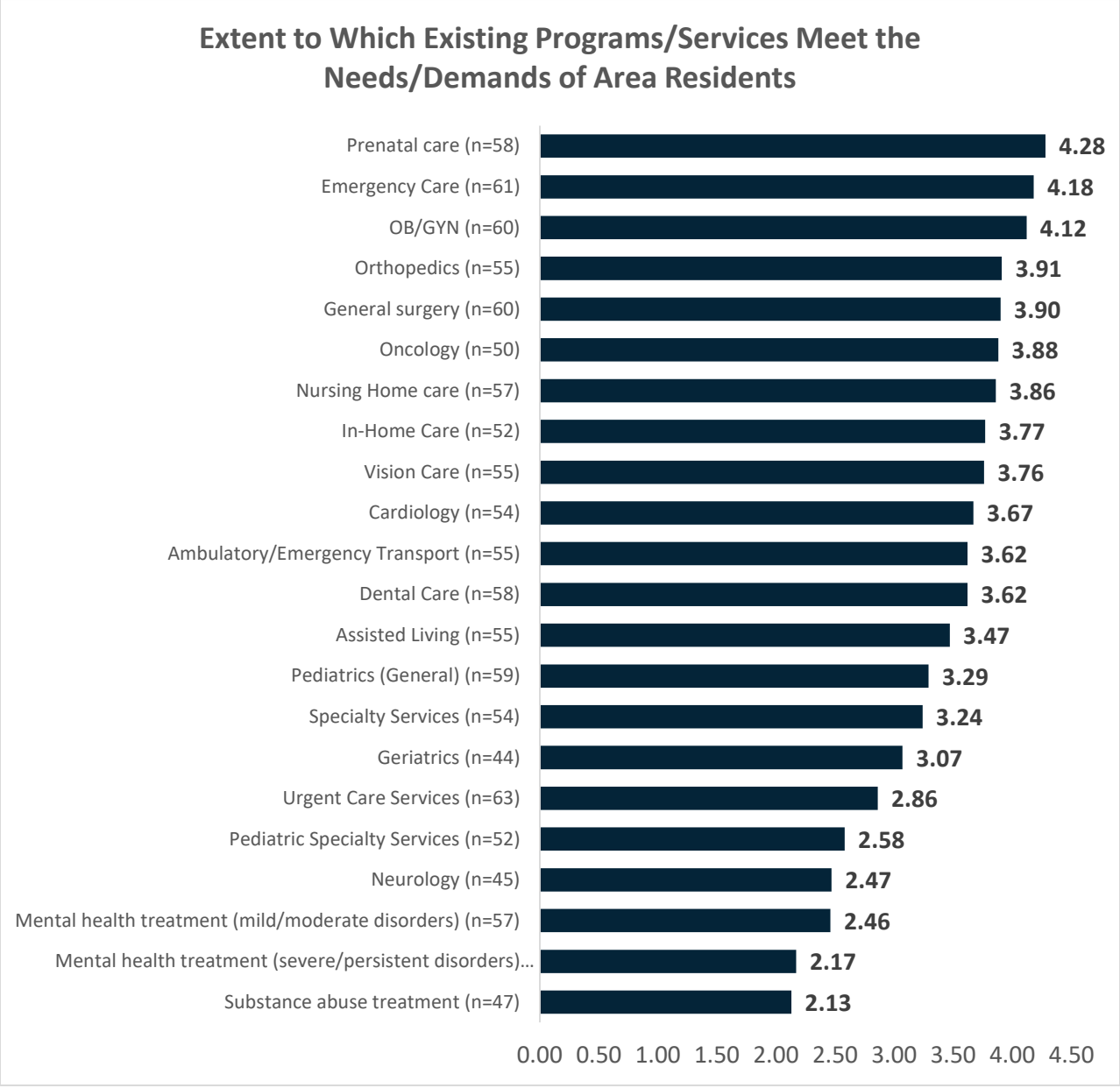
There's always room for improvement. There is an **initiative** that our agency, DHHS, and **TrueNorth** is involved within the context of **integration of services**, better integration of services. Collectively, **we serve many of the same folks, so we're trying to develop a shared database** or limited database, and one of the barriers is Mental Health because we have a highly regulated system in protecting privacy and confidentiality.

Source: SHGM 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=6); Q4a: Why do you say that? (n=6)

Gaps in Programs and Services

- Key Informants say the programs and services that meet the needs and demands of area residents best include prenatal care, emergency care, OB/GYN, orthopedics, general surgery, oncology, and nursing home care.

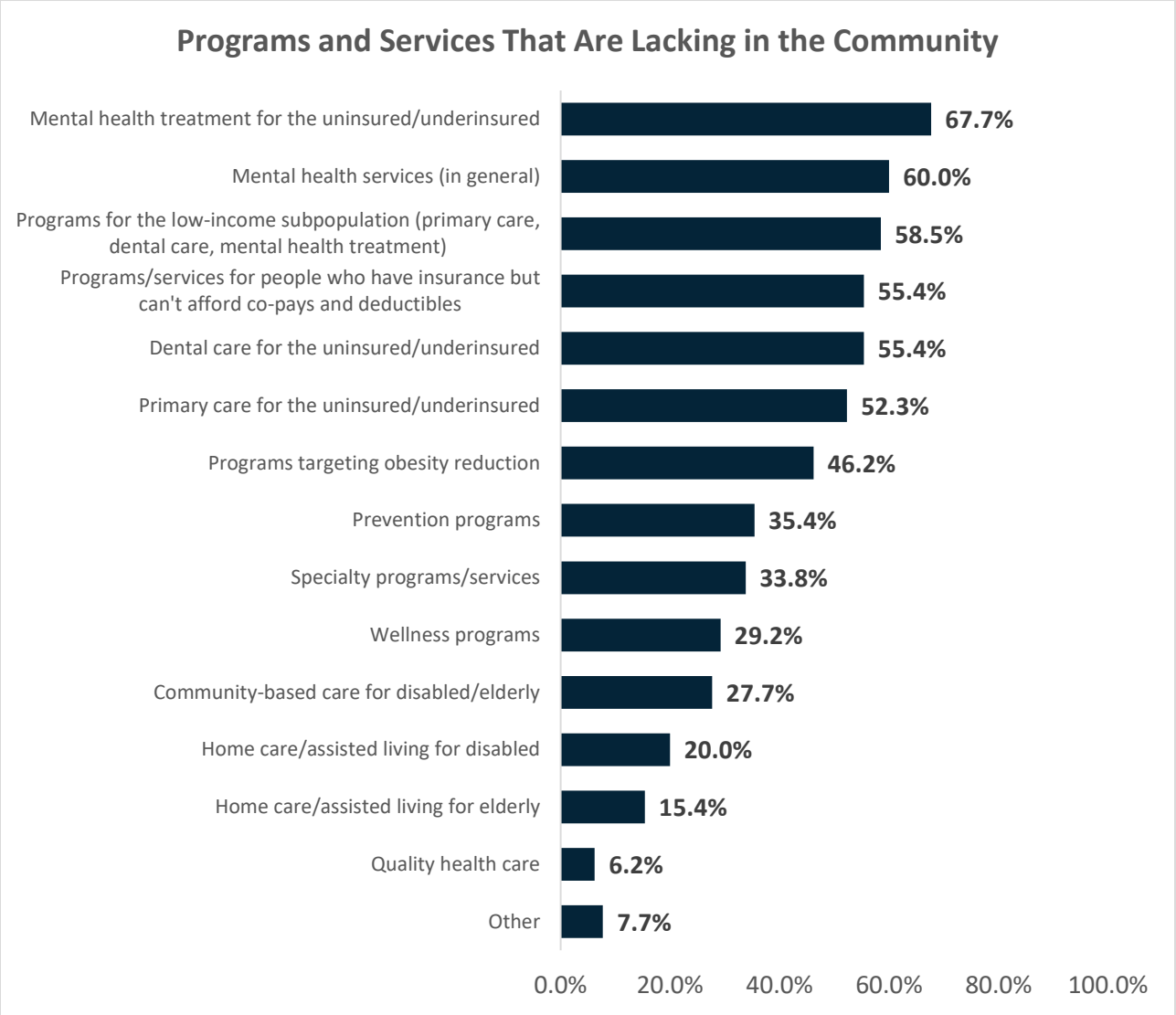
- Conversely, substance abuse treatment, mental health treatment for all disorders (from mild to severe), neurology, pediatric specialty services, and Urgent Care services do not meet the needs and demands of area residents well.



Source: SHGM 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

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



Source: SHGM Key Informant Online Survey, 2017, Q7: What programs and services are lacking in the community, if any? (n=65)

Specific Programs and Services Lacking in the Community (Continued)

- Key Informants report on a number of specialty services that are lacking in the community, including dermatology, GI, services for memory loss, ENT, services for movement disorders, and urology related services.

- Further, Key Informants discussed the difficulty in getting patients into specialty services even when they are local because of the length of time it can take to get an appointment. Because driving out of county for services can be burdensome, many choose to forego needed treatment.

- ✓ Dermatology (3)
- ✓ Gastrointestinal (3)
- ✓ Alzheimer's/dementia/memory loss (2)
- ✓ ENT (2)
- ✓ Movement disorders (Parkinson) (2)
- ✓ Urogynecology (2)
- ✓ Urology (2)
- ✓ Allergists
- ✓ Bariatric surgery
- ✓ Endocrinology
- ✓ Internal medicine
- ✓ Maternal child care
- ✓ Pain Management
- ✓ Palliative care
- ✓ Radiation therapy
- ✓ Stroke Team

Many specialties do come to Fremont but when they do it is very limited and I have seen **patients** literally, **rather die than drive to Grand Rapids**. They **went on hospice rather than pursue further treatment in GR**. Sometimes patients need an appointment with a specialist within a week or two but they **can't get them in locally for a month**. They **may end up in the ER waiting for that appointment**. On some occasions COA can transport the elderly to GR or Muskegon but not all are comfortable with that.

Even the trip to Reed City for some cancer patients can be a burden, depending on their location in the county due to transportation.

There is the cancer and specialty clinic in Fremont, but they **take months to a year to get into**.

Since it is a rural area, most specialty services are **referred out to bigger places** like Grand Rapids, Traverse City, or Lansing.

Source: SHGM Key Informant Online Survey, 2017, Q6a: What specialty services are currently lacking in your community? (n=28)

Specific Programs and Services Lacking in the Community (Continued)

Underserved residents cite myriad programs, services, or classes that they perceive are lacking in the community; however, the two greatest areas of need are (1) access to fitness/exercise programs and facilities, including activities for families and children, as well as seniors, and athletic opportunities such as basketball, swimming, and yoga, and (2) nutrition programs that focus on healthy eating and cooking, access to food via food trucks, food pantries, and healthy grocery stores.

- ✓ Gyms/exercise facilities/fitness classes (13)
- ✓ Nutrition/cooking classes (healthy eating and cooking)/vegetarian/vegan (8)
- ✓ Dental/dental specialists (4)
- ✓ Education/adult education/GED/High School (4)
- ✓ Food access (e.g., free food, food trucks, pantries) (4)
- ✓ Athletic opportunities (e.g., basketball camps, basketball teams, races, swimming) (3)
- ✓ Activities for families (e.g., exercise programs) (2)
- ✓ Better activities for seniors (e.g., places for seniors to meet) (2)
- ✓ Farmer's markets (2)
- ✓ Healthy grocery stores (2)
- ✓ Hearing (2)
- ✓ Mental health/psychiatry (2)
- ✓ Obesity/weight loss classes (2)
- ✓ Pediatricians (2)
- ✓ Smoking cessation (2)
- ✓ Social health/loneliness/social groups (2)
- ✓ Vision/visually impaired (2)
- ✓ Bariatric
- ✓ Counselors
- ✓ Evening clinic hours
- ✓ Help with housing when you have Section 8
- ✓ Homeless programs/shelters for homeless families
- ✓ Job training
- ✓ Mentoring programs
- ✓ More water related exercise programs that help people with health issues due to physical disabilities
- ✓ NA meetings
- ✓ Pain and MS specialist
- ✓ Post birth physical recovery classes for new moms
- ✓ Preventative classes
- ✓ Something to prevent teen pregnancy
- ✓ Special needs community/knowledge of special equipment
- ✓ Substance abuse specialist (addictionologist)
- ✓ There should be programs that help people meet their deductible
- ✓ Transportation to appointments
- ✓ Walk-in services for veterans at no cost
- ✓ Wellness
- ✓ YMCA

Source: SHGM 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=85)

Specific Programs and Services Lacking in the Community (Continued)

- Similar to Key Informants, Key Stakeholders report the SHGM area lacks programs and services related to mental health. Also, echoing underserved residents, there is a real need for opportunities to purchase healthy food and to learn ways to properly cook fruits and vegetables, as well as a need for places to be active and exercise, especially in the winter months. There is an additional need for shelters for victims of domestic violence or homeless individuals.

The biggest one, besides **behavioral medicine**, is **urology**. We have tried to get a urologist into our community for the last nine or ten years. We're serviced by a group out of Muskegon, so patients can have access to the specialists, but that care goes to Muskegon; it's **not treated here in Newaygo**. I think from a critical access hospital standpoint we provide a pretty strong array of services. The things that make people travel are things like **urology** or **ENT**. They **have to travel to Muskegon**, and obviously the specialties, but I think the basic core services are very well met by our facility here in Newaygo.

Mental health services if you are mild - so, just straight **depression**. Our **Community Mental Health can only take you if you are on Medicaid and you have moderate-to-severe disease**, so that leaves a **big gap** for commercial payers and "I just need to talk to a counselor because I'm depressed." There **isn't a great comprehensive behavioral health support system** in the county.

There are **no shelters**, so if you're an abused woman, there isn't really a homeless shelter or any kind of program to address **homelessness** or **domestic violence**.

If you look at **physical activity opportunities**, in the **winter months** it would be **nice to have more options** for those type of things. The access to the **healthy food** piece - it would be **nice to have better access to some farmers' markets and fresh fruits and vegetables** in some of our communities. I think we need **education** on **what to do with those things**. For example, if our WIC partners to go out and buy something like a squash or an eggplant, they have no idea what to do with those so they're not going to use it.

I do know that it goes to access to health care, **access to psychiatric services**. We **have to do a better job of coordinating**. We **have to develop platforms where we can share information more readily** and jointly serve consumers. We **still have siloed care in many ways**. We need to continue to educate the citizens in Newaygo County about mental health; what is mental health and the prevalence of mental health.

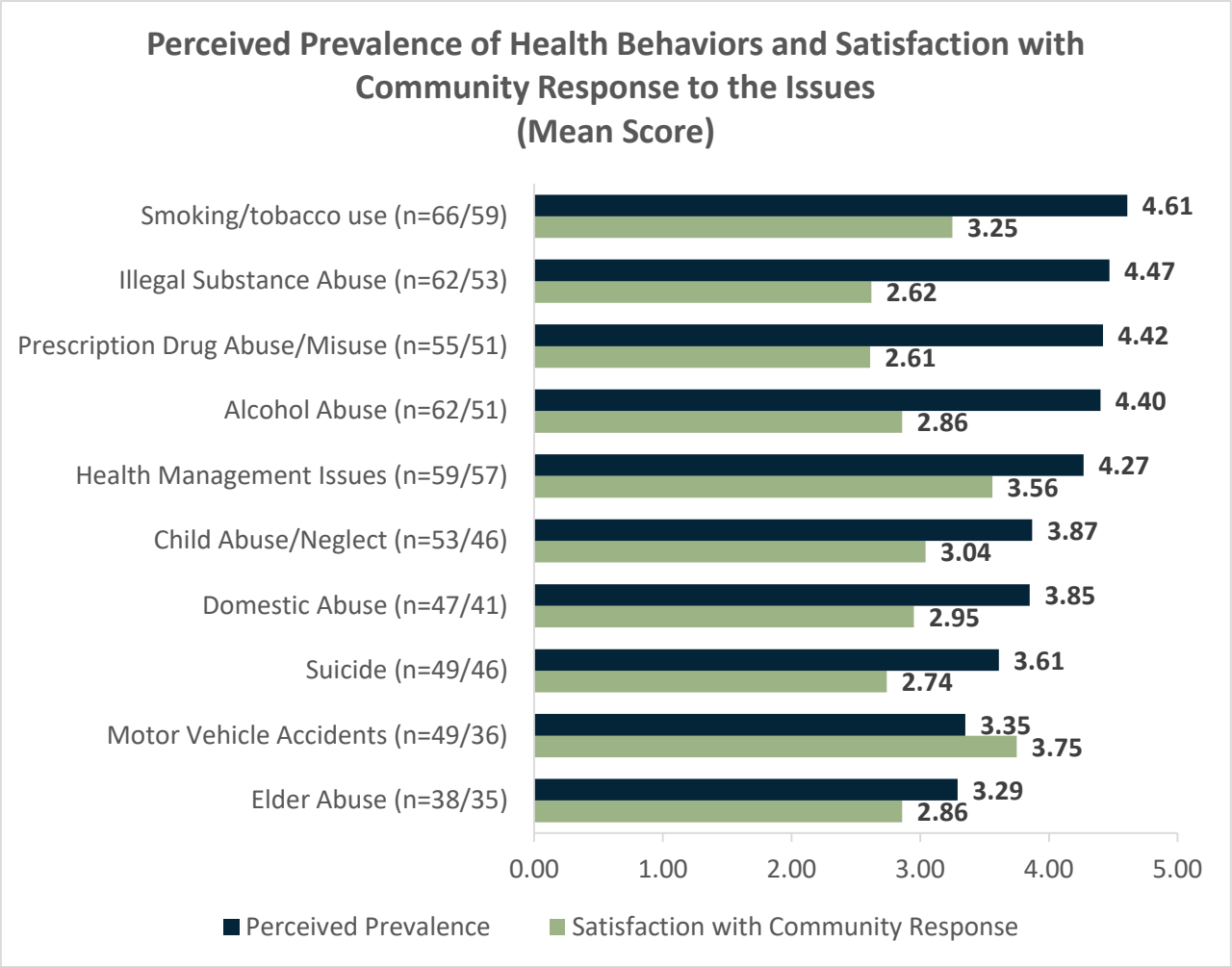
I would say what is **really lacking are services for mental health**. I think that - we do cognitive behavioral therapy, but there are a **lot of other kinds of things that we probably need**, and there's always the gray area of "What is Community Mental Health - what is their domain and what isn't?"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

Source: SHGM Key Stakeholder Interviews, 2017, Q4b: What programs or services are lacking in the community? (n=6)

RISK BEHAVIOR INDICATORS

Prevalence of Health Behavior Issues

- Similar to 2014, Key Informants perceive the top four most prevalent health behavior issues to be smoking, illegal substance abuse, prescription drug abuse, and alcohol abuse.
- Health management issues are also perceived to be prevalent.
- More concerning is that Key Informants are least satisfied with the community's response to anything related to substance abuse, licit or illicit.



Source: SHGM 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.

Prevalence of Health Behavior Issues (Continued)

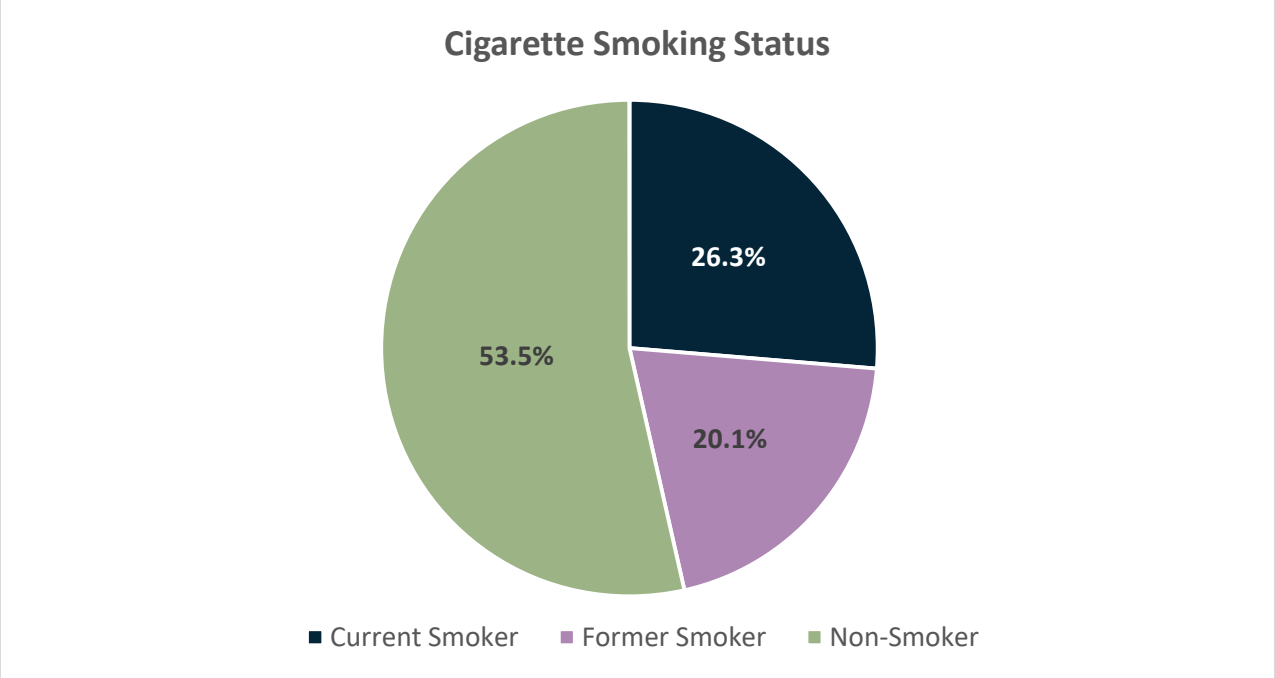
When asked to comment on any additional health behaviors that they deemed prevalent in the community, Key Informants mentioned poor nutrition, bullying, drunk driving, and lack of access to programs and services that would assist residents, especially children, in being active and living healthier lifestyles, among others:

- Poor nutrition (2)
- Bullying at the schools
- Childhood obesity and overall sedentary lifestyles
- Drunk driving
- Inadequate counseling availability due to lack of funds
- Low healthcare literacy
- Medication nonadherence
- More focus on preventative measures may avoid more costly care down the road
- Schools do not offer open rec time for all ages, children not on teams may not get access to fitness activities
- Poor dental hygiene
- There are not enough choices for doctors in this area; I know that people will avoid going because there aren't enough choices

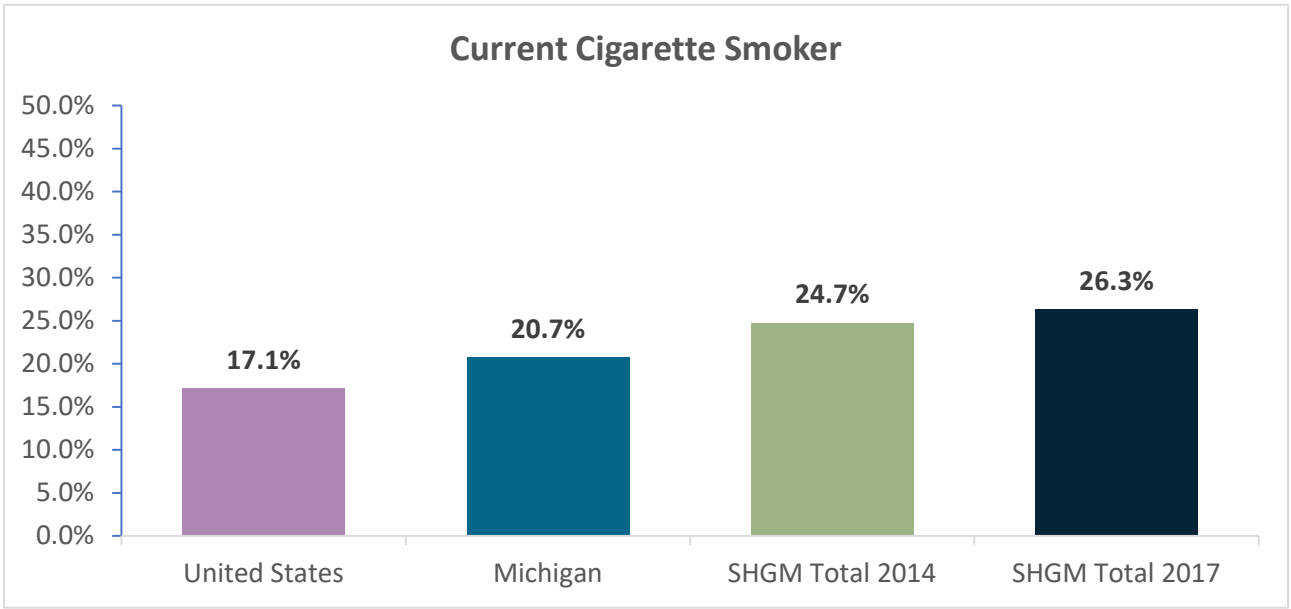
Source: SHGM Key Informant Online Survey, 2017, Q3b: What additional health behaviors are prevalent in your community, if any? (n=17)

Smoking and Tobacco Use

More than one-fourth (26.3%) of SHGM area adults are cigarette smokers, a rate higher than the state and national rates and higher than the previous CHNA iteration.



