Spectrum Health Ludington Hospital

Community Health Needs Assessment

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Spectrum Health

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Introduction

Background and Objectives

VIP Research and Evaluation was contracted by Spectrum Health to conduct a Community Health Needs Assessment (CHNA) for Spectrum Health Ludington Hospital (SHL) in 2019. For the purposes of this assessment, "community" is defined as, not only the county in which the hospital facility is located (Mason), but also regions outside the county which compose SHL's primary (PSA) and secondary (SSA) service areas. For example, since no hospital resides in Lake County, which borders Lake County to the east, some residents in the western portion of Lake County travel to Mason County and SHL for health care services. Thus, 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 Ludington Hospital community began meeting to discuss how the community could collectively meet the requirement of a CHNA.

The overall objective of a CHNA is to obtain information and feedback from SHL 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 SHL.

Because this CHNA is unique and an ad hoc endeavor, the overall objective of this CHNA is to gather feedback from the same groups listed above but is more narrow in scope, focusing on continued existing issues or problems, steps taken to address pre-identified issues or problems, and solutions and strategies going forward for both the creation of the next CHNA, as well as the implementation of services to address the issues or problems. More specific objectives include measuring:

- The overall health climate, or landscape, of the regions served by SHL, including primarily Mason County, but also portions of Lake and northern Oceana (e.g. Pentwater area) counties.
- Social indicators, such as crime rates, education, employment, poverty rates, and environmental factors.
- Community characteristics, such as factors that make it easy or hard for residents to lead healthy lives, social determinants of health, and available resources.
- Physical health status indicators, such as life expectancy, mortality rates, and leading causes of death.
- Perception of the most pressing or concerning health issues by Key Stakeholders, Key Informants, and adult area residents.
- Accessibility of health care, sources of health care payment, awareness of available services, services utilized, barriers to access, programs or services lacking, and health literacy.
- Improvement in health care access.
- Solutions and strategies implemented, recommendations, and resources available to address area health and health care needs.

Information collected from this research will be utilized by the Community Health Needs Assessment team of Spectrum Health Ludington 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 Administrators, Clinic Executive Directors	5
Key Informants	Online Survey	Physicians, Nurses, Dentists, Pharmacists, Social Workers	22
Community Residents (Underserved)	Self-Administered (Paper) Survey	Vulnerable and underserved subpopulations	34
Community Residents	Telephone Survey	SHL area adults (18+)	431

Secondary data were derived from various government and health sources such as the U.S. Census, Michigan Department of Health and Human Services, County Health Rankings, Bureau of Labor Statistics, and Kids Count Data Center.

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.

Key Informants are 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) and directors of non-profit organizations.

There were 34 self-administered surveys completed by targeted subpopulations 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.

A telephone survey was conducted among 431 SHL area adults (age 18+). The response rate was 35%.

Disproportionate stratified random sampling (DSS) was used to ensure results could be generalized to the larger SHL patient population. DSS utilizes both listed and unlisted landline samples, 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 431 completed surveys:

- 178 are cell phone completes (41.3%) and 253 are landline phone completes (58.7%).
- 127 are cell-phone-only households (29.5%).
- 91 are landline-only households (21.1%).
- 213 have both cell and landline numbers (49.4%).

For landline numbers, households were selected to participate subsequent to determining that the number belonged to a residence within the zip codes of the primary or secondary SHL 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 SHL PSA/SSA service areas.

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 431, at a 95% confidence level, is +/- 5.0% or better based on the population of zip codes that constitute the PSA/SSA of Spectrum Health Ludington Hospital.

Unless noted, consistent with CDC protocol, respondents who refused to answer a question or did not know the answer to a specific question were excluded from analysis. Only valid responses were used and thus, the base sizes vary throughout the report.

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

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

The formula used for the final weight is:

Design Weight X Raking Adjustment

The same robust process used in the 2017 CHNA to identify significant, or critical, health needs was used for this CHNA. Primary data comprised of quantitative and qualitative feedback from area health and human service professionals such as Key Stakeholders and Key Informants, as well as SHL area adults and underserved area residents, were systematically analyzed to determine pressing/critical/important health issues and emerging themes. This enabled researchers to gain a better understanding of areas respondents deemed to be the most important or critical health and health care issues in the community. Further, Key Stakeholders, Key Informants, and SHL area adults were specifically asked what they considered to be the most important or critical health needs in the community. The analyses of the primary data were combined with analyses of secondary data collected, providing the basis for determination of the significant health needs in the community.

The process utilized for determination of a significant health need involved the following steps:

1. Examination of quantitative data to see the issues Key Informants and SHL area adults rated as most pressing/important/critical health problems in the community.
2. Examination of Key Stakeholder responses regarding what they considered to be the most important health problems or issues in the community.
3. Further exploration of Key Stakeholder qualitative responses to additional questions that shed light on issues they considered important or critical; in this way, qualitative data were used to support quantitative data in the determination of issues that were considered significant or key.
4. Identification of important or critical health issues from previous CHNAs that have remained important issues or may have even become increasingly critical over time (e.g., haven't improved).
5. Analyses of secondary data were used to supplement the primary data and were particularly useful when comparisons could be made between the SHL area and the state and nation.
6. An important consideration when determining an issue to be a significant health need is that the issue is something the CHNA team, SHL staff, and the subsequent strategic plan can actually address.

The most significant health needs or issues in a community are often overarching areas that have a number of indicators that are also, individually, pressing or important issues. Examples of overarching significant health needs and their indicators include:

- Health care access – lack of primary care providers, inadequate health insurance, inability to afford out-of-pocket expenses, lack of specialty care, and barriers such as transportation issues.
- Mental health – prevalence of mental illness, lack of treatment options, comorbidity with substance use disorder, and continued stigma preventing those in need from seeking care.
- Substance use disorder – prevalence of illicit substance use, prescription drug abuse, opioid addiction, lack of treatment options, and comorbidity with mental illness.
- Obesity – prevalence, links to other health problems, and lack of access to affordable healthy food coupled with easy access to unhealthy food.

Executive Summary and Key Findings

Executive Summary and Key Findings

In general, consistent with findings from the 2017 CHNA, Spectrum Health Ludington Hospital resides in a community faced with many economic, social, and health challenges. However, community members also see improvement over the past several years from the CHNAs that have been conducted and the strategic plans that have been implemented that focused on areas of need uncovered in the research.

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

The area's physical environment, clean and with a wealth of natural beauty, is one of its best assets. The area's natural resources provide ample opportunities for outdoor activities such as hiking, biking, and water sports. Residents also have access to fresh healthy produce from nearby farms, if they can afford it. In addition, residents enjoy a small-town feel and rural atmosphere. All of these things make it easier for residents to be healthy.

On the other hand, the area's rural location presents challenges with regard to recruiting health care providers to the area and transporting residents to needed services and programs, and can lend to feelings of isolation for some residents. Additionally, there is a plethora of places that offer fast food or junk food, and the winter months can make it hard to be active. All of these things make it harder to be healthy.

Mason and Lake counties both have lower levels of violent crime compared to the state and nation. However, rates of child abuse/neglect in the region are much higher than state or national rates.

Unemployment, while higher than state and national rates, has decreased substantially over the past few years. Poverty levels are higher than state and national rates, and Lake County in particular has a strikingly high percentage of children living in poverty, more than twice the state and national levels. Educational levels are relatively low, particularly in Lake County; however, the freshman graduation rate for Lake County is on par with the state, and the rate is even better in Mason County.

In Mason County, life expectancy rates are higher for both female and male residents than state rates, but slightly lower when compared to national rates. Life expectancy for Lake County residents is lower than Mason County, state, and national rates.

There is ample room for improving the health climate of the SHL area. Taking everything into account – health conditions, health behaviors, health care availability, health care access – 70.0% of Key Informants are dissatisfied overall with the health climate of the region. Moreover, only 39.7% of area adults think, overall, their community is very or extremely healthy.

The four most **significant needs** remain the same from 2017:

1. Mental health
2. Health care access
3. Substance use disorder
4. Obesity

In addition, focusing on the social determinants of health as contributors to health and health care access is also important. A summary of findings follows.

1. Health Care Access

Access to health care remains a critical area of concern for a number of reasons despite the fact that the vast majority of residents have some form of health care insurance.

- When SHL area adults think about the characteristics that make a community "healthy," access to health care is their top consideration.
- So, it's concerning when eight in ten (79.8%) area residents believe access to health care is a critical problem for some community residents.
- Six in ten (62.5%) Key Informants feel equipped to help people (patients, clients) access needed programs and services.
  - What would better equip them to be able to help people would be lists/tools that identify programs and services available with contact information, care managers, social workers, hospital liaisons, and community outreach programs.

- The shortage of primary care providers in the SHL area emerged as a top health-related concern among Key Informants.
  - There are more MDs and DOs (per 100,000 population) in Mason County (86.2) compared to the state (79.4) according to the most recent secondary data; however, this latest rate may not be accurate as both Key Stakeholders and Key Informants cite lack of primary care providers as a major problem in the area as several PCPs have retired over the past few years and have not been replaced.
  - Lake County (8.7) has far fewer PCPs compared to Mason County or the state.
- Area residents continue to experience long wait times for appointments, including primary care for both adults and children.
- Another barrier to health care access is transportation, although it is not as critical of an issue as it is in neighboring counties.
  - Still, 45.0% of Key Informants say transportation issues are a common barrier to accessing care
- **Cost** of care is another barrier for some residents, and this barrier is present even for those with insurance due to unaffordable copays, deductibles, and spend-downs.
  - Half (50.0%) of Key Informants cite the inability to afford out-of-pocket expenses as a common barrier (tied for first with lack of primary care and lack of awareness of existing programs)
  - Area adults report that the top two barriers to access, by far, are the inability to afford out-of-pocket expenses and the high cost of prescription drugs
- Lack of awareness of existing programs or services may not be a barrier to access since 84.9% of area adults report they are somewhat or very aware of programs and services available in the community.
- Key Stakeholders and Key Informants recognize that certain subpopulations are underserved when it comes to accessing health care, especially those who are uninsured or underinsured, with reasons being:
  - Half (54.5%) of underserved adults had trouble meeting their health care needs in the past two years
  - 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 out-of-pocket expenses
  - The vulnerable and underserved often forego needed preventive or maintenance care, including prescription medications, and over-utilize emergency room services
  - Two-thirds (67.6%) of underserved adults report that they visited the ER/ED at least once in the past year; 38.3% two or more times
  - 8.8% of underserved adults had to skip or stretch their medication in the past year due to cost
  - 12.1% of underserved adults have no health care provider (no medical home)
  - 16.9% of all adults have Medicaid for their health insurance, compared to 50.0% for underserved adults

2. Mental Health

Access to mental health treatment continues to be an issue, and this has shown little to no improvement in the 10 years the Community Heath Needs Assessments have been conducted.

- Key Stakeholders and Key Informants consider mental health to be among the most pressing community issues for several reasons:
  - The area suffers from a lack of mental health professionals (especially psychiatrists) and a lack of programs, services, and resources in general that address mental health; this void includes a lack of resources to address mental health proactively, such as teaching coping skills and stress management techniques and providing children with mental health support early on
  - Health is often not considered in a holistic manner, leaving root causes of a patient's condition or difficulty unaddressed; as a result, mental health issues may not be recognized in their early stages when they can be more easily treated
  - Aspects of the SHL service area's social environment such as widespread poverty make area residents more susceptible to mental health challenges
  - 61.1% of Key Informants see a lack of residential treatment for mental health
  - At least half (50.0%) of Key Informants believe that access to mental health treatment for mild to moderate disorders, and more than four in ten (41.2%) think access to treatment for those without insurance has worsened over the past 5-6 years. A similar proportion (44.4%) believe access for those with severe and/or persistent disorders has also worsened over the same time period

3. Substance Use Disorder

Substance use disorder remains pervasive in the area and is under-addressed in terms of prevention and treatment. More significantly, substance use disorder is often comorbid with mental illness and has led to the emergence of the field of "behavioral health."

- Substance use disorder continues to be one of the most pressing or concerning community issues among Key Stakeholders and area residents. Key Informants also see it as an issue but prioritize it lower compared to other issues.
  - That said, 38.9% of Key Informants see a lack of residential treatment for substance use disorder
- 50.0% of underserved residents have resided in a household where alcohol use had a negative impact.
- Both Key Stakeholders and Key Informants cite smoking as a problem and one-third (35.3%) of underserved residents report nicotine/smoking had a negative impact on their household.
- There exists a culture of acceptance where substance use is considered the norm and is passed down from generation to generation.
- Substance use disorder often leads to other serious problems, including loss of employment, child welfare issues, and compounded health risks.

4. Obesity

The proportion of adult area residents considered overweight or obese hovers around two-thirds or worse, and this also has remained consistent for the past 10 years.

- Health care professionals would like to see more attention and resources dedicated to promoting a healthy diet and providing access to healthy food choices, weight loss programs, and nutritional counseling. These opportunities should be available to all regardless of socioeconomic circumstances.
- Obesity is considered one of the most pressing health issues in the SHL area by Key Stakeholders, primarily because of its comorbidity with other chronic conditions or negative outcomes such as diabetes, hypertension, heart disease, and sleep apnea.
- More than one-fourth (28.6%) of area adults cite obesity as the most important health problem in their community, second only to cancer.
- One-third (33.3%) of Key Informants consider programs targeting obesity reduction to be lacking in the community.

Other Health Needs

Chronic Disease

- Mason County has a lower cancer death rate compared to the state or national rate. Mason County also has a lower death rate from heart disease compared to the state, but its rate is higher than the national rate. Lake County has the highest rates for both diseases compared to Mason County, the state, and the nation.
  - Cancer diagnosis rates are lower in Mason and Lake counties compared to Michigan or the U.S.
- Because the cancer diagnosis rate is lower in Lake County compared to Michigan and the U.S., but the cancer death rate is higher, it raises the question: Is better cancer screening needed in order to detect cancer before it is too late to treat the condition?
- More than one-fourth (28.9%) of area adults report cancer as the most important health problem in their community today, the highest proportion of all problems rated.
- Mason County has a higher death rate from chronic lower respiratory diseases than the state and nation.

Negative Social Indicators

- Negative social indicators, such as lack of affordable housing, lack of affordable healthy food, adverse childhood experiences, and environmental conditions can cultivate negative health outcomes.
- As stated earlier, poverty is a major problem in the area, and Key Informants rated it the second most important health issue or concern in the community, only behind lack of primary care providers.
- 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, ways to address some of the issues of poverty include:
  - 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/vulnerable groups have access to services that will move them closer to participating on a level playing field, such as education

  - Connecting economically struggling residents with services providing low-cost or no-cost doctor visits, prescription refills, and other needed health services
- Four in ten (42.6%) of area adults say they are not very or not at all active in their community in terms of being involved in things like civic organizations, commissions/ boards, non-profits, volunteerism, etc.
- This research also shows the importance of collecting data on Adverse Childhood Experiences and demonstrating the relationship of these negative experiences to adult outcomes. Key Stakeholders were adamant about the importance this data has for the purposes of trying to prevent future negative outcomes.

Social Determinants of Health

A trend over the last 10 years that is moving in a positive direction is the acknowledgement by health care professionals, human service professionals, and other community leaders that health and health care outcomes are greatly influenced by social determinants. Because of this, the most effective way to address health and health care issues is through an integrated, holistic, or biopsychosocial approach.

- Still, Key Informants demonstrate there is room for improvement: 53.3% say that social determinants of health are only sometimes or rarely considered when developing treatment or care plans.
- 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, crowded conditions)
  - Health services/medical care (e.g., access to quality care)

Solutions and Strategies Currently Employed to Address Needs

- Federal funds are being distributed to area coalitions to work on substance abuse prevention initiatives (e.g., harm reduction programming).
- There is a general movement to improve collaboration and coordination among and between area organizations (e.g., SHL, CMH, Health Department) to address many health problems or issues in the community, such as expanding a critical linkages model, partnering with care management teams, and employing community health workers.
- Telecommunication via video conferencing is being used in mental health treatment to offset the lack of psychiatrists in the area.
- There continues to be improved collaboration and coordination between health care, Community Mental Health, and the Health Department to address behavioral health issues, especially treatment for opioid addiction.
- Community partners continue to explore ways to implement an evidence-based protocol for pain management/ treatment, particularly for low income residents.
- Increasingly, social determinants of health are considered in the development of treatment and care plans.

Suggestions on Additional Strategies to Employ to Address Needs

- Address poverty though a collective impact approach such as Bridges Out of Poverty.
- Find ways to secure additional funding (e.g., applying for grants) for needs such as lack of primary care providers.
- Create incentives to entice primary care providers to not only work, but also live, in the SHL area. An example of this would be to compensate providers (and include student loan forgiveness) more than they would make in the urban centers where they would be more likely to live and work.
- Find ways to create better paying jobs or encourage local businesses to pay higher wages with a guaranteed minimum standard in mind.
- Find ways to enable Community Mental Health to provide services for residents with mild to moderate mental health issues.
- Hire additional APPs so that there is one per primary care provider.
- Invite medical students (residents) interested in primary care to do clinical rotations with providers in the community to entice them to stay and practice in the community.
- Strengthen the community collaborative by becoming more visible, transparent, and setting definite goals.
- Build more spaces for youth to have safe local events.
- Create a senior center that provides respite care, and educate the elderly on wellness.

One of the goals of this CHNA was to determine if the appropriate topics had been explored or the right questions were asked in previous CHNAs. The feedback gathered from Key Stakeholders will be used to guide the research design, or approach, for future CHNAs.

All five Key Stakeholders interviewed report that appropriate topics had been explored and the correct questions were asked, but it's evident Spectrum Health could benefit from better collaboration with community partners.

> We talk to a lot of people in the communities as we were getting going into this, and I think we're talking about the right stuff. I think **we're getting the right kind of information in play. I just think so much of it, the problems, are so vexing** that **there's so much you need to do**. That's not a criticism, it's just the **reality that these are tough-to-fix challenges in our community**. So, I just think there's **room for improvement** just **because the problems are so big** that it takes **time and enormous people resources to move things in the right direction**. It's going to **take a long time to see impact here**.
>
> **– Key Stakeholder**

> I think from a public-health perspective **you have to make it pretty broad**, so not only what you consider those **traditional health issues**, like cholesterol, obesity, and things like that **but also some of those environmental issues**, so water quality and air quality and housing, transportation-type issues. So, it's all of those **social determinants of health** which obviously are going to have an impact on individuals' health. So, it's **looking real broadly and then kind of narrowing it down from there.**
>
> **– Key Stakeholder**

> I **don't think anything's missing from the report**. I think it's just **getting to that next step. How do we** get to the next step and **put something into place? I'm not invited to the table**, but I mean **I've never been invited to the table**. I think **Spectrum should consider meeting with community leaders to choose the questions to ask**.
>
> **– Key Stakeholder**

Key Stakeholders also mention additional topics that could be explored, or existing topics that could explored more in-depth. They also mention the importance of the next step: doing something important and impactful with the data, which includes more, or better, collaboration among area organizations.

> I think it's more on the other end; once the assessment is complete, how can leadership in the communities be more advocacy-driven to talk to legislators about specific needs and bring to the table some specific challenges that, maybe with the legislative support, could really make a change? I think that list is pretty exhaustive from the affordability of medication to just lots of things. I could just go on and on about all of the things that I think that legislatively some action could really have a very positive impact on community.
>
> **– Key Stakeholder**

> I do think that you're asking the right questions. Probably more questions need to be gleaned about things like social support of families because people feel support and have perceptions of support in many different ways. I think that could be really telling about what we're seeing in northern Michigan and maybe in other places about the social isolation and the impact that it has on health.
>
> **– Key Stakeholder**

> Maybe something around prevention? Maybe some information about prevention and gathering some data around prevention activities. That might not be a bad idea; more community-wellness focused.
>
> **– Key Stakeholder**

Detailed Findings

Demographics of Mason County

Mason County is predominantly a rural area, where 91.5% of its residents are White and roughly half (38.3%) of the population is under age 35. The median household income is $49,663, lower than the state ($54,938) or the nation ($60,293).

Mason County Demographic Characteristics

	N	%
Total Population	28,884	100.0%
Gender		
Male	14,310	49.5%
Female	14,574	50.5%
Age		
Under 5	1,514	5.2%
5 to 14	3,326	11.5%
15 to 24	3,217	11.1%
25 to 34	3,043	10.5%
35 to 44	2,941	10.2%
45 to 54	3,618	12.5%
55 to 64	4,761	16.5%
65 to 74	3,733	12.9%
75 to 84	2,142	7.4%
85 and over	589	2.0%
Race/Ethnicity		
White/Caucasian	26,416	91.5%
Black/African American	269	0.9%
Hispanic/Latino	1,314	4.5%
American Indian/Alaskan Native	217	0.8%
Asian	183	0.6%
Two or More Races	485	1.7%

	%
Household Income	
Less than $10,000	5.0%
$10,000 to $14,999	6.9%
$15,000 to $24,999	12.0%
$25,000 to $34,999	11.4%
$35,000 to $49,999	15.1%
$50,000 to $74,999	20.0%
$75,000 to $99,999	13.2%
$100,000 to $149,999	10.8%
$150,000 to $199,999	2.6%
$200,000 or more	3.1%
Urban/Rural Population	
Urban	37.3%
Rural	62.7%

Source: U.S. Census Bureau, American Community Survey, 2013-2018. Urban/Rural data from U.S. Census Bureau, Decennial Census, 2010.

