2019 Community Health Needs Assessment Report

Aurora Medical Center in Manitowoc County

5000 Memorial Drive | Two Rivers, WI 54241

Aurora Health Care | We are AdvocateAuroraHealth

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Introduction

About Advocate Aurora Health

Advocate Aurora Health is among the 10 largest not-for-profit, integrated health systems in the United States and a leading employer in the Midwest with more than 70,000 team members, including more than 22,000 nurses and the region's largest employed medical staff and home health organization. A national leader in clinical innovation, health outcomes, consumer experience and value-based care, the system serves nearly 3 million patients annually in Illinois and Wisconsin across more than 500 sites of care. Advocate Aurora is engaged in hundreds of clinical trials and research studies, and is nationally recognized for its expertise in cardiology, neurosciences, oncology and pediatrics. Advocate Aurora Health contributed $2 billion in charitable care and community health services to its communities in 2018. To learn more, visit aah.org.

Aurora Medical Center Manitowoc County (AMCMC)

Who we are. What we do

Aurora Medical Center Manitowoc County was originally founded in 1928 as Two Rivers Community Hospital. Our affiliation with Aurora Health Care in 1993 led to the construction and opening of the medical center at our present site in June of 2000. AMCMC is located on the beautiful shores of Lake Michigan, just about halfway between downtown Manitowoc and downtown Two Rivers.

Who we serve

The Aurora Medical Center Manitowoc County patient service area includes most of Manitowoc County – reaching 34,300 Aurora patients.

Aurora Medical Center Manitowoc County by the Numbers (2018)

- 69 hospital beds
- More than 76,700 outpatient visits
- More than 400 newborn deliveries
- More than 13,100 emergency department visits
- More than 3,500 surgical cases (inpatient and outpatient)

Area facilities and service partners include

- Aurora Health Center
  - Mishicot
  - Reedsville
  - Two Rivers
  - Valders
- Aurora Manitowoc Clinic
- Aurora Two Rivers Clinic

Aurora Medical Center Manitowoc County Distinctions

The Joint Commission

- First hospital in Wisconsin to earn certification for hip and knee programs
- Certified as a primary stroke center
- Recognized as a Top Performer Key Quality Measures for pneumonia, surgical care, venous thromboembolism and immunizations

American College of Surgeons Commission on Cancer

- Outstanding Achievement Award, 2012 (cancer accreditation program)
- Gold level Commendation to the Integrated Network Cancer Program

American Association of Cardiovascular and Pulmonary Rehabilitation (AACVPR)

- Cardiac Rehabilitation Certification, 2016 (for meeting standards and criteria, best practices, and the high-quality care of heart patients)
- Named among the nation's 100 Top Hospitals® by Truven Health Analytics™ researchers who identify hospitals that achieve lower mortality rates, fewer complications, shorter patient stays and patient satisfaction rates

IBM Watson Health 100 Top Hospitals

- Named among the nation's 100 Top Hospitals in 2019

Centers for Medicare and Medicaid Services (CMS) • Rated a 5-star facility, exceeding the national average of 3 out of 5 stars	*The Chartis Center for Rural Health* • Named among the nation's 100 Top Rural and Community Hospitals in 2019

Review of 2016 Community Health Needs Assessment and 2017-2019 Implementation Strategy

A Collaborative CHNA

The 2016 Community Health Needs Assessment was conducted between September 2015 and April 2016, through the Manitowoc County Community Health Needs Assessment Partnership, which includes Aurora Health Care, Holy Family Memorial, Lakeshore CAP, Lakeshore Community Health Care, Manitowoc County Health Department and United Way Manitowoc County. With Manitowoc County as the unit of analysis, the needs assessment used the three assessment tools as described in our 2019 CHNA (see page 13).

Needs Identified and Priorities Selected in 2016 CHNA

During 2016, Aurora hospital facility leaders prioritized significant needs based on the following criteria:

- Meets a defined community need (i.e., access for underserved populations)
- Aligns community benefit to organizational purpose and clinical service commitment to coordinate care across the continuum
- Aligns with hospital resources and expertise and the estimated feasibility for the hospital to effectively implement actions to address health issues and potential impact
- Reduces avoidable hospital costs by redirecting people to less costly forms of care and expands the care continuum
- Has evidence-basis in cross-section of the literature for defined populations
- Leverages existing partnerships with free and community clinics and Federally Qualified Health Centers (FQHCs)
- Resonates with key stakeholders as a meaningful priority for the Aurora hospital to address
- Leverages existing or additional resources to extend impact
- Increases collaborative partnerships with others in the community by expanding the care continuum
- Improves the health of people in the community by providing high-quality preventive and primary care
- Aligns hospital resources and expertise to support strategies identified in municipal health department Community Health Improvement Plan (CHIP)

Additionally, the *Hanlon Method for Prioritizing Health Problems* (see Appendix E for details) was applied.

Community health needs addressed in the AMCMC 2017-2019 Implementation Strategy:

- Access and Coverage
- Nutrition, physical activity, overweight/obesity and the link to diabetes
- Sexual Assault Nurse Examiner (SANE) Program
- Hepatitis C Program

Summary of Implementation Programs and Key Accomplishments

Access and Coverage:

- Provision of complimentary transportation for individuals with transportation limitations needing access to our healthcare facilities
- Partnership with Lakeshore Community Health Care (LCHC) to provide diagnostic imaging services at no cost
- Behavioral Health and Memory Care:
  - Provision of Aurora behavioral health counselors at all Aurora Health Care hospitals either in person or via secure video link, to conduct intake assessments in the ED and direct patients to appropriate resources and levels of care
  - Behavioral health informational and educational programs provided to the community
  - Development of a Memory Clinic to increase access to care for patients with memory related illnesses
- Nutrition and Physical Activity:
  - Provision of Kid Shape 2.0, a six-week community-based program for students who are overweight or obese, and their families, which includes instruction and activities related to healthy eating, physical activity and behavior modification, in partnership with the Y
  - Community presentations on physical fitness and the prevention of sports injuries at local high schools
  - Supplied cafeteria food to local food pantries
  - Staff, supplies, and interpretation services for diabetes classes targeting Hispanic individuals held in partnership with LCHC
  - Sexual Assault Nurse Examiner (SANE) Program:
    - 24/7, trauma-informed coverage for victims of sexual assault and violence through our SANE program
    - Sensitive, effective forensic evidence collection
    - Referrals to counseling and social service agencies
    - Community education/prevention/outreach presentations
    - Advanced knowledge within the broader community on how to respond to issues related to sexual assault and violence
- Hepatitis C: system-wide screening, identification and treatment

Detailed data for each program included in Implementation Strategies is provided in the Evaluations of Impact located in Appendices F-J.

