



Spectrum Health Pennock

2021-22 Community Health Needs Assessment



**Spectrum
Health**



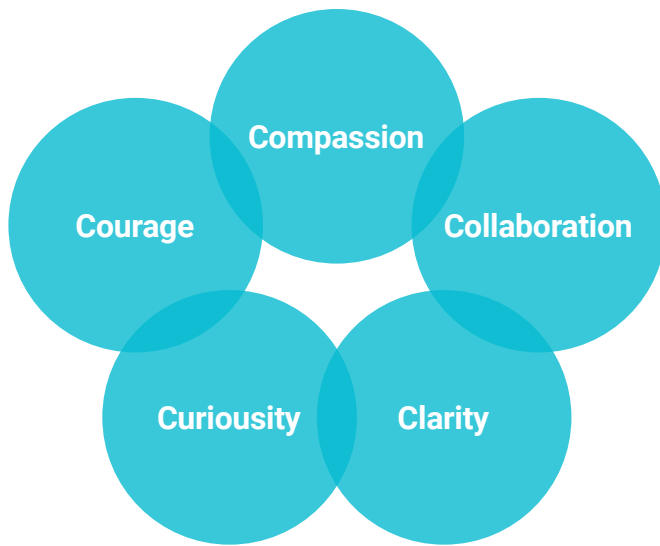
Mission

Improve health, instill humanity and inspire hope.

Vision

A future where health is simple, affordable, equitable and exceptional.

Values





Mission

Our mission is to protect and enhance health by promoting and providing innovative, community-based programs and initiatives.

Vision

A community where everyone has the opportunity to live a long, healthy and active life.

Values

Barry-Eaton District Health Department values are intrinsic to its service to the community:

- We are committed to helping people.
- We will treat people with dignity and respect.
- We will ensure good health and wellness.
- We will fulfill the essential public health functions.

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**Spectrum
Health**



**Barry-Eaton District
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Your feedback on this report or its contents is welcomed.
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Executive Summary

The 2021-2022 Spectrum Health Pennock Community Health Needs Assessment was collaboratively planned and developed by the Barry-Eaton District Health Department, Spectrum Health Pennock, Spectrum Health Healthier Communities and the Barry County community. Spectrum Health Pennock primarily serves the people of Barry County, Michigan. A collaborative effort was made to create the community-based assessment and identify community health needs.

For this Community Health Needs Assessment, “community” is defined by the county lines where Spectrum Health Pennock is located: Barry County. The data and information presented in this report will reflect the population living and working in the county.

Community engagement was vital in conducting this Community Health Needs Assessment. Engagement from key stakeholders within Barry County increased the quality of the process and findings. Spectrum Health and the Barry-Eaton District Health Department initiated and supported the 2021-2022 Community Health Needs Assessment project. The 2021-2022 Community Health Needs Assessment was the first cycle in which close collaboration occurred between these two partners.

To assess the health status in Barry County, demographic, socioeconomic, health behavior and health outcomes information for the Community Health Needs Assessment was obtained from publicly available secondary data sources. To gather feedback directly from the people of Barry County, three surveys and two focus group interviews were conducted.

In assessing the health status of Barry County from secondary data sources, surveys and focus group interviews, five significant health needs were identified.

1. Mental health needs and access
2. Affordable housing
3. Health care access and quality
4. Substance misuse
5. Social connection and capital

Mental Health Needs and Access

Mental health is a state of well-being in which individuals realize their abilities, can cope with the everyday stresses of life, can work productively, and can contribute to their community. Providers and community members identified access to mental health or behavioral health services as a factor defining a healthy community. Nearly a third of the community members surveyed identified that affordable access to behavioral health care was a problem impacting their community. In Barry County, there is one mental health provider for every 821 residents. Nearly a quarter of adults ages 18 to 24 and 45 to 54 reported not having good mental health.

Affordable Housing

Affordable housing is defined as living quarters that a household can obtain for 30% or less of its income. Two out of 10 community members surveyed identified affordable housing as a factor defining a healthy community. Between 2015 and 2019, 17.1% of households in Barry County spent more than 30% of their income on housing, which was lower than Michigan overall (26.8%).

Health Care Access and Quality

Health care is defined as the timely use of personal health services to achieve the best possible health outcomes. Having regular access to a primary care provider and dentist provides better health outcomes. Improving access to health care

professionals will improve quality of care, emphasis on prevention, and the identification and early management of conditions, resulting in better health outcomes and reducing health disparities. Community members and health care providers identified access to and having affordable health care as a factor that defines a healthy community. Nearly a third of the community members surveyed indicated that access to affordable health care is a problem impacting their community. Approximately two out of every ten adults reported having no primary care provider, and one out of 10 reported that they could not see a doctor or dentist when needed due to costs at some point during the past 12 months.

Substance Misuse

Substance misuse is defined as the use of illegal drugs and the inappropriate use of legal substances, such as alcohol and tobacco. Substance abuse is strongly associated with poor health outcomes and premature death. Another consequence of substance misuse is an increased incidence of violent crimes and a lack of safety in a community, which affects the health of others who may not use or misuse substances. Nearly a third of the community members surveyed identified that alcohol and drug issues negatively impact their community. One out of 10 adults in Barry County reported using marijuana during the past 30 days. Approximately two out of every ten adults reported to have either binged or drank heavily during the past 30 days.

Social Connection and Capital

Social connection and capital is defined as the connection between characteristics of the contexts within which people live, learn, work and play and their health and well-being. People with an increased sense of security, belonging and trust in their community have better health. People who do not feel connected are less inclined to act in healthy ways or work with others to promote well-being for all. In 2017-2018, 58.8% of middle school students and 53.5% of high school students reported knowing an adult they could talk to about something important in their neighborhood.

There was an emphasis on conducting this Community Health Needs Assessment with the organization's mission, vision and values as our guiding principles. Our mission to improve health, instill humanity and inspire hope is an important commitment to the people of Barry County. Throughout the Community Health Needs Assessment process, we were driven by our compassion, collaboration, clarity, curiosity and courage to understand the health status and needs in Barry County. Ultimately, our vision is to create a future where health is simple, affordable, equitable and exceptional.

Introduction

Two meanings are used to define what health is. The more commonly used definition of health is the absence of disease or illness. The World Health Organization created the other definition of health: “a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.”¹ The WHO’s definition views health using a holistic approach, which includes, but is not limited to, an individual’s physical, mental, social, emotional, and environmental well-being.

“It has long been recognized that the health of a community has a tremendous impact on the function of its social systems and that the condition of the social and economic systems has a significant impact on the health of all who live in a community.”

– Donald L. Patrick and Thomas M. Wickizer, 1995²

The WHO’s definition can also be applied to the communities where people live, work and play. Communities whose members have excellent physical, mental and psychosocial health also tend to be communities that are vibrant, thriving and cohesive.

The Community Health Needs Assessment takes a systematic approach to better identify, understand and prioritize the community’s health needs in the Spectrum Health service area. The CHNA report will define health using the holistic definition.

Regulatory Requirements

This Community Health Needs Assessment focuses on identifying the community needs as they exist during the assessment period (2021-2022), understanding fully that they will be continually changing in the months and years to come. The information contained in this report is current as of the date of the CHNA, with updates to the assessment anticipated every three years in accordance with the Patient Protection and Affordable Care Act and Internal Revenue Code 501(r). This Community Health Needs Assessment complies with the requirements of the Internal Revenue Code 501(r) regulations either implicitly or explicitly.

Definition of Community

For this Community Health Needs Assessment, “community” is defined by the county lines where Spectrum Health Pennock is located, Barry County. The data and information presented in this report will reflect the population living and working in the county.

Barry County, a rural county, is located in the southwest quadrant of Michigan’s Lower Peninsula and spans 577 square miles, of which 533 square miles are land area (Figure 1).³ The county has an estimated 60,540 residents (113.6 people per square mile of land), making it the 32nd-most-populous county out of the 83 counties in the state.⁴ Barry County consists of one city, 16 townships and four villages.⁵ Hastings is the largest city in Barry County, with an estimated population of 7,311. There are 13 K-12 public school districts and one community college in Barry County (Figure 2).^{6,7}

Partnership

The Spectrum Health and Barry-Eaton District Health Department partnership initiated and supported the project management of the 2021-2022 Community Health Needs Assessment. Community engagement was key in conducting this Community Health Needs Assessment. Engagement from key stakeholders within Barry County increased the quality of the process and findings. The 2021-2022 Community Health Needs Assessment was the first cycle in which close collaboration occurred between these two partners.

Spectrum Health

Spectrum Health is a not-for-profit health system that provides care and coverage, comprising 31,000+ team members, 14 hospitals (including Helen DeVos Children’s Hospital), a robust network of care facilities, teams of nationally recognized doctors and providers, and the nation’s third-largest provider-sponsored health plan, Priority Health, currently serving over 1 million members across the state of Michigan.

People are at the heart of everything we do. Locally governed and headquartered in Grand Rapids, Michigan, we are focused on our mission: to improve health, instill humanity and inspire hope. Spectrum Health has a legacy of strong community partnerships, philanthropy and transparency. Through experience, innovation and collaboration, we are reimagining a better, more equitable model of health and wellness.

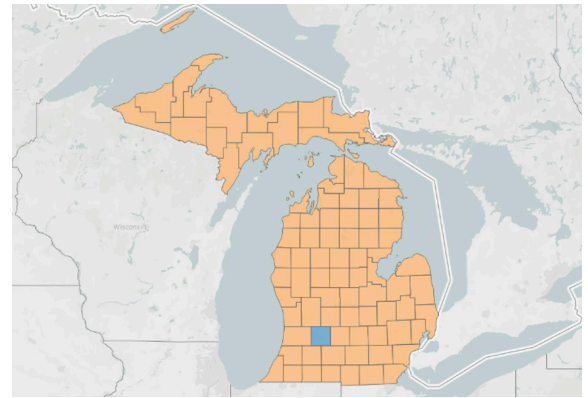


Figure 1: Location of Barry County, Michigan

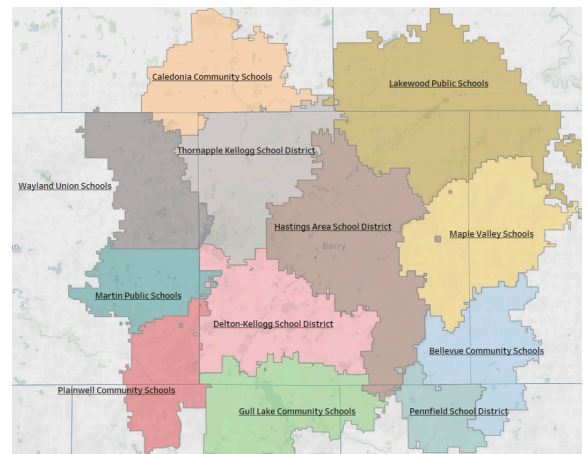


Figure 2: Barry County Public School Districts

Not Shown: Barry ISD. Barry ISD covers the entire Barry County area.



Figure 3: Spectrum Health Pennock in Barry County

Spectrum Health Pennock

Spectrum Health Pennock is a 49-bed community hospital in Hastings, located conveniently near Grand Rapids, Kalamazoo and Lansing (Figure 3). Pennock offers traditional acute care and outpatient care, as well as family, internal and pediatric medicine offices; obstetrics and gynecology clinics; family birthing center; general surgery and orthopedics; a health and wellness center; pharmacy; and a retirement village.⁸

Barry-Eaton District Health Department

Barry-Eaton District Health Department is a quasi-governmental entity governed by a board of health (board members consist of elected county commissioners) from Barry and Eaton counties. The health department and its Board of Health are tasked with preventing disease, prolonging life and promoting public health in the two counties.

Demographics

Sex and Age

There were more males in Barry County than females (101.3 males per 100 females) compared to Michigan (96.9 males per 100 females) in 2019. The county's population by age group and median age (42.5 years) was slightly higher than the state's estimates (Table 1).⁴

Table 1: Barry County and Michigan Demographics – Sex and Age

	Barry County		Michigan	
	#	%	#	%
SEX				
Females	30,076	49.7	5,060,025	50.8
Males	30,464	50.3	4,905,240	49.2
Sex ratio (# males/100 females)	101.3		96.9	
AGE				
Under 5 Years	3,357	5.5	57,1094	5.7
5 to 9 Years	3,666	6.1	591,065	5.9
10 to 14 Years	3,941	6.5	623,334	6.3
15 to 19 Years	3,864	6.4	661,499	6.6
20 to 24 Years	3,355	5.5	704,793	7.1
25 to 34 Years	6,683	11.0	1,267,775	12.7
35 to 44 Years	7,002	11.6	1,165,370	11.7
45 to 54 Years	8,304	13.7	1,317,258	13.2
55 to 59 Years	4,626	7.6	718,008	7.2
60 to 64 Years	4,825	8.0	678,726	6.8
65 to 74 Years	6,546	10.8	975,417	9.8
75 Years and Older	4,371	7.2	690,926	7.0
Median Age (Years)	42.5		39.7	

Source: U.S. Census Bureau: 2019 American Community Survey 5-Year Estimates, Table DP05

Race, Ethnicity, Natality and Language Spoken at Home

Unlike the state, the population of Barry County was relatively homogeneous, with non-Hispanic White people making up approximately 94% of the population in 2019.⁹ Hispanic and non-Hispanic multiracial people follow at a distance, making up 3.0% and 1.3% of the population, respectively.⁴

Nearly all (98.3%) of the residents of Barry County are native-born United States citizens. English was the only language spoken at home in most households (97.5%) (Table 2).¹⁰

Table 2: Barry County and Michigan Race, Ethnicity, Natality and Language Spoken at Home				
	Barry County		Michigan	
	#	%	#	%
RACE & ETHNICITY				
White	56,987	94.1	7,477,400	75.0
Black or African-American	306	0.5	1,358,034	13.6
Hispanic	1,786	3.0	507,353	5.1
Native American or Alaska Native	4	0.0	45,569	0.5
Asian	364	0.6	310,420	3.1
Multiracial	785	1.3	250,188	2.5
Native Hawaiian and Other Pacific Islander	4	0.0	2,649	0.0
NATALITY				
Native-born	59,540	98.3	9,281,068	93.1
Foreign-born	1,000	1.7	684,197	6.9
LANGUAGE SPOKEN AT HOME				
English Only	55,750	97.5	8,480,376	90.3
Other Language	1,433	2.5	913,795	9.7

Source: U.S. Census Bureau: 2019 American Community Survey 5-Year Estimates, Tables DP02 and DP05

School Enrollment

There are 13,471 children under the age of 18 residing in Barry County in 2019.⁴ Among children above the age of 3, 6.8% attend preschool or kindergarten; nearly half were in primary school, and one-quarter were in high school (Table 3).¹⁰

Table 3: Barry County and Michigan School Enrollment				
	Barry County		Michigan	
	#	%	#	%
SCHOOL ENROLLMENT				
Nursery School, Preschool	881	6.8	143,145	5.8
Kindergarten	594	4.6	119,635	4.9
Elementary and Middle School	6,328	48.8	965,649	39.4
High School	3,178	24.5	529,043	21.6
College, Undergraduate and Graduate	1,993	15.4	693,876	28.3

Source: U.S. Census Bureau: 2019 American Community Survey 5-Year Estimates, Table DP02

Household Income

The median household income in Barry County was slightly higher than the state median in 2019 (\$64,490 and \$57,144, respectively).¹¹ The percentage of county residents who lived below the federal poverty level was lower than that of the state in 2019 (7.7% and 13.4%, respectively) (Table 4).¹²

Table 4: Barry County and Michigan Household Income

	Barry County		Michigan	
	#	%	#	%
HOUSEHOLD INCOME				
Less Than \$10,000	923	3.8	260,286	6.6
\$10,000 to \$14,999	709	2.9	172,478	4.4
\$15,000 to \$24,999	2,026	8.3	379,660	9.6
\$25,000 to \$34,999	1,945	8.0	386,973	9.8
\$35,000 to \$49,999	3,390	14.0	531,149	13.5
\$50,000 to \$74,999	5,260	21.6	718,888	18.3
\$75,000 to \$99,999	3,786	15.6	501,245	12.7
\$100,000 to \$149,999	3,899	16.0	556,921	14.2
\$150,000 or More	2,358	9.7	427,441	10.8
MEDIAN HOUSEHOLD INCOME	\$64,490		\$57,144	
PEOPLE LIVING BELOW POVERTY LEVEL	4,613	7.7	1,398,527	13.4

Source: U.S. Census Bureau: 2019 American Community Survey 5-Year Estimates, Tables DP03 and S1701

Labor Force

Just over half of residents ages 16 and older participated in the labor force in 2019.⁹ Most residents were employed, and only 3.0% were looking for work. Approximately 18,028 residents above the age of 16 were not working, nor were they looking for work (Table 5).¹¹

A quarter of workers in Barry County work in manufacturing.¹¹ An additional 28% work in the retail sales, education, health care and social assistance sectors. Barry County has a small agricultural sector. In 2017, the county had 154,624 acres of farmland in use, divided among 938 farms. The market value of the products sold totaled \$139,682,000.¹³

Table 5: Barry County and Michigan Labor Force

	Barry County		Michigan	
	#	%	#	%
EMPLOYMENT				
Employed	29,100	59.8	4,654,930	57.8
Unemployed	1,475	3.0	293,894	3.7
Armed Forces	28	0.1	4,179	0.1
Not in Labor Force	18,028	37.1	3,096,766	38.5

Source: U.S. Census Bureau: 2019 American Community Survey 5-Year Estimates, Table DP03

Household/Housing Information

Among the 24,296 households in the county, approximately 58.2% were married-couple families in 2019.¹¹ Approximately 11.2% of households are single people living alone. The remaining 30.5% of households consist of multi-person, non-family households and families headed by a single person with no spouse or partner present.¹¹ The majority of homes in Barry County are owned (83.5%) while the rest (16.5%) are rented (Table 6).¹⁴

Table 6: Barry County and Michigan Demographics – Households

	Barry County		Michigan	
	#	%	#	%
TOTAL HOUSEHOLDS	24,296	-	3,935,041	-
HOUSEHOLD TYPE				
Married-Couple Family	14,150	58.2	1,853,456	47.1
Individual Living Alone	2,727	11.2	1,164,019	29.6
Other Types of Family Household	7,419	30.5	917,566	23.3
Households With One or More People Under 18 Years	7,278	30.0	1,127,499	28.7
Households With One or More People 65 Years and Over	7,534	31.0	1,181,569	30.0
HOUSING TENURE				
Owner-Occupied	20,299	83.5	2,802,699	71.2
Renter-Occupied	3,997	16.5	1,132,342	28.8

Source: U.S. Census Bureau: 2019 American Community Survey 5-Year Estimates, Tables DP03 and DP04

Veteran Status

Barry County was home to 3,931 veterans in 2019 (Table 7).¹⁰

Table 7: Barry County and Michigan Veteran Status				
	Barry County		Michigan	
	#	%	#	%
VETERAN STATUS				
Veteran	3,931	8.4	549,526	7.1
Non-Veteran	47,041	91.6	7,233,701	92.9

Source: U.S. Census Bureau: 2019 American Community Survey 5-Year Estimates, Table DP02

Amish Population

Michigan is home to the sixth-largest Amish population in the United States.¹⁵ Most of the Amish population is concentrated in the counties bordering Indiana and Ohio. However, there is an Amish settlement in Barry County. The Hastings settlement was established in 2006 and had an estimated population of 365 Amish members.¹⁵

Births, Deaths, Marriages and Divorces

In 2019, Barry County had 689 live births, 626 deaths, 403 marriages and 224 divorces (Table 8).⁹

Table 8: Barry County and Michigan Births, Deaths, Marriages and Divorces, 2019				
	Barry County		Michigan	
Life Event	#	Per 1,000 Population	Per 1,000 Population	
Births	689	11.3	11.0	
Deaths	626	10.2	9.9	
Marriages	403	13.2	11.3	
Divorces	224	7.3	5.6	

Source: Michigan Department of Health and Human Services, Division of Vital Records and Health Statistics: Community Health Information – Barry County, 2019

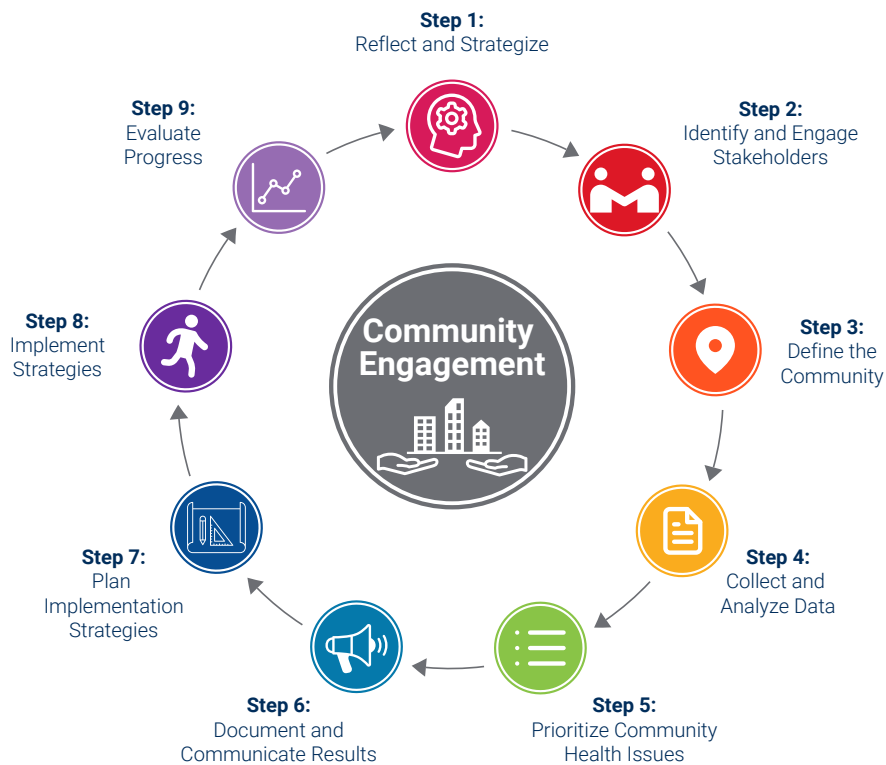
Methodology

Two frameworks governed the development of this Community Health Needs Assessment: the project and data frameworks.

Project Framework

The project framework used was based on the Community Health Assessment Toolkit (Figure 4) developed by the Association for Community Health Improvement.¹⁶ The toolkit helped guide us in conducting a community health assessment and developing implementation strategies in an organized, methodical and comprehensive process.

Figure 4: Association for Community Health Improvement’s Community Health Assessment Toolkit



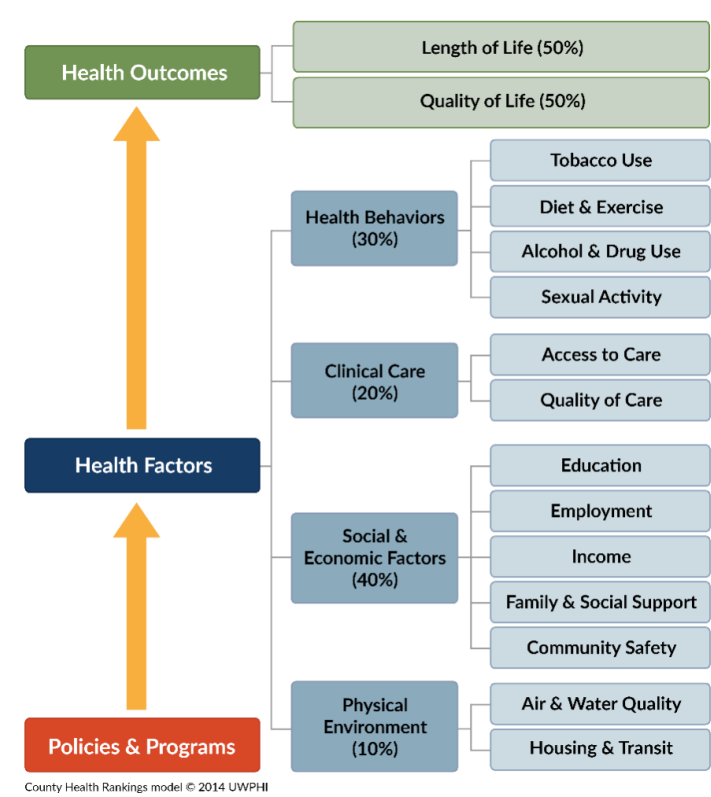
Source: Community Health Assessment Toolkit, www.healthcommunities.org

Data Framework

The purpose of the data framework was to ensure that the variety of data topics used to inform this Community Health Needs Assessment was comprehensive and inclusive of all the factors currently known to affect community health. We used the County Health Rankings model, developed by the Milwaukee Population Health Institute in conjunction with the Robert Wood Johnson Foundation, to inform our report (Figure 5).¹⁷

The County Health Rankings model uses health outcomes and factors, including health behaviors, clinical care, social and economic factors, and physical environment, by quantifying each component's effect on overall community health.

Figure 5: County Health Rankings Model

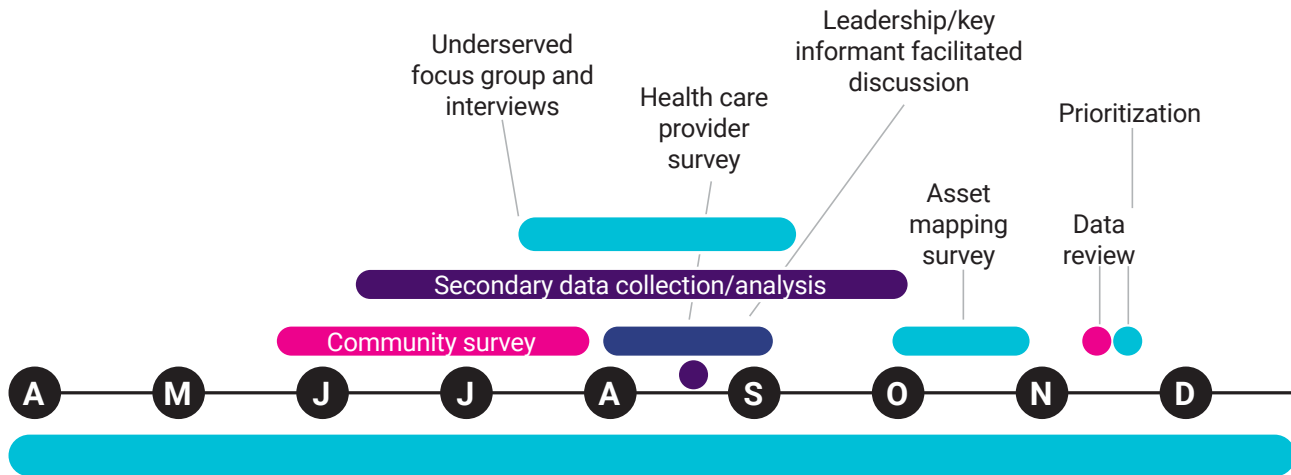


Source: Remington, Patrick L, Bridget B Catlin, and Keith P Gennuso. 2015. "The County Health Rankings: Rationale and Methods." *Population Health Metrics* 13 (11): 1-12.

Data Collection

This assessment's data collection and analysis occurred between April and October 2021 (Figure 6). The data in this report can be categorized into two types: primary and secondary data. Primary data refers to firsthand data gathered by partnering organizations. Secondary data means that the data was collected by someone else.

Figure 6: Project and Data Collection Timeline



Primary Data Collection

In this assessment, five primary data collection activities were used to gather information from the general public, individuals with specialized knowledge about the community, public health experts and underserved community members (Table 9). Information from the general public was solicited using a web-based community survey. Information about public meetings, including the data review and the community prioritization meeting, was posted via social media. The information needed for the Community Health Needs Assessment was sought from individuals and groups with specialized community and public health knowledge.

During the assessment and prioritization process, information was periodically sought from underserved community members and the Assessment Advisory Committee. The Assessment Advisory Committee consisted of organizations and key stakeholders with specialized knowledge of the general public.

Table 9: Primary Data Collection Activities

Activity	Data Collection Methodology	Target Audience	Audience Type	Number of People Who Completed Activity
Community Survey	Web-Based Survey	Individuals Who Live and Work in Barry County	Community Residents	404
Healthcare Provider Survey	Web-Based Survey	Physicians, Advanced Practice Providers and Other Primary Care Providers Working in Barry County	People Who Represent the Broad Interests of the Community	33
Asset Mapping Survey	Web-Based Survey	Individuals Who Live and Work in Barry County	Residents of Barry County and Those With Specialized Understanding of County Resources	15
Underserved Focus Group / Interviews	Focus Groups and In-Depth Interviews	Underserved Residents of Barry County	Community Residents (Uninsured People, Low-Income People and Minority Groups)	8
Leadership / Key Stakeholder Focus Group	Facilitated Discussion	Barry County Leadership and Stakeholders	People Who Represent the Broad Interests of the Community	14

Community Survey

The Barry County Community Survey was a web-based, convenience-sample survey of Barry County residents in June and July 2021. The survey aimed to collect information on community-identified needs, quality of life, health literacy and pandemic experience from adults who live and work in Barry County. There were 404 respondents to the Community Survey (Table 9). The Community Survey used for this Community Health Needs Assessment can be found in Appendix D.

Healthcare Provider Survey

The Barry County Healthcare Provider Survey was a web-based survey conducted in August 2021 of primary care physicians and advanced practice providers who work in Barry County. There were 33 respondents to this survey (Table 9). Providers from Spectrum Health Pennock and those with multiple affiliations with Pennock and hospitals in the surrounding counties were asked about general health needs, barriers experienced by their patients, the social needs of their patient population and community resources they refer their patients to. The Healthcare Provider Survey used for this Community Health Needs Assessment can be found in Appendix E.

Asset Mapping Survey

Attendees of the June 30, 2021, Community Health Needs Assessment Advisory Committee meeting were asked to review the provided asset inventory and vote on which asset categories (and individual assets within a category) would be most beneficial to the assessment process if they could be geographically mapped within Barry County. The purpose of this survey was to gather information about community assets that may not be easily identifiable to people living outside of the community. There were a total of 15 Community Health Needs Assessment Advisory Committee members who participated in the survey (Table 9).

Underserved Focus Group / Interviews

The Barry-Eaton District Health Department interviewed eight Barry County residents identified as members of underserved populations with the assistance of the Barry County United Way between Oct. 24 and Nov. 4, 2021. These individuals were either uninsured, of low income or a member of a minority group. These interviews were recorded, and the audio was then transcribed. The transcribed text was analyzed to identify key themes that emerged during the conversation that would provide greater insight into the health needs and concerns of underserved members of the community. Eight individuals were included in these focus groups and interviews (Table 9). Questions asked during the focus group can be found in Appendix F.

Leadership / Key Stakeholder Focus Group

On Oct. 1, 2021, leaders from various sectors in Barry County met to discuss the state of health in Barry County. The meeting was held virtually on Zoom and in-person at the Barry YMCA. The discussion was facilitated by Barry-Eaton District Health Department staff members, who asked a series of questions to spark conversation around community health and barriers to health that community members may experience. Fourteen individuals participated in the key stakeholder focus group (Table 9). Questions asked during the focus group can be found in Appendix G.

Secondary Data Collection

The indicators and measures used in this report were identified by the Barry County Community Health Needs Assessment Workgroup and were reviewed and approved by the Barry County Community Health Needs Assessment Steering Committee and the Barry County Community Health Needs Assessment Advisory Committee.

Table 10 shows the indicators and measures selected and their relationship to the data framework. Descriptions of all the data sources used in this report can be found in Appendix A.

Table 10: Community Health Needs Assessment Indicators And Measures

Domain	Indicator Group	Measure	
Health Outcomes	Length of Life	Mortality Rate per 100,000	
		Suicide Rate per 100,000	
		Premature Death	
		Age-Adjusted Rate of Death Due to Transportation Accidents	
	Quality of Life	Infant Mortality Rate	
		Poor or Fair Health	
		Poor Mental Health Days	
		Emotional Support	
Health Factors	Health Behaviors & Physical Condition	Binge Drinking in Adults	
		Binge Drinking in Adolescents	
		Current Smoking in Adults	
		Vaping in Adults	
		Marijuana Use	
		Breast Cancer Screening	
		Colon Cancer Screening	
		Percentage of Non-Medical Immunization Waivers Granted	
		Adult Weight Distribution (BMI Categories)	
		Adolescent Weight Distribution (BMI Categories)	
		Clinical Care	Adult Diabetes Prevalence
			Ambulatory Care Sensitive Hospitalizations: Diabetes
	Diabetes Management Education		
	Adult Asthma Prevalence		
	Ambulatory Care Sensitive Hospitalizations: Asthma		
	Ambulatory Care Sensitive Hospitalizations: Chronic Obstructive Pulmonary Disease		
	Ambulatory Care Sensitive Hospitalizations: Congestive Heart Failure		
	Disability		
	High Cholesterol		
	High Blood Pressure		
	Preventable Hospital Stays per 100,000		
	Persons With a Primary Care Provider		
	Health Care Access		
	Dental Care Access		
	Mental Health Providers (Ratio)		
	Social & Economic Factors		Gini Coefficient of Income Inequality
			Housing Affordability
			Percentage of Households Below Asset Limited, Income Constrained, Employed Threshold
		Lever of Education in Adults Over Age 25	
	Physical Environment	Percentage of Population Living in Food Desert	
		Internet Subscription	
		Rate of Elevated Blood Lead Levels	
		Air Pollution – PM2.5	

Community Input

Input from the community residents, including the underserved, those with a specialized understanding of community resources and people who represent the broad interest of the community, was essential to the Community Health Needs Assessment process. Information was gathered using multiple surveys (community-based, health care provider and community asset survey) and conducting multiple focus group interviews targeting the underserved population and county leadership and stakeholders of Barry County. While this primary data directly identifies the community needs, the prioritization process utilized this information along with secondary data to prioritize the community-identified significant health needs.

Overall Key Findings

- Access to affordable health care was a recurring theme throughout the surveys and focus group interviews.
- Difficulties in accessing mental health services and the shortage of mental and behavioral health providers were recurring themes across all five primary data collection activities.
- Community members and health care providers in Barry County both agreed that addressing social needs is as important as addressing medical conditions.
- The COVID-19 pandemic has made already existing gaps in opportunity wider.

Community Survey

The Barry County Community Survey is a web-based survey that collected information from Barry County residents about various health topics. The survey was distributed via social media by the Barry-Eaton District Health Department, by Spectrum Health Pennock, and through the traditional networks of the health and human service organizations.

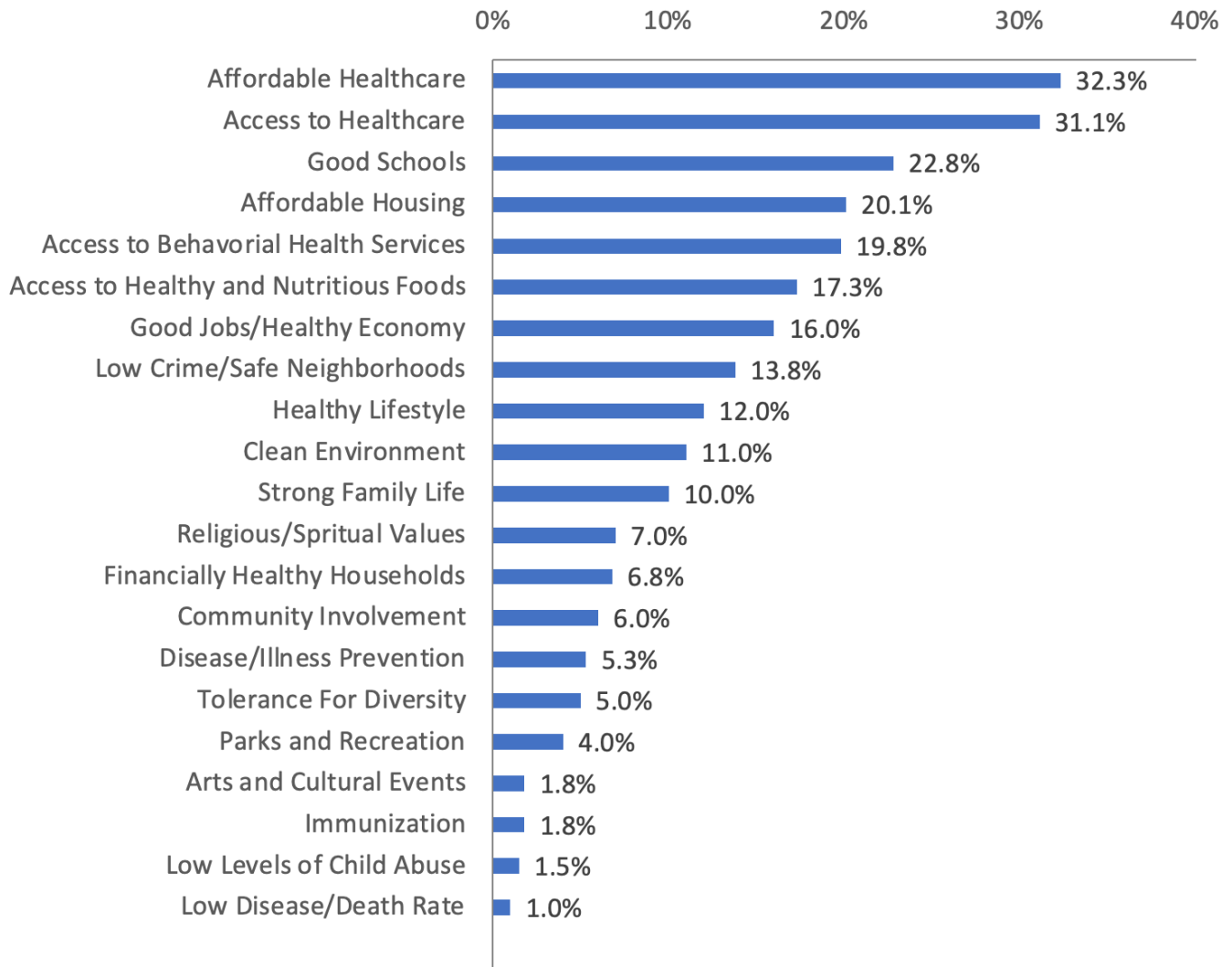
Barry County Community Survey Key Findings

- Affordable and accessible health care is a hallmark of a healthy community, but there are still problems with accessibility.
- Substance misuse and the lack of availability of affordable behavioral health services were top concerns among respondents.
- Many respondents agreed that addressing social issues in the community was important.
- COVID-19 vaccine hesitancy was due to concerns with vaccine safety and efficacy.
- Most respondents felt they had the means and ability to access what they needed to maintain or improve their health.

Community Member-Identified Factors That Define a Healthy Community

Three of the top five community-identified factors that define a healthy community were related to health care, including affordable health care (32.3%), access to health care (31.1%) and access to behavioral health services (19.8%). The remaining two factors from the top five were the presence of good schools (22.8%) and affordable housing (20.1%) (Figure 7).

Figure 7: Community Member-Identified Factors That Define a Healthy Community

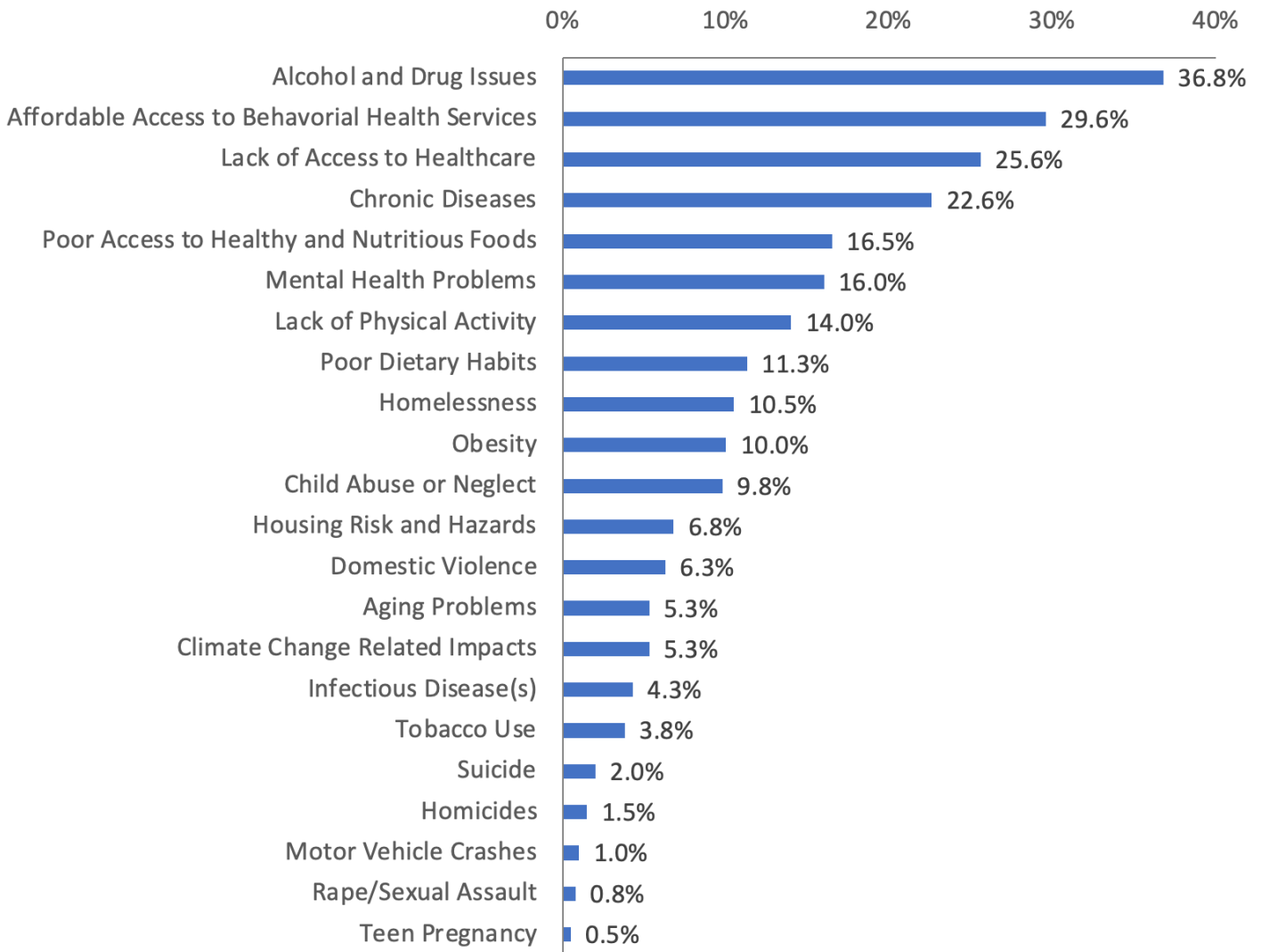


Source: 2021 Barry County Community Health Needs Assessment Community Survey

Community Member-Identified Problems Impacting the Community

The top four community-identified problems impacting Barry County were alcohol and drug issues (36.8%), affordable access to behavioral health services (29.6%), lack of access to health care (25.6%) and chronic disease (22.6%) (Figure 8).

Figure 8: Community Member-Identified Problems Impacting the Community

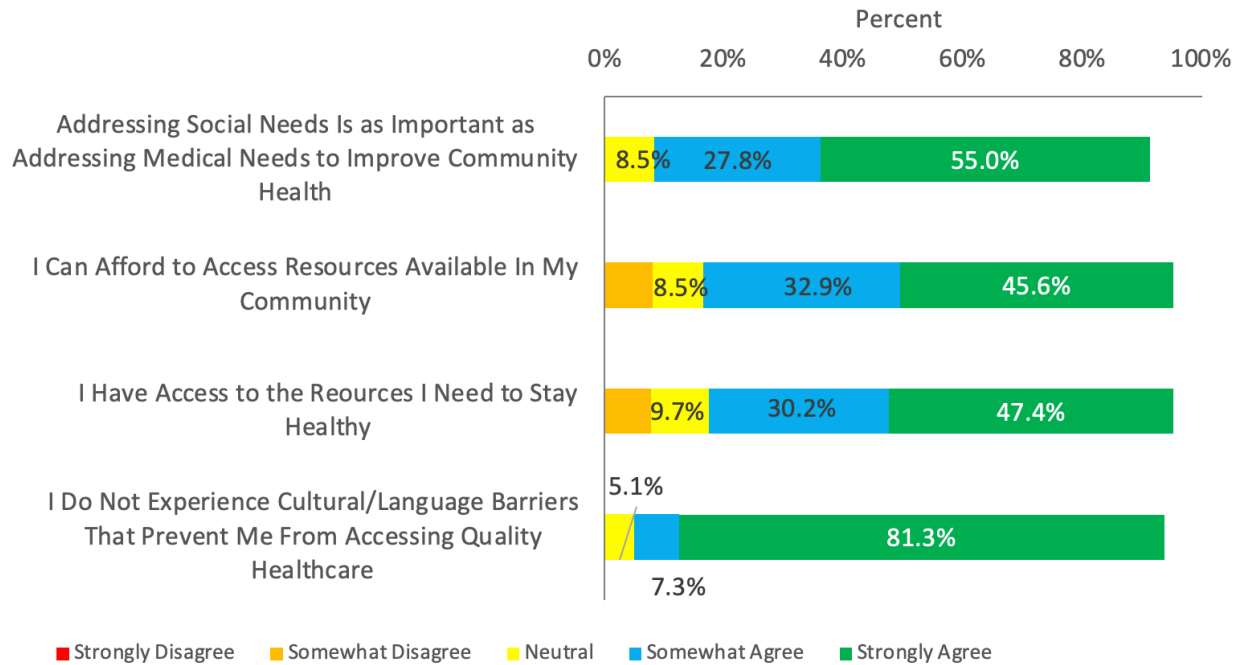


Source: 2021 Barry County Community Health Needs Assessment Community Survey

Community Members' Agreement With Various Health Statements

Most community survey respondents strongly agreed that addressing social needs is as essential as addressing medical needs to improve community health (55.0%), that they can afford to access resources available in their community (45.6%), that they have access to the sources needed to stay healthy (47.4%) and that they were not experiencing cultural/language barriers that prevented them from accessing quality health care (81.3%) (Figure 9).

Figure 9: Community Members' Agreement With Various Health Statements



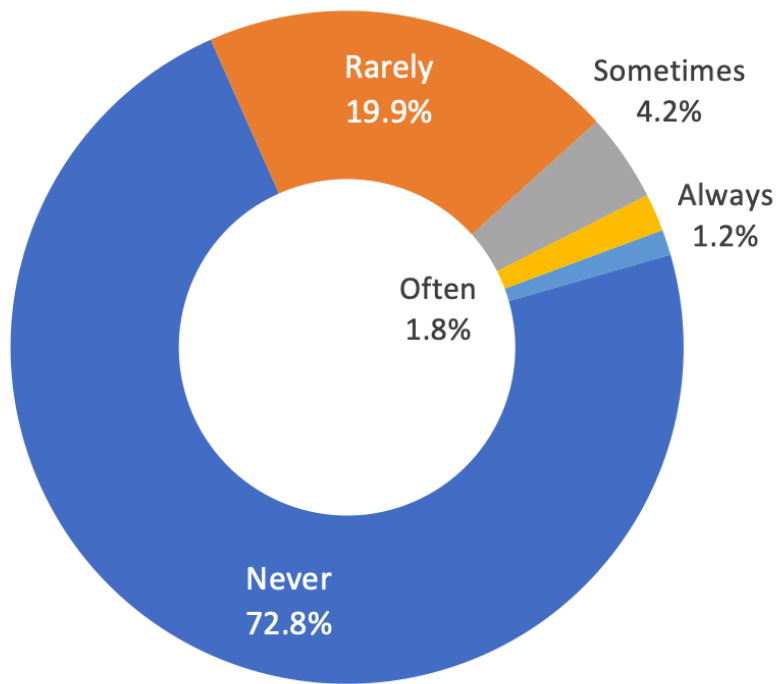
Source: 2021 Barry County Community Health Needs Assessment Community Survey

Community Members' Need for Assistance Reading Health-Related Instruction or Other Material From Their Provider

Health literacy refers to the ability of a person to understand and use the information they have acquired to make informed decisions about their or another person's health and health care.¹⁸

In Barry County, health literacy is relatively high. 92.7% of respondents indicated that they either never or rarely need assistance reading health-related instructions or other materials from their health care provider (Figure 10).