Demographics of Lake County

Lake County is entirely rural county. Most of its residents, 84.7%, are non-Hispanic White and the remaining 15.3% are racial/ethnic minorities. Approximately, one-third of the population, 31.5%, is under age 35 and another third is 65 years old or older. Lake County is one of the poorest counties in Michigan with a median household income of only $34,631; much lower than the state ($54,938) or the nation ($60,293).

Lake County Demographic Characteristics

	N	%
Total Population	**11,763**	
Gender		
Male	**6,000**	**51.0%**
Female	**5,763**	**49.0%**
Age		
Under 5	**492**	**4.2%**
5 to 14	**1074**	**9.2%**
15 to 24	**1160**	**9.9%**
25 to 34	**969**	**8.2%**
35 to 44	**1,088**	**9.2%**
45 to 54	**1,491**	**12.7%**
55 to 64	**1,160**	**9.9%**
65 to 74	**1,123**	**9.5%**
75 to 84	**1,980**	**16.8%**
85 and over	**960**	**8.2%**
Race/Ethnicity		
White/Caucasian	**9,963**	**84.7%**
Black/African American	**939**	**8.0%**
Hispanic/Latino	**311**	**2.6%**
American Indian/Alaskan Native	**113**	**1.0%**
Asian	**27**	**0.2%**
Some Other Race	**7**	**0.1%**
Two or More Races	**403**	**3.4%**

	%
Household Income	
Less than $10,000	**12.8%**
$10,000 to $14,999	**8.1%**
$15,000 to $24,999	**15.0%**
$25,000 to $34,999	**14.5%**
$35,000 to $49,999	**16.9%**
$50,000 to $74,999	**16.6%**
$75,000 to $99,999	**8.7%**
$100,000 to $149,999	**5.0%**
$150,000 to $199,999	**1.5%**
$200,000 or more	**0.9%**
Urban/Rural Population	
Urban	**0%**
Rural	**100%**

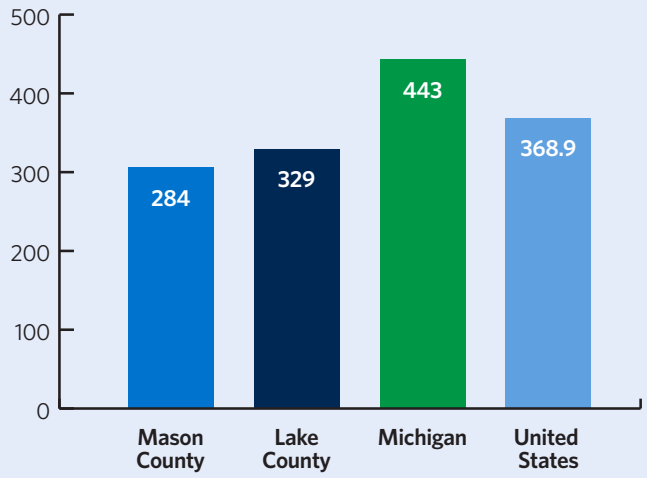
Source: U.S. Census Bureau, American Community Survey, 2013-2018. Urban/Rural data from U.S. Census Bureau, Decennial Census, 2010.

Crime Rates

Mason and Lake counties experience considerably less violent crime and far fewer homicides per 100,000 population compared to Michigan and the U.S.

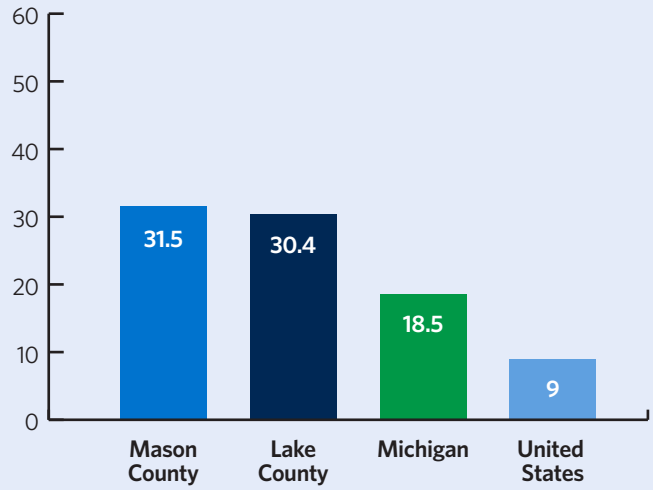
Both SHL area counties have significantly higher rates of child abuse and neglect than Michigan and the U.S. In fact, rates for each county are more than three times the national rate.

Violent Crime Rate Per 100,000 Population



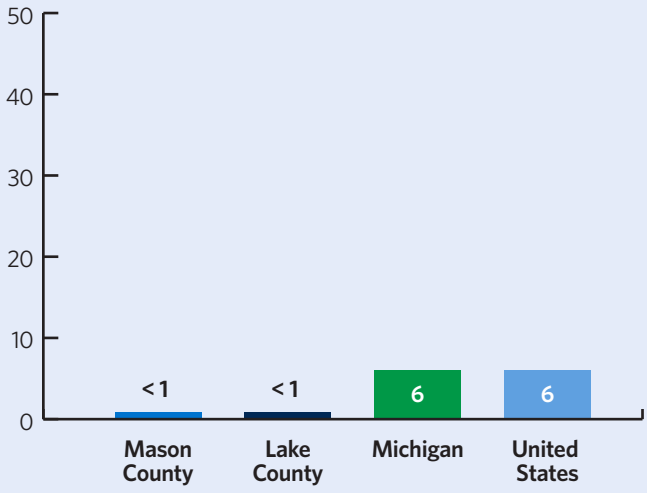
Source: County Health Rankings, 2014-2016; Federal Bureau of Investigation, Uniform Crime Reporting Program, 2018.

Confirmed Victims of Child Abuse/Neglect Per 1,000 Children Under Age 18



Source: Kids Count Data Center, counties and MI, 2018; U.S., 2017.

Homicide Rate Per 100,000 Population

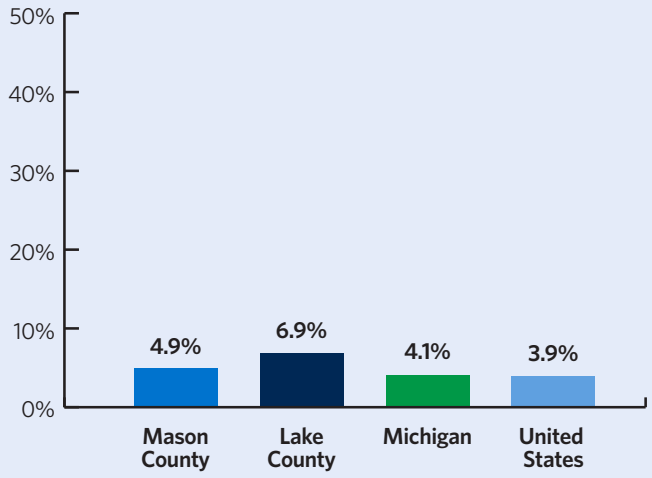


Source: County Health Rankings, 2014-2016.

Unemployment

Unemployment rates in Mason and Lake counties continue to be higher than rates Michigan and the U.S.

Population Age 16+ Unemployed and Looking For Work

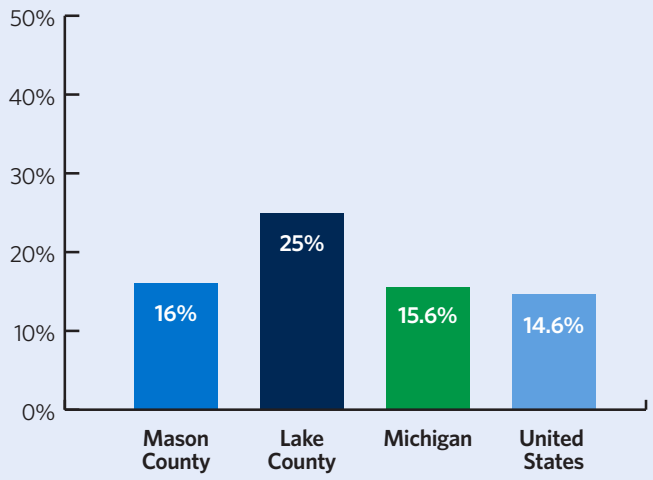


Source: Bureau of Labor Statistics, Local Area Unemployment Statistics 2018.

Poverty

Both Mason and Lake counties have poverty rates higher than Michigan and the U.S.

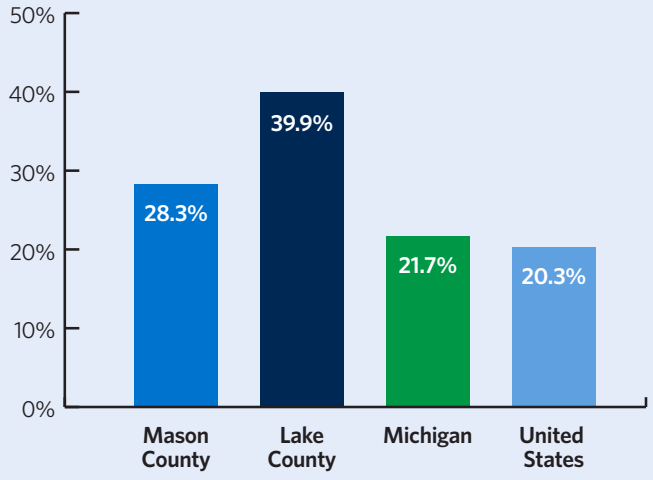
Percentage of People in Poverty



Source: U.S. Census Bureau, 2013-2017, 5-Year American Community Survey.

In addition, the percentage of children living in poverty is higher in both counties than in the state and nation. In Lake County, four in ten children under age 18 live in poverty.

Percentage of Children (Under Age 18) in Poverty



Source: U.S. Census Bureau, 2013-2017, 5-Year American Community Survey.

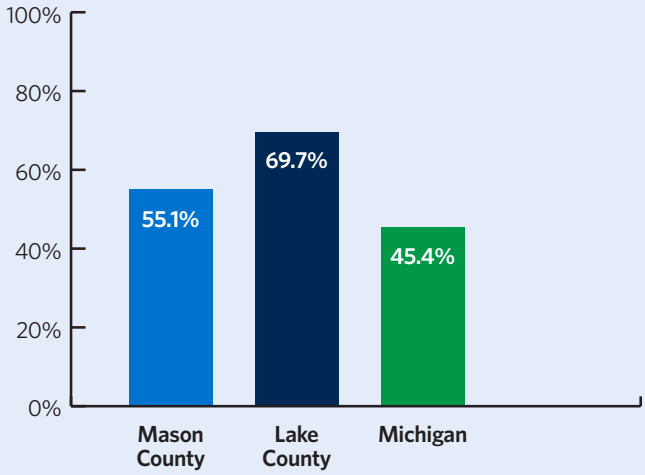
Social Indicators

Poverty, Continued

Both area counties have higher proportions of children ages 0-4 receiving WIC compared to the state. In Lake County, roughly two-thirds of children ages 0-4 receive WIC.

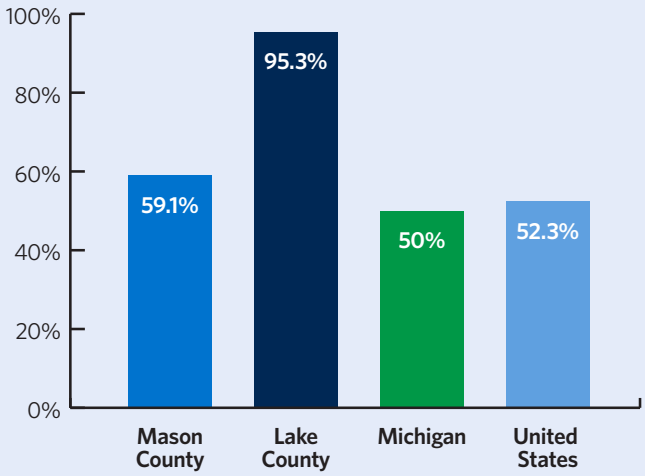
In addition, both counties have higher proportions of students eligible for free/reduced price lunches compared to the state and nation. In Lake County, more than nine in ten students are eligible.

Children Ages 0 to 4 Receiving WIC



Source: Kids Count Data Center, 2018.

Percentage of Students Eligible for Free/ Reduced Price School Lunches



Source: Kids Count Data Center, 2018 for MI and counties; Digest of Education Statistics, 2018 for U.S.

Social Indicators

Poverty, Continued

In both area counties, the proportion of families living in poverty is higher than state and national rates. In Lake County, four in ten families with children under age 5 live in poverty.

Married couple families are far less likely to be living in poverty compared to single-female households.

Almost two-thirds of single female families with children under five years old from Mason County, and nine in ten from Lake County, live in poverty.

Poverty Levels

	Lake County	Mason County	Michigan	U.S.
All Families				
With children under age 18	32.8%	22.7%	18.4%	16.7%
With children under age 5	42.1%	27.4%	20.6%	16.2%
Total	15.6%	11.5%	10.9%	10.5%
Married Couple Families				
With children under age 18	16.5%	10.2%	7.5%	7.5%
With children under age 5	20.3%	12.8%	6.9%	5.9%
Total	9.1%	6.1%	4.9%	5.3%
Single Female Families				
With children under age 18	68.3%	47.6%	42.5%	38.7%
With children under age 5	91.3%	65.2%	49.5%	43.7%
Total	49.4%	36.3%	31.3%	28.8%

Source: U.S. Census Bureau, 2013-2017, 5-Year American Community Survey.

Education

Lake County has a lower proportion of high school graduates (male, female) than Michigan or the U.S., while Mason County is more on par with the state and the nation. Far fewer male and female residents of both counties have earned a Bachelor's degree or higher compared to Michigan and the U.S.

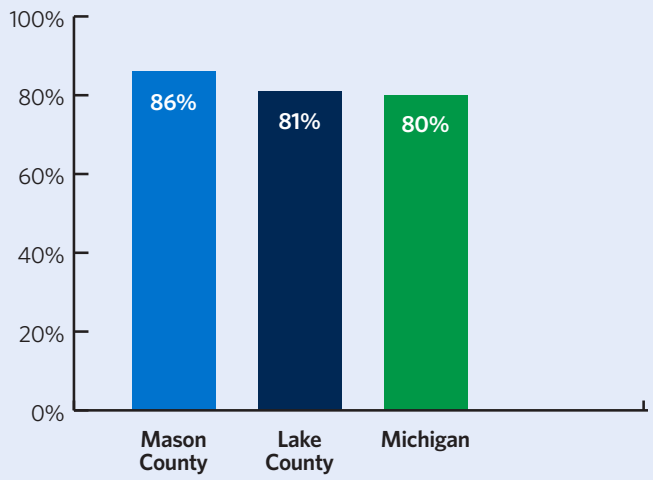
On the other hand, freshman graduation rates are on par with (Lake), or better than (Mason), state rates.

Education Level (Among Adults Age 25+)

	Men				Women			
	Lake County	Mason County	MI	U.S.	Lake County	Mason County	MI	U.S.
No Schooling Completed	1.5%	1.5%	1.1%	1.4%	1.4%	0.4%	1.0%	1.4%
Did Not Graduate High School	17.3%	8.5%	9.4%	11.9%	14.4%	5.9%	8.1%	10.6%
High School Graduate, GED, or Alternative	43.5%	32.5%	30.0%	28.1%	40.2%	34.1%	28.6%	26.6%
Some College, No Degree	21.2%	25.6%	23.6%	20.5%	22.8%	24.0%	23.6%	21.0%
Associate's Degree	5.7%	9.7%	8.0%	7.4%	9.1%	13.4%	10.5%	9.1%
Bachelor's Degree	6.4%	13.6%	16.9%	18.9%	8.0%	14.0%	17.2%	19.4%
Master's Degree	3.2%	6.0%	7.4%	7.7%	3.1%	6.7%	8.8%	9.1%
Professional School Degree	0.5%	1.4%	2.1%	2.4%	0.5%	0.9%	1.3%	1.7%
Doctorate Degree	0.7%	1.1%	1.5%	1.7%	0.3%	0.7%	0.9%	1.1%

Source: U.S. Census Bureau, 2013-2017, 5-Year American Community Survey.

Freshman Graduation Rate



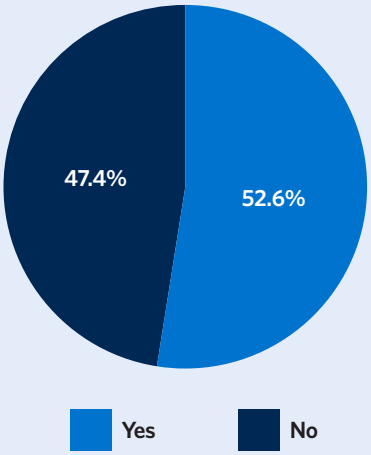
Source: County Health Rankings, 2016-2017.

Environmental Factors

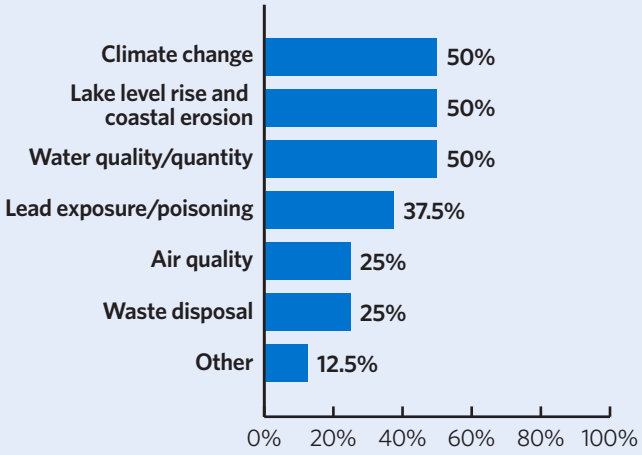
More than half (52.6%) of the Key Informants surveyed indicate they are concerned about environmental factors that could impact the health of area residents in the next few years.

Of those who are concerned, nearly half (50.0%) cite climate change, coastal erosion, and/or water quality/quantity as possibly impacting the health of area residents most.

Concerned About Environmental Factors That Could Impact the Health of Area Residents



Environmental Factors That Could Impact the Health of Area Residents



Source: Key Informant Online Survey, Q11: Are you concerned about any environmental factors that could impact the health of area residents in the next few years? (n=19); Q11a (If yes) What are the environmental factors that you think could impact the health of area residents? (Multiple response) (n=8).

Adverse Childhood Experiences

Four of the five Key Stakeholders are aware of ACEs data and what it entails, and all four think it is important that researchers collect such data for CHNAs; in fact, 3 of the 4 say it is "extremely" important.

Key Stakeholders see the importance of ACEs because the data demonstrates that childhood experiences impact adult outcomes. Knowing how to utilize the data is equally important. Spectrum Health could do a better job of sharing the information, or results, of their CHNAs with their community partners, especially the ACEs data.

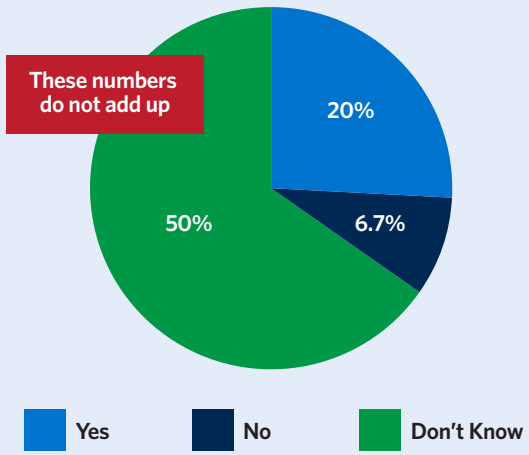
> I think it's **extremely important**, and I think for this big regional 31-county one, we didn't gather as much data on that as we should have. I think that's the lesson learned and obviously will be something that we will focus in on the next time, but definitely it **needs to be included since we know the role that it plays**.
>
> **– Key Stakeholder**

> I'm **definitely aware of ACEs overall**, and I'm aware of the national ACEs data. I **haven't seen any of the local ACEs data**, and as far as I know, we weren't even involved in collecting it. I've not seen it. I **didn't even know we did a local ACEs survey, just so you know**. I mean, I **had no idea**. I'm guessing if the hospital did it with any of the people we serve, they did it when folks were hitting the ER and not necessarily for the population as a whole.
>
> **– Key Stakeholder**

> I think it's **important that we collect it**, but I think **people don't know that it's out there**, and **they don't have strategies about how to use it, and we don't have kind of a comprehensive community plan about how we want to support efforts to interrupt the impact of trauma.**
>
> **– Key Stakeholder**

Despite the fact that ACEs are considered important as predictors of adult outcomes, only 20.0% of Key Informants can confirm that they, or their organization, screen patients/clients for adverse childhood experiences.