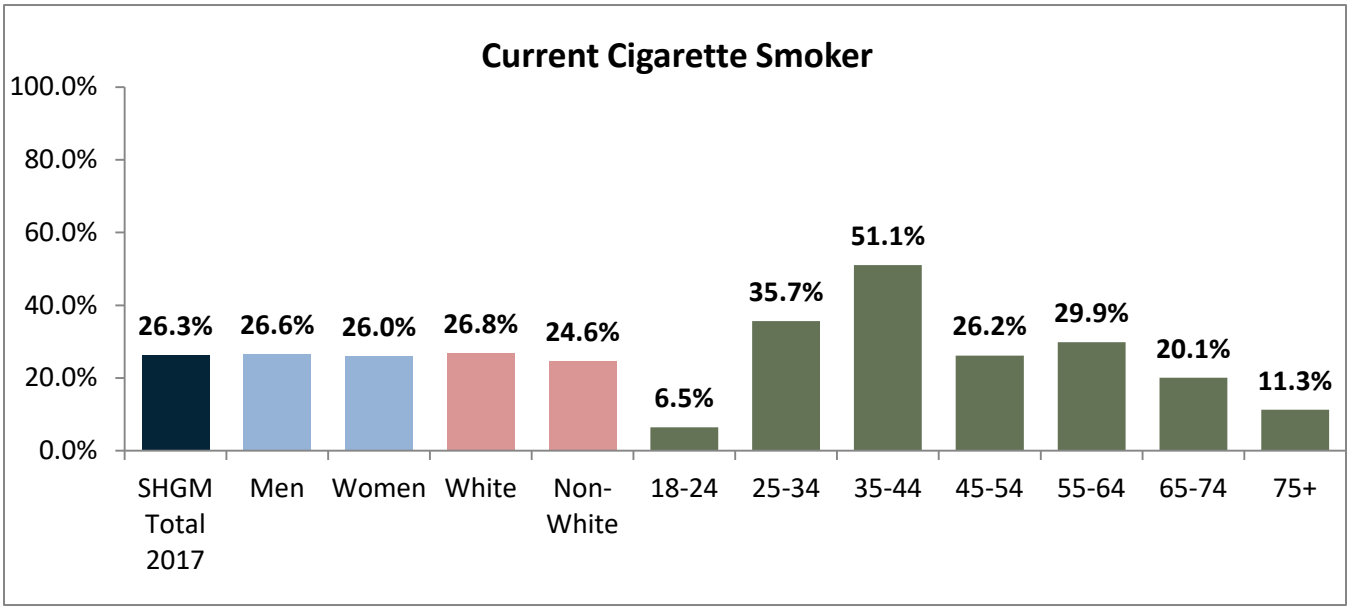
Source: SHGM Behavioral Risk Factor Survey, 2017, Q10.1: Have you smoked at least 100 cigarettes in your entire life? (n=568); q10.2: Do you now smoke every day, some days, or not at all? (n=350).
Note: current smoker = among all adults, the proportion reporting that they had ever smoked at least 100 cigarettes (5 packs) in their life and that they smoke cigarettes now, either every day or on some days.

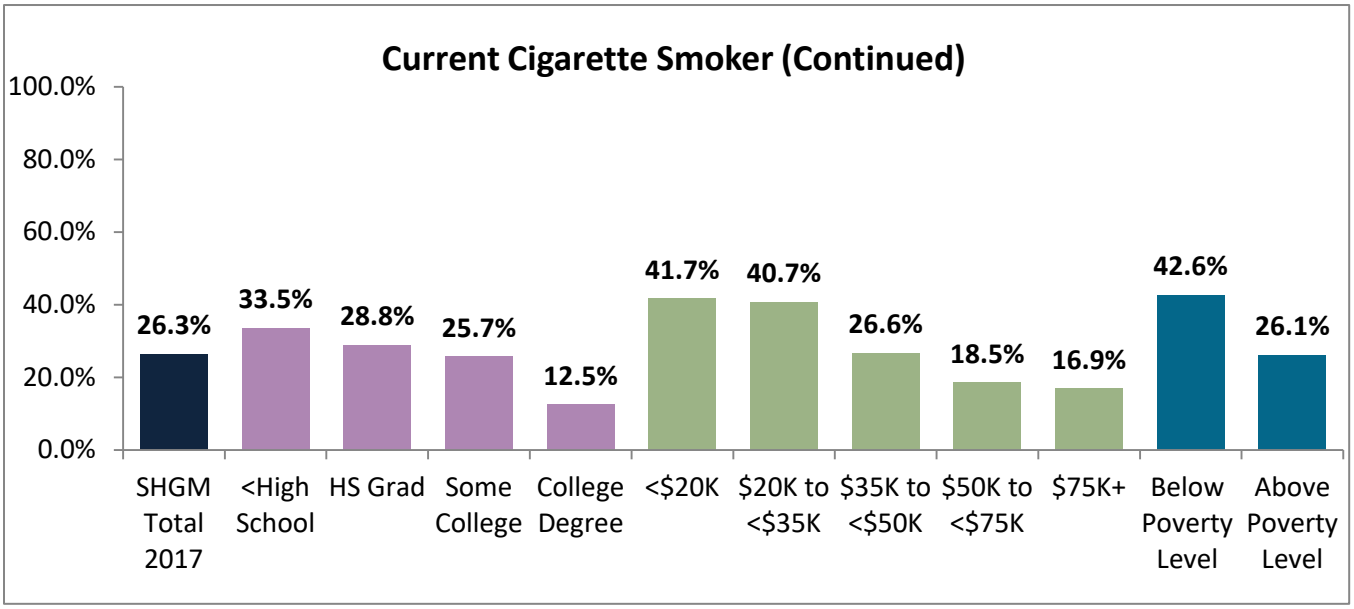


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017.

Smoking and Tobacco Use (Continued)

The prevalence of cigarette smoking is inversely related to education and income and is more common is adults aged 25-44 compared to adults who are younger or older.

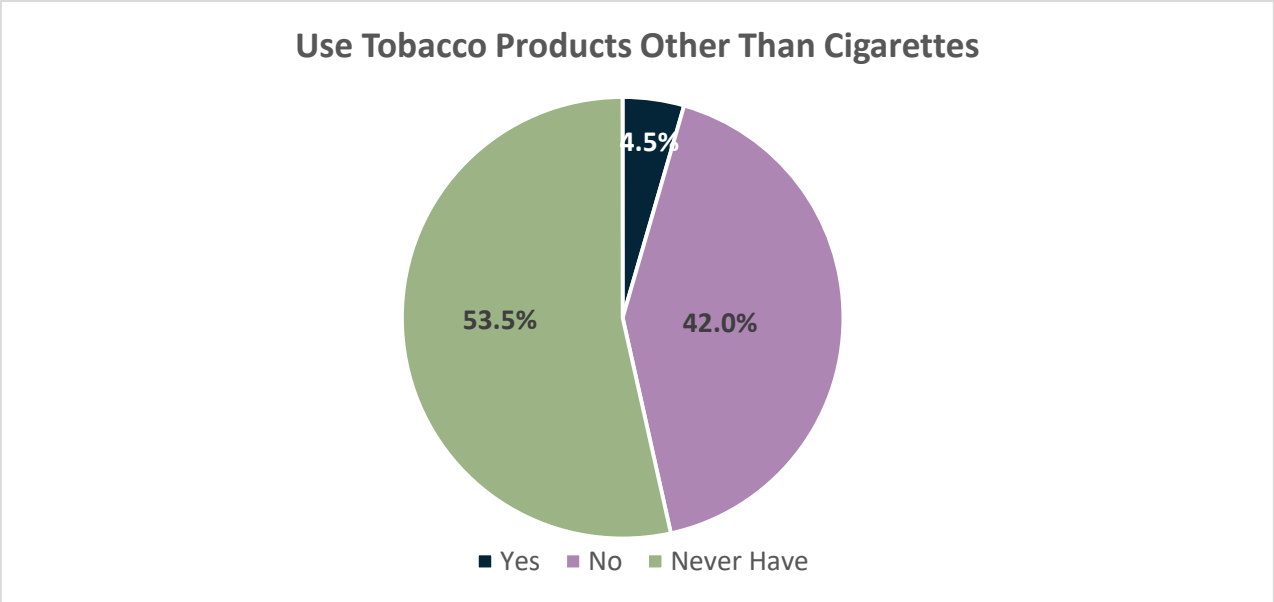




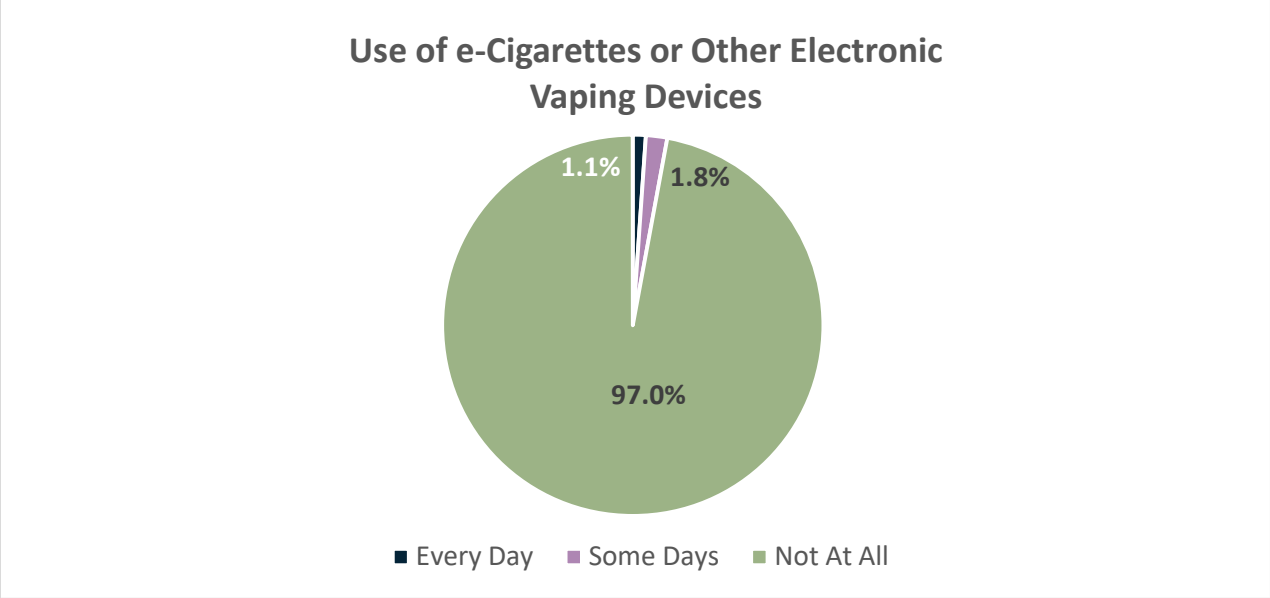
Source: SHGM Behavioral Risk Factor Survey, 2017, Q10.1/Q10.2, status = smoker. (n=568).

Smoking and Tobacco Use (Continued)

- Fewer than one in twenty (4.5%) area adults use tobacco products other than cigarettes and even fewer (3.0%) report using e-cigarettes or vaping devices.



Source: SHGM 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=558).

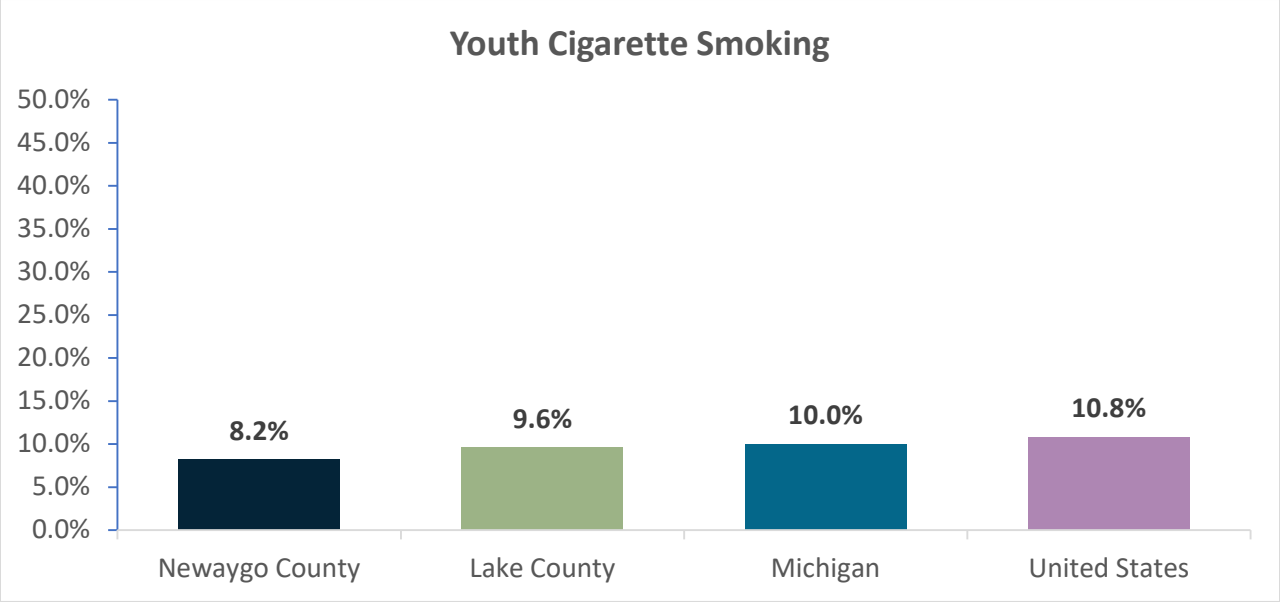


Source: SHGM Behavioral Risk Factor Survey, 2017, Q10.5: Do you now use e-cigarettes or other electronic "vaping" products every day, some days, or not at all? (n=556).

Smoking and Tobacco Use (Continued)

- The prevalence of smoking among youth in Newaygo and Lake counties is lower than the state or national rates. Still, nearly one in ten youth in Lake County and one in twelve youth in Newaygo County smoke cigarettes.

- Some Key Stakeholders and Key Informants cite smoking among youth and pregnant women (especially teens) as a pressing health issue in the community.



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

High numbers of our clients smoke, including **pregnant women**. **Teens** report it is **easy to purchase tobacco and vaping products**. – *Key Informant*

Smoking cessation has been something we've been really focused on recently, especially with **pregnant moms** and **young teenagers**. Those are two areas where we're still at or above the state and national averages. – *Key Stakeholder*

In Newaygo County we have a **very high rate of smoking among pregnant women**. Tobacco companies target poor, rural and youth. There is a **cultural acceptance of tobacco and nicotine use** and an **acceptance of the chronic diseases that go along with that use**. Tobacco is still viewed as **'socially acceptable'**, is **readily available**, and **considered a means for stress**. – *Key Informant*

Newaygo County has some of the **highest rates of tobacco use in the state**, including **among pregnant women** (~26-33%). Smokeless (chew) is also high among the rural poor here, and **youth**. E-**cigs are on the rise and thought to be 'safe'**. Pregnant smokers not only harm themselves but also the fetus and newborn – *Key Informant*

Smoking and Tobacco Use (Continued)

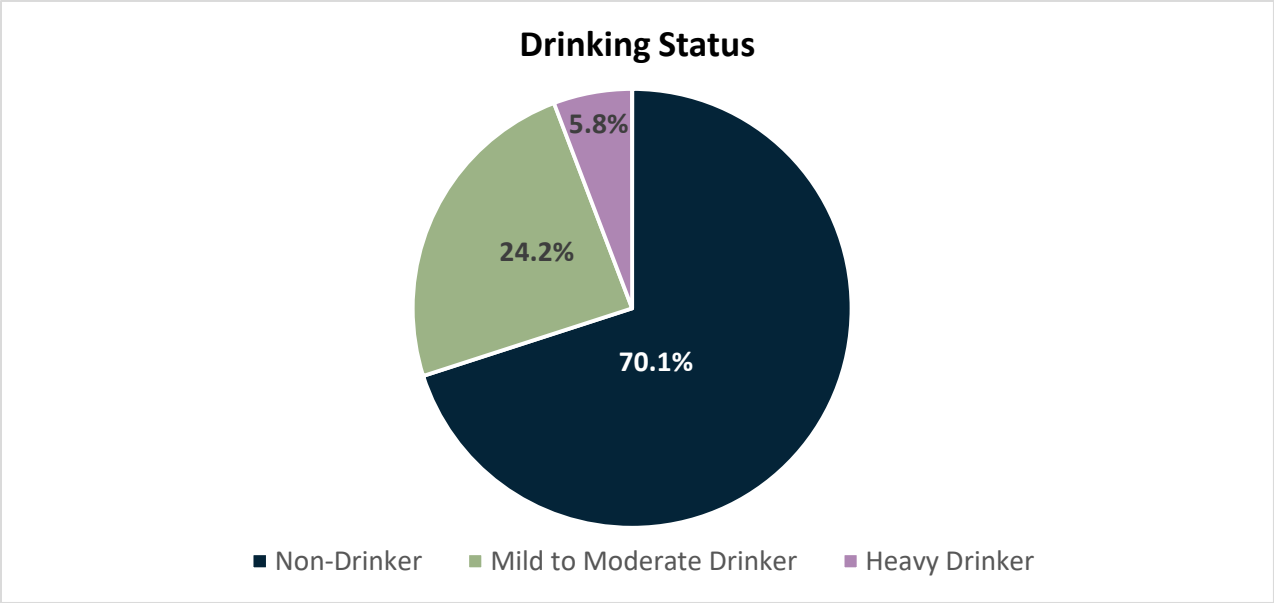
- More than one-fourth (27.2%) of area adults report smoking inside their home and this rises to 31.9% for households with children.
- Among non-smoking area adults, 15.0% are exposed to smoking in their home.

	Smoking in the Home				
	Total (n=567)	Have Children in the Home (n=109)	No Children in the Home (n=458)	Non-Smokers (n=434)	Smokers (n=133)
None	72.8%	68.1%	74.6%	85.0%	38.9%
1 person	18.8%	20.5%	18.2%	13.6%	33.4%
2 or more people	8.4%	11.4%	7.2%	1.4%	27.7%

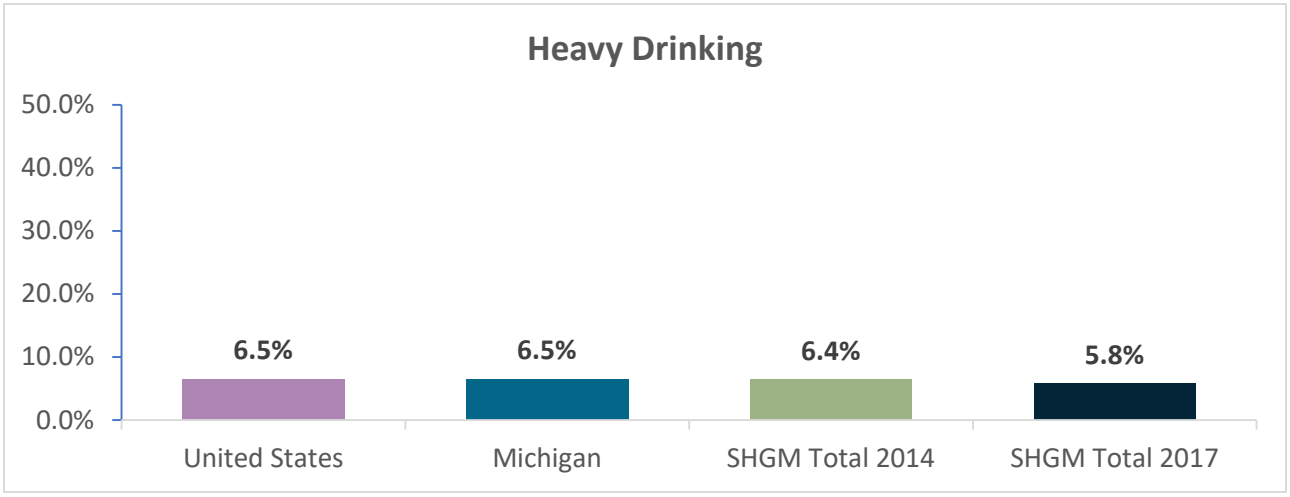
Source: SHGM Behavioral Risk Factor Survey, 2017, Q10.4: Now I would like to ask you a few questions about smoking where you live. How many people that live with you smoke cigarettes, cigars, little cigars, pipes, water pipes, hookah, or any other tobacco products in the home?

Alcohol Use

- Among area adults, 70.1% are considered to be non-drinkers because they have not consumed alcohol within the past month, while 24.2% are mild to moderate drinkers and 5.8% are considered to be heavy drinkers.
- The prevalence of heavy drinking among area adults is lower than state or national rates and has decreased slightly from the last CHNA.



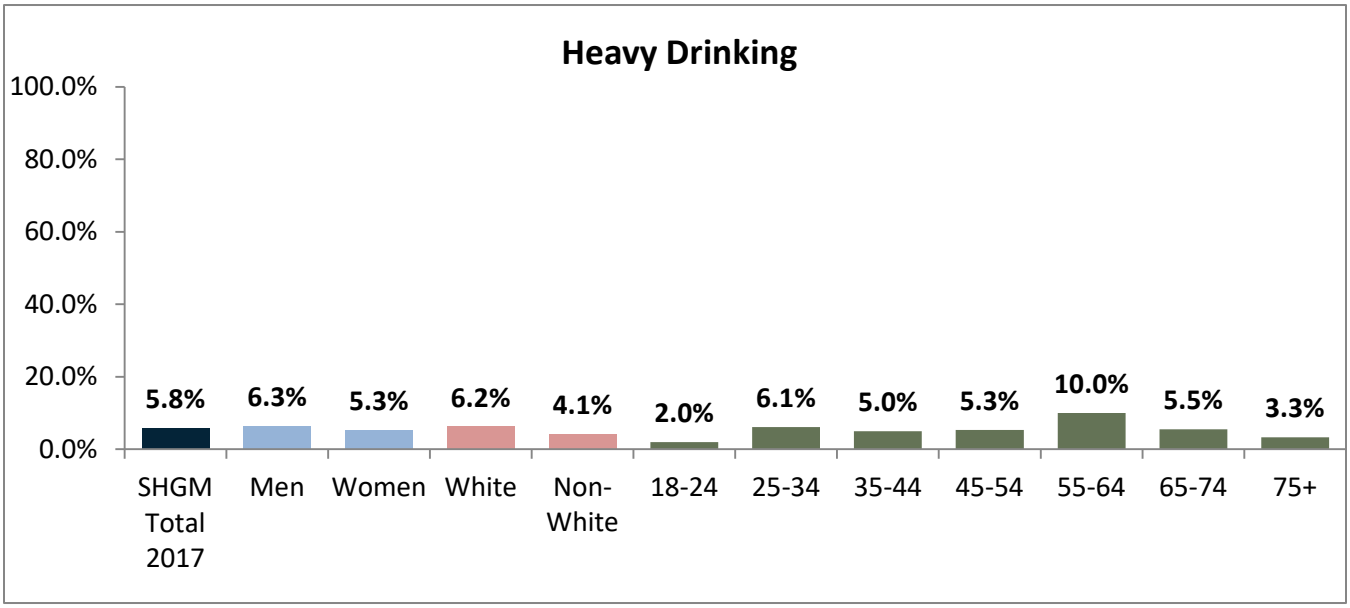
Source: SHGM Behavioral Risk Factor Survey, 2017, Q17.1: During the past 30 days, how many days per week or per month did you have at least one drink of any alcoholic beverage such as beer, wine, a malt beverage or liquor? (n=562); Q17.2: One drink is equivalent to a 12-ounce beer, a 5-ounce glass of 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=176). 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.