Input from the Community

Although feedback mechanisms were put in place for the public to comment or provide input on the community health needs assessment, our hospitals did not receive any feedback specific to the CHNA Report. Advocate Aurora Health will continue to encourage input from the community by providing various feedback mechanisms for the 2019 CHNA Report.

Lessons Learned

Although Aurora Health Care has always been committed to providing behavioral health care to its patients and surrounding communities, evidenced by the work of the Aurora Psychiatric Hospital and Aurora Behavior Health Services, an increased need for behavioral health care available through both inpatient and outpatient settings became apparent since our previous CHNA Report. This is most clearly illustrated through the emergence of the opioid crisis. In 2017, more than 47,000 Americans died due to an opioid overdose.[1] Of these deaths, 916 occurred in Wisconsin.[2] As a result, our hospitals worked on developing additional programs to link patients with appropriate care.

Another lesson has been learned through our attention to the demographics of our service area. We have worked to address the unique needs of our population of older adults by providing transportation assistance and developing a Memory Clinic. We have also worked to engage Hispanic residents through partnerships with community organizations and diabetes classes provided in Spanish. These programs have been successful by seeking to address unique needs and keeping in mind the characteristics of our community.

[1] NIH National Institute on Drug Abuse, Opioid Overdose Crisis. Available at https://www.drugabuse.gov/drugs-abuse/opioids/opioid-overdose-crisis. Accessed January 29, 2019.

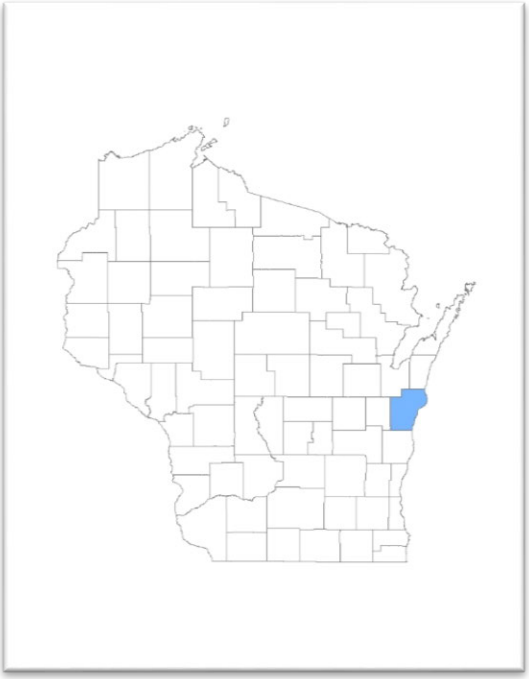
[2] Wisconsin Dept. of Health Services, Division of Public Health, Office of Health Informatics, Wisconsin Interactive Statistics on Health (WISH) data query system. Available at https://www.dhs.wisconsin.gov/wish/index.htm, Drug Overdose Deaths Module. Accessed March 14, 2019.

2019 Community Health Needs Assessment

Acknowledgements

The 2019 Community Health Needs Assessment was conducted between December 2018 and April 2019, through the Manitowoc County Community Health Needs Assessment Partnership, which includes Aurora Health Care, Holy Family Memorial, Lakeshore CAP, Lakeshore Community Health Care, Manitowoc County Health Department and United Way Manitowoc County, with Manitowoc County as the unit of analysis. See page 13 for a description of the assessment tools.

Our Community



Although Aurora Medical Center Manitowoc County serves patients from Manitowoc County and beyond, for the purpose of the community health needs assessment the community served is defined as Manitowoc County.

Created in 1836 as a territorial county, Manitowoc County is located on the shoreline of Lake Michigan and carries the nickname of Wisconsin's "Maritime Capital," due to its long history as a shipbuilding center. Manitowoc County is home to three higher education campuses including Lakeshore Technical College, Silver Lake College and the University of Wisconsin-Manitowoc.[3]

Manitowoc County includes suburban and rural areas including:

- Cities of Kiel (most), Manitowoc and Two Rivers
- Towns of Cato, Centerville, Cooperstown, Eaton, Franklin, Gibson, Kossuth, Liberty, Manitowoc, Manitowoc Rapids, Maple Grove, Meeme, Mishicot, Newton, Rockland, Schleswig, Two Creeks and Two Rivers
- Villages of Cleveland, Francis Creek, Kellnersville, Maribel, Mishicot, Reedsville, St. Nazianz, Valders and Whitelaw

According to the 2019 County Health Rankings released by the University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation, Manitowoc County ranked 43 out of 72 counties in health outcomes and 27 out of 72 counties for health factors.[4]

The largest employer in Manitowoc County is Lakeside Foods Incorporated, a food manufacturing company located in the City of Manitowoc.[5]

[3] Manitowoc County. Available at https://manitowoc.info/about/history/. Accessed May 22, 2019.
[4] County Health Rankings. Available at http://www.countyhealthrankings.org/app/wisconsin/2019/rankings/manitowoc/county/outcomes/overall/snapshot. Accessed May 22, 2019.
[5] Progress Lakeshore. Available at https://progresslakeshore.org/about/top-area-employers/. Accessed July 3, 2019.