Currently Screening for Adverse Childhood Experiences (ACEs)



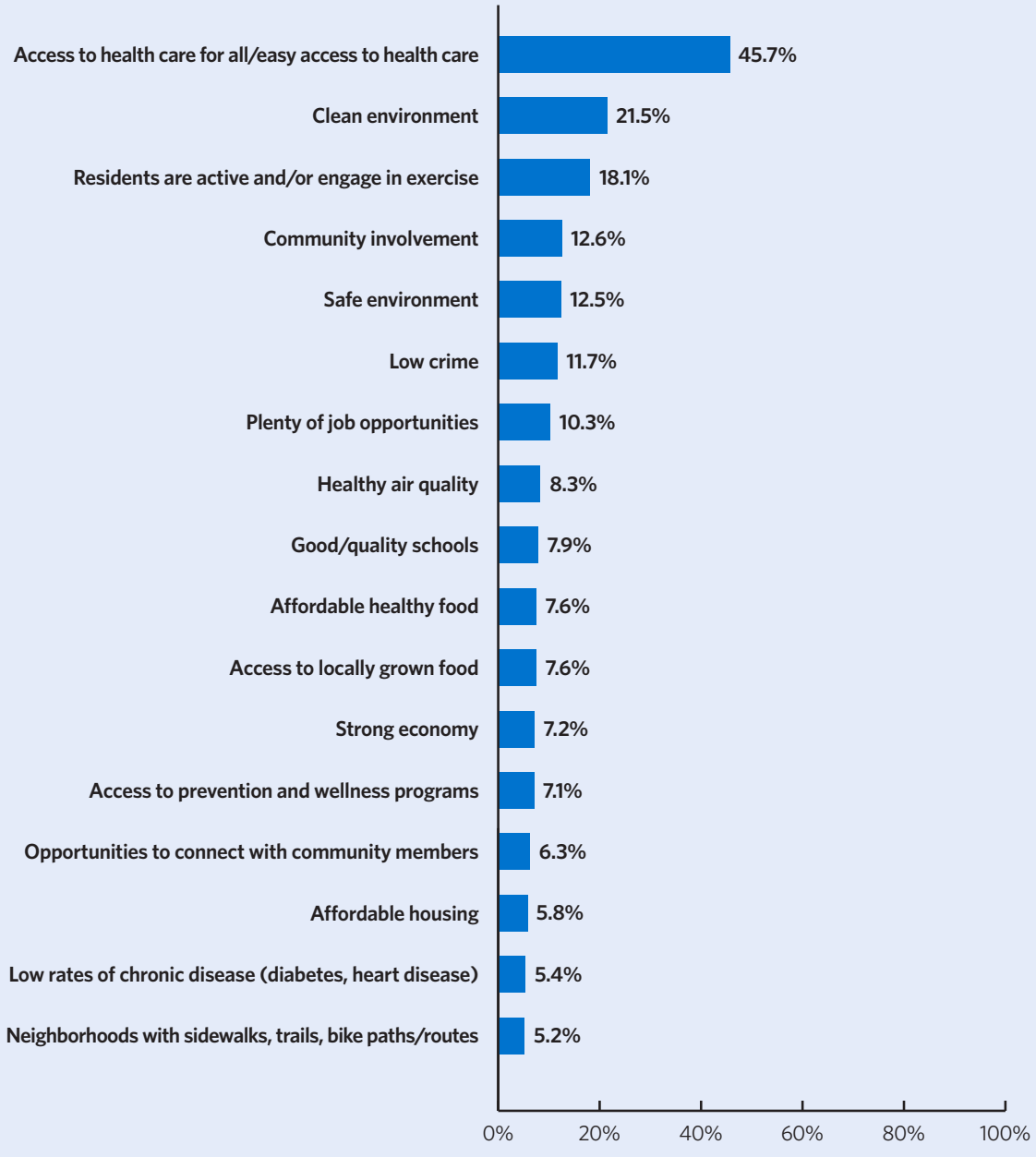
Source: Key Stakeholder Interviews, Q4: Are you aware of the ACEs (Adverse Childhood Experiences) data that came out of the last CHNA/BRFS study conducted in 2017, or are you aware of ACEs data in general? (n=6); Q4a: (If yes) How important is it that we collect this type of data in the CHNA? (n=6); Q4b: Why do you say that?; Key Informant Online Survey, Q10: Are you or members of your organization currently screening people/clients/patients for Adverse Childhood Experiences (ACEs)? (n=21)

Characteristics of a Healthy Community

When asked to describe what a healthy community looks like, area residents take a broad perspective, discussing access to health care services, a community where members are active, engaged, and connected, low crime, plentiful jobs, and safe and clean environments.

Almost half (45.7%) of area residents define a healthy community as one where everyone has access to health care.

Characteristics of a Healthy Community



Source: Resident Telephone Survey: Q1: There are many ways to define a healthy community. What does a healthy community look like, or mean, to you? (Multiple response) (n=422).

Characteristics of the SHL Community

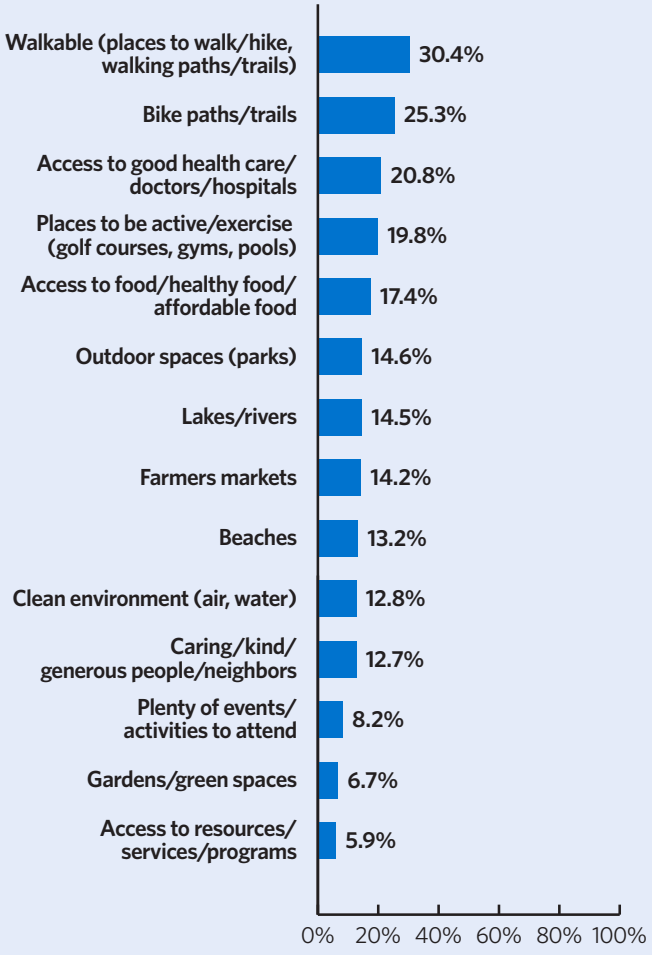
A major SHL community characteristic that makes it easy for residents to be healthy is the plethora of outdoor spaces that are conducive to being active: bike trails/paths, walking trails/paths/sidewalks, parks, lakes, and rivers.

Some residents also consider quality health care and affordable healthy food to be accessible for some residents.

When asked what characteristics of their community make it hard to be healthy, residents report the availability of fast/junk food at the top, followed by a poor economy, personal responsibility, bad weather, and the cost of health care.

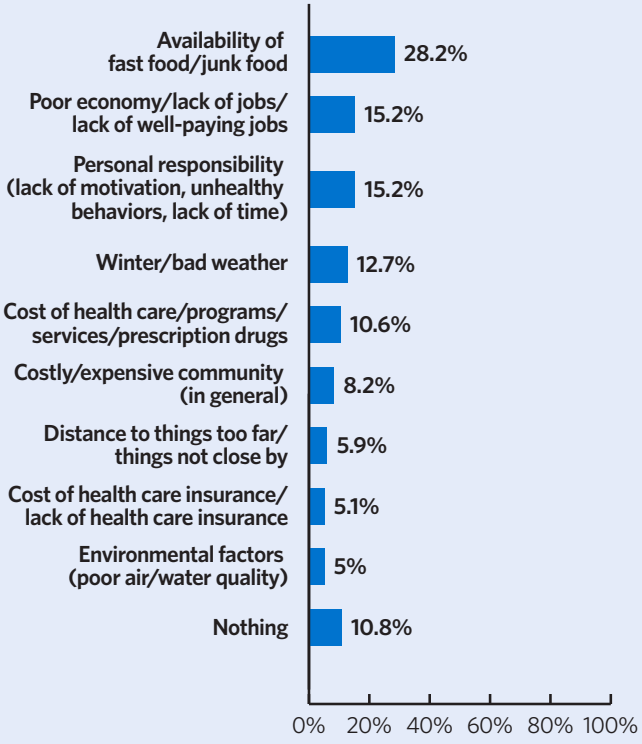
One in ten (10.8%) area adults think nothing in their community makes it hard to be healthy.

Primary Characteristics That Make it Easy to Be Healthy in My Community



Source: Resident Telephone Survey: Q4: What are the primary characteristics of your community that make it easy to be healthy? (Multiple response) (n=419).

Primary Characteristics That Make it Hard to Be Healthy in My Community



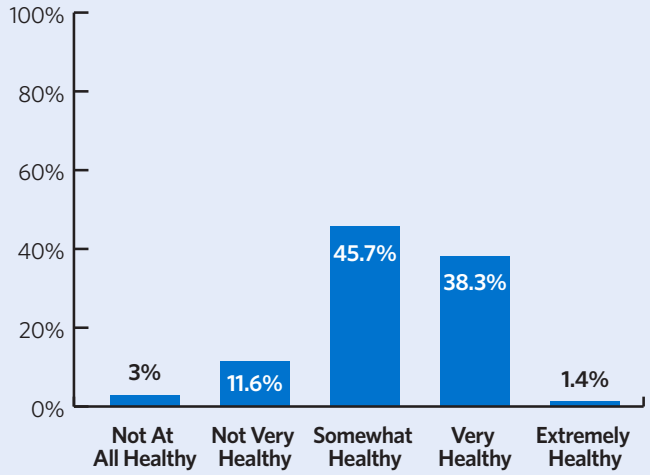
Source: Resident Telephone Survey: Q5: On the other hand, what are the primary characteristics of your community that make it hard to be healthy? (Multiple response) (n=424).

Overall Health of the SHL Community

Four in ten (39.7%) area residents believe their community is very or extremely healthy overall. Almost one in seven (14.6%) see their community as not very or not at all healthy.

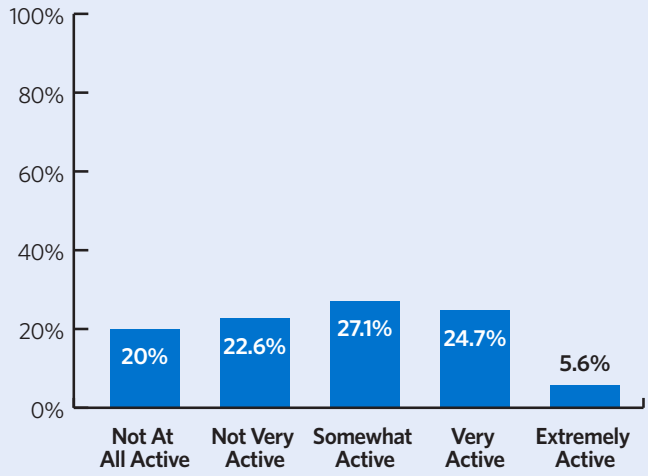
Four in ten (42.6%) area adults are not active in their community when it comes to being involved with organizations, town commissions/boards, non-profits, volunteerism, etc.

Perception of Your Community's Overall Health



Source: Resident Telephone Survey: Q2: If you were rating the overall health of your community (physical, social, emotional), would you say that your community is...? (n=416).

Degree to Which You are Active in Your Community



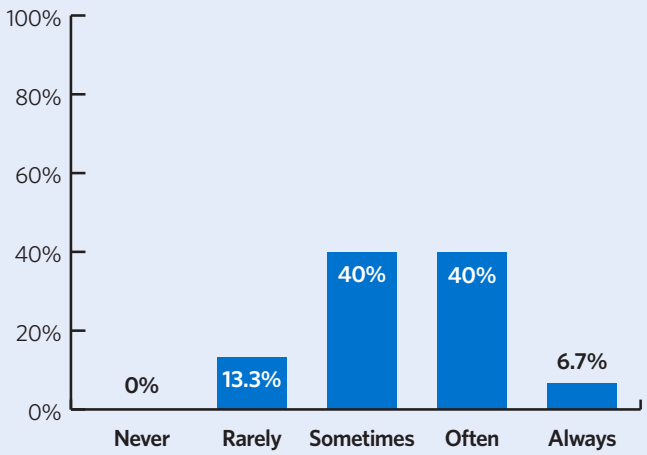
Source: Resident Telephone Survey: Q20: How active would you say you are in your community when it comes to things like being involved in civic organizations, volunteering, town commissions/boards, non-profits, etc.? Would you say...? (n=430).

Social Determinants of Health

According to Key Informants, opportunity exists for more inclusion of social determinants of health when developing treatment or care plans. Four in ten (40.0%) say that social determinants of health are considered only sometimes, and another 13.3% say they are considered rarely, when developing treatment/care plans for area residents.

Unprompted, Key Stakeholders mention the importance of the social determinants of health for addressing health and outcomes, and also for engaging community partners for possible collaboration on solutions and strategies when addressing problems from a holistic approach.

Extent to Which Social Determinants of Health are Considered When Developing Treatment/ Care Plans



> The health department has been working hard to bring leadership together and these communities to engage, through program development. We're trying to get patients engaged. We're working on those social determinants of health and trying to bring people out of isolation because that is the other issue. People get isolated, they get depressed, they sit, they smoke, they eat too much, and then they go out at night or whatever on the weekends, go out and drink.
>
> **– Key Stakeholder**

> Some of the counties are a little bit more far ahead than that, but I know in Grand Rapids, we've partnered with organizations and are accepting referrals from the practice and trying to address some of those social determinants of health. It's also trying to connect people if they do have a substance-use issue or one of the other pieces.
>
> **– Key Stakeholder**

Source: Key Informant Online Survey: Q8: In your opinion, how often are social determinants of health considered when developing treatment or care plans for area residents? Examples of social determinants of health include housing, transportation, and food access, among others. (n=15)

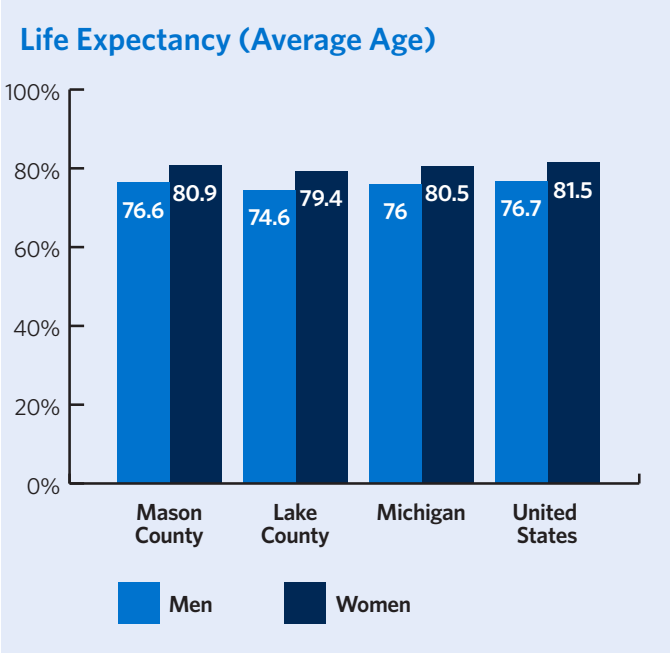
Health Status Indicators

Life Expectancy and Years of Potential Life Lost

For both men and women, life expectancy rates in Mason County are higher compared to Michigan. Lake County experiences the lowest rates of all comparable regions for both genders.

Mason County residents experience fewer years of potential life lost overall compared to Michigan but lose more years to accidents and far more to chronic lower respiratory disease.

Lake County residents experience more years of potential life lost overall and specifically due to malignant neoplasms and heart disease compared to the state or to Mason County.



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

Years of Potential Life Lost

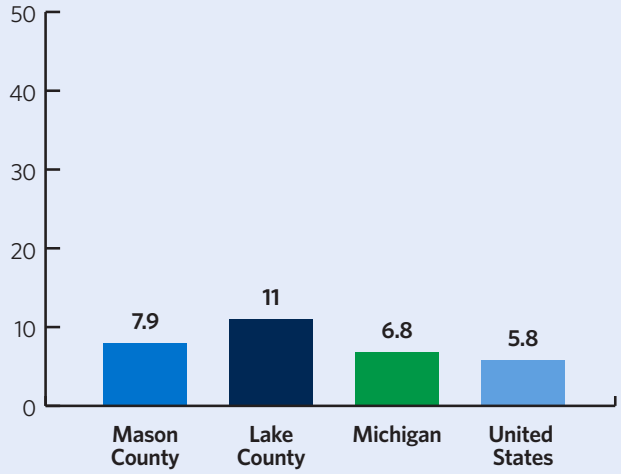
	Michigan		Mason County		Lake County	
	Rank	Rate	Rank	Rate	Rank	Rate
All Causes		**7992.0**		**7413.5**		**10605.2**
Malignant neoplasms (All)	1	1571.6	2	1408.8	2	2514.0
Accidents	2	1434.6	1	2018.0		**
Diseases of the heart	3	1283.9	3	1256.5	1	2653.6
Drug-induced deaths	4	1031.2		**		**
Intentional self-harm (Suicide)	5	431.5		**		**
Chronic lower respiratory diseases	6	243.3	4	742.5		**

Source: Michigan DHHS, Division of Vital Records and Health Statistics, Geocoded Michigan Death Certificate Registry, 2017.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

Mortality Rates

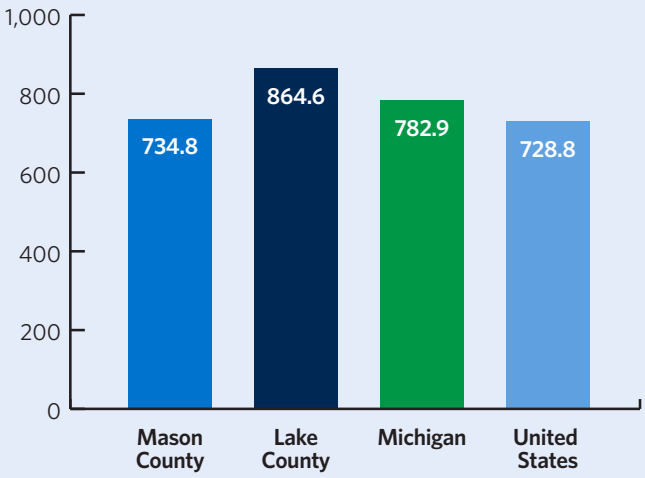
Both SHL area counties have higher infant mortality rates than the state and national. The age-adjusted mortality rate in Mason County is higher than the U.S. rate but lower than the state rate. In both cases, Lake County has the highest rates, by far, among the four regions compared.

Infant Mortality Rate Per 1,000 Live Births



Source: Michigan Department of Health and Human Services, Division of Vital Records and Health Statistics, 2018.

Age-Adjusted Mortality Rate Per 100,000 Population



Source: Michigan Resident Death File, Vital Records & Health Statistics Section, Michigan Department of Health & Human Services, 2017 for MI and counties, 2016 for U.S.

Leading Causes of Death

Heart disease and cancer are the leading causes of death in Mason and Lake counties, as well as in the state and nation.

Mason County has the lowest death rate from cancer compared to the other regions, but a higher death rate from heart disease compared to the U.S.

Mason County also has higher death rates from chronic lower respiratory diseases and stroke than the state and national rates.

Lake County has the highest death rates from both heart disease and cancer than the other comparable regions.

Years of Potential Life Lost

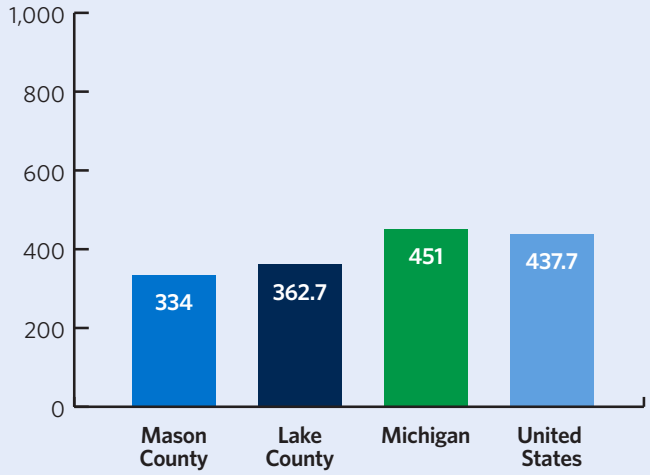
	Michigan		U.S.		Mason County		Lake County	
	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate
Heart Disease	1	195.9	1	165.5	1	173.5	1	243.5
Cancer	2	161.1	2	155.8	2	136.9	2	180.3
Unintentional injuries	3	53.9	3	47.4	3	68.6		**
Chronic Lower Respiratory Diseases	4	44.3	4	40.6	4	63.3		**
Stroke	5	39.2	5	37.3	5	50.0		**
Alzheimer's Disease	6	34.5	6	30.3		**		**
Diabetes Mellitus	7	22.1	7	21.0		**		**
Kidney Disease	8	14.7	10	13.1		**		**
Pneumonia/Influenza	9	14.1	9	13.5		**		**
Intentional Self-Harm (Suicide)	10	13.6	9	13.5		**		**
All Other Causes		189.6		190.8		132.2		170.0

Source: Michigan Department of Health and Human Services, 2017 for MI and counties, 2016 for U.S.
Note: ** = data do not meet standards of reliability and precision OR have a zero value.