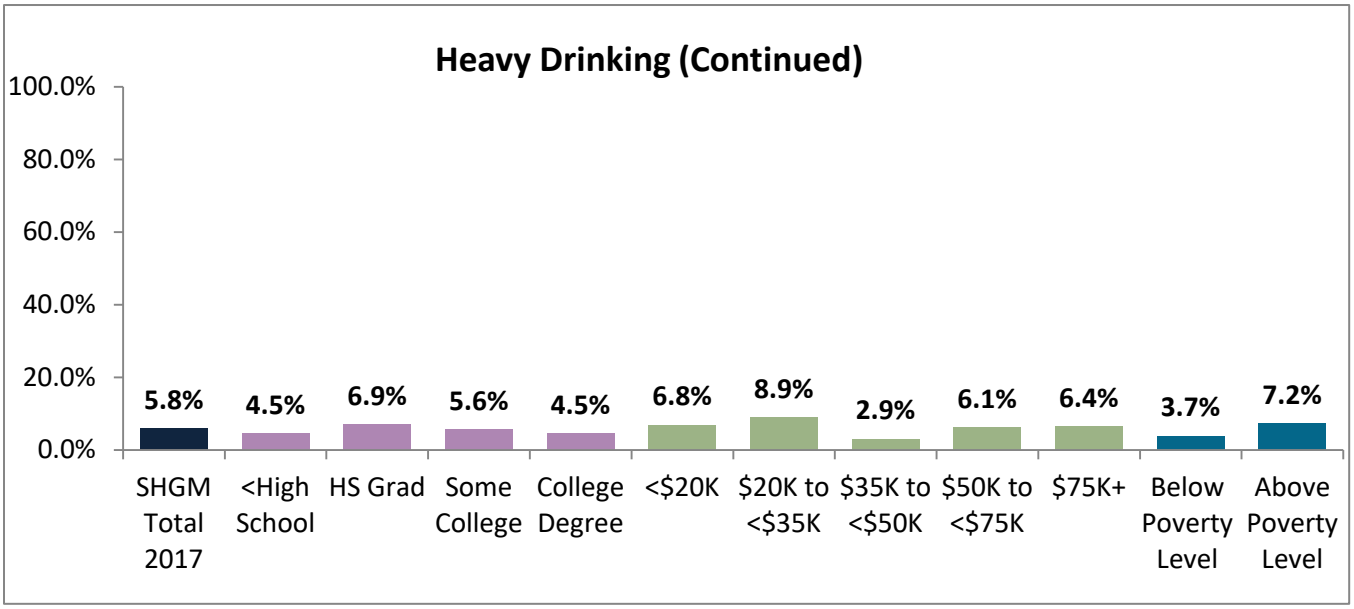


Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016; Preliminary Estimates for Risk Factor and Health Indicators, State of Michigan, Michigan BRFS, 2015; SHGM Behavioral Risk Factor Survey, 2014, 2017.

Alcohol Use (Continued)

Among SHGM area adults, men are more likely to engage in heavy drinking than women, and White adults are more likely to drink heavily compared to non-White adults.





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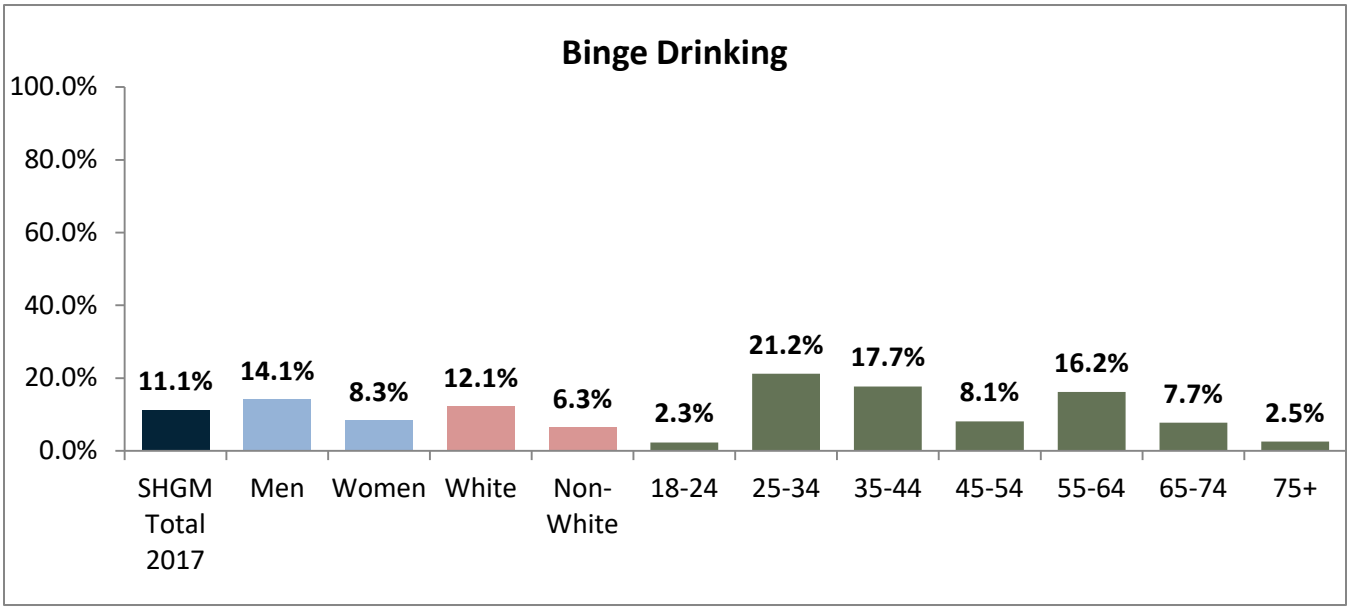
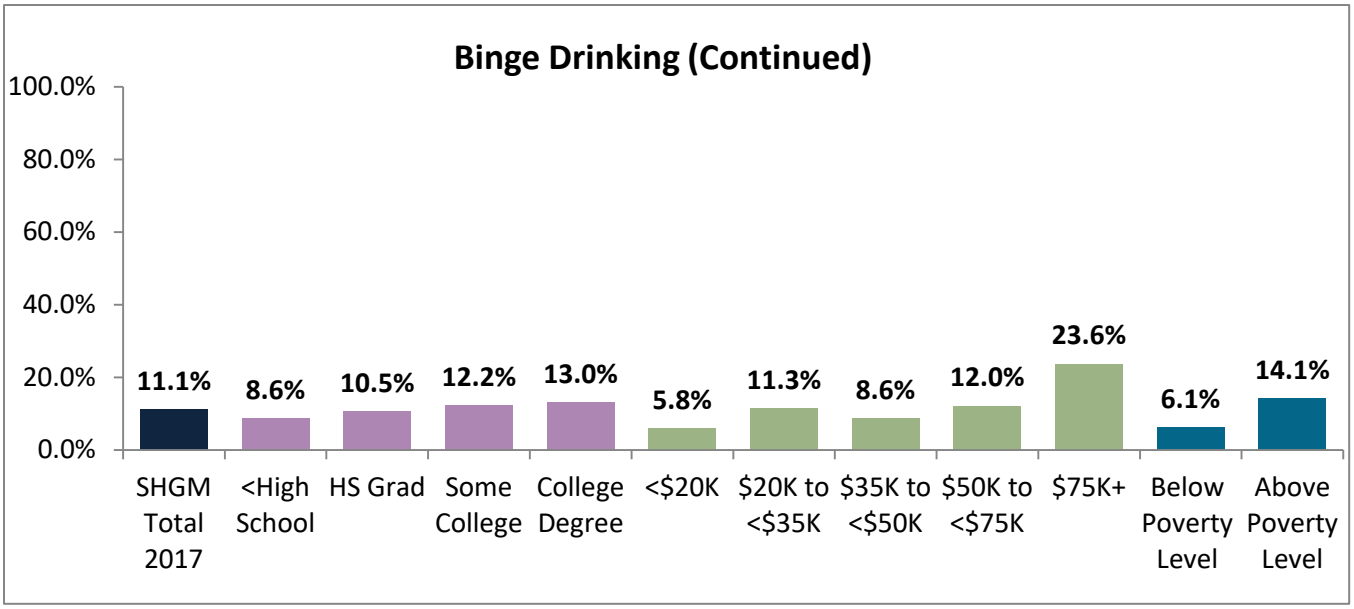
Alcohol Use (Continued)

- More than one in ten (11.1%) area adults engage in binge drinking and the prevalence increases with education and income.
- Binge drinkers are more likely to come from groups that are men, White adults, and aged 25-44.

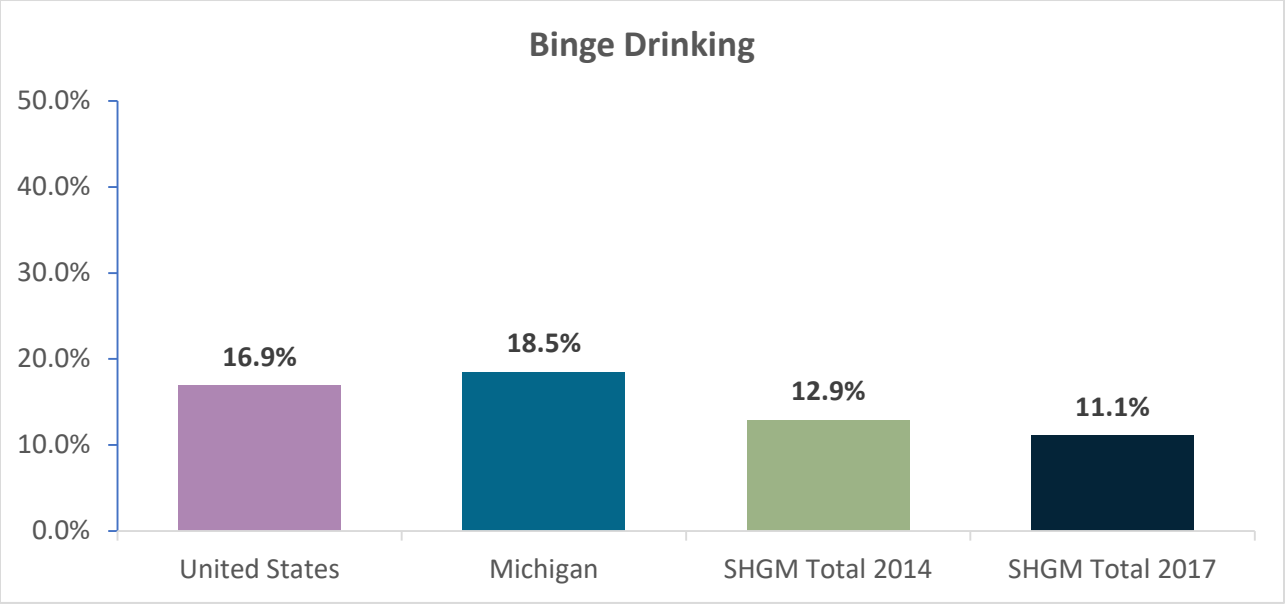




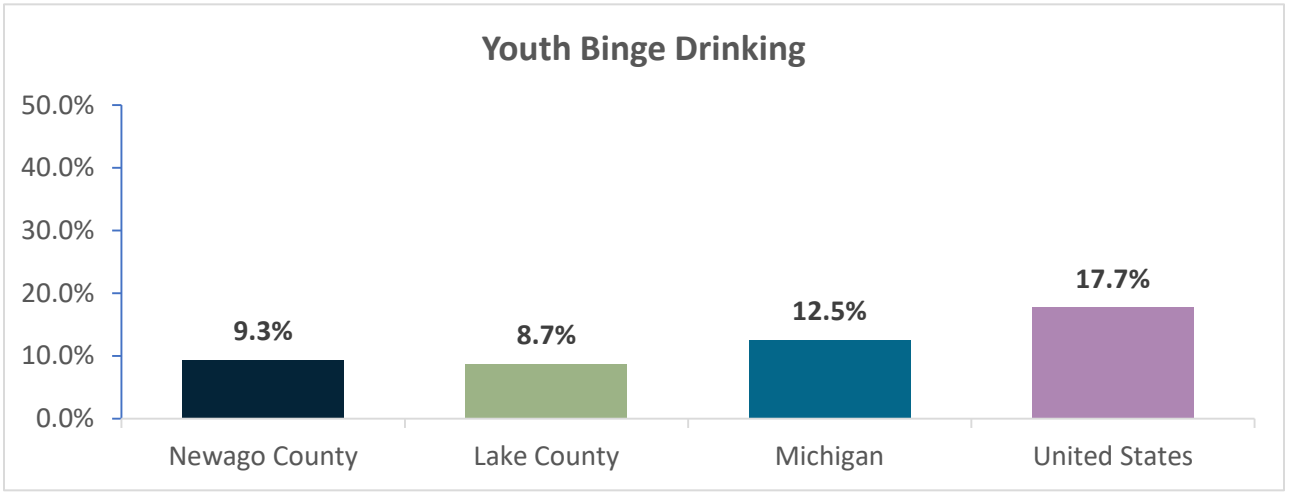
Source: SHGM Behavioral Risk Factor Survey, 2017, Q17.3: Considering all types of alcoholic beverages, how many times during the past 30 days did you have X (CATI X = 5 for men, X = 4 for women) or more drinks on an occasion? (n=560)
Note: among all adults, the proportion who reported consuming five 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 or national rates.
- Further, the binge drinking rate for area adults is slightly lower in 2017 compared to the rate during the last CHNA.



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; SHGM Behavioral Risk Factor Survey, 2014, 2017.



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

Substance Abuse

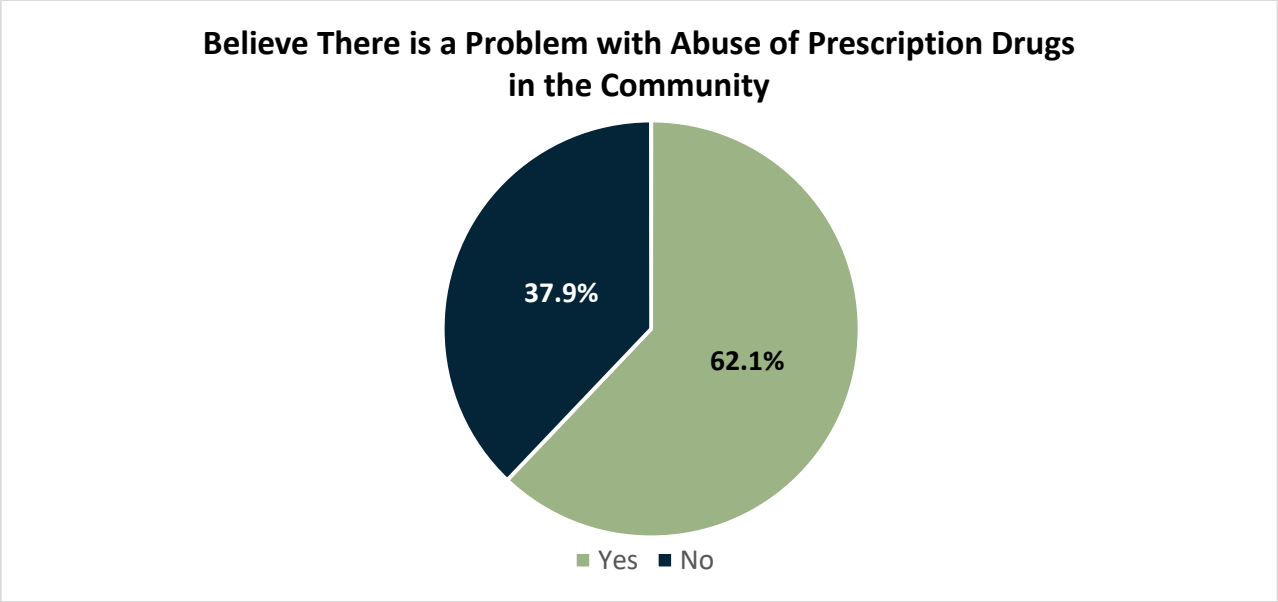
Key Stakeholders and Key Informants consider substance abuse to be one of the most pressing or concerning health issue in the SHGM area. Not only is substance abuse prevalent, but like many rural areas there is an opioid epidemic that has had an enormous impact of many facets of the community. Complicating things further, there is a lack of adequate programs and services to treat substance abuse.

Complications/product of use	Drug addiction and alcohol in addition to the **multiple health risks** puts the individual at **higher risk for sexual and domestic violence** and **homelessness**. – *Key Informant* This has such an **impact on work productivity**, **familial issues**, drug **overdose**/**death** (**ER visits**) and **babies** being born with **withdrawal issues**, and potentially **long-term complications** which could weigh heavily on society in the years to come. The issue is a **cost** to our clinics, hospitals, employers, schools, police and various other organizations. – *Key Informant*
Opioid use	I think we've got substance abuse issues, specifically the **opiate epidemic**, opiate use in those communities. – *Key Stakeholder* As a social worker in the OB clinic, we are beginning to see **more and more pregnant women and/or partners** with **addiction to pain medication and/or heroin**. – *Key Informant*
Prevalence	One of the other things that we see in my career here that's a **huge concern is substance abuse**, and it has always been more of a problem in Lake than Newaygo, but they're pretty close currently. – *Key Stakeholder* A majority of the clients I work with disclose **marijuana use** and do not consider the negative effects that can result. It's **almost a 'normal' thing to use**. – *Key Informant*
Lack of treatment options	**Limited access to transportation and treatment programs** in Newaygo County. The only residential rehab and detox facilities are **40 or more miles away**. Arbor Circle addresses patients without insurance and they are **closed over the weekend** and **after 5:00 PM** which **limits the access to treatment**. – *Key Informant*

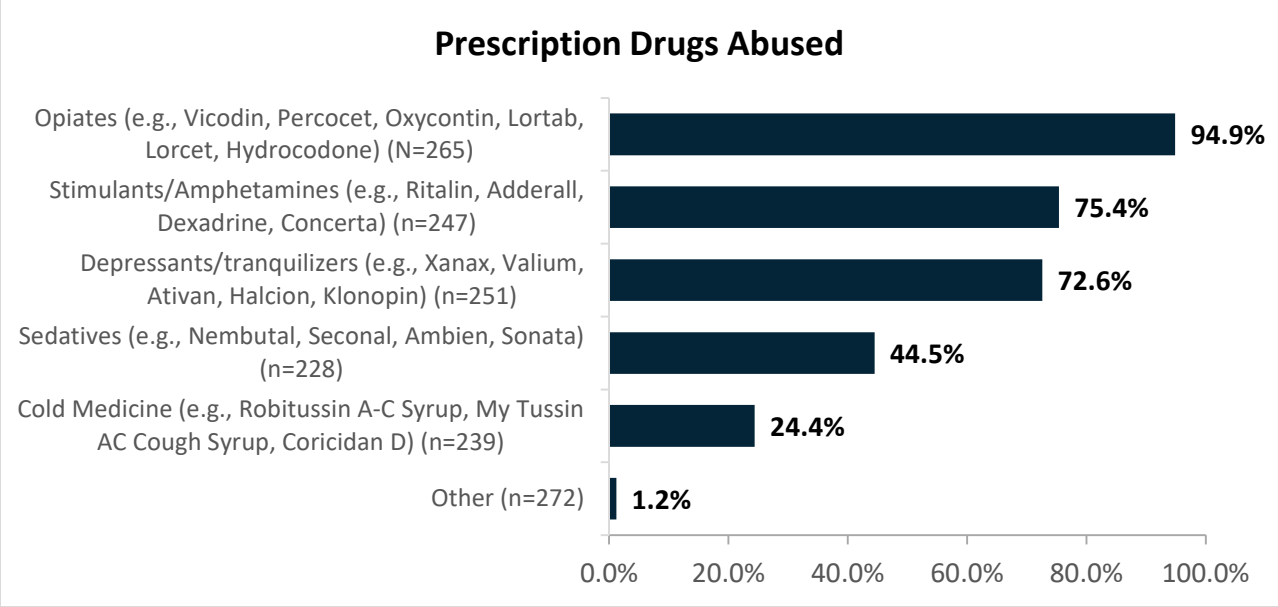
Source: SHGM Key Stakeholder Interviews, 2017, Q1: What do you feel are the two or three most pressing or concerning health issues facing residents in the community, especially the underserved? (n=6); Key Informant Online Survey, 2017, Q1: To begin, what are one or two most pressing health issues or concerns in the community? (n=72); Q1a: Why do you think it's a problem in the community? Please be as detailed as possible. (n=18)

Substance Abuse (Continued)

- Six in ten (62.1%) SHGM area adults believe there is a prescription drug abuse problem in the community, and of those more than nine in ten (94.9%) believe prescription opiates are abused.
- More than seven in ten also believe prescription stimulants and depressants are abused.



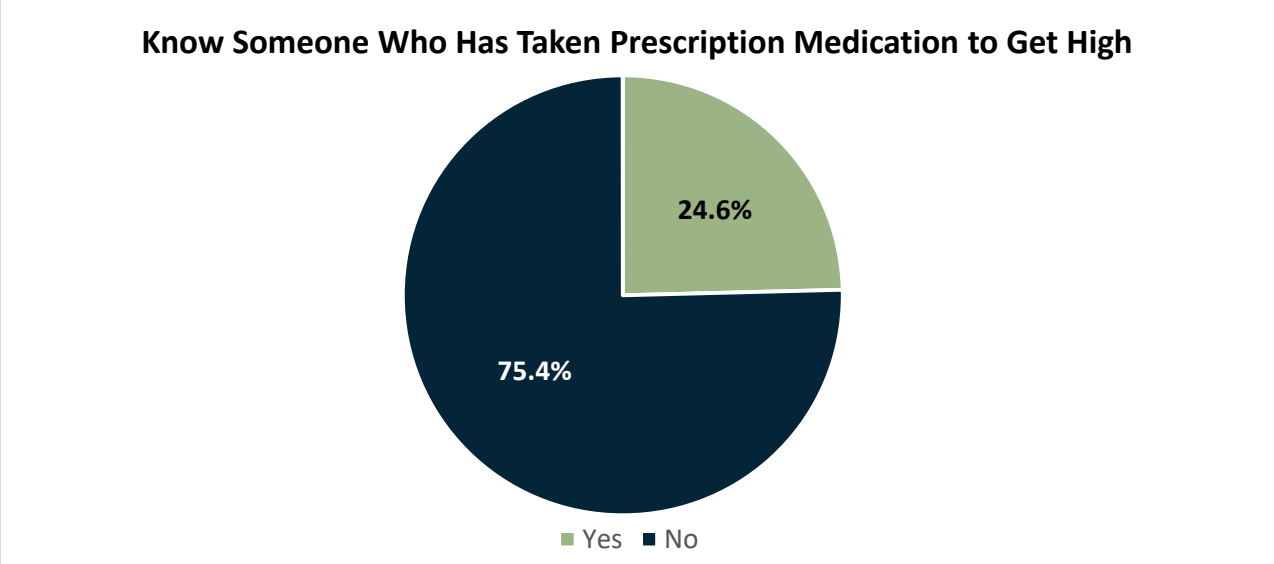
Source: SHGM Behavioral Risk Factor Survey, 2017, Q11.1: Do you believe there is a problem in your community with the abuse of prescription medication (e.g., Oxycontin)? (n=506)



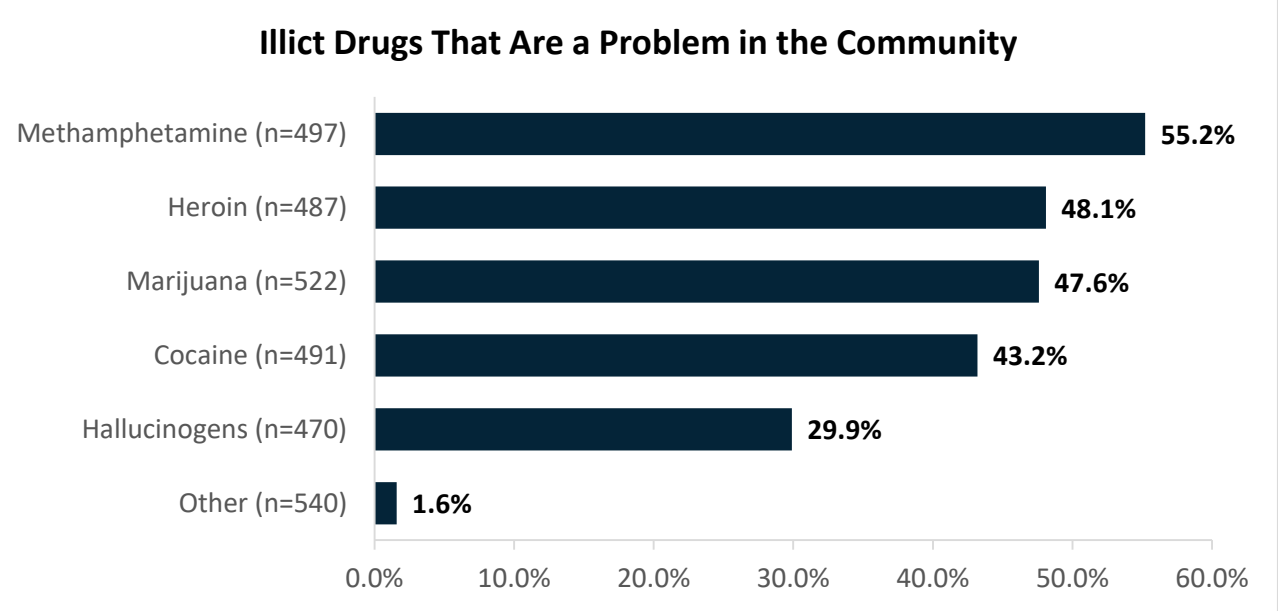
Source: SHGM Behavioral Risk Factor Survey, 2017, Q11.2-q11.7: Which prescription drugs do you feel are abused in your community?

Substance Abuse (Continued)

- One-fourth (24.6%) of SHGM area adults report that they know someone who has taken prescription drugs to get high.
- Over half of area adults believe the use of methamphetamines is a community problem and nearly half believe the same about heroin and marijuana use.