Figure 10: Community Members' Need for Assistance Reading Health-Related Instruction or Other Material From Their Provider

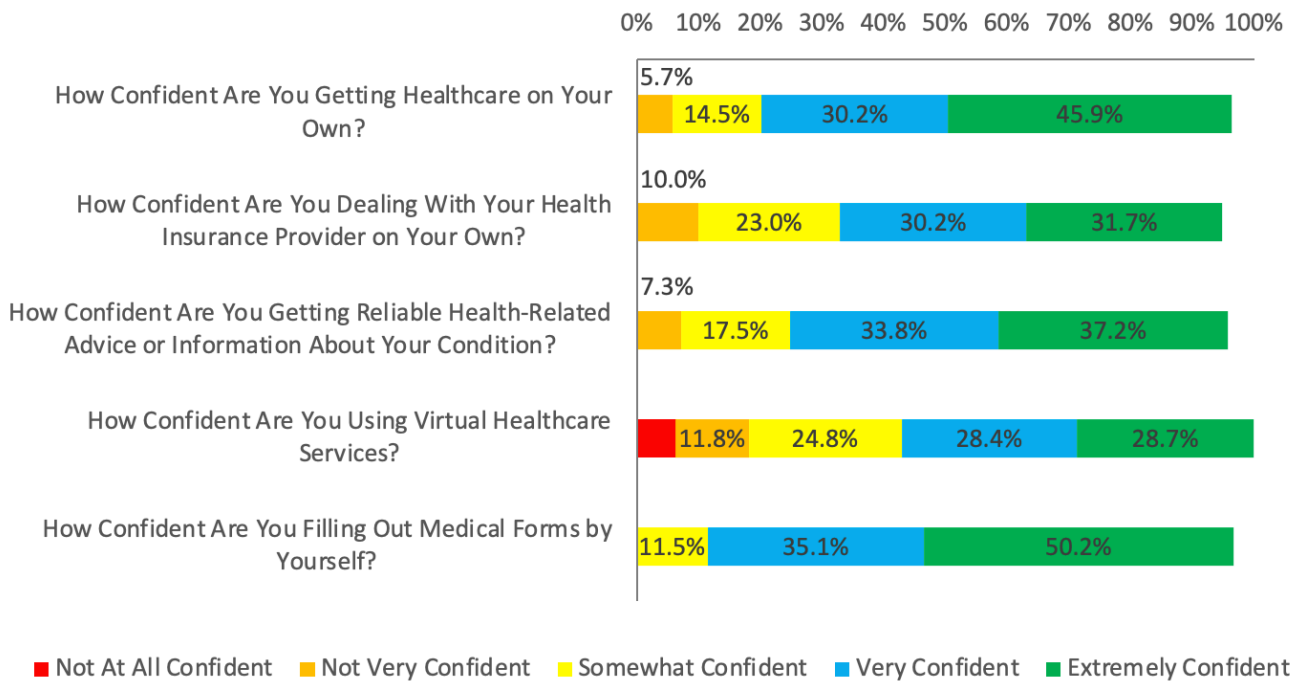


Source: 2021 Barry County Community Health Needs Assessment Community Survey

Community Members' Confidence With Accessing Health Care

Most respondents were extremely confident getting health care on their own (45.9%), dealing with their health insurance provider on their own (31.7%), getting reliable health-related advice or information about their condition (37.2%), using virtual health care services (28.7%) and filling out medical forms by themselves (50.2%) (Figure 11).

Figure 11: Community Members' Confidence With Accessing Health Care

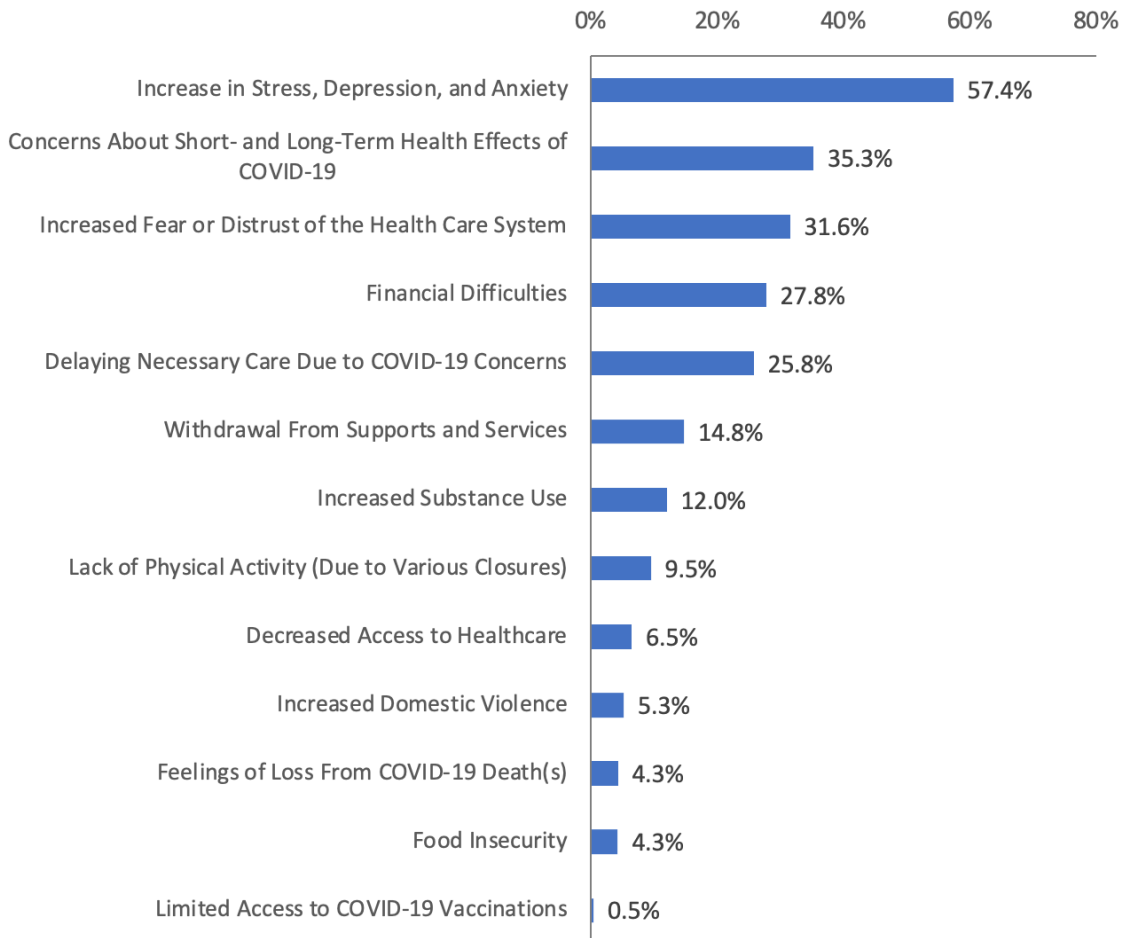


Source: 2021 Barry County Community Health Needs Assessment Community Survey

COVID-19 Pandemic-Related Concerns Impacting Community Members' Family/Household

More than half of respondents indicated increased stress, depression and anxiety (57.4%) as a concern related to the COVID-19 pandemic. About a third of respondents mentioned that they were concerned about short- and long-term health effects from COVID-19 (35.3%), had an increased fear or distrust of the health care system (31.6%) and were concerned about financial difficulties (27.8%) (Figure 12).

Figure 12: COVID-19 Pandemic-Related Concerns Impacting Community Members' Family / Household

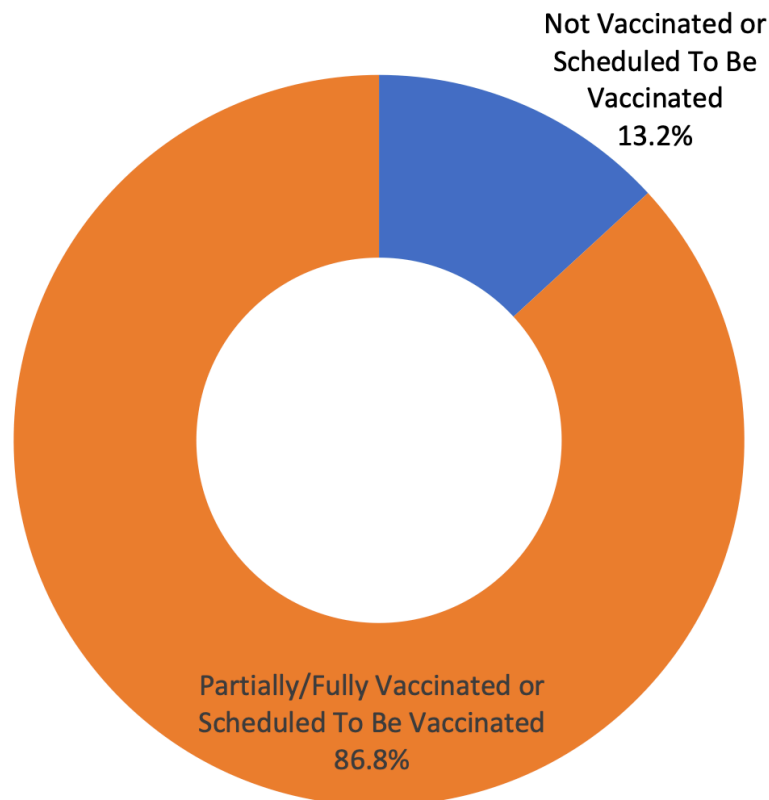


Source: 2021 Barry County Community Health Needs Assessment Community Survey

Community Members' COVID-19 Vaccination Status

When the survey was administered, 13.2% of respondents indicated that they were not vaccinated or were not scheduled to be vaccinated by July 2021 (Figure 13).

Figure 13: Community Members' COVID-19 Vaccination Status

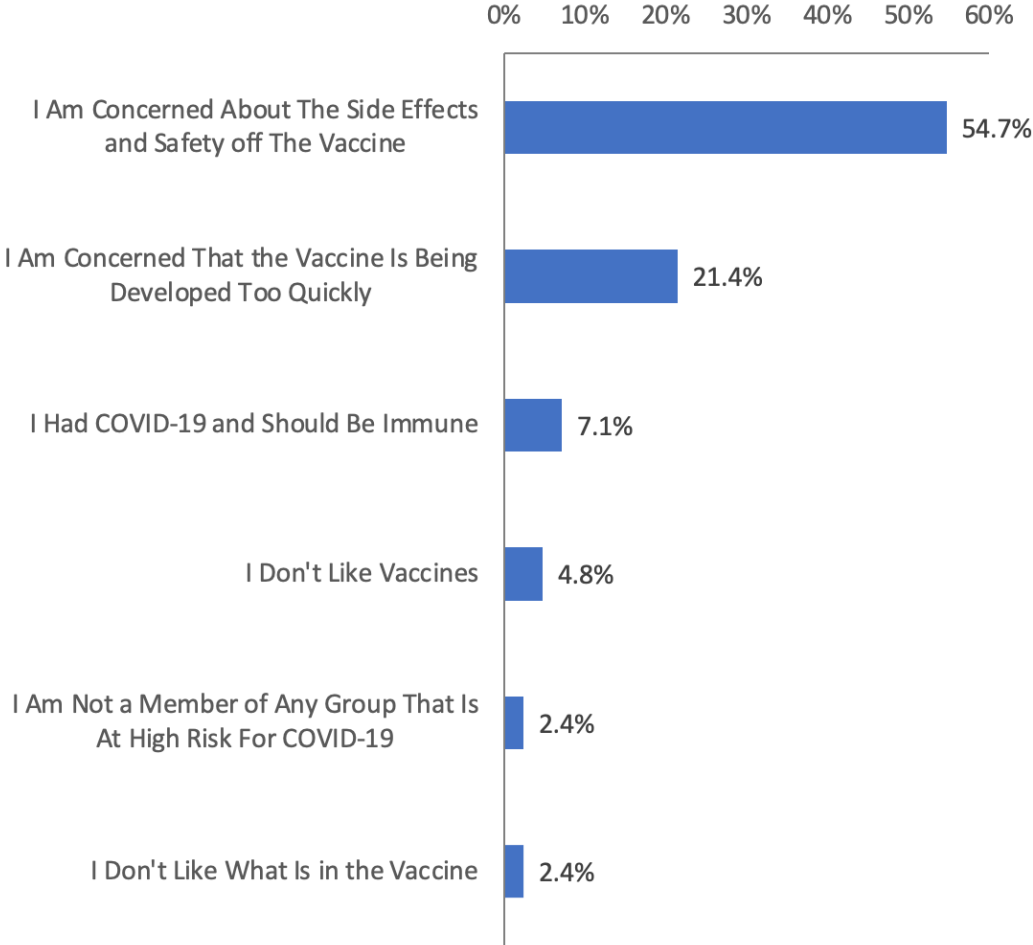


Source: 2021 Barry County Community Health Needs Assessment Community Survey

Unvaccinated Community Members' Reasons for Not Getting COVID-19 Vaccine

The top reasons for why community members were not vaccinated include concerns about the side effects and safety of the vaccine (54.7%) and that the vaccine was developed too quickly (21.4%) (Figure 14).

Figure 14: Unvaccinated Community Members Reasons for Not Getting COVID-19 Vaccine

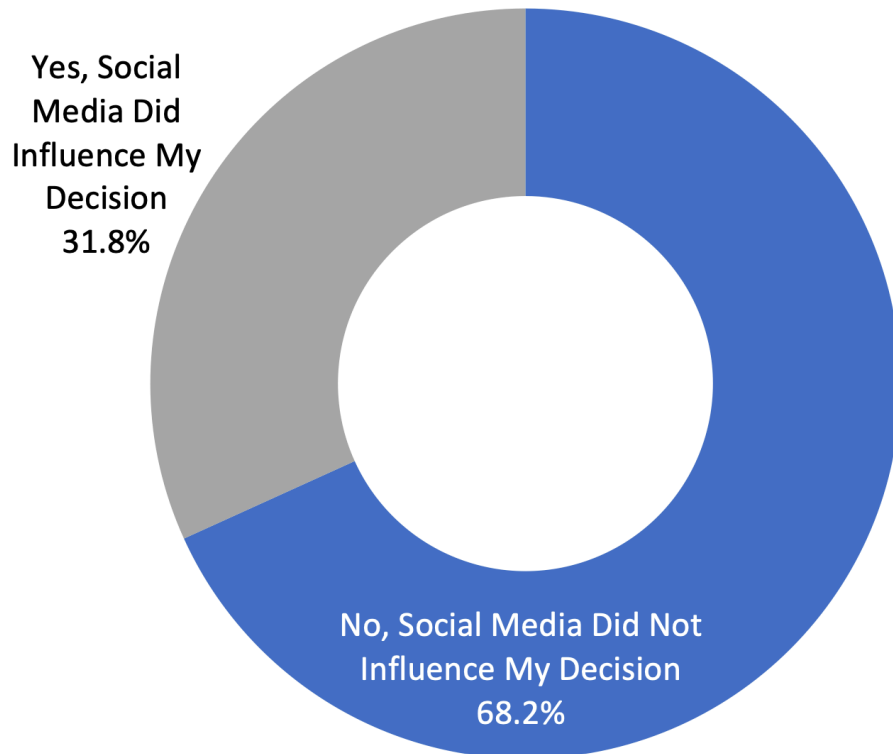


Source: 2021 Barry County Community Health Needs Assessment Community Survey

Social Media's Influence on Community Members' COVID-19 Vaccine Decision

Just under a third of the respondents indicated that their decision to be vaccinated against COVID-19 was influenced by social media (Figure 15).

Figure 15: Social Media's Influence on Community Members' COVID-19 Vaccine Decision



Source: 2021 Barry County Community Health Needs Assessment Community Survey

Healthcare Provider Survey

Another group from which input was sought was health care providers in Barry County, including physicians, nurse practitioners and physician assistants. Representatives from Spectrum Health Pennock and those with multiple hospital affiliations, including Spectrum Health Pennock and hospitals in the surrounding counties, participated in the Healthcare Provider Survey. Their role as health care providers whom most individuals interact with gives them specialized knowledge and insight regarding the health of the community members of Barry County. Unless otherwise noted, the charts and graphs reflect the thoughts and opinions of all health care providers active in Barry County, regardless of their health system affiliation.

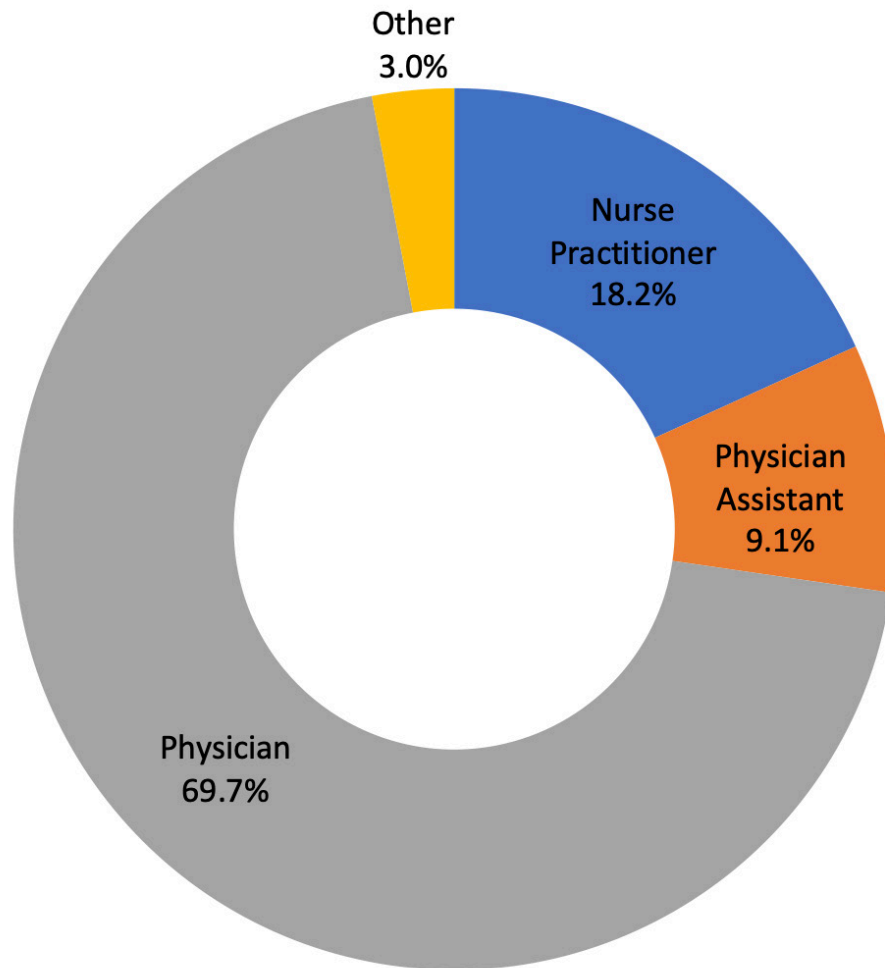
Barry County Provider Survey Key Findings

- Accessibility and affordability of health care, including mental and behavioral health services, were key markers of a healthy community to most providers.
- Limited resources to access care or the lack of motivation to make health-conscious decisions negatively impacted patients' health.
- Community services that most primary care providers are referring their patients to include additional support in the home, mental health support and substance abuse treatment services.
- Most physicians are concerned about the increased fear and distrust of the health care system, the effects of vaccine hesitancy and the psychological distress their patients are experiencing because of the COVID-19 pandemic.
- The pandemic has also affected health care providers themselves. Most of them indicated that they were feeling very overwhelmed at work.

Health Care Provider Job Title and Affiliation

Survey respondents represented various types of health care providers working in the county. Among those who responded, 69.7% were physicians, 18.2% were nurse practitioners and 9.1% were physician assistants (Figure 16).

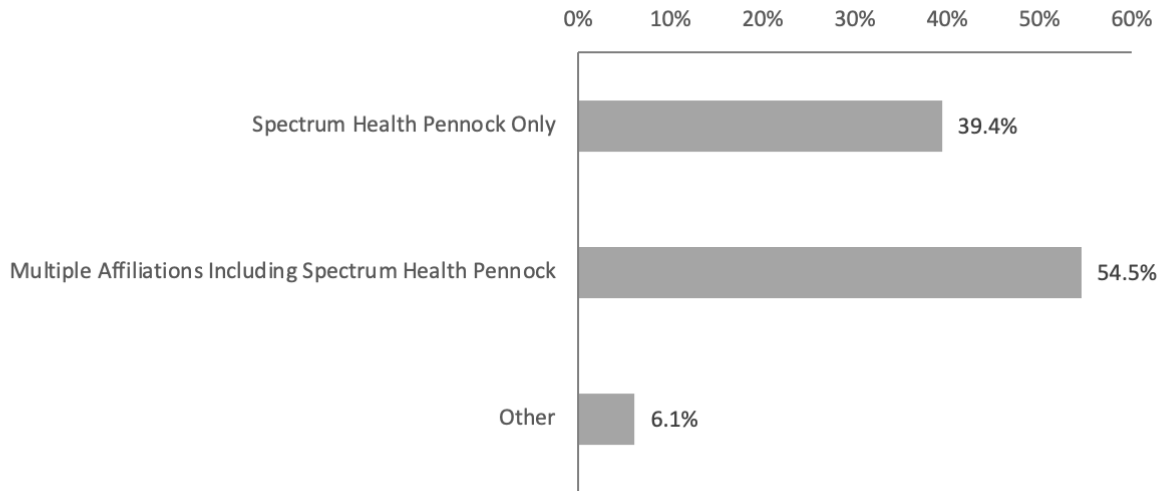
Figure 16: Health Care Provider Job Title



Source: 2021 Barry County Community Health Needs Assessment Healthcare Provider Survey

Health care providers responding to the survey had a variety of affiliations. Just over 39% of survey respondents were affiliated with only Spectrum Health Pennock; 54.5% had multiple affiliations, including Spectrum Health Pennock; and 6.1% of respondents had affiliations elsewhere (Figure 17).

Figure 17: Health Care Provider Affiliation

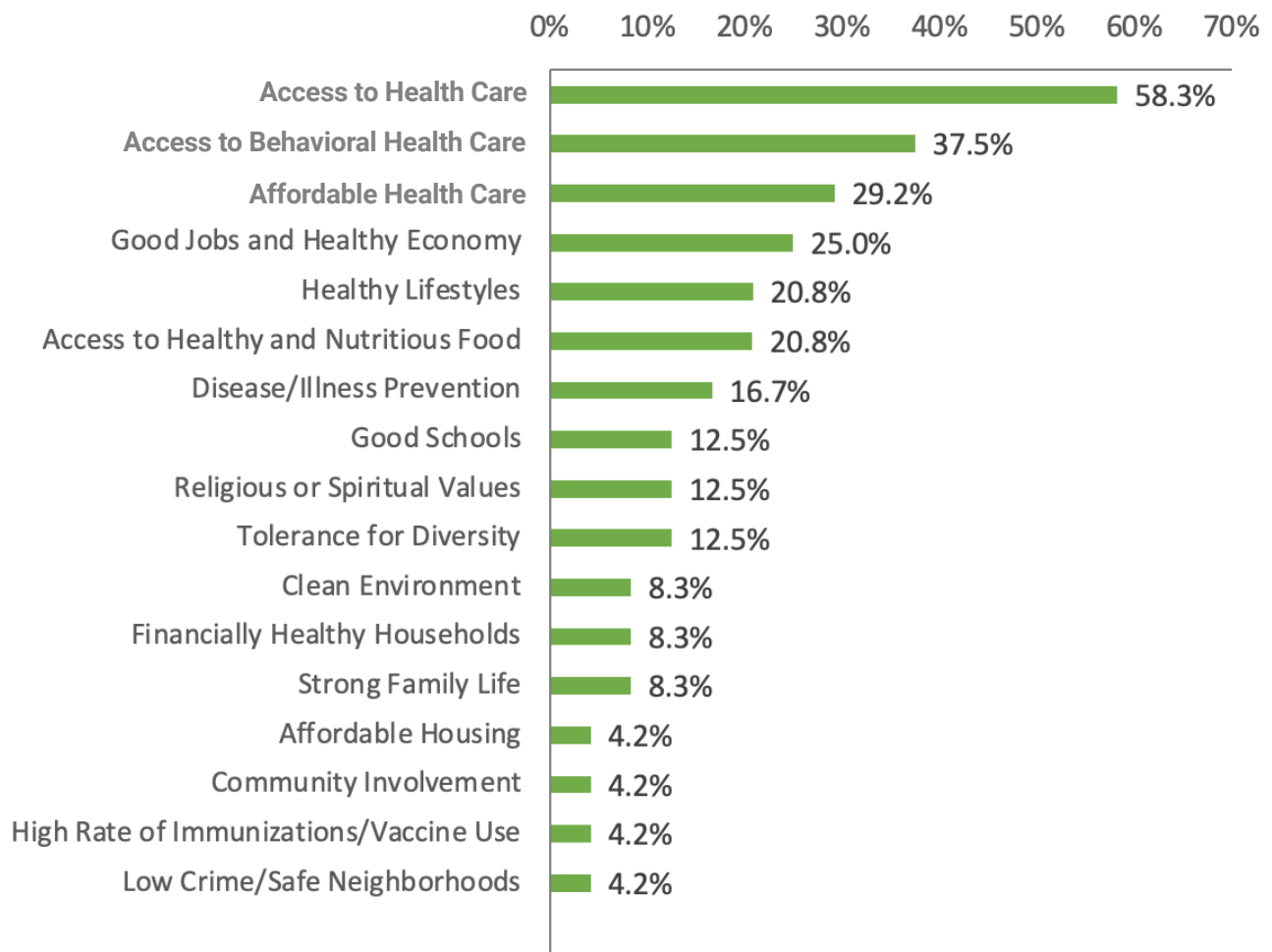


Source: 2021 Barry County Community Health Needs Assessment Healthcare Provider Survey

Health Care Provider-Identified Factors That Define a Healthy Community

Three of the top five health care provider-identified factors that define a healthy community were related to health care, including access to health care (58.3%), access to behavioral health care (37.5%) and affordable health care (29.2%). The remaining two factors from the top five were the presence of good jobs and a healthy economy (25.0%) and living a healthy lifestyle (20.8%) (Figure 18).

Figure 18: Health Care Provider-Identified Factors That Define a Healthy Community

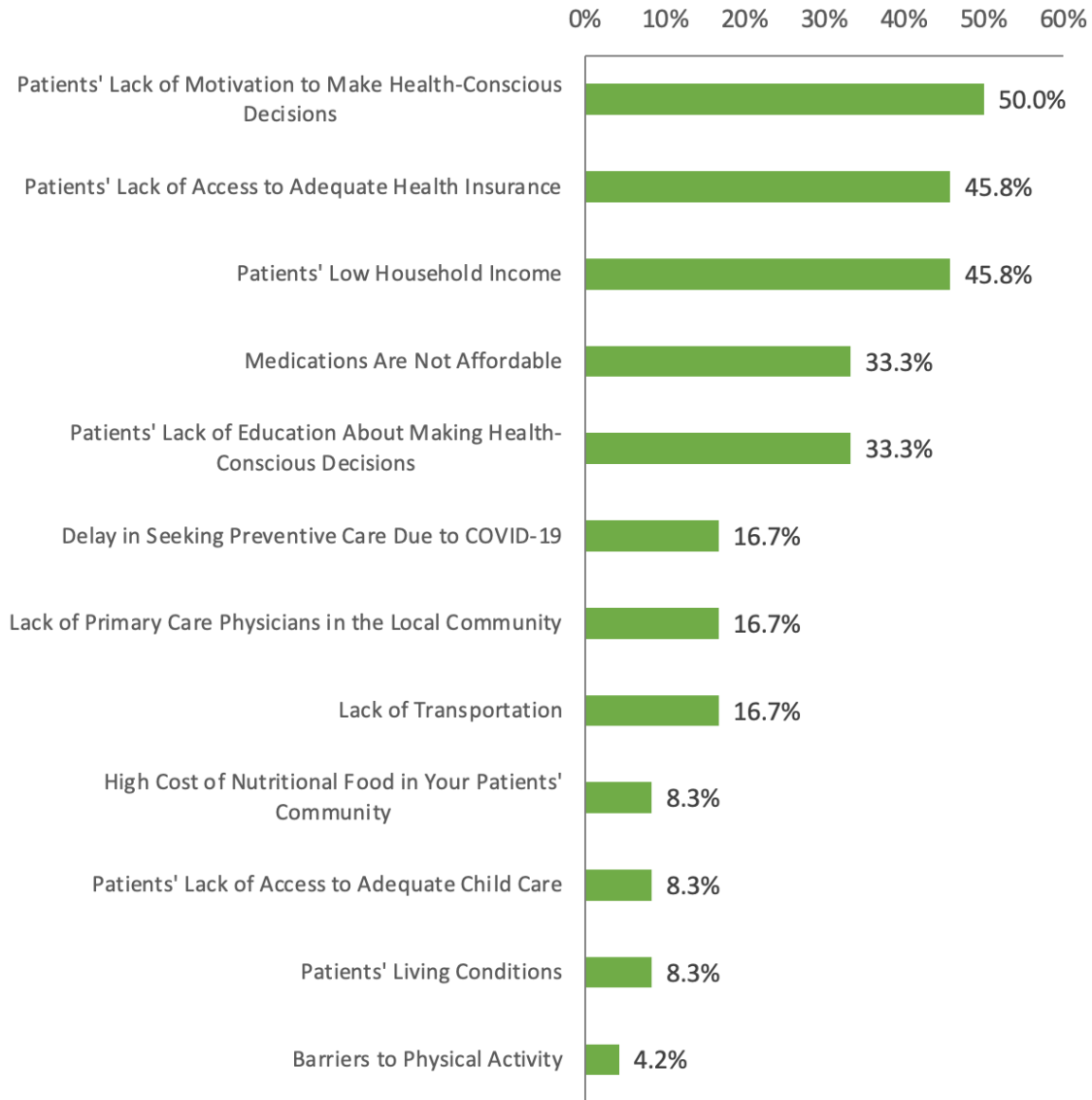


Source: 2021 Barry County Community Health Needs Assessment Healthcare Provider Survey

Health Care Provider-Identified Factors Negatively Impacting Patient Health

The top five health care provider-identified factors negatively impacting patient health in Barry County were patients' lack of motivation to make health-conscious decisions (50.0%), patients' lack of access to adequate health insurance (45.8%), patients' low household income (45.8%), lack of affordable medications (33.3%) and patients' lack of education about making health-conscious decisions (33.3%) (Figure 19).

Figure 19: Health Care Provider-Identified Factors Negatively Impacting Patient Health



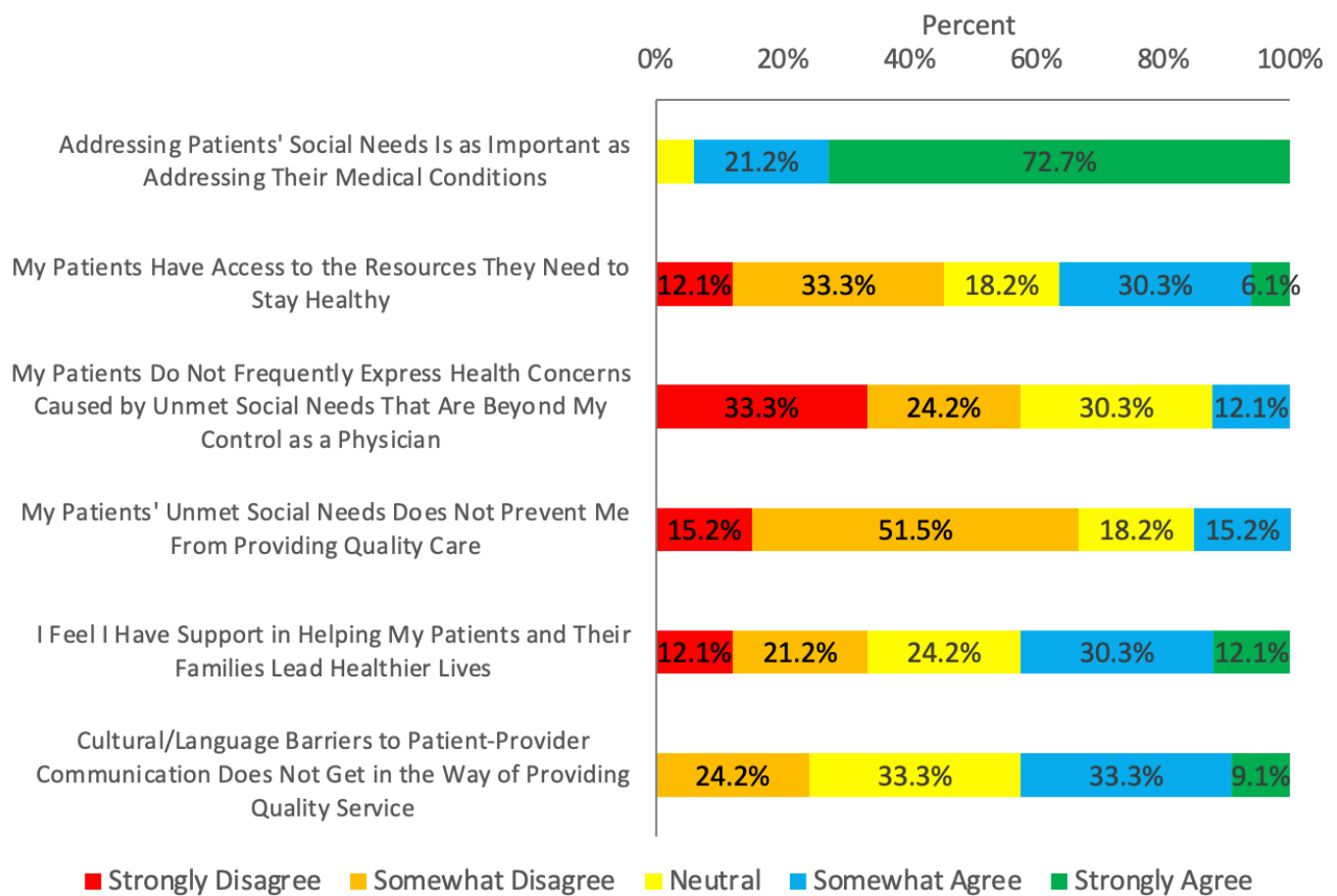
Source: 2021 Barry County Community Health Needs Assessment Healthcare Provider Survey

Health Care Providers' Agreement With Various Health Statements

Most health care providers surveyed strongly agreed or somewhat agreed that addressing patients' social needs is as important as addressing their medical conditions (93.9%), that they have the support needed to help patients and their families lead healthier lives (42.4%), and that cultural/language barriers do not get in the way of providing quality services to the patient (42.4%)

Most health care providers surveyed either strongly or somewhat disagreed that their patients had access to the resources needed to stay healthy (45.4%), that their patients do not frequently express health concerns caused by unmet social needs beyond the control of the physician (57.5%) and that patients' unmet social needs to not prevent them from proving quality care (66.7%) (Figure 21).

Figure 21: Health Care Provider Respondents' Agreement With Various Health Statements

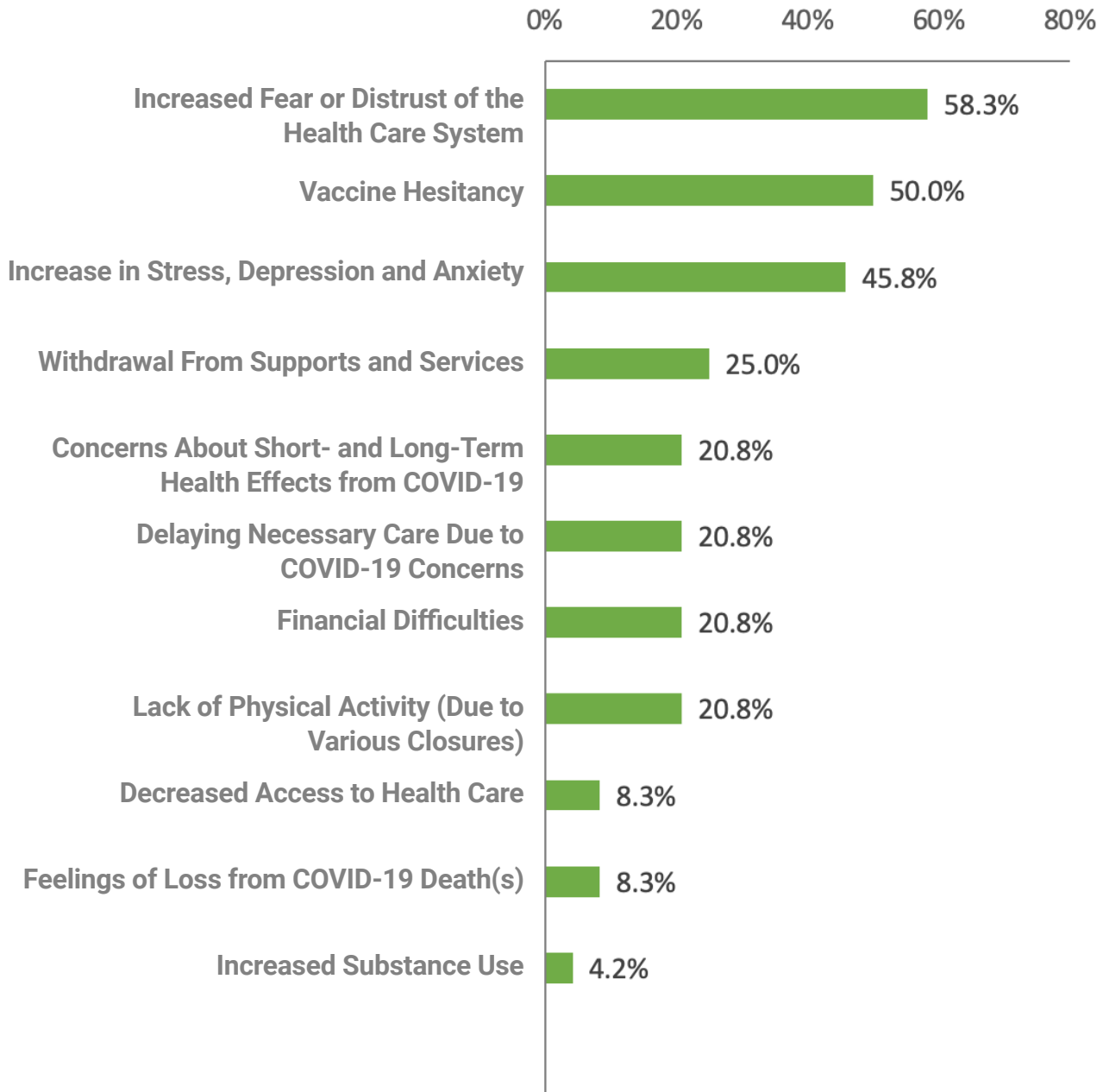


Source: 2021 Barry County Community Health Needs Assessment Healthcare Provider Survey

Health Care Provider Identified Health-Related Concerns Associated With the COVID-19 Pandemic

More than half of health care providers indicated increased fear or distrust of the health care system as their top COVID-19 health-related concern (58.3%). Respondents were also concerned about vaccine hesitancy (50.0%) and increased stress, depression and anxiety (45.8%) as top concerns related to the COVID-19 pandemic (Figure 22).

Figure 22: Health Care Provider Identified Health-Related Concerns Associated With the COVID-19 Pandemic

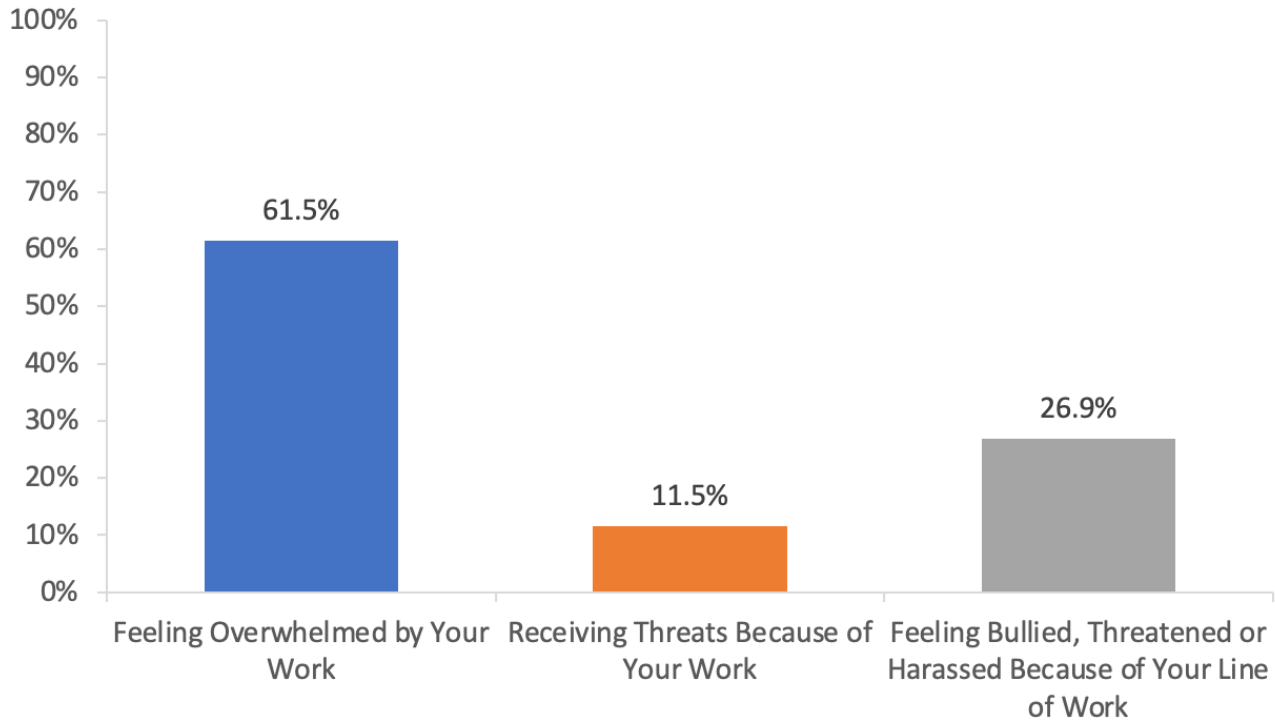


Source: 2021 Barry County Community Health Needs Assessment Healthcare Provider Survey

Health Care Provider Experience of Traumatic Events or Stressors During the COVID-19 Pandemic

When asked about their own experiences regarding the pandemic, 61.5% of the providers surveyed indicated that they were feeling very overwhelmed about their work, followed by feeling bullied, threatened or harassed because of their line of work (26.9%), and receiving threats because of their work (11.5%) (Figure 23).

Figure 23: Health Care Provider Experience of Traumatic Events or Stressors During the COVID-19 Pandemic



Source: 2021 Barry County Community Health Needs Assessment Healthcare Provider Survey

Underserved Population Interviews

An essential aspect of this Community Health Needs Assessment is to ensure that all in the community have an opportunity to be heard, especially those whose voices may be hardest to hear. Consequently, one data collection activity targeted more vulnerable community members: low-income, Medicaid-eligible and minority populations.

Barry County Underserved Population Interview Key Findings

- The availability of services and appointments for mental health and medical care in Barry County came up as barriers to care impacting disease management.
- People encountered difficulties in accessing mental health services in situations in which the person needing care was not an immediate danger to themselves or those around them.
- Having a chronic condition or a family member with a chronic condition resulted in challenges, not only physiologically but socially and economically.

Underserved Population Focus Group Themes Related to Access to Care

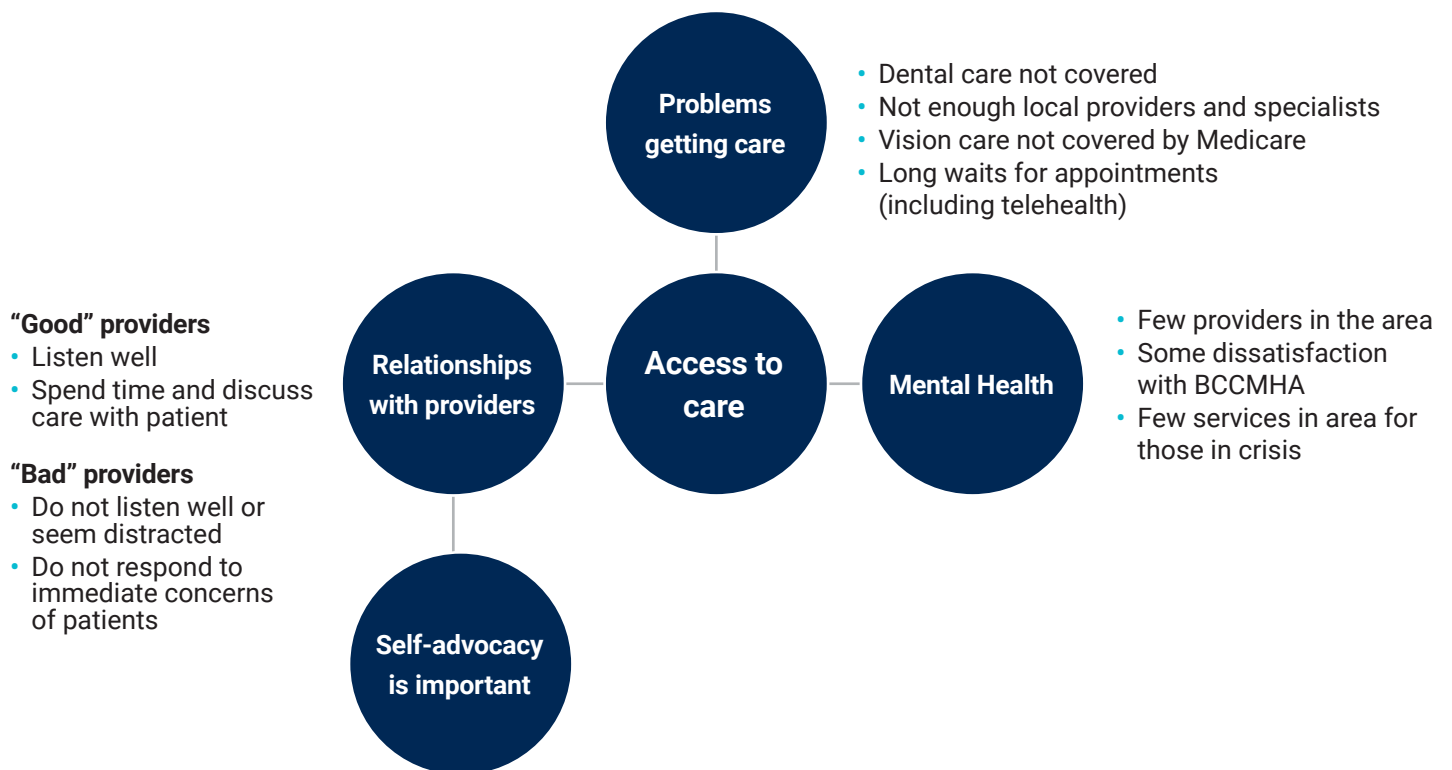
Emerging themes from the underserved population focus group regarding barriers to accessing care include problems getting care, relationships with providers and mental health.

Common barriers to getting care include dental care not being covered, vision care not being covered by Medicare, not enough local providers and specialists, and long waits for appointments.

When it came to relationships with providers, participants noted that self-advocacy was important. When it came to differentiating between good and bad health care providers, participants noted that good providers listened well and discussed the plan of care with patients.

For mental health, barriers included few providers in the area, dissatisfaction with the Barry County Community Mental Health Authority and few services in the area that are available to provide care for those in crisis (Figure 28).