Community Demographics

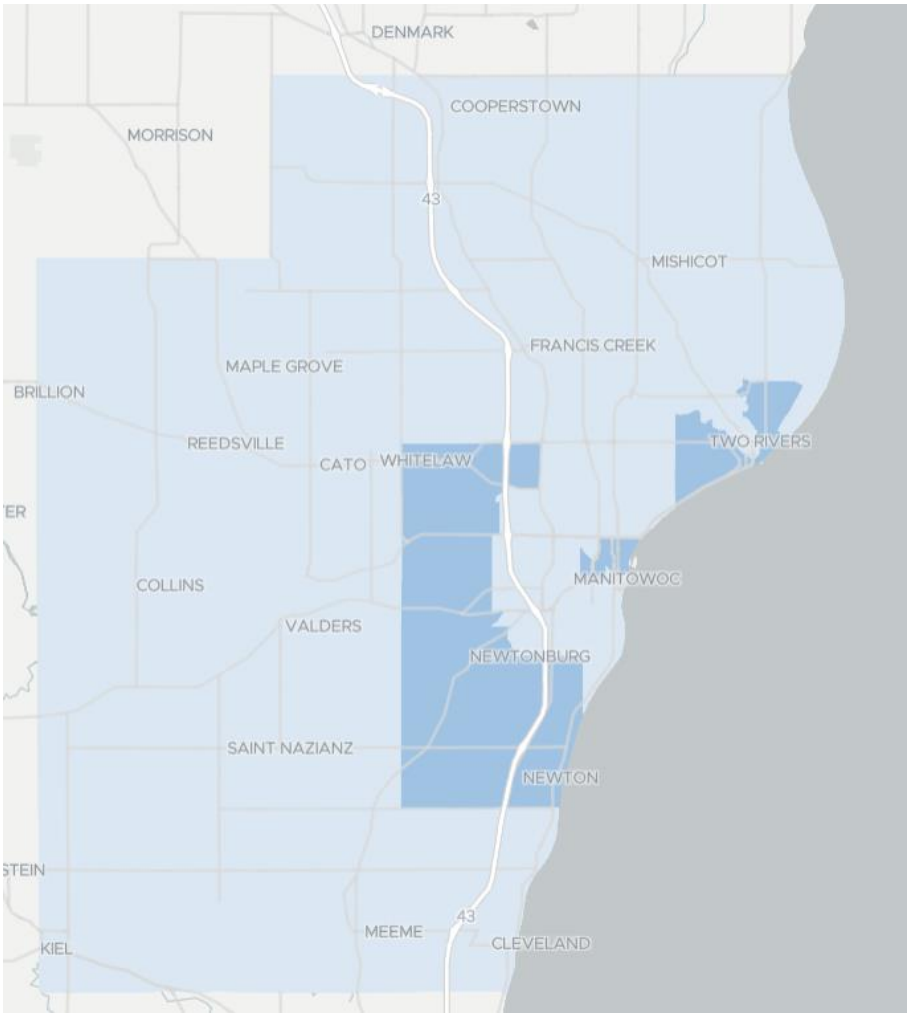
Total Population - Manitowoc County				
		2017		State 2017
	Total Population	79,680		5,763,217
Total Population		N	%	
	White	75,329	98.6%	85.9%
	Black or African American	571	0.7%	6.3%
	Asian	2,096	2.6%	2.6%
	American Indian and Alaska Native	339	0.4%	0.9%
	Some Other Race	195	0.2%	1.9%
	Two or more races	1,122	1.4%	2.3%
	Hispanic or Latino	2,945	3.7%	6.6%
Total Population				
	Male	39,612	49.7%	49.7%
	Female	40,068	50.3%	50.3%
Total Population				
	0-14	13,720	17.3%	18.6%
	15-44	26,682	33.5%	38.2%
	45-64	24,259	30.4%	27.5%
	65+	15,019	18.9%	15.6%

Demographics - Manitowoc County			
		2017	State 2017
Education level of adults 25 years or older			
	Less than high school degree	8.6%	8.3%
	High school degree	38.8%	31.3%
	Some college/associates	32.9%	31.4%
	Bachelors degree or higher	19.7%	29.1%
Percent of those ages 16 or older who are unemployed			
	Unemployment rate	2.4%	3.1%
Median HH Income (2017 dollars)			
	Median Income	$51,053	$56,759
Percent of all people below poverty in last 12 months			
	Percent below poverty	10.2%	12.3%
Language spoken at home			
	English	94.5%	91.3%
	Spanish	2.3%	4.6%
	Indo-European	1.0%	1.9%
	Asian and Pacific Island	2.1%	1.8%
	Other Languages	0.0%	0.4%
	Owner Occupied	75.0%	67.0%
	Renter Occupied	25.0%	33.0%

Manitowoc County

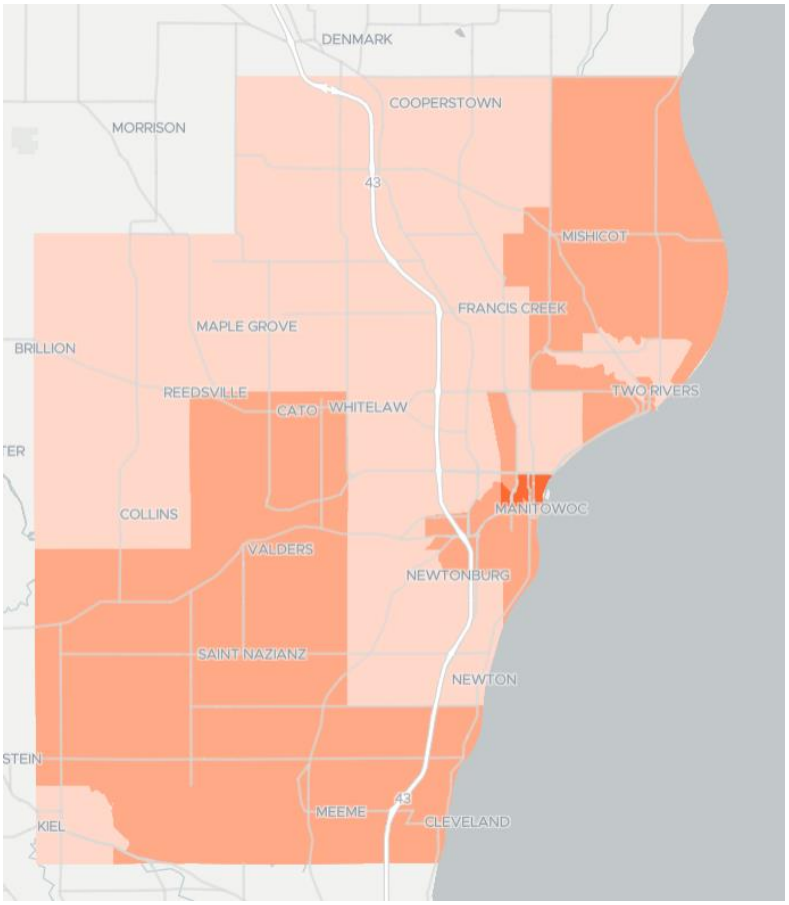
Community Indicator Report from the Community Commons website, available at https://www.communitycommons.org/, accessed July 3, 2019.

Manitowoc County



Data mapping from the Community Commons BroadStreet website, available at https://www.broadstreet.io/map, accessed April 26, 2019.