Source: SHGM Behavioral Risk Factor Survey, 2017, Q11.8: Do you know someone who has taken prescription medication, such as Oxycontin, to get high? (n=548)

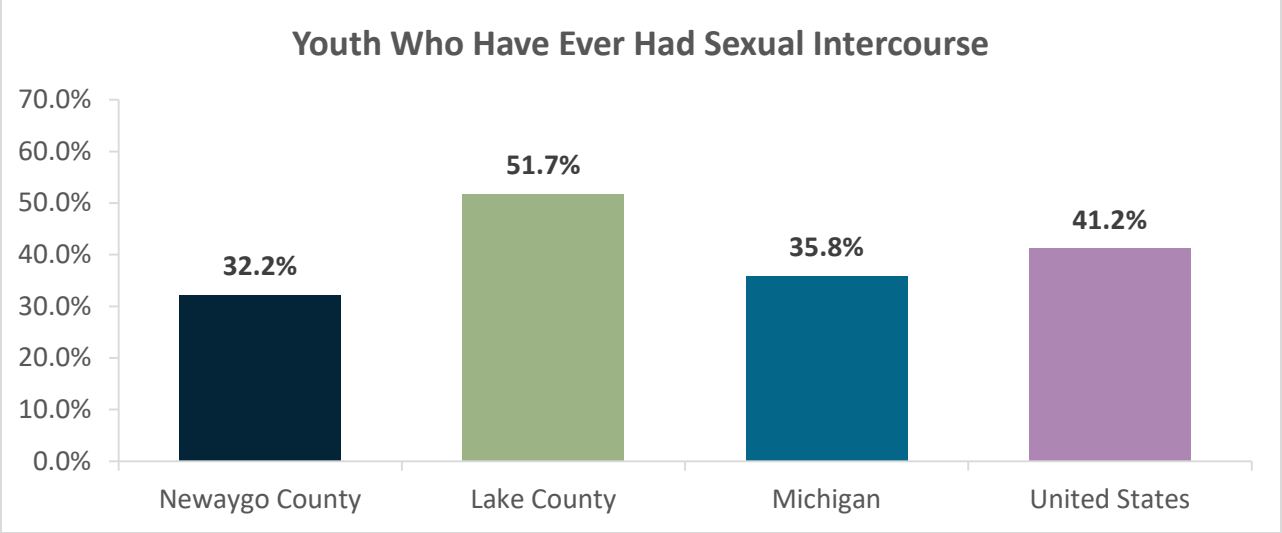


Source: SHGM Behavioral Risk Factor Survey, 2017, Q11.9-Q11.14: With regard to the use of the following drugs, which do you think are a problem in your community today?

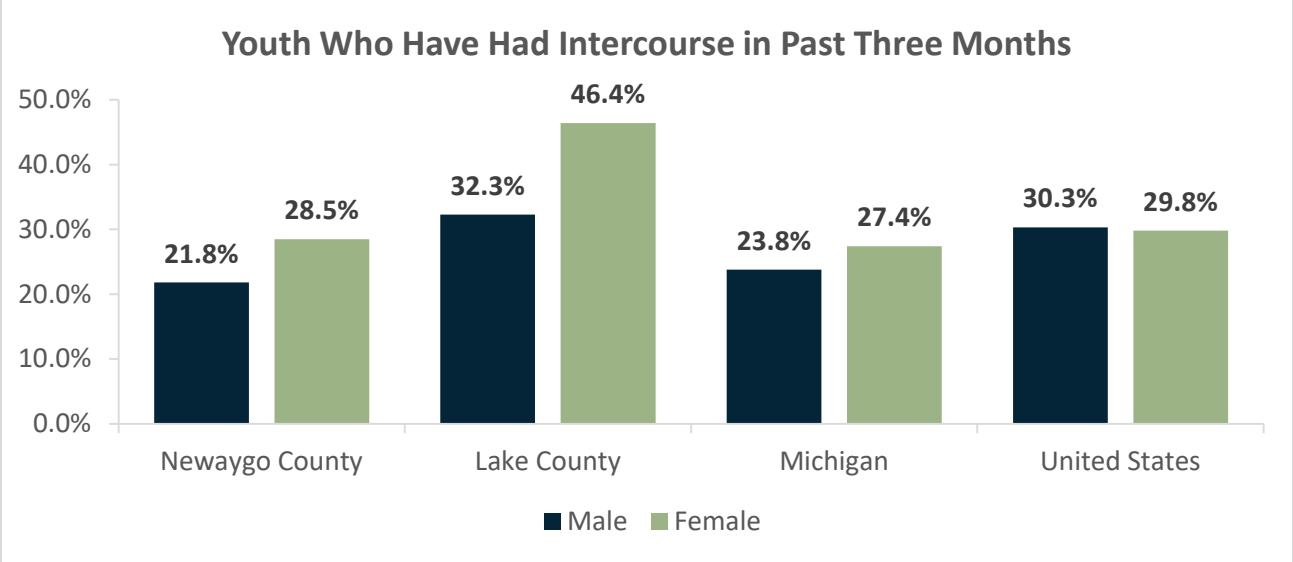
Teenage Sexual Activity

- One third (32.2%) of Newaygo County and half (51.7%) of Lake County teens have had sexual intercourse, the latter rate higher than the state or national rates.

- Among teens who report having had sexual intercourse in the past three months, the proportion of females is higher than the proportion of males; almost half (46.4%) of Lake County female teens have had sexual intercourse in the past three months.



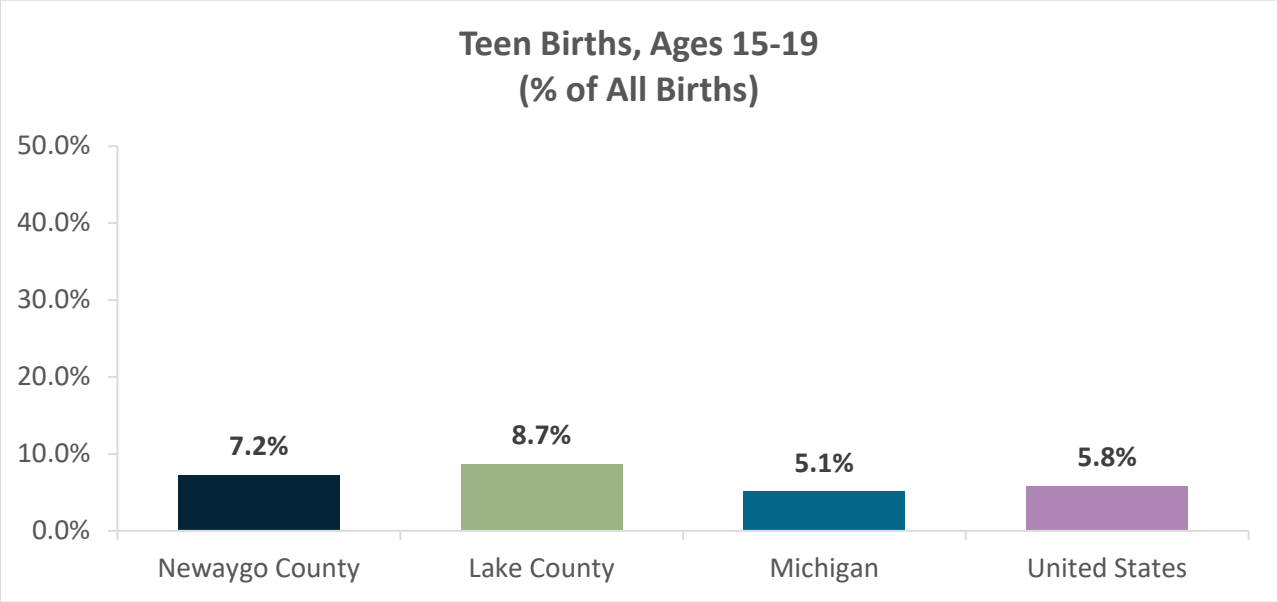
Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS),



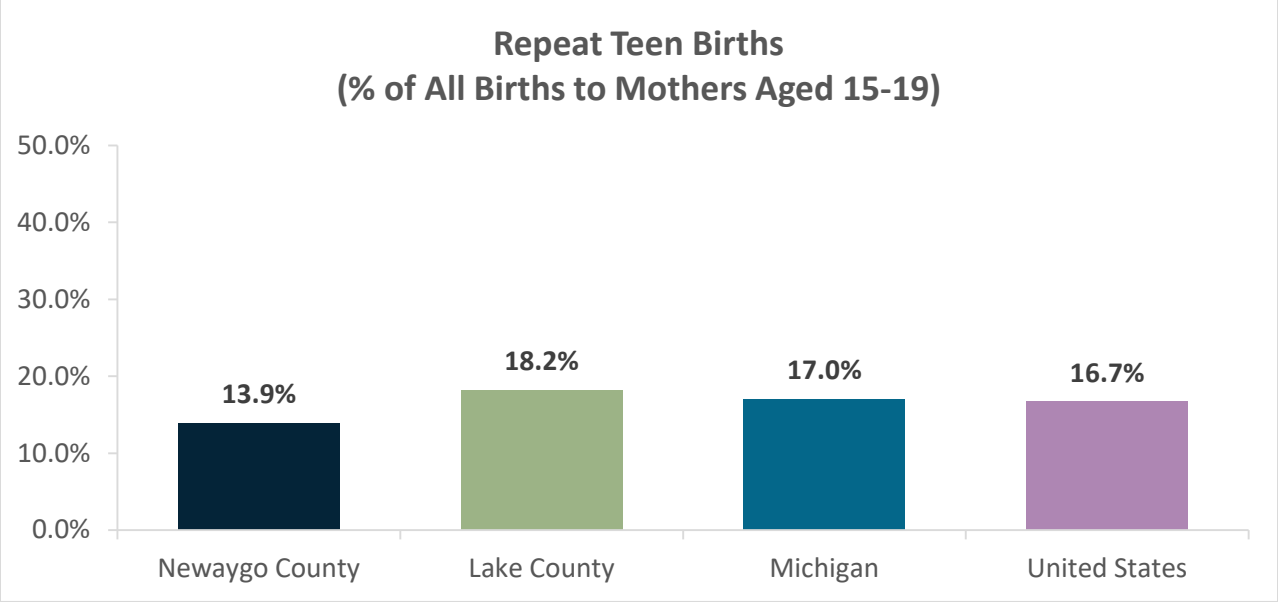
Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Teenage Sexual Activity (Continued)

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



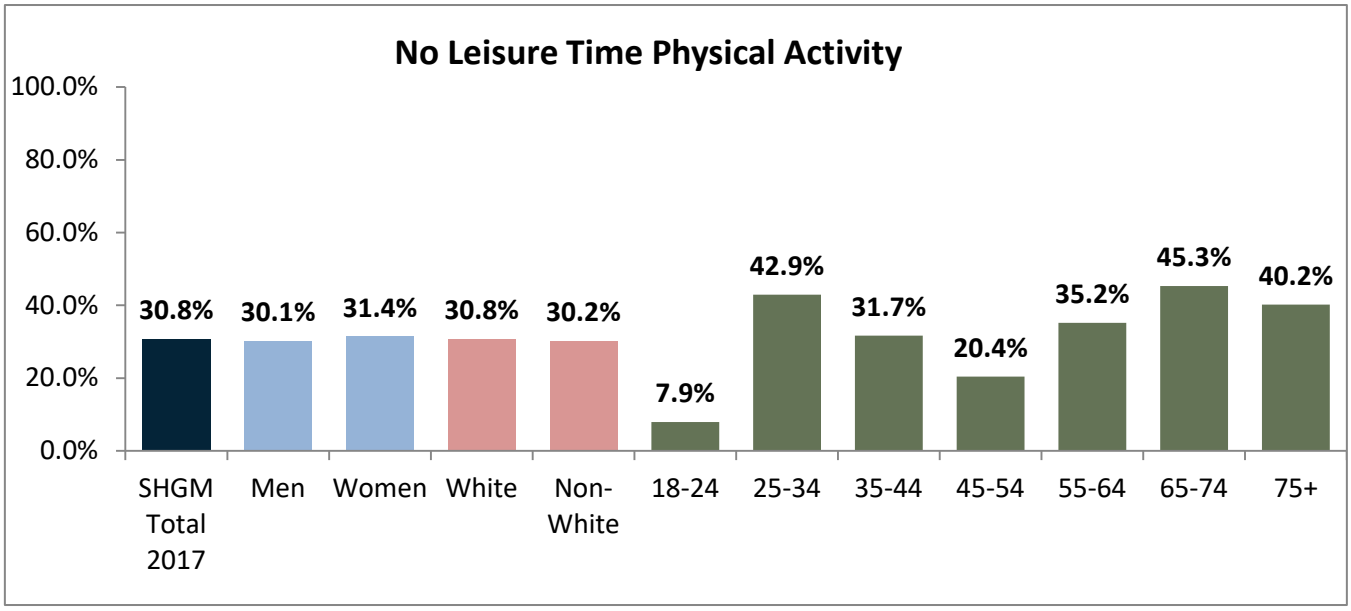
Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

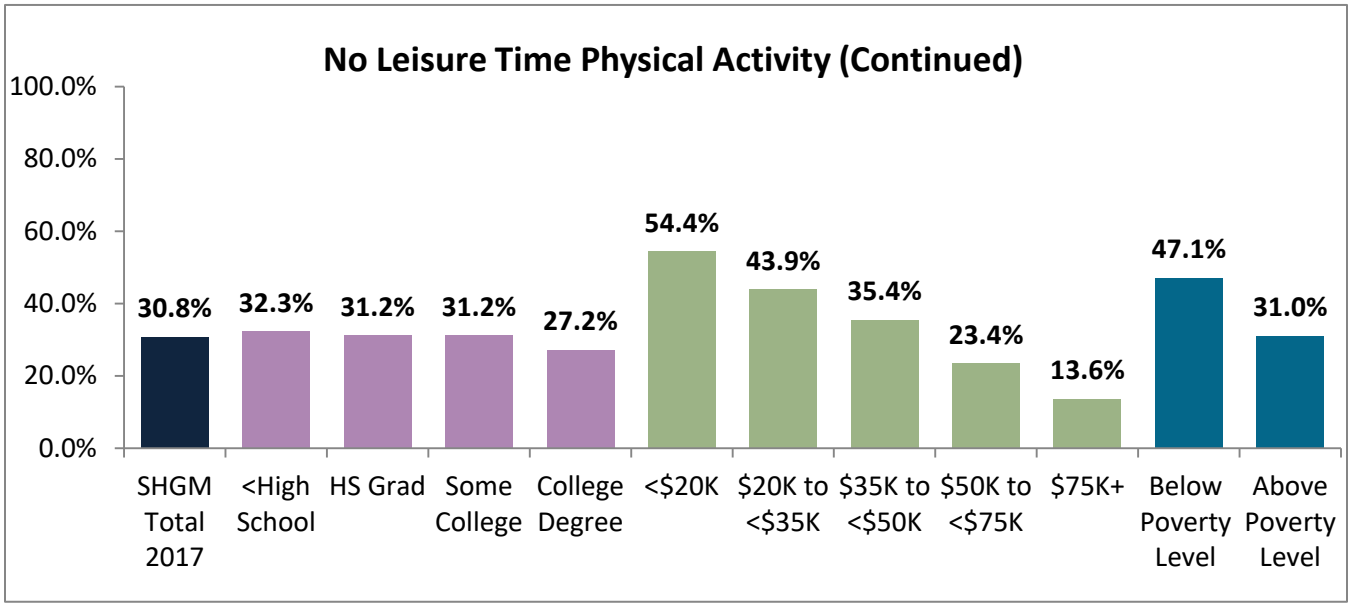


Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Physical Activity

- Three in ten (30.8%) area adults do not participate in leisure time physical activity outside of their job.
- Lack of physical activity is inversely related to income; over half (54.4%) of adults with incomes of less than $20K do not participate in physical activity compared to 13.6% of adults with incomes of $75K or more.

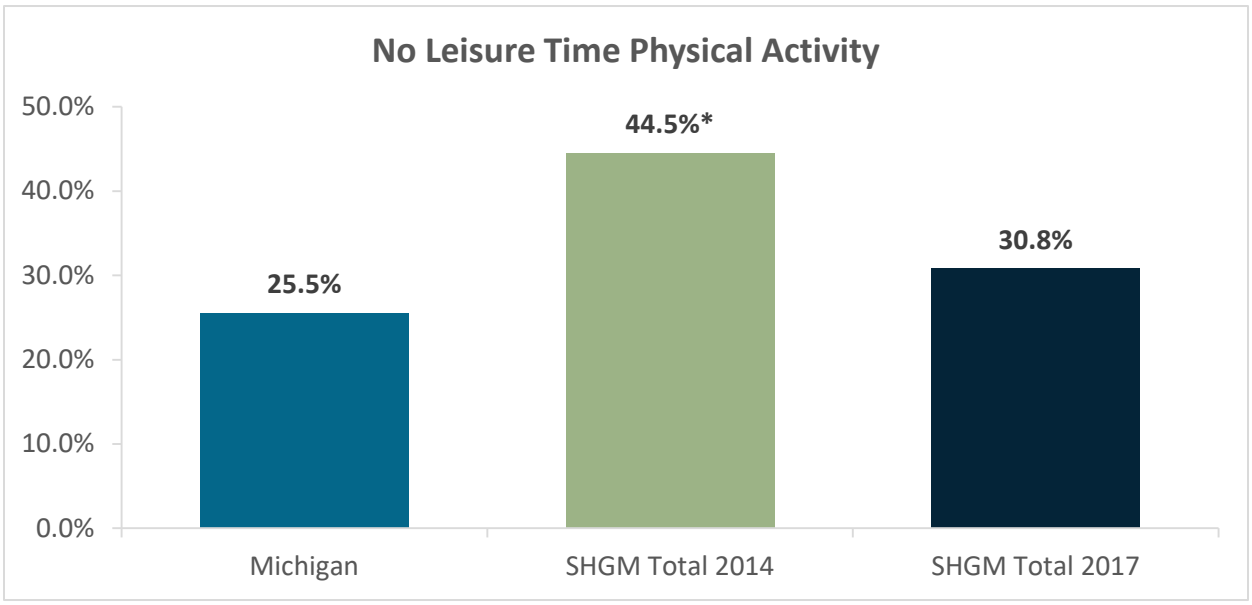




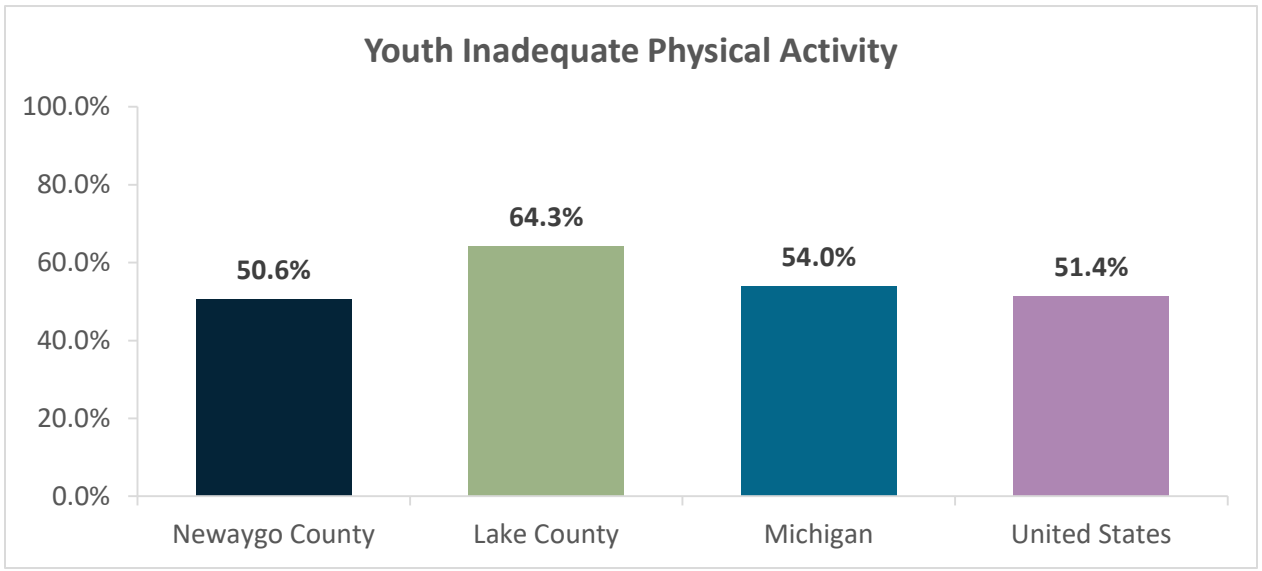
Source: SHGM Behavioral Risk Factor Survey, 2017, Q16.1: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise? (n=557)

Physical Activity (Continued)

- SHGM area adults are less active than adults across Michigan.
- Half of SHGM area youth in Newaygo County, and almost two-thirds of youth in Lake County, receive inadequate amounts of physical activity; the latter rate is much higher than state or national rates.



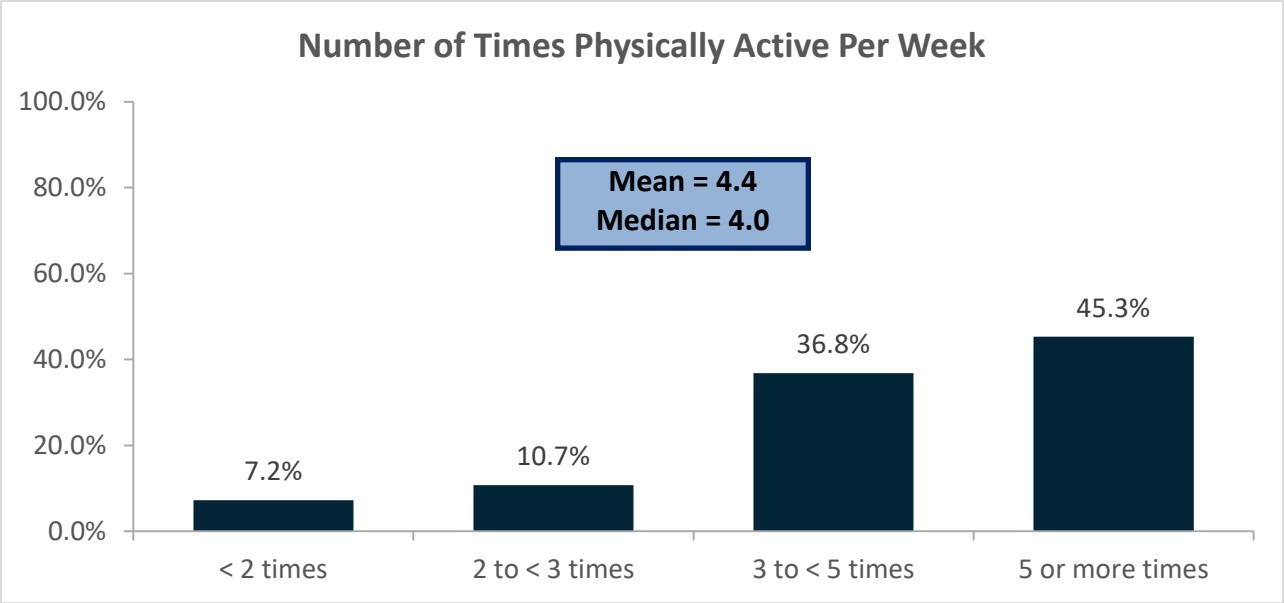
Source: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2016. *Note: this measure is much higher than what is typical due to the 2014 BRFS being conducted in the winter months.



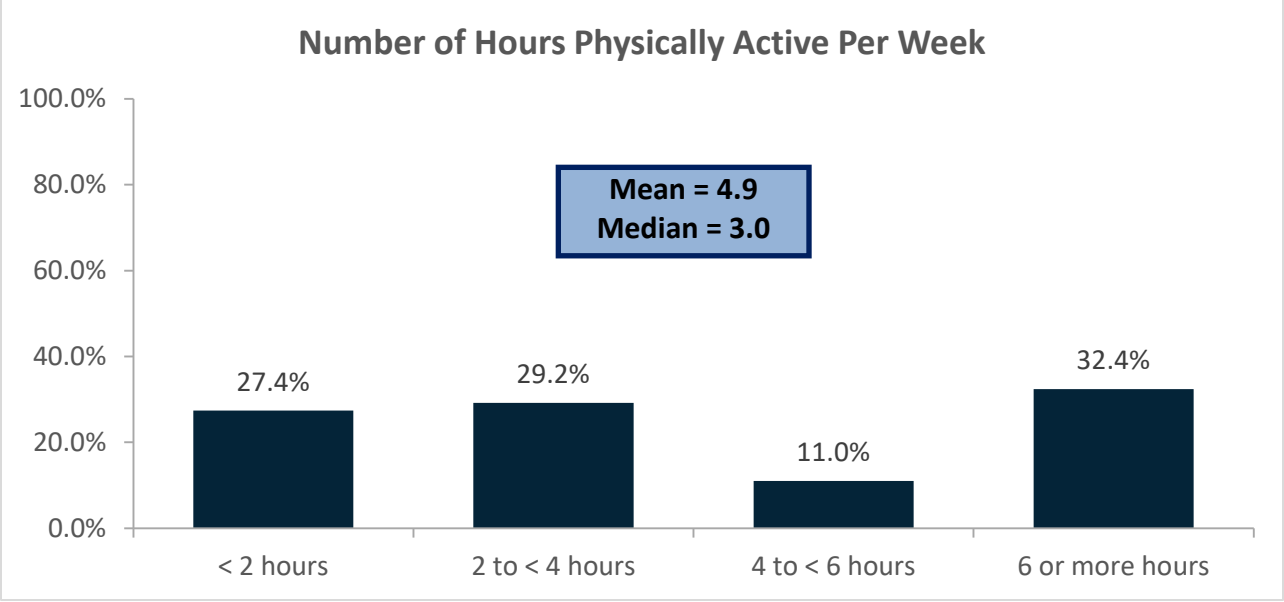
Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Physical Activity (Continued)

- Among those who exercise, 82.1% participate at least three times per week.
- More than half (56.6%) participate for less than four hours per week, while one-third (32.4%) participate for six hours or more.