Cancer Diagnosis and Death Rates

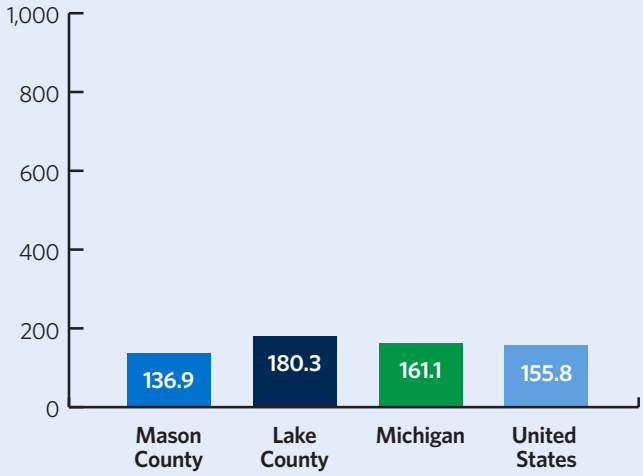
While the cancer death rate is higher in Lake County than it is in Michigan or the U.S., the cancer diagnosis rate is lower, which suggests better cancer pre-screening is needed in the region.

Cancer Diagnosis Rate (Age-Adjusted) Per 100,000 Population



Source: MDHHS counties and MI, 2017, U.S., 2016.

Overall Cancer Death Rate Per 100,000 Population



Source: MDCH Cancer Incidence Files. Counties and MI 2012-2016 5-year average, U.S. 2015.

Chronic Conditions

One third of SHL area adults report arthritis and an equal proportion report chronic pain, while one in nine (11.2%) have diabetes and an additional 20.3% have pre-diabetes.

Area women are more likely than area men to have arthritis, asthma, and COPD, while men are more likely than women to have diabetes and pre-diabetes.

Non-White adults are more likely than White adults to have chronic pain, asthma, diabetes, and COPD.

Area adults with less than a high school degree are less likely to have arthritis, chronic pain, pre-diabetes, and asthma than adults with more education.

Area adults with annual household incomes under $20,000 are more likely to have chronic pain and pre-diabetes compared to adults with higher household incomes.

Prevalence of Chronic Diseases by Demographics

		Gender		Race		Age						
	TOTAL	Men	Women	White	Non-White	18-24	25-34	35-44	45-54	55-64	65-74	75+
Chronic pain	**34.9%**	32.2%	37.2%	35.0%	35.0%	4.7%	24.1%	19.1%	32.3%	53.2%	50.4%	44.9%
Arthritis	**33.1%**	34.9%	31.6%	32.6%	40.3%	8.4%	34.9%	43.1%	30.9%	36.0%	42.0%	29.7%
Pre-diabetes	**20.3%**	24.0%	17.3%	20.9%	12.9%	8.4%	18.1%	31.6%	19.0%	17.3%	24.5%	25.3%
Lifetime asthma	**13.5%**	10.7%	15.7%	13.0%	19.5%	18.1%	33.7%	11.6%	12.8%	9.5%	11.5%	2.0%
Diabetes	**11.2%**	13.7%	9.1%	10.5%	19.2%	0.0%	5.1%	4.1%	8.7%	17.9%	17.3%	22.5%
Current asthma	**8.1%**	4.3%	11.2%	7.8%	11.9%	6.7%	17.4%	4.4%	10.0%	8.3%	7.2%	1.7%
COPD	**9.5%**	9.0%	9.9%	8.8%	17.3%	0.0%	2.3%	1.7%	9.8%	15.7%	19.1%	9.4%

Continued

		Education				Income					Poverty Level	
	TOTAL	<High School	HS Grad	Some College	College Degree	<$20K	$20K-<$35K	$35K-<$50K	$50K-<$75K	$75K+	Below Poverty Level	Above Poverty Level
Chronic pain	**34.9%**	16.8%	42.3%	38.7%	28.5%	30.7%	41.2%	42.8%	45.9%	26.2%	30.4%	39.7%
Arthritis	**33.1%**	25.4%	39.8%	31.0%	30.1%	51.7%	39.3%	30.2%	26.6%	21.1%	47.8%	30.2%
Pre-diabetes	**20.3%**	9.3%	30.1%	18.1%	13.9%	26.1%	17.9%	22.5%	19.4%	9.0%	25.1%	16.5%
Lifetime asthma	**13.5%**	9.4%	15.0%	13.1%	14.5%	14.8%	12.1%	19.0%	7.6%	16.3%	15.8%	13.2%
Diabetes	**11.2%**	10.1%	11.6%	12.8%	8.2%	11.6%	15.4%	2.1%	13.2%	12.0%	8.7%	12.6%
Current asthma	**8.1%**	5.7%	8.6%	8.8%	7.8%	8.4%	9.0%	8.6%	3.9%	5.0%	9.0%	6.7%
COPD	**9.5%**	7.9%	15.6%	7.1%	3.2%	13.7%	18.7%	5.6%	5.1%	1.8%	15.0%	8.7%

Source: 2017 SHL Behavioral Risk Factor Survey, (n=514)

Health Status Indicators

Chronic Conditions, Continued

One in ten (10.7%) SHL area adults report some form of cardiovascular disease such as stroke, heart attack, and/or angina/coronary heart disease (CHD).

Area men are slightly more likely than women to have cardiovascular disease (especially heart attacks), while women are more likely than men to have cancer and strokes.

Non-White adults are more likely than White adults to have any cardiovascular disease, while White adults are more likely to have cancer than non-White adults.

Area adults with less than a college education are more likely to have cardiovascular disease, especially heart attacks and strokes, compared to adults with more education.

Area adults with annual household incomes under $35,000 are more likely to have cardiovascular disease, especially stokes, than adults with higher household incomes.

Prevalence of Chronic Diseases by Demographics

		Gender		Race		Age						
	TOTAL	**Men**	**Women**	**White**	**Non-White**	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**	**75+**
Any cardio-vascular disease*	**10.7%**	12.2%	9.4%	9.1%	27.7%	3.4%	0.0%	0.7%	9.6%	13.6%	19.7%	27.7%
Other (non- skin) cancer	**8.2%**	7.1%	9.0%	8.3%	7.9%	0.0%	8.3%	0.0%	4.1%	18.6%	6.7%	16.9%
Skin cancer	**5.1%**	4.7%	5.5%	5.2%	4.4%	0.0%	0.0%	0.0%	2.4%	8.4%	9.7%	15.8%
Stroke	**4.8%**	4.3%	5.2%	4.2%	11.9%	0.0%	0.0%	0.0%	7.0%	5.9%	4.9%	16.7%
Heart attack	**5.0%**	7.0%	3.3%	4.2%	13.6%	3.4%	0.0%	0.0%	2.7%	7.1%	12.0%	8.6%
Angina/coronary heart disease	**4.5%**	5.0%	4.1%	3.9%	11.6%	0.0%	0.0%	0.7%	3.8%	6.3%	9.6%	10.0%

Continued

		Education				Income					Poverty Level	
	TOTAL	**<High School**	**HS Grad**	**Some College**	**College Degree**	**<$20K**	**$20K-<$35K**	**$35K-<$50K**	**$50K-<$75K**	**$75K+**	**Below Poverty Level**	**Above Poverty Level**
Any cardio-vasculardisease*	**10.7%**	13.4%	13.5%	8.6%	6.5%	12.6%	17.4%	5.8%	11.5%	3.3%	14.0%	9.8%
Other (non-skin) cancer	**8.2%**	6.5%	10.1%	8.4%	5.3%	5.3%	11.4%	7.3%	6.9%	7.6%	6.9%	8.6%
Skin cancer	**5.1%**	3.1%	5.9%	5.3%	4.7%	5.3%	5.6%	5.4%	12.7%	2.5%	5.4%	6.1%
Stroke	**4.8%**	10.4%	6.0%	2.3%	2.3%	9.2%	6.0%	1.8%	3.7%	0.6%	8.3%	3.2%
Heart attack	**5.0%**	6.0%	7.9%	3.0%	1.9%	3.1%	9.7%	0.0%	4.4%	2.0%	6.9%	3.6%
Angina/coronary heart disease	**4.5%**	2.6%	5.6%	4.5%	3.8%	1.8%	9.7%	4.1%	6.4%	1.0%	6.0%	4.6%

Source: 2017 SHGL Behavioral Risk Factor Survey, (n=514). *Any cardiovascular disease = respondent said they had at least one of the following: heart attack, angina/coronary heart disease, or stoke.

Most Pressing Health Issues or Concerns

All five of the Key Stakeholders were also interviewed in 2017 and confirmed that the most pressing or concerning issues listed below from 2017 are still the most critical issues in 2019.

The most critical issues include: (1) behavioral health, which encompasses mental health and substance abuse, which are often comorbid, (2) access to care, due to cost and a lack of providers, (3) social issues such as housing, employment, food access, and access to child care, and (4) lifestyle issues or risk behaviors such as obesity and smoking.

- Opiate epidemic/ addiction (3)
- Obesity (2)
- Smoking (2)
- Access to health care
- Access to medication-assisted treatment that is affordable
- Behavioral health needs
- Diabetes
- Lack of specialists
- Lifestyle choices (diet, exercise)
- Mental health needs
- Safe and affordable child care
- Safe and affordable housing
- Substance abuse
- Unemployable people (can't pass drug test)

New issues emerging since 2017 include increased focus on the **social determinants of health** and environmental concerns, especially in Lake County where chemicals have been discovered to be in the ground and potentially contaminating the local sources of drinking water.

> I don't know if it's necessarily new issues but issues that are getting more attention now, and it would be how do the **social determinants of health** play into each of those issues [**substance abuse, specifically the opiate epidemic, mental/behavioral health needs, access to health care**]
>
> **– Key Stakeholder**

> **We've had some additional concerns with water quality and environmental issues with PFOS**. There's been some water studies done on the public water system here in **Baldwin**, and now we're **starting to conduct more environmental studies on the land** because they're discovering that **Michigan has quite a bit of PFOS found in the ground**, so of course that's kind of like a permanent thing. **You can't clean it up. It's already in our bodies**. Recently, here in Baldwin, we've had **some issues with a dry-cleaning company that dumped all the chemicals and things into the Pere Marquette**, so that's still like an ongoing thing. Now **rates of cancer are high but** I don't know what the link to PFOS is. I don't think they've really confirmed everything but there might be some kind of association, because we do have **high rates of cancer mortality**.
>
> **– Key Stakeholder**

Source: Key Stakeholder Interviews, Q1: Two years ago, when we last spoke, you said that [insert issues mentioned] were the most pressing or concerning health issues facing residents in your area. Would you say those are still the most pressing or concerning issues facing residents in your area today? (n=5); Q1b: What are the new issues that are pressing or concerning, if any? (n=5);

Health Status Indicators

Most Pressing Health Issues or Concerns, Continued

When Key Stakeholders were asked why the issues they cited in 2017 continue to be the most pressing or concerning issues, they provide a picture of a community where some residents have substance abuse and/or mental health issues and face many barriers to addressing their problems, the greatest of which is accessing needed care. Moreover, these problems are complex and complicated and require more resources to adequately address them than currently exists.

Opioid issue/ substance abuse	Typically, the **people that get into trouble with opioids**, they're **not the fringe part of society**. These are **people who have jobs and families and responsibilities**, and they've always taken care of things. But, then they had a back surgery, or they had some type of injury that got them on pain meds, and **before they knew it**, the **slippery slope** has taken them to places they've never been; **they get addicted**, and suddenly, everything in life is trying to deal with this newly developed drug addiction as opposed to how they used to be when they functioned normally and went to work every day and took care of their families and took care of their homes. All of that just gets up-ended. **That's the thing that's really different about this than previous drug challenges**, whether it was heroin or anything else they're getting in the street, but now it's **people that have been solid members of the community that are suddenly in a downhill spiral**. **– Key Stakeholder**
Smoking	I think it has to do with the **lack of employment**. There's **not a lot for people to do**, and part of it's just **cultural**. Some of it is just **generational; their parents smoked**, their **grandparents smoked**, they smoke. We have a **lot of bars up here** that have been going on for a long time, and people go in the bar, and they drink, and they smoke. **– Key Stakeholder**
Obesity	Our restaurants are not restaurants like you would find in more urban areas. These **restaurants are connected to a bar-and-grill type of thing**, so **food - how the food's prepared** and the type of food adds to that, and it's all one big vicious cycle. **– Key Stakeholder**
Mental health	I think **they're not easy to fix**. With **mental health**, I think it's a **combination** of that it's **hard to move the needle on it**, and the **resources** and what we dedicate to that, is **not adequate**. And, **unless we do a lot more than we've done, we're not going to see the kind of dramatic improvement in the whole mental-health area**. I just think they're **daunting challenges**, and I think that's why it's **hard to get movement on them**. Once you start doing the right thing, it **takes a long time to actually see the efforts you're putting forth** make a difference. **– Key Stakeholder**

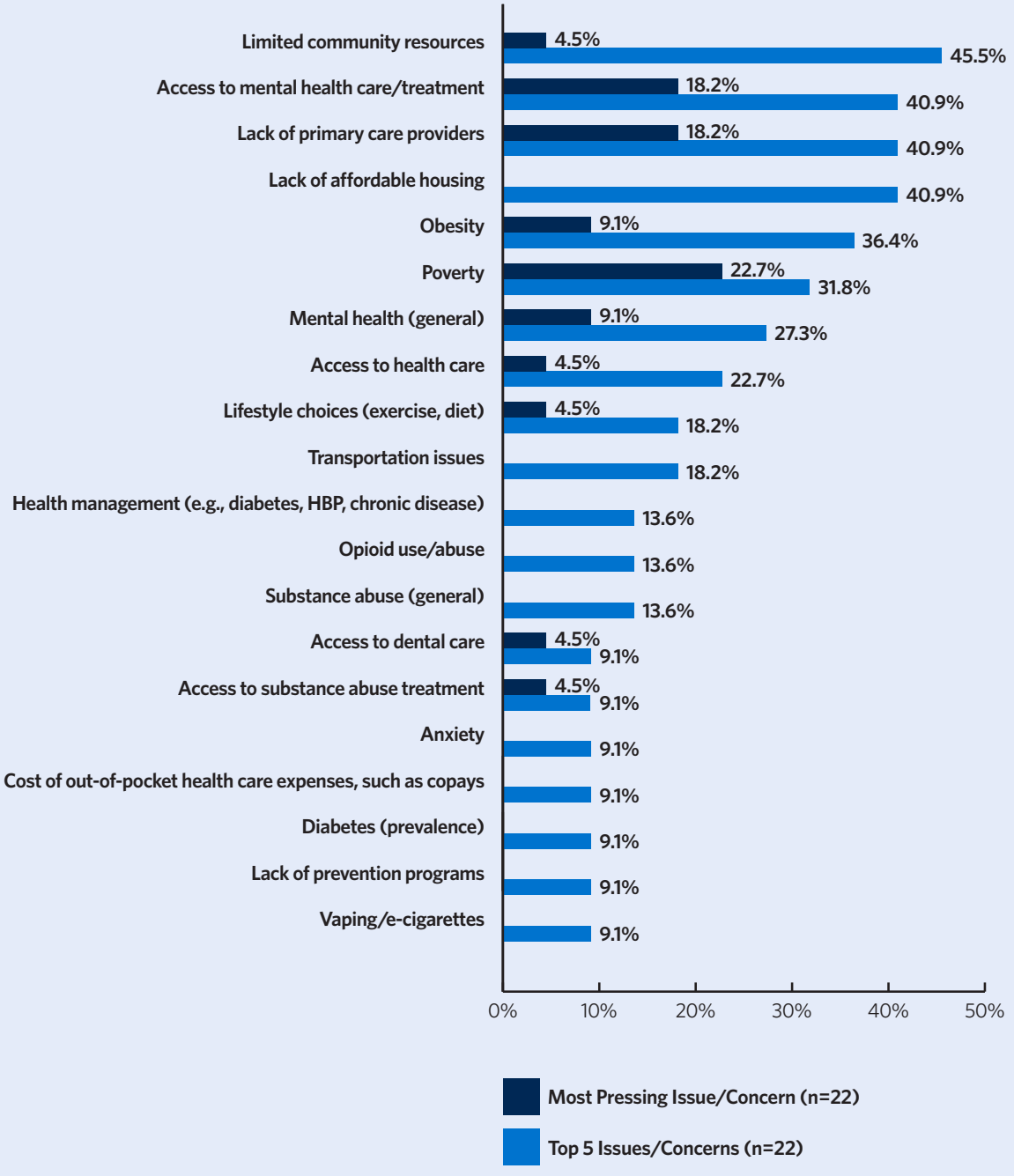
Source: Key Stakeholder Interviews, Q1a: In your opinion, what are the reasons they remain the top health issues in your community? (n=5); Q1b: What are the new issues that are pressing or concerning, if any? (n=5); Q1d: What are the reasons they are top issues in your community? (n=5)

Health Status Indicators

Most Pressing Health Issues or Concerns, Continued

Key Informants cite a number of pressing health issues or concerns in the SHL area today. Most often cited are poverty, lack of primary care providers, mental health and access to treatment, limited community resources, obesity, lack of affordable housing, access to care, and lifestyle choices.

Most Pressing Health Issues/Concerns



Source: Key Informant Online Survey, Q1: To begin, what are the most pressing health issues or concerns in your area? Please check no more than five issues. (Multiple response) (n=22); Q1b: Of the most pressing health issues or concerns you selected, which one do you think is the most critical? (n=22)

Health Status Indicators

Most Pressing Health Issues or Concerns, Continued

Poverty exacerbates the existing problem of limited access to health care services, especially primary care and mental health treatment, and drives most social determinants of health.

Access to care for low income residents – primary, specialty, mental health, substance use disorder, and dental care – is an issue because there is a lack of providers that accept all insurance plans or have sliding scales.

When access to care is available there are often long wait times, or many residents find themselves traveling out of the area for care.

Poverty

Poverty impacts access to health services, and is the **driver for most other social determinants of health.**

– Key Informant

Cost of living relative to wages is high in Mason County, particularly in the areas of **housing** and **securing reliable transportation**. Often **people cannot afford insurance premiums and/or copays and so go without**, and **find other ways to self-medicate** with **substances**.

– Key Informant

Mental health/ access to mental health treatment

Increase in magnitude of student mental health and **behavioral health incidents.**

– Key Informant

I have heard from citizens about their **frustration finding treatment options.**

– Key Informant

Mental health affects not only the individual but the whole family. If mental health isn't addressed then the **person may not be able to hold down a job or be supportive of their other family members** (spouse, children).

– Key Informant

Lack of primary care providers

The **frequency of patients saying they do not have a primary provider or are being managed by nurse practitioners is high.**

– Key Informant

It is **currently a six month wait to see a primary care doctor**, despite adding a significant amount of physician extenders. A significant number of our primary care physicians have retired in the last several years but haven't been replaced.

– Key Informant

Health Status Indicators

Most Pressing Health Issues or Concerns, Continued

Access to care

Lack of providers in our area. **Lack of urgent care on Sunday.**

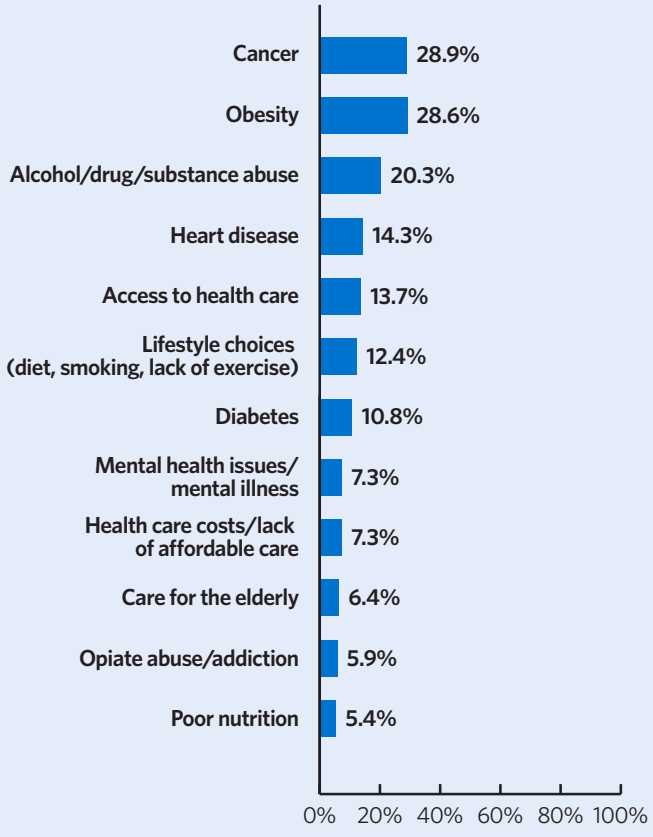
– Key Informant

I see **many children with poor teeth** from a very early age, and it is **very difficult for them to get care** because so many are from low income families and **can't afford treatment** or they **can't find a dentist that will accept Medicaid.**

– Key Informant

Source: Key Informant Online Survey, Q1c: Why do you think [insert issues] is the most critical health issue or concern in the area? (n=22).

Most Important Health Problems/Concerns in the Community



Source: Resident Telephone Survey: Q3: What are two or three of the most important health problems or concerns in your community today? (Multiple response) (n=405).

SHL area adults list cancer and obesity as the two most important health problems or concerns in the community.