Manitowoc County



Population of Hispanic Origin:

Percent by Census Tract

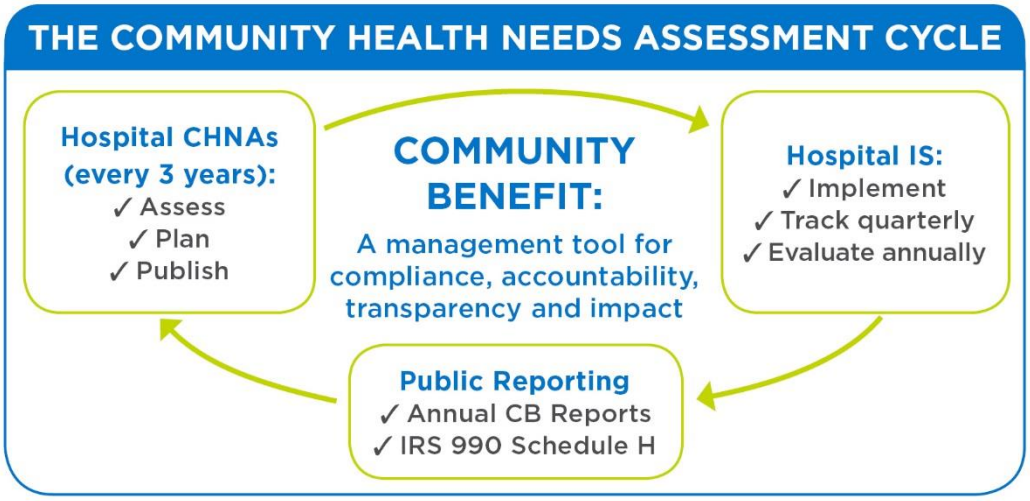
American Community Survey 2012-2016

Hispanic (%), ACS 2012-2016 by Tract
- Over 19.8
- 7.0 - 19.8
- 2.5 - 7.0
- Under 2.5
- No Data or Data Suppressed

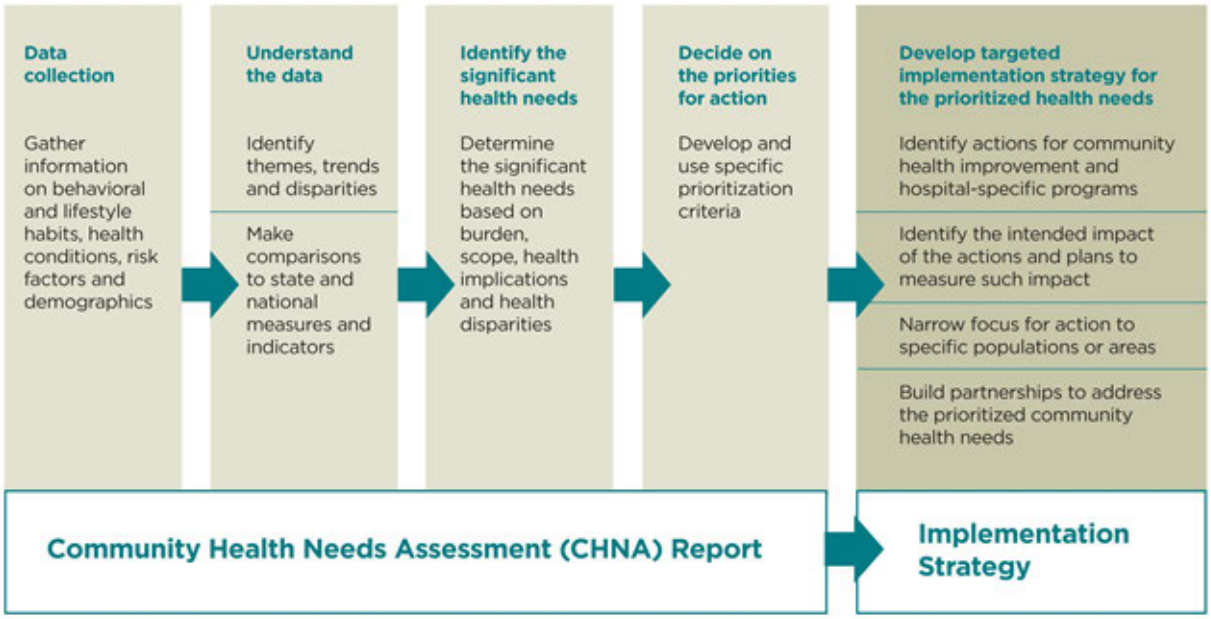
Data mapping from the Community Commons BroadStreet website, available at, https://www.broadstreet.io/map/, accessed April 26, 2019.

Methodology Used for the 2019 Community Health Needs Assessment

Since 2003, Aurora Health Care has underwritten a community health survey of Manitowoc County approximately every three years, conducted in partnership with the Manitowoc County Health Department. This helps the health department focus its resources on community health issues and enables our hospital to align our charitable resources and expertise to respond to identified community health priorities. To view the community health surveys dating back to 2012, visit aurora.org/commresearch. To view community health surveys prior to 2012, visit aurora.org/commresearch and select "Contact Us" to submit your request.



Through the Manitowoc County Community Health Needs Assessment Partnership, quantitative data was collected through primary and secondary sources and was supplemented with qualitative data gathered through key informant interviews and focus groups. Secondary data sources are collected, analyzed and published at different intervals; therefore, the data years noted in this report vary. However, the most current data available was used in preparing this CHNA Report.



The core data sources for the CHNA include:

Quantitative data sources

Source #1 | Primary Research: Community Health Survey Report

The community health survey of 400 adults is a source of primary community health data. The latest telephone survey was completed between January 28 and February 28, 2019 and analyzed and posted in 2019. This comprehensive phone-based survey gathers specific data on behavioral and lifestyle habits of the adult population and select information about child health. In addition, this report collects data on the prevalence of risk factors and disease conditions existing within the adult population and compares, where appropriate and available, health data of residents to state and national measures. Conducted approximately every three years, the survey can be used to identify community trends and changes over time. New questions have been added at different points in time. JKV Research, LLC, analyzed the data and prepared the final report. For further description see Appendix A and for the data summary see Appendix D.

Source #2 | Secondary Data Report

This report summarizes the demographic and health-related information for Manitowoc County. Data used in the report came from publicly available data sources. Data for each indicator is presented by race, ethnicity and gender when the data is available. When applicable, Healthy People 2020 objectives are presented for each indicator. The report was prepared in 2019 by the Center for Urban Population Health (CUPH). For further description see Appendix B.