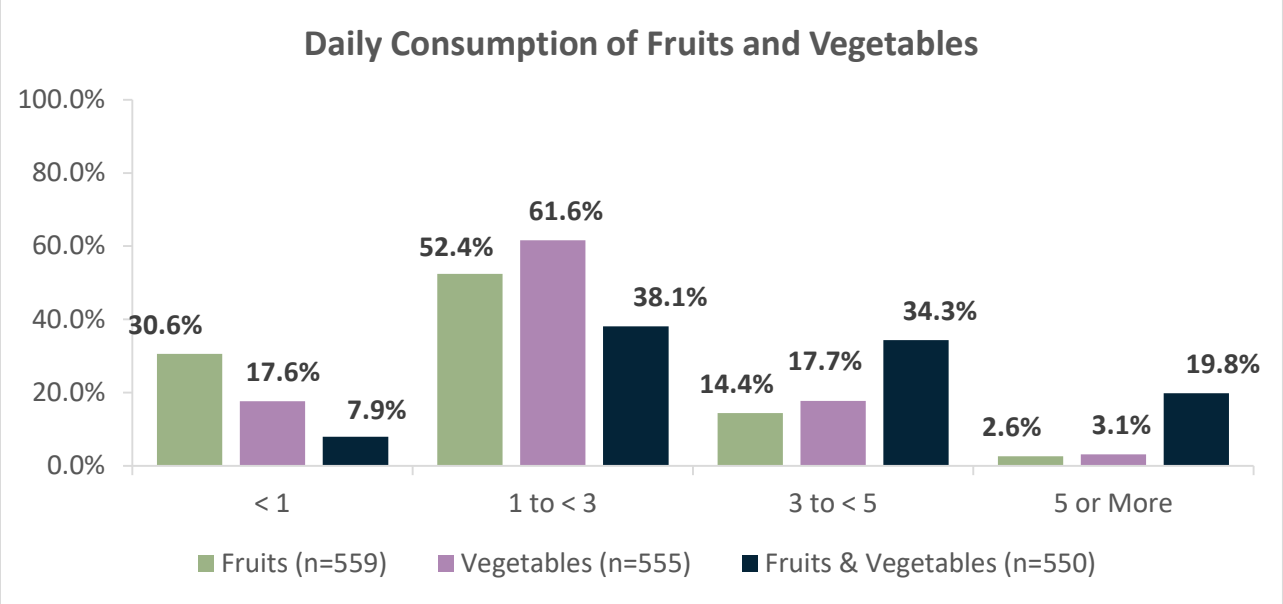
Source: SHGM Behavioral Risk Factor Survey, 2017, Q16.2: How many times per week or per month did you take part in physical activity during the past month? (n=352)



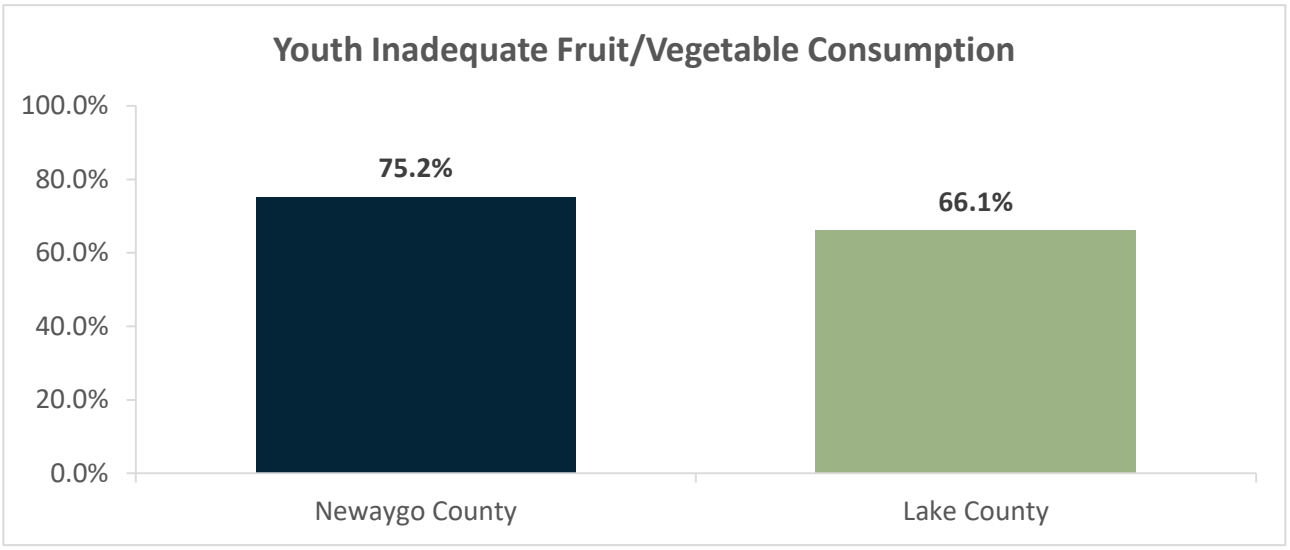
Source: SHGM Behavioral Risk Factor Survey, 2017, Q16.3: And when you took part in physical activity, for how many minutes or hours did you usually keep at it? (n=348)

Fruit and Vegetable Consumption

- One in five (19.8%) SHGM area adults, and between one-third and one-fourth of youth, consume adequate amounts of fruits and vegetables per day, which is defined as five or more times per day.
- Large majorities of area adults consume fruits and vegetables fewer than three times per day.



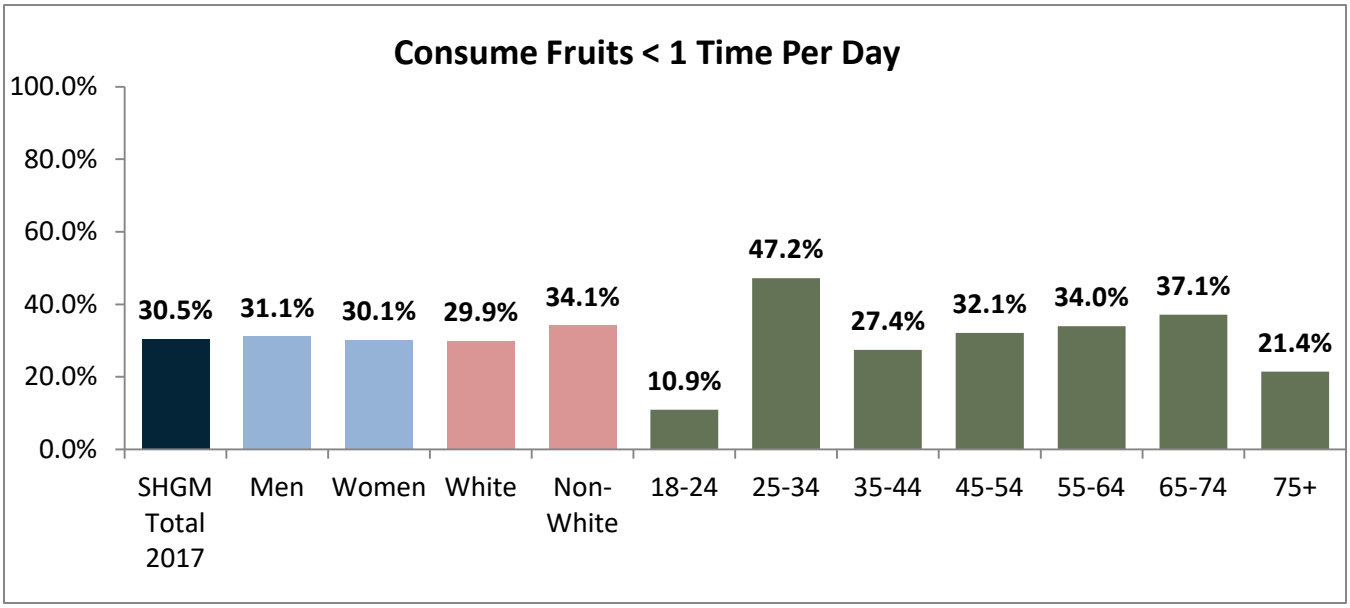
Source: SHGM Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.;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

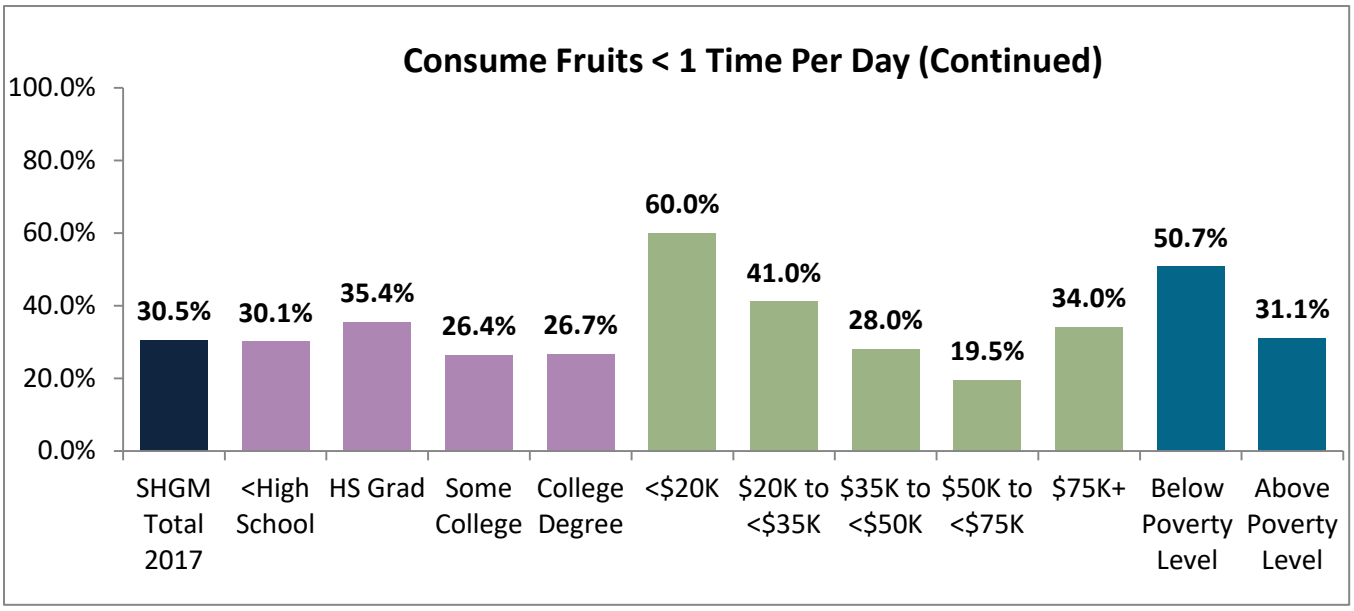


Source: For Newaygo and Lake counties: Michigan Profile for Healthy Youth (MiPhy), 2015; For MI and US: Youth Behavior Risk Survey (YRBS), 2015.

Fruit and Vegetable Consumption (Continued)

- Three in ten (30.5%) area adults consume fruit less than one time per day on average.
- Area adults most likely to consume fruits less than one time per day come from lower income groups.

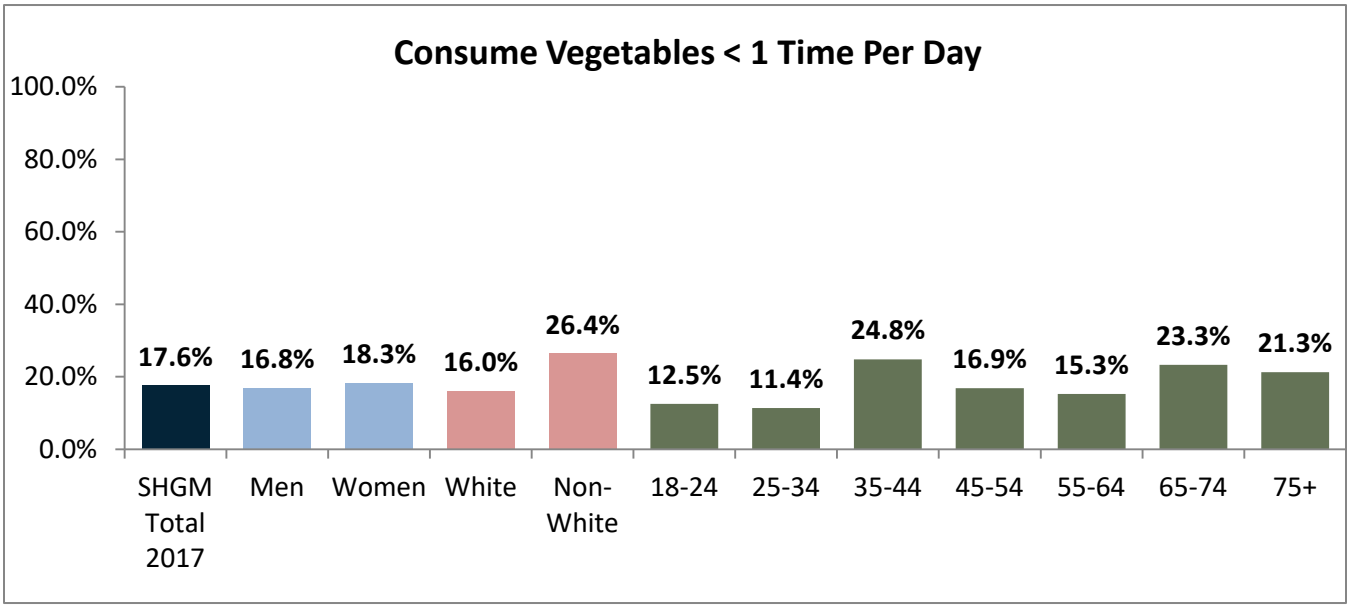


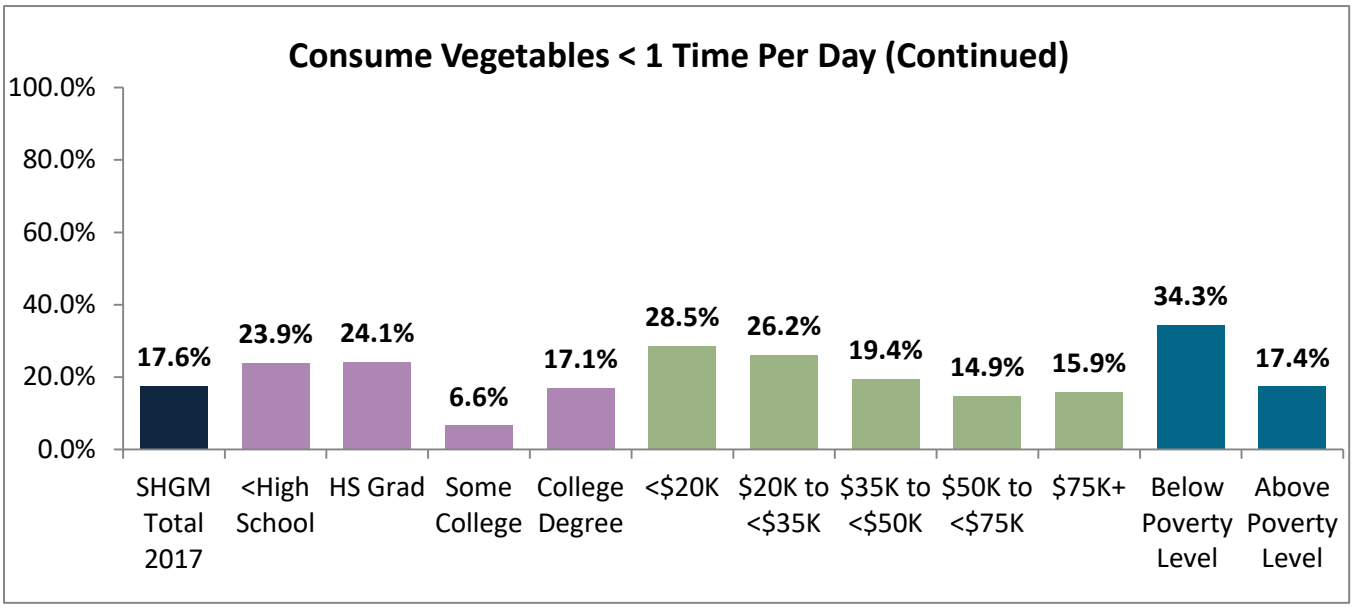


Source: SHGM Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.

Fruit and Vegetable Consumption (Continued)

Nearly one in six (17.6%) SHGM area adults consume vegetables less than one time per day, on average, and those most likely to do this come from groups that are non-White, have less than a college education, and/or have incomes less than $35K.

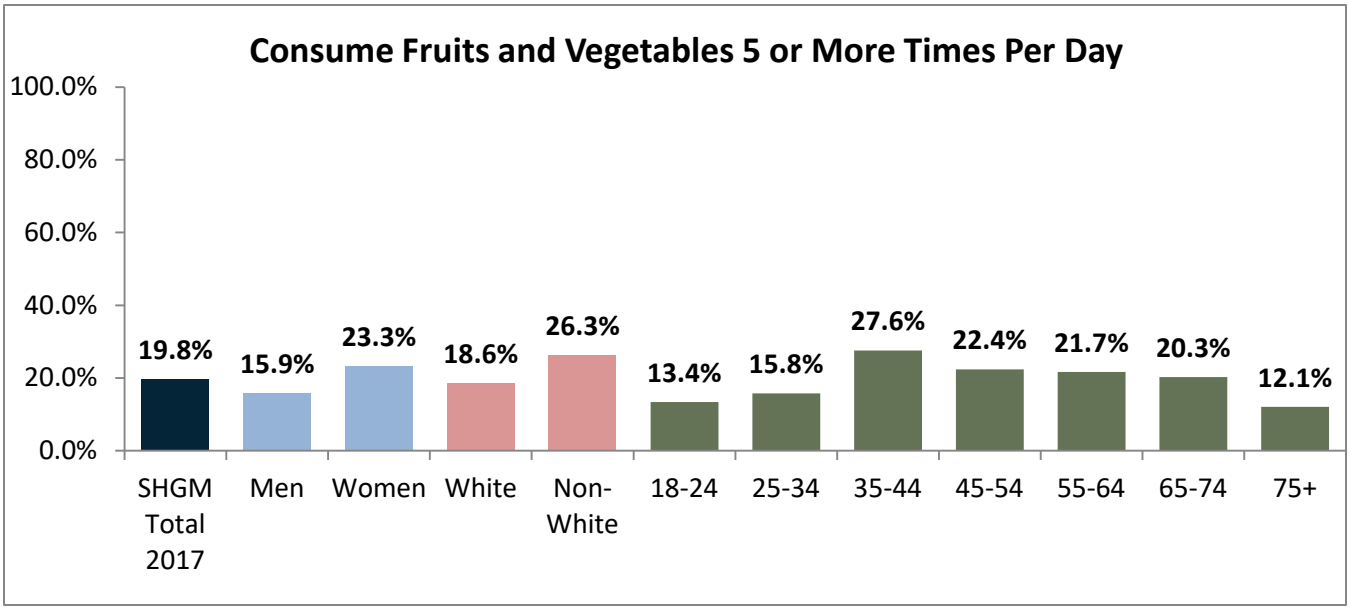


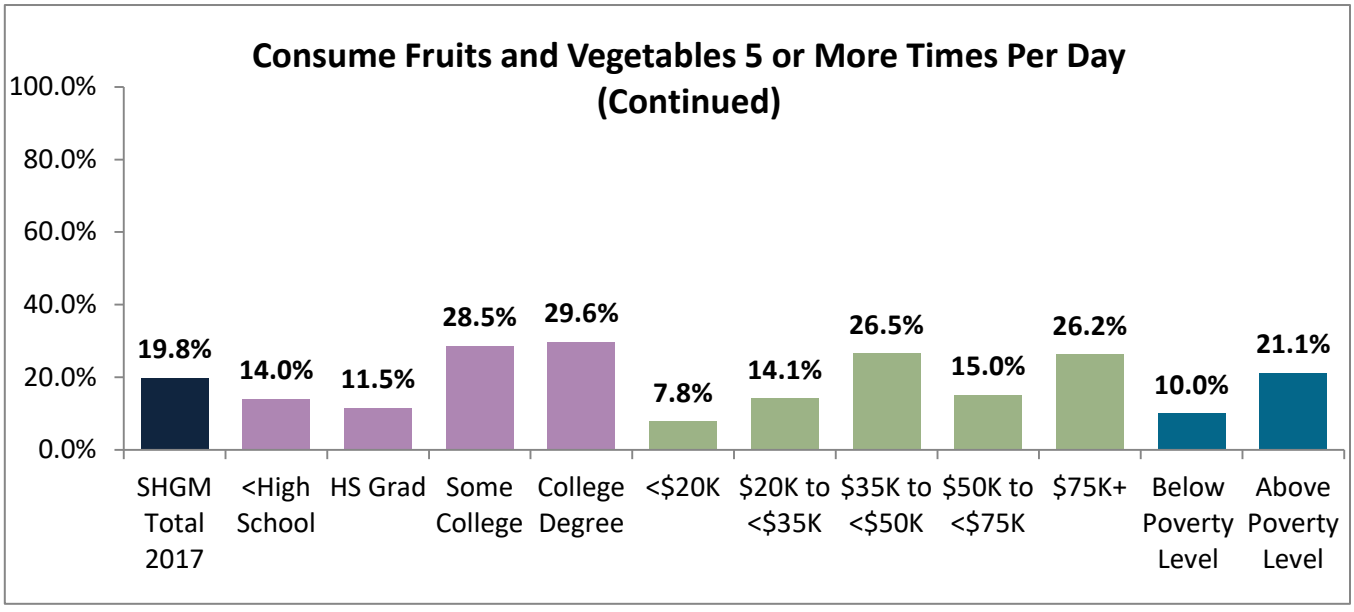


Source: SHGM Behavioral Risk Factor Survey, 2017, Q14.2: During the past month, how many times per day, week, or month did you eat vegetables for example broccoli, sweet potatoes, carrots, tomatoes, V-8 juice, corn, cooked or fresh leafy greens including romaine, chard, collard greens or spinach?

Fruit and Vegetable Consumption (Continued)

- Women and non-White adults are more likely to consume adequate amounts of fruits and vegetables daily, compared to men and White adults, respectively.
- Adults most likely to consume adequate amounts of fruits and vegetables are college educated and/or have incomes of $35K or more.