Figure 24: Underserved Interview Concept Map for Access to Care



Source: 2021 Barry County Community Health Needs Assessment Underserved Population Interviews

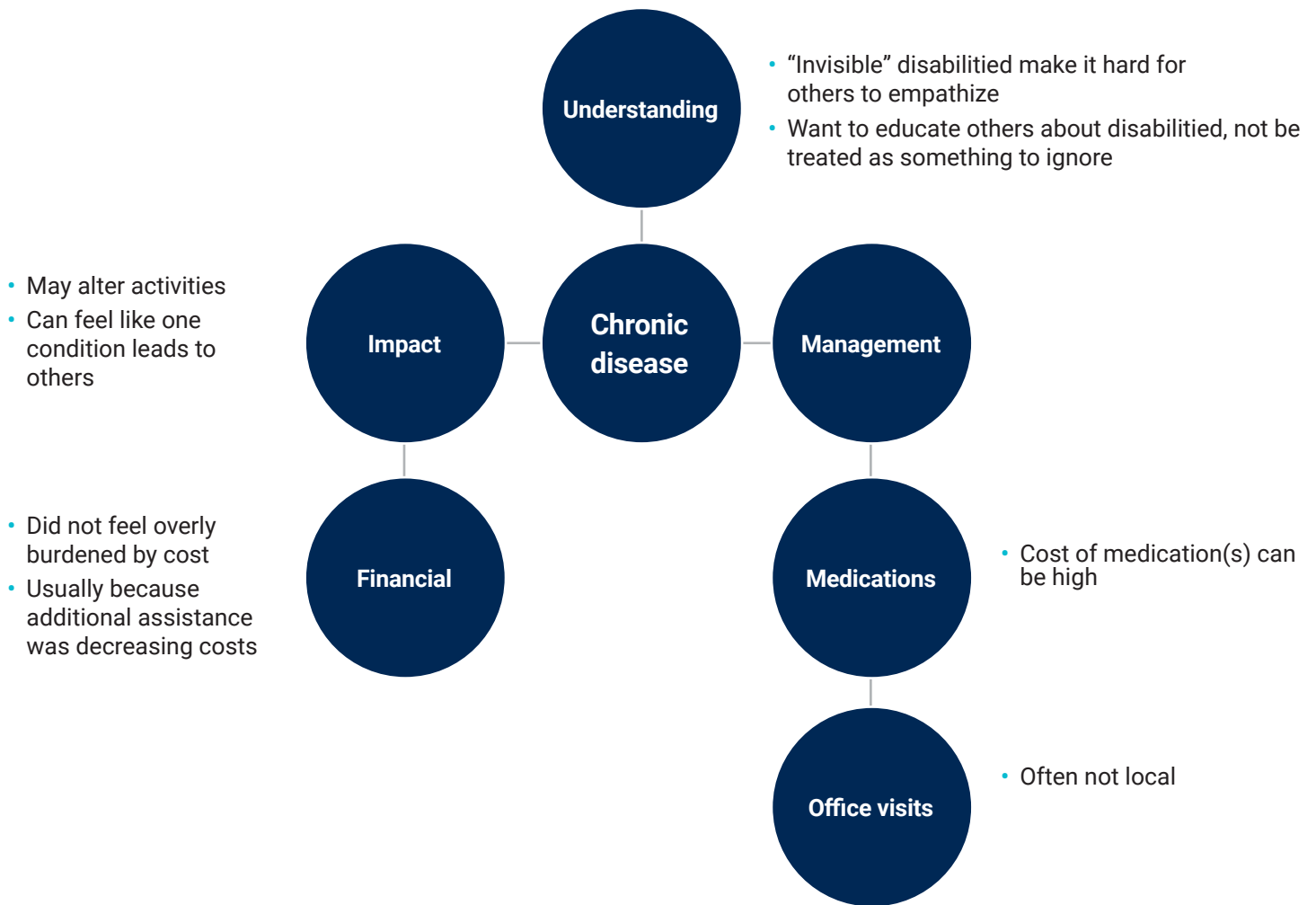
Underserved Population Focus Group Themes Related to Chronic Diseases

Interviewees were asked about managing their chronic disease and its impact on their lives. Focus group participants noted that chronic disease might alter their activities, that they feel like one condition leads to others, and that they do not feel overly burdened by cost.

Since chronic diseases may not be apparent to others, “invisible” disabilities make it hard for others to empathize. A potential solution to this problem identified during the focus group was to increase the amount of education and awareness in wider populations about disabilities.

To manage their chronic illness, members of the focus group identified barriers related to the cost of medication and the availability of appointments for treatment and management. Office visits were often not locally available (Figure 25).

Figure 25: Underserved Population Interview Concept Map for Chronic Diseases



Source: 2021 Barry County Community Health Needs Assessment Underserved Population Interviews

County Leadership/Key Stakeholder Input

On Oct. 1, 2021, leaders from various organizations met to discuss the state of health in Barry County. The meeting was held virtually on Zoom and facilitated by the Barry-Eaton District Health Department. A series of questions was asked to help identify concerns and barriers in the community. A summary of findings with supporting quotations follows.

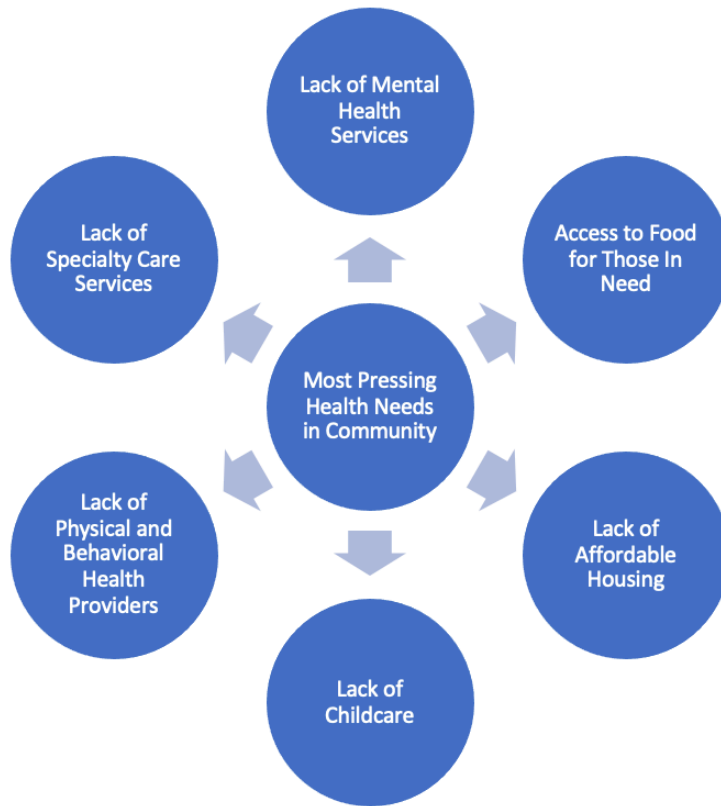
Barry County Leadership/Key Stakeholder Discussion Key Findings

- Health care providers are scarce, particularly mental and behavioral health providers.
- The availability of safe and affordable housing is low, and that scarcity impacts a variety of individuals, from underserved residents to providers being recruited by health and social service organizations.
- Individuals and families without broadband internet access are facing obstacles that not only obstruct their ability to go about normal daily activities safely but also limit their ability to access health care and public resources.
- Although resources are limited, services are available for residents who need them.

County Leader/Key Stakeholder-Identified Pressing Health Needs or Issues

When asked about the most pressing health needs or issues in Barry County, local leaders and stakeholders mentioned lack of mental health services, lack of specialty care, lack of physical and behavioral health providers, lack of child care, lack of affordable housing, and an increased need for resources to address food insecurity (Figure 26).

Figure 26: County Leader/Key Stakeholder-Identified Pressing Health Needs or Issues



Source: 2021 Barry County Community Health Needs Assessment County Leaders/Key Stakeholders Focus Group

County Leader/Key Stakeholder-Identified Barriers or Obstacles to Health Care Programs/Services

When asked to identify barriers or obstacles to accessing health care programs and services, local leaders and stakeholders noted that limited access to broadband internet and cell phone service in remote areas in Barry County had been an issue. Limited access has made searching for health care and other services more difficult. Other barriers or obstacles identified include communication issues between agencies and health care providers and difficulties communicating with community members via social media, electronic communication and messaging applications (Figure 27).

Figure 27: County Leader/Key Stakeholder-Identified Barriers or Obstacles to Health Care Programs/Services



Source: 2021 Barry County Community Health Needs Assessment County Leaders/Key Stakeholders Focus Group

County Leaders/Key Stakeholders' Viewpoint on Meeting the Needs of the Community

When asked about how well existing programs and services are meeting the needs and demands of the community, county leaders and key stakeholders thought that civic groups within the community were robust and met the needs of residents. Participants also highlighted a strong sense of cooperation and comradery among agencies within Barry County. However, the focus group noted that even though they are highly involved with the community, they felt like they could be a little more involved (Figure 28).

Figure 28: County Leaders/Key Stakeholders' Viewpoint on Meeting the Needs of the Community



Source: 2021 Barry County Community Health Needs Assessment County Leaders/Key Stakeholders Focus Group



Factors Contributing to Health

Health Care Access and Quality

According to the National Academies of Sciences, Engineering, and Medicine (formerly known as the Institute of Medicine), access to health care is defined as the “timely use of personal health services to achieve the best possible health outcomes.”¹⁹ Having regular access to a primary care provider and dentist provides better health outcomes. Improving access to health care professionals will “improve quality of care, emphasis on prevention, [and] the identification and early management of conditions,” resulting in better health outcomes and reducing health disparities.²⁰

Preventive care practices, such as screenings and vaccinations, are essential tools and methods to detect diseases early and prevent severe illnesses.²¹ Early detection and preventive measures could avert serious illnesses and reduce premature deaths in the community.

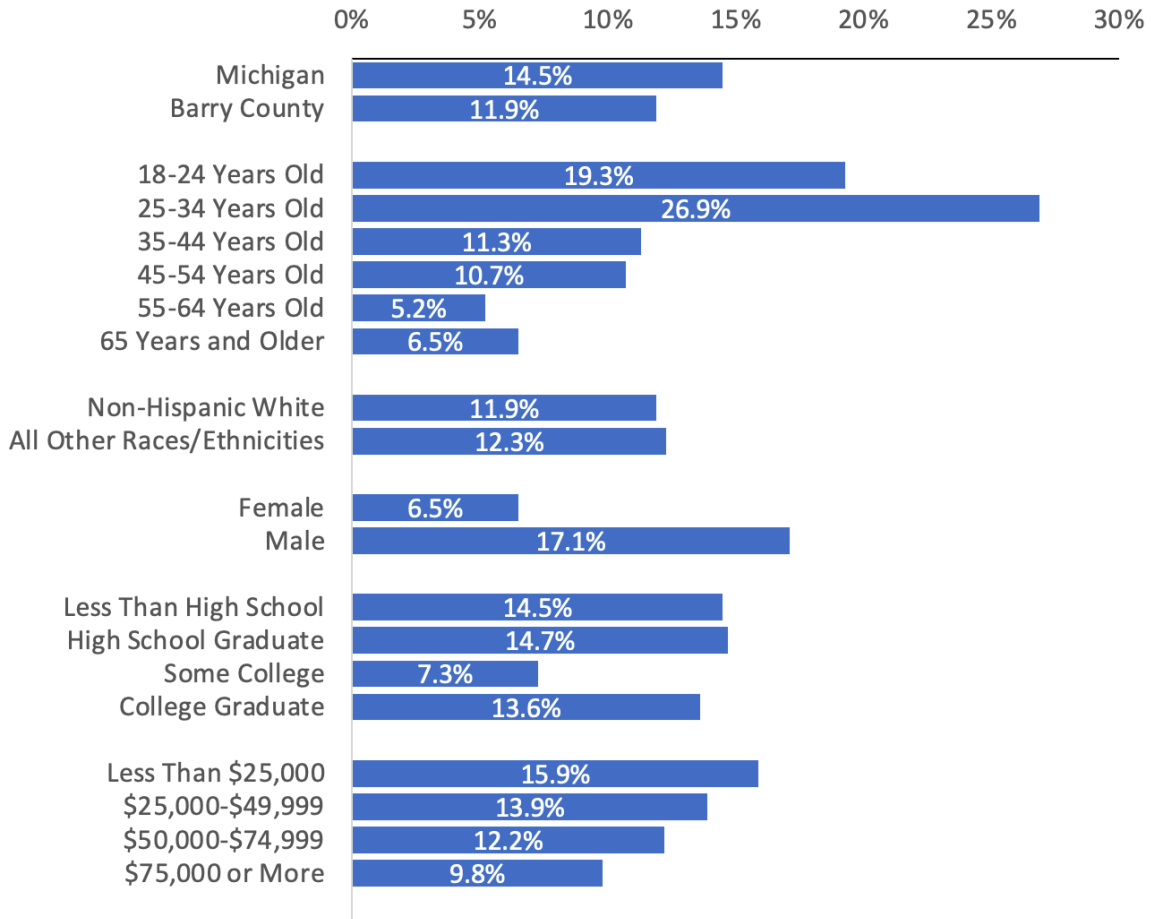
Indicators

- Adults With No Primary Care Provider
- Adults Who Could Not See a Doctor When Needed Due to Costs Within the Past 12 Months
- Adults With No Dental Care Within the Past 12 Months
- Breast Cancer Screening Among Women 40 Years and Older
- Colon Cancer Screening Among Adults 50 Years and Older

Adults With No Primary Care Provider

Barry County (11.9%) had fewer adults reporting not having a primary care provider than Michigan (14.5%). Eighteen- to 24-year-olds and 25- to 34-year-olds were two to three times more likely to report not having a primary care provider than the other age groups. Males were almost three times more likely to report not having a primary care provider than females. People with some college education were half as likely to report not having a primary care provider. As income levels increased, the percentage of adults reporting not having a primary care provider decreased (Figure 29).^{22,23}

Figure 29: Adults With No Primary Care Provider



Sources:

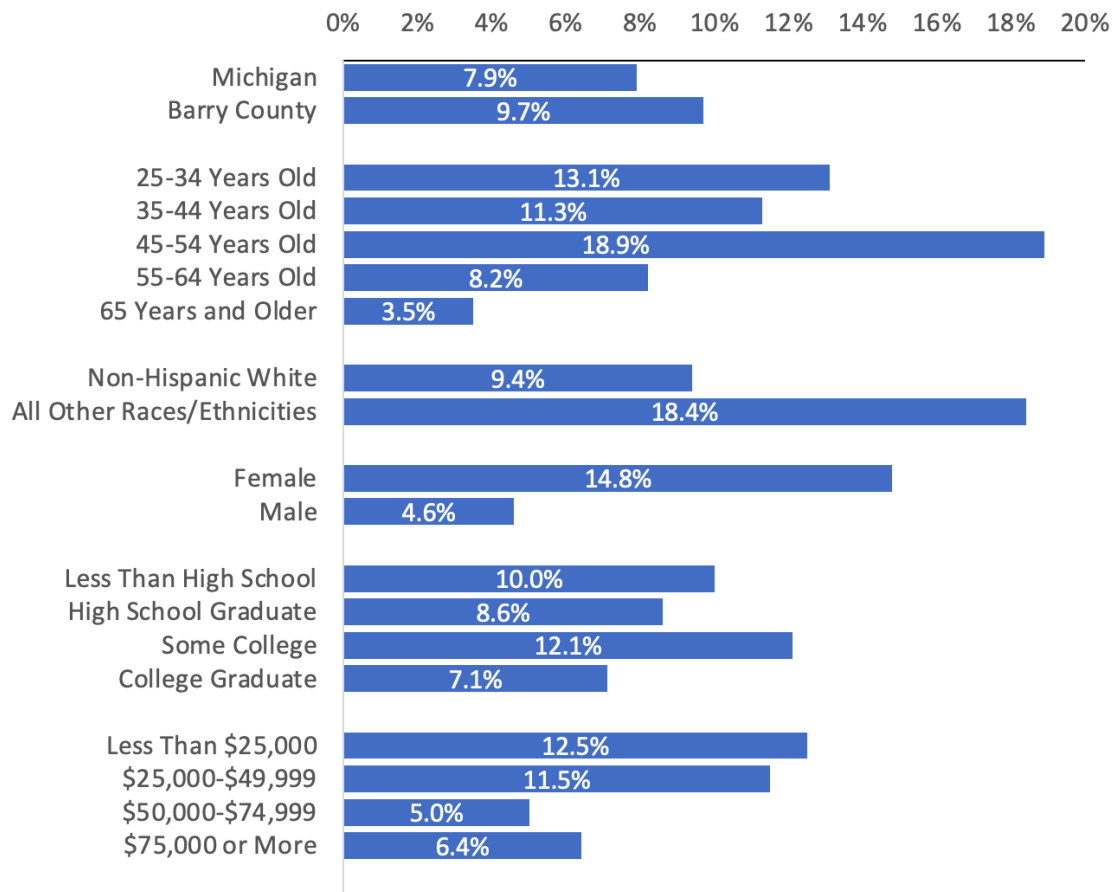
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

Adults Who Could Not See a Doctor When Needed Due to Costs Within the Past 12 Months

Barry County (9.7%) had more adults reporting that they could not see a doctor when they needed to due to costs than Michigan (7.9%) during the past year. Other than the 45- to 54-year-olds (18.9%), as age levels increased, fewer adults reported that they could not see a doctor when needed in Barry County. Non-Hispanic White people were half as likely to report that they could not see a doctor when needed compared to all other races and ethnicities. Females were three to four times as likely to report not seeing a doctor when needed. The highest income levels, \$50,000 to \$74,999 and \$75,000 or more, were half as likely to report that they could not see a doctor when needed compared to the two other income levels (Figure 30).^{22,23}.

Figure 30: Adults Who Could Not See a Doctor When Needed Due to Costs Within the Past 12 Months



Sources:

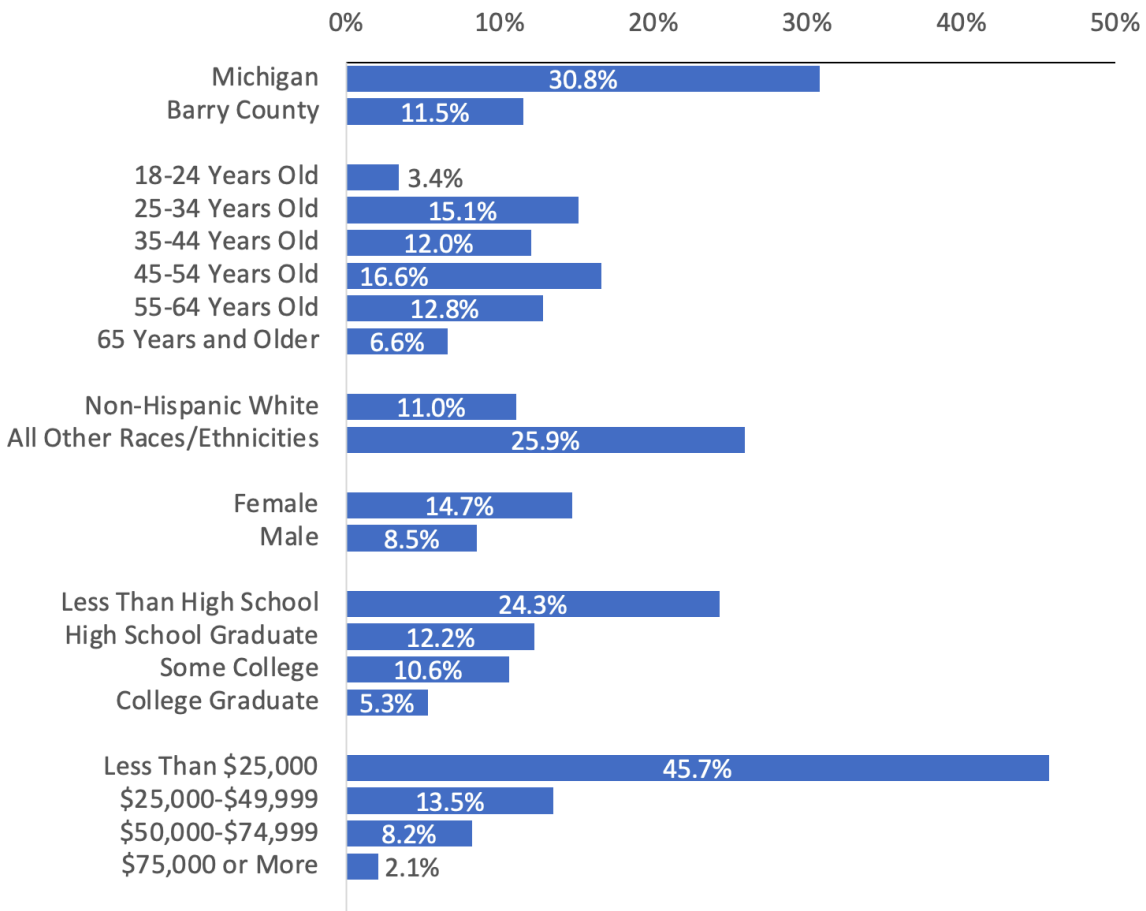
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

Adults With No Dental Care Within the Past 12 Months

Barry County (11.5%) had fewer adults reporting not visiting a dentist than Michigan (30.8%) during the past year. Non-Hispanic White people were half as likely to report not visiting a dentist compared to the other races and ethnicities. Males were almost half as likely to report not visiting a dentist. Those with less than a high school education were twice as likely to report not visiting a dentist than high school graduates or those who attended some college, and they were five times more likely than college graduates. Those with a household income less than \$25,000 were four to five times more likely to report not visiting a dentist than people from the other income levels (Figure 31).^{22,23}

Figure 31: Adults With No Dental Care Within the Past 12 Months



Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

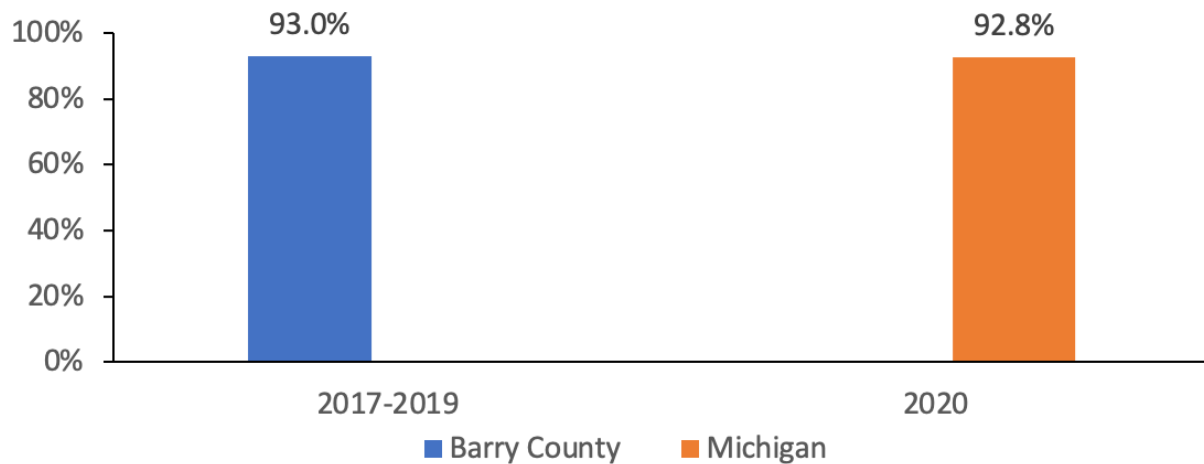
2020 MDHHS Behavioral Risk Factor Survey

Breast Cancer Screening Among Women 40 Years and Older

In 2018, breast cancer caused 1,488 deaths among Michigan women. Screenings are essential for the early detection of breast cancer. The Centers for Disease Control and Prevention recommends that women who do not have a family history of breast cancer or do not have the genes associated with breast cancer begin screening between 40 and 49 years old.²⁴

In Barry County, 93.0% of women over 40 years of age reported having a mammography screening. In Michigan, 92.8% of women over age 40 had a screening in 2020 (Figure 32).^{22,23} Data regarding mammography screenings was not reported for Michigan in 2019.²⁵

Figure 32: Mammography Screening – Ever Had Mammogram, Age 40+ Years



Sources:

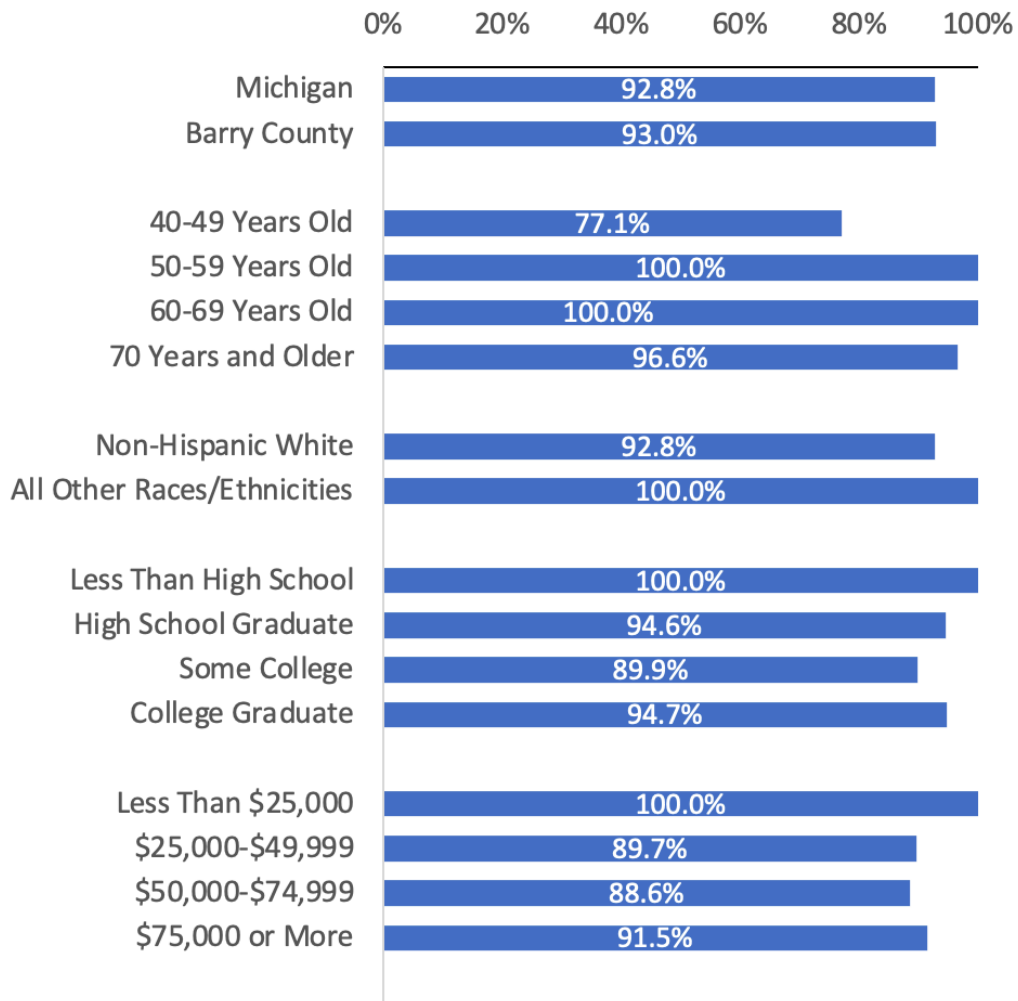
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

In Barry County, 93.0% of women over 40 have had a mammogram. Nearly three out of four women between the ages of 40 and 49 have had a mammogram. In contrast, nearly 100% of women age 50 and older reported ever having a mammogram.

Regarding the highest education level attained, the highest percentage of women having a mammogram was found among those with less than a high school education (100.0%) and the lowest percentage among those with some college education (89.9%). Women with an income less than \$25,000 had the highest percentage of women ever having a mammogram (100.0%) compared to the other income groups (88.6% to 91.5%) (Figure 33).^{22,23}

Figure 33: Demographic Characteristics of Women 40 and Older Who Ever Had a Mammogram



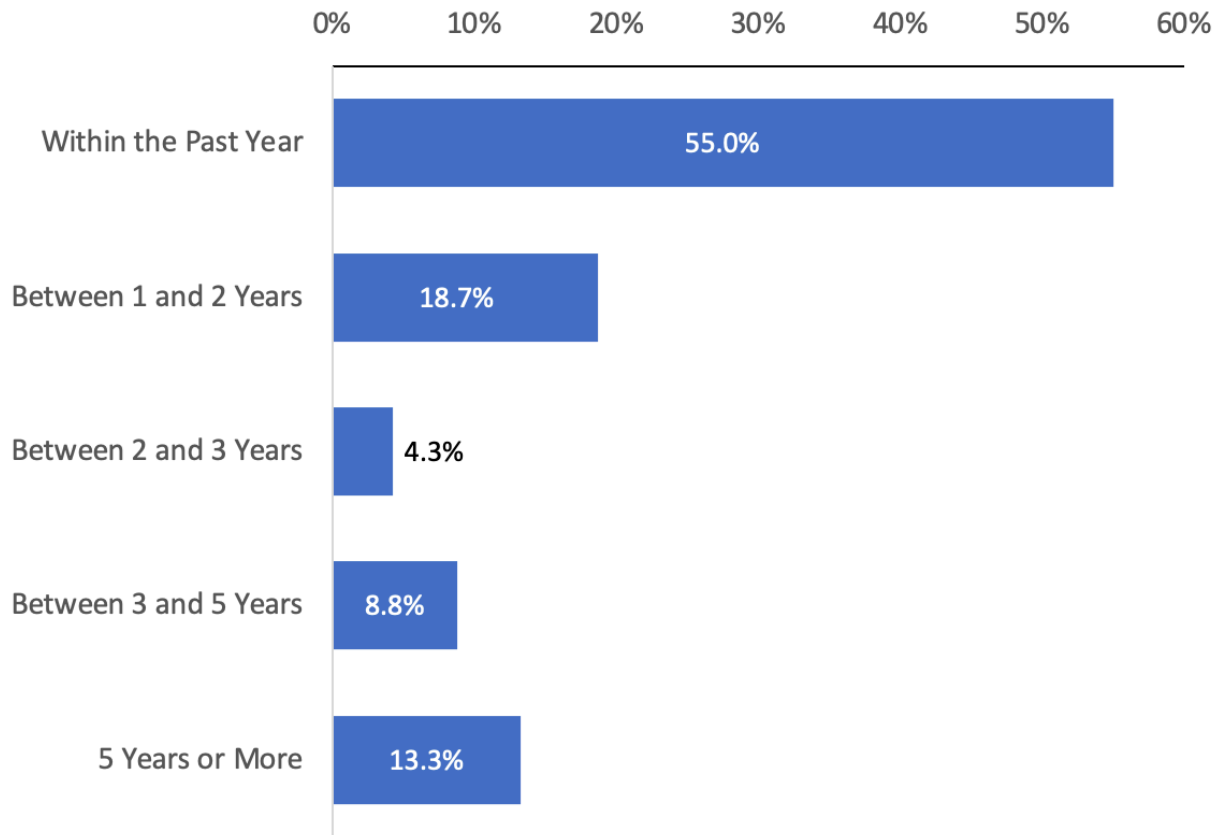
Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

Among women age 40 and older, 55.0% reported having their last mammogram within the past 12 months. For 8.8% of women, their last mammogram was between three and five years ago, and 13.3% reported that it had been five years or more since their last screening (Figure 34).²²

Figure 34: Adult Women Age 40 Years and Older Last Reported Mammogram Screening by Demographic Group, Barry County Residents, 2017-2019



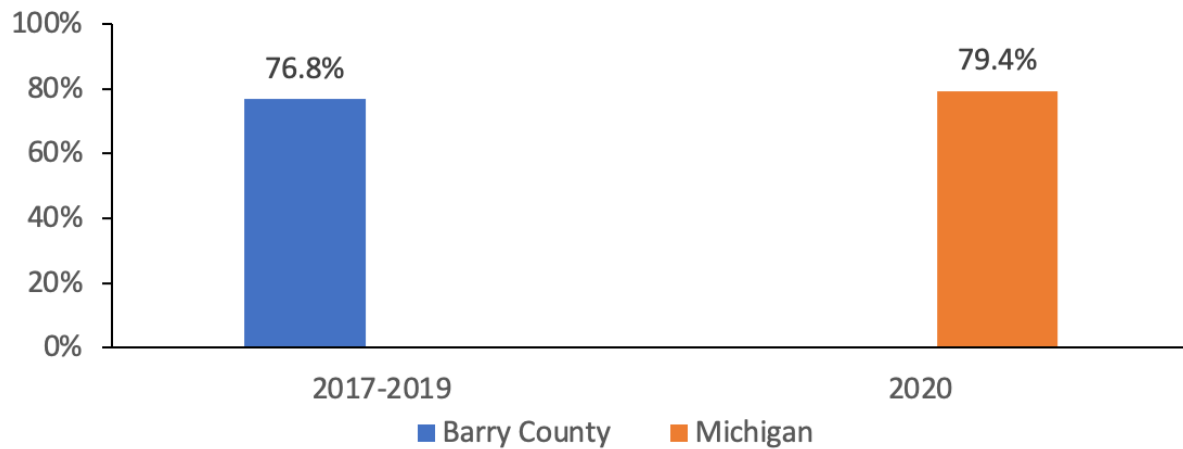
Source: 2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

Colon Cancer Screening Among Adults 50 Years and Older

Colorectal cancer is the second most common cause of cancer death in the United States. When caught early, colorectal cancer is very treatable. Fortunately, colonoscopies are an effective screening tool to detect and, if possible, remove cancerous cells.²⁶

The percentage of adults age 50 years and older reporting ever having a colonoscopy/sigmoidoscopy was slightly lower in Barry County (76.8%) than in Michigan (79.4%) (Figure 35).^{22,23}

Figure 35: Adults 50 Years Old and Older Who Ever Had a Colonoscopy/Sigmoidoscopy in Barry County and Michigan



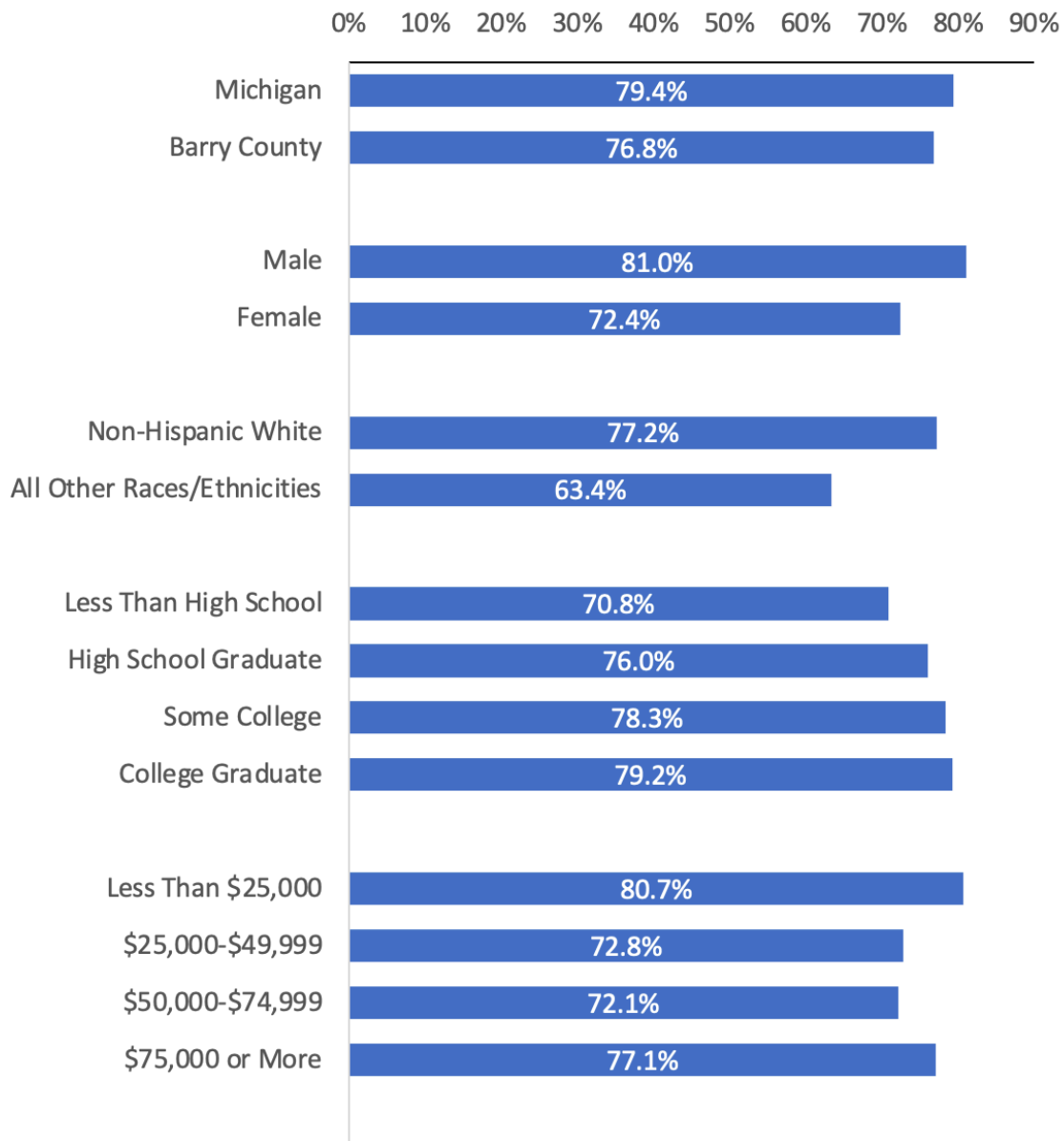
Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

In Barry County, males (81.0%) were more likely than females (72.4%) to ever have a colonoscopy. Non-Hispanic White people (77.2%) had a higher percentage of colonoscopy than all other races and ethnicities combined (63.4%). Those with less than a high school education were less likely to have a colonoscopy (70.8%) than the other education levels (76.0% to 79.2%). Adults 50 years and older with an income less than \$25,000 (80.7%) were more likely to have ever had a colonoscopy than the other income levels (72.1% to 77.1%) (Figure 36).^{22,23}

Figure 36: Demographic Characteristics of Adults 50 Years and Older Who Ever Had a Colonoscopy/Sigmoidoscopy



Sources:
 2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only
 2020 MDHHS Behavioral Risk Factor Survey



Financial Security and Economic Stability

According to the International Committee of the Red Cross, financial security or economic stability is defined as the “ability of individuals, households or communities to cover their essential needs sustainably and with dignity.”²⁷ Income and health have a strong association with each other. Poverty is strongly associated with increased morbidity and mortality. Poor health will likely cause a person to miss work, resulting in a reduced income.²⁸

Indicators

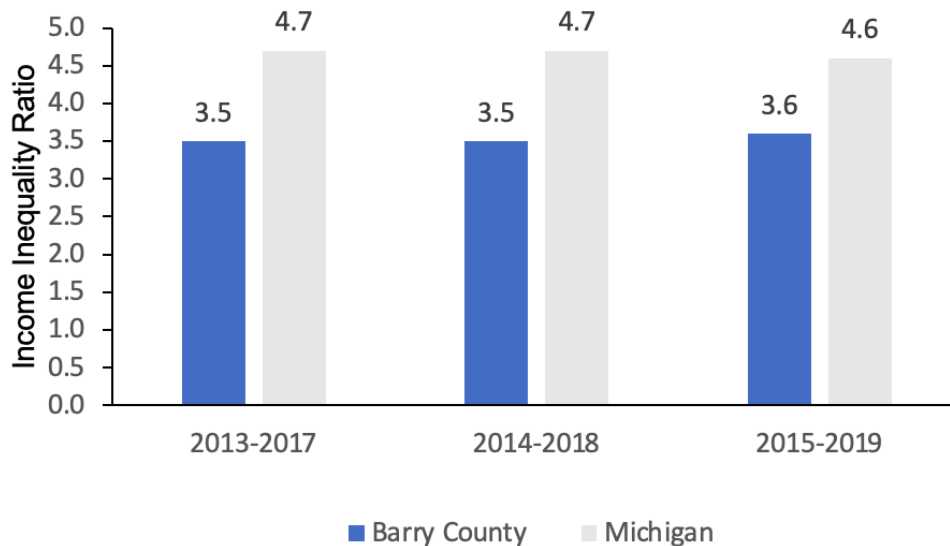
- Income Inequality
- Households Below ALICE Threshold
- Households Who Spend More Than 30% of Their Income on Housing
- Food Insecurity

Income Inequality

Income inequality has been shown to increase the prevalence of poverty, increase stress, reduce the sense of community and harm health.²⁹ In Figure 37, the income inequality ratio is defined as the ratio of household income at the 80th percentile to household income at the 20th percentile.

In Barry County, the income inequality ratio was lower (3.5 to 3.6) than in Michigan (4.6 to 4.7) across all three five-year periods. Across the three periods, the income inequality ratio was stable for Barry County and Michigan.³⁰

Figure 37: Income Inequality Ratio



Source: 2019-2021 County Health Rankings

Households Below ALICE Threshold

An acronym for Asset Limited, Income Constrained and Employed, ALICE, is the households with income above the federal poverty level but below the basic cost of living. The ALICE Threshold “represents the minimum income level necessary for survival for a household” and includes those below the federal poverty level and those above the FPL but not making enough income to meet basic needs.³¹ The Household Survival Budget is the bare-minimum costs of basic necessities, including housing, child care, food, transportation, health care and a smartphone plan.

In Barry County, the annual Household Survival Budget is \$24,288 per single adult, \$35,196 for two adults, and between \$53,988 and \$66,108 for a family of two adults and two children (Table 11).³²

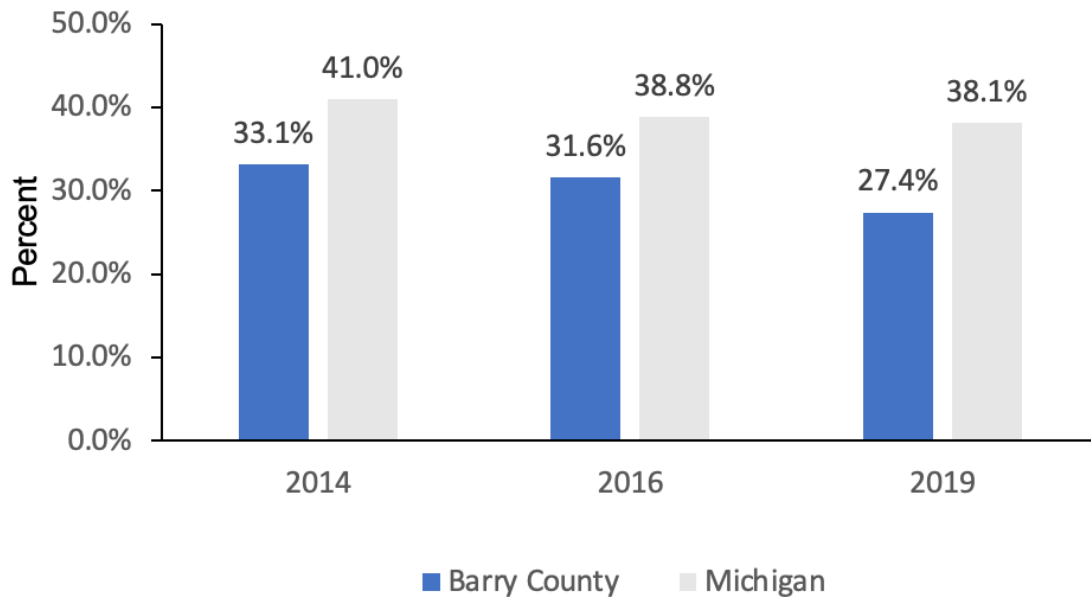
Table 11: ALICE Household Survival Budget, Barry County, 2019

	Single Adult	One Adult, One Child	One Adult, One in Child Care	Two Adults	Two Adults, Two Children	Two Adults, Two in Child Care	Single Senior	Two Seniors
Housing	\$634	\$696	\$696	\$696	\$894	\$894	\$634	\$696
Child Care	\$0	\$216	\$649	\$0	\$431	\$1,224	\$0	\$0
Food	\$227	\$395	\$330	\$473	\$792	\$691	\$196	\$404
Transportation	\$457	\$606	\$606	\$647	\$929	\$929	\$406	\$545
Health Care	\$189	\$403	\$403	\$403	\$569	\$569	\$455	\$909
Technology	\$55	\$55	\$55	\$75	\$75	\$75	\$55	\$75
Miscellaneous	\$184	\$265	\$310	\$267	\$409	\$501	\$203	\$301
Taxes	\$278	\$283	\$364	\$372	\$400	\$626	\$287	\$379
Monthly Total	\$2,024	\$2,919	\$3,413	\$2,933	\$4,499	\$5,509	\$2,236	\$3,309
Annual Total	\$24,288	\$35,028	\$40,956	\$35,196	\$53,988	\$66,108	\$26,832	\$39,708
Hourly Wage	\$12.14	\$17.51	\$20.48	\$17.60	\$26.99	\$33.05	\$13.42	\$19.85

Source: ALICE Household Survival Budget – Barry County, Michigan, 2019, United Way of Northern New Jersey, United for Alice

The percentage of households below the ALICE Threshold in Barry County was lower than in Michigan across the three periods. The percentage of households below the ALICE Threshold in Barry County (from 33.1% in 2014 to 27.4% in 2019) and Michigan (from 41.0% in 2014 to 38.1% in 2019) declined from 2014 to 2019 (Figure 38).³⁰

Figure 38: Percentage of Households Below ALICE Threshold

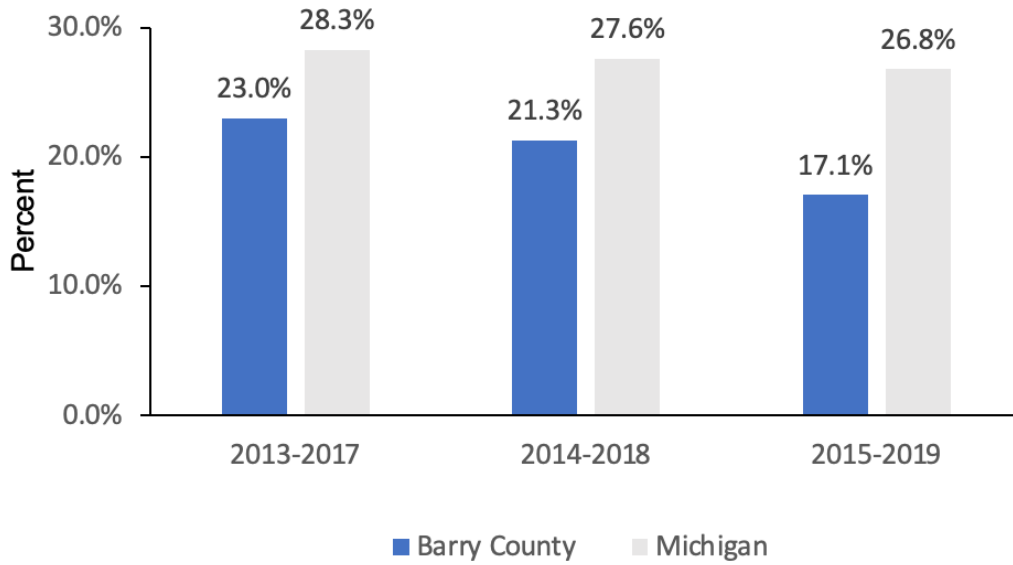


Source: ALICE Household Survival Budget – Barry County, Michigan, 2019, United Way of Northern New Jersey, United for Alice

Households That Spend More Than 30% of Their Income on Housing

The percentage of households that spend more than 30% of their income on housing was lower in Barry County than in Michigan across the three five-year periods. From 2013-2017 to 2015-2019, the percentage of households that spend more than 30% of their income on housing declined in Barry County (from 23.0% to 17.1%) and in Michigan (from 28.3% to 26.8%) (Figure 39).³³⁻³⁵

Figure 39: Percentage of Households That Spend More Than 30% of Their Income on Housing

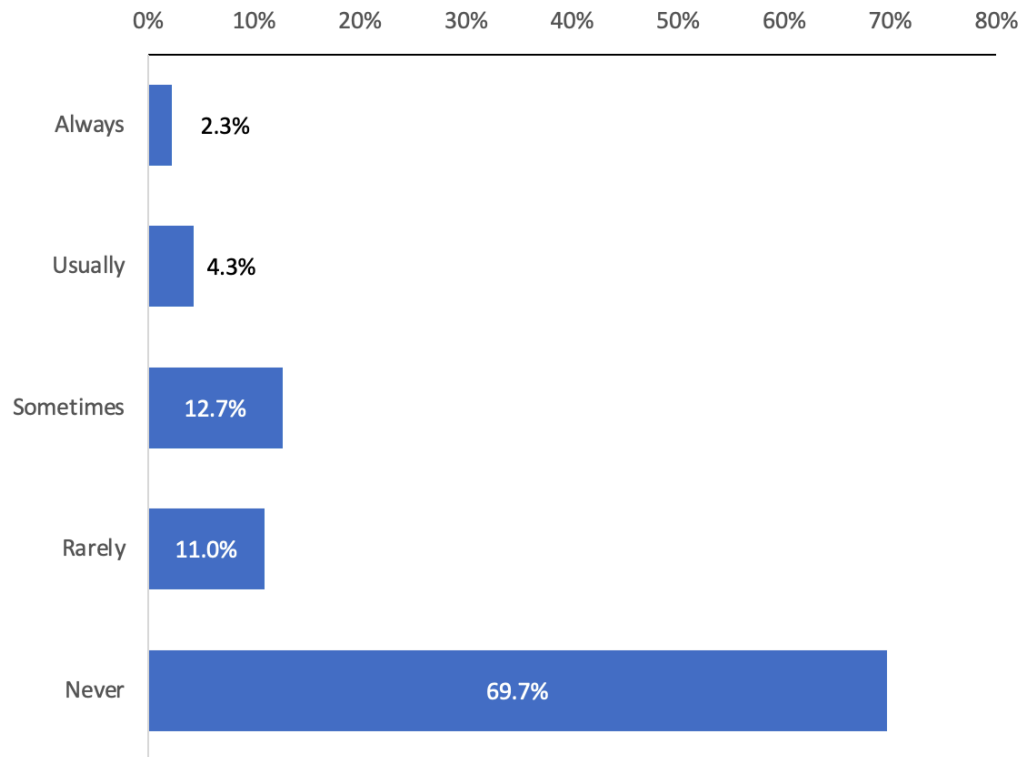


Source: U.S. Census Bureau: 2017-2019 American Community Survey 5-Year Estimates, Table S2503

Food Insecurity

The majority of adults in Barry County were never worried or stressed about having enough money to buy nutritious meals in the past 12 months. However, 2.3% of adults were always, and 4.3% of adults were usually stressed about having enough money for these purchases (Figure 40).²²

Figure 40: Adults Worried or Stressed About Having Enough Money To Buy Nutritious Meals



Source: 2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only



Education

Education is vital to improving the health of a community. Increased access to quality education and educational attainment helps promote health equity and reduces disparities. Quality education can lead to better opportunities that increase income and improve overall health.