Qualitative data source

Source #3 | Key Informant Interview Report

During 2019, thirty-one individuals who represent the broad interests of the community served, leaders from public health, education, law enforcement and community organizations serving medically underserved, low-income and minority populations, were consulted in one-on-one interviews. The same interview tool was used in each case. These key informants were asked to rank-order the top three-to-five major health-related issues for Manitowoc County, based on the focus areas presented in Wisconsin's State Health Plan, *Healthiest Wisconsin 2020*. For each top-ranked health topic, the respondents were asked to specify existing strategies to address the issue, barriers or challenges to addressing the issue, additional strategies needed, key partners in the community that hospitals should collaborate with to improve community health, and targeted groups to address health inequities.

The summary *Key Informant Interview Report* (KIIR) prepared by the Center for Urban Population Health (CUPH) presents cross-cutting themes, summaries of the top five health issues and additional health issues reported by community stakeholders. Additionally, the Key Informant Interview Report compiles a listing of potential resources and partners (assets) identified to address community health issues (Appendix C).

Additional sources of data and information used to prepare the CHNA Report also were considered when identifying significant community health needs and are cited within the report.

Summary of Findings

This report references the following data collection years: 2007, 2010, 2013, 2016, and 2019. The Community Health Survey (Source #1), the secondary data (Source #2), and the key informant interview reports (Source #3) provide an overview of the community health issues in Manitowoc County. When available and applicable, *Healthy People 2020* objectives are listed for the health topics.

The use of statistics is to determine whether a true difference between two percentages is likely to exist. If a difference is **statistically significant**, it is unlikely that the difference between the two percentages is due to chance. Conversely, if a difference is **not statistically significant**, it is likely there is no real difference (Source #1).

Access

Unmet medical care | In 2019, 15% of respondents delayed or did not seek medical care due to costs in the past 12 months, similar to 16% in 2016. From 2016 to 2019, the rate of respondents reporting an unmet medical need has remained steady, as well as from 2013 to 2019. The number of respondents reporting their child had an unmet medical need has statistically decreased since 2016. The number of respondents reporting their child had an unmet specialist need has remained steady since 2016 (Source #1). Access to health care was a ranked as a top issue by community members and key stakeholders (Sources #1, #3). The table below shows respondents reporting someone in their household did not get the medical or specialist care they needed in the last 12 months (Source #1).

	Delayed medical care due to cost		Unmet Medical (Adult)		Unmet Medical (Child)		Unmet Specialist (Child)	
	2016	**2019**	**2016**	**2019**	**2016**	**2019**	**2016**	**2019**
Manitowoc County	16%	15%	10%	7%	9%	3%	5%	6%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

- The *Healthy People 2020* target is to reduce the proportion of persons who are unable to obtain or delay in receiving necessary medical care to 4.2%.

  Why is this significant? Unmet medical care can lead to further health complications and increase future costs. Access to medical care can detect and treat disease at an earlier stage, improve overall health, prevent disease and disability, and reduce preventable deaths.[6]

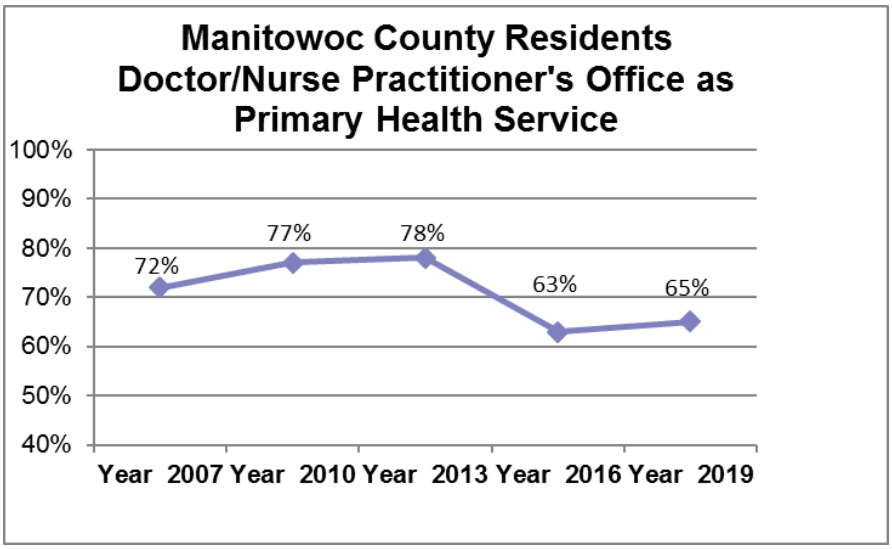
[6] Healthy People 2020-Access to Health Services, U.S. Department of Health and Human Service. Available at https://www.healthypeople.gov/2020/topics-objectives/topic/access-to-health-services. Accessed January 25, 2019.

In 2019, 65% of respondents reported their primary place for health services when they are sick was a doctor or nurse practitioner's office, similar to 63% in 2016. Female respondents were more likely to report their primary place for health services as a doctor or nurse practitioner's office. From 2016 to 2019, there was no statistical change in the overall percent of respondents reporting they have a primary care doctor or nurse practitioner. From 2016 to 2019, there was a statistically significant decrease in respondents reporting they have a personal health doctor or nurse who knows their child well and is familiar with their history (Source #1). Access to health care was a ranked as a top issue by community members and key stakeholders (Sources #1, #3). The table below shows respondents reporting the location they seek primary health services and if they have a primary care physician (Source #1).

	Doctor/Nurse Practitioner's Office as Primary Health Service (Adult)		Have a Primary Care Doctor/Nurse (Adult)		Personal Health Doctor/Nurse Who Knows Child Well and Familiar with History (Child)	
	2016	**2019**	**2016**	**2019**	**2016**	**2019**
Manitowoc County	63%	65%	88%	90%	96%	88%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

The rate of respondents reporting their primary place for health services when they are sick was a doctor or nurse practitioner's office has statistically decreased since 2007, as shown in the graph below (Source #1)



– The *Healthy People 2020* targets is to increase the proportion of people who have a primary care provider and a medical home to 95%.

Why is this significant? Respondents who have a medical home but not a primary care provider are more likely to obtain their care at a clinical setting with rotating providers. Respondents with a primary care provider but who do not receive their primary health services at their medical home are more likely to access urgent care services (Source #1).