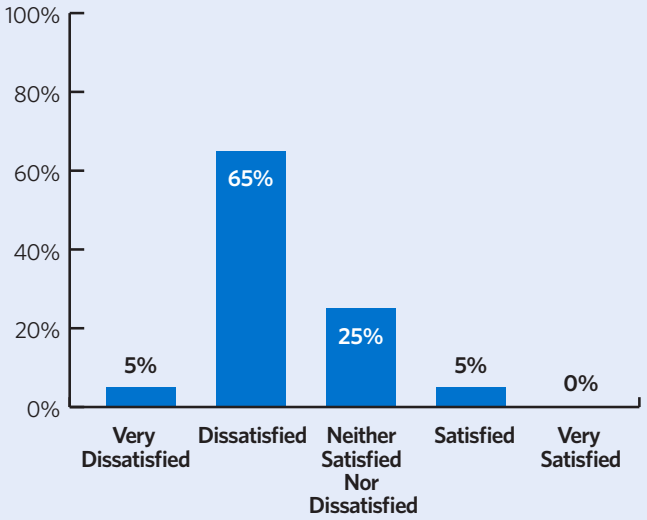
One in five adults mention substance abuse, including alcohol, as one of the most important health problems in the community.

Other mentions by more than one in ten adults include heart disease, access to health care, lifestyle choices, and diabetes.

Overall Satisfaction with Health Climate

In considering the overall health climate of the SHL area, seven in ten (70.0%) Key Informants – the very people on the ground working in or around the field of health care – are dissatisfied, demonstrating that there is substantial room for improvement, and their comments indicate concerns across several areas.

Overall Satisfaction With the Health Climate in Your Community



Neither satisfied nor dissatisfied

There are **areas in which we do very well**. We have **strong primary care providers**. The **challenge is the influx of seasonal residents and specialty services available**.

We **do provide services but those who need them either don't know about them** or have **difficulty with availability or transportation**.

Dissatisfied

It is **still difficult for new patients to get appointments to primary care physicians** in a **reasonable time** or change physicians.

I work directly with about 18% of Mason County's workforce and **I see way too many cases of people who are underinsured or uninsured** due to the **high costs of premiums** (cost sharing) and **deductibles.**

We are **losing our local doctors**, which won't help our community.

The **lack of access to PCPs** and some **specialty care (ortho, urology, cardiology, psychiatry** and uncertainty concerning **hematology/oncology services).**

There are **too many barriers to leading a healthy lifestyle** and **accessing services.**

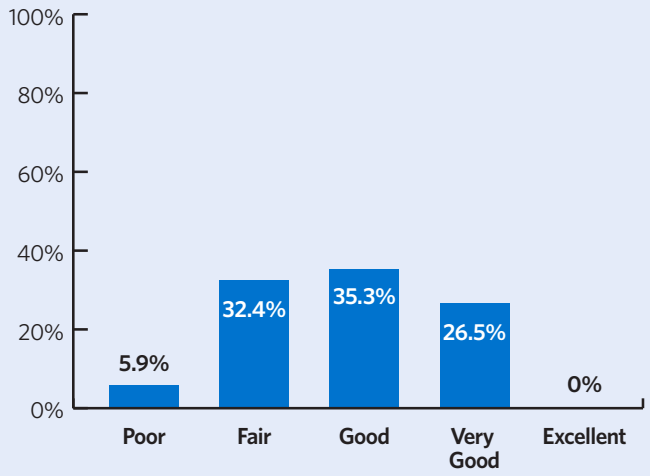
Source: Key Informant Online Survey, Q9: Taking everything into account, including health conditions, health behaviors, health care availability, and health care access, how satisfied are you overall with the health climate in your community? (n=20); Q9a: Why do you say that?

Health of Underserved Residents

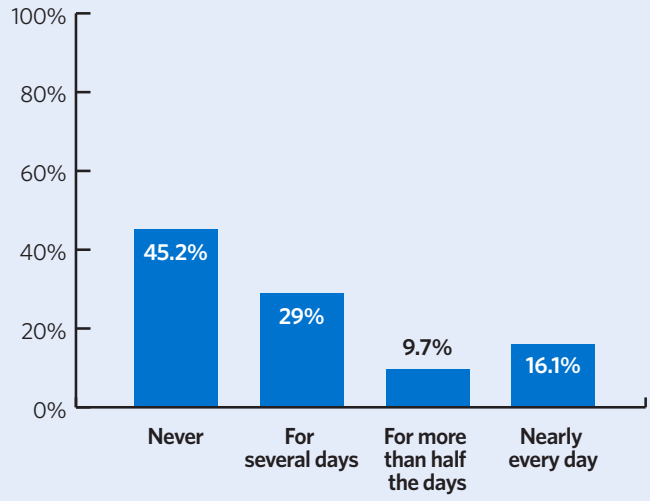
Almost four in ten (38.3%) underserved residents report their general health as fair or poor. Additionally, at least half had "little interest/pleasure in doing things" (54.8%) and/or "felt down, depressed, or hopeless" (50.0%) at some point during the past two weeks.

Roughly one in eight (11.8%) underserved residents thought about taking their life during the past year; 2.9% attempted suicide in the past year.

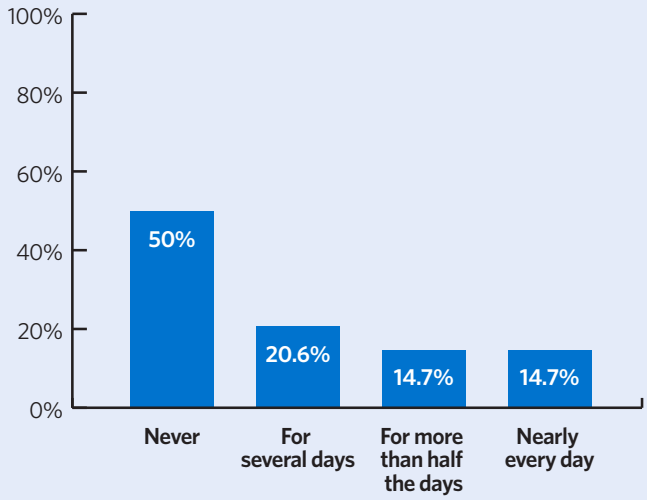
Perception of General Health



Had Little Interest or Pleasure in Doing Things Over Past Two Weeks



Feeling Down, Depressed, or Hopeless Over Past Two Weeks



Source: Underserved Resident Self-Administered Survey: Q1: To begin, would you say your general health is…? (n=34); Q17: Over the past two weeks, how often have you been bothered by having little interest or pleasure in doing things? (n=31); Q18: Over the past two weeks, how often have you been bothered by feeling down, depressed, or hopeless? (n=34); Q19: Has there been a time in the past 12 months when you thought of taking your own life? (n=34); Q20: During the past 12 months, did you attempt to commit suicide (take your own life)? (n=34)

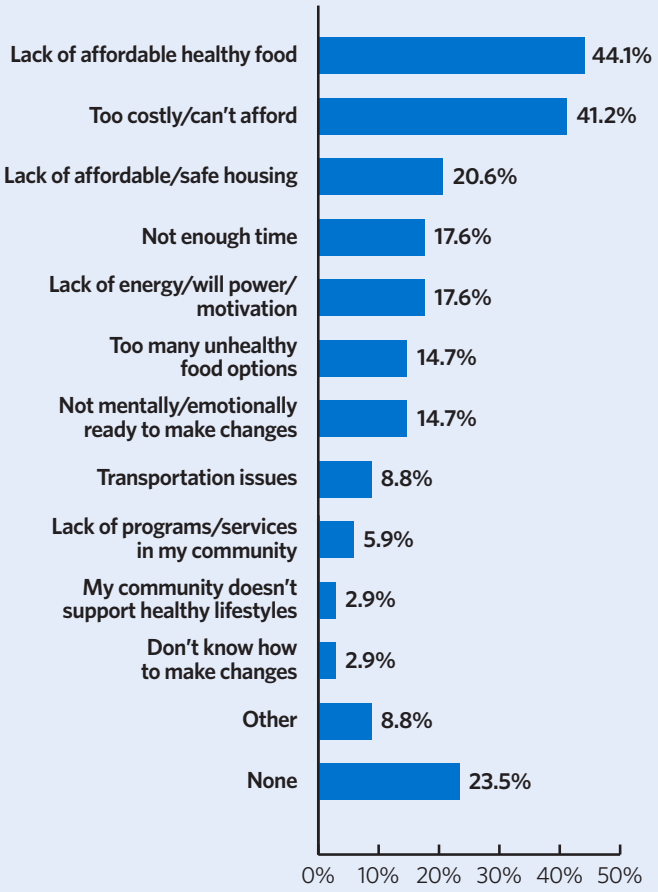
Health of Underserved Residents, Continued

There are many barriers that prevent underserved residents from living healthy lifestyles, but the two most common revolve around cost: the lack of affordable healthy food and the general cost of trying to live a healthy lifestyle.

Lack of affordable/safe housing, lack of energy, will power, motivation, and time, are also barriers to living healthier.

Nearly one-fourth (23.5%) do not think there are any barriers to their living a healthier lifestyle.

Barriers to Living a Healthier Lifestyle



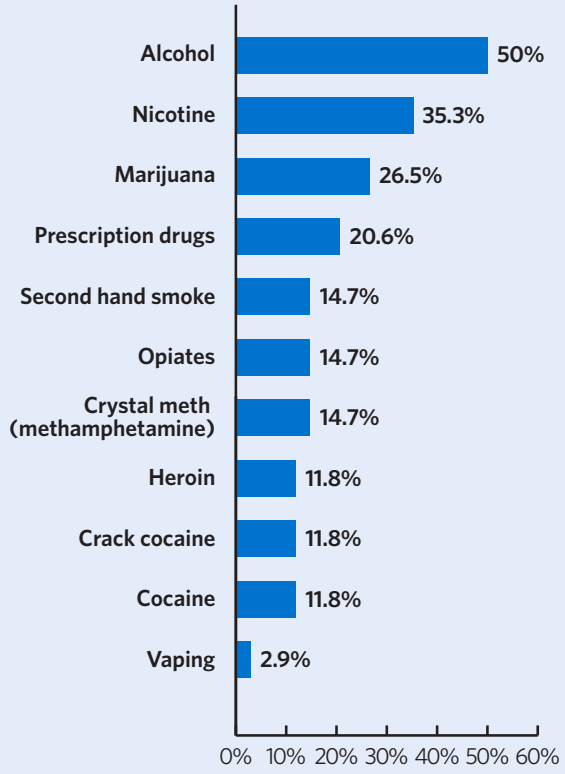
Source: Underserved Resident Self-Administered Survey: Q10: What are some of the barriers you face when trying to live a healthier lifestyle? (Multiple response) (n=34)

Substance Use/Abuse

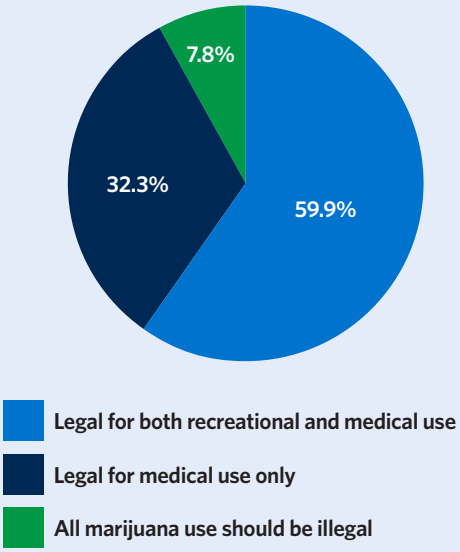
Half (50.0%) of underserved residents report that alcohol use/abuse has negatively impacted their family. Additionally, more than one-third (35.3%) say smoking/nicotine was also harmful.

Among adults in the general population, six in ten (59.9%) think marijuana should be legal for both medical and recreational use.

Substance/Addiction That Have Had a Negative Impact on the Person/Family



Opinion on Marijuana Use Among Adults in Michigan



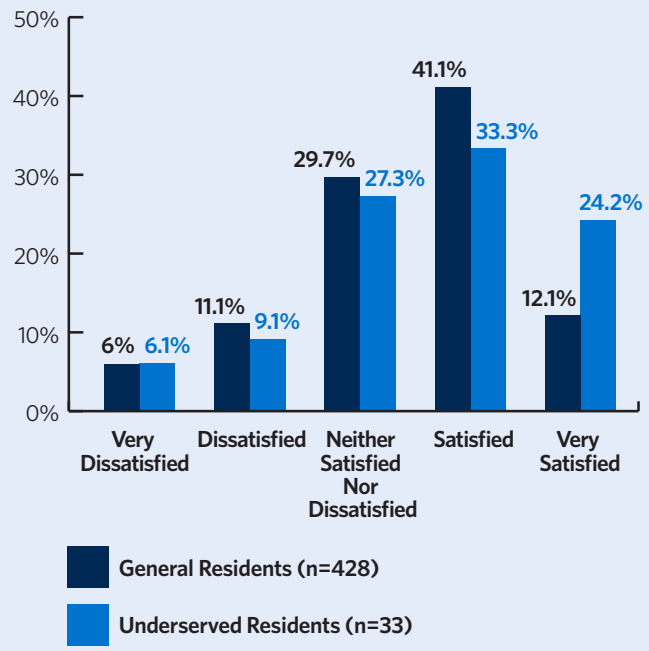
Source: Underserved Resident Self-Administered Survey: Q13: Substance abuse and addiction can have a negative impact on individuals and families. Which of the following, if any, have had a negative effect on your or your family? (Multiple response) (n=34); Resident Telephone Survey, Q21: In your opinion, should marijuana use by adults be legal for both recreational and medical use, medical use only, or should all marijuana use be illegal? (n=408)

Satisfaction with Health Care System

In terms of satisfaction with the health care system, there is very little difference between general residents and underserved residents: over half are either satisfied or very satisfied with the health care system overall.

Reasons for dissatisfaction are many, but most often cited are costs, lack of access, poor communication, wait times to see a provider, and poor-quality care.

Satisfaction with Health Care System Overall



Health systems are not coordinated well. Need to collaborate/align with other health focused entities better.

– Underserved Resident

They **need a lot of improvement. Doctors should work in teams to treat people. Specialists need to coordinate with the patient's other doctors to provide the best care possible**. I honestly feel like they are **taking on more patients than they can adequately provide** for. **All for the almighty DOLLAR!**

– General Resident

Cost and **quality of care does not reflect the amount of time and energy required to access and understand** it.

– Underserved Resident

Because I **can't get help with transportation** for my mom to get the dialysis she needs because **there is no dialysis here anymore.**

– General Resident

The **cost is outrageous**, for care and insurance. I am **frustrated by the system**. There is a **systemic failure** to **communicate together and have the patient's interest and health number one**. This is because doctors' hands are tied because they have to **answer to stockholders and corporations.**

– General Resident

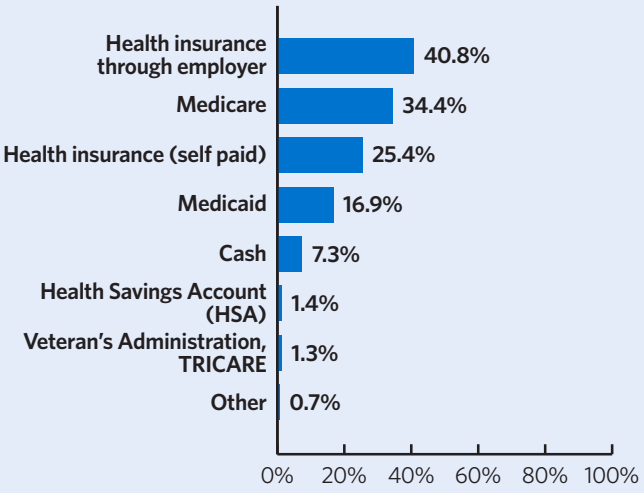
Source: Resident Telephone Survey/Underserved Residents Self-Administered Survey, Q19/Q3: How satisfied are you with the health care system overall? Q19a/Q4: (If dissatisfied) Why are you dissatisfied with the health care system overall?

Payment for Health Care

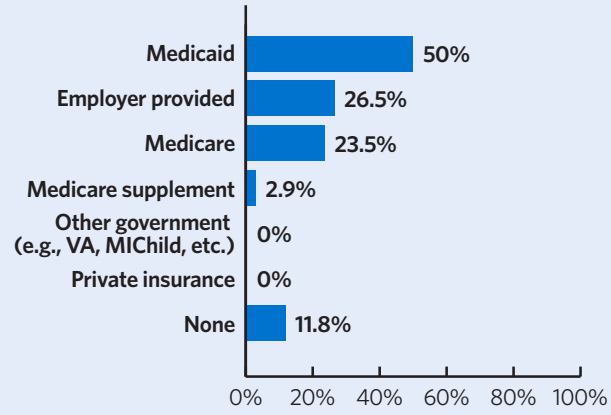
The majority of adult residents from the general sample pay for their health care through insurance they receive through their employer (40.8%) or via private insurance that they purchased (25.4%).

Conversely, half (50.0%) of underserved residents have Medicaid for health insurance, while almost one in nine (11.8%) have no insurance.

Sources of Health Care Payment



Type of Insurance (Underserved Residents)



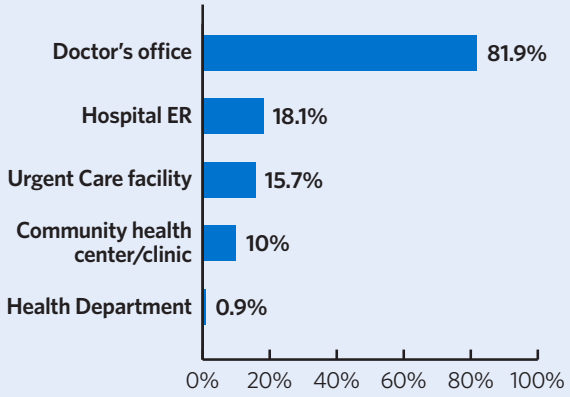
Source: Resident Telephone Survey, Q12: How do you usually pay for your health care? (Multiple response) (n=424); Underserved Resident Self-Administered Survey, Q6: Which of these describes your health insurance situation? (Multiple response) (n=34)

Sources of Health Information

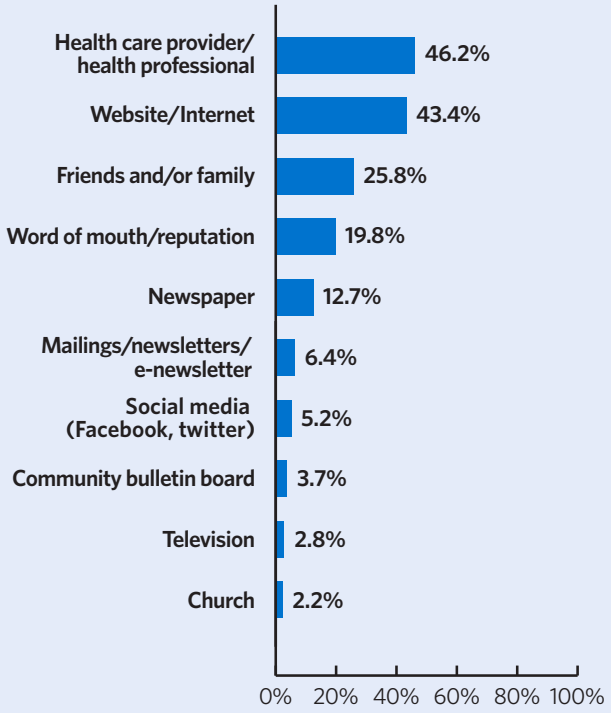
Although eight in ten (81.9%) area adults report they usually go to the doctor's office when they get sick, almost one in five (18.1%) visit the emergency room (ER).

When seeking information about available health services and programs available in the community, adults most often turn to health professionals, the Internet, friends/family, and/or word-of-mouth.

Place Usually Go When Sick or in Need of Health Care



Information Sources Used to Learn About Available Health Services and Programs



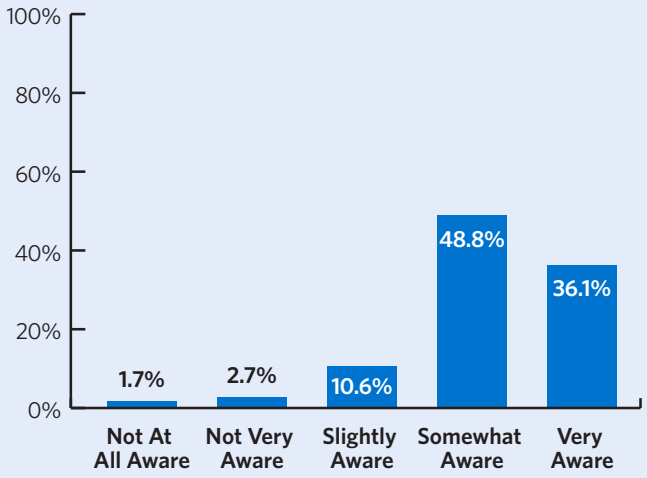
Source: Resident Telephone Survey, Q11: Where do you usually go when you are sick or in need of care? (Multiple response) (n=426); Q10: What information sources do you use to learn about the health services and programs that are available in your community? (Multiple response) (n=424)

Awareness and Use of Health Care Services

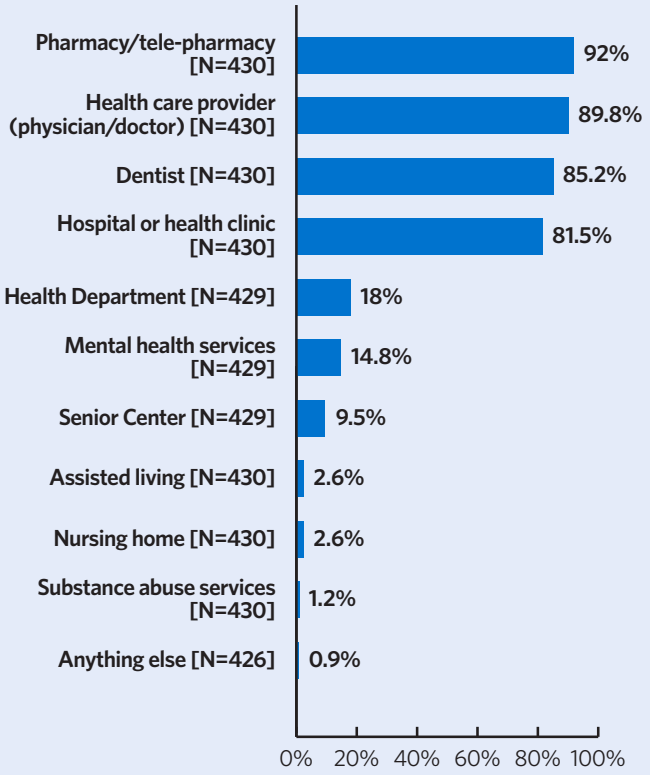
More than eight in ten (84.9%) SHL area adults say they are somewhat or very aware of health services and programs available in the area.