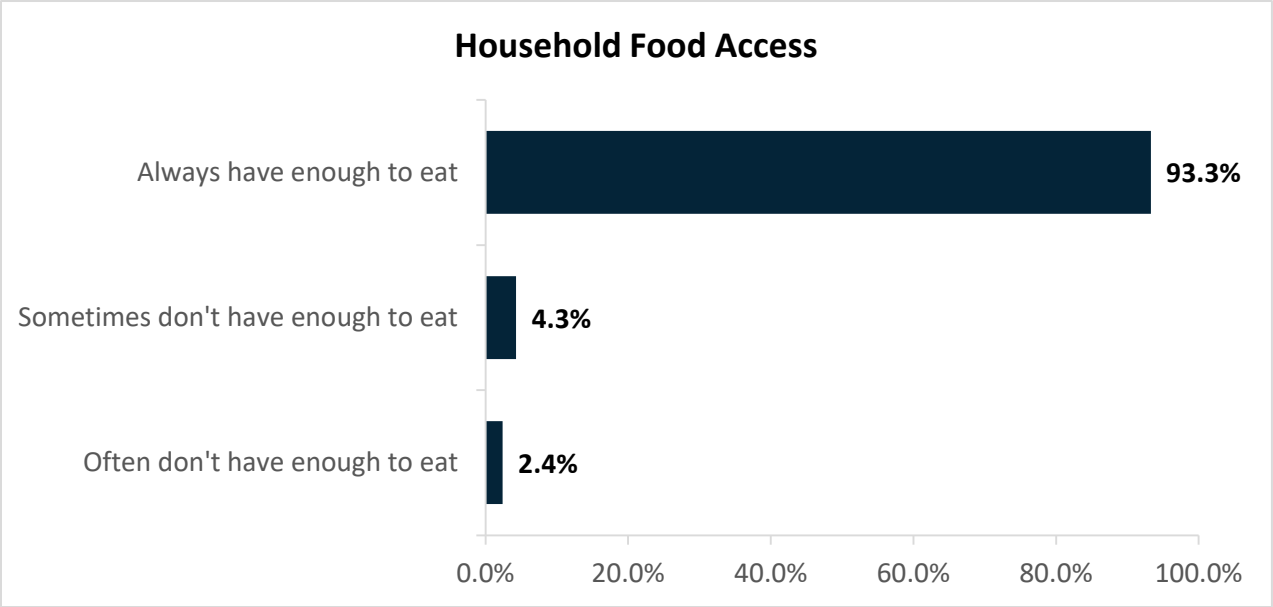




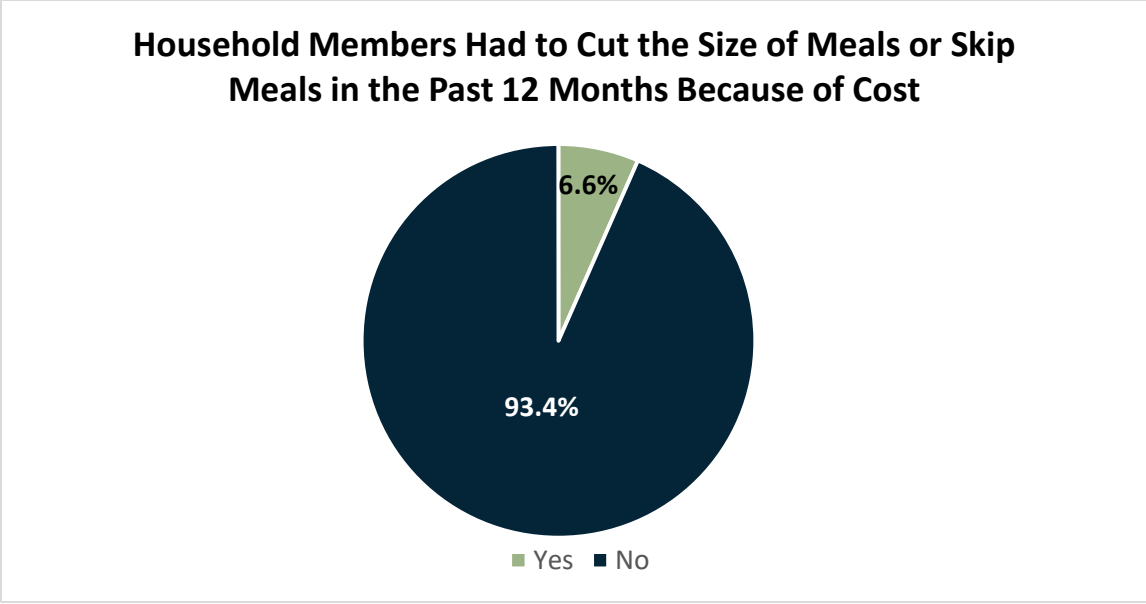
Source: SHGM Behavioral Risk Factor Survey, 2017, Q14.1: During the past month, how many times per day, week or month did you eat fruit or drink 100% PURE fruit juices? Do not include fruit-flavored drinks with added sugar or fruit juice you made at home and added sugar to. Only include 100% juice.;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

More than nine in ten (93.3%) area adults report they always have enough food to eat and a similar proportion say they have not had to cut the size of meals, or skip meals, because of cost.



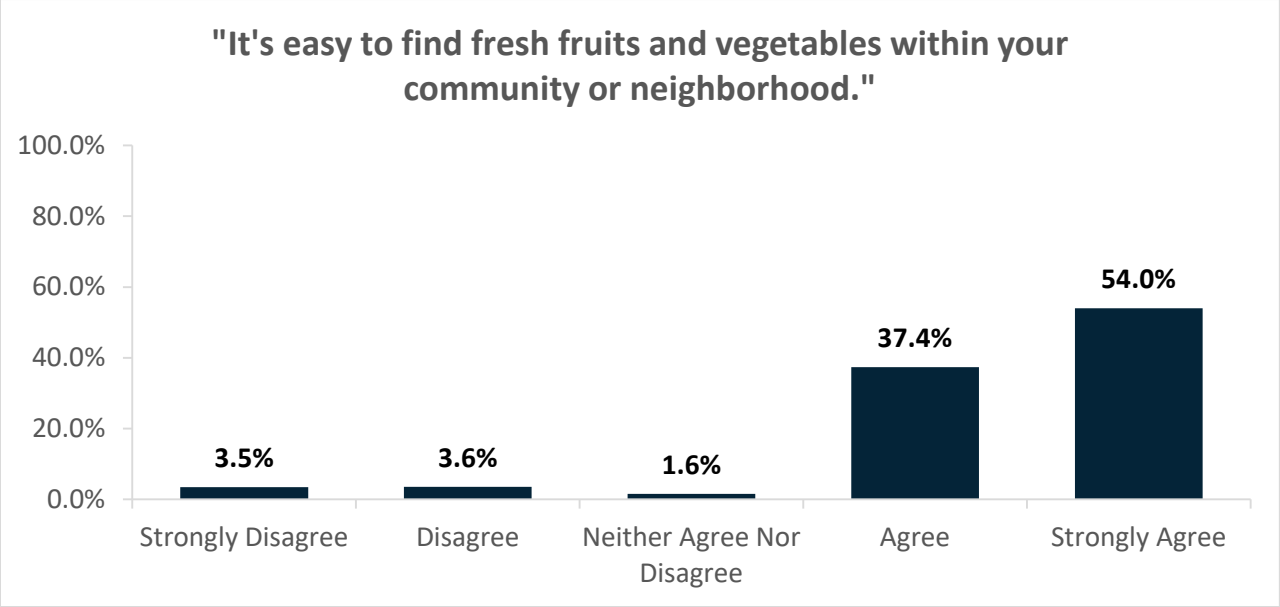
Source: SHGM Behavioral Risk Factor Survey, 2017, Q15.1: Which of the following statements best describes the food eaten in your household within the last 12 months? Would you say that…? (n=565)



Source: SHGM 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=565)

Food Sufficiency (Continued)

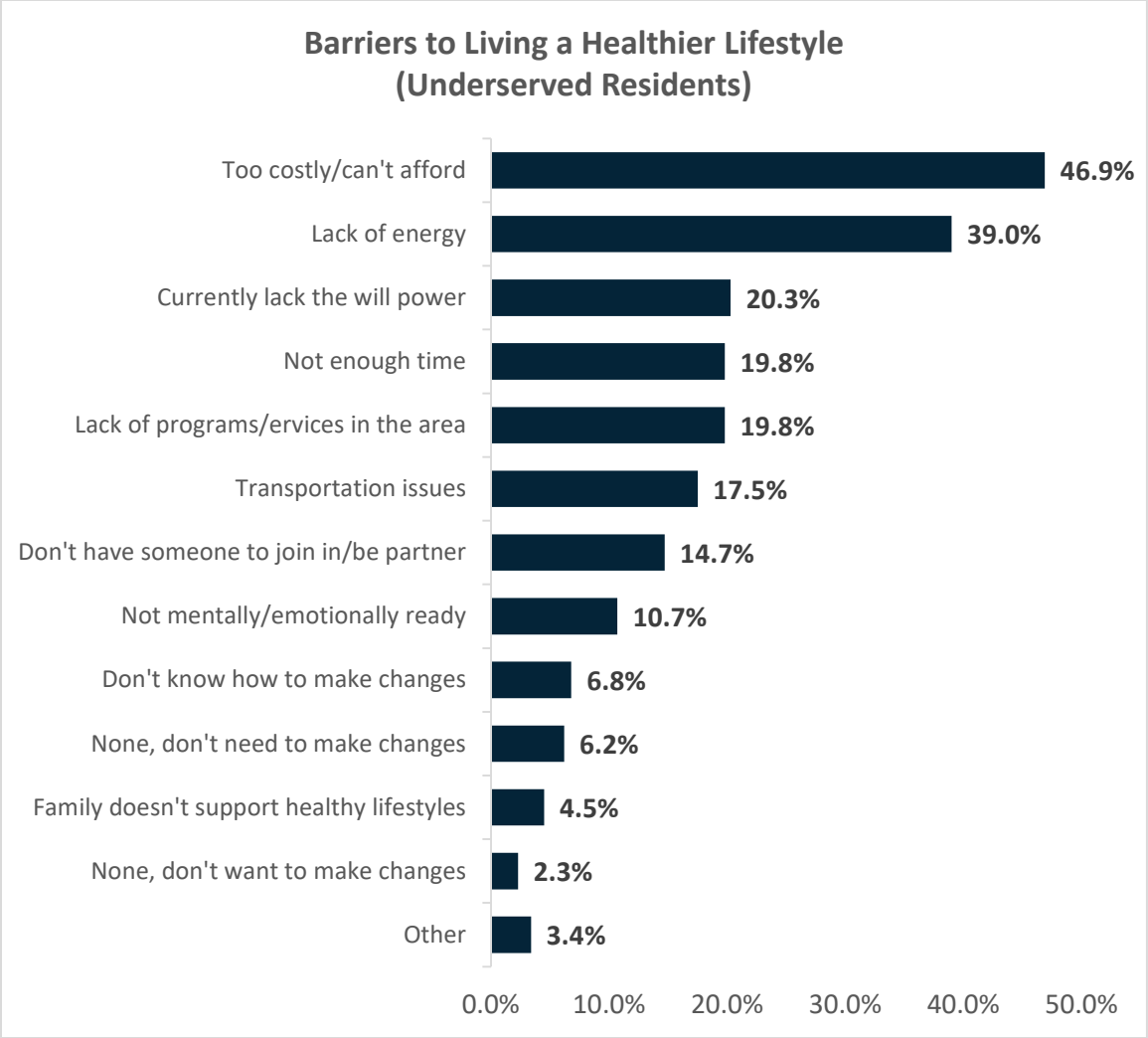
Additionally, more than nine in ten (91.4%) area adults say that it's easy to find fresh fruits and vegetables within their neighborhood or community.



Source: SHGM 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=557)

Barriers to Living a Healthier Lifestyle

- Underserved adults face many barriers when trying to live a healthier lifestyle, especially cost, followed by lack of energy.
- Lack of will power, time, and lack of programs and services to assist them in living a healthier lifestyle are also substantial barriers.



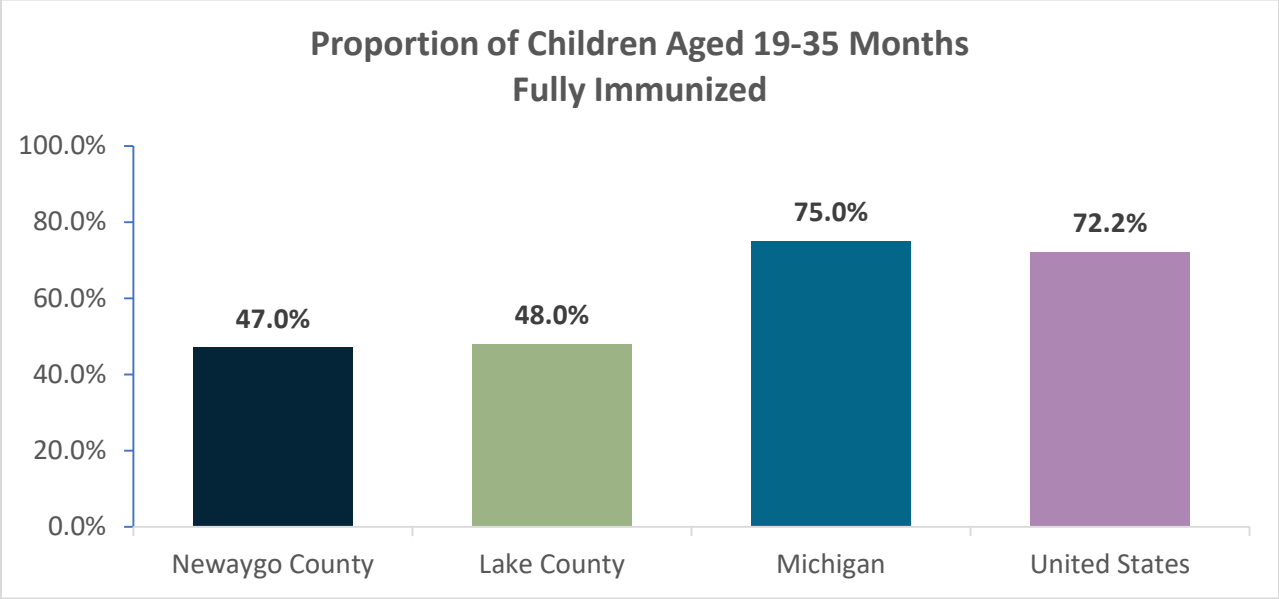
Source: SHGM Underserved Resident Survey, 2017, Q17: What are some of the barriers you face personally when trying to live a healthier lifestyle? (n=178)

CLINICAL PREVENTATIVE PRACTICES

Child Immunizations

- Less than half of children aged 19-35 months in Newaygo and Lake counties are fully immunized, rates far below the state or national rates.

- Although Key Informants do not consider lack of childhood immunizations to be one of the most pressing or prevalent health issues in the community, some acknowledge that this is a problem. For example, there is a sizeable, local group of Amish that may not adhere to an immunization schedule for their children. More critically, there are parents in the general population who either do not consider immunizing their children as important or believe that there could be harmful side-effects to immunization.



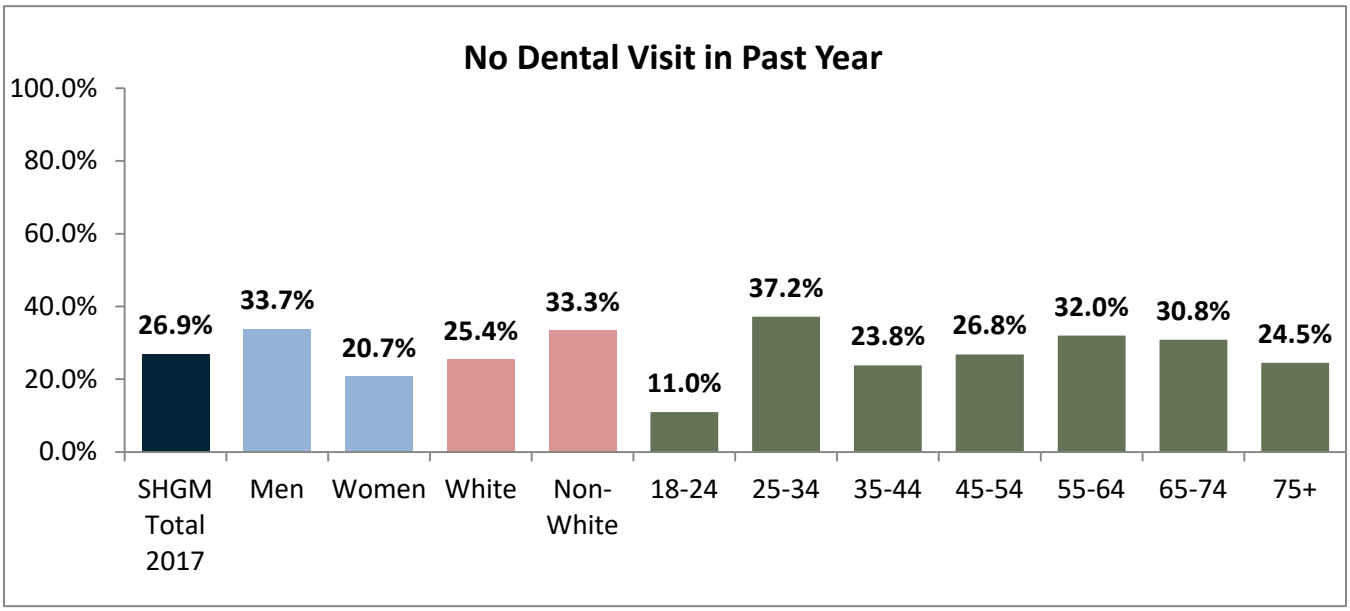
Source: Local and MI % from MICR June, 2017, National data at CDC National Immunization Survey, 2015.

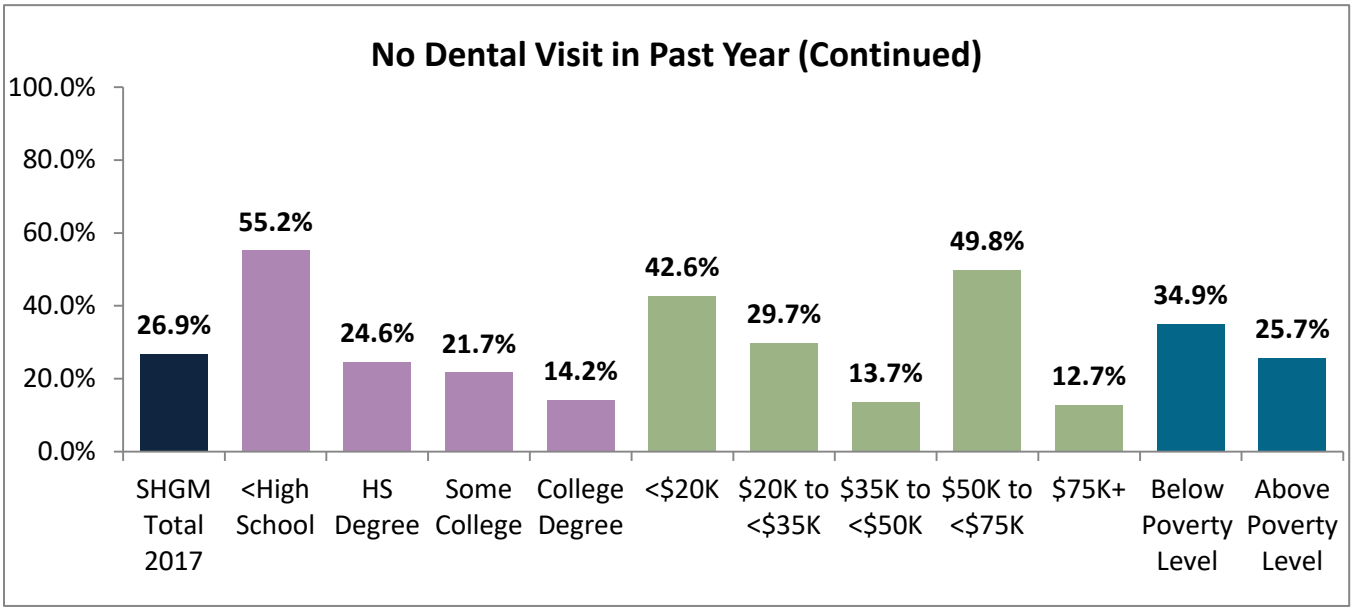
We have a **high Amish population that may not be immunized**. – *Key Informant*

Lack of immunization and **understanding by parents of the importance of immunizations**. This is one thing that factually we know works and yet there is a **strong counter force against immunizing**. – *Key Informant*

Oral Health

- Slightly more than one-fourth (26.9%) of SHGM area adults have not visited a dentist in the past year, and these people tend to come from groups that are male, non-White, without a high school diploma, and from lower income households.
- This rate is slightly better than the 2014 rate (30.1%).

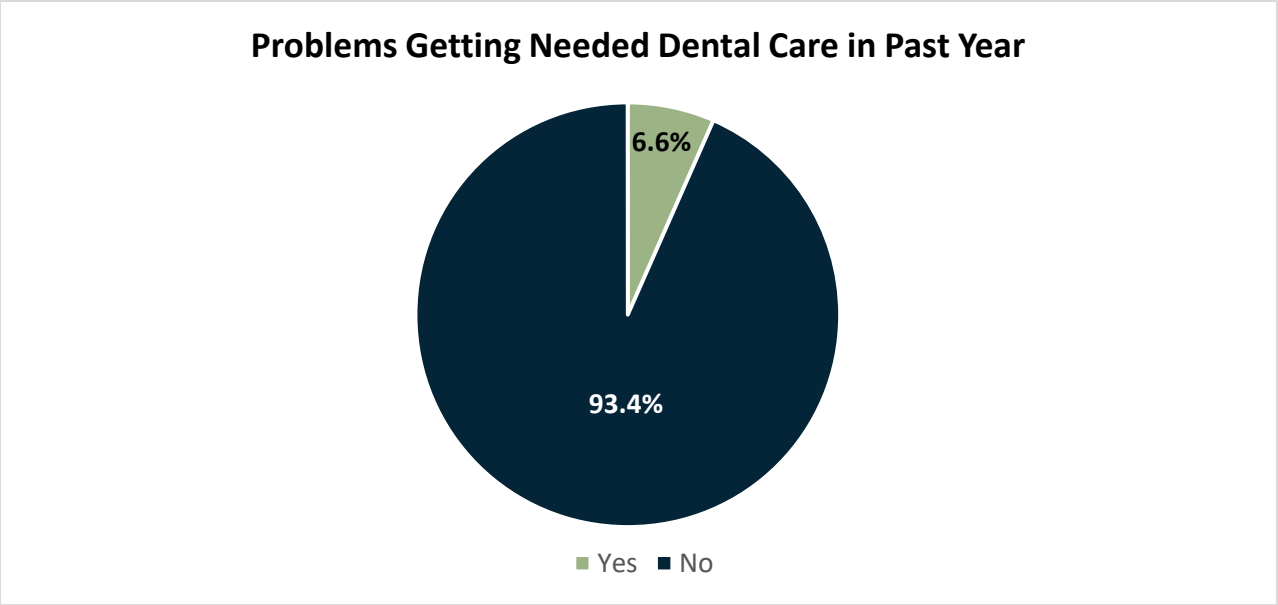




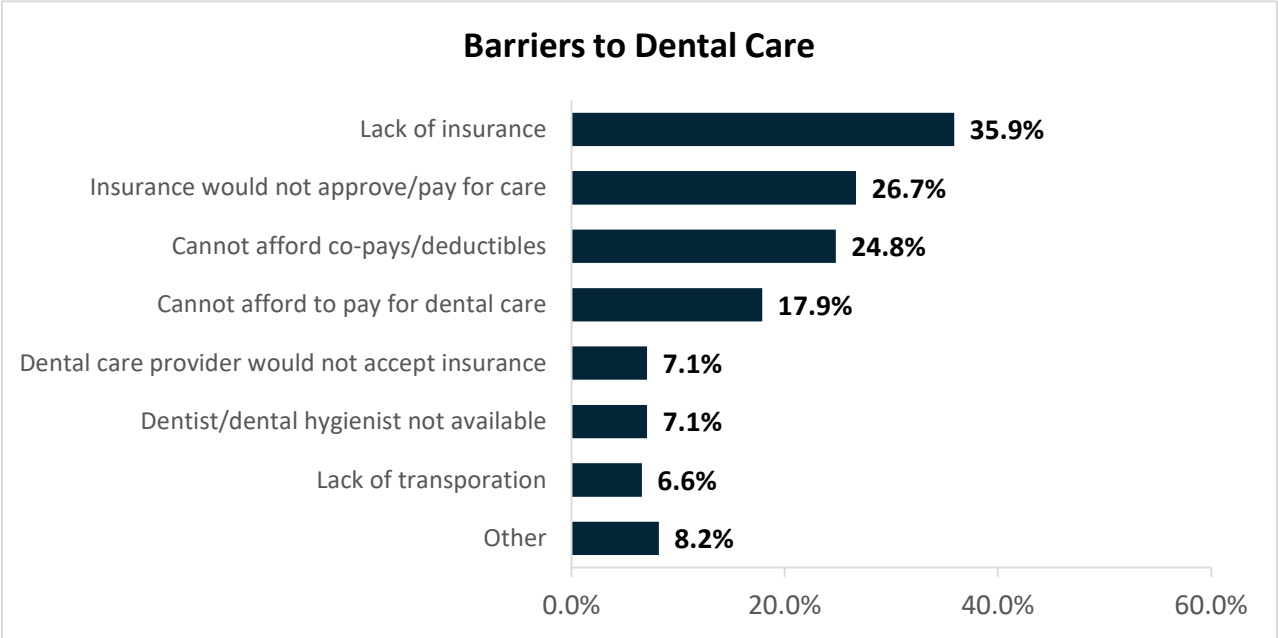
Source: SHGM Behavioral Risk Factor Survey, 2017, Q19.1: How long has it been since you last visited a dentist or a dental clinic for any reason? Include visits to dental specialists, such as orthodontists. (n=562)

Oral Health (Continued)

Very few (6.6%) area adults have had problems receiving needed dental care in the past year, but for those who have, lack of insurance, limited insurance, or inability to afford out-of-pocket expenses such as co-pays and deductibles were the top barriers to dental care.