Dental services and unmet dental care | In 2019, 16% of respondents reported in the past year someone in their household did not receive the dental care needed, which has statistically increased since 2016. In 2019, 6% of respondents reported their child did not receive the dental care needed, which has remained steady since 2016. The table below shows respondents reporting they did not get the dental care they needed in the last 12 months (Source #1).

	Unmet Dental (Adult)		Unmet Dental (Child)	
	2016	**2019**	**2016**	**2019**
Manitowoc County	11%	16%	5%	6%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

– The *Healthy People 2020* target is to reduce the proportion of persons who are unable to obtain or who encounter substantial delay in receiving necessary dental care to 5.0%.

Why is this significant? Unmet dental care can increase the likelihood for oral disease, ranging from cavities to oral cancer, which can lead to pain and disability. Access to oral health services can prevent cavities, gum disease and tooth loss, improve the detection of oral cancers and reduce dental care costs.[7]

Unmet prescription medications | In 2019, 9% of respondents reported someone in their household had not taken their prescribed medication due to prescription costs, which has remained steady since 2013. The table below shows respondents reporting that someone in their household had not taken their prescribed medication in the past 12 months due to prescription costs (Source #1).

	Unmet Prescription (Household)	
	2016	**2019**
Manitowoc County	12%	9%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

– The *Healthy People 2020* target is to reduce the proportion of persons who are unable to obtain or who encounter substantial delay in receiving necessary prescription medication to 2.8%.

Why is this significant? Lack of access to prescribed medication can decrease medication adherence and reduce self-management of chronic diseases and other health issues.[8]

[7] Healthy People 2020-Oral Health. U.S. Department of Health and Human Service. Available at https://www.healthypeople.gov/2020/topics-objectives/topic/oral-health. Accessed January 25, 2019.
[8] Healthy People 2020-Access to Health Services. U.S. Department of Health and Human Service. Available at https://www.healthypeople.gov/2020/topics-objectives/topic/access-to-health-services. Accessed January 25, 2019.

Unmet mental health services | In 2019, 4% of respondents reported someone in their household had an unmet mental health need, which has remained steady since 2013. The table below shows respondents reporting an unmet mental health need (Source #1).

	Unmet Mental Health (Adult)	
	2016	2019
Manitowoc County	3%	4%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

Why is this significant? Mental health and physical health are interconnected. An unmet mental health need can lead to further complications and increase future costs; the burden of mental illness is among the highest of all diseases. Screening, early detection and access to services can improve outcomes, and over time, can provide savings to the health care system.[9]

Coverage

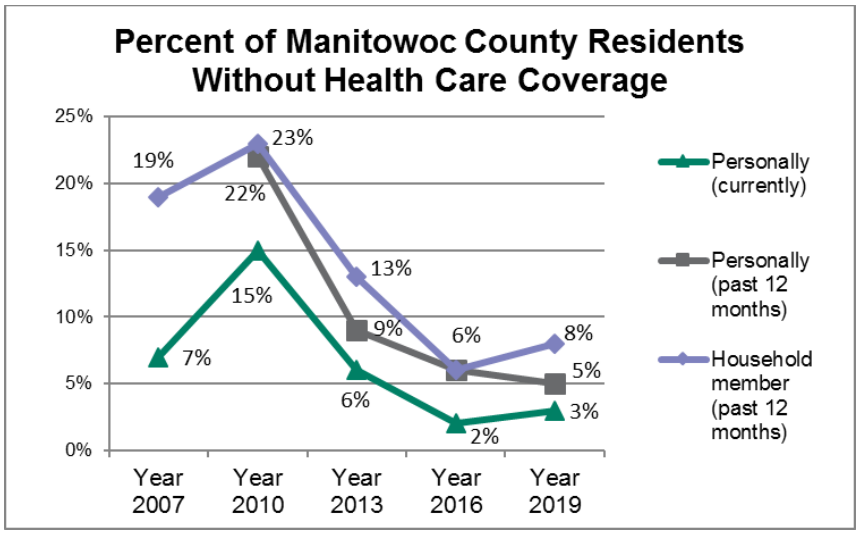
Health care coverage | From 2016 to 2019, the rate of respondents 18 and older reporting no current personal health care coverage remained steady. Respondents who were 18 to 34 years old or were in the bottom 40 percent household income bracket were more likely to report this. From 2016 to 2019, the rate of respondents reporting no personal health care coverage sometime in the past year remained steady. From 2016 to 2019, the rate of respondents reporting someone in the household was not covered in the past year remained steady. The table below shows respondents reporting health care coverage (Source #1).

	Personally Not Covered (Currently)		Personally Not Currently Covered (Past Year)		At Least One Household Member Not Covered in Past Year	
	2016	2019	2016	2019	2016	2019
Manitowoc County	2%	3%	6%	5%	6%	8%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

[9] Healthy People 2020-Access to Health Services. U.S. Department of Health and Human Service. Available at https://www.healthypeople.gov/2020/topics-objectives/topic/access-to-health-services. Accessed January 25, 2019.

From 2007 to 2019, there was a statistical decrease in the rate of respondents 18 and older reporting no current personal health care coverage. From 2010 to 2019, there was a statistical decrease in rate of respondents reporting no personal health care coverage sometime in the past year. From 2007 to 2019, there was a statistical decrease in the rate of respondents reporting someone in the household was not covered. The graph below shows respondents reporting health care coverage (Source #1).



– The *Healthy People 2020* target for health care coverage is 100%.

Why is this significant? Adults without consistent health care coverage are more likely to skip medical care because of cost concerns, which can lead to poorer health, higher long-term health care costs and early death.[10]

Chronic disease: asthma, diabetes, heart disease, overweight/obesity and cancer

Chronic conditions such as asthma, diabetes, heart disease and cancer can result in health complications, compromised quality of life and burgeoning health care costs. As the most common and preventable of all health issues, chronic diseases account for 86% of health care costs nationwide.[11] Access to health care was a ranked as a top issue by community members (Sources #1).

Asthma | In 2019, 14% of respondents reported current asthma, which has remained steady since 2007. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported their child had asthma. The table below shows respondents reporting current asthma in the past three years (Source #1).

	Asthma, current (adult)		Asthma, current (child)	
	2016	2019	2016	2019
Manitowoc County	13%	14%	4%	4%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

[10] Healthy People 2020-Access to Health Services. U.S. Department of Health and Human Service. Available at https://www.healthypeople.gov/2020/topics-objectives/topic/access-to-health-services. Accessed January 25, 2019.
[11] Centers for Disease Control and Prevention - Chronic Disease Prevention and Health Promotion. Available at http://www.cdc.gov/chronicdisease/index.htm. Accessed February 28, 2019.