Indicators

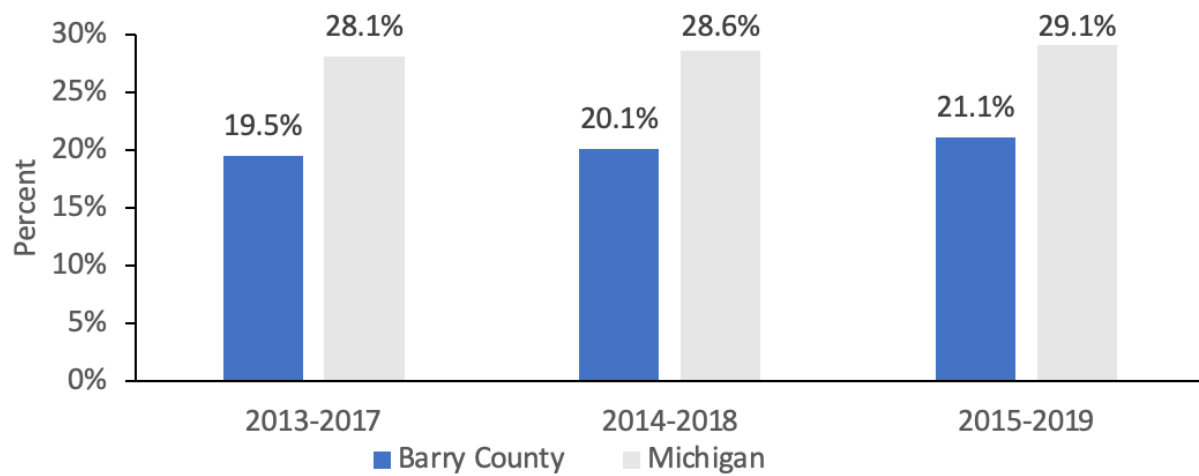
- Adults Age 25 and Older With a Bachelor's Degree or Higher

Adults 25 Years of Age and Older With a Bachelor's Degree or Higher

Those who have attained a bachelor's degree or higher have better health and economic outcomes than those who have completed high school or some college. Figure 41 shows the percentage of adults with a bachelor's degree or higher.

The percentage of adults age 25 and older with a bachelor's degree or higher was significantly lower in Barry County (19.5% to 21.1%) than in Michigan (28.1% to 29.1%) over the three five-year periods. However, for both Barry County and Michigan, the percentage of adults age 25 and older with a bachelor's degree or higher slightly increased over the three five-year periods.³⁶⁻³⁸

Figure 41: Adults With a Bachelor's Degree or Higher, Age 25+ Years



Source: U.S. Census Bureau: 2017-2019 American Community Survey 5-Year Estimates, Table S1501



Environmental Quality

The environment has a significant impact on health. The World Health Organization estimated that globally, “24% of the disease burden (healthy life years lost) and an estimated 23% of all deaths (premature mortality) was attributable to environmental factors.”³⁹ According to Healthy People 2020, “poor environmental quality has its greatest impact on people whose health status is already at risk.”⁴⁰

Indicators

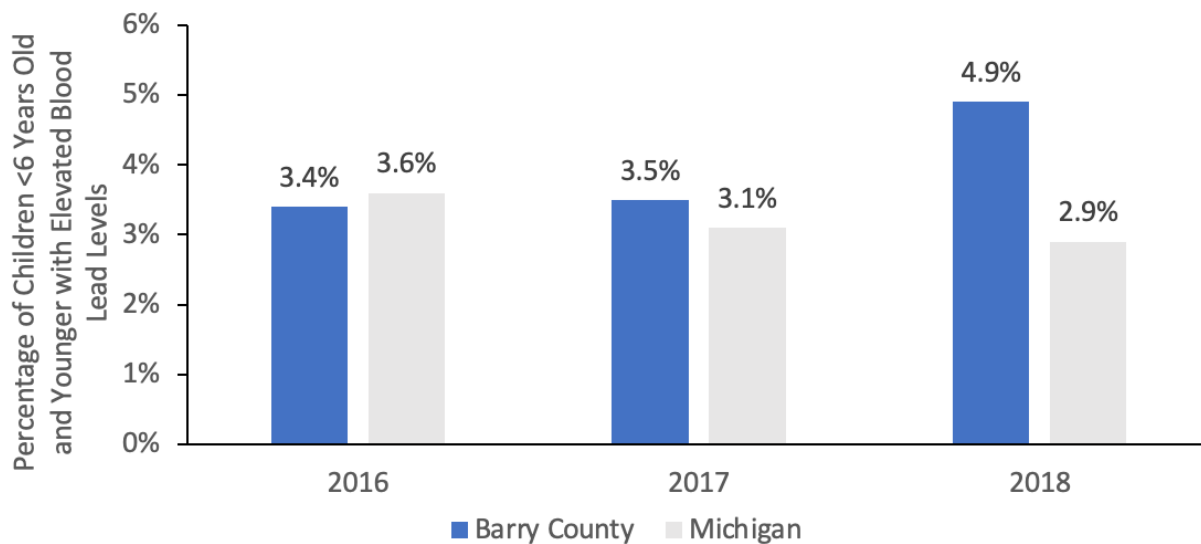
- Elevated Blood Lead Levels Among Children 6 Years and Younger
- Air Pollution (PM2.5)

Elevated Blood Lead Levels Among Children 6 Years and Younger

Lead exposure, from touching, swallowing, or breathing in lead or lead dust, has produced adverse effects, especially in children. There has not been a safe blood lead level identified in children. Lead exposure has been shown to damage the brain and nervous system, slowing growth and development in children, resulting in learning and behavior problems, as well as hearing and speech problems.⁴¹ Lead exposure can come from various sources, including lead in water pipes, lead dust from lead paint, and lead dust in the soil around the house. An elevated blood lead level is defined as having a blood lead level of $\geq 5 \mu\text{g}/\text{dL}$.⁴²

The percentage of children under the age of 6 with elevated blood lead levels was lower in Barry County than in Michigan in 2016. However, since 2017, the percentage of children with an elevated blood lead level has been higher in Barry County (3.5% in 2017 and 4.9% in 2018) than in Michigan (3.1% in 2017 and 2.9% in 2018) (Figure 42).⁴²

Figure 42: Percentage of Children 6 Years and Younger With Elevated Blood Lead Levels



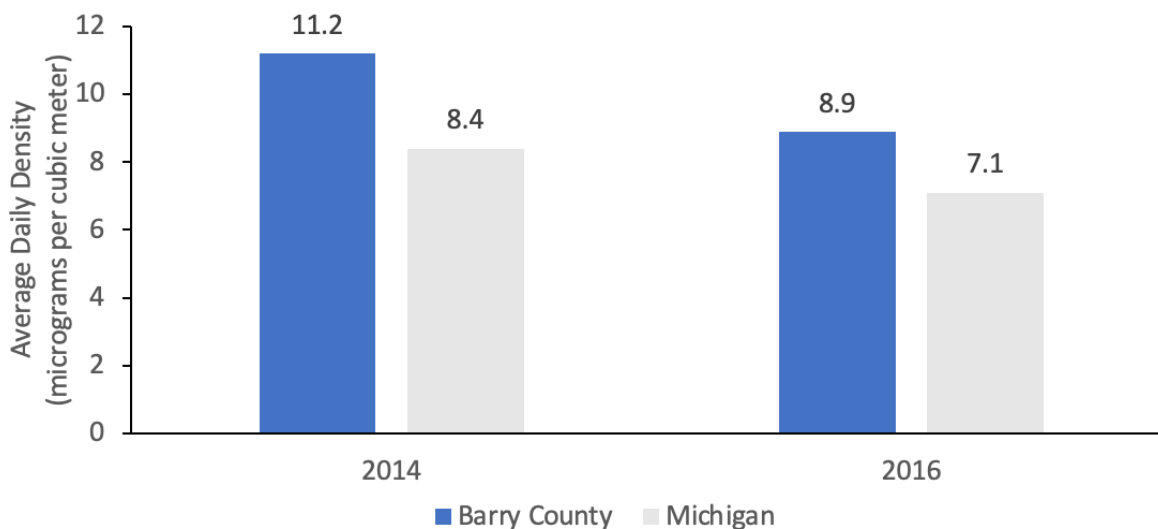
Source: Annual Data Report on Childhood Blood Lead Testing in Michigan, Michigan Department Health and Human Services, 2018

Air Pollution—Particulate Matter

Poor air quality and pollution harm health and cause chronic bronchitis, decreased lung function, asthma and other adverse effects. In Figure 43, air pollution is defined as the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5). PM2.5 can come from a variety of sources—traffic, coal-fired power plants, industry and more—and although some particulates are emitted directly from these sources, much of it forms in the air when chemicals, such as sulfates, nitrates and volatile organics, react or condense to form fine particles.⁴³

Between 2014 and 2016, the average daily density of fine particulate matter in micrograms per cubic meter was higher in Barry County (11.2 in 2014 and 8.9 in 2016) than in Michigan (8.4 in 2014 and 7.1 in 2016). However, the average daily density of fine particulate matter has decreased over the same period in Barry County and Michigan.⁴⁴

Figure 43: Air Pollution – Particulate Matter



Source: 2014-2016 CDC Tracking Network



Built Environment and Transportation

Safe and affordable housing, neighborhoods and built environments shape lives and affect residents' health. Poor housing conditions, air quality and water quality, and limited access to healthy foods can lead to injuries, poor health and poor outcomes.^{45,46}

Motorized vehicle transportation contributes to morbidity and mortality. Increased driving leads to an increased risk of an accident, mental stress, physical inactivity and air pollution, which can be detrimental to people's overall health and well-being.⁴⁷

Indicators

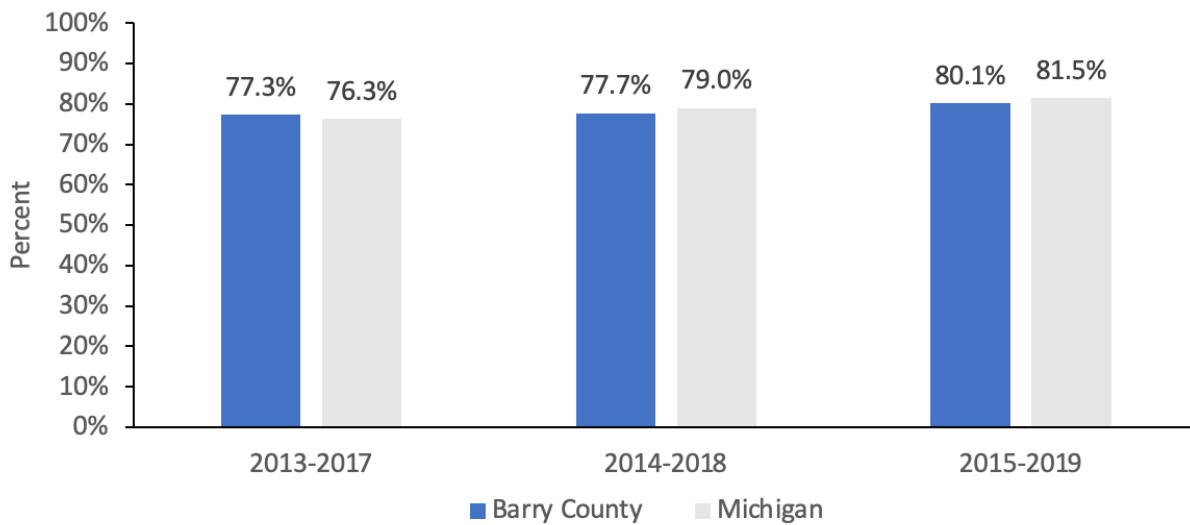
- Broadband Internet Subscriptions
- Transportation Accidents

Broadband Internet Subscription

Broadband internet access is a social determinant of health and affects the health and quality of life of an individual and household. People without broadband internet are likely to have poor health outcomes and lower quality of education. Health care delivery via telemedicine, health literacy and health prevention efforts can be limited without broadband internet.⁴⁸ Studies have shown that students without broadband internet had trouble completing schoolwork.⁴⁹ Figure 44 shows the percentage of households with a broadband internet subscription.

The percentage of households with broadband internet was lower in Barry County than in Michigan during the 2014-2018 and 2015-2019 periods. From 2014-2017 to 2015-2019, households with broadband internet increased in Barry County (from 77.3% to 80.1%) and Michigan (from 76.3% to 81.5%).⁵⁰⁻⁵²

Figure 44: Broadband Internet Subscription



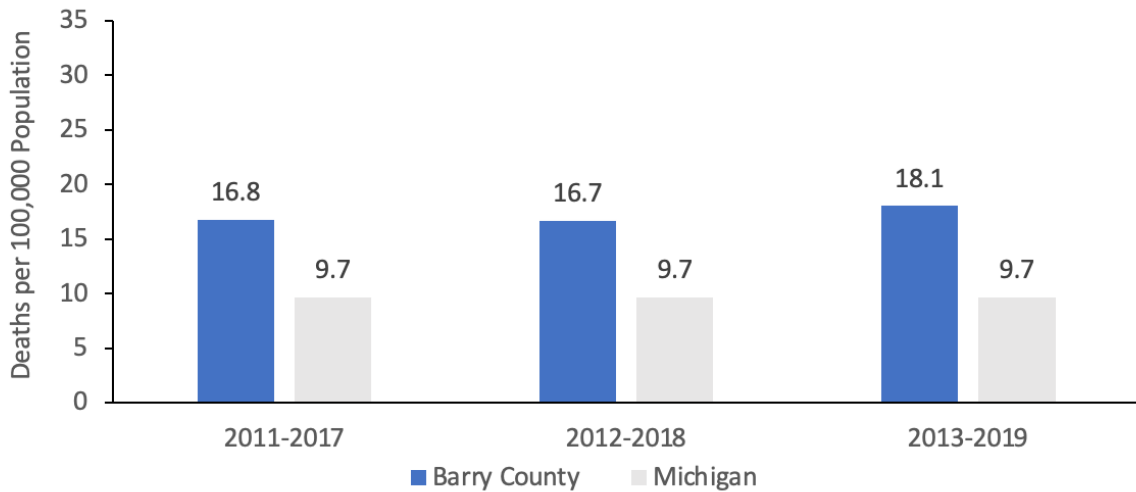
Source: U.S. Census Bureau: 2017-2019 American Community Survey 5-Year Estimates, Table S2801

Motor Vehicle Crash Deaths per 100,000 Population

In Figure 45, the number of motor vehicle crashes resulting in death is defined as the number of motor vehicle crash deaths per 100,000 population.

The number of motor vehicle crash deaths per 100,000 population was higher in Barry County (16.7-18.1 deaths per 100,000 population) than in Michigan (9.7 deaths per 100,000 population) over the three four-year periods. The number of deaths per 100,000 remained steady in Michigan; however, there was an increase in Barry County from 2012-2018 to 2013-2019.⁵³

Figure 45: Motor Vehicle Crash Deaths per 100,000 Population



Source: 2011-2017 through 2013-2019 CDC Wonder Data



Social Connection and Capital

Healthy People 2030 defines social and community context as the “connection between characteristics of the contexts within which people live, learn, work, and play and their health and well-being.”⁵⁴ According to the Robert Wood Johnson Foundation, people with an increased “sense of security, belonging, and trust in their community have better health. People who don’t feel connected are less inclined to act in healthy ways or work with others to promote well-being for all.”⁵⁵

Indicators

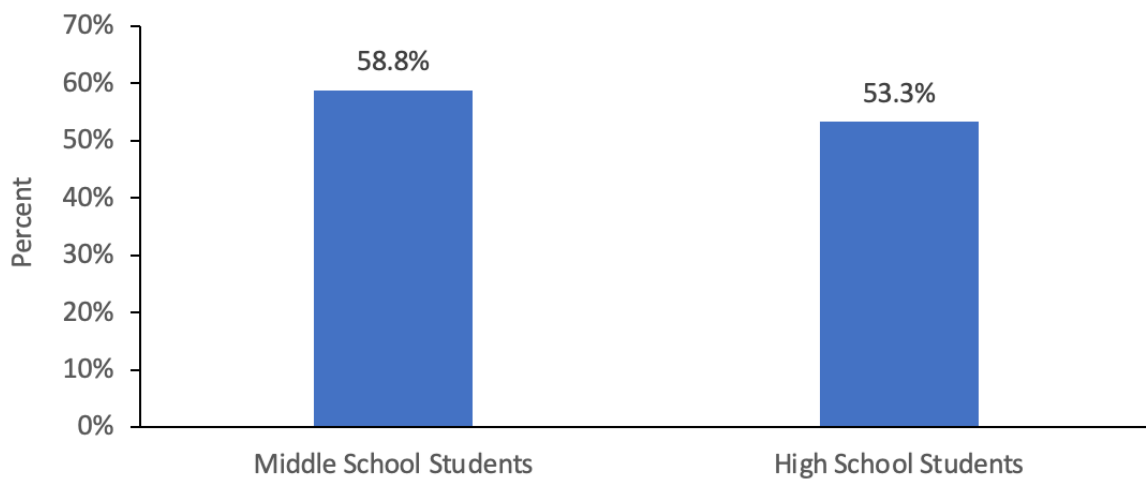
- Adolescents Who Know Adults in the Neighborhood They Could Talk to About Something Important

Adolescents Who Know Adults in the Neighborhood They Could Talk to About Something Important

Non-parent adults who are positive and supportive can contribute to an adolescent's self-esteem, problem-solving behavior and overall resilience. Research has shown that adolescents with positive support from non-parental adults have a better attitude toward school, increased academic achievements, and fewer behavioral and emotional problems.^{56, 57}

In 2017, the percentage of high school students who knew adults in the neighborhood they could talk to about something important was 53.3%, and the percentage among middle school students was 58.8% (Figure 46).⁵⁸

Figure 46: Adolescents Who Know Adults in the Neighborhood They Could Talk to About Something Important, 2017-2018



Source: 2017-2018 County Reports—School Health Survey, Michigan Department of Education



Morbidity and Mortality

Mortality

Mortality data is a great indicator of the general health of and life expectancy in a community. In addition to looking at life expectancy, mortality data can be used to identify patterns in a community, including trends in the leading causes of death or premature death rates.⁵⁹

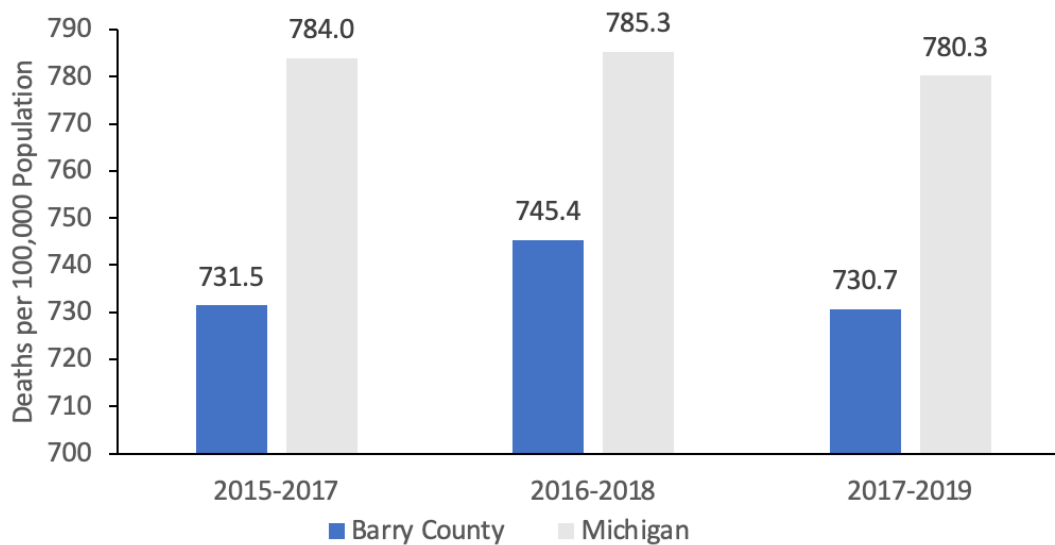
Indicators

- Age-Adjusted Mortality Rate
- Leading Causes of Death
- Premature Death Rate
- Suicide Rate

Age-Adjusted Mortality Rate

The three-year age-adjusted mortality rate per 100,000 population was significantly lower in Barry County than in Michigan across the three periods. The age-adjusted deaths per 100,000 population remained steady for Barry County (between 730.7 and 745.4 deaths per 100,000 population) and Michigan (between 780.3 and 785.3 deaths per 100,000 population), over 2015-2017 to 2017-2019 (Figure 47).⁶⁰

Figure 47: Age-Adjusted Mortality Rates per 100,000 Population



Source: Community Health Information – Mortality, Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics.

Leading Causes of Death

The most common cause of death in Barry County (between 165.3 and 170.9 deaths per 100,000 population) and Michigan (between 195.0 and 198.0 deaths per 100,000 population) was heart disease. The second most common cause of death for both Barry County (between 151.9 and 168.6 deaths per 100,000 population) and Michigan (159.7 and 164.9 deaths per 100,000 population) was cancer (Table 12).⁶⁰

Table 12: Leading Causes of Death – Age-Adjusted Rates per 100,000 Population

Causes of Death	Barry County			Michigan		
	2015-2017	2016-2018	2017-2019	2015-2017	2016-2018	2017-2019
All Causes of Death	731.5	745.4	730.7	784.0	785.3	780.3
Heart Disease	165.3	167.6	170.9	198.0	197.4	195.0
Cancer	168.6	166.9	151.9	164.9	163.1	159.7
Chronic Lower Respiratory Diseases	50.8	50.3	52.3	45.4	44.4	44
Unintentional Injuries	39.7	40.8	45.6	49.4	52.3	51.8
Stroke	35.1	40.6	40.0	38.5	39.5	39.5
Alzheimer's Disease	36.8	41.1	47.3	32.8	34.3	34.3
Diabetes Mellitus	21.5	28.6	22.2	22.0	21.9	22.1
Kidney Disease	9.1	Not Reported	8.8	14.9	14.7	14.6
Pneumonia/Influenza	14.8	13.7	12.1	14.3	14.1	13.8
Intentional Self-harm (Suicide)	20.3	15.6	14.0	13.5	14.0	14.3
Chronic Liver Disease and Cirrhosis	11.6	12.8	10.6	10.6	10.6	11.1

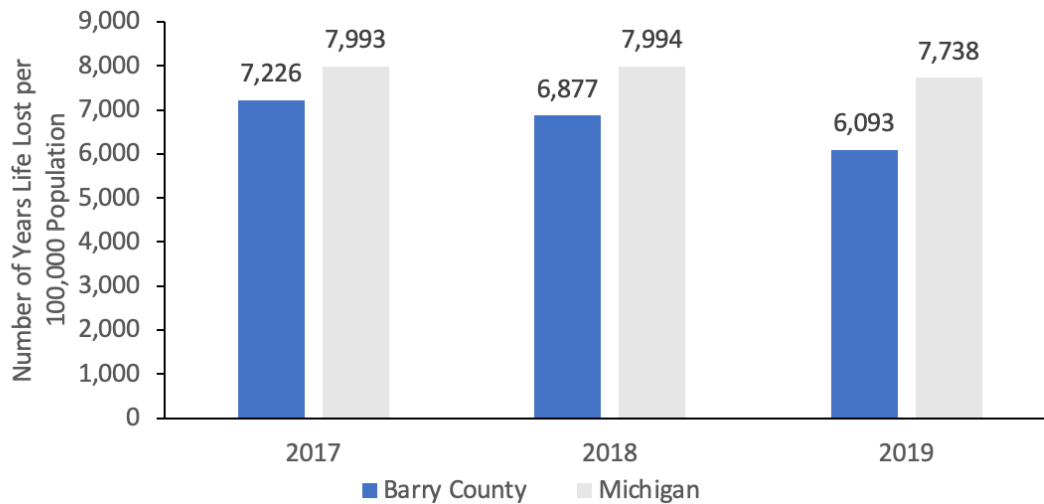
Source: Community Health Information – Mortality, Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics.

Premature Death Rate

One way to assess premature death is using Years of Potential Life Lost. YPLL assumes that a person's life expectancy is 75 years. A person who dies at 70 years old has lost five years of potential life. When calculating the years of potential life lost for a community, all of the potential life years lost over a year are summed. That sum is then divided by the total population of that area that year and then multiplied by 100,000.⁶¹

The total number of YPLL was lower in Barry County than in Michigan in 2017-2019. Since 2017, the total YPLL declined in Barry County (from 7,226 to 6,093) and Michigan (from 7,993 to 7,738) (Figure 48).⁶²

Figure 48: Years of Potential Life Lost per 100,000 Population



Source: Rates of Years of Potential Life Lost below Age 75 by Sex and Race, Barry County – Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics

The average YPLL was lower in Barry County than Michigan across the three three-year periods. From 2015-2017 to 2017-2019, the YPLL decreased from 6,855.8 to 6,729.8. in Barry County, while it remained relatively steady in Michigan (between 7,907.6 and 8,002.0).

The causes of deaths with the highest YPLL were related to malignant neoplasms, accidents, and heart diseases for Barry County and Michigan across the three periods. However, the YPLL from intentional self-harm or suicide was much higher in Barry County (between 453.1 and 703.4) than in Michigan (between 429.4 and 454.6) across the three periods (Table 13).⁶²

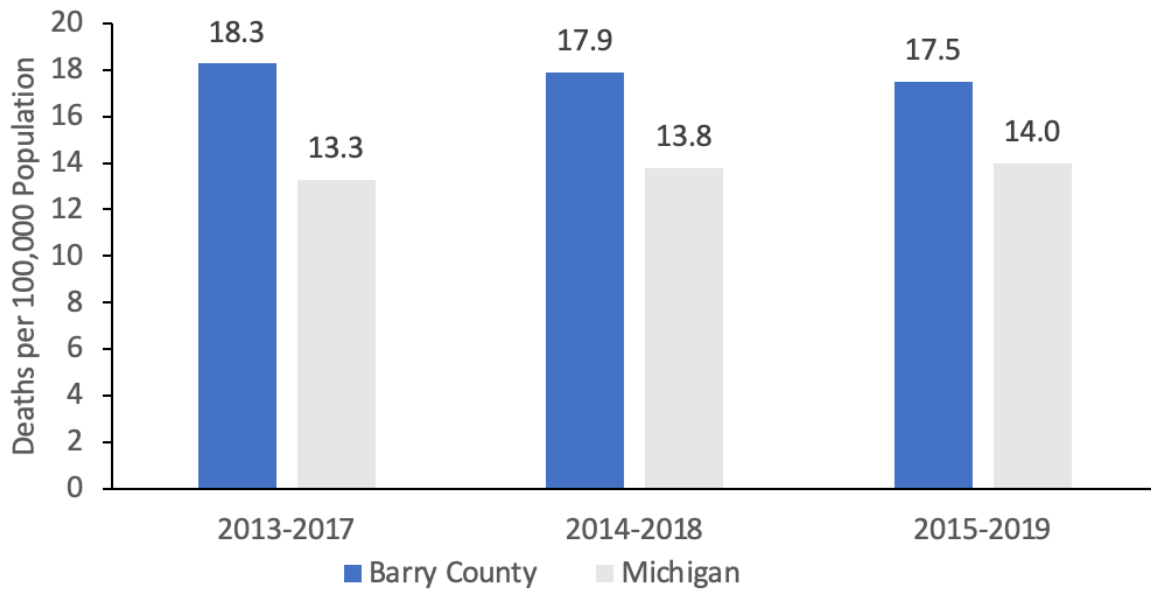
Table 13: Three-Year Average Rates of Years of Potential Life Lost Below Age 75 by Leading Conditions						
Cause of Death	Barry County			Michigan		
	2015-2017	2016-2018	2017-2019	2015-2017	2016-2018	2017-2019
All Causes	6,855.8	6,965.5	6,729.8	7,918.6	8,002.0	7,907.6
Malignant Neoplasms	1,733.1	1,733.1	1,588.9	1,601.9	1,579.6	1,549.7
Accidents	850.7	849.9	1,029.2	1,311.6	1,386.4	1,347.7
Diseases of the Heart	1,068.6	1175.2	1,147.5	1312	1,317.7	1,282.7
Intentional Self-Harm (Suicide)	703.4	519.3	453.1	429.4	447.1	454.6
Chronic Lower Respiratory Diseases	314.3	305.7	261.9	251.7	252.5	253.7
Chronic Liver Disease and Cirrhosis	143.7	160.2	135.3	206	204.2	216.1
Diabetes Mellitus	203.5	281.9	200.1	208.7	205.3	213
Cerebrovascular Diseases	156.8	208.9	224.8	180.8	182.5	180.2
Influenza and Pneumonia	71.8	71.2	55.9	93.3	98.9	100.2
Nephritis, Nephrotic Syndrome and	65.9	Not Reported	55.9	84.2	85.2	89
All Other Causes	1,066.8	1,086.7	1,035.1	1,383.4	1,390.0	1,390.2

Source: Rates of Years of Potential Life Lost below Age 75 by Sex and Race, Barry County – Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics

Suicide Rate

The age-adjusted suicide rate per 100,000 population was higher in Barry County than Michigan across the three five-year periods. There was a slight decline in the suicide rate in Barry County (from 18.3 to 17.5) and a slight increase in Michigan (from 13.3 to 14.0) between 2013-2017 and 2015-2019 (Figure 49).⁶³

Figure 49: Age-Adjusted Suicide Rates per 100,000 Population



Source: Critical Indicators, Barry County – Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics



Chronic Disease

Chronic disease is the leading cause of death and disability in the United States. According to the National Center for Chronic Disease Prevention and Health Promotion, chronic diseases are defined as “conditions that last one year or more and require ongoing medical attention or limits activities of daily living or both.” Six in 10 adults in the United States have a chronic disease, and four in 10 adults have two or more chronic diseases.

Indicators

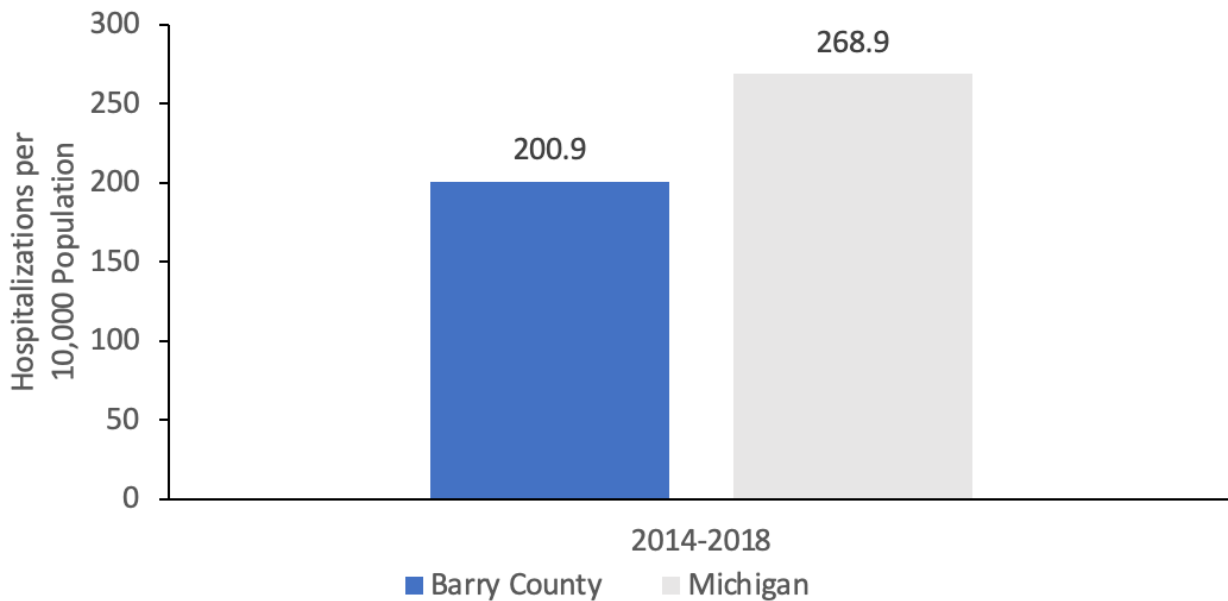
- Preventable Hospitalizations
- Prevalence of Diabetes
- Diabetes Hospitalizations
- Diabetes Management Education
- Congestive Heart Failure Hospitalizations Among Adults 65 Years and Older
- Chronic Obstructive Pulmonary Disease Hospitalizations
- Prevalence of Adult Asthma
- Prevalence of High Cholesterol
- Prevalence of High Blood Pressure
- Disability Rate

Preventable Hospitalizations

Ambulatory care sensitive conditions are health conditions or diagnoses for which timely and effective ambulatory care can reduce the risks of hospitalizations. ACSCs include, but are not limited to, asthma, diabetes, and dehydration.⁶⁴ High rates of hospitalizations due to ACSCs in a community may be an indicator of the lack or failure of prevention efforts; a primary care resource shortage; poor performance of primary health care delivery systems; or other factors that create barriers to obtaining timely and effective care, resulting in poor health outcomes.

In 2015-2019, the number of preventable hospitalizations per 10,000 population was lower in Barry County (200.9) than in Michigan (268.9) (Figure 50).⁶⁴

Figure 50: Preventable Hospitalizations per 10,000 Population



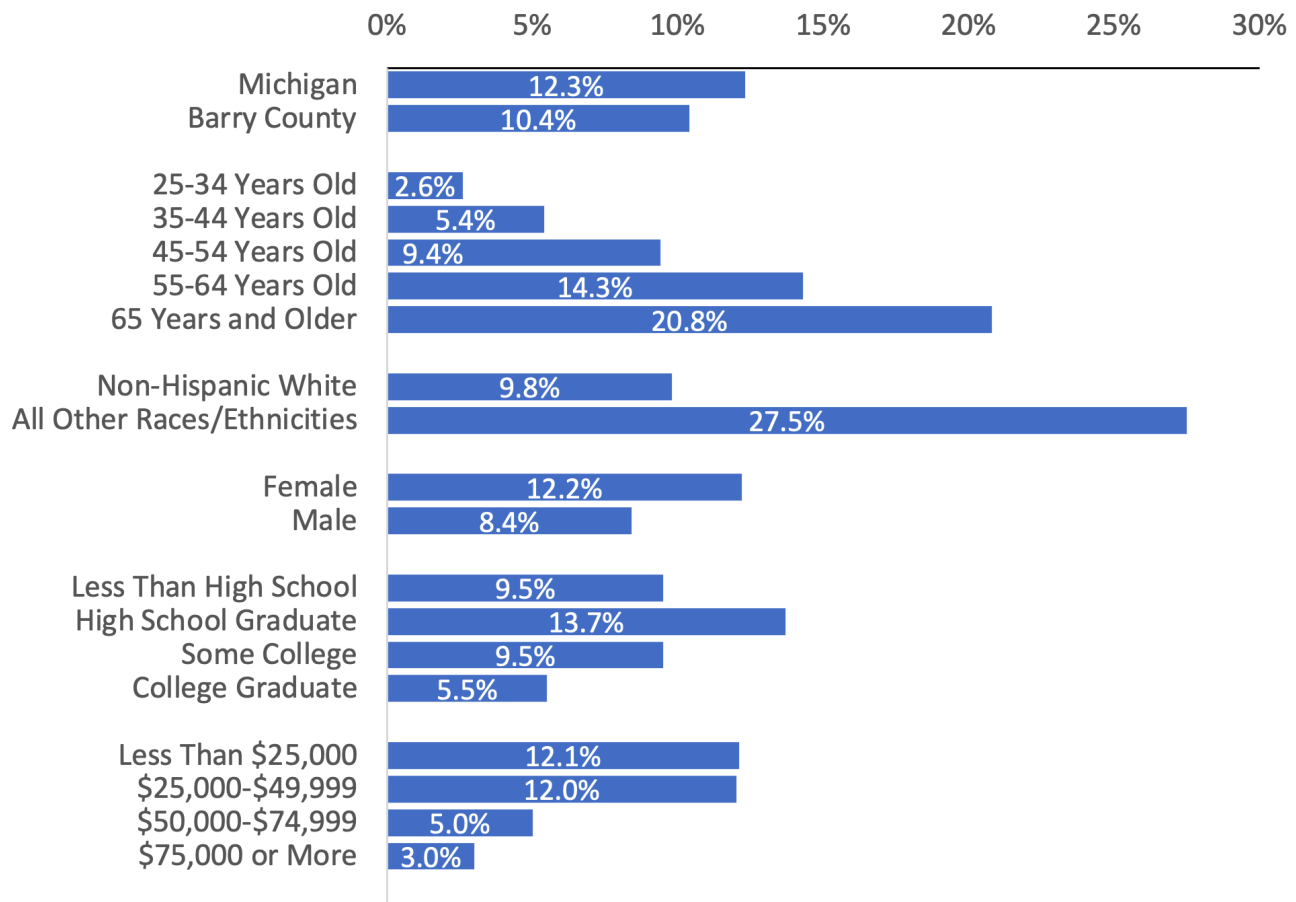
Source: 2003-2019 Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Michigan Department of Health and Human Services

Prevalence of Diabetes

Diabetes is a chronic disease in which the body's ability to metabolize carbohydrates and sugars is impaired. Complications from diabetes can include stroke, kidney failure, nerve damage, blindness and lower-limb amputations. When accounting for medical costs and loss of productivity, researchers estimated that diabetes cost the United States \$327 billion in 2017.⁶⁵ As the number of overweight and obese individuals increases, diabetes is also expected to increase.

In Figure 51, fewer adults in Barry County (10.4%) reported being ever told that they have diabetes than in Michigan (12.3%). The percentage of adults in each successive age group reporting ever being told they had diabetes increased (from 2.6% in 25- to 34-year-olds to 20.8% among those 65 years and older). Non-Hispanic White people were almost three times less likely to report ever being told they had diabetes. As income levels increased, the percentage of adults reporting they had diabetes decreased (from 12.1% among those with less than \$25,000 income to 3.0% among those with an income of \$75,000 or more).^{22,23}

Figure 51: Percentage of Adults with Diabetes by Demographic Characteristics



Sources:

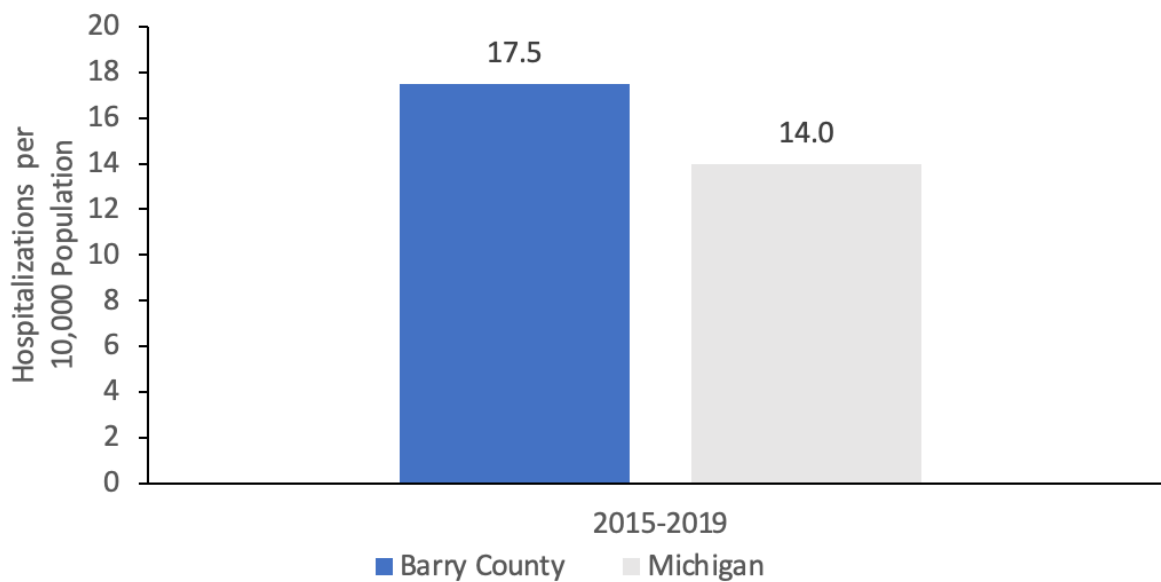
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

Diabetes Hospitalizations

In 2015-2019, the number of hospitalizations related to diabetes per 10,000 population was higher in Barry County (17.5) compared to Michigan (14.0) (Figure 52).⁶⁴

Figure 52: Diabetes Hospitalizations per 10,000 Population



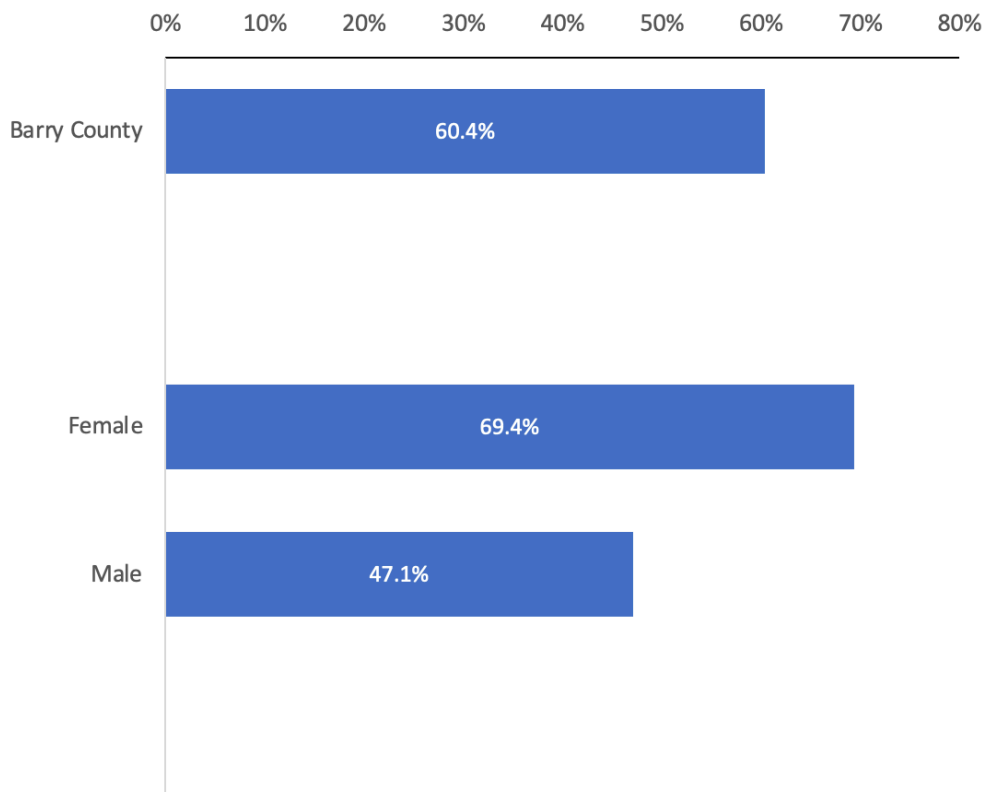
Source: 2003-2019 Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Michigan Department of Health and Human Services

Diabetes Management Education

If appropriately controlled, diabetes may not lead to disability, additional medical costs, or untimely death. The purpose of diabetes self-management and education is to help people diagnosed with diabetes learn how to monitor their condition and make lifestyle changes necessary to prevent complications.⁶⁶

Among adults in Barry County with diabetes, 60.4% reported attending a diabetes self-management course. The percentage of people with diabetes who reported taking this class was higher among women (69.4%) than men (47.1%) (Figure 53).²²

Figure 53: Percentage of Adults With Diabetes Who Attended a Diabetes Self-Management Course

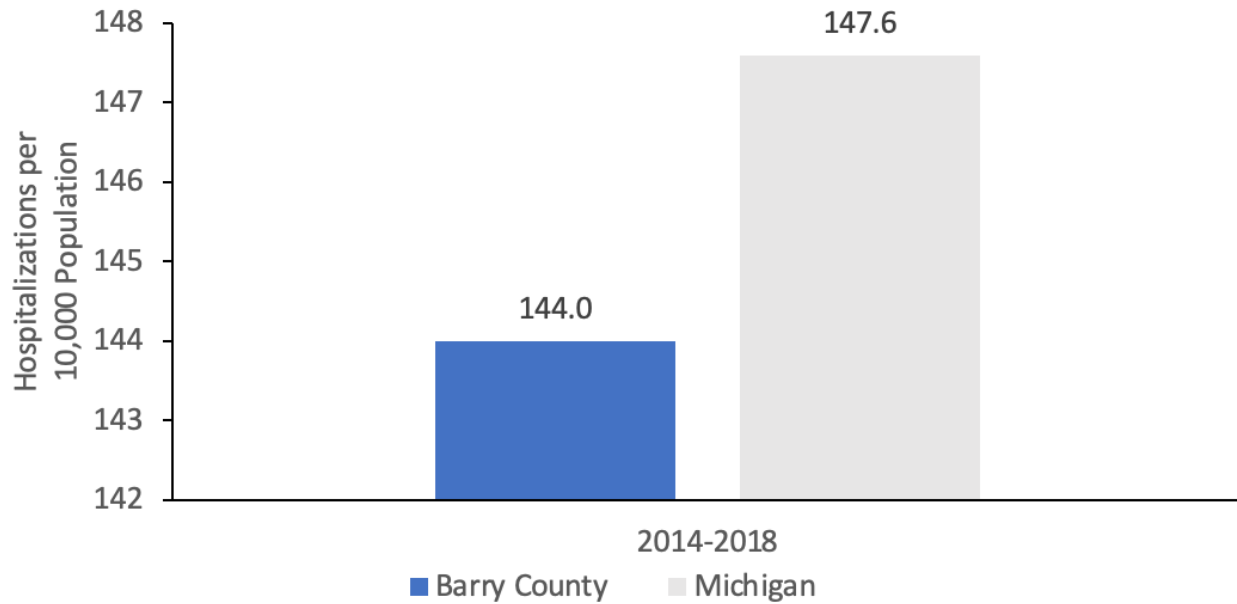


Source: 2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

Congestive Heart Failure Hospitalizations Among Adults 65 Years and Older

In 2014-2018, the number of congestive heart failure hospitalizations per 10,000 population was lower in Barry County (144.0) than in Michigan (147.6) among adults 65 years and older (Figure 54).⁶⁴