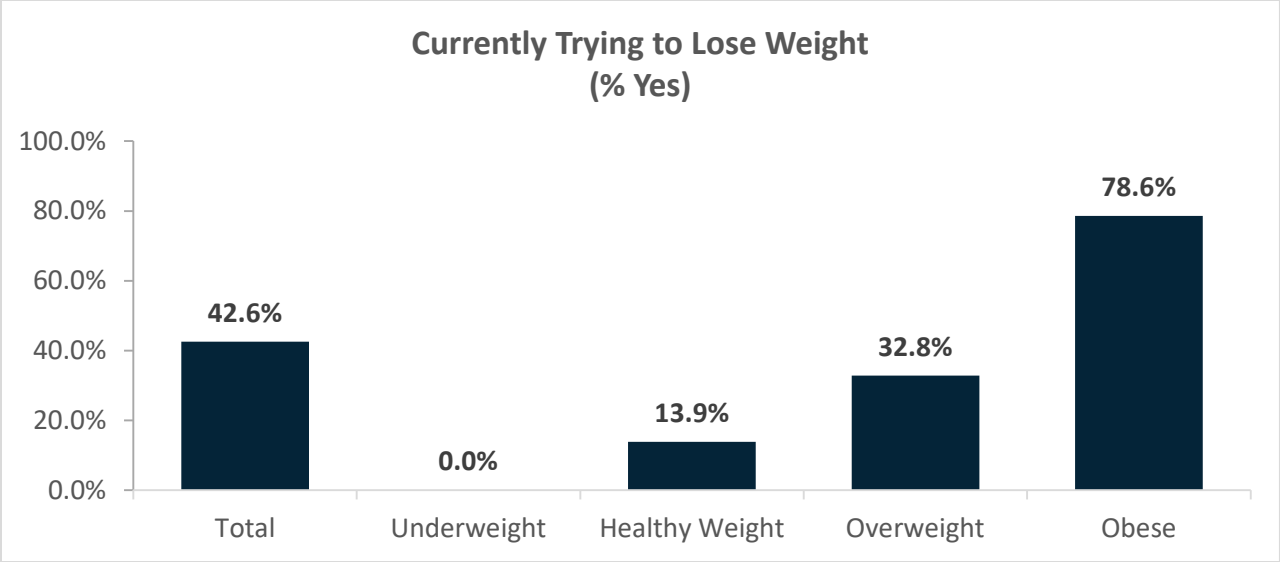
Source: SHGM Behavioral Risk Factor Survey, 2017, Q19.2: In the past 12 months, have you had problems getting needed dental care? (n=560)



Source: SHGM Behavioral Risk Factor Survey, 2017, Q19.3: Please provide the reason(s) for the difficulty in getting dental care. (Multiple response). (n=35)

Weight Control

- Four in ten (42.6%) area adults are currently trying to lose weight but only 32.8% of adults who are overweight per their BMI are currently trying to lose weight.
- Further, many of those who are overweight or obese see themselves more favorably; for example, 69.6% of those considered obese per their BMI see themselves as only slightly overweight, and 52.5% of those who are overweight view themselves as about the right weight.



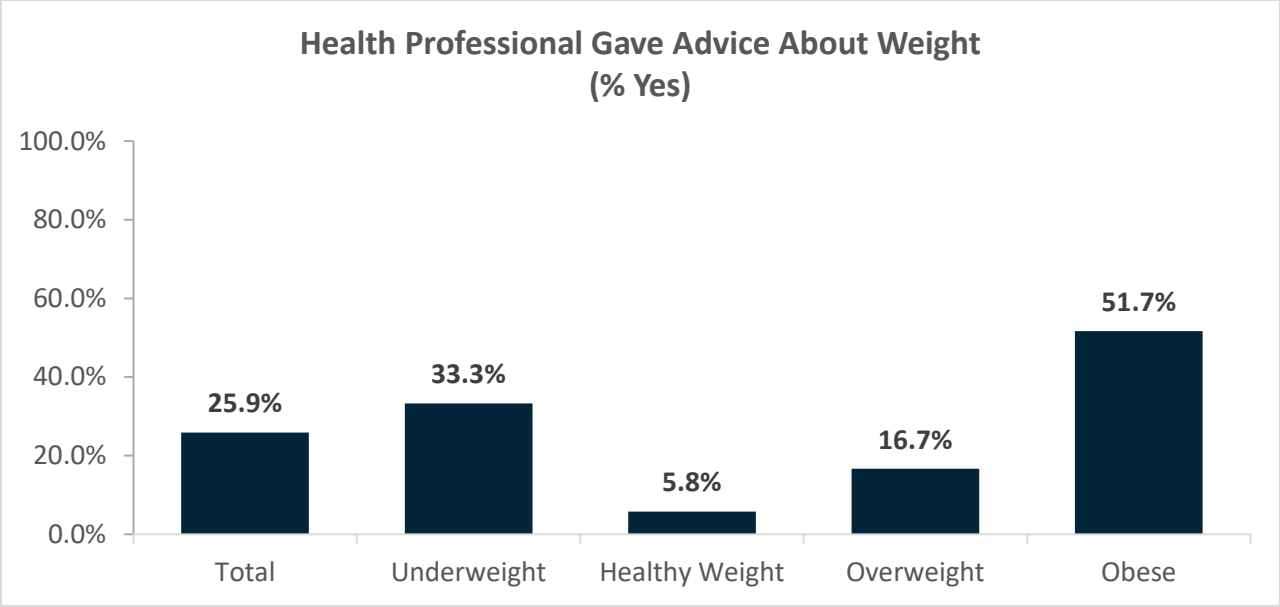
Source: SHGM Behavioral Risk Factor Survey, 2017, Q13.1: Are you currently trying to lose weight? (n=566)

		BMI Category			
Self-Described Weight	TOTAL (n=563)	Obese (n=185)	Overweight (n=203)	Healthy Weight (n=151)	Underweight (n=5)
Underweight	1.8%	0.0%	0.0%	5.8%	33.3%
About the right weight	45.3%	2.5%	52.5%	86.8%	66.7%
Slightly Overweight	41.9%	69.6%	46.6%	6.9%	0.0%
Very Overweight	10.9%	27.9%	0.9%	0.5%	0.0%

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

Weight Control (Continued)

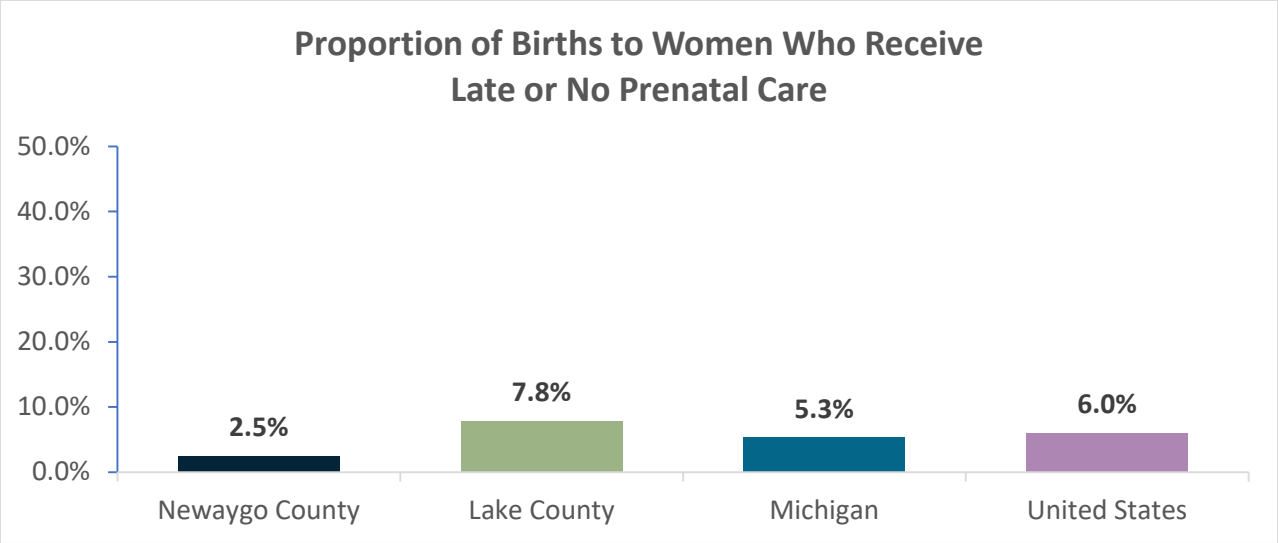
In light of the fact that seven in ten adults in the SHGM area are either overweight or obese per this 2017 CHNA, it is surprising that many more adults are not receiving advice from health care professionals regarding their weight; only 16.7% of adults who are overweight, and 51.7% of those who are obese, per their BMI, are receiving advice about their weight from a health professional.



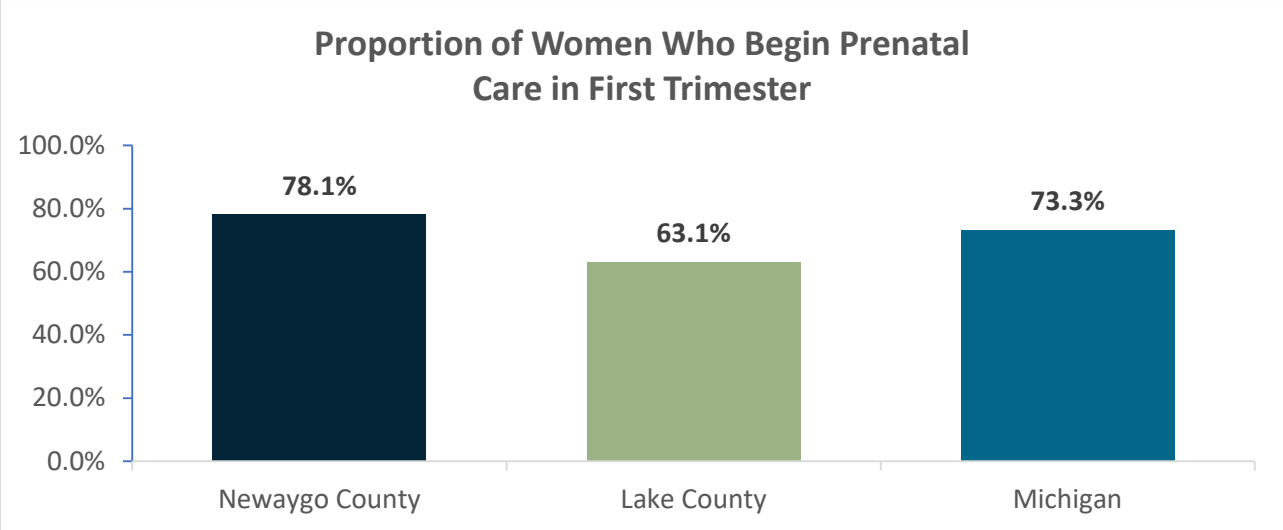
Source: SHGM Behavioral Risk Factor Survey, 2017, Q13.3: Has a doctor, nurse, or other health professional given you advice about your weight? (n=556)

Prenatal Care

- The proportion of pregnant women in Newaygo and Lake counties that have late or no prenatal care is extremely low, although the latter rate is higher than the state or national rates.
- That said, there is room for improvement as more than one in five (21.9%) pregnant women in Newaygo County and more than one-third (36.9%) of pregnant women in Lake County do not receive prenatal care in the first trimester.



Source: Kids Count Data Book, 2015.



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

SOLUTIONS & STRATEGIES

Partnerships That Could Be Developed

Developing partnerships with organizations and agencies are strategies that would facilitate meeting community needs. For example, providers need to consider the importance of the social determinants of health and be more involved in developing ways to provide care (especially dental and mental health). Also, Key Stakeholders view the current collaboration that is taking place among organizations and agencies positively but suggest that the scope could be broadened to meet the needs of more people, more specific groups, or more specific subpopulations.

Among health care organizations	TrueNorth, CMH, and Spectrum Health have made great strides, but the **opportunity lies in being able to expand that network and use of community health workers**. – *Key Informant* I've always thought that **our [SHGM] relationship with the family health care** - the **FQHC**, **could be better**. We get a lot of their patients, but there's **really no coordination** of that care. – *Key Stakeholder* **More community linkages are necessary** along with **collaboration between PCP offices** and the **community resources to ensure follow through**. – *Key Informant*
Among other area agencies/organizations	**Newaygo County** is a little different in that there are **five distinct villages/towns** and they **all have their own distinct culture**, and **their own distinct way of doing things**, and some of them don't want to collaborate with the other ones. There's still **an opportunity to start developing partnerships with some of the people in those other cities**, as well as **bringing in some of the county government**. I **see an opportunity if we could collaborate better with the policymakers at the county and state level** because that's where we're going to see probably the biggest influence. – Key Stakeholder There's **collaboration between MSUE**, the **Chambers**, the **hospitals**, the **health department**, the **schools**, **educational opportunities** - those groups have begun to work quite well together. It's **getting to that coordination of efforts** and **realization of what really is important** as well as where it's probably not going to work. – *Key Stakeholder*
Partnerships to address specific needs/gaps	There's always **lots of opportunity**. Right now, there 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*

Source: SHGM Key Stakeholder Interviews, 2017, Q6: Are there any specific partnerships that could be developed to better meet a need? (n=6); SHGN Key Informant Online Survey, 2017, Q1c: What ideas do you have to resolve this issue (most pressing health issues or concerns)? (n=72)

Resources Available to Meet Issues/Needs

Key Informants and Key Stakeholders mention several existing resources available for residents with mental health and/or substance abuse issues, or those with obesity issues; the problem is that the demand outweighs the supply, especially for those without health insurance.

Mental/behavioral health	**CMH**, **MSW**, **medical clinics**. – *Key Informant* **Newaygo County Mental Health** and **local physicians** along with **private counselors**. – *Key Informant* **Newaygo County Mental Health** provides services to those with severe mental illness. There are limited resources for those with mild to moderate mental illness. – *Key Informant* Psychiatric services for mild and moderate - folks have to go out of the county to get that if they need psychiatric services, but I do know that Spectrum has attempted more recently to address that by having at least **consultative services available through TeleMed**. – *Key Stakeholder*
Substance abuse	I think the area that we're branching out into is relative to substance abuse, and we're at the point where we're **providing medication-assisted treatment**, and we're in the process, through our **addictionologist**, of trying to **reach out to primary care providers and practices to offer that** as well as to offer it in terms of **linking them** and encouraging them to consider being a prescriber or participant in the medication-assisted (Suboxone) process. – *Key Stakeholder* **CMH substance abuse counseling**, **AA**. – *Key Informant* **Medication assisted treatment**, **Arbor Circle**, **Newaygo CMH outpatient substance abuse treatment**, **Substance Abuse Prevention Coalition**– *Key Informant*
Obesity	There are **programs at Tamarac** for **diet** and obviously **exercise** but it has a **reputation for being expensive**. Many assume this is too expensive for them. We also have the **Community Rec Center**. – *Key Informant* **Cooking Matters**, a **class** that **teaches individuals how to cook** and then you prepare the dish in class together and get to take additional ingredients home with them to make for their family. – *Key Informant* **Many recreational activities with a cost**. **Woods**, **rivers**, **some playgrounds**. – *Key Informant*

Source: Key Stakeholder Interviews, 2017, Q1a: Are there adequate area resources available to address these issues? (n=6); 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=72)

Resources Available to Meet Issues/Needs (Continued)

Resources in place to address additional issues have more limited success. Recruiting providers to the area is difficult so increasing access occurs through hiring additional mid-level providers and utilizing MedNow and TeleMed. The Commission on Aging helps somewhat with transportation issues, but the hours are limited. Efforts are also underway to improve the nutrition of area residents but healthy food still comes with a cost.

Lack of providers	**Family Health Care** and **Spectrum Health Medical Group** are the current entities capable of **recruitment**. **Gerber Hospital is active in collaborating recruitment**. – *Key Informant* The recent **addition of mid-level providers** has been an **attempt to address the shortage of providers** but access to a physician is still very limited. – *Key Stakeholder* **MedNow** and **convenient care** may **help increase access** to care. – *Key Stakeholder*
Smoking	**SHGM hired a nurse to become trained in tobacco treatment** and develop/implement **cessation** and education programs and this TTS (**Tobacco Treatment Specialist**) is the coordinator of Headway's '**BreatheWell**', which focuses on tobacco and nicotine use. Both DHD 10 and SHGM have a TTS, and both are also trained in **SCRIPT**, an **evidence-based cessation program for pregnant women**. – *Key Informant* **Nicotine cessation programs through various agencies**, including Gerber Memorial. – *Key Informant*
Transportation	**Commission on Aging does run buses** that help some people. – *Key Informant* **Services are limited to those that qualify** for services through **COA** and **MA** with proper notice. – *Key Informants*
Nutrition	SHGM to have the **CATCH** program in all of the county's elementary schools this fall. **MSU extension classes and programs**. **Food banks** and **mobile food pantries**. **SHGM Healthy Minds, Healthy Bodies** programs. – *Key Informant* Agency **collaboration with local farms**, **cooking demonstrations**. – *Key Informant*

Source: Key Stakeholder Interviews, 2017, Q1a: Are there adequate area resources available to address these issues? (n=6); 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=72)

Resources Available to Meet Issues/Needs (Continued)

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

- Arbor Circle
- Baldwin Family Health Care
- BreathWell smoking cessation program
- Commission on Aging
- Community Home Health Care Services
- Cooking Matters cooking classes
- Coordinated Approach to Childhood Health (CATCH)
- Department of Health and Human Services (DHHS)
- Diabetes education
- District Health Department #10
- Family Health Care
- Food banks and food pantries
- Healthy Beginnings
- LiveWell Newaygo County
- MedNow, telemedicine, telepsychiatry and other technology to increased health care access
- Newaygo County Community Collaborative
- Newaygo County Mental Health
- Newaygo Farmers Market
- Newaygo Urgent Care
- Spectrum Health Gerber Memorial Hospital
- Spectrum Health Tamarac
- Substance Abuse Prevention Coalition
- Support groups (e.g., Alzheimer's, stroke, Parkinson's, weight management)
- TrueNorth Community Services
- United Way of the Lakeshore
- Women's Information Services, Inc. (WISE)

Strategies Implemented Since Last CHNA

Four key strategies have emerged out of the results of the past two CHNAs and their corresponding implementation plans: (1) LiveWell, which is a program that aligns SHGM CHNA planning and DHD #10 strategic and program planning with the identified health needs of Newaygo County, (2) technology-driven ways to quickly connect patients to providers via MedNow, telemedicine, and telepsychiatry, (3) CATCH, a program that targets childhood obesity, and (4) TrueNorth, an initiative that collaborates with local agencies and organizations to provide services throughout the area.

LiveWell	The **LiveWell** community collaboration has also been a benefit. It's really starting to **bring the providers together and talk about the needs**. – *Key Stakeholder* Greater **partnerships for healthy outcomes** such as **LiveWell**. – *Key Informant*
Increased use of technology to combat access issues	**Increasing use of technology and innovation** such as **MedNow** and convenient care will improve access to care. – *Key Informant* We have worked on the development of the convenient cares and our **MedNow** program, which is the telehealth program for people to have direct physician-to-consumer. – *Key Stakeholder* **MedNow** is really beneficial to a rural community. – *Key Informant* Improved psych care via **telemedicine**. – *Key Informant*
CATCH	We're doing the **Coordinated Approach to Childhood Health**, which is CATCH. It's a national program from the CDC. So, this year we were in a White Cloud Elementary School, and next fall we're going to be in every elementary school in the county with that program. – *Key Stakeholder* **Childhood obesity programs** have been implemented in the county's schools to bring awareness to children in the community. – *Key Informant*
TrueNorth Community Services	SHGM is **working with TrueNorth** on a **high-risk population that doesn't seek health care**, and we're **finding what kind of things are deterrents for them** to not go get check-ups or things like that. – *Key Stakeholder* The TrueNorth/ Spectrum Health partnership will be showcased as a **best in class approach to reducing the generational cycle of poverty**. – *Key Informant*

Source: Key Stakeholder Interviews, 2017, Q10 (n=6); Key Informant Online Survey, 2017, Q16 (n=72): There was a Community Health Needs Assessments conducted in your community back in 2014. What, if anything, has been done locally to address any issues relating to the health or healthcare of area residents?

Strategies Implemented Since Last CHNA (Continued)

Additional strategies implemented over the past few years are programs targeting smoking cessation, teenage pregnancy, diabetes, and memory and movement disorders, as well as increased use of mid-level providers to increase health care access, and increased collaboration and coordination among local agencies and organizations to provide optimal service.

Smoking Cessation	Tobacco cessation, with **focus on pregnant women who smoke**. New hire of **RN who was trained in tobacco cessation evidence-based programs** for adults, youth and pregnant women, and who is **providing tobacco education to community** and schools, and **collaborating with providers** (e.g., schools, DHD 10). – *Key Informant* We created BreatheWell Newaygo County, which is a coalition of entities specifically for smoking, so we offer smoking cessation classes, and are also integrated in the OB/GYN clinic for pregnant women on their first prenatal visit, if they're identified as smoking. – *Key Stakeholder*
Increased collaborations/coalition building	In some of the communities we do have some **coalitions** that are **working on issues**. I think the **change you can see may be more involvement 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 three years. I think **there definitely have been efforts to increase engagement in the existing collaboratives and the groups towards the issues uncovered**. – *Key Stakeholder* **Collaboration has increased** and **moved towards a collective impact model**. – *Key Informant*
Better access though additional mid-level providers	We have **increased the number of primary care providers** to include additional **APPs**. – *Key Informant* The **addition of APP's** to address the shortage of providers. – *Key Informant*
Various specific issues	**Multiple support groups** in community for **Alzheimer's**, **stroke**, **Parkinson's**, and **weight management**. – *Key Informant* **Teen pregnancy prevention group**. – *Key Informant* **Diabetes education** increased and decreased A1C numbers in community members. – *Key Informant*

Source: Key Stakeholder Interviews, 2017, Q10 (n=6); Key Informant Online Survey, 2017, Q16 (n=72): There was a Community Health Needs Assessments conducted in your community back in 2014. What, if anything, has been done locally to address any issues relating to the health or healthcare of area residents?

Suggested Strategies to Improve Overall Health Climate

Key Informants offer myriad suggestions for improving the overall health care of the community but the top areas are: (1) increased awareness via education of health information, resources, and needs, (2) offset lack of providers with walk-in options and Urgent Care, (3) county-wide bus and/or providers traveling to patients to reduce transportation barrier, (4) focus on prevention and wellness through health conscious policies and healthier food options, and (5) improving the already existing collaboration between agencies and organizations through better integration and adopting a holistic/biopsychosocial/multi-disciplinary approach.

Awareness/Education	**Community Info Days** designed to educate the population. **Increase education to professionals**, **community members**, and **businesses** about the **health needs**, **current resources**, and **what could be done to improve**. I think **if we were all better versed on our community's health needs and barriers**, we as a community would be **more likely to work together to bring in additional resources** and try to **decrease barriers one problem at a time**.
More Providers	There needs to be **more primary care MDs**, **NPs** and **PAs** that can **accept a patient within weeks**, not months. An alternative could be that a **pharmacy offers walk-in clinic times**, similar to CVS on the east coast for minor medical needs. **Urgent Care availability** will be very **helpful** for **providing access** when I need it for care.
Transportation	Solve the transportation issues; **institute a county-wide bus system** like the one in Muskegon County. Having **health care providers go out into different communities** so that transportation is not an issue for people.
Prevention/wellness	**Continued education on preventative care** as well as perhaps **incentive programs** for larger systems to **adopt health conscious policies**. **Change the food offered at food trucks/pantries to more healthy choices**.
Collaboration/integration/ holistic health	**Continued collaboration** for an **integrated approach** to health.

Source: 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=72)

Suggested Strategies to Address Specific Issues/Needs

Key Stakeholders and Key Informants offer a number of achievable solutions to some of the **barriers to health care**, such as educating residents and health professionals on the existing programs and services, and specifically residents on how to navigate the health care system; utilizing nurse navigators to bridge the gap for people who have to travel out of the county for some conditions; creating a dial-a-ride bus system that can cross county lines; and, increase collaboration to include more key agencies (e.g., health, education, law enforcement, social work, business).

Awareness/Education	We could **offer greater educational opportunities for the public** about the **services we provide** at Spectrum Health. – *Key Informant* I have come across people who still do not have insurance; I think **they need more information on how to get help applying for insurance/open enrollment**, etc. – *Key Informant* Better wellness programs, **coaching**, community funding for uninsured, and **education on prevention**. – *Key Stakeholder*
More Providers	**Nurse Navigators** for stroke, Alzheimer's-dementia, Parkinson's, pediatrics, gerontology, COPD/Lung: a **navigator can help bridge the gap for people with the above who live in this area, who currently have to go to GR or Muskegon** (and therefore outside of SH services often). We **need memory loss and Parkinson's specialty providers to come to our multispecialty clinic** at least monthly. – *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, and I think that would address a lot of the transportation issues that we have, but I don't know if it has to do with the funding, or if there's federal limitations on what they can do, **but if you have to stop at the county line and drop somebody off, it doesn't necessarily work out so well**. – *Key Stakeholder*
Collaboration/integration/ holistic health	**More community linkages** are necessary along with **collaboration between PCP offices and the community resources to ensure follow through**. – *Key Informant* **Get the people together that are involved in these problems**: **Physicians**, **staff**, **ER staff**, **social work**, **police**. – *Key Informant* **Partner with universities to provide vision and dental clinics** locally to address uninsured/underinsured persons who can't afford care or copays/deductibles because they're too high. – *Key Stakeholder*

Source: Key Stakeholder Interviews, 2017, Q10 (n=6); Key Informant Online Survey, 2017, Q16 (n=72): There was a Community Health Needs Assessments conducted in your community back in 2014. What, if anything, has been done locally to address any issues relating to the health or healthcare of area residents?