Almost all adults report using pharmacies and health care providers, and a vast majority used dentists, hospitals, or health clinics in the past three years while far fewer adults report using mental health or substance abuse services.

Awareness of Health Services and Programs Available in the Community's



Community Health Resources Used in Past Three Years



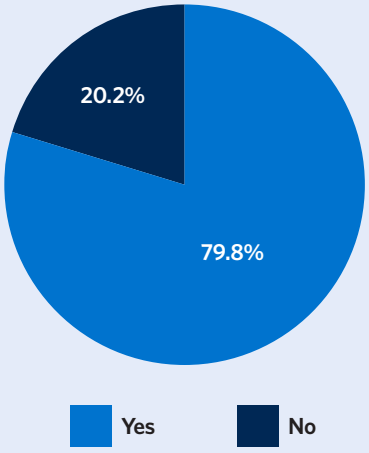
Source: Resident Telephone Survey, Q6: In general, how would you rate your awareness of the health services and programs available in your community? (n=428); Q7: Which of the following community health resources have you used in the past three years?

Barriers to Health Care Access

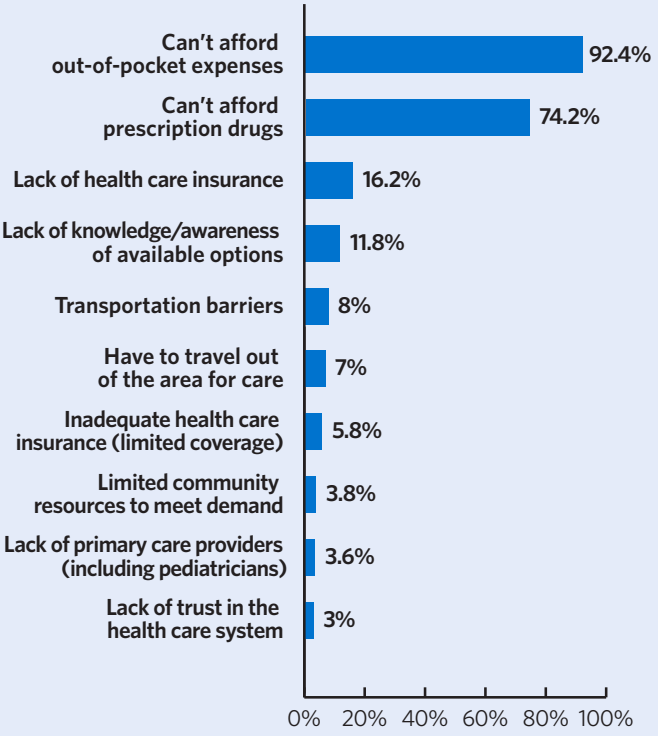
More than three-fourths (79.8%) of SHL area adults believe access to health care is a critical issue or problem for some community members.

Area adults who see this issue as critical believe the two greatest barriers to health care access are the inability to afford out-of-pocket expenses and the cost of prescription drugs.

Believe Access to Health Care is a Critical Issue or Problem for Some Residents in the Community



Reasons Access to Health Care is an Issue for Some Area Residents



Source: Resident Telephone Survey, Q13: Do you believe that access to health care is a critical issue or problem for some residents in your community? (n=399); Q14: (If yes) In your opinion, why is access to health care an issue for some residents in your community? (Multiple response) (n=329)

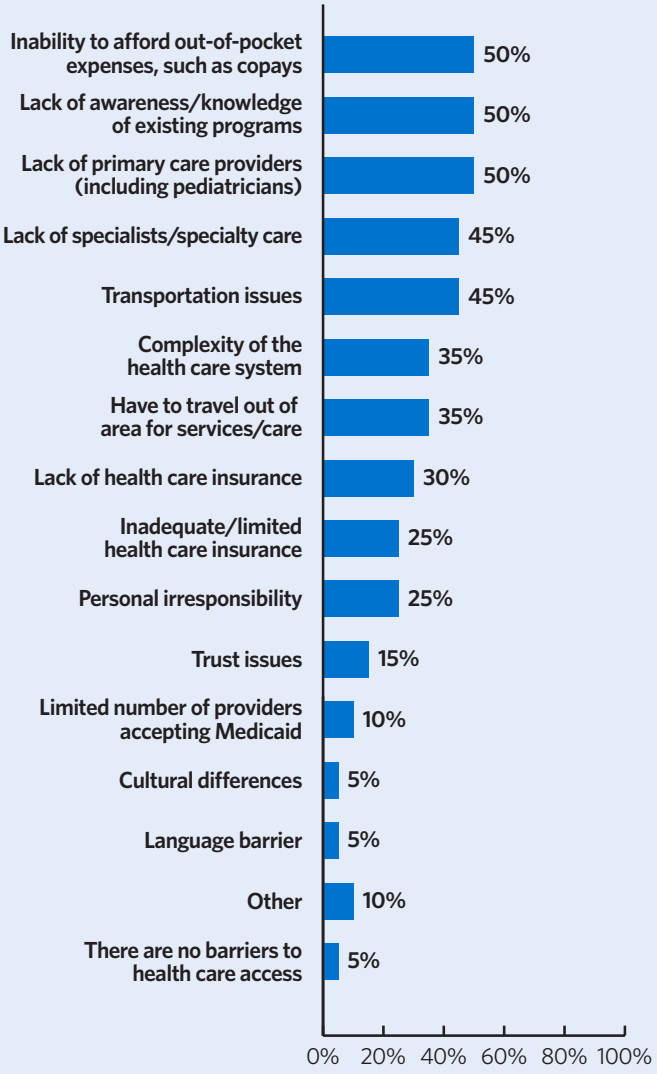
Health Care Access

Barriers to Health Care Access, Continued

Key Informants report the five greatest barriers to accessing health care as an inability to afford out-of-pocket expenses such as copays and deductibles, lack of awareness of existing programs and services, lack of primary care providers (including pediatricians), lack of specialists or specialty care, and transportation issues.

More than one-third of Key Informants view the complexity of the system (e.g., difficult to navigate) and having to travel out of the area for services as barrier to care.

Most Common Barriers to Accessing Health Care



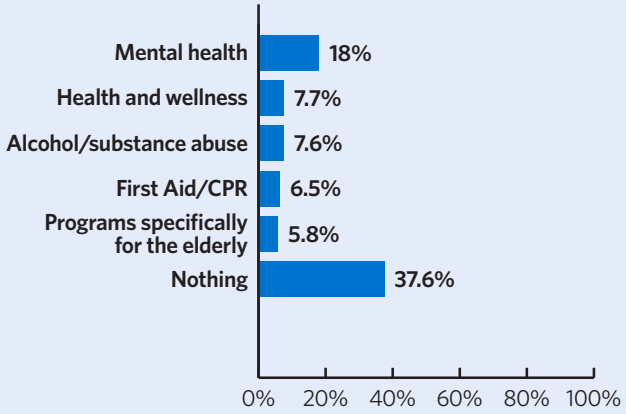
Source: Key Informant Online Survey, Q2: In your opinion, what are the most common barriers to accessing health care in your community? (Multiple response) (n=20)

Program and Services Lacking in the Community

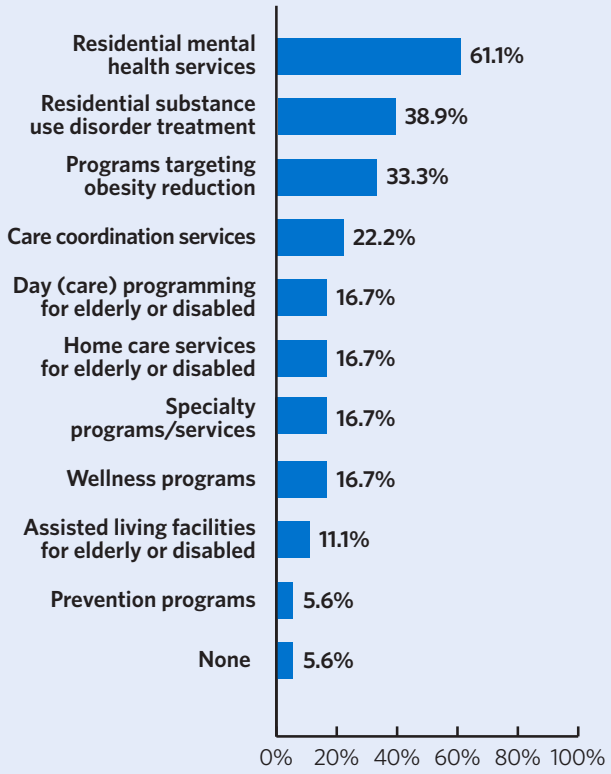
Almost four in ten (37.6%) area adults report there is no lack of health programs, services, or classes in their community; however, nearly one in five would like to see more programs serving mental health.

On the other hand, Key Informants believe a number of programs and services are lacking in the community and top priority should be residential services for mental health and substance abuse, followed by programs targeting obesity reduction.

Programs/Services/Classes Lacking in the Community



Programs/Services Currently Lacking That Should Be Greatest Priorities



Source: Resident Telephone Survey, Q9: What health programs, services, or classes do you feel are lacking in the community? (Multiple response) (n=390); Key Informant Online Survey, Q7: What programs or services are currently lacking in the community that should be the greatest priorities, if any? (Multiple response) (n=18)

Improvement in Health Care Access

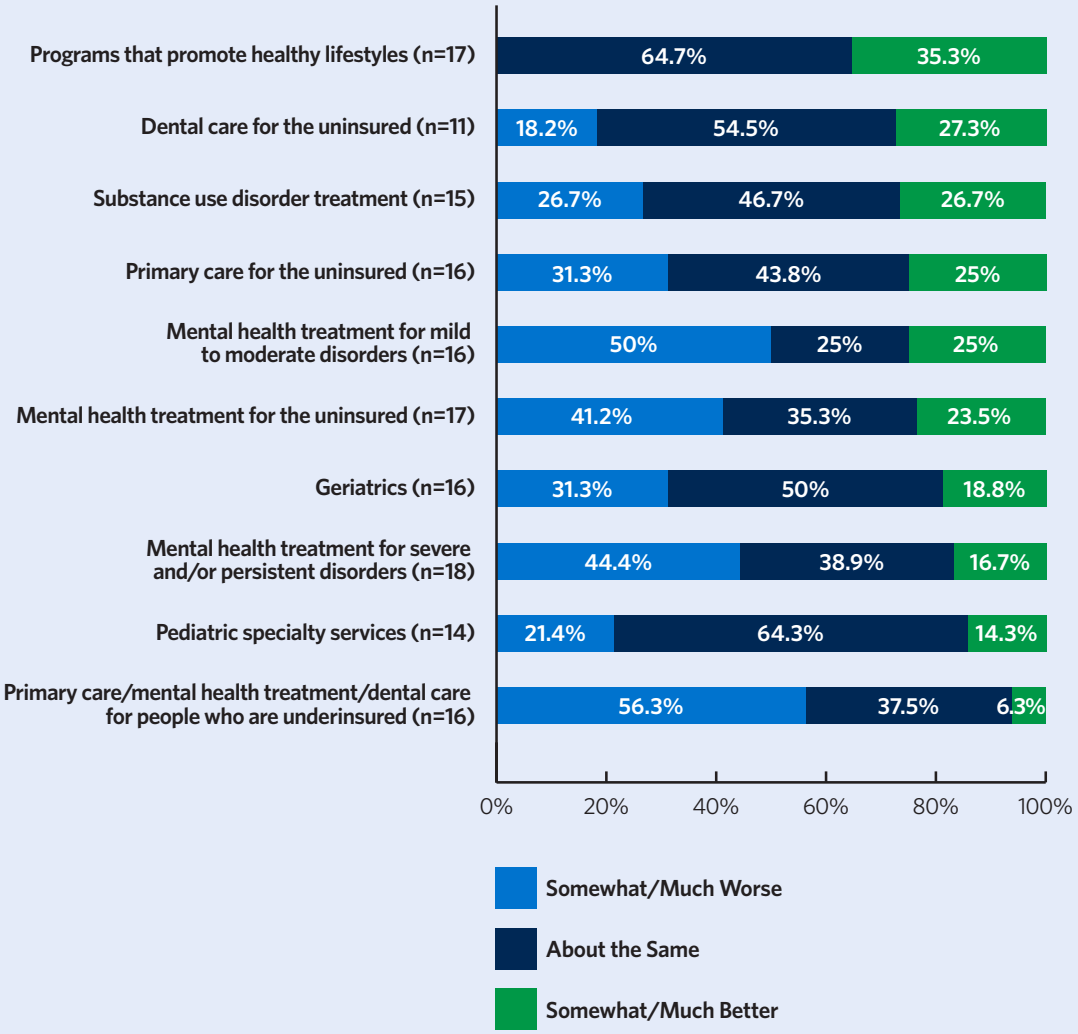
Key Informants were presented with a list of programs and services that were deemed (by Key Informants and Key Stakeholders) to be lacking and not meeting the needs and demands of area residents over the past 5-6 years. They were then asked whether or not access has become better, worse, or remained the same.

They feel that access improved most for programs that promote healthy lifestyles and there has been slight improvement for dental care for the uninsured. There are mixed feelings on substance use disorder treatment programs where roughly equal proportions say access is better and access is worse.

Key Informants clearly view access to mental health treatment for all in need – mild to severe and those without insurance – as becoming worse over the past several years.

Residents who are underinsured will have the hardest time accessing any services.

Extent to Which Access Has Improved Over the Past 5-6 Years



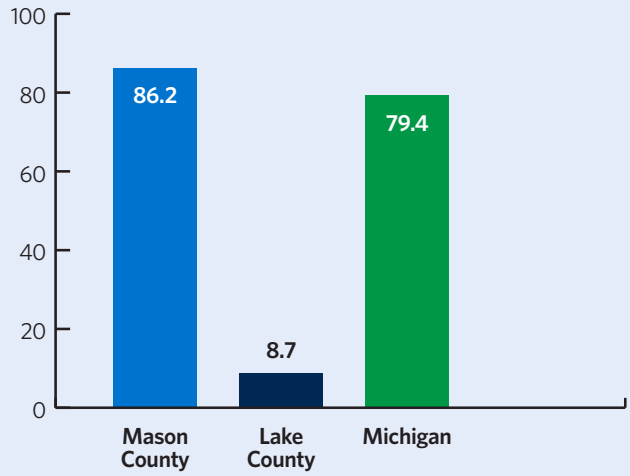
Source: Key Informant Online Survey, Q6: Below is a list of programs and services from the past two Community Health Needs Assessments that Key Informants reported did not meet the needs and demands of area residents well. In your opinion, over the past 5-6 years, to what degree has access to each improved (or not) for area residents?

Lack of Primary Care

Mason County actually has more PCPs (MDs and DOs) per 100,000 population than the state of Michigan. Conversely, Lake County's rate is by far the lowest, with only about one-tenth the number of PCPs, proportionately, compared to the state.

The most recent secondary data may not be accurate as several Key Informants and Key Stakeholders speak of a lack of primary care due to many PCPs retiring or moving in recent years.

Primary Care Physicians* (MDs and DOs) Per 100,000 Population



Source: County Health Rankings, 2016
***Note:** Physicians defined as general or family practice, internal medicine, pediatrics, obstetrics or gynecology.

We have **lost three primary care providers** with **several more planning to retire**. One practice is completely closed to new patients.

– Key Informant

It is **currently a six month wait to see a primary care doctor**, despite adding a significant amount of physician extenders. Despite a **significant number of our primary care physicians retiring the last several years**, they **have yet to be replaced** and **access to primary care has become a critical problem in our community.**

– Key Informant

We have **had a large number of primary care physicians retire**. We have a **significant number of people that do not have a PCP** or **have to wait months**. In some cases, the **wait is nearly a year to establish a PCP**. This **leads to delay in care and management of chronic conditions**. This **can adversely affect patient outcomes**. In addition, it **places a greater strain on the remaining physicians and leads to physician burnout.**

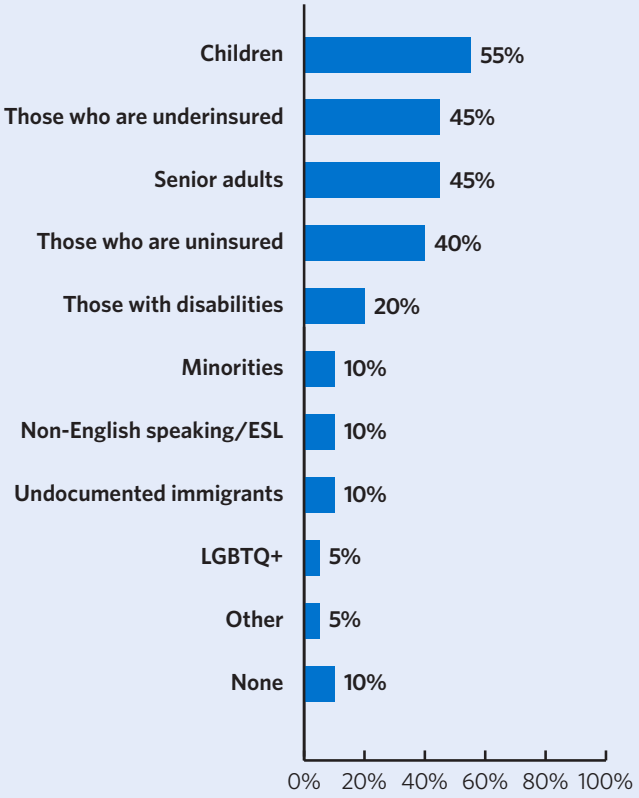
– Key Informant

Underserved Populations

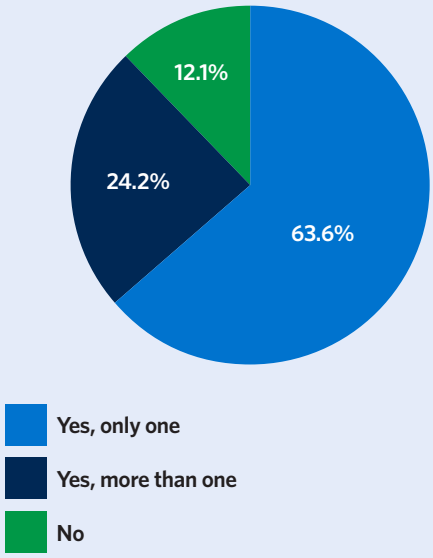
According to Key Informants, underserved groups most deserving of the community's focus are children, those who are uninsured or underinsured, and senior adults.

One in eight (12.1%) underserved residents have no medical home (no personal health care provider).

Underserved Groups That Should Be Focused On



Have Personal Health Care Provider



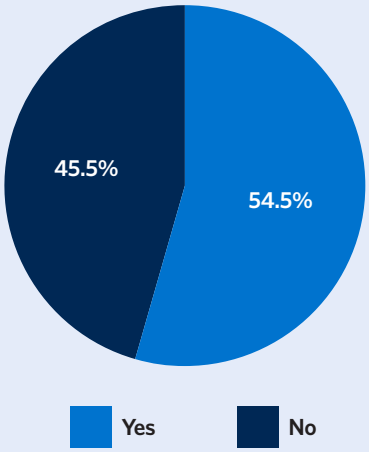
Source: Key Informant Online Survey, Q3: With regard to health care, which of the following underserved groups should we focus on most as a community? (Multiple response) (n=20); Underserved Resident Self-Administered Survey, Q2: Do you have one person you think of as your personal doctor or health care provider? (n=33)

Over half (54.5%) of underserved residents had trouble meeting their health care needs in the past two years.

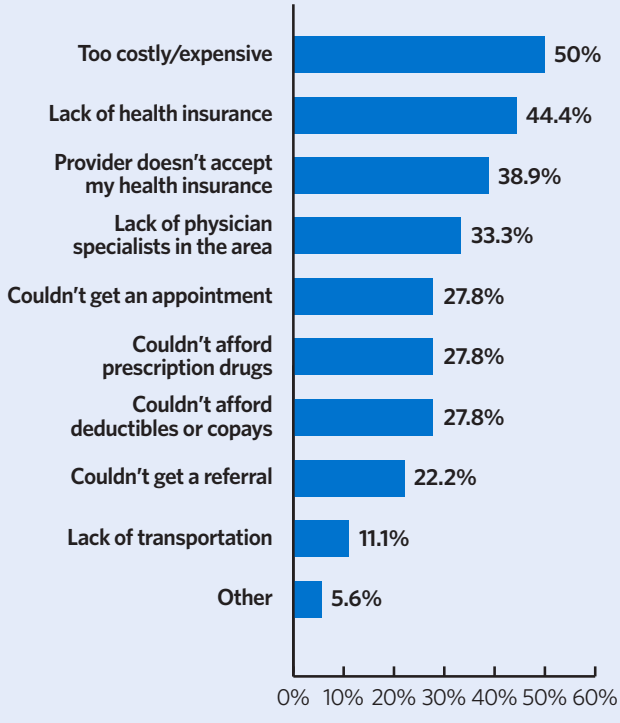
Cost, lack of health insurance, providers not accepting existing insurance plans, and lack of specialists in the region are the most common reasons they had trouble meeting their health care needs.