Figure 54: Congestive Heart Failure Hospitalizations per 10,000 Population

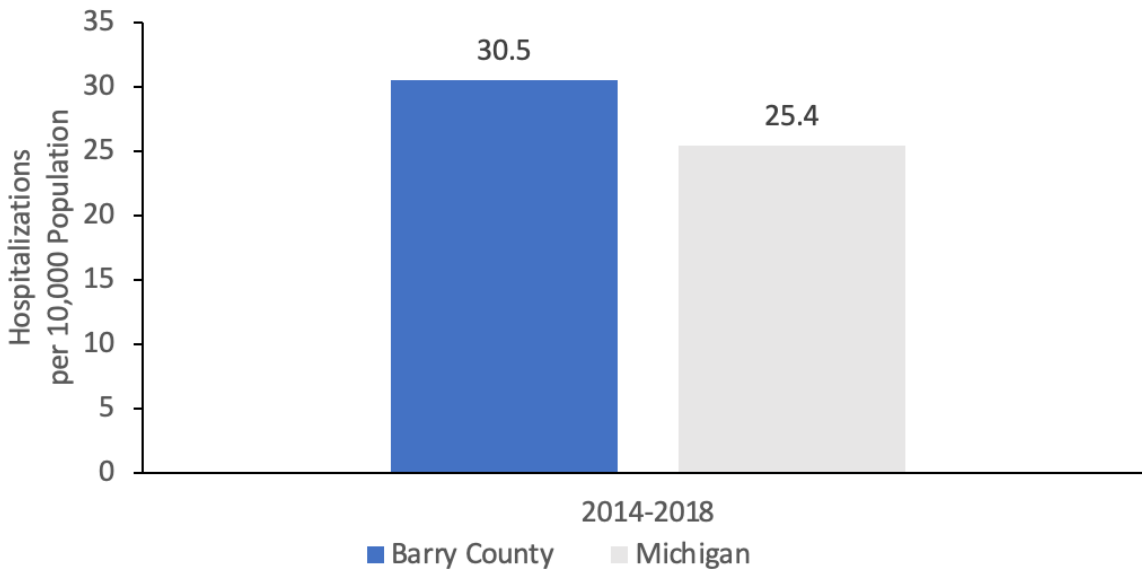


Source: 2003-2019 Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Michigan Department of Health and Human Services

Preventable Chronic Obstructive Pulmonary Disease Admissions

In 2015-2019, chronic obstructive pulmonary disease hospitalizations per 10,000 population were higher in Barry County (30.5) compared to Michigan (25.4) (Figure 55).⁶⁴

Figure 55: Chronic Obstructive Pulmonary Disease Hospitalizations per 10,000 Population



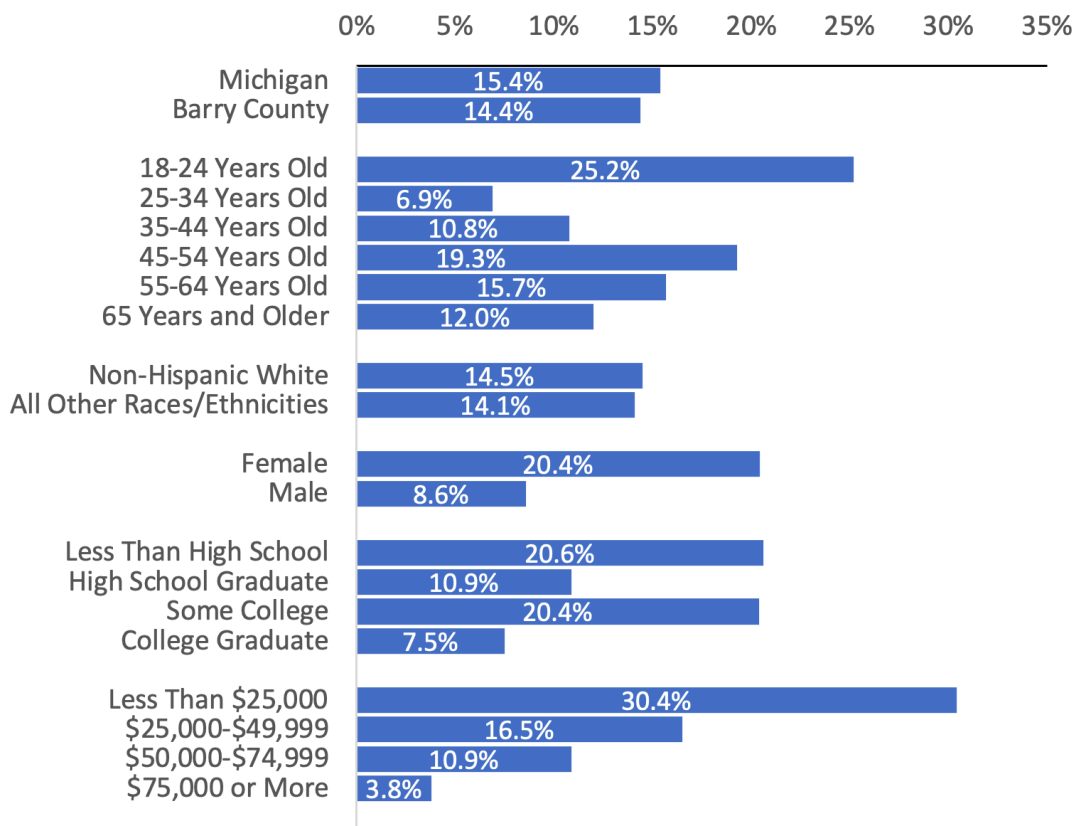
Source: 2003-2019 Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Michigan Department of Health and Human Services

Prevalence of Asthma in Adults

Asthma is a chronic disease of the airways characterized by periods of reversible airflow obstruction resulting in coughing, wheezing, chest tightness and breathing difficulties.⁶⁷ It is estimated that between 2008 and 2013 medical costs related to asthma were \$3,266 and prescription costs were \$18,000 per person, per year. Collectively, children with asthma miss approximately two days of school per year, and adults with asthma miss two days of work per year.⁶⁸

As shown in Figure 56, fewer adults in Barry County (14.4%) reported ever having asthma than in Michigan (15.4%). In Barry County, a more significant percentage of adults 18 to 24 years old were more likely to have been told that they have asthma compared to the other age groups. Females were two to three times more likely to report having asthma than males. Those with a household income less than \$25,000 were more likely to have been told that they have asthma than the other income levels.^{22,23}

Figure 56: Percentage of Adults With Asthma by Demographic Characteristics



Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

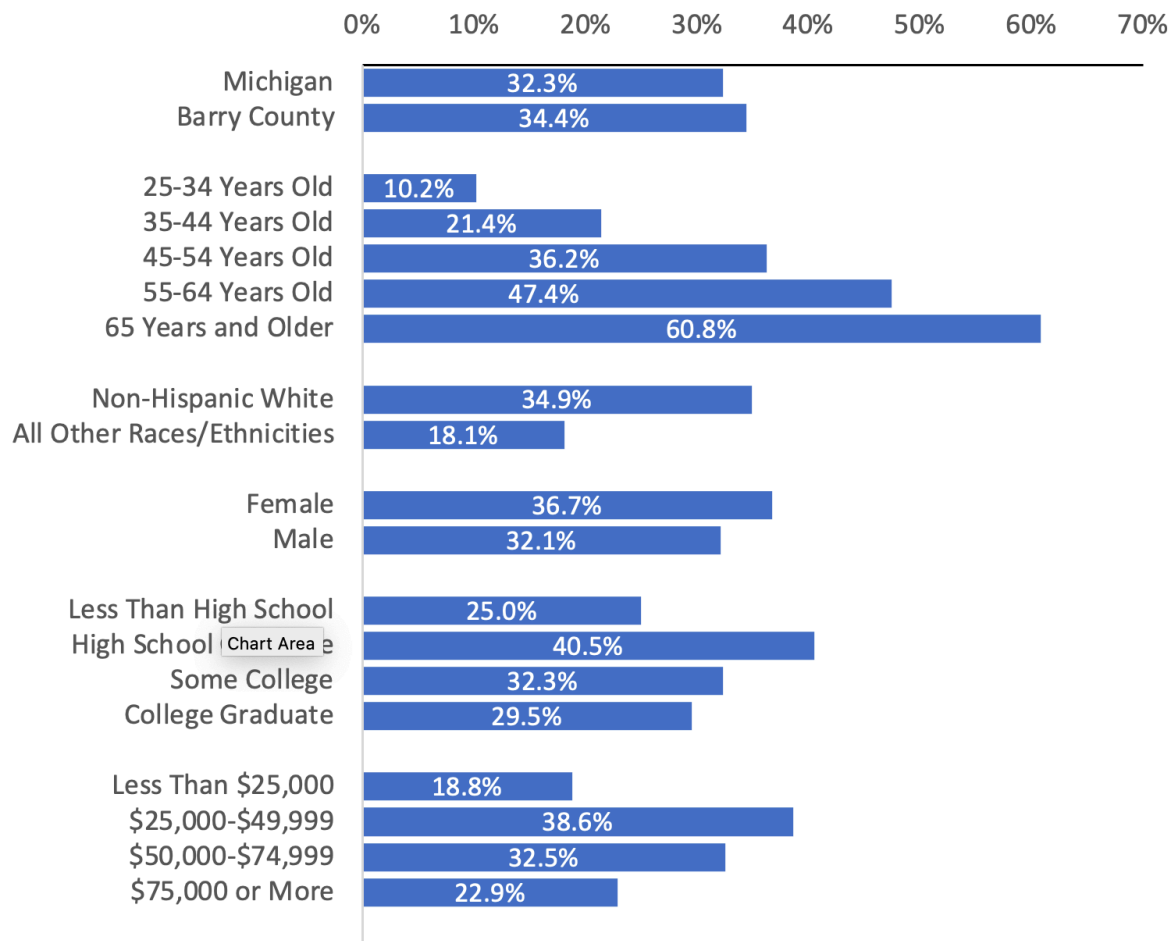
2020 MDHHS Behavioral Risk Factor Survey

Prevalence of High Cholesterol

An elevated level of blood cholesterol (total cholesterol >200 mg/dL) is one of the significant risk factors for heart disease, a leading cause of death in Michigan and nationally. In the United States, nearly one-third of adults have high cholesterol.⁶⁹

The percentage of adults in Barry County (34.4%) reporting they were ever being told they have high cholesterol was about the same as in Michigan (32.3%). The percentage of adults 65 years old or older reporting being told they had high cholesterol was six times higher than the percentage in the 25- to 34-year-old age group. Adults with incomes less than \$25,000 were half as likely to report having been told they had high cholesterol compared to those in the \$25,000 to \$49,000 and \$50,000 to \$74,000 income groups. (Figure 57).^{22,25}

Figure 57: Percentage of Adults With High Cholesterol by Demographic Characteristics



Sources:

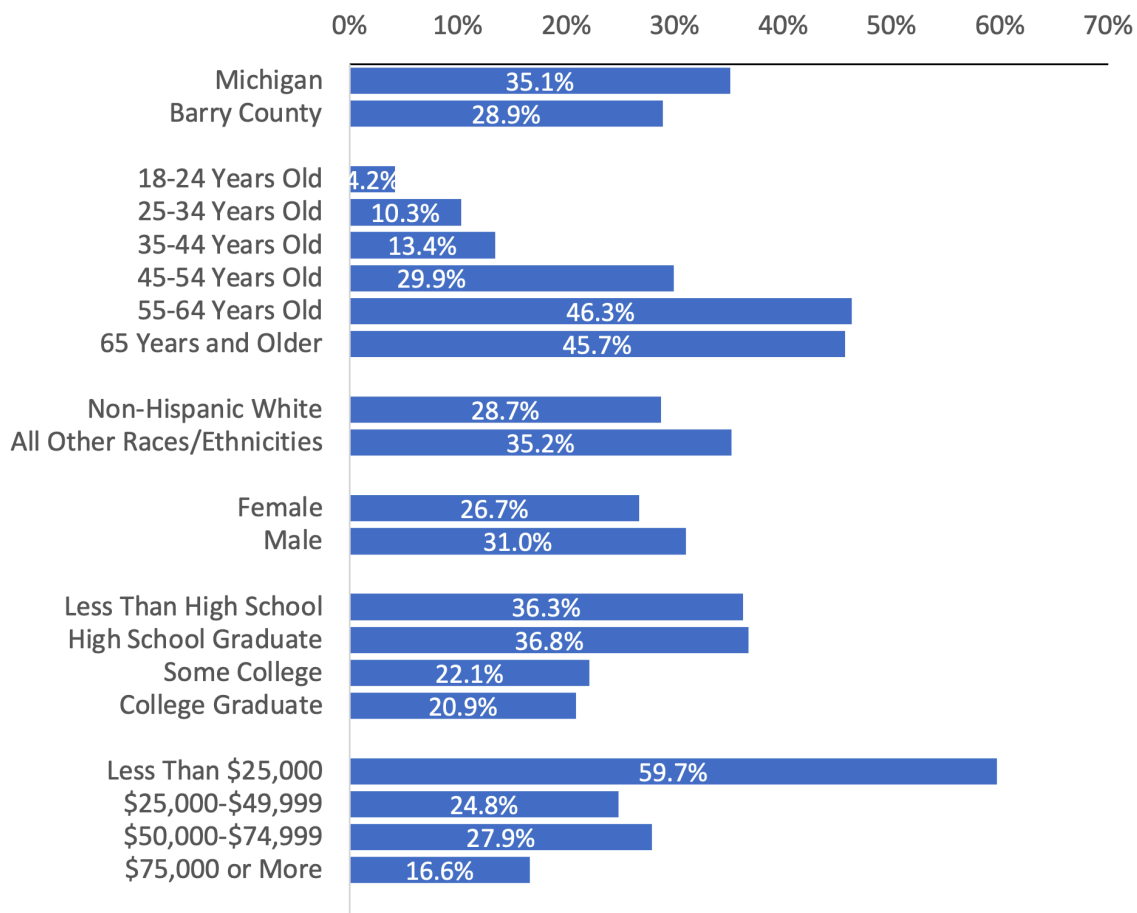
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only
 2019 MDHHS Behavioral Risk Factor Survey

Prevalence of High Blood Pressure

Approximately 116 million adults in the United States have hypertension. Hypertension is defined as having a systolic blood pressure at or above 130 mmHg or diastolic blood pressure at or above 80 mmHg. Hypertension increases the risk for heart disease and stroke, which are leading causes of death in the United States.⁷⁰

In Barry County (28.9%), adults were less likely to report being told they had high blood pressure than in Michigan (35.1%). The percentage of adults in each age successive group reporting ever being told they have high blood pressure increased (from 4.2% among 18- to 24-year-olds to 45.7% among 65 years and older). As education levels and income levels increased, the percentage of adults reporting high blood pressure decreased (Figure 58).^{22,25}

Figure 58: Percentage of Adults with High Blood Pressure by Demographic Characteristics



Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

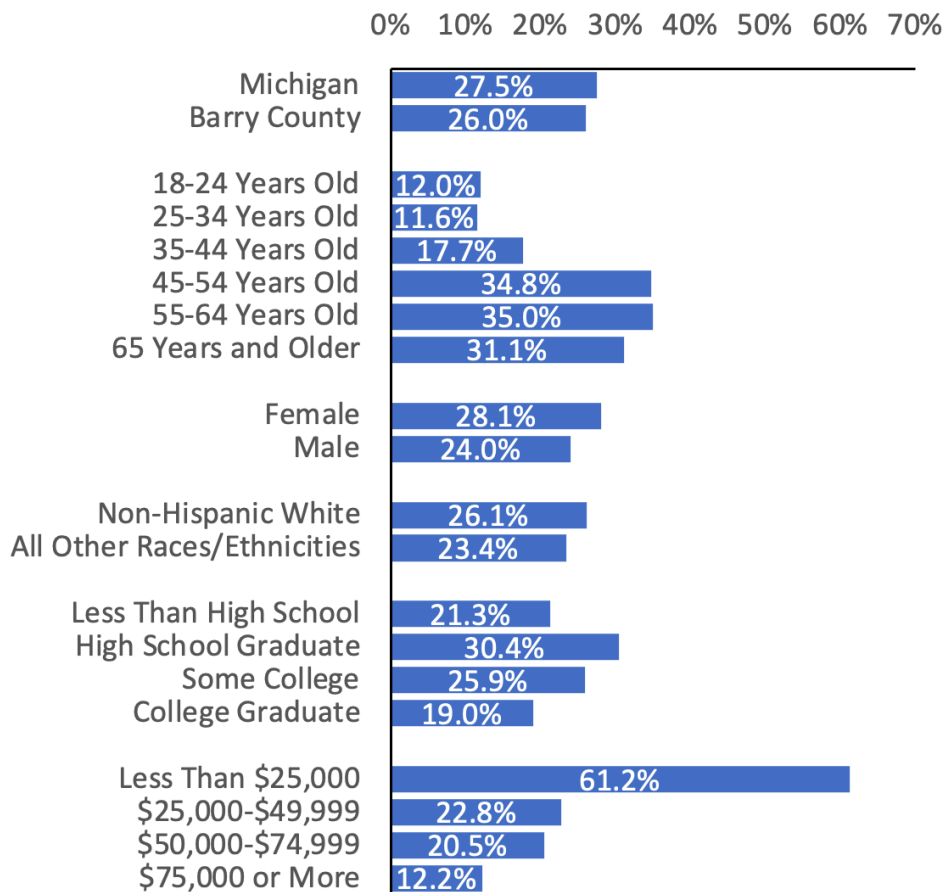
2019 MDHHS Behavioral Risk Factor Survey

Disability Rate

A disability is an impairment, activity limitation, or participation restriction people may experience in their daily life. In the United States, approximately 64 million people live with a disability.^{71,72} People with a disability are less likely to be employed and can affect income received. Households with people with a disability had a median annual household income of about 60% of families who did not have a person with a disability.⁷² In Figure 59 disability is defined as any activity limitations because of a physical, mental, or emotional condition.

As shown in Figure 59, the percentage of adults with a disability in Barry County (26.0%) was slightly lower than in Michigan (27.5%). The percentage of adults who reported an activity limitation due to physical, mental, or emotional problems was twice as high in adults 55 years old or older when compared to the other age groups. Those with incomes less than \$25,000 were twice as likely to report being told they have a disability compared to the other income groups.^{22,23}

Figure 59: Percentage of Adults Who Experience Activity Limitations Because of Physical, Mental or Emotional Problems by Demographic Characteristics



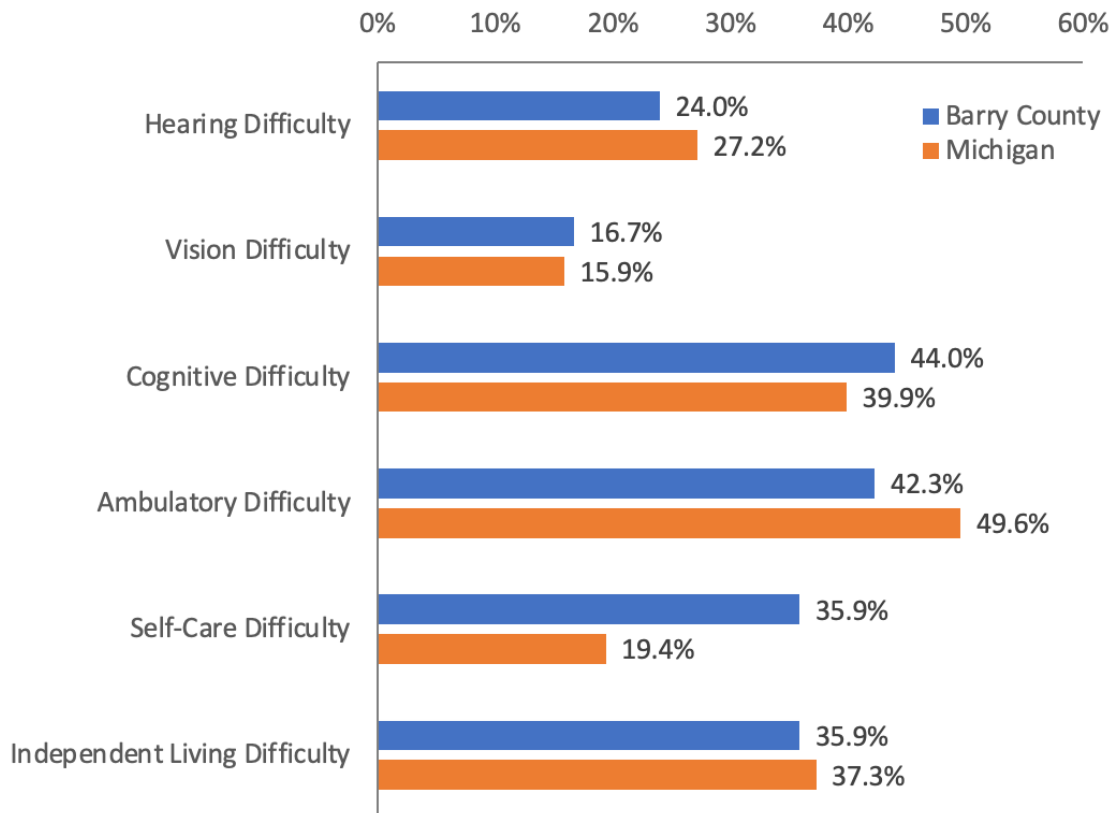
Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

The most common difficulties reported by disabled residents in Barry County and Michigan were ambulatory (42.3% vs. 49.6%) and cognitive (44.0% vs. 39.9%) difficulties. Slightly fewer Barry County residents reported experiencing hearing difficulties (24.0% vs. 27.2%) compared to Michigan residents (Figure 60).⁷³

Figure 60: Types of Disabilities Among Disabled Adults in Barry County and Michigan



Source: U.S. Census Bureau: 2019 American Community Survey 1-Year Estimates, Table K201803



Obesity

According to the World Health Organization, obesity is defined as “abnormal or excessive fat accumulation that presents a risk to health.” A person with a body mass index (kg/m²) over 30 is considered obese.⁷⁴ From 1999-2000 through 2017-2018, the prevalence of obesity in the United States increased from 30.5% to 42.4%.⁷⁵ Obesity is associated with coronary heart disease, high blood pressure, high cholesterol, stroke, low quality of life, and mental illness.⁷⁶

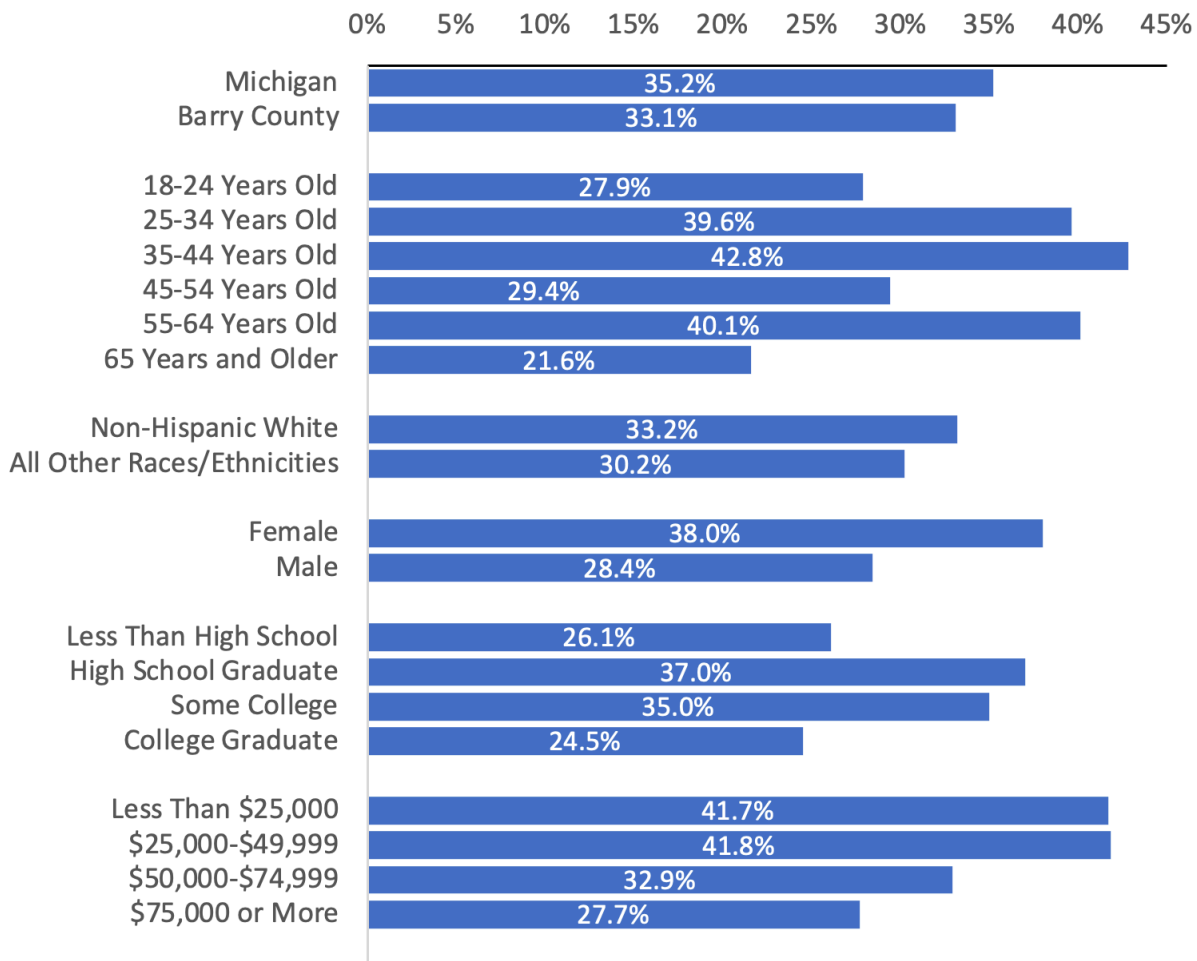
Indicators

- Obese Adults
- Obese Adolescents

Adults Who Are Obese

Barry County (33.1%) and Michigan (35.2%) had a similar percentage of the population reporting that they were obese. More females (38.0%) reported being obese than males (28.4%). High school graduates (37.0%) and those who attended some college (35.0%) were more likely to be obese than those with only a high school education (26.1%) and college graduates (24.5%). As income levels increased, the percentage of the adults reporting to be obese decreased (Figure 61).^{22,23}

Figure 61: Percentage of Adults Who Are Obese by Demographic Characteristics



Sources:

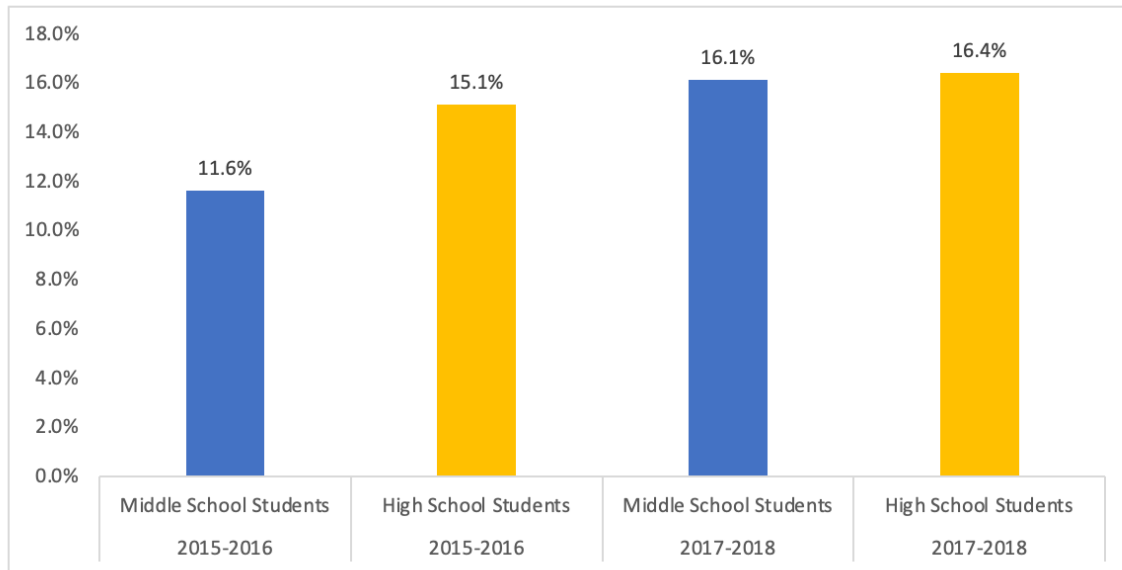
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

2020 MDHHS Behavioral Risk Factor Survey

Adolescents Who Are Obese

The percentage of obese students in Barry County increased from 2015-2016 to 2017-2018. The most significant increase in the percentage of obese students was among middle school students (from 11.6% to 16.1%). There was a 1.3 percentage point increase in obesity among high school students (Figure 62).^{57,77}

Figure 62: Percentage of Adolescents Who Are Obese, Barry County



Sources:

2017-2018 Michigan Profile for Healthy Youth – Weight and Nutrition Summary Table

2015-2016 Michigan Profile for Healthy Youth – Weight and Nutrition Summary Table



Mental Health Needs and Access

According to the World Health Organization, mental health is a “state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community.”⁷⁸ Depression, anxiety, bipolar disorder and anger are some conditions affecting moods and behavior. Access to mental health providers allows people to seek treatment for mental health conditions that are severe enough to be detrimental to one’s health to improve their mental health with the aid of mental health providers.

Indicators

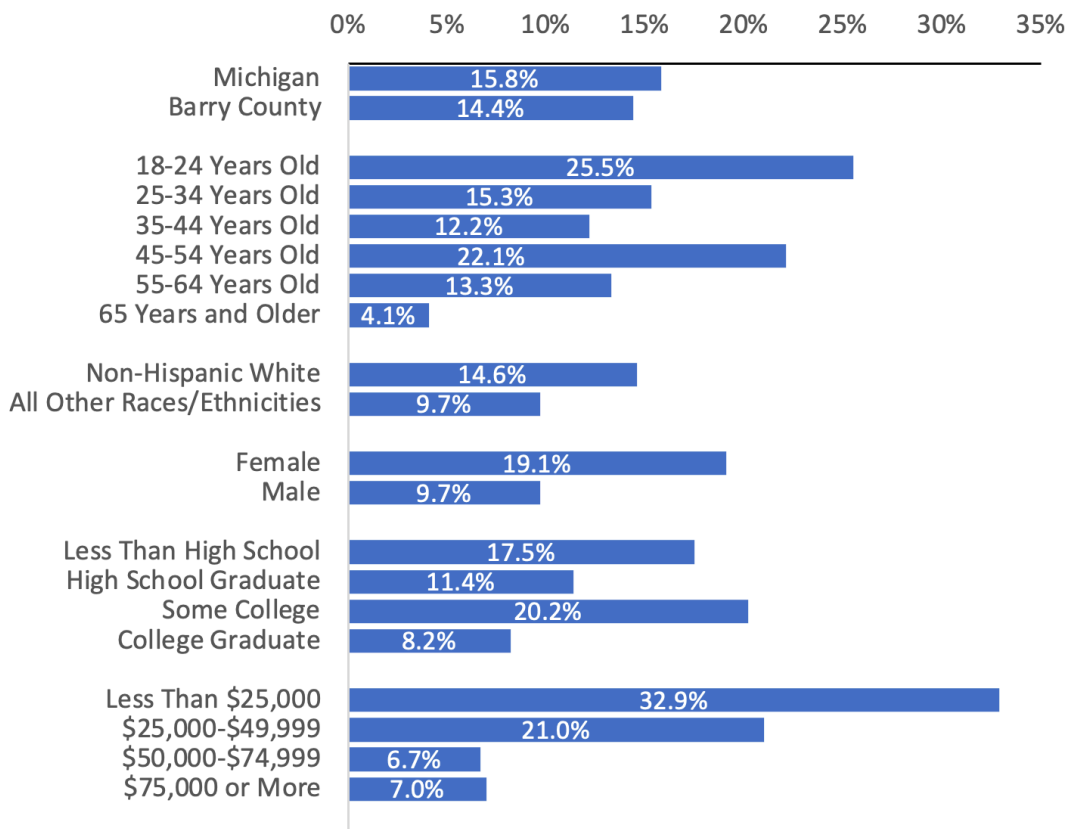
- Adults Not Having Good Mental Health
- Mental Health Provider Ratio

Adults Not Having Good Mental Health

There are a variety of characteristics that are associated with frequent mental distress in adults. These include the experience of trauma or violence, bullying, and having a chronic disease or disability.⁷⁹ The effect of frequent mental distress can negatively impact activities of daily life and, in the case of those with a disability or chronic condition, the management of their condition.⁸⁰ In Figure 63, frequent mental distress or not having good mental health is defined as the percentage of adults who reported their mental health as not good for 14 or more days in a month.

In Barry County (14.4%) and Michigan (15.8%), the percentage of adults reporting not having good mental health was about the same. When looking at the different age groups, 18- to 24-year-olds (25.5%) and 45- to 54-year-olds (22.1%) were twice as likely to report not having good mental health compared to the other age groups. Females were twice as likely to report not having good mental health. Those with less than \$25,000 income were four times more likely to report not having good mental health compared to those with a household income of \$50,000 to \$74,999 and \$75,000 or more (Figure 63).^{22,23}

Figure 63: Percentage of Adults Not Having Good Mental Health in the Past Month by Demographic Characteristics



Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

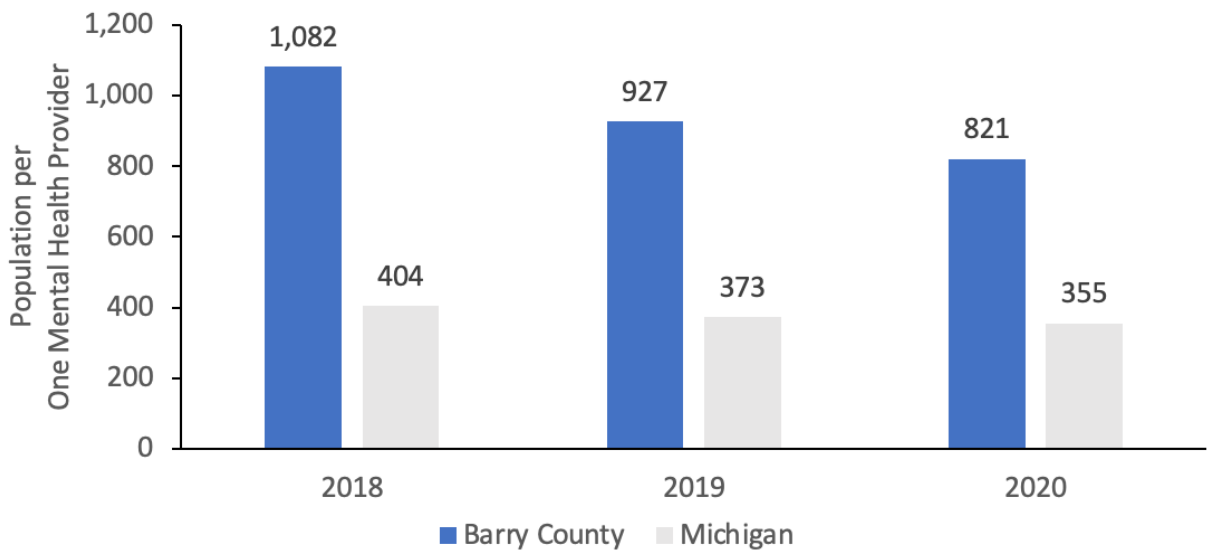
2020 MDHHS Behavioral Risk Factor Survey

Mental Health Provider Ratio

In addition to barriers arising from limitations in health coverage and the location of services, there are barriers to the services they can provide.⁸¹ Because medication can be a valuable tool in some mental and behavioral health therapies, there is a need for mental and behavioral health providers who can prescribe medication. Additionally, nearly one in five counties in the United States had fewer non-prescribing mental and behavioral health providers than needed in the community.⁸²

From 2018 to 2020, the population to one mental health provider ratio was much higher in Barry County compared to Michigan. However, since 2018, the population to one mental health provider ratio has decreased significantly in Barry County (from 1,082 in 2018 to 821 in 2020) and in Michigan (from 404 in 2018 to 355 in 2020) (Figure 64).⁸³

Figure 64: Ratio of Population to Mental Health Providers in Barry County and Michigan



Source: Area Health Resources Files Data Downloads | 2020-2021 County Level Data, United States Health Resources & Services Administration, Bureau of Health Workforce



Substance Misuse

The American Public Health Association defines substance misuse as the “use of illegal drugs and the inappropriate use of legal substances, such as alcohol and tobacco.”⁸⁴ Substance abuse is strongly associated with poor health outcomes and premature death. Another consequence of substance misuse is an increased incidence of violent crimes and a lack of safety in a community, which affects the health of others who may not use or misuse substances.

Indicators

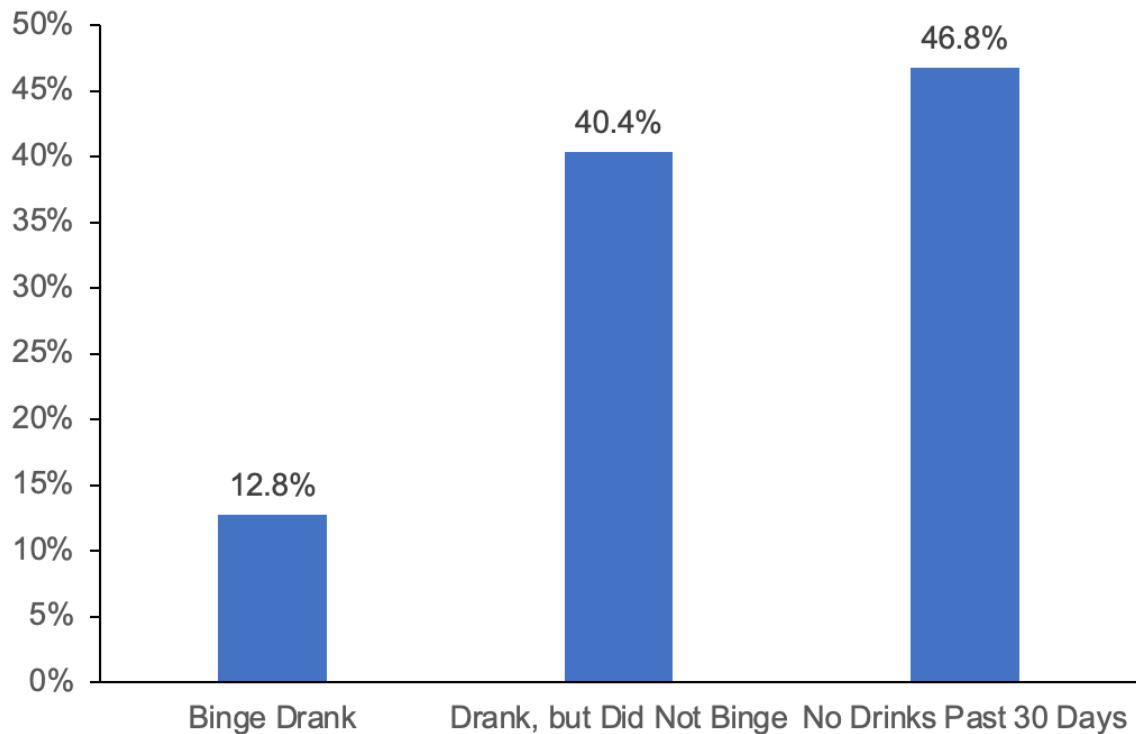
- Adults Who Binge Drank During the Past 30 Days
- Adults Who Drank Heavily During the Past 30 Days
- Adolescents Who Binge Drank During The Past 30 Days
- Marijuana Use in Adults During the Past 30 Days
- Adolescents Who Have Used Marijuana During the Past 30 Days
- Adolescents Who Have Used Marijuana Prior to Age 13

Adults Who Binge Drank During the Past 30 Days

For women, binge drinking is defined as consuming more than four alcoholic beverages on a single occasion; for men, it is defined as more than five alcoholic beverages on a single occasion.⁸⁵ Consuming a large quantity of alcohol in a short time can result in alcohol poisoning, which can be fatal for a typical person.

Nearly 12.8% of adults reported having engaged in binge drinking at one point within the past 30 days prior to responding to the survey, while 40.4% drank but did not binge (Figure 65).²²

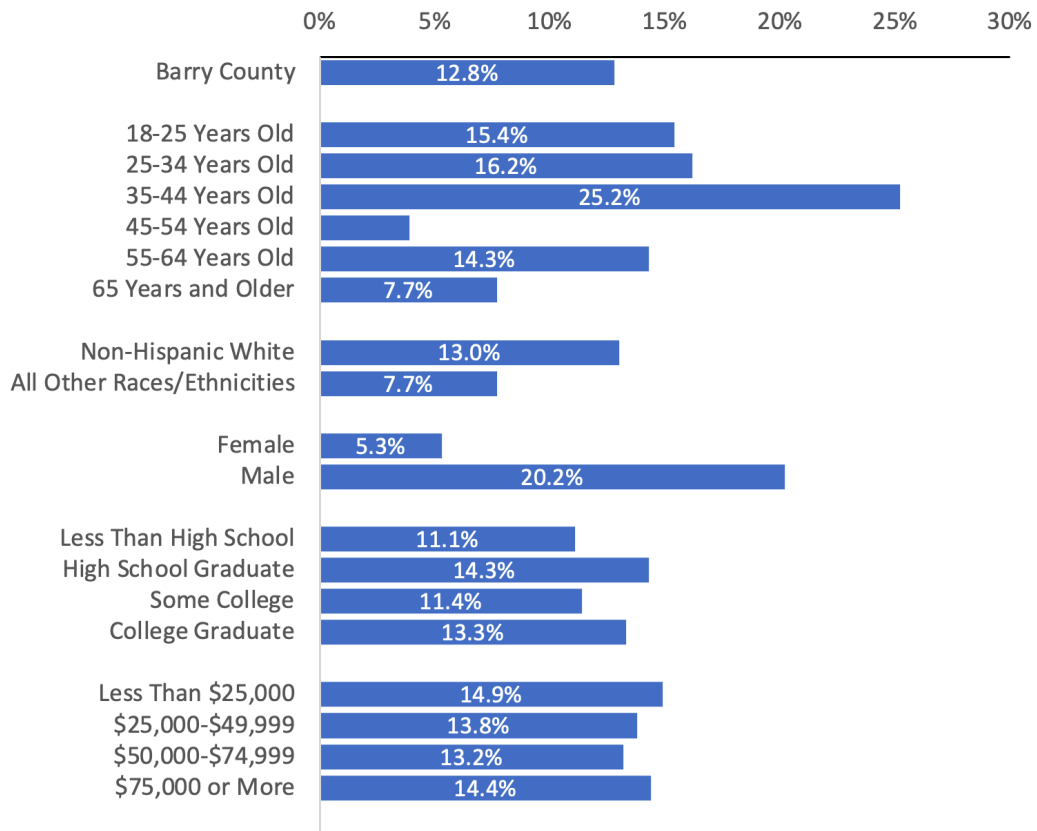
Figure 65: Demographic Characteristics of Binge Drinking Among Adults in Barry County



Source: 2017-2019 Capital Area Behavioral Risk Factor Surveillance System, Barry County Only

One out of four adults between the ages of 25 and 34 reported engaging in binge drinking within the past 30 days. Non-Hispanic White people were twice as likely as all other races and ethnicities, and males were four times as likely as females to binge drink. There were no significant differences in the percentage of adults who binge drank by education and income levels (Figure 66).²²

Figure 66: Percentage of Adults Who Binge Drank in the Past Month by Demographic Characteristics



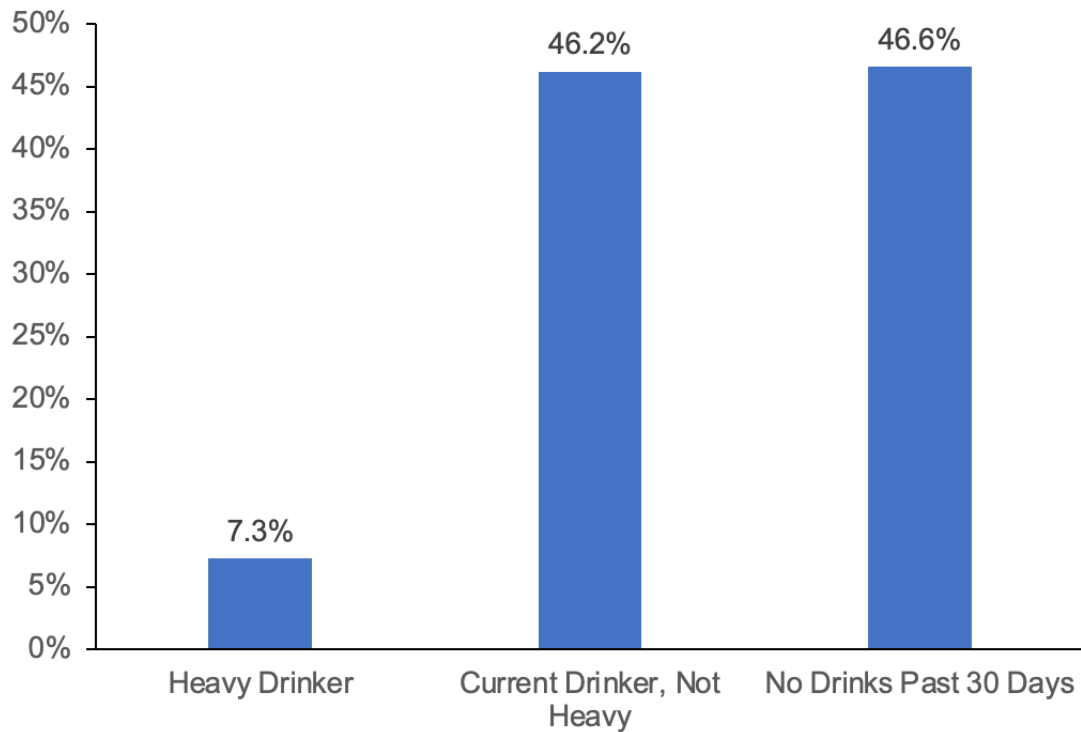
Source:
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

Adults Who Drank Heavily During the Past 30 Days

For women, heavy drinking is defined as consuming two alcoholic drinks a day; for men, it is defined as consuming more than one alcoholic drink per day.⁸⁵ Heavy drinking may have some of the immediate consequences of binge drinking and is associated with an increased risk in chronic conditions such as hypertension and cardiac events.⁸⁶

In Barry County, 7.3% of adults drank heavily within the past 30 days while 46.2% drank but not heavily (Figure 67).²²

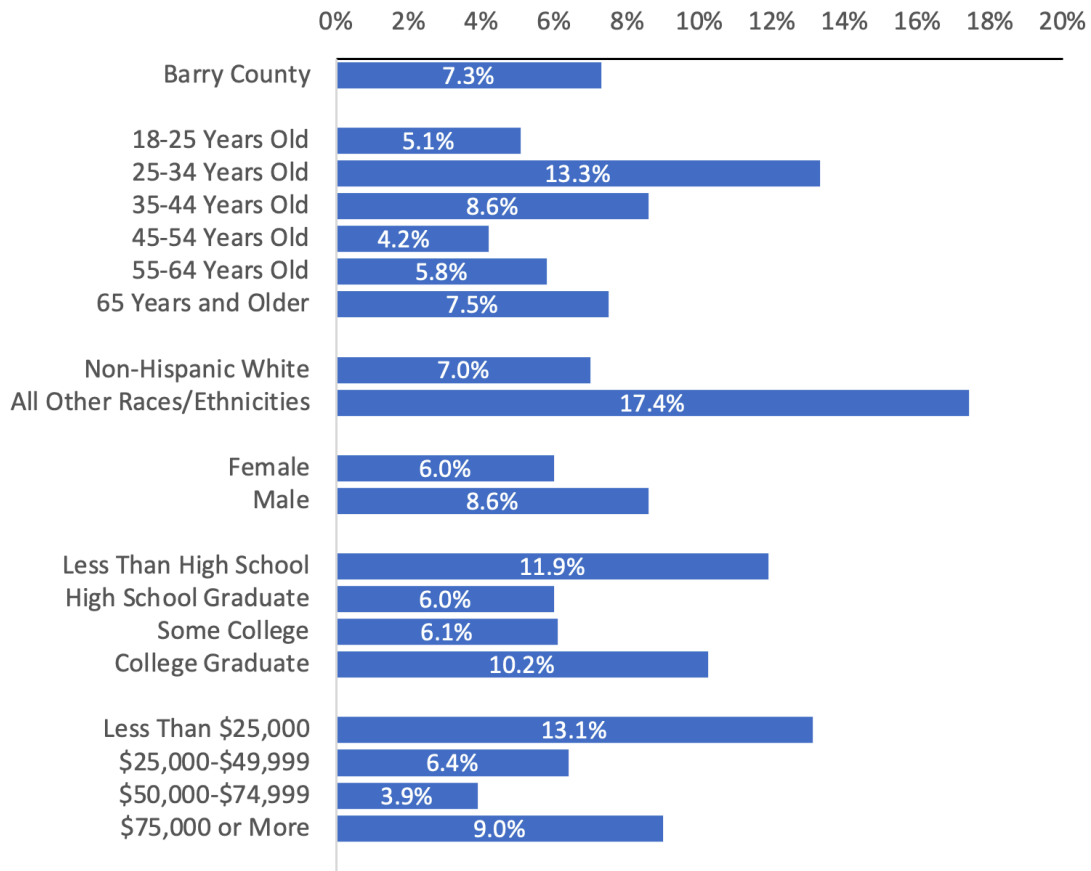
Figure 67: Demographic Characteristics of Heavy Drinking Among Adults in Barry County