Why is this significant? Without proper management, asthma can lead to high health care costs. Management of the disease with medical care and prevention of attacks by avoiding triggers is essential.[12]

Diabetes | In 2019, 13% of respondents reported diabetes, which has remained constant since 2007. Respondents who were in the bottom 40 percent household income bracket or had a high school education or less were more likely to report diabetes. The table below shows adults reporting diabetes in the past three years (Source #1).

	Diabetes	
	2016	**2019**
Manitowoc County	9%	13%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

Why is this significant? Diabetes may lead to serious health complications including heart disease, blindness, kidney failure and lower-extremity amputations; it is the seventh leading cause of death in the United States.[13] The average medical expenditures among people with diagnosed diabetes is about 2.3 times higher than average medical expenditures for people without diabetes.[14]

Heart disease or heart condition | In 2019, 8% of respondents reported heart disease or a heart condition, which has remained steady since 2007. The table below shows adults reporting a heart condition in the past three years (Source #1).

	Heart Disease or Condition	
	2016	**2019**
Manitowoc County	10%	8%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

Why is this significant? The term "heart disease" refers to several types of heart conditions, such as coronary artery disease, angina, heart failure and arrhythmias. High blood pressure, high cholesterol and smoking are key risks for heart disease. Heart disease is the leading cause of death among both males and females in the United States.[15]

[12] Centers for Disease Control and Prevention – Asthma. Available at https://www.cdc.gov/asthma/. Accessed February 20, 2019.
[13] Centers for Disease Control and Prevention. –Diabetes Complications. Available at https://www.cdc.gov/diabetestv/diabetes-complications.html. Accessed January 30, 2019.
[14] CDC National Diabetes Statistics Report, 2017: Estimates of Diabetes and Its Burden in the United States. Available at https://www.cdc.gov/diabetes/pdfs/data/statistics/national-diabetes-statistics-report.pdf. Accessed February 20, 2019.
[15] Centers for Disease Control and Prevention – Heart Disease. Available at https://www.cdc.gov/heartdisease/index.htm. Accessed February 20, 2019.

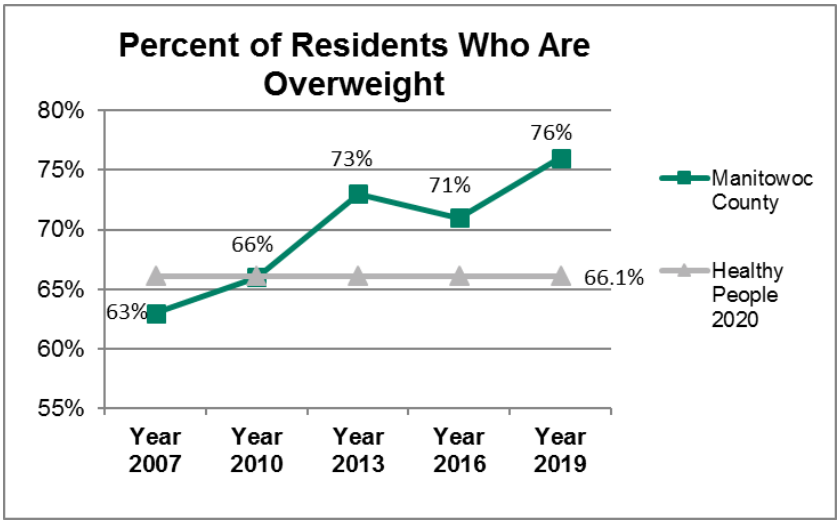
Overweight/Obesity | From 2016 to 2019, there was no statistical change in residents reporting being overweight or obese (Source #1).

In the Manitowoc County Community Health Survey, the category "overweight" includes overweight and obese respondents. One nationally used definition of overweight status developed by the CDC is when a person's body mass index (BMI) is greater or equal to 25.0. A BMI of 30.0 or more is considered obese. Body Mass Index is calculated by using weight in kilograms/height in meters^2. The table below shows adults who were classified as being overweight (BMI 25 or greater) or obese (BMI 30 or greater) (Source #1).

	Overweight (BMI 25+)		Obese (BMI 30+)	
	2016	2019	2016	2019
Manitowoc County	71%	76%	42%	43%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

From 2007 to 2019, there was a statistical increase in residents reporting being overweight or obese, shown in the table below (Source #1).



– The *Healthy People 2020* goal is 66.1%.

Why is this significant? Overweight and obesity can increase the risk for high blood pressure, high cholesterol levels, coronary heart disease, type 2 diabetes, stroke, some cancers and other health conditions. People who have obesity have annual medical costs that average $1,429 higher than those of normal weight. [16]

[16] Centers for Disease Control and Prevention. –Adult Obesity Facts. Available at https://www.cdc.gov/obesity/data/adult.html. Accessed January 30, 2019.

Cancer | From 2012-2016, the age-adjusted cancer incidence rate for Manitowoc County was 465.8 per 100,000 population, which is higher than the Wisconsin average of 458.6 per 100,000 population. The Manitowoc County age-adjusted cancer incidence rate for males was 513.7 per 100,000 population, and 432.3 per 100,000 population for females (Source #2).

> **Why is this significant?** A person's cancer risk can be reduced in a number of ways including, but not limited to, receiving regular medical care and screenings, avoiding tobacco, limiting alcohol use, avoiding excessive exposure to ultraviolet rays from the sun and tanning beds, eating a diet rich in fruits and vegetables, getting tested for Hepatitis C, maintaining a healthy weight and being physically active.[17]

Health risk behaviors: alcohol use, substance use, tobacco use, nutrition and physical activity

Four modifiable health risk behaviors are responsible for the main share of premature death and illness related to chronic diseases: excessive alcohol consumption, tobacco use and exposure, poor nutrition and lack of physical activity.[18]

Alcohol use | From 2016 to 2019, there was a statistical decrease in the rate of respondents reporting binge drinking in the past month. In 2019, 30% of respondents reported binge drinking in the past month, higher than the Wisconsin average of 25% and the *Healthy People 2020* goal of 24.4%. Respondents who were male, 35 to 44 years old, with some post high school education or in the top 40 percent household income bracket were more likely to have binged at least once in the past month.