Suggested Strategies to Address Specific Issues/Needs (Continued)

Suggested strategies for **substance abuse** issues include: (1) addressing the issue from an integrated, holistic, or biopsychosocial approach, (2) placing limits/constraints on, or providing guidelines to, providers to avoid over-prescribing drugs, especially opiates, (3) providing more programs or treatment options for people dealing with addiction (e.g., walk-in programs, detox centers counselors, inpatient treatment), and (4) through education and best practices, instructing parents and youth on not only the dangers of drug use but also teaching coping, life, and job skills that will aid in substance abuse prevention.

Integrated care	Ideally Newaygo County would have a **Center for Integrated Health** that helps treat those with **addiction**. This could include; **Suboxone** with **counseling**, **residential rehab**, **safe detox** options within the county. – *Key Informant* A **multidisciplinary approach** may help that includes **collaboration** of **health care** providers, **community educators**, and **law enforcement**. – *Key Stakeholder* **Collaborate** with **CMH**, **Arbor Circle**, and **other organizations** in the community to address the issue. – *Key Informant*
Reduce/control opioid prescriptions	**Fewer prescriptions for opioids**. **Make ordering physicians aware when their ordering patterns diverge from norms**. **Better** addiction **treatment programs. –** *Key Informants* **Restrict the use of pain medication**. – *Key Informant* Develop a **protocol** for **providers on how long/how much they will continue to prescribe pain medication** to patients. – *Key Informant*
Best practices	**Utilize evidence-based practices** to **target the younger population** to **break the belief that it's 'normal' or that everyone uses marijuana**. – *Key Informant*
More treatment options	**Inpatient treatment**. **Actual drug counselors** and **other substance abuse professionals**. – *Key Informant*
Education	**Education** throughout **community** and **schools**. – *Key Informant*

Source: SHGM Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=6); Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=72)

Suggested Strategies to Address Specific Issues/Needs (Continued)

Although research has shown that people know what they need to do to **lose weight** or stay in shape, motivating people to take this path requires a cultural shift, or change in mindset. The community must continue emphasizing the importance of exercise and healthy eating and this needs to begin early in the life cycle. If classes and gyms/exercise areas were more affordable, or more accessible, people may be more inspired to participate and, in turn, lose weight. Lastly, but certainly not least in importance, providers need to be more involved in giving advice to their patients regarding weight and weight loss strategies.

Begin early in the life cycle	Try to **teach families with young children better habits** for health, nutrition and physical activity. We need to **address these issues when children are young**. – *Key Informant* **Start with mothers and prenatal nutrition**, **elementary nutrition education** with **physical activity** and **easier access for all to Tamarac**. – *Key Informant*
Change culture/mindset	I think more than anything there needs to be a **culture change**. An **atmosphere of wellness** and for **people to see others like themselves taking care of their bodies**, for people to **see this as normal**, **not the exception** for 'those people' with all kinds of time on their hands. – *Key Informant* Continue to talk about, educate, **refuse to settle for 'oh well**, **the whole country is overweight.'** Continue to be community focused. The more we can do in the community, the better. Go to the people, don't wait for them to come into the office. – *Key Stakeholder*
Increase options for people to be active	Use **city and county resources for bike lanes**, **restriping the streets to allow bike travel**. **More sidewalks, public water fountains**. – *Key Informant* **Increase bike and walking trails** to improve walkability of the community. **Increase youth and family athletics opportunities at low and minimal cost**. – *Key Stakeholder*
Easier access to classes	We have weight management classes and diabetes management classes open to the public. A **financial scholarship for the weight management classes may help those who can't afford to come to class**. – *Key Stakeholder*
Providers need to be more involved	**Doctors need to be referring patients to nutritionist**. – *Key Informant*

Source: SHGM Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=6); Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=72)

Suggested Strategies to Address Specific Issues/Needs (Continued)

Area professionals offer a number of recommendations specific to addressing the issue of **mental health**, such as: (1) providing more comprehensive and integrated care realizing that the best way to address mental health is through a multidisciplinary approach, (2) developing better screening and referral protocols to ensure patients get the appropriate care, (3) continuing to use, or even increasing usage, of technology such as MedNow and TeleMed to lift some barriers to access, (4) training case managers to be proactive in preventing psychological episodes from escalating/worsening, and (5) increasing awareness of existing services, and having local community champions speak out about mental illness making it more real and identifiable.

Integration of care/ Comprehensive care	Greater **collaboration** with **CMH**. **Increasing the integration of behavioral health into primary care** could foster greater collaboration. – *Key Informant* **Continued integration between community agencies** and development of additional resources. – *Key Informant*
Better screening and referrals	Need efforts to **increase mental health providers' universal screenings** within the health system (PCP visits, ED visits, etc.), with some sort of **referral system to treatment**. Potentially look at avenues to **increase inpatient facility availability**. **Encourage providers and community to TALK about mental health** and establish preventative measures. School programming needs to start in early elementary school. – *Key Stakeholder*
Continue use of technology to increase access	Continued growth of **mental health integration into health care systems**. **Increasing use of MedNow and TeleMed**. – *Key Informant*
Proactive intervention	**Case managers that follow patients to head off an episode needing care**. – *Key Informant*
Increased awareness of existing services	Increased access to mental health professionals. **Increased transparency on what resources we have available in the community**. – *Key Stakeholder*

Source: SHGM Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=6); Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=72)

Suggested Strategies to Address Specific Issues/Needs (Continued)

Key Stakeholders and Key Informants offer numerous suggestions to address other issues such as transportation as a barrier to care, diabetes, the lack of specialists, poverty, and nutrition.

Diabetes	**Encourage physicians to attend prediabetes classes and diabetes education**. – *Key Informant* Have **more organizations offering diabetes prevention programs** in the county, **work with the food trucks and pantries** to provide food that will help with a more balanced diet (e.g., higher in vegetables and lower in carbohydrates). – *Key Informant*
Lack of specialists	**Recruit a full-time cardiologist to the community** to see patients in the hospital, do procedures and provide timely follow up. – *Key Informant* Either **recruitment of a neurologist** or **setting up a robust telehealth consultation system**. – *Key Informant*
Transportation	**Transportation buses for doctors**, **counseling**, **therapy**, all realms of health. Having a **transportation service through the hospital** and **deploy vehicles out to homes that need to get to appointments but can't**. – *Key Stakeholder* Would like to see some type of **shuttle service available** that would be able to help **provide the needed transportation for both scheduled appointments** and those that need transportation **home after hospitalization/ED visits**. – *Key Informant*
Poverty	**Increase** the number of **resources**, such as **social workers**, **transportation**, and **Back to Work programs**. – *Key Informant* We have a **lower educational attainment rate**, and **that feeds into health outcomes later in life**. I think if we can fix this it would go a long way. – *Key Stakeholder*
Nutrition	Need a group willing to **fund a breastfeeding support group**. – *Key Informant*

Source: SHGM Key Stakeholder Interviews, 2017, Q1b: What are your recommendations to resolve this issue? (n=6); Key Informant Online Survey, 2017, Q1c: What ideas do you have, if any, to resolve this issue? Please be as detailed as possible. (n=72)

APPENDIX

Participant Profiles

Key Stakeholder In-Depth Interviews

Chief Operating Officer, Spectrum Health Gerber Memorial

Director, DHS of Lake and Newaygo Counties

Health Officer, District Health Department #10

President, Spectrum Health Gerber Memorial

President and CEO, Baldwin Family Health Care

Key Informant Online Survey		
Registered Nurse (9)	CEO	Medical Social worker/Masters of Social Work
Physician (8)	Certified Professional Life Coach and Certified Grief Recovery Specialist	Nurse's Aide
Community Coordinator (3)	City Mayor	Nurse Manager
Public Health Educator (3)	Consultant	Nutrition Program Instructor
Registered Nurse Care Manager (3)	Director of Community Support Services, Newaygo County Mental Health	Office manager
Community Health Program Specialist (2)	Director of Operations for SH Medical Group	PA-C
Community Health Worker (2)	FNP	Patient Relations
Community Nurse Specialist (2)	Health and Prevention Coordinator	Pharmacist
Executive Director (2)	Health Care Worker	Physical Therapist
General Dentist (2)	Hospital Board Member	Principal
School Superintendent (2)	Housing Resource Specialist (work with homeless)	Supervisor
Administrator	Human Resources	VP of Research and Development
Business owner	Licensed Masters Social Worker, Integrated Behavioral Heath, specializing in pediatrics and maternal health.	
Case Manager	Management	

Participant Profiles (Continued)

Behavioral Risk Factor Survey (Telephone)					
	TOTAL		TOTAL		TOTAL
Gender	(n=568)	Marital Status	(n=567)	Own or Rent	(n=563)
Male	48.3%	Married	58.0%	Own	83.1%
Female	51.7%	Divorced	10.1%	Rent	14.8%
Age	(n=568)	Widowed	5.5%	Other	2.1%
18 to 24	12.8%	Separated	0.6%	County	(n=568)
25 to 34	10.7%	Never married	24.1%	Lake	3.4%
35 to 44	11.8%	Member of an unmarried couple	1.7%	Mecosta	0.1%
45 to 54	21.1%	Employment Status	(n=566)	Montcalm	0.4%
55 to 64	21.5%	Employed for wages	43.9%	Muskegon	11.9%
65 to 74	13.3%	Self-employed	7.2%	Newaygo	73.4%
75 or Older	8.8%	Out of work 1 year+	0.8%	Oceana	11.0%
Race/Ethnicity	(n=562)	Out of work <1 year	0.2%	Zip Code	(n=568)
White/Caucasian	85.2%	Homemaker	4.4%	49309	3.1%
Black/African American	6.8%	Student	2.8%	49327	8.7%
Hispanic/Latino	5.0%	Retired	26.5%	49329	1.4%
Asian	0.4%	Unable to work	14.2%	49337	19.5%
Native American	2.6%	Education	(n=566)	49349	16.5%
Adults in Household	(n=568)	Less than 9th grade	6.4%	49412	22.6%
One	12.1%	Grades 9 through 11	9.0%	49421	4.5%
Two	50.2%	High school graduate/ GED	39.6%	49425	5.4%
Three	17.9%	College, 1 to 3 years	31.3%	49442	2.4%
Four	11.7%	College 4 years or more (graduate)	13.7%	49445	3.7%
Five or more	8.1%	Income	(n=409)	49451	1.0%
Children in Household	(n=568)	Less than $10K	7.3%	49457	5.9%
None	72.6%	$10K to less than $15K	4.9%	49459	1.9%
One	12.1%	$15K to less than $20K	9.1%	49644	2.2%
Two	6.5%	$20K to less than $25K	9.2%	49656	1.1%
Three	6.1%	$25K to less than $35K	12.7%		
Four or more	2.6%	$35K to less than $50K	23.5%		
		$50K to less than $75K	16.0%		
		$75K or more	17.2%		

Participant Profiles (Continued)

Underserved Resident Survey (Self-Administered)					
	TOTAL		TOTAL		TOTAL
Gender	(n=207)	Marital Status	(n=209)	Own or Rent	(n=191)
Male	22.7%	Married	30.1%	Own	52.4%
Female	77.3%	Divorced	23.4%	Rent	34.0%
Age	(n=208)	Widowed	12.4%	Other	13.6%
18 to 24	10.6%	Separated	4.8%	County	(n=209)
25 to 34	24.0%	Never married	24.9%	Kent	1.0%
35 to 44	15.4%	Member of an unmarried couple	4.3%	Lake	20.6%
45 to 54	8.2%	Employment Status	(n=208)	Muskegon	1.9%
55 to 64	11.1%	Employed for wages	25.0%	Newaygo	75.1%
65 to 74	14.9%	Self-employed	5.3%	Oceana	1.40%
75 or Older	15.9%	Out of work 1 year+	6.7%	Zip Code	(n=171)
Race/Ethnicity	(n=210)	Out of work <1 year	4.3%	49304	13.5%
White/Caucasian	83.3%	Homemaker	8.7%	49309	11.1%
Black/African American	9.0%	Student	1.9%	49318	0.6%
Hispanic/Latino	2.9%	Retired	29.8%	49327	7.0%
Asian	0.0%	Unable to work	18.3%	49330	0.6%
Other	4.8%	Education	(n=208)	49337	12.3%
Adults in Household	(n=198)	Less than 9th grade	4.3%	49349	21.6%
One	33.1%	Grades 9 through 11	16.8%	49412	19.9%
Two	41.9%	High school graduate/ GED	38.0%	49421	1.8%
Three	13.6%	College, 1 to 3 years	27.9%	49425	1.2%
Four	9.1%	College 4 years or more (graduate)	13.0%	49451	0.6%
Five or more	2.0%	Income	(n=193)	49544	0.6%
Children in Household (6-17)	(n=199)	Less than $10K	42.0%	49565	0.6%
None	64.8%	$10K to less than $15K	15.0%	49623	2.3%
One	12.1%	$15K to less than $20K	13.0%	49642	2.3%
Two or more	23.1%	$20K to less than $25K	6.7%	49644	2.9%
Children in Household (<6)	(n=568)	$25K to less than $35K	10.4%	49656	1.2%
None	73.5%	$35K to less than $50K	6.7%		
One	16.8%	$50K to less than $75K	3.1%		
Two or more	9.7%	$75K or more	3.1%		

Previous Implementation Plan Impact Exhibit B

Spectrum Health Gerber 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 2014-2015 CHNA.

Specific Health Need Goal	Metric	Impact of Implementation Plan Strategy
Access to Healthcare		
Increase primary care provider availability within Gerber Memorial by a variety of methods including, but not limited to: • Increase the number of appointments available per day by eliminating wasteful work • To avoid expensive Emergency Department (ED) visits, create a marketing campaign which encourages patients to call their primary care provider first before going to the ED • Increase the number of primary care providers; Gerber will recruit additional primary care providers as outlined in our strategic plan. • Increase provider/team ratio by adding care managers for complex patients and any other primary care innovation	1a. Up to 50% of primary care visits Newaygo County primary care locations are completed within 48 hours of patient request by the end of FY18 1b. The primary care ED sensitivity rate for each practice will decrease by 10% or to system average by the end of FY18	We have fully achieved success in meeting our goal of ensuring that 50% of the primary care visits are completed within 48 hours of the patient's request. We have been unable to obtain the data necessary to accurately track our ED sensitivity rate, and therefore unable to track progress. Tableau Dashboard only tracks Priority Health patients, and is not a clear or accurate reflection of the patients using the Emergency Department. Furthermore, the opening of our Convenient Care clinic has been delayed due to not having a provider. The opening of this clinic is expected to decrease inappropriate use of the ED, resulting in a 10% reduction. Achieving the goal is possible, but is not likely due to this delay and our inability to access all of the data necessary to show an accurate improvement.
1. Use technology to overcome transportation barriers by using telemedicine visits from home to	1a. 15 telehealth visits of any type completed by the end of FY16, 50 by the end of FY17 and 150	1a-1c. We have fully achieved our goal in utilizing technology and collaborating with community partners to overcome the transportation issues that our patients

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provider or service location to provider	by the end of FY18 1b. 3 primary care providers using telehealth for at least 10% or 300 patients by end of FY18 1c. and 2. 100 visits of any type completed using an off-site method by the end of FY18	sometime face. We have exceeded 300 patients using telehealth services, however we are unable to provide the service through SHGM providers due to a provider shortage in our area. As of June 2017 we have completed 822 specialty and 246 direct-to-consumer TeleHealth visits have been completed YTD. Mobile Mammography bus is scheduled to provide services in rural areas of Croton, White Cloud and Holton between June and October of 2017.
2. Use our community assets and partner with local organizations such as Central Michigan University (CMU) to use their care-mobile and provide primary and preventative care at remote sites in the county	2. Measure the number of patients seen with no current primary care provider who now have a care provider	2. With measuring the number of patients with a PCP, we have shifted our focus and now utilize the MI Way to Thrive program, which uses Community Health Workers to provider services in the home. With this, we are also tracking participants without a PCP who we then help establish a relationship with a PCP in our system.
Chronic Disease		
1. Create a certified medical wellness center for patients with chronic diseases to receive support for healthy lifestyles	1. Certify Tamarac as a Medical Fitness Association (MFA) Certified facility with at least 3 defined care pathways for those with chronic disease by the end of FY16	All actions have been fully achieved. Tamarac is now a MFA (Medical Fitness Association) certified facility; the 3rd in the state of Michigan. Clinical pathways have been implemented, including referrals into Tamarac's programs from Primary Care Diabetes Education Medical Nutrition Therapy and Physical Therapy. Advance Care Planning services have exceeded 100 conversations with community members, and over 30 Advance Directives have been signed and uploaded into Epic, Cerner and Great Lakes Health Connect.
2. Create a healthy lifestyle prescription from providers to well-defined pathways at Tamarac by the end of FY17	2. Measure MFA patients' baseline health metrics and re-measure at 3, 6 and 12 months for program impact. Based upon results, implementations may change	

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3. Partner with community agencies to create and implement innovative models designed to meet the Triple Aim*, focusing on care coordination, healthy lifestyle support, rising risk reduction and determinates of health	3. Explore and implement at least 1 innovative care model with community partners by the end of FY18	
4. Increase the number of all patients with advance directives by implementing Advance Care Planning program for end of life decisions following Gunderson Lutheran's Respecting Choices® model in the following stages: i. First Steps-FY16 ii. Next Steps-FY17 iii. Last Steps-FY18	4. At least a total of 100 completed conversations and 30 Advance Directive documents are completed and uploaded by the end of FY18	
1. Increase access to services that can improve an individual's health regardless of their ability to pay: institute a sliding fee scale at Tamarac, teach practical skills such as healthy cooking and how to use vegetables, create referral channels from primary care to Tamarac for lifestyle support	1. Create at least 2 new lifestyle supports such as cooking, fitness or wellness to help people with chronic disease improve their health by the end of FY16	A new diabetes cooking class series has been implemented at Tamarac. Cooking Matters classes are also being taught to patients, through a partnership with MSU-E. Each clinic in Newaygo Co. has at least 1 new nurse care manager. Diabetes Management program participation has increased over 15% in the past three years, and a new Diabetes Prevention and Diabetes Intervention program has been implemented at Tamarac through a partnership with the National Kidney Foundation. 20 participants attended the

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services and chronic disease management 2. Improve the medical management of patients with chronic disease by hiring one full time RN care manager for each primary care clinic, trained and managed by Spectrum Health care management department 3. A focused effort on improving the participation in the Diabetes Education and Prevention programs through marketing and improved experience will result in our goal of improving attendance by at least 20%	 2. Add at least 1 nurse care manager for patients with complex needs at each Spectrum Health primary care location by the end of FY16 3a. Grow the number of participants in the Diabetes Prevention Program and Diabetes Management programs either through Spectrum Health or a community partner by 20% by the end of FY18 3b. Measure the improvement from baseline to program completion in HbA1C's for patients in the Diabetes program	first series.
Behavioral Health		
1. Continue to provide master's degree level social workers in primary care for immediate needs during the provider visit, follow up counseling visits and real time communication between physical	1a. Add an additional full time provider by the end of FY17 in the primary care setting 1b. Measure the improvement of PHQ-9 scores in	Physician Assistants have been added to Primary Care settings at Fremont Multi-Specialty Clinic, Newaygo Clinic and Main Street Clinic. We have added a Social Worker to each of our Outpatient clinics across the county as well. Community Mental Health has taken lead through our partnership, and has been measuring improvement in PHQ-

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and behavioral health providers	those with diagnosed depression by the end of treatment 1c. Measure the number of newly identified cases of depression through routine screening of all new patients	9 scores for those diagnosed with depression. All new patients are screened with a PHQ-4 currently, and if appropriate, a PHQ-9 is used for further screening.
2. Continue to provide master's degree level social worker in the OB/GYN clinic with an emphasis on identifying new mothers with a history of severe childhood trauma to improve mother and baby interaction and outcomes	2. Measure the % of infants meeting normal developmental milestones born to new mothers with a history of childhood trauma	2. Due to different offices and computer issues, we were unable to track the % of infants meeting normal developmental milestones born to mothers with a history of childhood trauma. We expect this to change with the Nexus go-live in May 2018.
Obesity		
1. Bring Bariatric services to Newaygo County, with surgery performed at Spectrum Health's Center of Excellence, continue to offer a multi-component medically supervised weight loss program, and continue with low cost team based healthy lifestyles programs	1a. Implement a surgical and medically supervised weight loss program for overweight patients by the end of FY17 1b. Measure the weight loss of participants at 3, 6 and 12 months	1. Medical weight loss program implemented (Optifast) with 49 participants to-date. Weight & blood chemistry are being measured by providers and educators. Bariatric surgery services are now offered on the edge of Gerber's service area - at the newly built North Muskegon location. Furthermore, a post-bariatric surgery support group is offered at Tamarac on the second and fourth Monday of each month, via the Telemedicine platform.
2. Partner with local schools and governments to address policies that help make the healthy choice	2. Create at least 1 new public policy that supports healthy lifestyle choices for any location in Newaygo County by the end of	2. A Tobacco Free workplace policy has been created, and will be adopted by businesses across the county - led by BreatheWell Coalition via Gerber Memorial.

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the easy choice for example: raising the age to purchase tobacco to 21, adding bike lanes to roads, expanding bike paths or signage or a workplace policy on healthy food 3. Partner with local school districts (Fremont, White Cloud, Hesperia, Newaygo or Grant) to improve school health environment through policy and program development; for example the national program CATCH* (Coordinated Approach to Child Health) program	FY18 3. Implement a healthy lifestyle program such as CATCH in at least 2 schools by the end of FY18	 3. The Coordinated Approach to Child Health is in 107 classrooms, service over 3,100 students in every school district across Newaygo County.
Social Support		
1. Implement the Neighbor to Neighbor Network, which is modeled after the Memphis Congregational Health* model, which uses church volunteers to provide and increase social and emotional support for patients and community members	1. Use metrics from Memphis Model: a. Number of participating organizations and individuals with at least 10 partner organizations and 250 individuals by the end of FY18 b. Readmission rate for participants maintained or reduced by at least 5% by the end of FY18	Six partner organizations have signed a MOU to join the Neighbor 2 Neighbor network. We have presented to and met with over two dozen organizations/churches, but the community is hesitant to adopt due to internal politics at local churches and uncertainty of their ability to support an internal volunteer structure of this magnitude. Furthermore, many groups do not feel there is a need for this service, since the foundation of the program already exists in most churches. Because of this lack of engagement and perceived need from the community, we have not been able to partner with 10 CPOs, and therefore have been

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	c. Mortality rate for participants maintained or reduced by 5% by the end of FY18 d. Total costs for participants maintained or reduced by 5% by the end of FY18	unable to measure readmission rates, mortality rate due to being live for only 4 months. General health education and screenings are still being provided as needed and requested by community. Goals b, c, and d are not expected to be achievable by June 2018.
Prevention & Wellness		
1. Research best practice smoking cessation programs, create a comprehensive, multi-site and multi-approach program, train staff and launch to public 2. Partner with local agencies such as the health district and Newaygo County Partners in Prevention and Recovery to provide smoking cessation materials and programs 3. Partner with OB/GYN clinics on smoking cessation for pregnant women	1. Research and implement with our community partners best practice smoking cessation programs by end of FY16 2. Create at least 3 referral pathways from primary care, inpatient, outpatient, Tamarac and community organizations to smoking cessation program by the end of FY17 3. Research best practice program to reduce smoking during pregnancy and implement with our community partners by the end of FY17	Spectrum Gerber, Newaygo County Regional Education Service Agency**,** and District Health Department 10 have created a new coalition - BreatheWell. Focus is on evidence based tobacco treatment and cessation services, including SCRIPT - Smoking Cessation Reduction in Pregnancy Treatment. Referral pathways created internally and externally, including on public websites, in primary care, OB/GYN, Tamarac, Diabetes Services, MI Way to Thrive program and inpatient services at SHGM.
1. Continue the current collaborative relationships with	1. Continue multi-stakeholder collaborative project group with Institute for	IHI Project, now named MI Way to Thrive has expanded, and uses Community Health Workers from SHGM in

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community partners and actively participate in the healthcare collaborative group, whose vision is to make Newaygo County the healthiest county in Michigan	Healthcare Improvements (IHI)* Better Health and Lower Cost for Patient's with Complex Needs through at least the end of FY16	partnership with energy assistance Self-Sufficiency Specialists from TrueNorth to address individuals social, medical, physical, mental and emotional needs. Community Partner groups participation is being measured annually for those in the county wide coalition - LiveWell Newaygo County. County Health Rankings from the Robert Wood Johnson Foundation shows Newaygo County improved from 2014 to 2017 by 22% in Health Factors and 23% in Health Outcomes, with an average of 22.5%
2. A sub-group is working together with Institute for Healthcare Improvements (IHI) on developing a new care model for rising risk patients based upon patients' feedback and needs	2. Use metrics in IHI Collaborative to measure impact of the new model	
3. The strategic plan of the LiveWell Newaygo County group will include a broader set of tactics to include the determinates of health such as poverty and education at a policy level	3a. Move Newaygo County's health ranking by County Health Rankings* up by 10% by the end of FY18 3b. Measure for all community partners/groups we actively participate in using Intensity of Integration assessment from http://www.organizational research.com/publications and resources/a_handbook_of_data_collection_ tools.pdf*	