Source: 2017-2019 Capital Area Behavioral Risk Factor Surveillance System, Barry County Only

Adults between the ages of 25 and 34 were twice as likely to drink heavily compared to the other age groups. Non-Hispanic White people were half as likely to drink heavily compared to all other races and ethnicities. College graduates (10.2%) and those with less than a high school education (11.9%) were twice as likely to drink heavily compared to the other education levels. Lastly, those with a household income less than \$25,000 and those with \$75,000 or more were more likely to drink heavily compared to the other income groups (Figure 68).²²

Figure 68: Adults Reporting Heavy Drinking Within the Past 30 Days by Demographic Group, Barry County Residents, 2017-2019



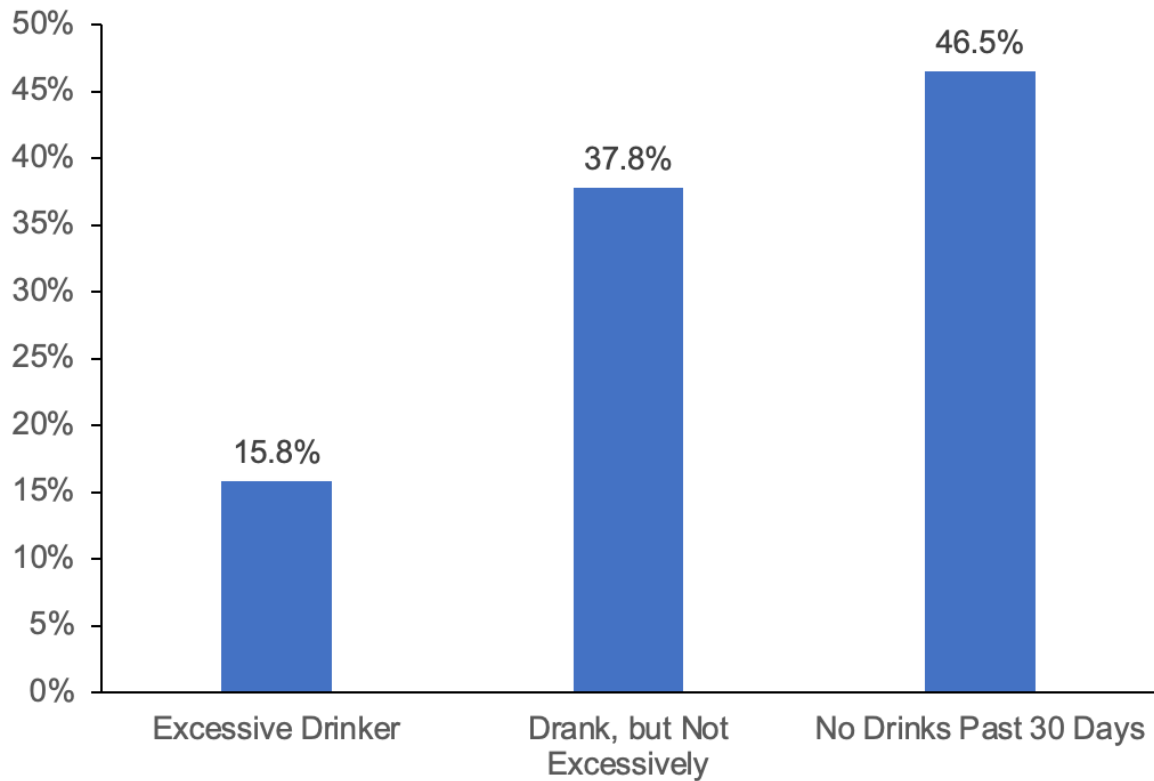
Source: 2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

Adults Who Drank Excessively During the Past 30 Days

A person is considered an excessive drinker if they have binge or heavily drank.⁸⁵

In Barry County, 15.8% reported drinking excessively, 37.8% consumed alcohol but not in excess and 46.5% did not drink during the past 30 days (Figure 69).²²

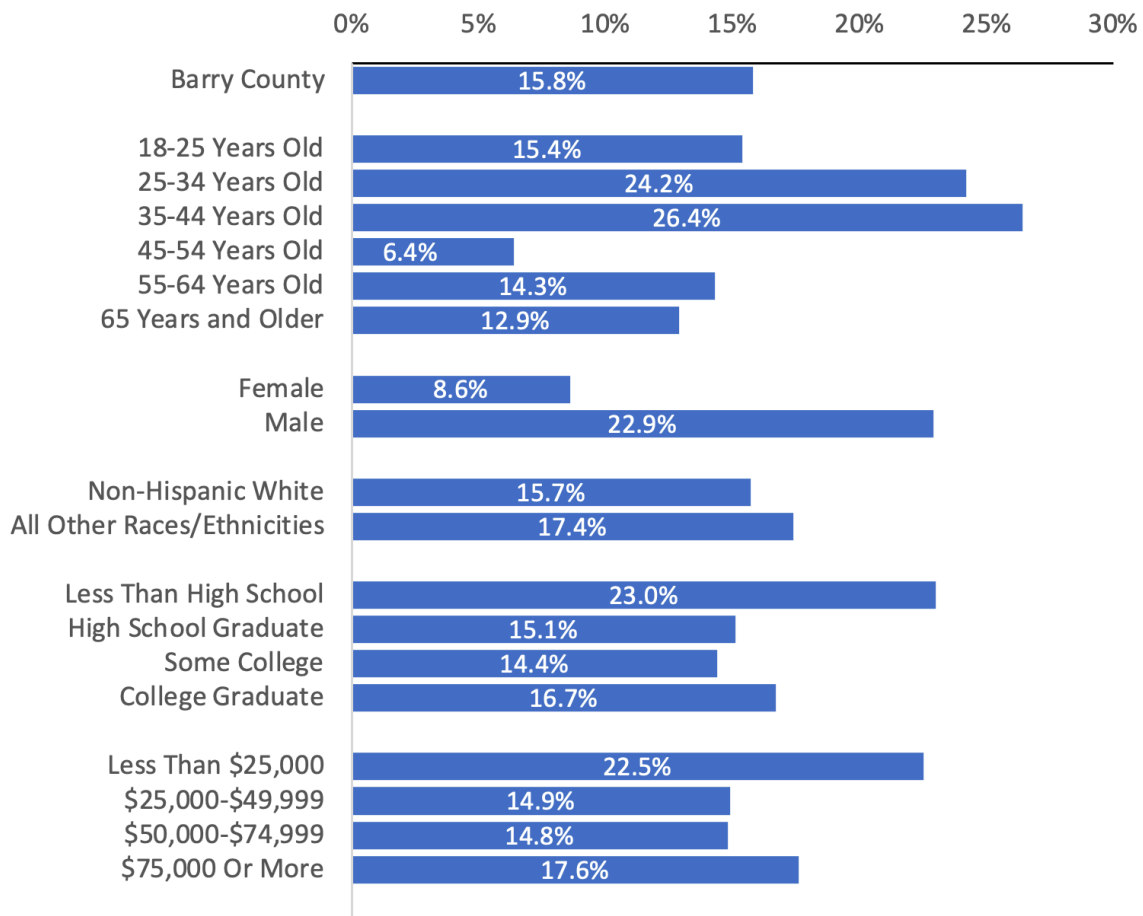
Figure 69: Demographic Characteristics of Excessive Drinking Among Adults in Barry County



Source: 2017-2019 Capital Area Behavioral Risk Factor Surveillance System, Barry County Only

Adults between the ages of 25-34 and 35-44 were twice as likely to drink excessively compared to the other age groups. Males (22.9%) were three times more likely to drink excessively than females (8.6%). Adults with less than a high school education and those with a household income less than \$25,000 were more likely to drink excessively compared to other education and income groups (Figure 70).²²

Figure 70: Percentage of Adults Who Drank Excessively Within the Past 30 Days by Demographic Group, Barry County Residents, 2017-2019

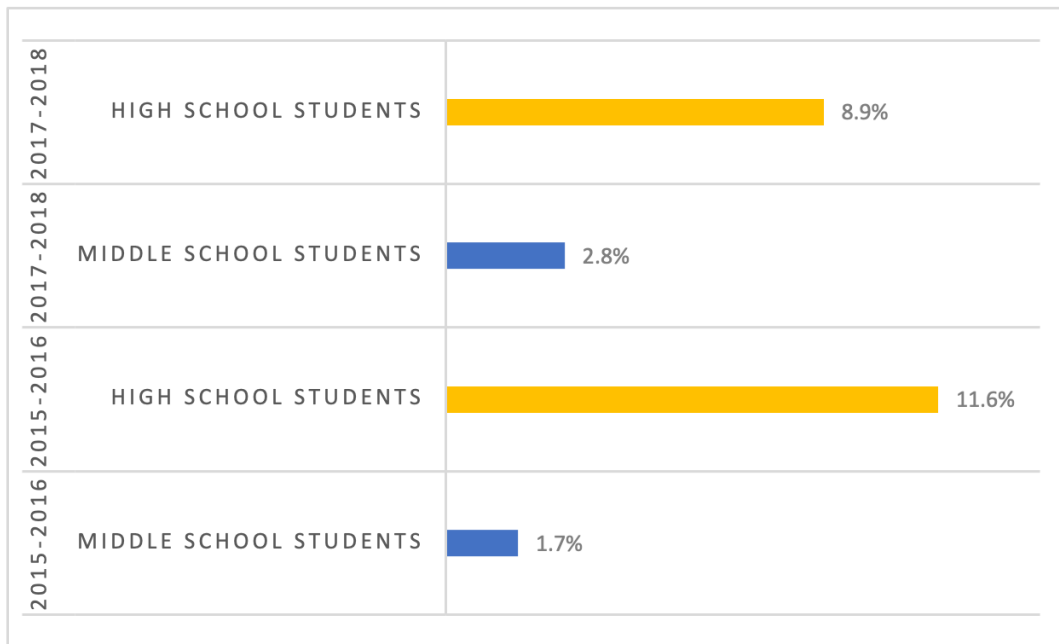


Source:
2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

Adolescents Who Binge Drank During the Past 30 Days

The percentage of students reporting binge drinking during the past 30 days increased among middle school students from 1.7% to 2.8% between 2015-2016 and 2017-2018. Among high school students, the percentage of students reporting binge drinking decreased from 11.6% to 8.9% between 2015-2016 and 2017-2018 (Figure 71).^{57,77}

Figure 71: Binge Drinking Among Adolescents in Barry County



Sources:

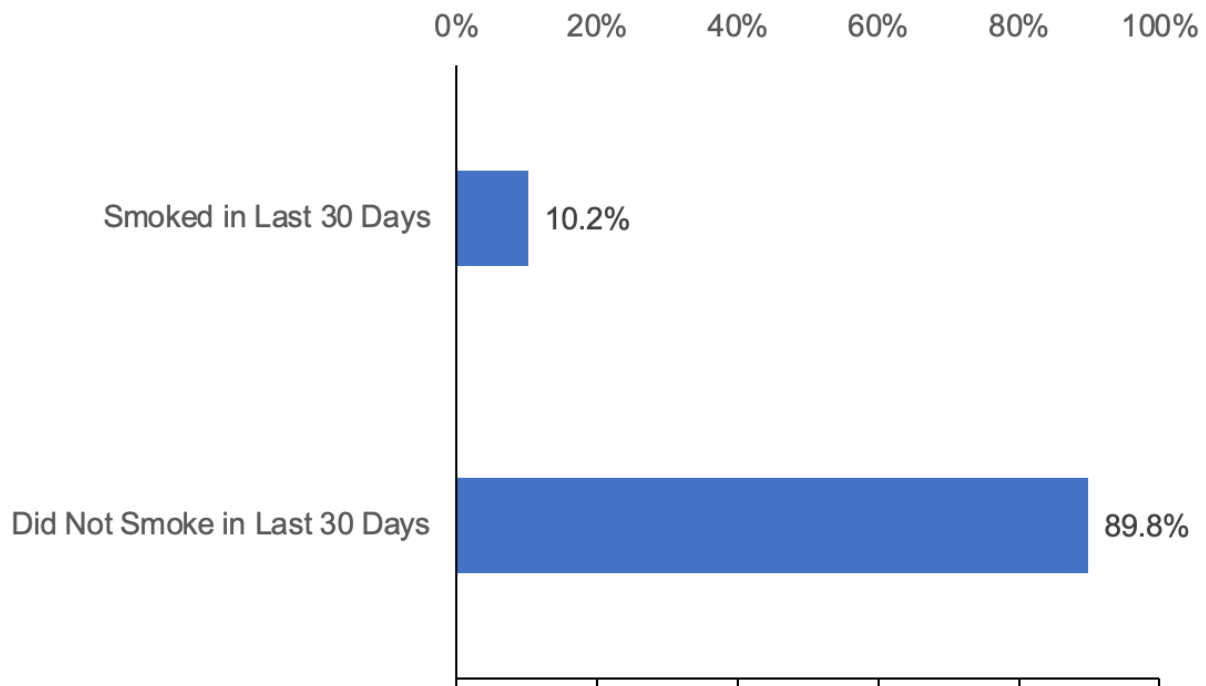
2017-2018 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table

2015-2016 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table

Marijuana Use in Adults During the Past 30 Days

Although still illegal in the United States, marijuana use was decriminalized in Michigan for medical use in 2008 and recreational use in 2018 for adults. Among adults in Barry County, 10.2% reported using marijuana in the past 30 days (Figure 72).²²

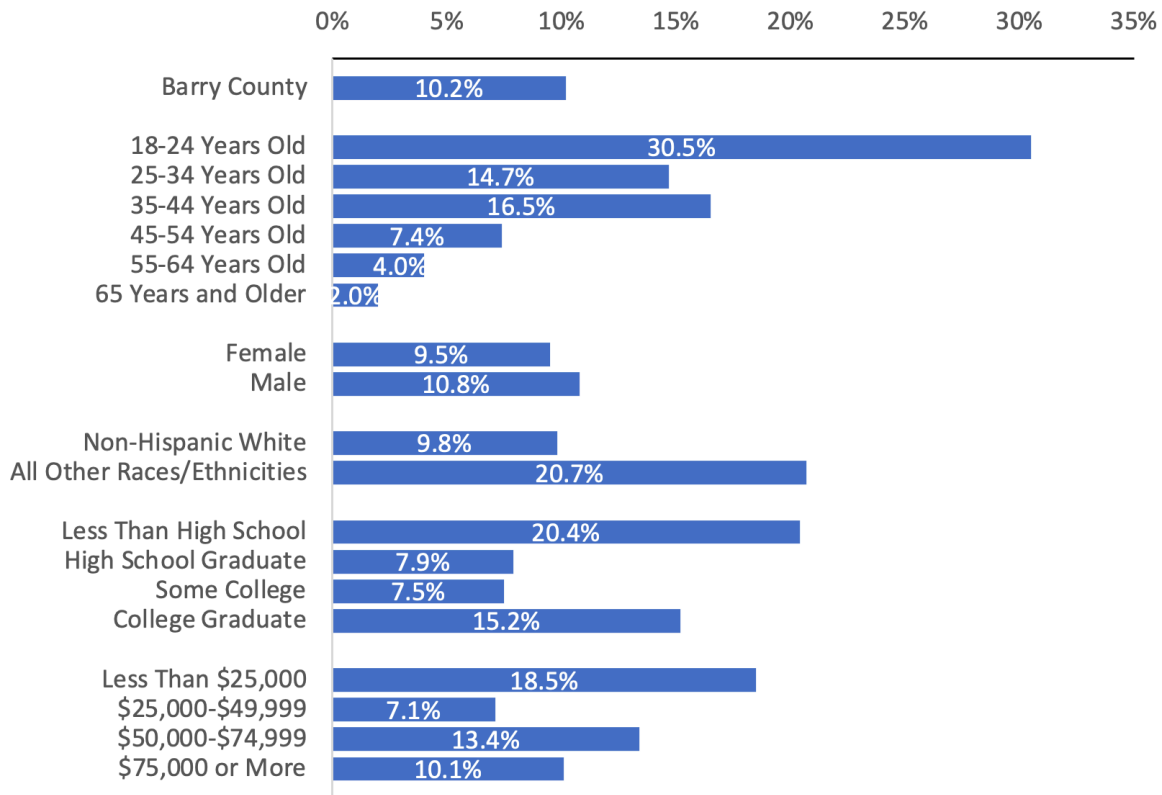
Figure 72: Any Marijuana Use Among Adults in Barry County During the Past 30 Days



Source: 2017-2019 Capital Area Behavioral Risk Factor Surveillance System, Barry County Only

The percentage of adults in Barry County using marijuana in the past 30 days was highest in the 18-24 age group (30.5%) compared to the other age groups. More adults with less than a high school education (20.4%) and college graduates (15.2%) used marijuana compared to high school graduates (7.9%) and those with some college (7.5%) (Figure 73).²²

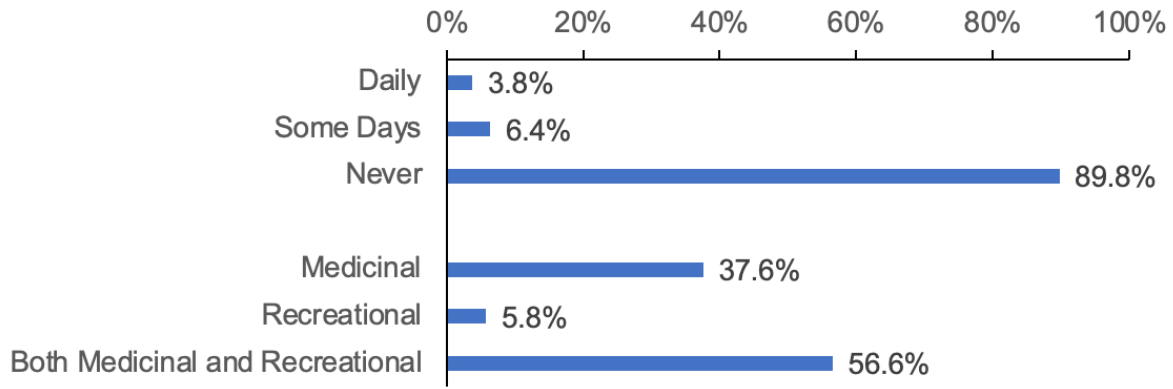
Figure 73: Demographic Characteristics of Adult Marijuana Use in Barry County



Source: 2017-2019 Capital Area Behavioral Risk Factor Surveillance System, Barry County Only

Nearly one in 10 adults in Barry County (3.8%) reported using marijuana daily within the past 30 days. Regarding the reasons for smoking, 37.6% used it only medicinally, 5.8% used it only recreationally and 56.6% used marijuana for both purposes (Figure 74).²²

Figure 74: Marijuana Use in the Past 30 Days and Reason for Use Among Barry County Adults

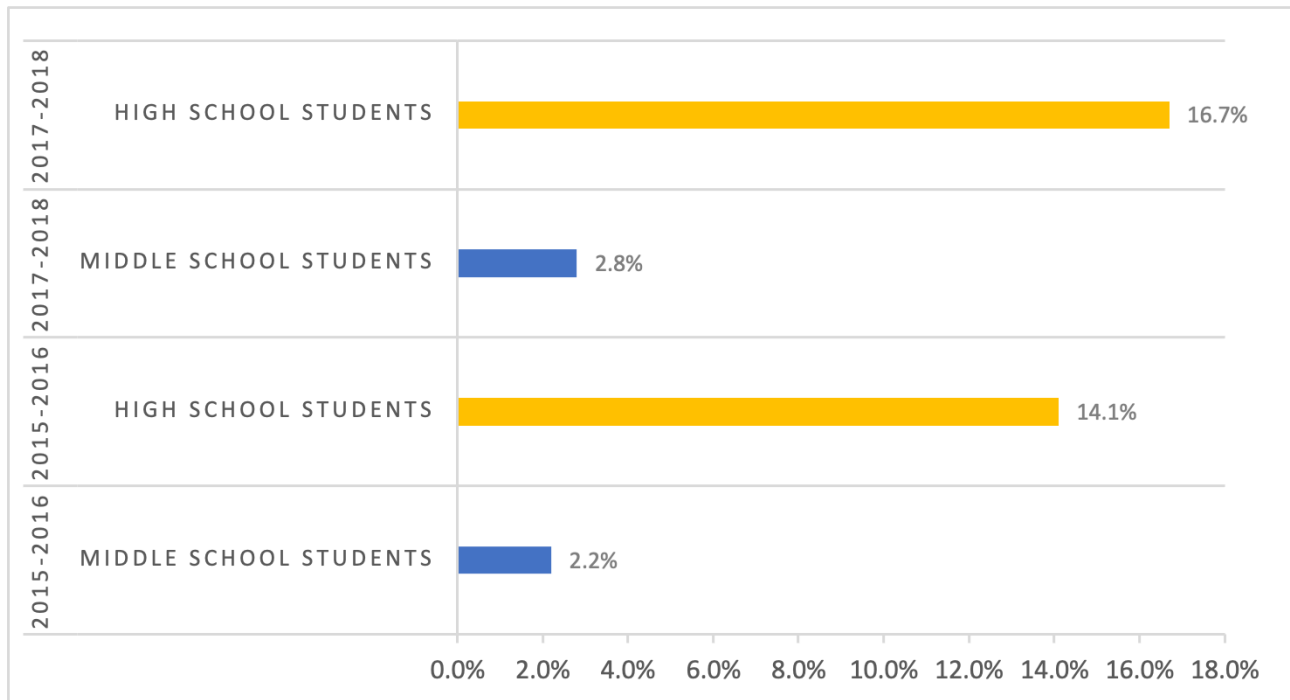


Source: 2017-2019 Capital Area Behavioral Risk Factor Surveillance System, Barry County Only

Adolescents Who Have Used Marijuana During the Past 30 Days

The percentage of students reporting using marijuana during the past 30 days in Barry County increased among middle school (from 2.2% to 2.8%) and high school students (from 14.1% to 16.7%) from 2015-2016 to 2017-2018 (Figure 75).^{57,77}

Figure 75: Marijuana Use Among Adolescents in Barry County



Sources:

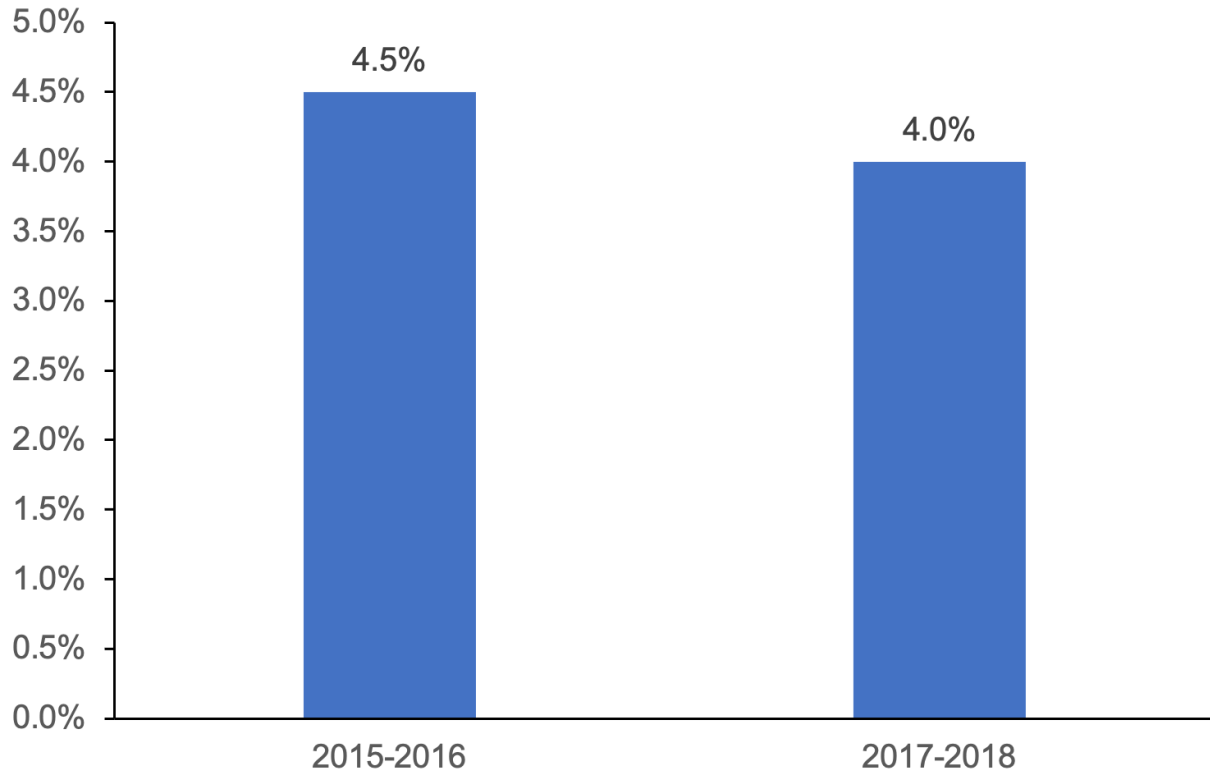
2017-2018 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table

2015-2016 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table

Adolescents Who Have Used Marijuana Prior to Age 13

There was a slight decrease in the percentage of high school students reporting having used marijuana prior to the age of 13 from 4.5% in 2015-2016 to 4.0% in 2017-2018 (Figure 76).^{57,77}

Figure 76: Adolescents Using Marijuana Prior to Age 13 in Barry County



Sources:

2017-2018 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table

2015-2016 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table



Nicotine Use

Cigarette smoking contributes to multiple diseases and premature death. Smoking can increase the risk of various cancers, cardiovascular disease, respiratory conditions, low birthweight and other adverse health outcomes. Measuring the prevalence of smoking in the population can alert communities to potential adverse health outcomes and be valuable for assessing the need for cessation programs or the effectiveness of existing programs.⁸⁷

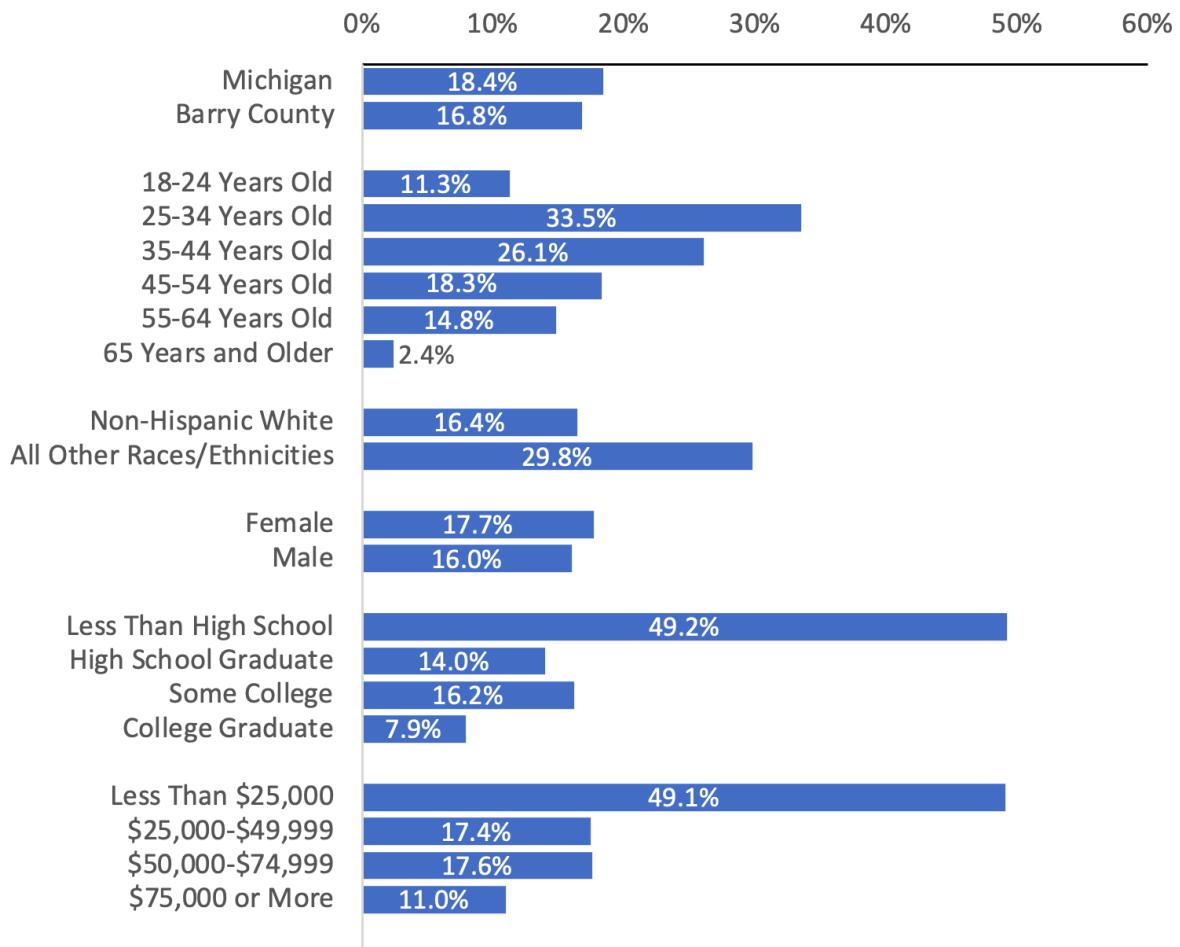
Indicators

- Adults Who Smoke
- Adults Who Use Vaping Products
- Adolescents Who Smoked Cigarettes During the Past 30 Days

Adults Who Smoke

The percentage of adults who reported smoking in Barry County (16.8%) was lower than in Michigan (18.4%). More than 33% of 25- to 34-year-olds and 26.1% of 35- to 44-year-olds reported being smokers, nearly twice as high as those in the 45- to 54-year-old and 55- to 64-year-old age groups. Non-Hispanic White people (16.4%) were half as likely to report that they were smokers compared to all other races and ethnicities combined (29.8%). Those with less than a high school education and those with a household income less than \$25,000 were three to four times more likely to be smokers than the other education and income groups (Figure 77).^{22,23}

Figure 77: Demographic Characteristics of Adults Who Smoke in Barry County



Sources:

2017-2019 Capital Area Behavioral Risk Factor Survey, Barry County Only

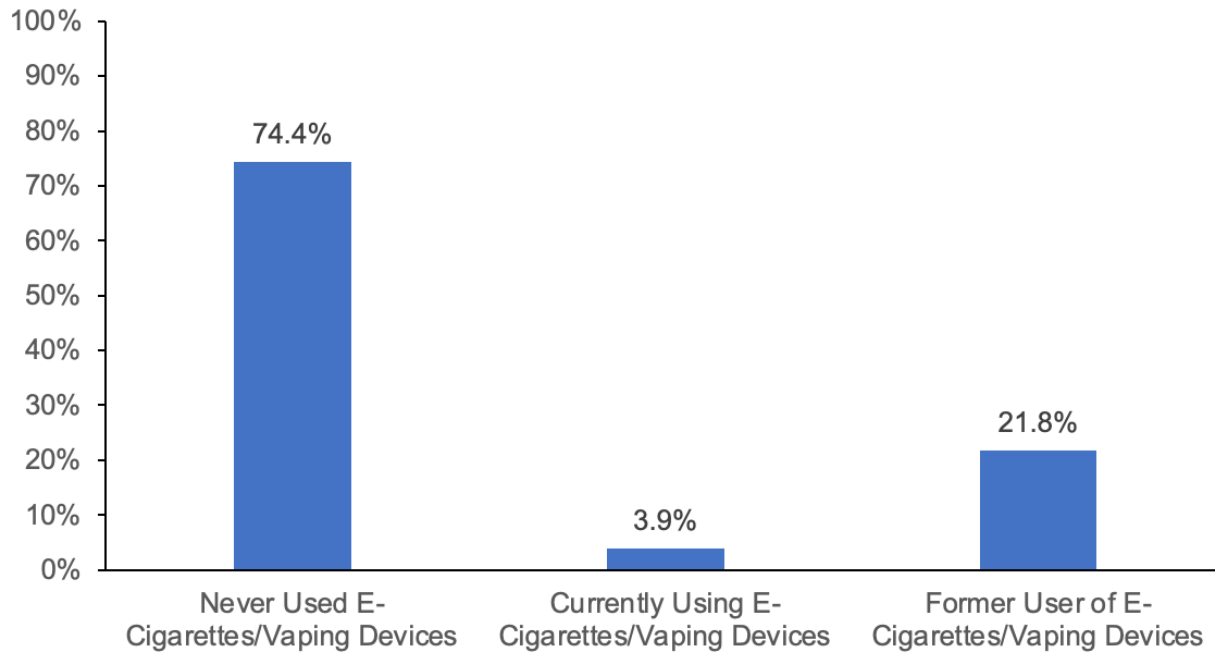
2020 MDHHS Behavioral Risk Factor Survey

Adults Who Use Vaping Products

A growing trend among tobacco and marijuana users is using e-cigarettes or vaping devices. Smokeless and odorless, these electronic devices resolve some of the complaints associated with traditional smoking.

Among adult smokers in Barry County, only 3.9% use e-cigarette and vaping devices, while 74.4% reported never using them and 21.8% reported formerly using such devices (Figure 78).²²

Figure 78: Adults Who Smoke in Barry County

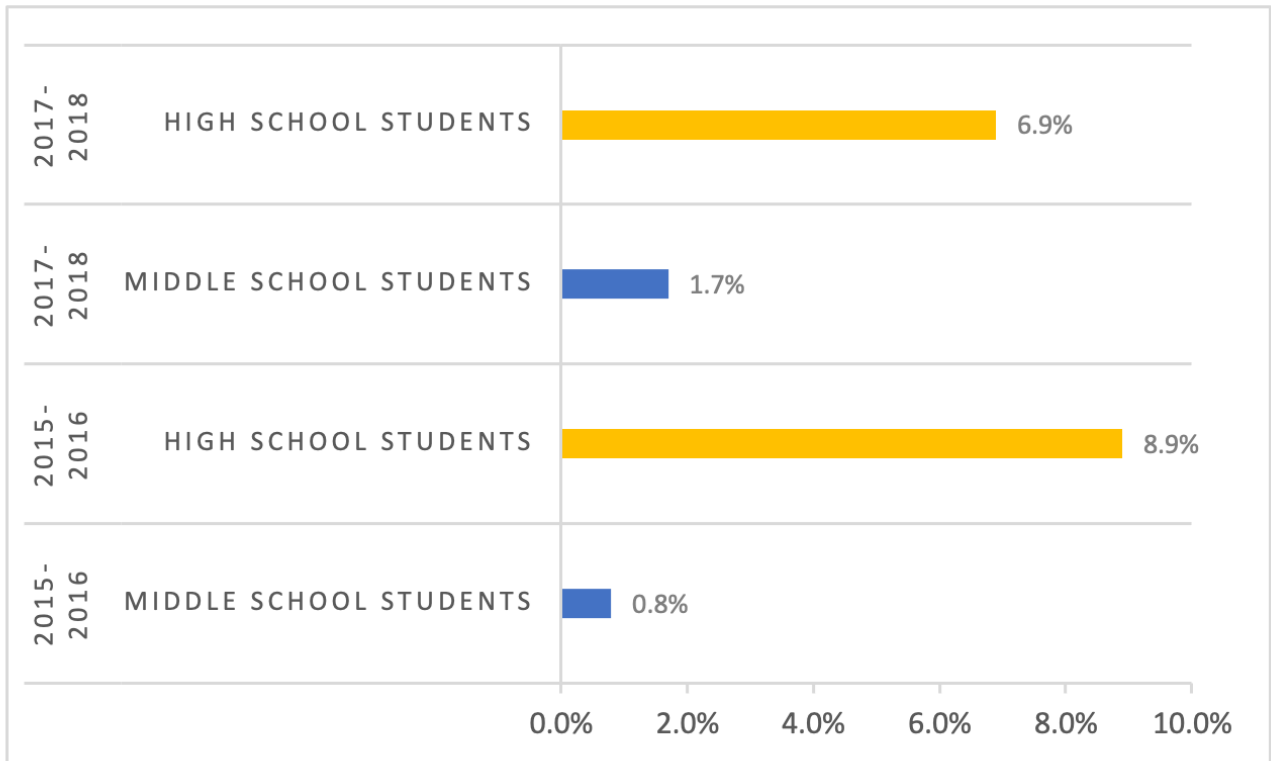


Source: 2017-2019 Capital Area Behavioral Risk Factor Surveillance System, Barry County Only

Adolescents Who Smoked Cigarettes During The Past 30 Days

The percentage of students reporting having smoked cigarettes during the past 30 days in Barry County decreased from 2015-2016 to 2017-2018. Among high school students, there was a 2 percentage point decrease, and there was a 0.9% point decrease among middle school students (Figure 79).^{57,77}

Figure 79: Adolescents Who Smoked Cigarettes During the Past 30 Days



Sources:

2017-2018 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table

2015-2016 Michigan Profile for Healthy Youth – Alcohol and Other Drugs Summary Table



Maternal and Child Health

Poor maternal and child health is detrimental to the health of individuals and communities and can have immediate and lasting effects.⁸⁸ Maternal and child health refers to the health and well-being of women, infants, children and families.⁸⁹ Indicators used to assess overall well-being include infant mortality and asthma hospitalizations among children under 18.

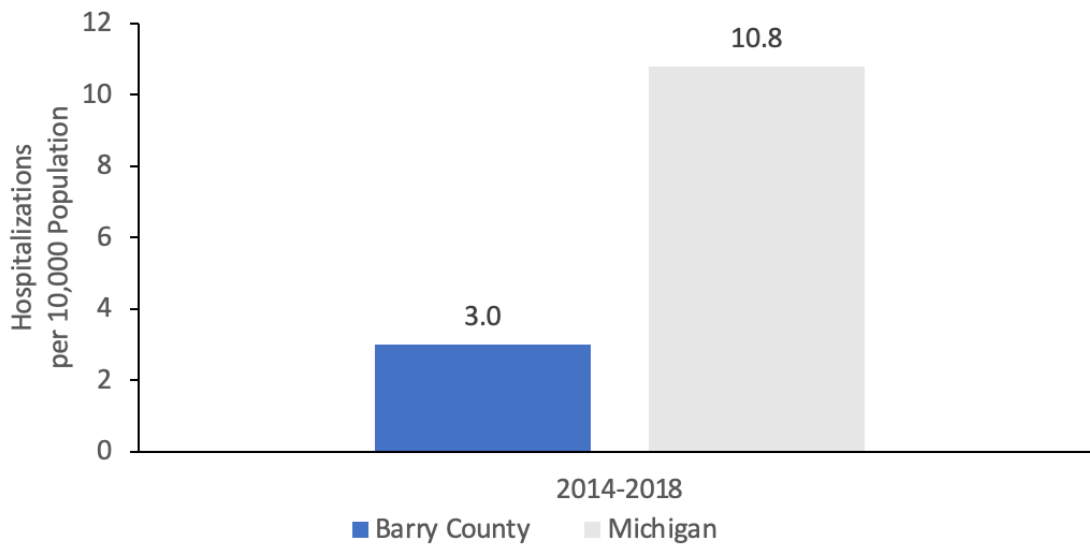
Indicators

- Preventable Asthma Hospitalization Among Youths Under 18
- Infant Mortality

Asthma Hospitalization Among Youths Under 18

In Barry County, there were an average of four asthma-related hospitalizations annually for children under 18 years old between 2014 and 2018. There were three hospitalizations per 10,000 children in Barry County, which was much lower than Michigan. There were 10.8 hospitalizations per 10,000 children under 18 in Michigan (Figure 80).⁶⁴

Figure 80: Asthma-Related Hospitalizations per 10,000 Population



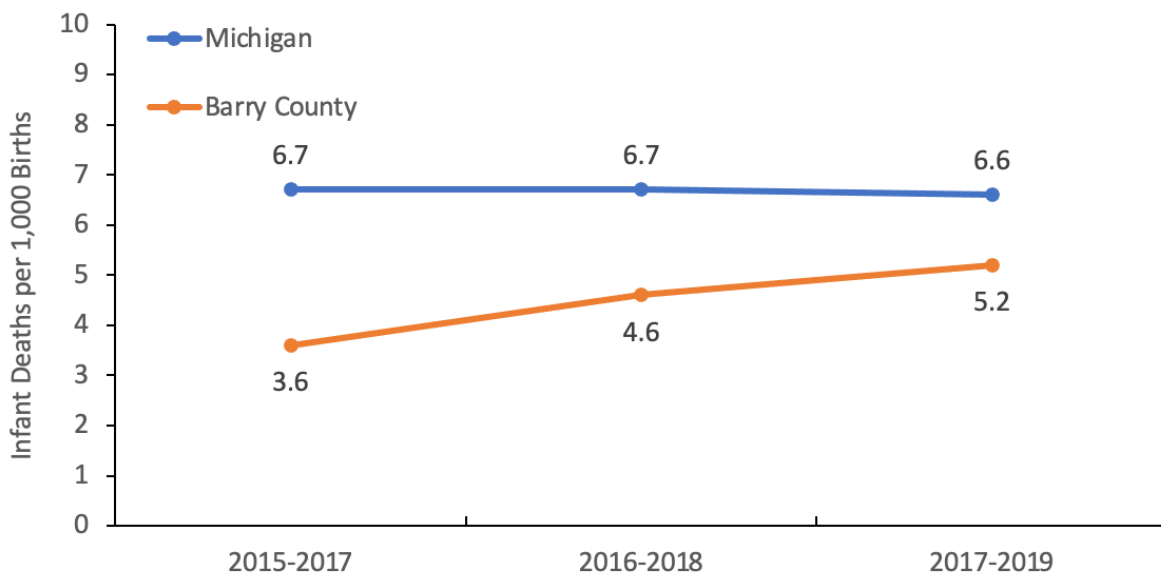
Source: 2003-2019 Michigan Resident Inpatient Files created by the Division for Vital Records and Health Statistics, Michigan Department of Health and Human Services

Infant Mortality

Infant mortality is defined as the death of an infant before their first birthday.⁹⁰ The infant mortality rate is calculated as the number of infants who died within their first year of life divided by live births. The leading causes of infant deaths include congenital abnormalities, low birthweight, preterm birth, pregnancy complications and unintentional injuries. Maternal risk factors highly associated with infant mortality include maternal age, obesity, diabetes and smoking.

The infant mortality rate was lower in Barry County than in Michigan between 2015-2017 and 2017-2019. The infant mortality rate has increased in Barry County from 3.6 deaths per 1,000 live births to 5.2 deaths per 1,000 live births in 2017-2019. In Michigan, the infant mortality rate remained stable between 2015-2017 and 2017-2019 (6.6-6.7 infant deaths per 1,000 live births) (Figure 81).⁹¹

Figure 81: Three-Year Moving Average Infant Mortality Rate in Barry County and Michigan



Source: Michigan Infant Mortality, Michigan Department of Health and Human Services, Division for Vital Records and Health Statistics



Communicable Diseases

Non-medical immunization waivers are a “written statement by parents/guardians describing their religious or philosophical (other) objections to specific vaccine/vaccines.”⁹¹ High non-medical waiver rates in a community can leave communities susceptible to communicable diseases such as measles, chickenpox and pertussis.⁹²

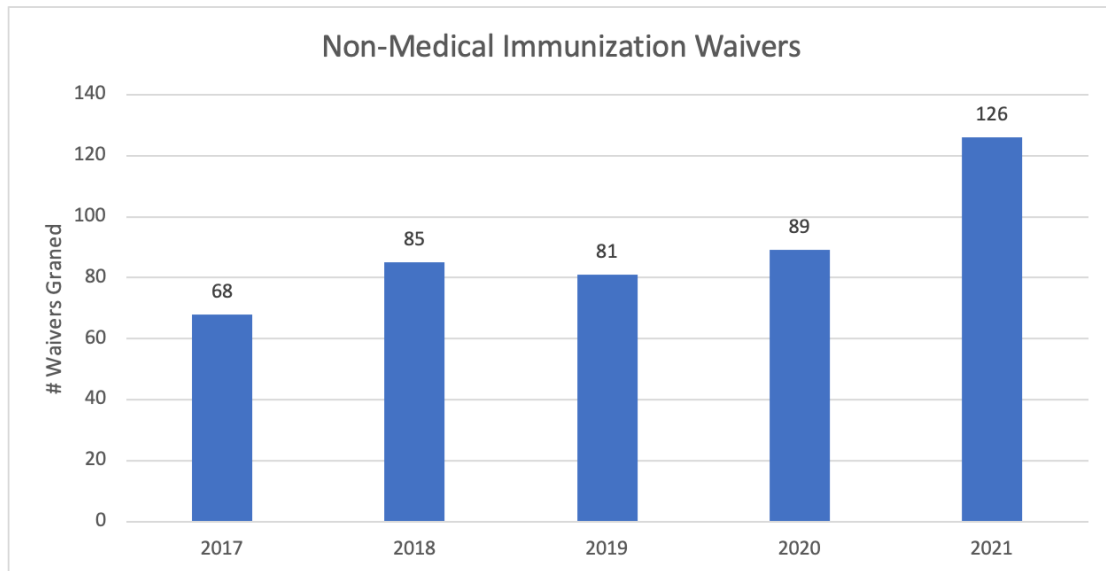
Indicators

- Non-Medical Immunization Waivers Granted

Non-Medical Immunization Waivers Granted

The number of non-medical immunization waivers granted for children has increased from 68 in 2017 to 126 in 2021.⁹³

Figure 82: Non-Medical Immunization Waivers Granted



Source: Barry-Eaton District Health Department, Waiver Log, 2017-2021

Community Resources

Description of the Health System

For this Community Health Needs Assessment Report, the term “health system” is defined using the World Health Organization’s definition from their report *Everybody’s Business: Strengthening Health Systems to Improve Health Outcomes*, which includes organizations that provide or support medical care, as well as public health, mental/behavioral health and human service organizations.

“All organizations, people and actions whose primary intent is to promote, restore or maintain health. This includes efforts to influence determinants of health as well as more direct health-improving activities.”

—World Health Organization, 2007⁹⁴

Hospitals in Barry County

There is only one hospital in Barry County, Spectrum Health Pennock. Spectrum Health Pennock, located in Hastings, is a 49-bed community hospital that offers a comprehensive range of services: acute care, primary care (including obstetrics and gynecology) and surgery (e.g., orthopedics).

Federally Qualified Health Centers

There is one Federally Qualified Health Center in Barry County: Cherry Health’s Barry Community Health Center. Cherry Health is the largest FQHC in Michigan, serving six counties. Cherry Health has approximately 800 employees and a network of over 70 physicians and advanced practice providers specializing in primary care/family medicine, pediatrics, obstetrics/gynecology, optometry, oral health, behavioral health and psychiatry.⁹⁵

FQHCs are an essential feature of the social safety net. They provide an array of health services (primary care, chronic disease management and mental/behavioral health) to anyone, regardless of their ability to pay. To qualify as an FQHC site, a community must demonstrate a shortage of providers. Barry County qualifies for this under the Governor-Designated Secretary-Certified Shortage Areas.

Health Care Providers in Barry County

According to data housed by the Health Resource Service Administration, Barry County has one primary care physician for every 2,910 residents and one dentist for every 3,620 residents. In contrast, provider ratios for the state overall are one primary care physician for every 1,270 residents and one dentist for every 2,130 residents.⁹⁶ A comprehensive list of health care providers by specialty in Barry County can be found in Tables B2 and B3 in Appendix B.

Mental Health Providers

There are two mental health systems in Michigan: public and private systems. A comprehensive list of the number of mental health providers in Barry County can be found in Tables B2 and B3 in Appendix B.