Underserved Populations, Continued

Have Had Trouble Meeting Health Care Needs In the Past Two Years



Reasons Had Trouble Meeting Health Care Needs

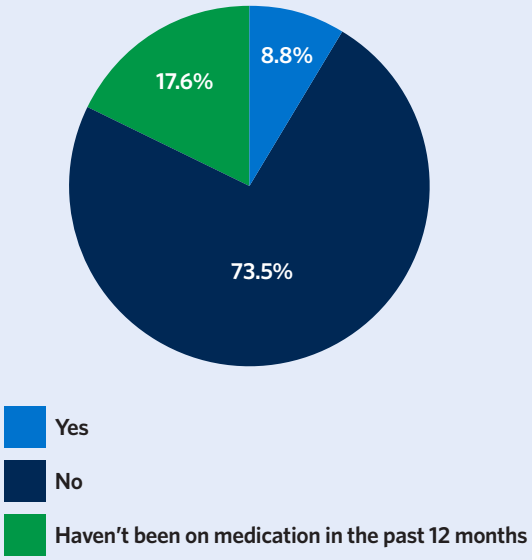


Source: Underserved Resident Self-Administered Survey, Q7: In the past two years, was there a time when you had trouble meeting your health care needs? (n=33); Q8: (If yes) What are some of the reasons you had trouble meeting your health care needs? (Multiple response) (n=18)

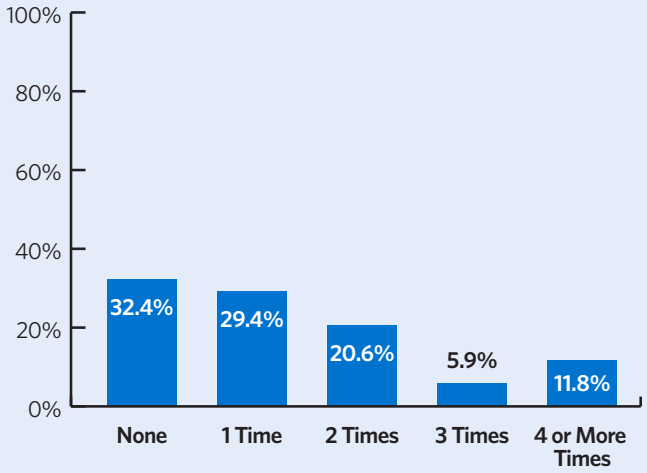
Roughly one in eleven (8.8%) underserved residents had to skip, or stretch their supply of, medication in the past 12 months in order to save on costs.

Two-thirds (67.6%) of underserved residents have personally used the hospital ER in the past 12 months, and almost four in ten (38.3%) visited two or more times.

Have Skipped, or Stretched Supply of, Medication to Save on Costs



ER Utilization in Past 12 Months

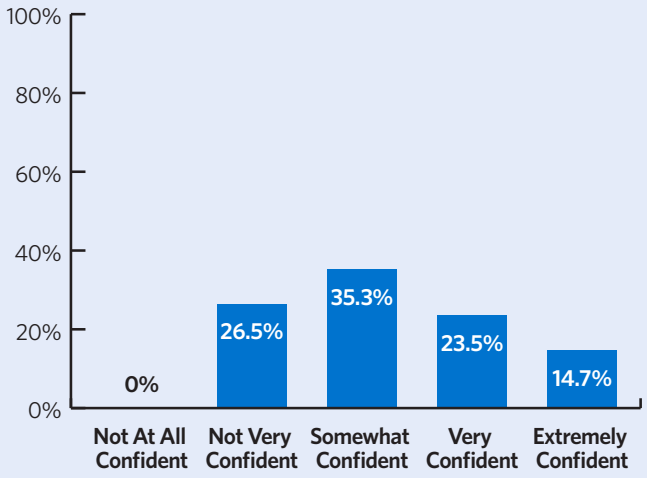


Source: Underserved Resident Self-Administered Survey, Q9: Was there ever a time in the past 12 months when you did not take your medication as prescribed, such as skipping doses or splitting pills, in order to save on costs? (n=34); Q12: How many times have you been to an Emergency Room/ Emergency Department in the past 12 months? (n=34)

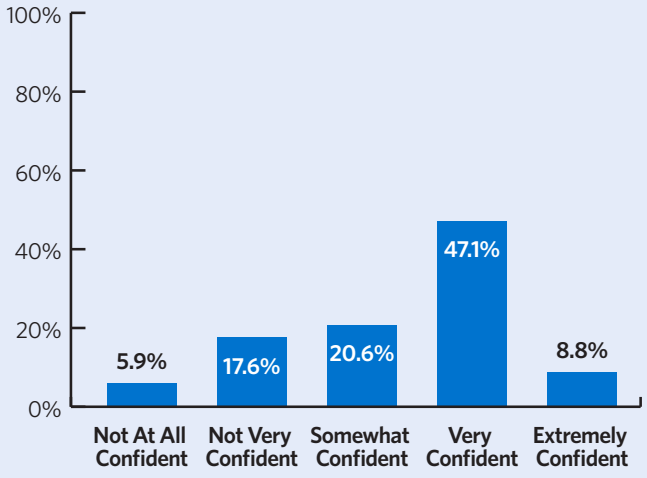
Underserved residents lack confidence in navigating the health care system: one in four (26.5%) are not very or not at all confident and 35.3% are only somewhat confident.

They are more confident that they can complete medical forms by themselves (55.9% very/extremely) and 55.9% rarely or never have problems understanding information necessary to be knowledgeable about their health condition.

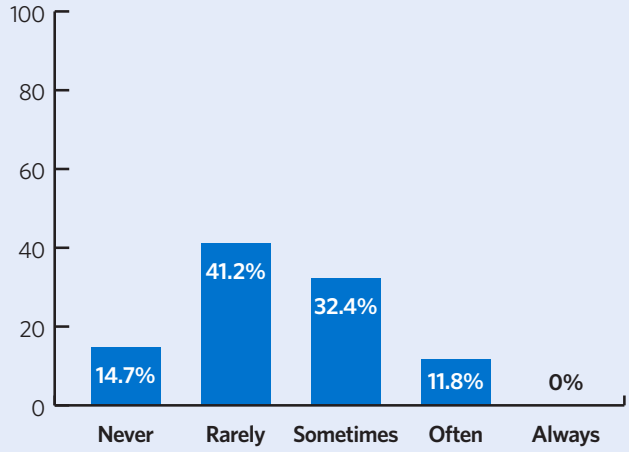
Confidence in Navigating the Health Care System



Confidence in Completing Medical Forms By Yourself



Frequency of Having Difficulty in Understanding Written Information Regarding Health Conditions



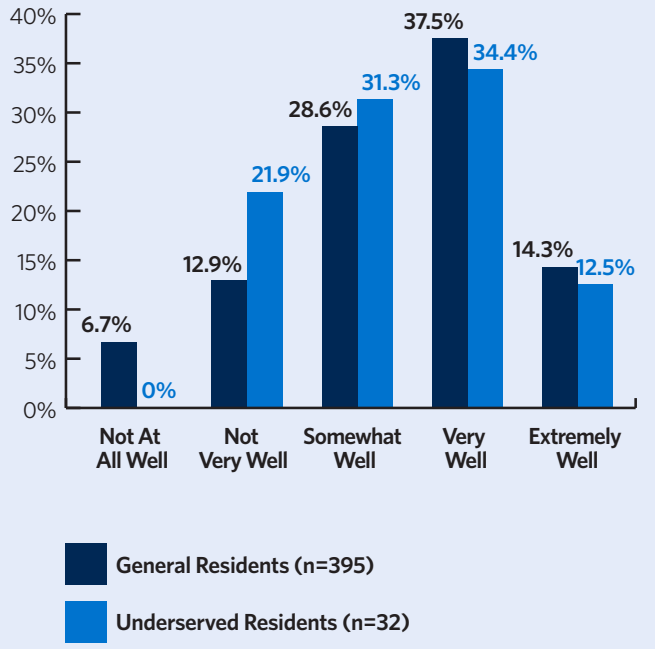
Source: Underserved Resident Self-Administered Survey, Q14: How confident are you that you can successfully navigate the health care system? (n=34); Q15: How confident are you in filling out medical forms by yourself? (n=34); Q16: How often do you have problems learning about your health condition because of difficulty in understanding written information? (n=34)

Communication Between Health Care Providers

Overall, the vast majority of SHL area adults believe health care providers communicate at least somewhat well with each other regarding patients' health care.

Roughly one in five (21.9%) area adults from the general sample, and a similar proportion of underserved residents (19.6%), believe providers do not communicate well with each other.

Extent to Which Health Care Providers Communicate with Each Other About Patients' Health Care



Source: Resident Telephone Survey, Q15: In your opinion, how well do health care professionals communicate with each other about your health care?; Underserved Resident Self-Administered Survey, Q5: How well do you feel health care professionals communicate with each other about your health care?

Ability to Refer People to Care

Six in ten (62.5%) SHL Key Informants believe they are equipped to assist people in accessing needed programs and services.

What would better equip them to be able to help people would be lists/tools that identify programs and services available with contact information, care managers, social workers, hospital liaisons, and community outreach programs.

Resources currently used include care managers, 211, MI Bridges, District Health Department #10, the Department of Social Services, and support for student behavioral issues.

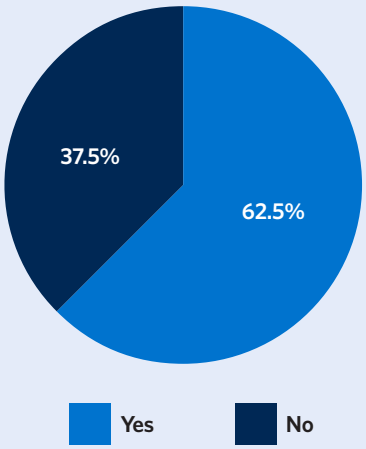
What Would Better Equip You

- A **full map of what programs are offered** by what organizations would **allow us to direct people to the proper agency**.
- **Care managers at primary care offices. Hospital patient liaison** provided by **community resources living document online** for easy access financial support.
- **I need a list of all nearest services available**.
- **I utilize our case managers** and **social workers** for these services.
- I work within a finite group/area within the hospital that does not provide outreach or access directly through my specific area. This would be **better addressed by primary care specialists, or clinics, or community outreach programs**.

Resource Used Most Often

- Care manager.
- Health Department and Department of Social Services.
- MI Bridges, 211.
- Michigan, 211.
- Support for student behavioral issues.

Believe to be Equipped to Help People Access Needed Programs and Services



Source: Key Informant Online Survey, Q5: Do you feel you are equipped to help people/clients/patients access needed programs and services? (n=16); Q5a: (If no) What would better equip you to help people/clients/patients access needed programs and services?; Q5b: (If yes) What is the resource you use most often to help people/clients/patients access needed programs and services?

Strategies Implemented Since Last CHNA

Key Stakeholders and Key Informants cite numerous initiatives that have resulted from the past two CHNAs and their corresponding implementation plans. One example includes targeting substance use disorder from a harm reduction perspective, which treats the issue as a public health problem as opposed to a criminal problem. There has also been increased collaboration among and between area organizations to address many critical health issues in the community.

Substance abuse/ treatment	With regards to the **substance abuse and opiate issues, we have funding for Lake County and Oceana County**. It's **federal dollars** that are aimed at coalitions and **working on substance-use prevention**. I think **opiates probably more so in Oceana County**, and I think **Lake County is more focused on alcohol and marijuana** but still trying to address some of the opiate-type issues. We actually just got approval from out Board today to **implement some harm-reduction programming**, so we're **looking at implementing a service program in Lake County** to kind of **address the opiate issue, Hep C, HIV**, and some of the **other substance-abuse problems there**. **– Key Stakeholder**
Behavioral health	I think there **continues to be work** in the **behavioral-health area**, working regionally **with partners in the community, partners across the region**. I think that the work is **getting more refined** but it's going to take time. I think **we're seeing better coordination between the Community Mental Health agencies**, the **Department of Health** people, **health care**. I think we're **seeing more collaboration there**. I just **don't think we've done enough yet to really get fired up that we've made enough progress** in the whole **mental-health area**. **– Key Stakeholder**
Collaboration/ coordination	We **are expanding out our community critical linkages model**, so we have **created hubs and employ some community health workers** now and are **partnering with the care management teams** that some of the practices have to actually accept referrals and then kind of **navigate these clients to the appropriate resources**. Some of the counties are a little bit more far ahead than that, but I know it's trying to **connect people if they do have a substance-use issue** or one of the other pieces. **– Key Stakeholder** We're **continuing to partner to improve access**. We're **always looking for ongoing partnerships around opiate treatment** and **comprehensive opiate treatment**, not just MAT but MAT in the context of other kinds of services. I do think one area that we don't completely have the ability to control, and we might need more hospital or primary care engagement around, is **pain management, particularly for people in the safety net**. I think **that's something that our physician community and our hospital community could really assist with**. I literally **know of no place in Mason County where anyone is following an evidence-based protocol for pain-management treatment**. **– Key Stakeholder**

Source: Key Stakeholder Interviews, Q1e: What, if anything, has been done to address these issues? (n=5)

Strategies Implemented Since Last CHNA, Continued

The local health department has been collaborating with other health and human service organizations, community leaders, and area residents to decrease isolationism and focus on the social determinants of health that impact health and health care access.

Social determinants of health

Certainly, the **health department has been working hard to bring leadership together and get these communities to engage and trying to get patients engaged**. We're **working on those social determinants of health** and **trying to bring people out of isolation** because that is the other issue. **People get isolated, they get depressed, they sit, they smoke, they eat too much, and then they go out at night or whatever on the weekends**.

– Key Stakeholder

Source: Key Stakeholder Interviews, Q1e: What, if anything, has been done to address these issues? (n=5)

Resources Available to Meet Issues/Needs

Four of the five Key Stakeholders say there are not adequate resources in the community to address the most pressing or critical health issues. There are some resources to be sure, but the resources that exist do not cover the full extent of the need and/or are limited to certain segments of the population. The very nature of the region – being rural and somewhat isolated – creates limitations on resources available. If organizations coordinate and collaborate more with each other that would offset some of the effects of resource limitations.

No, I don't think so. I think t**here's probably more that could be done**. If we had that magic recipe to know what it would take, it would be a wonderful thing. **We live in an area that's pretty isolated**, so **that alone creates some of the barriers and lack of resources that we have**, but **the people who are doing the work are working very hard to try to make changes**, including the **health department**, the **hospital**, **programs like mine** - **we're all working together, we're working collaboratively, and changes are incremental**. It just takes time.

Yes and no. I think **there are resources available in the communities**. I think **the question is "Are people willing to collaborate and coordinate together - work together - and kind of share those resources to address the problem?"** You can have a coalition of individuals, and **does everybody around the table look at addressing the issue with kind of a broad agenda or a very narrow agenda**. I think it's **whether they're willing to look at it broadly or not.**

No, I really don't, and I think **that's part of the problem for some of the key issues we're talking about**. These are **chronic issues** that have **been on the radar screen a long time**, but I **don't think we can ever put all the resources in play that we would need to fully move everything at the same time. You've got to sort of pick and choose what you can afford or work on and where you can put emphasis**, but I **don't think we'll ever see enough resources for some of the challenges we're dealing with here.**

I think they're getting better, but I don't think there are [adequate resources] overall. It's our experience that **much of the primary care community** in Mason County (and in Lake County and Oceana County) **is not adequately educated about opiate addiction**. I think there's **still a huge, huge stigma associated with opiate addiction and a lot of discomfort on the part of physicians for dealing with it**, so rather than managing folks who have addictions, they refer them out or stop offering them full treatment, so we do **have a huge issue for primary care access for the people we serve who have SD problems**. There's a huge primary-care access issue for those folks, and a lot of those folks have secondary physical health concerns relative to their addiction problems.

Source: Key Stakeholder Interviews, Q1g: Are there adequate area resources available to address these issues? (n=5)

Resources Available to Meet Issues/Needs, Continued

All five of the Key Stakeholders interviewed think that the community prioritizes issues effectively, at least to some degree, given the resources that are available. Collaboration between the hospital, health department, and other community organizations has improved over the years.

That said, there continues to be room for improvement; even more organizations and key leaders should be invited to the table to brainstorm and have an open dialogue to determine if everyone can agree on two or three critical areas to focus on for program implementation. Increased inclusivity will also help ensure all residents in need get the attention that is warranted.

I think that the **communities prioritize the issues appropriately depending upon who's around the table at that time**, if that makes sense. I think **it would be advantageous to take that piece of the process kind of out on the road** and **set up in different locations and try to gather that input** versus saying, "Okay, we're going to come together today, and we're going to kind of prioritize what these issues are, and if you make it that day, you voice concerns, and if you don't, then unfortunately you don't." This way, I think you can probably find some commonality in a lot of those issues and narrow it down to one or two.

Yeah, I think there's **generally disconnect between what people identify as needs and available dollars and manpower to positively impact an issue**, but I think we're **looking at the right things**. I think it's a **matter of the resources relative to the problems are scarce**, and that's going to make this a **very difficult battle to sort through**, but I think we're **focusing on the right things;** I just think we've probably **underestimated - severely underestimated how much it's going to take in the way of dollars** and **manpower** to **actually move things in** the right direction.

Yeah, I do. I think that **change takes time**, and I think **we don't give up easily**. I think the **health department has done a good job in leading** and **trying to gather the right people around the table to make change or to address issues** or to identify ways that we can improve, but we've **gotten a lot better at collaboration over the years**, and we've done grants together, so we **have developed some resources that we didn't have before**.

I don't know if the community really prioritizes issues as a whole. I think we **prioritize them for psych meds**. I have **never seen a needs assessment completed that then turns into collective community action**, never.

That's a tough one. **Yes and no**, how's that? One of the interesting things about this community is **there's such a "take care of your own" mentality**. Who folks define as their own is a tough thing, right? **And I don't know that their own encompasses everyone in the community**. I think when we say we take care of our own, **we take care of people that we don't have judgments and attitudes and stigma toward**, and I'm not trying to be mean; I'm trying to be thoughtful. I think it is **historically true of most communities**, but **I think this community has made some great strides** in the past several years in part **through efforts of the United Way** and through efforts of things like **Pennies from Heaven Foundation**, to really kind of **push the envelope on our responsibility to try to take better care of folks overall**, but I think it still comes with a fair amount of patriarchal attitude, so a fair amount of "If you just did what we told you to do, your life would be better."

Source: Key Stakeholder Interviews, Q5: Do you feel like the community prioritizes issues effectively given the resources that are available? (n=5).

Resources Available to Meet Issues/Needs, Continued

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

Health Care/Human Service Organizations

- American Red Cross
- Baldwin Family Health Clinic
- C.O.V.E shelter
- Council on Aging
- Convenient Care (walk-in clinic)
- Department of Health and Human Services (DHHS)
- District Health Department #10
- Five Cap, Inc.
- Mason County Health Department
- MSU extension
- Mercy Health
- Oakview Medical Care Facility
- Spectrum Health Cancer Center
- Spectrum Health Ludington Hospital
- Spectrum Health Pain Clinic
- Staircase Youth Services
- United Way of Mason County
- West Michigan Community Mental Health

Community Initiatives/Coalitions

- Farmers' market
- Fit Kids program
- Food pantries
- Healthy Communities Coalition
- Mason County Family Link
- MedNow, telemedicine, and other technology to increase health care access
- Pennies from Heaven Foundation
- Support groups (e.g., AA, Al-Anon, diabetes,)
- Weight loss programs
- Win With Wellness program

Suggested Strategies to Address Issues/Needs

Key Informants offer myriad suggestions to address the community's top health-related concerns and improve the area's overall health climate. For example, poverty can be addressed by not only advocating for better paying jobs but focusing on the issues via a collective impact approach.

Better collaboration and coordination of services can help address access to mental health treatment issues, and lack of primary care could be offset by hiring more APPs and thinking of creative ways to offer better compensation to primary care providers to get them to consider working and living in the area.

Poverty	**Some kind of community action is necessary**, a **collective impact approach** of some kind (e.g., **Bridges Out of Poverty)** where we can **take down barriers** and **educate the entire community** to **help build financial sustainability for more people.** **– Key Informant** Systemically, we **need a higher minimum wage** and **guaranteed minimum income. Universal health coverage** would impact poverty as well, along with **earned income tax credits. This is a rural agricultural community and many jobs are low-paying.** **– Key Informant**
Mental health/ access to treatment	**Coordination of services among many agencies for students** and those with whom they reside. **– Key Informant** We **need affordable health care for all** with available resources to help them. **– Key Informant**
Lack of primary care	**Hiring APPs to have a 1:1 ratio of APP to provider. Provide rotations for our primary care residents** in community clinics to encourage our residents to stay in the community. **– Key Informant** We obviously **need better recruitment**. To bring someone into a smaller community to practice we **likely will need a better compensation model** which is easier to understand and **includes loan repayment**. Medium term: it would be beneficial to **have residents do some clinical rotations in our community**. Long term: continue to **have medical students interested in primary care** due rotations with our local providers. **– Key Informant**
Limited community resources	**Strengthen community collaborative - be more visible, transparent** and **set definite goals. Engage farmers** to develop more food coops **Build more spaces for youth** to have safe social events. **Safer biking trails. Stronger senior center** to **provide respite care** and **education to elderly on wellness.** **– Key Informant**

Source: Key Informant Online Survey, Q1d: What ideas do you have, if any, to resolve this issue [most pressing health issue or concern in the area]? (n=22).