The public system in Barry County is administered by the Barry County Community Mental Health Authority. The Barry County Community Mental Health Authority provides behavioral health and substance use services to about 1,700 individuals annually. Those services may include behavioral health services, co-occurring mental health services, and services for individuals with intellectual disabilities, children with severe emotional disturbances and individuals with autism.

In addition to what may be considered traditional community mental health services, the Barry County Community Mental Health Authority provides an array of auxiliary services to support individuals, such as community living supports, respite care and employment services.

The private system includes all mental and behavioral health providers who take commercial insurance or cash payments. Access to care requires not only financial coverage but also access to providers.

In Barry County, there is one mental health provider for every 820 residents. In contrast, there is one mental health provider for every 360 residents in Michigan.⁹⁶

Government Entities

The protection of the entire population's health as outlined in the Michigan Constitution and delegated to local governing entities. The Barry-Eaton District Health Department is responsible for performing the following activities:

- Investigating the causes of disease, especially outbreaks of diseases
- Providing care for individuals with severe communicable disease or infection
- Mitigating environmental or disease-related health hazards
- Routinely inspecting facilities with a high likelihood of impacting public health (e.g., food service facilities, public pools, public and private wells, and septic systems)

Existing Resources in the Community

A list of assets was provided for discussion during the June 2021 meeting to streamline the asset inventory process for this cycle. Only Barry County’s assets and those traditionally used in Community Health Needs Assessments were presented. After discussion amongst the Advisory Committee members, local economic assets were chosen with further instruction to explore how they should be mapped and what specific resources would be included.

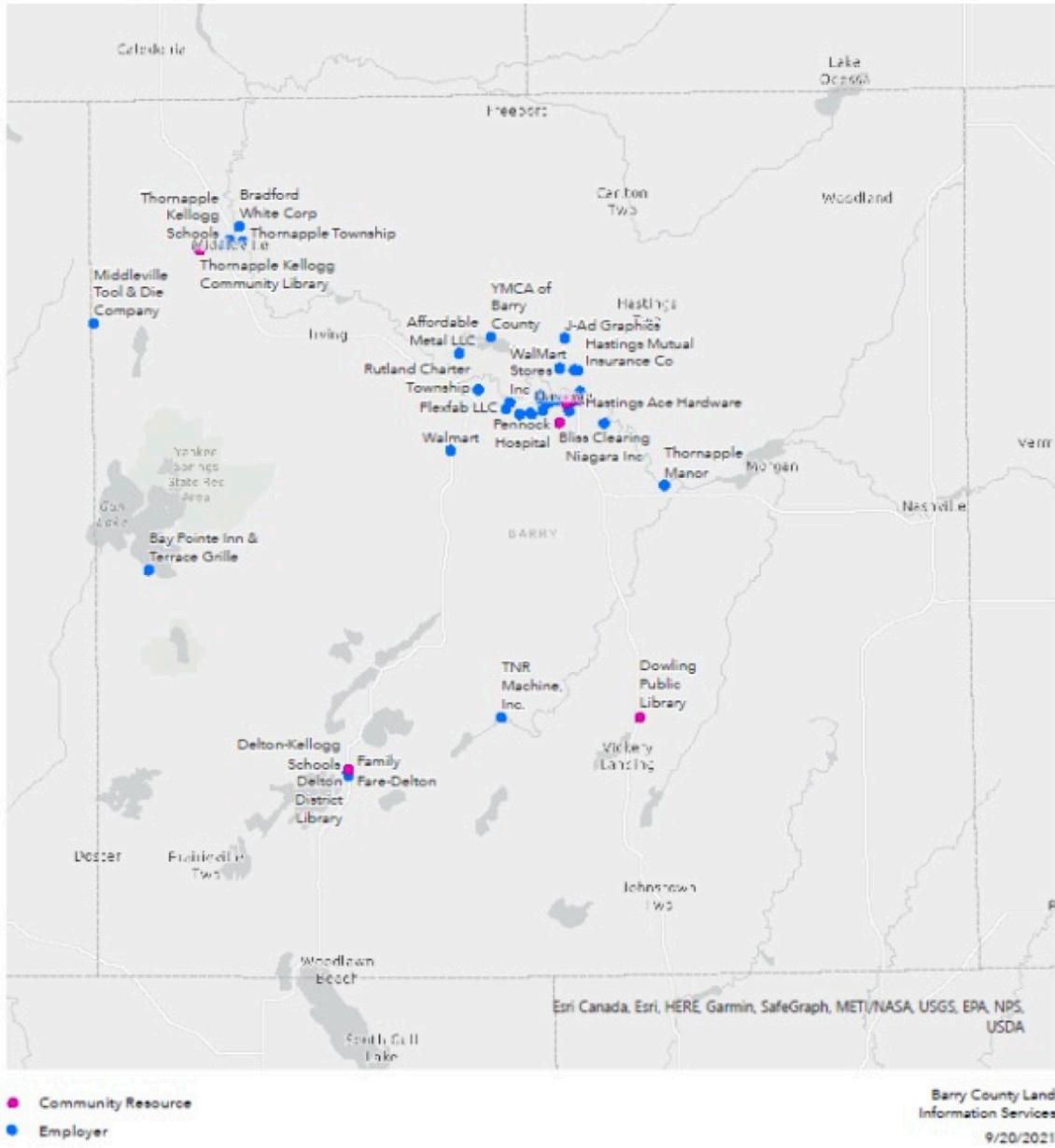
Barry-Eaton District Health Department worked with the Barry County Chamber of Commerce to identify appropriate and valuable economic assets (Table 14) and present them on a map. Barry County’s Geographical Information System department supported the final development of the maps seen in the report.

Table 14: Identified Community Assets

Health Care Resources	Mental Health Providers/Facilities
	Free Clinics
	Substance Abuse Treatment and Recovery Providers
	Hospitals
Institutions	K-12 Schools/Districts
	Government Resources
Public Safety	Domestic Violence & Crisis Response Orgs
Food System	Food Pantries/Banks/Commodities
	Grocery Stores
Local Economy	Unemployment & Job-Placement Services
Community Involvement	Citizen Groups & Coalitions

The maps in Figures 83 and 84 highlight the identified community assets found in Table 15. These assets center on the county's largest employers and include assets that help residents acquire new skills or further develop skills they currently have. Figure 83 is a county-level view of the locations of all discussed assets, both for largest employers and upskilling resources.

Figure 83: Major Employers and Community Resources, Barry County



The second map, Figure 84, shows a closer view of the City of Hastings and the related resources.

Figure 84: Major Employers and Community Resources, City of Hastings

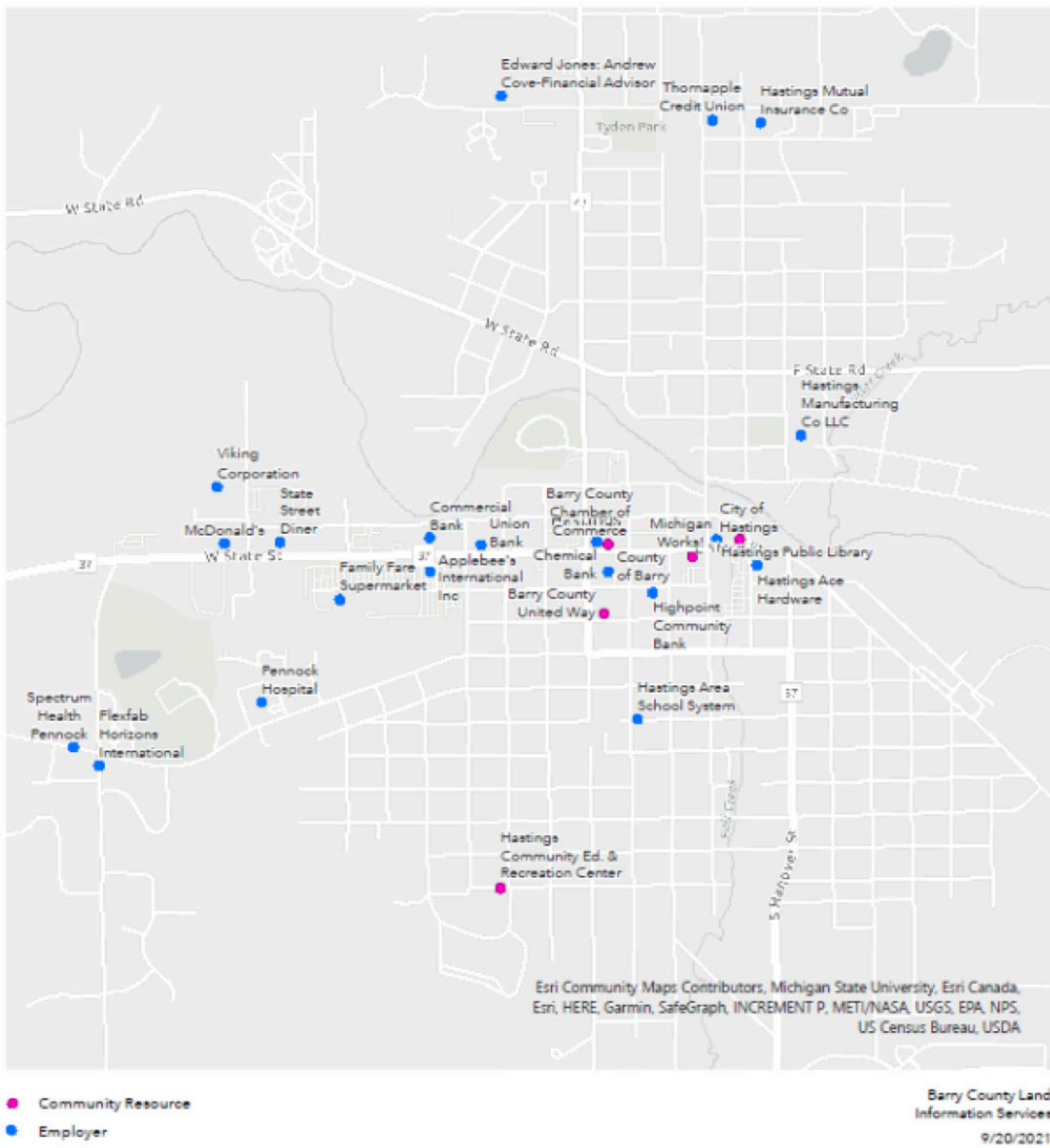


Table 15: List of Community Assets

Name of Resource	Address	City	Zip	Asset Type
Affordable Metal LLC	2995 W. Airport Rd.	Hastings	49058	Employer
Applebee's International Inc.	638 W. State St.	Hastings	49058	Employer
Bay Pointe Inn & Terrace Grille	11456 Marsh Rd.	Shelbyville	49344	Employer
Bliss Clearing Niagara Inc.	1004 E. State St.	Hastings	49058	Employer
Bradford White Corp	200 Lafayette St.	Middleville	49333	Employer
Chemical Bank – Hastings	241 W. State St.	Hastings	49058	Employer
Chemical Bank – Middleville	303 Arlington St.	Middleville	49333	Employer
City of Hastings	201 E. State St.	Hastings	49058	Employer
Commercial Bank	629 W. State St.	Hastings	49058	Employer
County of Barry	220 W. State St.	Hastings	49058	Employer
Delton-Kellogg Schools	327 N. Grove St	Delton	49046	Employer

Name of Resource	Address	City	Zip	Asset Type
Edward Jones: Andrew Cove -Financial Advisor	421 W. Woodlawn Ave.	Hastings	49058	Employer
Family Fare – Delton	103 N. Grove St.	Delton	49046	Employer
Family Fare Supermarket	902 W. State St.	Hastings	49058	Employer
Flexfab Horizons International	102 Cook Rd.	Hastings	49058	Employer
Flexfab LLC	1699 W. M43 Hwy.	Hastings	49058	Employer
Hastings Ace Hardware	200 S. Boltwood	Hastings	49058	Employer
Hastings Area School System	232 W. Grand St.	Hastings	49058	Employer
Hastings Fiber Glass Products	770 Cook Rd.	Hastings	49058	Employer
Hastings Manufacturing Co. LLC	325 N. Hanover St.	Hastings	49058	Employer
Hastings Mutual Insurance Co.	404 E. Woodlawn Ave.	Hastings	49058	Employer
Highpoint Community Bank	150 W. Court St.	Hastings	49058	Employer
J-Ad Graphics	1351 N. M-43 Hwy.	Hastings	49058	Employer

Name of Resource	Address	City	Zip	Asset Type
McDonald's	1215 W. State St.	Hastings	49058	Employer
Middleville Tool & Die Company	1900 Patterson Rd.	Middleville	49333	Employer
Rutland Charter Township	2461 Heath Rd.	Hastings	49058	Employer
Spectrum Health Pennock	1009 W. Green St.	Hastings	49058	Employer
State Street Diner	1105 W. State St.	Hastings	49058	Employer
Thornapple Credit Union - Hastings	202 E. Woodlawn Ave.	Hastings	49058	Employer
Thornapple Kellogg Schools	509 W. Main St.	Middleville	49333	Employer
Thornapple Manor	2700 Nashville Rd.	Hastings	49058	Employer
Thornapple Township	200 E. Main	Middleville	49333	Employer
TNR Machine, Inc.	8951 S. Cedar Creek Rd.	Dowling	49050	Employer
Union Bank	529 W. State St.	Hastings	49058	Employer
Viking Corporation	210 N. Industrial Park Dr.	Hastings	49058	Employer

Name of Resource	Address	City	Zip	Asset Type
YMCA of Barry County	2055 Iroquois Tr.	Hastings	49058	Employer
Walmart Stores Inc.	1618 W. M-43 Hwy.	Hastings	49058	Employer
Barry County Chamber of Commerce	221 W. State St.	Hastings	49058	Resource
Barry County United Way	231 S. Broadway St.	Hastings	49058	Resource
Delton District Library	330 N. Grove St.	Delton	49046	Resource
Dowling Public Library	1765 E. Dowling Rd.	Hastings	49058	Resource
Hastings Community Ed. & Recreation Center	520 W. South St.	Hastings	49058	Resource
Hastings Public Library	227 E. State St.	Hastings	49058	Resource
Michigan Works!	130 E. State St.	Hastings	49058	Resource
Thornapple Kellogg Community Library	3885 Bender Rd.	Middleville	49333	Resource

Additional Resources

Beyond strictly workforce development, there are also resources to attract employees and prospective talent. Several initiatives aim to connect with Barry County students to meet future workforce needs. Examples of these are:

- MAVIN for Employers (<https://massp.com/mavin>)
- Discover Manufacturing (<https://www.discover-manufacturing.com/>)
- Barry County Career Tours (Barry County Chamber & Economic Alliance)

The following programs in the community help aid individuals who were previously incarcerated connect with and rebuild their lives through job training, employment, and access to housing and resources.

- Starting Over for Success (www.startingoverforsuccess.org)
- Clean Slate Initiative via MichiganWorks! (<https://www.miworks.org/clean-slate>)

Prioritization

The prioritization of Barry County significant health needs occurred through a best-practice, community-engaged approach. This approach organized the various themes and indicators from data collection into key prioritized categories, which were then used by stakeholders to select the top significant health needs.

Methodology

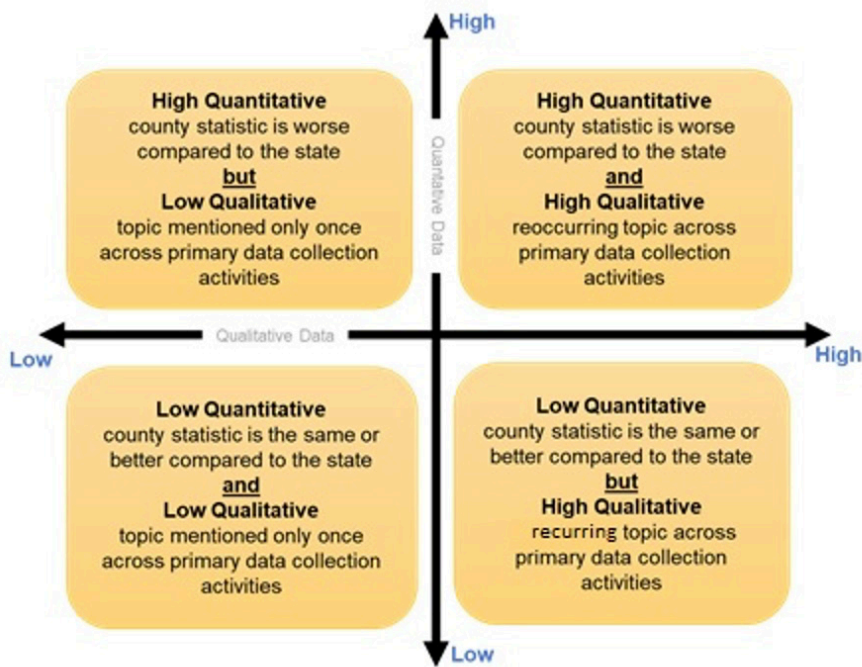
Priority Category Identification

In the first step, a prioritization matrix (Figure 85) was used to evaluate the data collected from the assessment activities. Based on the characteristics of the quantitative data or the frequency of health themes that occurred in the qualitative data, data or themes were grouped into one of four categories: High Quantitative/High Qualitative, High Quantitative/Low Qualitative, Low Quantitative/Low Qualitative and Low Quantitative/High Qualitative.⁹⁷

The indicators and themes identified as High Quantitative/High Qualitative were highlighted in the data preview event along with those with positive or negative trends, and emerging needs.

The workgroup and Steering Committee used a facilitated discussion to collectively combine the quantitative indicators into a set of health issues to be used in the prioritization event.

Figure 85: Health Needs Matrix



Source: Truven Health Analytics and Beaumont Health Community Health & Outreach. Community Health Needs Assessment – 2016, Beaumont Health

Significant Health Need Prioritization

The prioritization of significant health needs used a weighted criteria approach. The criteria and associated weights were discussed and approved by the Steering Committee (Table 17). The category groupings were voted on in each of the four criteria areas (Table 16). After the vote, each category rank was entered into the weighted prioritization matrix.

The sum of the participants' votes for each health issue was multiplied by the weight of each criterion, creating four scores per health issue. These four scores were combined into one score used to compare the health issues. The five issues with the lowest score would be the five significant health needs.

Identifying and Prioritizing Health Needs

In November 2021, Barry-Eaton District Health Department hosted a "data preview" virtual event, which was open to the public. During this event, data gathered from the assessment was reviewed by members of the steering and advisory committees, Spectrum Health Pennock staff, and other individuals living or working in Barry County. Barry-Eaton District Health Department advertised the meeting on their website, social media pages and emails to individuals on the project's contact list.

Health department staff highlighted assessment data that:

- Categorized as high quantitative and high qualitative using the health needs matrix (Figure 85)
- Showed significant movement, regardless of the direction
- Was unexpected
- Stood out when compared to the region, state or national data
- Included past Barry County community priorities from previous assessments

In addition to presenting quantitative measures, findings from the community and health care provider surveys, asset mapping surveys, underserved focus groups, and county leadership and key stakeholder interviews were presented. Interspersed throughout the presentation were short, facilitated questions about the data, and health department staff led the group in a brief conversation about the underlying factors that may be present. The audience could request additional data to clarify or better understand a presented health issue during this event.

Time Between Data Preview Event and Prioritization Event

Between the data preview and the prioritization event, two things happened.

1. Health department staff used the quantitative indicators to group those indicators into 16 health issues (Table 16).
2. The Steering Committee reviewed the criteria used to evaluate all the health issues. The Steering Committee was guided by health department staff and selected four criteria to evaluate the health issues: (1) seriousness; (2) control; (3) capacity; and (4) catalytic. After confirmation of the criteria, weights were assigned to each of the four criteria (Table 17).

Prioritization Event

The prioritization of the Barry County significant health needs took place one month after the data review. All project partners were encouraged to invite key stakeholders and community partners to the prioritization event, during which the health issues would be prioritized (Appendix C). The meeting was advertised on the Barry-Eaton District Health Department website and Facebook page, via email to the project email listserv, at local coalition meetings, and via project partner websites, Facebook pages and other media.

During the event, the health department staff facilitated grounding activities to prepare participants for voting later in the session.

Facilitated grounding activities:

- Review of the Community Health Needs Assessment process
- Refresher of the data presented at the data preview event
- Outline of the new information requested by the audience at the data preview event

After this grounding phase, participants engaged in an orientation to the web-based voting process, including a mock voting session. Once participants were comfortable with the voting process, they evaluated all 16 health issues in four voting cycles (one for each prioritization criteria). The results were put into the prioritization matrix worksheet, and weighted scores were calculated (Table 17). The five health issues with the lowest score were the community prioritized significant health needs. In Figure 86, the Barry County significant health needs with the highest weighted score were:

- Mental health needs and access
- Affordable housing
- Health care access and quality
- Substance misuse
- Social connection and capital

Table 16: Individual Indicators by Priority Category

Priority Category	Description	Individual Measures From Assessment
Financial Stability and Economic Mobility	<ul style="list-style-type: none"> Financial stability can include many interrelated economic components, such as poverty and income. Economic mobility means the ability to improve one’s economic situation, which can be reflected by a geography’s cost of living, employment opportunities and the ability to earn a living wage. 	<ul style="list-style-type: none"> Gini Coefficient of Income Inequality Percentage of Households Below ALICE Threshold Food Insecurity
Affordable Housing	<ul style="list-style-type: none"> Affordable housing may improve health by freeing up resources for nutritious food and health care costs. Quality housing can reduce exposure to mental health stressors, infectious diseases, allergens, neurotoxins and other dangers. Families that can only find affordable housing in very high poverty areas may be prone to greater psychological distress and exposure to violent or traumatic events. 	<ul style="list-style-type: none"> Percentage of Households That Spend More Than 30% of Their Income on Housing
Education	<ul style="list-style-type: none"> There is a positive relationship between higher education and improved health outcomes. Years of formal education correlate strongly with improved work and economic opportunities, reduced psychosocial stress and healthier lifestyles. 	<ul style="list-style-type: none"> Percentage of Adults Age 25 or Older With a Bachelor’s Degree or Higher
Social Connection and Capital	<ul style="list-style-type: none"> A growing body of evidence suggests that non-parent adults have a large positive or negative influence on adolescent development. Adolescents whose social network includes a non-parent adult mentor involved in illegal activity have an increased probability of becoming involved in illegal activity. Non-parent adults who are positive and supportive can contribute to an adolescent’s self-esteem, problem-solving behavior and overall resilience. 	<ul style="list-style-type: none"> Percentage of Adolescents Who Know Adults in the Neighborhood They Could Talk to About Something Important
Community Safety	<ul style="list-style-type: none"> High levels of violent crime compromise physical safety and psychological well-being. Crime rates can also deter residents from pursuing healthy behaviors, such as outdoor exercise. Increased stress levels, which might arise from continuous exposure to violence or concerns about personal safety, may contribute to obesity. Considerations also may include transportation, equality and accessibility of resources. 	<ul style="list-style-type: none"> Transportation Accidents

Priority Category	Description	Individual Measures From Assessment
Health Care Access and Quality	<ul style="list-style-type: none"> • Health care access and quality reflect one’s ability to obtain health care, get affordable health care services, and receive appropriate and high-quality health care services. • Health insurance coverage helps patients gain entry into the health care system. • Access to primary and preventive health care services can prevent future hospitalization and poor health outcomes. Access to specialty care providers is also critical for patients within a community. 	<ul style="list-style-type: none"> • Percentage of Adults With No Primary Care Provider • Dental Care Access • Breast Cancer Screening • Colon Cancer Screening
Environmental Quality	<ul style="list-style-type: none"> • An ideal environment has clean air, water and food and is free from toxic exposures. A contaminated environment may contribute to poor health outcomes. • Human environments generally consist of two components: indoor and outdoor. Indoor environmental issues can include lead, mold, exposure to allergens, and infectious agents from insects or rodents. Outdoor environmental hazards can include poor air quality due to smoke, smog, pollution, extreme temperatures and contaminated water sources. 	<ul style="list-style-type: none"> • Rate of Elevated Blood Lead Levels Among Children 6 Years and Younger • Air Pollution – Particulate Matter (PM2.5)
Built Environment	<ul style="list-style-type: none"> • An adequately built environment enhances the development and well-being of its residents and supports healthy behaviors and outcomes. • The built environment can include the design of a community (such as streets, buildings, sidewalks, parks, etc.) and the assets located within the community (grocery stores, green spaces, locations for physical activity, schools, etc.). 	<ul style="list-style-type: none"> • Housing Quality • Internet Subscriptions (Broadband)
Obesity	<ul style="list-style-type: none"> • Obesity is often the result of an overall energy imbalance due to poor diet and limited physical activity. • Obesity increases the risk for health conditions such as coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia, stroke, liver and gallbladder disease, sleep apnea and respiratory problems, and osteoarthritis. • Obese individuals may face social and psychological problems, such as stigmatization and low self-esteem. 	<ul style="list-style-type: none"> • Percentage of Adults Who Are Obese • Percentage of Adolescents Who Are Obese

Priority Category	Description	Individual Measures From Assessment
Nicotine Use	<ul style="list-style-type: none"> Tobacco use can include cigarettes, electronic cigarettes, chewing tobacco and other nicotine-containing products. Cigarette smoking is a cause of multiple diseases, including various cancers, cardiovascular conditions, low birthweight and other adverse health outcomes. 	<ul style="list-style-type: none"> Percentage of Adults Who Smoke Percentage of Adolescents Who Smoked Cigarettes During the Past 30 Days Percentage of Adults Who Use Vaping Products
Behavioral Health Need and Access	<ul style="list-style-type: none"> Behavioral health is an emerging term within the mental health and substance abuse fields that focuses on a person's mental well-being, ability to function in everyday life and concept of self. This area focuses on access to behavioral health resources. 	<ul style="list-style-type: none"> Percentage of Adults With Poor Mental Health Population to Mental Health Provider Ratio
Substance Use	<ul style="list-style-type: none"> Components include aspects of mental health, including stress, depression, psychological disorders, access to mental health services, and those relating to substance misuse, including inappropriate use of alcohol, prescription drugs and illegal drugs. This area focuses specifically on substance use. 	<ul style="list-style-type: none"> Percentage of Adults Who Binge Drank During the Past 30 Days Percentage of Adolescents Who Binge Drank During the Past 30 Days Percentage of Adolescents Who Have Used Marijuana in the Past 30 Days Percentage of Adolescents Who Have Used Marijuana Prior to Age 13
Communicable Diseases	<ul style="list-style-type: none"> Communicable diseases are diseases that are transmitted between people. These include a variety of respiratory, gastrointestinal, sexually transmitted, bloodborne and vector-borne infections. Prevention and treatment of communicable diseases are critical to the health of both individuals and communities. Prevention can take many forms, including vaccination, hand washing, social distancing, use of insect repellants and use of condoms during sex, to name a few. 	<ul style="list-style-type: none"> Percentage of Non-Medical Immunization Waivers Granted
Maternal and Child Health	<ul style="list-style-type: none"> Maternal health concerns are traditionally thought of as pregnancy and childbirth. Increasingly, this field is expanding to consider pre- and postpartum depression, obesity and substance misuse issues. Child health can relate to many topics, such as infant mortality, immunization, proper development and growth, and common childhood diseases such as asthma and obesity. 	<ul style="list-style-type: none"> Rate of Preventable Asthma Hospitalization Among Youths Under 18 Rate of Infant Mortality

Priority Category	Description	Individual Measures From Assessment
Chronic Disease	<ul style="list-style-type: none"> Chronic diseases generally last one year or longer and usually cannot be prevented by vaccines or cured by medication. Examples of chronic diseases include cardiovascular disease, diabetes, asthma and arthritis. Chronic diseases have the most significant impact on the health care system, both in terms of use and financial burden. Some chronic diseases can lead to other diseases and cause financial and psychological distress for patients. 	<ul style="list-style-type: none"> Rate of Preventable Diabetes Hospitalization Rate of Preventable Congestive Heart Failure Hospitalization Among Adults 65 and Older Rate of Preventable COPD Admissions Preventable Hospital Stays Disability Rate Adult Asthma Prevalence High Cholesterol High Blood Pressure Diabetes Management Education
Mortality	<ul style="list-style-type: none"> Several factors can drive mortality rate, suicide rate and premature death rate. An indicator that stands out would provide an opportunity to identify and address a community need. 	<ul style="list-style-type: none"> Mortality Rate Premature Death Rate Suicide Rate

Table 17: List of Prioritization Criteria and Weights

Criteria	Weight
Seriousness (<i>How Serious Is the Health Issue?</i>)	4
Control (<i>How Much Control Do We Have To Affect the Health Issue?</i>)	2
Capacity (<i>What Is Our Ability, as a Community, To Act on a Particular Health Issue?</i>)	3
Catalytic (<i>How Much Does This Issue Affect Other Health Issues?</i>)	1

Figure 86: Filled-In Prioritization Matrix From 2021 Barry County Prioritization Event

	Seriousness (how serious is the health issue?)	Control (how much control do we have to affect the health issue?)	Capacity (what is our ability, as a community to act on a particular health issue?)	Catalytic (how much does this issue affect other health issues?)	Weighted Score
	weight=1	weight=2	weight=3	weight=4	
Mental Health Needs and Access	1	4	6	4	15
Affordable Housing	2	8	3	12	25
Health Care Access and Quality	5	2	9	16	32
Substance Misuse	3	14	12	28	57
Social Connection and Capital	8	12	15	32	67
Financial Stability and Economic Mobility	4	28	30	8	70
Obesity	6	24	24	24	78
Education	12	20	18	36	86
Communicable Diseases	14	10	27	44	95
Chronic Disease	9	26	42	20	97
Maternal and Child Health	10	22	33	40	105
Nicotine Use	7	18	21	60	106
Built Environment and Transportation	13	16	36	48	113
Environmental Quality	15	6	39	56	116
Mortality	11	30	45	52	138

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Appendix A: Secondary Data Collection Descriptions

American Community Survey, United States Census Bureau

The U.S. Census Bureau's American Community Survey, formerly the decennial's 'long form', is a nationwide population-based survey that collects and produces information on social, economic, housing, and demographic characteristics about our nation's population every year.⁹⁸

Area Health Resource File/American Medical Association

The Area Health Resources Files are released annually by the Health Resources & Services Administration's Bureau of Health Workforce. The Area Health Resource File includes data on health care professions, health facilities, population characteristics, economics, health professions training, hospital utilization, hospital expenditures, and environment for various geographies in the United States.⁹⁹

Behavioral Risk Factor Survey, Capital Area

The Capital Area Behavioral Risk Factor Survey (BRFS) is a random digit-dialed landline and mobile telephone health survey of adults administered by the Capital Area United Way on behalf of Barry-Eaton District Health Department, Ingham County Health Department, and Mid-Michigan District Health Department. This survey project collects information on health behaviors, preventive health practices, health care access, social cohesion, and interactions from six counties.¹⁰⁰ It is modeled after Michigan's (BRFS) and the national Behavioral Risk Factor Surveillance System.

Behavioral Risk Factor Surveillance System, Michigan

The Michigan Behavioral Risk Factor Surveillance System (BRFSS) comprises annual, state-level landline and mobile telephone surveys of Michigan residents aged 18 years and older. These annual, state-level surveys, also known as Michigan Behavioral Risk Factor Surveys, act as the only source of state-specific, population-based estimates of the prevalence of various behaviors, medical conditions, and preventive health care practices among Michigan adults.

The BRFSS is supported by the Centers for Disease Control and Prevention through a cooperative agreement with the Michigan Department of Health and Human Services. The Michigan surveys follow the Centers for Disease Control and Prevention's telephone survey protocol for the BRFSS annual standardized core questionnaire.¹⁰¹

Centers for Medicare & Medicaid Services Office of Minority Health's Mapping Medicare Disparities

The Centers for Medicare & Medicaid Services Office of Minority Health has designed the Mapping Medicare Disparities Tool, an interactive map first launched in 2016, to identify areas of disparities between subgroups of Medicare beneficiaries (e.g., racial and ethnic groups) in health outcomes, utilization, and spending. Focused initially on chronic condition prevalence, the tool currently contains additional measures across multiple health domains, including costs, service utilization, quality of care, and health outcomes.¹⁰²

Comprehensive Housing Affordability Strategy United States Department of Housing and Urban Development / U.S. Census Bureau

The Comprehensive Housing Affordability Strategy consists of "custom tabulations" of U.S. Census Bureau data that are generally not publicly available. This data is used to determine the number of households needing housing assistance.¹⁰³

National Environmental Public Health Tracking Network, Centers for Disease Control and Prevention

In collaboration with national, state, and local partners, the Environmental Public Health Tracking Network uses data and expertise to identify and address environmental public health needs, particularly air quality, and improve public health capacity across the United States.¹⁰⁴

Fatality Analysis Reporting System, National Center for Statistics and Analysis, National Highway Traffic Safety Administration

The Fatality Analysis Reporting System, which became operational in 1975, contains data on a census of fatal traffic crashes for every state, the District of Columbia, and Puerto Rico. To be included in Fatality Analysis Reporting System, a crash must involve a motor vehicle traveling on a traffic way customarily open to the public and must result in the death of an occupant of a vehicle or a non-occupant within 30 days (720 hours) of the crash.¹⁰⁵

Food Environment Atlas, Economic Research Service / United States Department of Agriculture

There is a complex interaction between the local food environment (i.e., store/restaurant proximity, food prices, food and nutrition assistance programs, and community characteristics) and individual food choices. These factors must be observed with each other to understand these complex interactions. The United States Department of Agriculture's Food Environment Atlas was designed as a tool to facilitate that understanding.¹⁰⁶

Local Area Unemployment Statistics, Michigan Department of Technology, Management & Budget

The Local Area Unemployment Statistics program, housed in the Michigan Department of Technology, Management & Budget (DTMB), provides a monthly estimate of the state's labor force, employment, unemployment, and unemployment rate. Data is taken from surveys and unemployment claims recorded during the monthly reference week, usually the week including the 12th day of each month. Statistics are an estimate of persons by place of residence.¹⁰⁷

Map the Meal Gap, Feeding America

Map the Meal Gap is an annual study of food cost and food insecurity conducted by Feeding America. Feeding America is a nationwide network of food banks and the nation's largest domestic hunger-relief organization. Information collected by Map the Meal Gap includes food insecurity rates and numbers, food budget shortfall, cost-of-food index, and national average meal cost. The study uses the Current Population Survey information, a population-based survey of the country's labor force project, supported jointly by the United States Census Bureau and the United States Bureau of Labor Statistics.¹⁰⁸

Michigan Disease Surveillance System, Michigan Department of Health and Human Services

Michigan Disease Surveillance System is a public health surveillance system administered by the Michigan Department of Health and Human Services that monitor individual cases of reportable conditions for the state.¹⁰⁹

Michigan Center for Educational Performance and Information

The Michigan Center for Educational Performance and Information is a clearinghouse of information collected from schools and colleges in the state. It coordinates, collections, connections, and reports education data in Michigan. The data is then used to help inform parents, educators, and policymakers' policy, programs, and other decisions to improve state and local educational outcomes.¹¹⁰

Michigan Incident Crime Reporting, Michigan State Police

Information about 95 specific criminal offenses (ranging from arson to homicide to weapon offenses) is collected by Michigan State Police from all law enforcement agencies. This information is used to populate the Michigan State Police's incident-based reporting system: Michigan Incident Crime Reporting. Some of the information captured in Michigan Incident Crime Reporting include administrative, offense, victim, property, offender, and arrestee information for each incident known to police. The Michigan State Police also forward this information to the Federal Bureau of Investigation's National Incident-Based Reporting System.¹¹¹

Michigan Health & Hospital Association Data

Michigan Health & Hospital Association is the advocacy organization representing all community hospitals in the state. It owns and administers a proprietary database of hospitalizations of Michigan residents, all short-stay hospitals (including Veterans Administration hospitals but excluding military hospitals) in Michigan and surrounding states. MHA shares a portion of the information it collects with the Michigan Department of Health and Human Services.¹¹²

National Vital Statistics System – Mortality Files, National Center for Health Statistics

Data on deaths and births were provided by National Center for Health Statistics and drawn from the National Vital Statistics System. These data are submitted to the NVSS by the vital registration systems operated in the jurisdictions legally responsible for registering vital events (i.e., births, deaths, marriages, divorces, and fetal deaths). In prior years of the Rankings, Premature Death was calculated by the National Center for Health Statistics. However, this year, the Mortality-All County (micro-data) file was requested, allowing Premature Death and Life Expectancy to be calculated.¹¹³

National Provider Identifier Registry/National Plan and Provider Enumeration System, Centers for Medicare and Medicaid

The National Plan and Provider Enumeration System, developed by the Centers for Medicare and Medicaid, documents the National Provider Identifier. The National Provider Identifier is a unique intelligence-free identification number for covered health care providers. Covered health care providers and all health plans and health care clearinghouses must use the National Provider Identifier in the administrative and financial transactions adopted under Health Insurance Portability and Accountability Act. The National Provider Identifier Registry is a query-only database updated daily to enable users to query the NPPES (e.g., search by National Provider Identifier, provider name, etc.) and retrieve the Freedom of Information Act-disclosable data from the search results.¹¹⁴

Safe Drinking Water Information System, Environmental Protection Agency

The Safe Drinking Water Act requires states to report drinking water information periodically to the United States Environmental Protection Agency. Some of the information states include in their report are basic information about each public water system, characteristics of the system's source(s) of water, violation information for each public water system, and enforcement information (including actions states or the Environmental Protection Agency have taken to ensure that a public water system returns to compliance if it is in violation).¹¹⁵

Uniform Crime Reporting – Federal Bureau of Investigation

Uniform Crime Reporting Program generates reliable statistics for use in law enforcement. It also provides information for students of criminal justice, researchers, the media, and the public. The program has been providing crime statistics since 1930. The Uniform Crime Reporting Program includes data from more than 18,000 cities, universities and colleges, county, state, tribal, and federal law enforcement agencies. Agencies voluntarily participate and submit their crime data either through a state Uniform Crime Reporting program or directly to the Federal Bureau of Investigation's Uniform Crime Reporting Program.¹¹⁶

Vital Records & Health Statistics, Michigan Department of Health & Human Services

While the primary purpose for collecting vital records is to record information on vital events (i.e., births, deaths, marriages, and divorces) for legal purposes, these records also serve as an essential source for statistical information. The Michigan Department of Health & Human Services' Division for Vital Records & Health Statistics calculates Michigan's counts, rates, and percentages for various demographic groups and geographies.⁹

Appendix B: Health Care Resource Availability

Table B1: Number of Healthcare Facilities in Barry County and Michigan

Indicator	Year	Measure	Barry County	Michigan
Non-Hospital Facilities				
Community Health Centers	2020	Total Number	1	385
Community Mental Health Centers	2020	Total Number	0	2
Federally Qualified Health Centers	2020	Total Number	0	267
Home Health Agencies	2020	Total Number	0	464
Hospices	2020	Total Number	0	141
Rural Health Clinics	2020	Total Number	3	192
Skilled Nursing Facilities	2020	Total Number	2	432
Hospital Facilities				
Hospitals	2020	Total Number	1	165
Community Hospitals	2020	Total Number	1	126
Critical Access Hospitals	2020	Total Number	1	36
General Hospitals	2020	Total Number	1	127
Non-General Hospitals	2020	Total Number	0	34
Acute Long-Term Care Hospitals	2020	Total Number	0	0
Psychiatric Hospitals	2020	Total Number	0	13
Rehabilitation Hospitals	2020	Total Number	0	2
Veterans Administration (VA) Hospitals	2020	Total Number	0	5

Table B2: Number of Health Care Professionals in Barry County and Michigan

Indicator	Year	Measure	Barry County	Michigan
Short-Term Hospitals / General Hospitals				
Registered Nurses	2019	Total Number	63	45,187
Advanced Practice Nurses	2019	Total Number	34	11,503
Licensed Practical Nurses/ Licensed Vocational Nurses	2019	Total Number	6	1,245
Nursing Assistive Persons	2019	Total Number	24	11,601
Laboratory Technicians	2019	Total Number	20	3,734
Pharmacists	2019	Total Number	2	1,901
Pharmacy Technicians	2019	Total Number	5	1,994
Radiology Technicians	2019	Total Number	17	5,297
Respiratory Therapist	2019	Total Number	4	2,457
Short-Term Non-General / Long-Term Hospital Facilities				
Registered Nurses	2019	Total Number	0	2,873
Licensed Practical Nurses/ Licensed Vocational Nurses	2019	Total Number	0	341
Nursing Assistive Persons	2019	Total Number	0	1,640
Laboratory Technicians	2019	Total Number	0	82
Pharmacists	2019	Total Number	0	152
Pharmacy Technicians	2019	Total Number	0	114
Radiology Technicians	2019	Total Number	0	119
Respiratory Therapist	2019	Total Number	0	201

Source: 2021 County Level Data – Area Health Resource File

Table B3: Number of Medical and Nursing Specialties in Barry County and Michigan

Indicator	Year	Measure	Barry County	Michigan
Medical Specialties				
MD Medical Doctors (Allopathic Medicine)				
Allergy & Immunology	2019	Total Number, Non-Federal	0	147
Anesthesiology	2019	Total Number, Non-Federal	1	1,171
Cardiovascular Disease Specialty	2019	Total Number, Non-Federal	0	620
Child Psychology	2019	Total Number, Non-Federal	0	209
Colorectal Surgery	2019	Total Number, Non-Federal	0	77
Dermatology	2019	Total Number, Non-Federal	0	338
Diagnostic Radiology	2019	Total Number, Non-Federal	0	782
Emergency Medicine	2019	Total Number, Non-Federal	1	1,603
General Family Medicine	2019	Total Number, Non-Federal	12	2,920
Forensic Pathology	2019	Total Number, Non-Federal	0	18
Gastroenterology	2019	Total Number, Non-Federal	0	378
General Practice	2019	Total Number, Non-Federal	13	102
Preventive Medicine	2019	Total Number, Non-Federal	0	35
General Surgery	2019	Total Number, Non-Federal	4	1,255
General Internal Medicine	2019	Total Number, Non-Federal	3	3,737
Neurological Surgery	2019	Total Number, Non-Federal	1	187
Neurology	2019	Total Number, Non-Federal	0	566
Obstetrics / Gynecology	2019	Total Number, Non-Federal	2	1,245
Occupational Medicine	2019	Total Number, Non-Federal	0	56
Otolaryngology	2019	Total Number, Non-Federal	0	263
Pathology	2019	Total Number, Non-Federal	0	524
General Pediatrics	2019	Total Number, Non-Federal	3	1,543
Pediatric Cardiology	2019	Total Number, Non-Federal	0	123
Physical / Medical Rehabilitation	2019	Total Number, Non-Federal	0	448

Table B3: Number of Medical and Nursing Specialties in Barry County and Michigan

Indicator	Year	Measure	Barry County	Michigan
Plastic Surgery	2019	Total Number, Non-Federal	0	229
Psychiatry	2019	Total Number, Non-Federal	0	948
Pulmonary Disease Specialist	2019	Total Number, Non-Federal	0	399
Radiation Oncology	2019	Total Number, Non-Federal	0	193
Radiology	2019	Total Number, Non-Federal	0	383
Thoracic Surgery	2019	Total Number, Non-Federal	0	133
Urology	2019	Total Number, Non-Federal	0	313
DO Doctor Of Osteopathic Medicine				
Anesthesiology	2019	Total Number, Non-Federal	0	227
Emergency Medicine	2019	Total Number, Non-Federal	3	567
General Family Medicine	2019	Total Number, Non-Federal	3	1,070
General Practice	2019	Total Number, Non-Federal	0	176
General Surgery	2019	Total Number, Non-Federal	0	150
General Internal Medicine	2019	Total Number, Non-Federal	2	408
Obstetrics/Gynecology	2019	Total Number, Non-Federal	2	212
Orthopedic Surgery	2019	Total Number, Non-Federal	1	183
General Pediatrics	2019	Total Number, Non-Federal	0	156
Physical/Medical Rehabilitation	2019	Total Number, Non-Federal	2	94
Psychiatry	2019	Total Number, Non-Federal	0	108
Nursing Specialties				
Nurse Practitioners (NPI)	2020	Total Number	29	8,433
Advanced Practice Nurse Midwives (NPI)	2020	Total Number	3	301
Advanced Practice Registered Nurses (NPI)	2020	Total Number	34	11,503
Certified Registered Nurse Anesthetists (NPI)	2020	Total Number	2	2,658
Certified Nurse Midwives (NPI)	2013	Total Number	5	321
Clinical Nurse Specialist (NPI)	2020	Total Number	0	111

Note: NPI - National Provider Identifier Number

Appendix C: Prioritization Participants

Table C1: Prioritization Event Participants

Attendee	Affiliation
Jillian Foster	Barry Community Foundation
Tammy Pennington	Barry County Commission on Aging
Emily Whisner	Barry County Community Mental Health Authority
Kristyn Kostelec	Barry County Community Mental Health Authority
Liz Lenz	Barry County Community Mental Health Authority
Rich Thiemkey	Barry County Community Mental Health Authority
Sheryl Overmire	Barry County Trial Court
Lani Forbes	Barry County United Way
Patrick Jansens	Barry County United Way
Anne Barna	Barry-Eaton District Health Department
Emily Smale	Barry-Eaton District Health Department
Robert Schirmer	Barry-Eaton District Health Department
Julie McMillen	Calhoun Intermediate School District
Ashleigh Wassenaar	Michigan Department of Health and Human Services
Lorena Frederick	Michigan Department of Health and Human Services
Sarah Graham	Michigan Department of Health and Human Services
Laura Anderson	Michigan State University
Leslie Visser	Pine Rest Christian Mental Health Services
Angie Ditmar	Spectrum Health
Bernard Jore	Spectrum Health
Beth Jabin	Spectrum Health
Cassie Larrieux	Spectrum Health
Emily Welker	Spectrum Health
Janine Dalman	Spectrum Health
Rhonda Lundquist	Spectrum Health

Appendix D: Barry County Community Survey

1. 1. Do you live or work in Barry County?
 - Yes (go to a and b)
 - No (*End of survey. Thank you for participating.*)

2. What is your age in years?
 - Under 18 years old (*End of survey. Thank you for participating.*)
 - 18-21years old
 - 21-30 years old
 - 31-40 years old
 - 41-50 years old
 - 51-60 years old
 - 61-70 years old
 - 71 years or older

3. What is the highest level of education you have completed?
 - Never attended school or only attended Kindergarten
 - Grades 1 through 8 (Elementary School)
 - Grades 9 through 11 (Some High School)
 - Grade 12 or GED (High School Graduate)
 - College 1 to 3 years (Some college or technical school)
 - College 4 or more years (College Graduate)

4. Are you currently...? Mark only one.
 - Employed for wages
 - Self-employed
 - Out of work for more than 1 year
 - Out of work for less than 1 year
 - A Homemaker
 - A Student
 - Retired
 - Unable to work

5. Is the community you live
 - Urban
 - Suburban
 - Rural

6. How would you identify your gender?
 - Female
 - Male
 - Other: _____

7. Do you have any kind of health care coverage, including health insurance, or prepaid plans (such as HMOs, or government plans such as Medicare, Medicaid, or a County Health Plan)? Mark only one.
- Yes
 - No
8. What type of health care coverage do you use to pay for most of your medical care? Mark only one.
- A plan through an employer or union (includes plans purchased through another person's employer)
 - A plan you, or someone else, buys for you
 - Medicare
 - Medicaid
 - Healthy Michigan Plan (expanded Medicaid)
 - Military (CHAMPUS, TRICARE or VA)
 - Indian Health Service or Alaska Native Health Service
 - Other: _____
 - None (you pay the provider or hospital directly for full cost of care)
9. Do you rent or own your home?
- Rent
 - Own, paying mortgage
 - Own, no mortgage
 - Living with friend or family and not paying rent
 - Homeless
10. Pick the TOP three factors you think define a healthy community? Choose only THREE.
- Access to healthcare
 - Access to healthy and nutritious food
 - Affordable healthcare (including dental, vision, and hearing)
 - Affordable housing
 - Arts and cultural events
 - Clean environment
 - Community involvement
 - Disease/illness prevention
 - Financially healthy households
 - Good jobs and healthy economy
 - Good schools
 - Healthy lifestyles
 - Access to immunizations
 - Low crime/safe neighborhoods
 - Low disease rate and death rate
 - Low levels of child abuse
 - Access to Parks and recreation
 - Religious or spiritual values
 - Strong family life
 - Tolerance for diversity
 - Other: _____

11. Pick the TOP three problems you think are impacting the health of Barry County? Choose only THREE.

- Aging problems
- Alcohol and other drug issues
- Child abuse and neglect
- Chronic disease
- Climate change related impacts (more severe weather, increase in water and insect borne disease)
- Domestic violence
- Homelessness
- Homicides
- Housing risks and hazards
- Infectious disease
- Lack of access to healthcare (including dental, vision and hearing)
- Lack of physical activity
- Mental health problems
- Motor vehicle crashes
- Obesity
- Poor access to healthy and nutritious food (i.e. too expensive or store is too far away)
- Poor dietary habits
- Rape / sexual assault
- Sexually transmitted infections
- Suicide
- Teen pregnancy
- Tobacco use
- Other: _____

12. Pick the TOP three concerns impacting your household/family because of the COVID-19 pandemic? Choose only THREE.

- Concerns about short/long term health effects from COVID-19
- Decreased access to healthcare
- Delaying necessary care due to COVID-19 concerns
- Feelings of loss from COVID-19 death(s)
- Financial difficulties
- Food insecurity
- Increase in stress, depression & anxiety
- Increased fear or distrust of the health care system
- Increased substance use
- Increased domestic violence
- Limited access to COVID-19 vaccinations
- Lack of physical activity (due to various closures)
- Withdrawal from supports and services
- None

13. Have you been partially or fully vaccinated, scheduled to be vaccinated, or planning to be vaccinated for COVID-19?

- Yes (Go to Question 16)
- No (Go to Question 14)

14. What is the main reason why you would not get a vaccine for coronavirus?

- I had COVID-19 and should be immune
- The vaccine could give me COVID-19
- COVID-19 is not a serious illness
- I am not a member of any group that is at high risk for COVID-19
- I plan to use masks/other precautions instead
- I plan to wait and see if it is safe and may get it later
- I am concerned that the vaccine is being developed too quickly
- I am concerned about the side effects and safety of the vaccine
- I don't like vaccines
- I am concerned about the costs associated with the vaccine (such as office visit costs or vaccine administration fees)
- I don't like what is in the vaccine
- Other: _____

15. Have reports you heard/read in the media/on social media influenced your decision to be vaccinated?

- Yes
- No

16. How confident are you...	Not at All Confident	Not Very Confident	Somewhat Confident	Very Confident	Extremely Confident
...getting healthcare on your own? (for example, scheduling and attending appointments, finding a provider, filling a prescription, and knowing where to go for services)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...dealing with your health insurance provider on your own? (for example, understanding your coverage, understanding the statements they send to you, or disputing a claim)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...getting reliable health-related advice or information about your condition?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...using virtual healthcare services? (for example, scheduling and attending appointments, sending, and receiving messages from your provider, or navigating apps/patient portals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...filling out medical forms by yourself? (for example, insurance forms, questionnaires, and doctor's office forms)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. How often do you need to have someone help you when you read instructions, pamphlets, or other written material from your provider or pharmacy?

- Always
- Often
- Sometimes
- Rarely
- Never

18. In the past 12 months, were you offered the opportunity of a virtual office visit with a health service provider?

- Yes (go to question 19)
- No (go to question 21)

19. On a scale from 1 (very easy) to 5 (very difficult) rate how easy it was to...

	1 Very easy	2	3	4	5 Very difficult	NA
...use the website (i.e. Zoom/patient portal/app).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. On a scale from 1 (very easy) to 5 (very difficult) rate how easy it was to...

	1 Very easy	2	3	4	5 Very difficult	NA
...send or receive messages from your provider.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Why didn't you choose to have a virtual office visit?

- I do not have a computer
- My computer or smartphone is too old
- I do not have a smartphone
- My provider does not offer virtual visits
- I could not download the software/app
- I do not have internet access at home
- my internet is too slow
- I don't like computers
- I could not understand the directions to the software/patient portal/app
- I had trouble logging into the software because of my password
- Other:

22. What is your race? Do you consider yourself to be...

- White
- Black or African American
- Asian
- Native Hawaiian or Pacific Islander
- American Indian or Alaskan Native
- More than One Race
- Other: _____

23. Are you Hispanic, Latino/a, or of Spanish Origin?

- Yes
- No

24. What is your annual household income (from all sources)? Mark only one.

- \$14,999 or less
- Between \$15,000-\$24,999
- Between \$25,000 and \$34,999
- Between \$35,000 and \$49,999
- Between \$50,000 and \$74,999
- Between \$75,000 and \$99,999
- \$100,000 or more

25. What is your sexual orientation? Do you identify as...?

- Heterosexual or Straight
- Homosexual or Lesbian/Gay
- Bisexual
- Other: _____

26. Because of a physical, mental or emotional condition, do you have difficulty doing errands alone such as visiting a doctor's office or shopping?

- Yes
- No
- Don't Know/Not Sure

27. Please indicate your level of agreement with the following statements (check all that apply):

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
Addressing social needs is as important as addressing medical needs to improve community health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can afford to access resources available in my community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have the access to the resources I need to stay healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I experience cultural / language barriers that prevent me from accessing quality healthcare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. What do you feel are the top THREE barriers to getting healthcare in the community in which you live?

- Ability to schedule appointments
- Cost
- Concerns about COVID-19 exposure
- Difficulty navigating the healthcare system
- Fear or distrust of the health care system
- Finding a practice that accepts my insurance
- Finding a practice that accepts new patients
- Location of healthcare / no transportation
- Not knowing where to find resources to pay for care
- Prescription / Medication cost
- No Barriers
- Other: _____

29. Where do you get information about the health resources available in Barry County? Check all the apply.

- Church
- Community Service Organizations
- Community / Senior Center
- E-newsletters
- Family and friends
- Health professionals (doctor, nurse, pharmacist, etc.)
- I don't know where to look
- Internet
- Library
- Newspaper and magazines
- Radio
- School
- Social media

Appendix E: Barry County Healthcare Provider Survey

1. In which county(ies) do you practice? (check all that apply)

- Barry
- Eaton
- Kent
- Allegan
- Calhoun
- Ionia
- Kalamazoo
- Other: _____

2. What level of provider are you? (check only one)

- Nurse Practitioner
- Physician's Assistant
- Physician

3. What hospitals are you affiliated with?

(check all that apply)

- Spectrum Health Pennock
- Spectrum Health Blodgett Hospital
- Spectrum Health Butterworth Hospital
- Bronson Battle Creek Hospital
- Ascension Borgess Hospital
- Bronson Methodist Hospital
- Mercy Health St. Mary's
- Metro Health Hospital
- Other: _____

4. What is your gender?

- Female
- Male
- Prefer not to say
- Other: _____

5. What is your race? Do you consider yourself...

- White
- Black or African American
- Asian
- American Indian or Alaskan Native
- Native Hawaiian or Pacific Islander
- Other: _____

6. What is your ethnicity?
- Hispanic/Latino(a) or Spanish Origin
 - Arab or Middle Eastern
 - Neither
7. Do you identify as:
- Heterosexual
 - Lesbian, Gay, or Homosexual
 - Bisexual
 - Other: _____
8. What is your age in years?
- Less than 21 years
 - 21-30 years
 - 31-40 years
 - 41-50 years
 - 51-60 years
 - 61-70 years
 - 71 and older
9. Do you live in Barry County?
- Yes
 - No
10. What do you think are the THREE most significant factors that define a “healthy community?”
- Access to health care (physical health)
 - Access to behavioral health care (mental health)
 - Access to healthy and nutritious food
 - Affordable health care (including dental, vision, and hearing)
 - Affordable housing
 - Arts and cultural events
 - Clean environment
 - Community involvement
 - Disease/illness prevention
 - Financially healthy households
 - Good jobs and healthy economy
 - Good schools
 - Healthy lifestyles
 - High rate of Immunizations / Vaccine use
 - Low crime/safe neighborhoods
 - Low disease rate and death rate
 - Low levels of child abuse
 - Parks and recreation
 - Religious or spiritual values
 - Strong family life
 - Tolerance for diversity
 - Other:

11. What do you believe are the top THREE factors that negatively impact your patients' health?

- Barriers to physical activity
- Communication barriers
- Crime rate in your patients' local community
- Delay in seeking preventative care due to COVID-19
- High cost of nutritional food in your patients' community
- Lack of available nutritional food in your patients' community
- Lack of primary care physicians in the local community
- Lack of senior services in the local community
- Lack of transportation
- Medications are not affordable
- Patients' lack of access to adequate childcare
- Patients' lack of access to adequate health insurance
- Patients' lack of education about making health-conscious decisions
- Patients' lack of motivation to make health-conscious decisions
- Patients' living conditions
- Patients' low household income
- Poor environmental conditions (e.g. air and water pollution)

12. To what, if any, community resources do you routinely refer patients to help address unmet needs (please check all that apply)

- Community Health Clinics (ex: FQHCs, Health Centers)
- Community Health Workers (CHWs)
- Community mental health services
- Community organizations such as Salvation Army or United Way
- MI Department of Health and Human Services (MDHHS)
- Domestic Abuse Services and Resources
- Food bank/pantry
- Home care and/or hospice services
- I do not refer patients to community services
- Intermediate school district services
- Neighborhood centers
- Police departments
- Public health services
- Religious organizations
- Resident clinic
- Substance abuse treatment services
- Senior services
- Women's resource cent

13. Please indicate your level of agreement with the follow statements:

	Strongly disagree	Somewhat disagree	Neutral	Somewhat agree	Strongly agree
Addressing patients' social needs is as important as addressing their medical conditions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Besides my own staff and colleagues, I feel I have little to no support in helping my patients and their families lead healthier lives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My patients have access to the resources they need to stay healthy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My patients frequently express health concerns caused by unmet social needs that are beyond my control as a physician	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My patients' unmet social needs often prevent me from providing quality care	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cultural / language barriers to patient-provider communication often get in the way of quality service provision	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. What do you think are the THREE most important health-related concerns associated with the COVID-19 pandemic?

(Check all that apply)

- Concerns about short/long term health effects from COVID-19
- Decreased access to health care
- Delaying necessary care due to COVID-19 concerns
- Feelings of loss from COVID-19 death(s)
- Financial difficulties
- Food insecurity
- Increase in stress, depression, and anxiety
- Increased fear or distrust of the health care system
- Increased substance use
- Increased domestic violence
- Limited access to COVID-19 vaccinations
- Lack of physical activity (due to various closures)
- Withdrawal from supports and services
- Vaccine hesitancy
- Other: _____

15. The COVID-19 pandemic has been an unprecedented time for health care providers. Given your experience, what are your suggestions for concrete actions to help our county recovery and address potential long term impacts of the pandemic?

16. During the COVID-19 pandemic, have you felt overwhelmed by your workload or work/family balance?

- Yes
- No

17. Do you feel like your efforts at work were appreciated during the pandemic?

- Yes
- No
- Not sure

18. Have you experience any of the following traumatic events or stressors during the pandemic? (

Check all that apply)

- Feeling overwhelmed by your work
- Receiving threats because of your work
- Feeling bullied, threatened, or harassed because of your line of work

19. Do you feel you were provided adequate resources for help (such as an Employee Assistance Program) during the pandemic?

- Yes
- No
- Not sure

Appendix F: Underserved Population Focus Group/Interview Questions

2021 Interview Discussion Guide

What to expect in the interview?

Interviews are a way for us to collect lived experiences of people in Barry County. Please feel free to answer the questions open and honestly. We ask questions about your experiences with health systems, community support, and health in general.

The interview will be audio recorded because we don't want to miss any of your comments. Your name will not be connected with your comments outside of the recordings. No one besides the project staff and researchers will have access to these recordings. We hope you'll feel free to speak openly and honestly. Your name and address will only be used to mail the gift card.

You will receive a \$25 gift card from Walmart for your participation in the mail.

What is the purpose of this interview?

This discussion will help us to find out the health needs and concerns of people in Barry County. Information from these interviews will be combined with other health statistics and information to better describe health needs and concerns of all residents of the three counties. Our goal is to work together as health departments, hospitals, and community organizations to improve health, and asking people directly what they think and have experienced in the community is a key part.

Paperwork - These are completed ahead of time

- Focus group participation agreement form
- Incentive receipt form - \$25 Walmart Gift Cards

DISCUSSION TOPICS

1. We have all been living through the largest pandemic in modern history. So much has changed – many things have been harder, even heartbreaking if you have experienced a loss, but there may have been some positive things as well. How has COVID-19 impacted you and your family?
 - a. **PROBE**
 - i. Was there anything (resources, etc.) that you couldn't access as you could prior to the pandemic?
 - ii. Were there any resources you were able to use in a manner that was more beneficial than before the pandemic? (ex. Virtual visits)
 - iii. In what ways has it impacted your mental health?
 - iv. What helped you get through the COVID-19 pandemic?
2. One of the things that affects people's personal health is having access to health care.
 - a. Has there been a time recently when you or someone you know needed care but didn't get it? Why not?
 - b. Did having insurance, no insurance, Medicaid at the time make a difference?
 - c. Are you able to get the preventive services that you need, like yearly physicals, well-child visits, dental care, mental health, behavioral health, etc.?
 - d. Do you take any medications for chronic conditions such as high blood pressure, diabetes, etc.? If so, are they affordable? Has that changed recently?
3. Our relationship with our doctor or other health care professional can be very important to helping us be healthy.
 - a. How do you feel about the relationship with your doctor or other health care professional?
 - b. Do you feel that your health care professional listens to you? Do they make sure that you understand what they are telling you? Do they allow you to help make decisions regarding your medical care or treatment?
 - c. Do you feel your professional spends enough time with you?

4. What has been your experience dealing with your mental health?
 - a. What coping strategies or mechanisms have you used?
 - b. Have you been able to get mental or behavioral health care when you needed it? Have you had to travel outside of your local community to access the care you are looking for?
5. Many of us have chronic diseases like diabetes, heart disease, hypertension, asthma, or depression – or if we don't someone in our family might.
 - a. What's your experience with chronic diseases like these? How do they change your life?
 - b. How do you get treatment for your condition? What has been your experience been like trying to get it under control?
 - c. Have you had to travel outside of your local community for care?
 - d. Thinking back to the time before you or your family member developed the disease – what things, actions, or interventions might have prevented them from getting it in the first place?
6. Why do you think are factors that help some people in the community be healthier than others?
 - a. What are the things around where you live that help you to be healthy?
 - b. What are the things around where you live that make it harder to be healthy?
 - c. PROBE:
 - i. Access to healthy foods
 - ii. Access to places for physical activity (gyms, parks, trails, etc.)
 - iii. Opportunities to experience nature or your natural environment
 - iv. Safety / Attractive surroundings
 - v. Access to doctor's office – (accommodations, language)
 - vi. Exposure to alcohol/tobacco/other illegal substances or unhealthy foods
 - vii. Housing
 - viii. Work that you do
7. We are interested in making our community a healthier place for everyone to live now, and after the pandemic ends.
 - a. What concrete things could we do to make that happen?
 - b. If anything were possible, what would help your family be healthier?
8. Is there anything else you'd like to add, or anything else we should know?

Closing

Thank you for participating in this interview. We appreciate you taking the time to share your experience with us. You will be receiving a \$25 gift card to Walmart in the mail shortly.

Appendix G: Barry County Leadership/Key Stakeholders Focus Group/ Interview Questions

Set up and other considerations

We would like to thank you for participating in tonight's discussion on health in our community. In order to help avoid potential distractions we would appreciate it if you would turn your cell phones off or place them on vibrate. We want everyone to have the chance to explain their personal experiences, so we would appreciate it if you would allow those speaking to finish before sharing your own comments.

We would like the discussion to be informal, so there's no need to wait for us to call on you to respond. In fact, we encourage you to respond directly to the comments other people make. If you don't understand a question, please let us know. We are here to ask questions, listen, and make sure everyone has a chance to share. If the group seems to be stuck on a topic, we may interrupt you and if you aren't saying much, we may call on you directly. If we do this, please don't feel bad about it; it's just our way of making sure we obtain everyone's perspective is included.

We do ask that we all keep each other's identities, participation and remarks private. We hope you'll feel free to speak openly and honestly.

We will be cloud recording the discussion and transcript, because we don't want to miss any of your comments. Your name will not be connected with your comments. No one besides the project staff and researchers will have access to these tapes.

What is the purpose of this group?

This discussion will help us to find the most pressing health needs and concerns of Barry County residents. Information from these focus groups will be combined with other health statistics and information to better describe health needs and concerns of all residents. Our goal is to work together as the health department, hospital system, and community organizations to improve health, and asking people directly what they think and have experienced in the community is a key part.

Leadership Focus Group Questions and Issues

1. What are the most pressing health needs or issues in your community?
 - a. Is there anything currently being done to address these issues?
 - b. How are the issues being addressed?
2. What are the top health outcomes you feel should be evaluated?
3. What is the current state of health care access in your community?
 - a. Is there a wide variety/choice of primary health care providers?
 - b. Is there a lack of insurance coverage for ancillary services, such as prescriptions, dental care or vision care?
 - c. Is there an inability to afford out-of-pocket expenses, such as co-pays and deductibles?
 - d. Are there enough mental health services available?

4. How well are existing programs and services meeting the needs and demands the community?
 - a. Why is that?
 - b. What programs or services are lacking in the community?
 - c. How could any of the existing services or programs be implemented better?
5. Are there any partnerships that could be developed or expanded to better meet community needs?
 - a. What would be the partnership?
 - b. How could it be expanded?
6. Are there any barriers or obstacles to health care programs/services in your community?
 - a. What are they? Things like language or cultural barriers, technology barriers, travel/transportation etc.
 - b. Do you feel any of the barriers have been addressed recently, or are the same barriers still present?
7. Do you feel relevant stakeholders or community residents are involved in planning and decision making?
 - a. Why or why not?
8. What health related resources currently exist in your community beyond programs/services just discussed?
 - a. What are any resource limitations, if any?
9. Since the last Community Health Needs Assessment was conducted and then published in 2020, what has been done locally to address the significant needs found?
 - a. Health Care Access, Mental Health, Substance Use Disorder, Obesity
 - b. Do you feel the strategies are working or having an impact? How can they be improved?
10. How has COVID-19 impacted health in the Barry County community?
 - a. Are there any positive changes made during the pandemic you would like to see maintained?
 - b. Has COVID-19 exposed any additional barriers or shown any additional challenges that you weren't aware of prior to the pandemic?
11. Do you have any additional comments on any issues regarding health or health care in your community that we haven't discussed so far? Or any other important information you think we should know?

Appendix H

Spectrum Health Pennock Hospital 2021-22 Implementation Strategy Impact Report



**Spectrum
Health**

Spectrum Health Pennock Hospital

Previous Implementation Strategy Impact

This report identifies the impact of actions to address the significant health needs addressed in the 2021-2022 Spectrum Health Pennock Implementation Strategy created from results of the 2020 Community Health Needs Assessment. The Implementation Strategy was shortened from the traditional three-year coverage to two-year, beginning Jan. 1, 2021 and ending Dec. 31, 2022. This change was necessary because a change in year-end by the organization, from a fiscal year to a calendar year, would have caused a gap in compliance if no action was taken until the organization resumed assessment activities with other community partners in a collaborative community health needs assessment the following year.

The two-year implementation strategy reporting period was narrowed further for this document and only covers Jan. 1, 2021 to March 31, 2022. This is to ensure the governing board approved at the needed time to stay in compliance with IRS regulations. Regardless of the shortened reporting period, all goals set for Dec. 31, 2022 are expected to be met. Monitoring of all the 2021-2022 Spectrum Health Pennock's Implementation Strategies will continue in accordance with the identified action date and the organization will use all resources committed towards these goals to accomplish the desired impacts.

Health Care Access

Health Screenings

Action

By Dec. 31, 2022, Spectrum Health Pennock will provide health screening (i.e., blood pressure, cholesterol, and pre-diabetes screening) to at least 100 attendees of the Fresh Foods Initiative. Partners include United Way, Cherry Health, Barry Eaton District Health Department.

Measurable Impact

Provide health screenings to at least 100 attendees of the Fresh Foods Initiative by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, there have not been any health screenings given. The Fresh Food Initiative did not occur as originally planned due to COVID-19 and was held as a drive-through—which left no time to do the health screenings. Testing and education were instead given to students and staff at both Hastings and Delton-Kellogg schools.

Community ParaMedicine

Action

By Dec. 31, 2022, Spectrum Health Pennock will partner with Thornapple Township Emergency Services Community Paramedicine Program in the provision of clinical experiences for three Emergency Medical Service workers. Resource/ External Partnerships: State of Michigan Thornapple Township Medical Control Authority.

Measurable Impact

Partner with Thornapple Township Emergency Services Community Paramedicine Program in the provision of clinical experience for 3 Emergency Medical Service workers by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, the program has not yet been deployed. Due to COVID-19 and the loss of EMTs, the program was delayed and will not start up until community EMT staffing levels return to normal.

Advocacy Efforts

Action

By Dec. 31, 2022, Spectrum Health will increase community ability to access information and services via virtual technology. This will be accomplished by successfully advocating for public policy and resource allocation to provide individuals and families living in the Spectrum Health Pennock service area with reliable, affordable access to information and services delivered via virtual technology. Partners include local decision-makers, and regional decision-makers.

Measurable Impact

Involvement in advocacy efforts at the regional hospital level by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, Spectrum Health has supported the nearly \$1 billion Build Back Better Act effort by Congress to expand broadband affordability and accessibility, which includes funding for committees and awareness efforts. Spectrum Health also supported the Biden Administration's Internet for All initiative, which is a \$45 billion initiative to provide affordable high-speed broadband access to all Americans by 2029. Spectrum Health has supported Governor Whitmer's announcement of a project to utilize \$5.2 million in CARES Act funding to identify gaps in broadband coverage across the state. Lastly, Spectrum Health supported Congressman Moolenaar's efforts to support two acts: The BOOST Act, which is a rural broadband legislation that allows rural homeowners and primary lessees to receive tax credits for purchasing mobile hotspot, and the Gigabit Opportunity Act, which creates opportunity zone in low-income rural and urban areas that lack the federal minimum broadband service.

COVID-19

Action

By Dec. 31, 2022, Spectrum Health will reduce the number of residents in the community infected with COVID-19 by providing employers, school administrators, and general community with accurate and timely information on preventing the spread of COVID-19.

Measurable Impact

Spectrum Health releases timely and accurate information about COVID-19 and its prevention, targeted to a variety of sectors and population by Dec. 31, 2022. This is measured by community emails sent, the number of community virtual conversations, and number of website/social media updates.

Impact of Strategy

As of March 31, 2022, Spectrum Health Pennock released 42 community emails about COVID-19 and prevention, had 17 community virtual conversations, and 142 website and or social media updates.

Action

By Dec. 31, 2022, Spectrum Health will contribute to reducing COVID-19 infections within the community by providing community-based screening and appropriate testing.

Measureable Impact

Spectrum Health provides opportunities for COVID-19 testing that is convenient and meets the needs of the community by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, Spectrum Health Pennock had one COVID-19 testing site, defined as the location in which the COVID-19 sample is tested (i.e., lab site). At this site, there have been 6,507 COVID-19 tests administered during the coverage period.

Mental Health

PHQ-4

Action

By Dec. 31, 2022, Spectrum Health Medical Group and Spectrum Health Pennock Primary Care will increase the administration of the Patient Health Questionnaire-4 depression protocol and anxiety test to patients by 10% over 2020 baseline of 86.2%.

Measurable Impact

Increase the administration of the Patient Health Questionnaire-4 (PHQ-4) Depression and Anxiety Screening protocol by 10% by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, Spectrum Health Pennock has increased the administration of the PHQ-4 Depression and Anxiety screening protocol to 91.1% of patients (3,421/3,756), slightly lower than the target of 94.8%. This is a 6.9% increase over the baseline of 86.2%

Blue Envelope

Action

By Dec. 31, 2022, Spectrum Health Healthier Communities School Nurse will train 25% school staff and 100% of school counselors on the Blue Envelope protocol in at least one middle school. Partners include Spectrum Health Pennock Foundation, Barry Community Resource Network's Suicide Prevention Taskforce, and Barry County Community Mental Health Authority. Resources include staff time for planning, training, ongoing support.

Measurable Impact

Spectrum Health Healthier Communities will train 25% of school staff on the Blue Envelope protocol in at least one middle school by Dec. 31, 2022.

Measurable Impact

Spectrum Health Healthier Communities will train 100% of school counselors on the Blue Envelope protocol in at least one middle school by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, there have been multiple middle schools in Barry County trained in Blue Envelope with staff reporting an increased confidence in the ability to handle suicidal students. 90.6% of middle school staff (144/159) reported this increased confidence.

Suicide Education

Action

By Dec. 31, 2022, 700 middle school and 500 high school students between Thornapple-Kellogg, Hastings, Delton, and Lakewood school districts will participate in Signs of Suicide education provided by Spectrum Health Healthier Communities school nursing staff and Spectrum Health Pennock Community Health Educators. Partners include Thornapple-Kellogg School District, Hastings School District, Delton School District, Lakewood School District, Barry County Community Mental Health Authority, Barry Community Resource Network's Suicide Prevention Taskforce.

Measurable Impact

Provide Signs of Suicide education to 700 middle school students within Barry County by Dec. 31, 2022.

Measurable Impact

Provide Signs of Suicide education to 500 high school students within Barry county by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, 760 middle school students and 540 high school students have been provided Signs of Suicide education in Barry county. The middle schools include Delton-Kellogg Middle School, Hastings Middle School, Maple Valley Middle School and Thornapple-Kellogg Middle School. The high schools include Thornapple-Kellogg High School, Hastings High School and Lakewood High School.

Behavioral Health Resource Guide

Action

By Jan. 1, 2022, Spectrum Health Pennock will create and distribute a web-based Barry County Behavioral Health Resource Guide to adults working with youth and adults. Partners include Barry County Community Mental Health Authority, area school systems.

Measurable Impact

Create a web-based Barry County Behavioral Health Resource guide by Jan. 1, 2022.

Measurable Impact

Distribute a web-based Barry County Behavioral Health Resource guide to all Barry County Schools and all SHMG provider clinics by Jan. 1, 2022.

Impact of Strategy

As of March 31, 2022, Spectrum Health Pennock created and distributed 2,000 web-based Barry County Behavioral Health resource guides to all Barry County schools and SHMG provider clinics. Updates are being made for a July 2022 reprint and distribution.

Virtual Consultative Services

Action

By Dec. 31, 2022, expand psychiatry consultative services for adult patients within Spectrum Health Pennock through utilization of 24/7 inpatient consultative services.

Measurable Impact

By Dec. 31, 2022, expand psychiatry consultative services for adult patients within Spectrum Health Pennock through utilization of 24/7 inpatient consultative services.

Impact of Strategy

As of March 31, 2022, Spectrum Health Pennock has expanded psychiatry consultative services for adult patients through utilization of 24/7 inpatient consultative services.

Substance Use Disorder

Coordinated Approach to Child Health My Breath

Action

By Dec. 31, 2022, Spectrum Health Pennock's Community Health Educators will be trained to deliver Coordinated Approach to Child Health My Breath anti-vaping education. Partners include Barry County Substance Abuse.

Measurable Impact

Train 100% of Community Health Educators to deliver Coordinated Approach to Child Health My Breath anti-vaping education by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, 100% (2/2) Community Health Educators were trained to delivery Coordinated Approach to Child Health My Breath anti-vaping education. In addition, three Barry County Substance Abuse Taskforce members were trained.

National Take Back Events

Action

By Dec. 31, 2022, Spectrum Health Pennock in collaboration with Barry County Community Mental Health Authority will conduct at least two Medication and Needle Takeback events annually.

Measurable Impact

Conduct at least two Medication and Needle Takeback events annually by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, two Medication and Needle Takeback events have been conducted. In total, over 1,100 pounds of sharps were turned in at these events,

along with controlled substances. It was noted that sharp disposal continues to be an issue in the community.

Opioid Prescribing Guidelines

Action

By Dec. 31, 2022, Spectrum Health Medical Group will implement opioid prescribing guidelines that are procedurally/ conditionally based.

Measurable Impact

Implementation of opioid prescribing guidelines by Dec. 31, 2022

Impact of Strategy

As of March 31, 2022, Spectrum Health Medical Group has completed Safe Opioid Prescribing (SOP) education to all offices, and are now monitoring every quarter to ensure that high risk patients are individually handled. Continuation of provision of supportive measures and resources for all prescribing providers.

Action

By Dec. 31, 2022, Spectrum Health Medical Group will monitor provider scorecards related to prescribing guidelines for opioids on a monthly basis and report findings/recommendations to the appropriate leadership.

Measurable Impact

Continuously monitor opioid prescribing provider scorecards by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, an opioid dashboard is live in Epic, the electronic medical records system. The next steps are to educate system providers regarding its availability through the Safe Opiate Prescribing project.

Go Team

Action

By Dec. 31, 2022, the “Go team” will be activated and provide coaching and mentoring to requested Spectrum Health locations 90% of the time.

Measurable Impact

The “Go team” will provide coaching and mentoring to requested Spectrum Health locations 90% of the time by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, the “Go team” is support and in-place. During the reporting period, there were zero requests for the “Go team” by Spectrum Health Pennock.

Substance Use Disorder Screening

Action

By Dec. 31, 2022, Spectrum Health Medical Group Obstetrics and Gynecology will utilize substance use disorders screening to screen 100% of pregnant patients for substance use disorders and refer them to treatment.

Measurable Impact

100% of Spectrum Health Medical Group Obstetrics and Gynecology pregnant patients screened for substance use disorder by Dec. 31, 2022.

Measurable Impact

100% of Spectrum Health Medical Group Obstetrics and Gynecology pregnancy patients with substance use disorder referred for treatment by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, there have been data reporting challenges for both of these measurable impacts. Currently, if pregnancy patients are given a blood draw instead of a Point-of-Care Urinary Drug Screening (POC UDS), there is no data available for this measure.

Referred patients could get sent to a methadone clinic, GREAT MOM’s program, or Center for Integrative Medicine. Determining the data collection process for referred patients is in progress.

Obesity

Blue Zone Activate

Action

By August 2021, Spectrum Health Pennock will support Built Environment and Food Policy work carried out by Blue Zones in Barry County.

Measurable Impact

Support Built Environment and Food Policy work carried out by Blue Zones by August 31, 2021.

Impact of Strategy

As of March 31, 2022, Spectrum Health Pennock collaborated with Blue Zone Activate to support Built Environment and Food Policy work. This included supporting the Countywide Trail Plan (making a story map and survey), holding the Complete Streets Workshop (Middleville Complete Streets Advisory Council formation), beginning the TAP grant application, completing the Safe Routes to School Nashville-MFF grant submission, and forming the Safe Routes to School Nashville committee.

Action

By October 31, 2021, Spectrum Health Pennock will participate with Blue Zone Activate to develop a Built Environment project work plan.

Measurable Impact

In collaboration with Blue Zone Activate, develop a Built Environment project work plan by October 31, 2021.

Impact of Strategy

As of March 31, 2022, Spectrum Health Pennock collaborated with Blue Zone Activate to develop a built environment project work plan. The plan includes the Mobile Market pilot program, Culinary Medicine program,

the SHP DK Community/School Garden grant submission, the Food Policy Council's creation of vision/mission/goals/objectives statements, and a Community Food Center Feasibility Study (Phase 1).

Action

By Dec. 31, 2022, Spectrum Health Pennock will provide an additional \$141,000 to support implementation of the plan opportunities.

Measurable Impact

Disperse \$141,000 to support implementation of built environment project work plan by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, all financial obligations were met. Spectrum Health Pennock continues to provide staffing to support the food systems committee, food policy committee, steering committee and the fundraising committee.

YMCA Veggie Van

Action

By Dec. 31, 2022, Spectrum Health Pennock will partner with the YMCA veggie van and Barry County United Way to distribute fresh produce to 500 households.

Measurable Impact

Distribute fresh produce to 500 households in Barry county by Dec. 31, 2022.

Impact of Strategy

As of March 31, 2022, fresh produce has been distributed to 500 households in Barry County by Spectrum Health Pennock and the YMCA Veggie Van.



**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، فيمكنك الحصول على المساعدة اللغوية المتاحة مجاناً. اتصل على الرقم 1.844.359.1607 (TTY: 711).

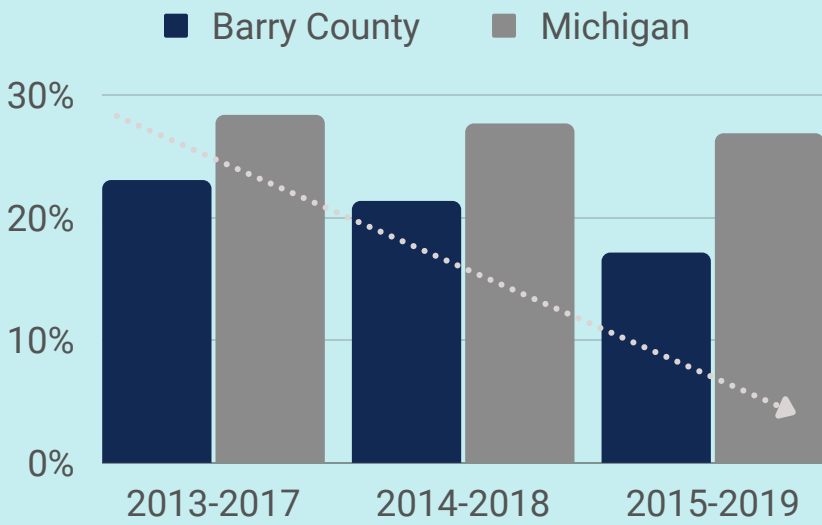
AFFORDABLE HOUSING



The U.S. Department of Housing & Urban Development defines affordable housing as a household an individual can obtain for 30% or less of their income.

INDICATOR

- Percent of Households Who Spend More Than 30% of Their Income On Housing

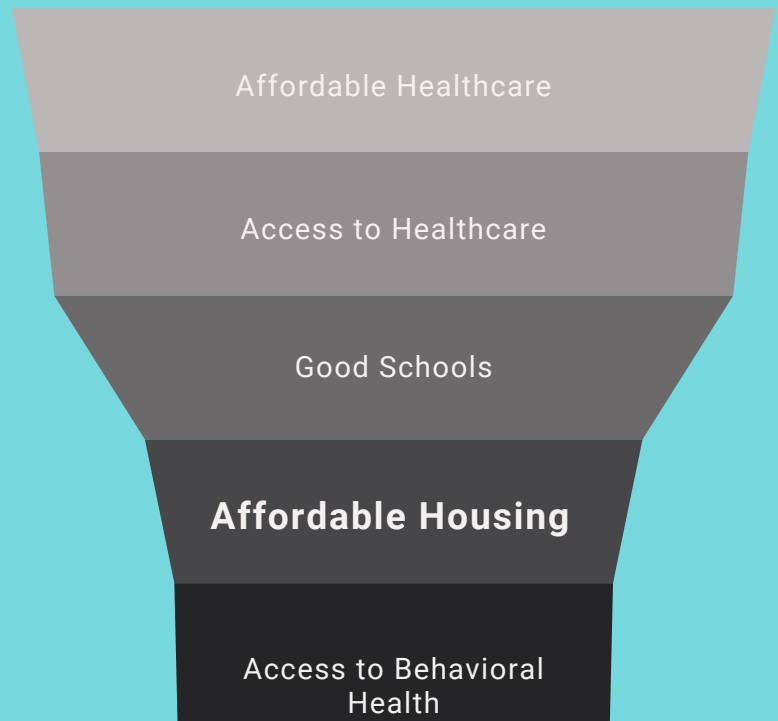


The percentage of households that spent more than 30% of their income on housing has **decreased** more rapidly in Barry County when compared to the state of Michigan across three 5-year periods

RESIDENT-IDENTIFIED FACTORS DEFINING A HEALTHY COMMUNITY

20% of respondents indicated that affordable housing was among the **Top 5 Factors** that defined a healthy community

4.2% healthcare providers reported **Affordable Housing** was a factor that defined a healthy community



BARRY COUNTY LEADERSHIP & KEY STAKEHOLDER INPUT



What are the most pressing health needs or issues in Barry County?

- Access to food for those in need
- **Lack of affordable housing**
- Lack of mental health services
- Lack of specialty care services

The availability of safe and affordable housing is low.
 That scarcity impacts a variety of individuals from underserved residents to providers being recruited by health and social service organizations.

HEALTH CARE ACCESS AND QUALITY



According to the National Academies of Sciences, Engineering, and Medicine, Access to Health Care is defined as the timely use of personal health services to achieve the best possible health outcomes.

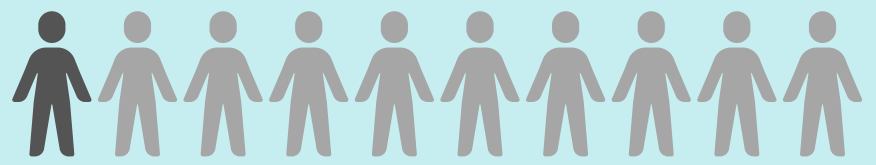
INDICATORS

- Adults With No Primary Care Provider
- Adults Who Could Not See A Doctor When Needed Due To Costs Within Last 12 Months
- Adults With No Dental Care Within The Last 12 Months
- Breast Cancer Screening Among Women 40 Years and Older
- Colon Cancer Screening Among Adults 50 Years and Older

■ 18-24 ■ 25-34 ■ 35-44 ■ 45-54
 ■ 55-64 ■ 65+



Those ages **18-24 & 25-34** were **2x-3x more likely to report not having a primary care provider** than the other age groups



1 in 10 adults could not see a doctor or dentist when needed due to costs at some point during the last year

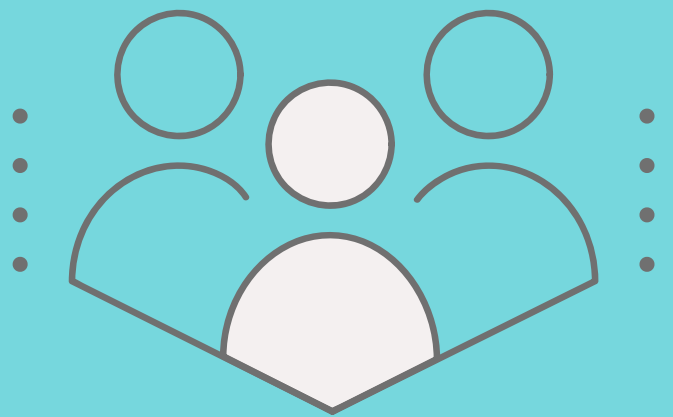
DEFINING A HEALTHY COMMUNITY

58.3%

Of Health Care Providers identified **Access to Health Care** as the **#1 Factor** that defined a healthy community

31.1%

Of Community Members agreed that **Access to Health Care** helps define a healthy community



UNDERSERVED POPULATION FOCUS GROUPS - THEMES

- Problems Getting Care
- Relationships with Providers
- Mental Health

"The doctor my husband has, it seems like he's more interested in his laptops than he is, you know, with him, but he likes him so that's what matters."

MENTAL HEALTH NEEDS AND ACCESS

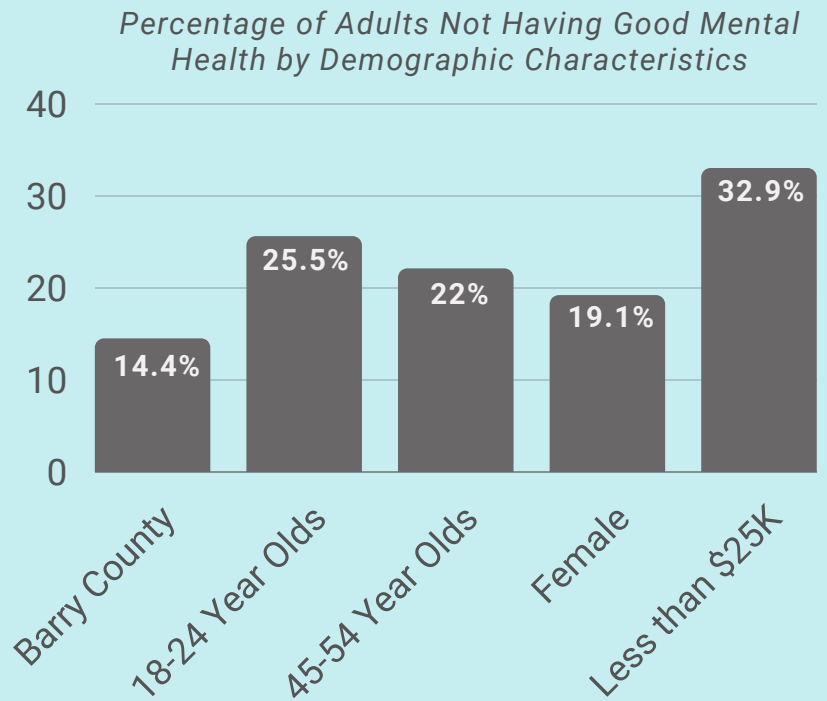


According to the World Health Organization, mental health is a state of well-being in which an individual realizes their abilities, can cope with the everyday stresses of life, work productively, and can contribute to their community

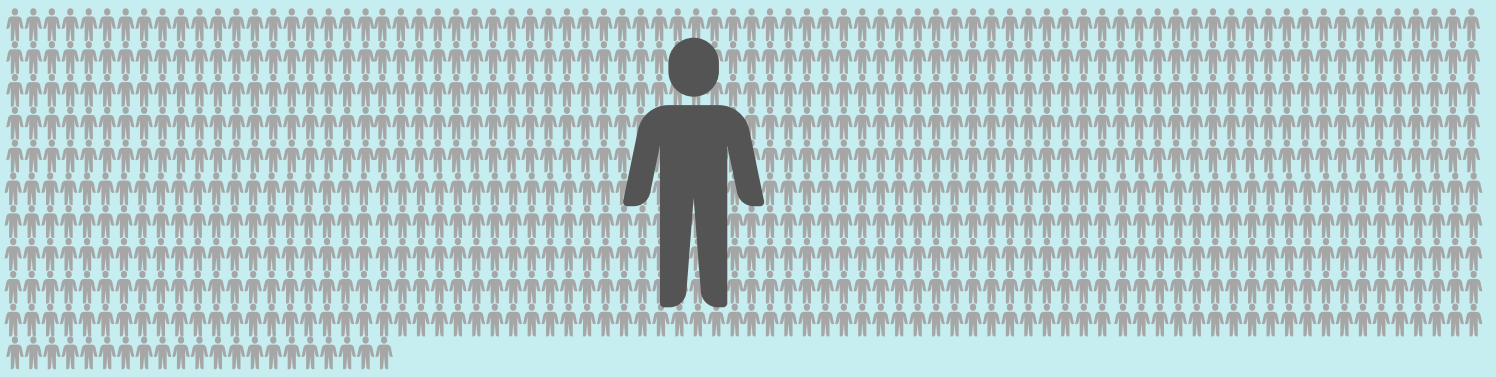
INDICATORS

• Adults Not Having Good Mental Health

Nearly **one quarter** of adults between the ages of 18-24 and 45-54 reported **not** having good mental health



• Mental Health Provider Ratio



*In Barry County, there is 1 mental health provider for every **821** residents*

RESIDENT-IDENTIFIED PROBLEMS IMPACTING THE COMMUNITY

29.6%

Of the community members surveyed identified that **Affordable Access to Behavioral Healthcare** was a problem impacting their community

"Barry County community mental health is absolutely a shame -- That is the biggest challenge here that I would just have to say out of all of the medical side of things."

DEFINING A HEALTHY COMMUNITY



Providers and community members both identified **Access to Mental Health or Behavioral Health Services** as one of the **TOP 5** factors that define a healthy community

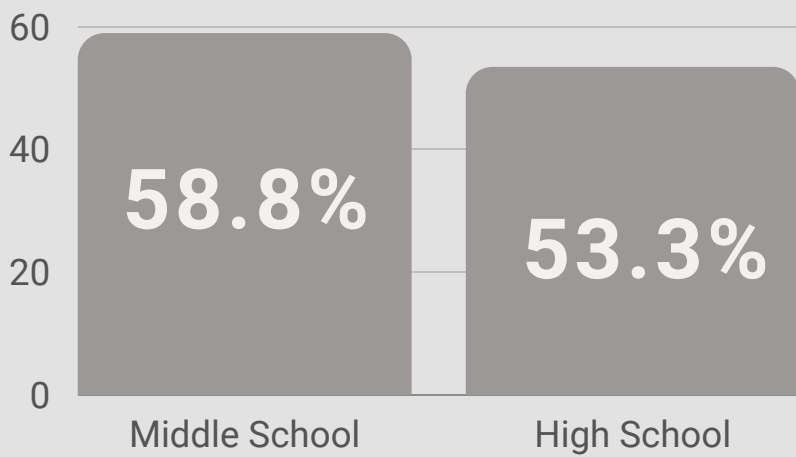
SOCIAL CONNECTION & CAPITAL



Healthy people 2030 defines social connection and capital as the connection between characteristics of the contexts within which people live, learn, work, and play and their health and well-being.

INDICATOR

- Adolescents Who Know Adults In The Neighborhood they Could Talk To About Something Important



Adolescents with positive support from non-parental adults have a better attitude toward school, academic achievements, and fewer behavioral and emotional problems

RESIDENTS' AGREEMENT WITH VARIOUS HEALTH STATEMENTS

Other Neutral Somewhat Agree Strongly Agree

80% of Barry County community members somewhat agreed or strongly agreed that **Addressing Social Needs Is As Important As Addressing Medical Needs to Improve Community Health**

UNDERSERVED POPULATION INTERVIEWS

Do you think there's anything that could be added to this community to help people be healthier?



*Well, I think maybe more of an outreach to some of the senior citizens because I know there's others my age that **don't have a good network of friends** and sometimes they **feel lonely and left out**. Some of them don't know about the center on aging down there either, but sure. That's a good resource. Ought to be publicized more, you know, to make it known that it's available for people.*

BARRY COUNTY LEADERS IDENTIFIED OBSTACLES

Limited Cell Phone Service in Remote Areas

Limited Access to Broadband Internet in Remote Areas

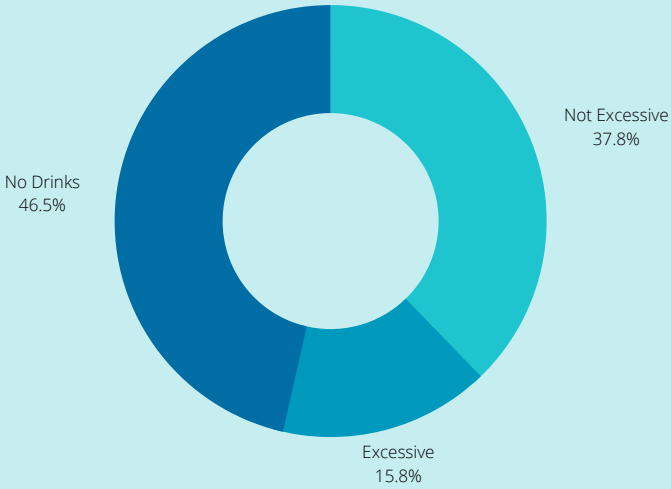
Communicating via Social Media & Messaging Applications

SUBSTANCE USE DISORDER

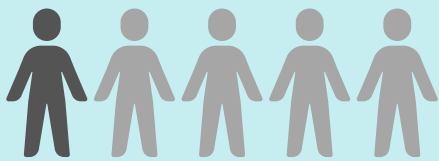


According to Mayo Clinic, Substance Use Disorder is a disease that affects a person's brain and behavior and leads to an inability to control the use of a legal or illegal drug or medication. When you're addicted, you may continue using the drug despite the harm it causes.

INDICATORS



15.8% of adults have excessively drunk during the past 30 days



Nearly 1 in 5 high school students have used marijuana

- Adults Who Binge Drank, Drank Heavily, or Drank Excessively During The Past 30 Days
- Adults Who Have Used Marijuana During The Past 30 Days
- Adolescents Who Binge Drank During The Past 30 Days
- Adolescents Who Have Used Marijuana During The Last 30 Days
- Adolescents Who Have Used Marijuana Prior To Age 13

RESIDENT-IDENTIFIED PROBLEMS IMPACTING THE COMMUNITY

Nearly 1/3 of survey respondents ranked **Alcohol and Drug Issues** to be the **#1 problem** impacting Barry County



12% of community members reported an **Increase in Substance Use** as a concern related to the COVID-19 Pandemic

PROVIDER-IDENTIFIED RESOURCES & CONCERNS

Substance Abuse Treatment Services was the **3rd most common** community resource healthcare providers referred patients of Barry County

4.2% of providers also indicated **increased substance use** was a concern related to COVID-19