Appendix

Participant Profiles

Key Stakeholder In-Depth Interviews

Administrator, Baldwin Family Health
Director, United Way of Mason County
Director, West Michigan Community Mental Health
Health Officer, District Health Department #10
President, Spectrum Health Ludington Hospital

Key Informant Online Survey		
Physician (4)	County Administrator	Pediatrician
Anesthesiologist	Doctor	Professional
Business Owner/President	Doctor of Medicine	Radiologist
Chief Development Officer	Education Administrator	Resource Coach
City Manager	Hospitalist	

Appendix

Resident Telephone Survey

	Total		Total		Total
Gender	**(n=431)**	**Marital Status**	**(n=423)**	**Own or Rent**	**(n=414)**
Male	**49.1%**	Married	**49.3%**	Own	**79.9%**
Female	**50.9%**	Divorced	**10.1%**	Rent	**17.0%**
Age	**(n=422)**	Widowed	**6.8%**	Other	**3.1%**
18 to 24	**18.7%**	Separated	**1.1%**	**Zip Code**	**(n=431)**
25 to 34	**8.2%**	Never married	**31.1%**	49304	**12.5%**
35 to 44	**11.6%**	Member of an unmarried couple	**1.6%**	49405	**4.5%**
45 to 54	**14.8%**	**Employment Status**	**(n=422)**	49410	**2.7%**
55 to 64	**19.7%**	Employed for wages	**45.7%**	49420	**17.7%**
65 to 74	**15.6%**	Self-employed	**6.1%**	49431	**48.2%**
75 or Older	**11.2%**	Out of work 1 year+	**0.9%**	49449	**4.5%**
Race/Ethnicity	**(n=424)**	Out of work <1 year	**0.9%**	49454	**9.8%**
White/Caucasian	**88.2%**	Homemaker	**2.3%**		
Hispanic/Latino	**1.0%**	Student	**5.6%**		
Black/African American	**10.2%**	Retired	**32.1%**		
Asian	**0.2%**	Unable to work	**6.4%**		
Native American	**0.3%**	**Education**	**(n=420)**		
Adults in Household	**(n=431)**	Less than 9th grade	**1.8%**		
One	**20.0%**	Grades 9 through 11	**7.0%**		
Two	**58.9%**	High school grad/GED	**41.1%**		
Three	**14.5%**	College, 1 to 3 years	**30.5%**		
Four	**5.0%**	College 4+ years (grad)	**19.6%**		
Five or more	**1.6%**	**Income**	**(n=288)**		
Children in Household	**(n=426)**	Less than $10K	**5.6%**		
None	**69.3%**	$10K to less than $15K	**5.7%**		
One	**11.3%**	$15K to less than $20K	**7.9%**		
Two	**14.7%**	$20K to less than $25K	**11.2%**		
Three	**3.4%**	$25K to less than $35K	**17.2%**		
Four	**0.8%**	$35K to less than $50K	**11.5%**		
Five	**0.1%**	$50K to less than $75K	**13.0%**		
Six	**0.3%**	$75K or more	**27.8%**		

Appendix

Underserved Resident Survey (Self-Administered)

	Total		Total		Total
Gender	**(n=34)**	**Marital Status**	**(n=33)**	**Own or Rent**	**(n=33)**
Male	**29.4%**	Married	**30.3%**	Own	**57.6%**
Female	**70.6%**	Divorced	**15.2%**	Rent	**33.3%**
Age	**(n=34)**	Widowed	**9.1%**	Other	**9.1%**
18 to 24	**14.7%**	Separated	**9.1%**	**Zip Code**	**(n=32)**
25 to 34	**17.6%**	Never married	**30.3%**	49304	**6.3%**
35 to 44	**17.6%**	Member of an unmarried couple	**6.1%**	49402	**3.1%**
45 to 54	**20.6%**	**Employment Status**	**(n=34)**	49405	**3.1%**
55 to 64	**23.5%**	Employed for wages	**50.0%**	49410	**3.1%**
65 to 74	**5.9%**	Self-employed	**2.9%**	49411	**6.3%**
Race/Ethnicity	**(n=34)**	Out of work 1 year+	**2.9%**	49420	**3.1%**
White/Caucasian	**82.4%**	Out of work <1 year	**2.9%**	49431	**59.4%**
Black/African American	**5.9%**	Homemaker	**5.9%**	49454	**9.4%**
Hispanic/Latino	**5.9%**	Student	**2.9%**	49455	**3.1%**
Native American	**5.9%**	Retired	**5.9%**	49623	**3.1%**
Adults in Household	**(n=33)**	Unable to work	**26.5%**		
One	**39.4%**	**Education**	**(n=34)**		
Two	**42.4%**	Less than 9th grade	**0.0%**		
Three	**6.1%**	Grades 9 through 11	**14.7%**		
Four	**6.1%**	High school grad/GED	**29.4%**		
Five	**6.1%**	College, 1 to 3 years	**35.3%**		
Children in Household (6-17)	**(n=33)**	College 4+ years (grad)	**20.6%**		
None	**69.7%**	**Income**	**(n=32)**		
One	**21.2%**	Less than $10K	**28.1%**		
Two or more	**9.1%**	$10K to less than $15K	**21.9%**		
Children in Household (<6)	**(n=33)**	$15K to less than $20K	**9.4%**		
None	**84.8%**	$20K to less than $25K	**12.5%**		
One	**12.1%**	$25K to less than $35K	**6.3%**		
Two	**3.0%**	$35K to less than $50K	**6.3%**		
		$50K to less than $75K	**3.1%**		
		$75K or more	**12.5%**		

Exhibit B

Spectrum Health Ludington Hospital

Previous Implementation Plan Impact

This report identifies the impact of actions taken from 2018-2020 to address the significant health needs in the Implementation Plans created as a result from the 2017-2018 CHNA.

Substance use and abuse

Medication take back

Action 1

To improve public health and safety in reducing the quantity of unwanted, unused or expired medications and hazardous medical waste, we will implement bi-annual community wide "take back" events for medications and sharps on site at Spectrum Health Ludington Hospital ("SHLH") partnering with law enforcement, system counterparts, pharmacy and the District Health Department #10 (HD#10) substance abuse coalitions.

Measurable Impact

- Document and measure the amount of medication and sharps collected at each event to determine the volume in reduction of unsafe substances and items. To be completed by 6/30/2019, 6/30/2020 and 6/30/21.
- Identify of number of participants/households contributing to the events. To be completed by 6/30/2019, 6/30/2020 and 6/30/2021.

Impact of Implementation Plan Strategy

Community wide "take back" events will now be standard practice occurring twice a year following the national substance take back event calendar (Spring and Fall). This new implementation practice has allowed us to reduce unwanted and unused medications and substances in the community and has brought greater community wide awareness about the potential dangers and risks of not properly disposing of unused medications and substances.

Action 2

As universal community resources are needed to identify all area locations for safe medication and sharps return, we will develop education materials on all community locations for medication and sharps take back and drop off locations.

Measurable Impact

- Completion of education materials on community offered medication and sharps take back locations. To be completed by 6/30/2019.
- Will explore and determine if implementing a permanent Medication take back box would be beneficial. To be completed 6/30/2021.

Impact of Implementation Plan Strategy

Creating a universal community resource guide on the available locations for proper and safe medication and sharps return has provided a tangible education piece for our area physicians to issue to patients and have education on proper medication disposal. This furthers community awareness about the importance of minimizing substances in our community. This educational brochure is now a standard piece of patient and community resource and education.

Substance use and abuse, Continued

Focus on the R strategies: Remove-Rescue-Recover

Action 1

Distribute Naloxone kits to SHLH Emergency Department, which are to be distributed to the patients and families of opioid abuse.

Measurable Impact

Document the number of kits issued to hospital staff and the general public on an annual basis. Reoccurring annual report be completed by 6/30/2019, 6/30/2020 and 6/30/2021

Impact of Implementation Plan Strategy

The process of issuing naloxone kits and education in the ED is now standard procedure and will provide appropriate patients, families, and caregivers with the emergency tools needed in the event of an overdose, in addition to continued education on opioid overdose and narcan administration. Prior to this CHNA this process was not in place. This provides further life saving measures to the community we serve for those at risk of opioid overdose.

Action 2

Emergency staff to provide applicable training to recipients of Naloxone and use for opioid overdose.

Measurable Impact

- Emergency department staff to receive standardized system training through the online education platform Spectrum Health Learning Institute (SHLI) which will review the issue of opioid overdose, purpose of naloxone, parameters for administration and how to train patients, family and friends on overdose rescue with the medication. All Spectrum Health Ludington Emergency Staff issuing narcan and education to patients, to complete training by 6/30/2019.
- All recipients of Naloxone kits will review a standardized video that instructs on proper use and administration of narcan in the event of an opioid overdose. This training and education will occur in the emergency department setting at the time of patient treatment and care. This training will occur for each patient or caregiver that receives a narcan kit. This standardized process of patient education will be put into effect no later than 12/1/2018.

Impact of Implementation Plan Strategy

As opioid use and addiction continue to be challenges in the communities we serve, it remains vital to educate ED staff and caregivers on addiction, treatment, and life saving measures. The education and training standards are now in place to ensure staff are properly trained and informed when treating these patients. Standardized education and training ensuring continuity and best practice in care.

Action 3

Issue Naloxone kits and deliver education to area schools partnering through the Healthier Communities SHLH School Based Nurse program, specifically Scottville, Ludington and Custer schools.

Measurable Impact

- Document and quantify the number of kits issued to local schools on an annual basis. To be completed by 6/30/2019, 6/30/2020 and 6/30/2021.
- Track the education given to superintendents, principals, educators and school support staff annually. To be completed by 6/30/2019, 6/30/2020 and 6/30/2021.

Impact of Implementation Plan Strategy

Opioid use and addiction is not isolated to our adult population but can occur in our school aged children as well, and/or those students parents or caregivers. We now have the standard process and procedures in place to ensure all area school personnel receive training on opioid use and addiction, have onsite naloxone kits in each district and building, and staff receive standard annual training on narcan procedures. This positions our school personnel to be ready for life saving measures if necessary. The work through the CHNA has also allowed for improved communication and collaboration between public health and area agencies working on addressing substance use and abuse in our community.

Substance use and abuse, Continued

Tobacco cessation

Action 1

Create and launch substance abuse training and education through Win with Wellness Fit Club program while partnering with local law enforcement, the HD#10 substance abuse coalition "Leeward initiative" and All Access Care.

Measurable Impact

Training to be rolled out over a three year period with 50% of schools receiving education in year one (2019), 75% in year two (2020), and 100% schools receiving training in year three (2021).

Impact of Implementation Plan Strategy

We consulted and partnered with local law enforcement, the Health Department #10, and the Health Department's substance use and abuse committee "The Leeward Initiative" to implement an educational module on tobacco and vaping use into our school health education program "Fit Club". Conversation continues on appropriateness of bringing in additional education and potential national speakers for area youth. The initial grant we were seeking to partner with the DH#10 did not come to fruition and in light of COVID-19 timelines for in school programming in the 2020 academic year have been postponed. Youth substance education remains a key focus of the area and p artnerships between area agencies on public health to continue.

Action 2

Market and provide education about smoking cessation program to physician offices so they are aware of this resource for their adult patients. This will expand our referral pipeline to the program.

Measurable Impact

By 6/30/2019 all Spectrum Health Ludington primary care offices to receive presentation from our tobacco treatment specialist nurse on the existence of tobacco cessation programming, classes, and course offerings.

Impact of Implementation Plan Strategy

Standard marketing and information resources now exist to the community at large regarding tobacco use and addiction and the resources available to them to quit. Standard education to our area physicians and offices is now in place to ensure they can refer appropriate patients to our tobacco treatment specialist. Prior to this CHNA we had no local TTS available and now have an onsite staff and local DH#10 partner trained and certified. Standard one to one consultation and community facing classes are standard procedures to combat tobacco use and addiction, which were not in place prior to this CHNA IP.

Action 3

Offer free community smoking cessation courses three times a year that are open to the public.

Measurable Impact

Measure and quantify the number of participants who participant in the three time a year free open tobacco cessation course offering. Fiscal year annual report to occur on an ongoing basis with report concluded on 6/30/2019, 6/30/2020 and 6/30/2021.

Impact of Implementation Plan Strategy

Prior to this CHNA free community facing community smoking cessation classes were not in place. This is now a standing schedule and we actively partner with our local health department to offer programming.

Action 4

Develop targeted programming in the OB outpatient office space for smoking mothers SCRIPT (smoking cessation and reduction in pregnancy treatment program)

Measurable Impact

SCRIPT program in the Spectrum Health Ludington Hospital Obstetrics office to be implemented and in effect by 6/30/2020.

Impact of Implementation Plan Strategy

Prior to this CHNA the SCRIPT program was not in place at our OBGYN practice. This is now standard programming and procedure to combat tobacco use in pregnant women.

Behavioral Health

Action 1

Launch consultative tele psychiatry services through the Spectrum Health telehealth MedNow platform in the Emergency Department and Inpatient space to open access to behavioral health services and consultations. Services will initially be offered Monday through Friday 8 a.m. through 5 p.m.

Measurable Impact

Document the initial start of the program and quantify the number of fiscal year patient consultations on a reoccurring annual report to be completed by 6/30/2019, 6/30/2020 and 6/30/2021.

Impact of Implementation Plan Strategy

Behavioral health services and access are a challenge in rural areas. Prior to this CHNA we lacked a referral option for psychiatry services. Opening up access to psychiatry services through telehealth provides an access point to our emergency and inpatient patients. Utilizing technology like telehealth provides access to specialty services that we otherwise would be unable to provide to our community. This platform allows the potential for expansion, growth, and continued improved access to needed services.

Action 2

Spectrum Health will implement a 24/7 Psychological consultative/rapid response service within the Grand Rapids based health center. This will allow for the services to be delivered in a telehealth/virtual manner.

Within the regional hospital spaces, such as SHLH, we will offer telehealth psych consultative services 24 hour/7 day a week.

Measurable Impact

- Establish a performance baseline one year after the service is established. To be completed by 6/30/2020.
- In subsequent years, increase tele psych consults by 10%. To be completed by 6/30/2021.

Impact of Implementation Plan Strategy

Hiring additional internal behavior health physicians and resources provides increased access to our patients in need of behavior health. Expanded the number of providers available to consult and treat via the telehealth platform provides added access and resources.

Obesity and weight issues

Action 1

Formalize three-year focused Win with Wellness adult programs that include the following crucial components:

- Initial onboarding session to verify participant has managed care and/or PCP and participant to complete person health assessment to identify key health issues to promote awareness and health ownership.
- Biometric screenings every 6 months (Fall and Spring) held onsite at SHLH to measure and track health data
- Education and fitness challenges offered throughout the year for participant engagement
- Rewards and incentives through partnerships with community business and organizations with an initial target of 20 community partnerships between Mason, Lake and Oceana county.

Measurable Impact

- By 6/30/2020 Win with Wellness Adult focused obesity reduction program content will be formalized that includes listed critical components: focus on managed care, biometric screenings for key health identifiers, health education sessions, community programs and partnerships.
- Fall of 2020 launch Win with Wellness Adult focused obesity reduction program. Will measure and quantify the number of participants enrolled in the program. Participation will be measured on an annual go-forward basis with fiscal year reports starting in 6/30/2021.
- By 6/30/2021 will have aggregate data report showing biometric screening results for participants to measure trends and any positive correlation.

Impact of Implementation Plan Strategy

Focusing on patients having a designated provider and medical home promotes managed care vs episodic care. A primary care physician and regular care is proven to improve health and chronic disease vs allowing exacerbation of these issues. In addition providing free access to key health indicators through bioemetric screening provides a twofold benefit, 1. access to the objective biometric numbers to discern key state of health and 2. education to the participant on those numbers, and health meaning behind them. This program and the goals and action put in place, promotes participant health education and ownership of their health. Providing free biometric services removed financial barriers.

Action 2

Culinary medicine and food preparation class:

- Partner with Lakeshore Resource Center, Michigan State Extension Service Office and the SHLH community benefit team which consists of a local, onsite, multidisciplinary team of dietitians, physician assistant, registered nurse, and health educators.
- Will partner to develop a reoccurring culinary medicine and food preparation class offered quarterly at the community hub Lakeshore Resource Center.

Measurable Impact

- Document the education and specialized training of the Spectrum Health Ludington Hospital Community Benefit team around the area of culinary medicine to ensure that practices and programming is evidence based and data driven.
- Launch the first offering of the culinary medicine program Fall of 2019 at the Lakeshore Resource Center community hub.
- Measure and quantify the number of participants in the quarterly offering of the culinary medicine program. Participation reports will be measured on a go-forward basis captured annually at the end of each fiscal year starting with 6/30/2020.
- Collect participant aggregate date during biometric screenings pre and post culinary medicine course to measure any positive correlation between program and participant health.

Impact of Implementation Plan Strategy

A focus on holistic health that includes diet and nutrition is a shift in chronic disease and health management. Prior to this CHNA this type of education and offering was not available. Programs like culinary medicine provide patients with the tools and education to make smarter diet and nutrition choices and break down barriers and misconceptions regarding produce and whole food options and cost. This strategy emphasizes the importance of ownership in patients health and provides a forum for support and education utilizing a foundation of evidence based practice and programming. In addition the collaborative approach with this program between other community resources and partners positions us for sustainability and greater community and patient impact.

Obesity and weight issues, Continued

Action 3

Create an onsite hospital garden to outsource fresh, locally grown produce and create a culture of wellness and healing in the hospital.

- Partner directly with the Lakeshore Resource Center Lakeshore Food club
- Partner with our Win with Wellness Fit Club program to introduce the source of fresh produce and expose area youth to whole, natural foods.
- Core function of the community benefit department
- Source interns and volunteers for operational support where needed

Measurable Impact

- Physical hospital garden structure to be in place by summer of 2020.
- Measure and quantifying the number of community counterparts and partnerships in place to sufficiently operationalize initiative and ensure long term sustainability.
- Using the established toolkit " Farming Concrete-Data collection toolkit, Methods for measuring the outcomes and impacts of community gardens and urban farms" collect objective and subject feedback from community partners and participants to establish baseline data and information on success of onsite garden.

Impact of Implementation Plan Strategy

As hospital based care continues to look at and seek ways to address health disparities and perception of health, the symbolic nature of a hospital garden onsite sends a powerful message. In addition the garden is utilized as an education tool for our pediatric population through our community health outreach program, Fit Club. Providing the education and exposure to fresh produce early on focuses on the importance of participant education and taking ownership in ones individual health. The collaborative approach to this work with area agencies, nonprofits and public health, again aligns us for greater impact, messaging, and sustainability, thus become a greater community conversation around the importance of fresh fruits and vegetables.

Spectrum Health

Spectrum Health complies with applicable Federal civil rights laws and does not discriminate on the basis of race, color, national origin, age, disability, or sex.
[81 FR 31465, May 16, 2016; 81 FR 46613, July 18, 2016]

ATENCIÓN: Si usted habla español, tiene a su disposición servicios gratuitos de asistencia lingüística. Llame al 1.844.359.1607 (TTY: 711).

إذا كنت تتحدث اللغة العربية، فبإمكانك الحصول على المساعدة اللغوية المتاحة مجانًا. اتصل على الرقم 1.844.359.1607 (TTY: 771).

Community Health Needs Assessment for:

Memorial Medical Center of West Michigan d/b/a Spectrum Health Ludington Hospital

Spectrum Health System, a not-for-profit, integrated health system, is committed to improving the health and wellness of our communities. We live our mission every day with 31,000 compassionate professionals, 4,600 medical staff experts, 3,300 committed volunteers and a health plan serving 1 million members. Our talented physicians and caregivers are privileged to offer a full continuum of care and wellness services to our communities through 14 hospitals, including Helen DeVos Children's Hospital, 150 ambulatory sites and telehealth offerings. We pursue health care solutions for today and tomorrow that diversify our offerings. Locally-governed and based in Grand Rapids, Michigan, our health system provided $585 million in community benefit in fiscal year 2019. Thanks to the generosity of our communities, we received $30 million in philanthropy in the most recent fiscal year to support research, academics, innovation and clinical care. Spectrum Health has been recognized as one of the nation's 15 Top Health Systems by Truven Health Analytics®, part of IBM Watson Health™.

Community Health Needs Assessment

The focus of this Community Health Needs Assessment (CHNA) is to identify the community needs as they exist during the assessment period (2019-2020), understanding fully that they will be continually changing in the months and years to come. For the purposes of this assessment, "community" is defined as not only the county in which the hospital facility is located (Mason), but also regions outside the county which compose SHL's primary (PSA) and secondary (SSA) service areas, including Lake County. 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.

Please note that the assessment period concluded before the widespread outbreak of COVID-19 in the communities served by Spectrum Health. Recognizing that the pandemic's impact has and will continue to influence the health needs of our communities, Spectrum Health plans to address this in forthcoming implementation plans.

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