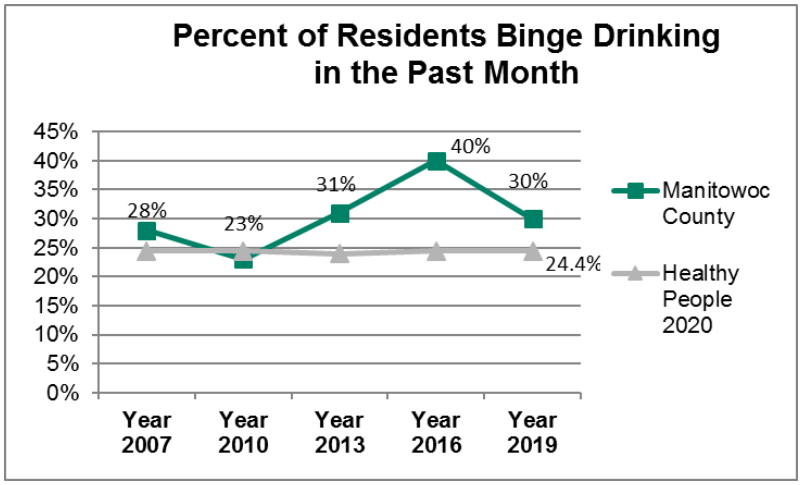
Excessive drinking reflects the percent of adults who report either binge drinking or heavy drinking. According to the National Institute on Alcohol Abuse and Alcoholism, binge drinking is defined as alcohol consumption that brings the blood alcohol concentration to 0.08% or more; this is generally achieved through consuming four or more alcoholic beverages for women or five or more for men within approximately two hours. In addition, the Substance Abuse and Mental Health Services Administration defines heavy alcohol use as binge drinking on five or more days in the past month.[19] Substance use was ranked as a top issue by community members and key stakeholders (Sources #1, #3). The table below shows adults who reported binge drinking in the past month (Source #1).

	Binge Drinking	
	2016	**2019**
Manitowoc County	40%	30%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

[17] Centers for Disease Control and Prevention – Cancer Prevention and Control. Available at https://www.cdc.gov/cancer/dcpc/prevention/other.htm. Accessed January 30, 2019.
[18] Centers for Disease Control and Prevention-Chronic Disease Overview. Available at https://www.cdc.gov/chronicdisease/. Accessed March 1, 2019.
[19] National Institute on Alcohol Abuse and Alcoholism – Drinking Levels Defines. Available at https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/moderate-binge-drinking. Accessed January 30, 2019.

From 2007 to 2019, there was no statistical change in the rate of respondents reporting binge drinking in the past month, shown in the graph below (Source #1).



– The *Healthy People 2020* goal for binge drinking among adults is 24.4%.

Why is this significant? Binge drinking is associated with an array of health problems including, but not limited to, unintentional injuries (e.g. car crashes, falls, burns, drownings), intentional injuries (e.g., firearm injuries, sexual assault, domestic violence), alcohol poisoning, sexually transmitted infections, unintended pregnancy, high blood pressure, stroke, and other cardiovascular diseases, and poor control of diabetes. Binge drinking is extremely costly to society from losses in productivity, health care, crime and other expenses.[20]

Substance use | In Manitowoc County, the rate of opioid-related hospital discharges was 490.4 per 10,000 population in 2017, higher than Wisconsin rate of 475.4 per 10,000 population. However, this rate has been decreasing since 2015 (Source #2). According to the CDC, the rate of dispensed opioid prescriptions peaked in 2012 and has since decreased steadily. The rate of opioid prescriptions dispensed in Manitowoc County in 2017 was 48.4 prescriptions per 100 population, lower than the state (52.6/100 population) and United States (58.7/100 population) averages.[21] Residents and key informants identified substance use as one of the top health issues challenging the community (Sources #1, #3).

Why is this significant? Substance abuse is a major public health issue that has a strong impact on individuals, families, and communities. The use of illicit drugs, abuse of alcohol, and addiction to pharmaceuticals is linked to serious health conditions such as heart disease, cancer, and liver diseases, exacting over $600 billion annually in costs related to lost work productivity, healthcare, and crime. Substance abuse also contributes to a wide range of social, physical, mental, and public health problems such as teenage pregnancy, HIV/AIDs, STIs, domestic violence, child abuse, motor vehicle crashes, crime, homicide, and suicide.[22]

[20] Centers for Disease Control and Prevention – Alcohol & Public Health. Available at https://www.cdc.gov/alcohol/index.htm. Accessed January 30, 2019.
[21] Centers for Disease Control and Prevention – Opioid Overdose: U.S. County Prescribing Rates. Available at https://www.cdc.gov/drugoverdose/maps/rxcounty2016.html. Accessed March 1, 2019.
[22] Health Compass Milwaukee. Available at http://www.healthcompassmilwaukee.org/. Accessed May 21, 2019.

Tobacco Use and Exposure | In 2019, 16% of respondents reported being a current smoker, which does not meet the *Healthy People 2020* goal. However, from 2016 to 2019, there was a statistical decrease in respondents reporting being a current smoker, while from 2007 to 2019, there has been no statistical change. In 2019, 83% of respondents did not allow smoking in their home, which has been statistically increasing since 2009 (Source #1). In 2016 14.4% of Manitowoc County mothers smoked during pregnancy, higher than the state rate of 11.0% (Source #2). The table below shows adults reporting tobacco use, including cigarette, electronic cigarette, and cigar, cigarillo, or little cigar exposure in the past 30 days (current smoker) (Source #1).

	Cigarette Smokers		Electronic Cigarettes		Cigars, Cigarillos, or Little Cigars	
	2016	2019	2016	2019	2016	2019
Manitowoc County	21%	16%	4%	3%	2%	3%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

From 2016 to 2019, there has been no statistical change in respondents reporting that smoking is not allowed in their home. The table below shows adults reporting smoking policies at home (Source #1).

	Smoking Not Allowed in Home	
	2016	2019
Manitowoc County	85%	83%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

– The *Healthy People 2020* target is to reduce cigarette smoking by adults to 12.0% and adolescents to 16.0% and increase the percentage of current smokers to quit smoking in the past year to 80.0%. Also, it aims to increase the prohibition of smoking within the homes to 87.0% and to reduce the percentage of non-smokers exposed to secondhand smoke in the past seven days to 33.8% and reduce the percentage of mothers who smoke during pregnancy to no greater than 1.4%.

Why is this significant? In the United States, cigarette smoking is the leading cause of preventable death. Smoking leads to disease and disability and harms nearly every organ in the body.[23]

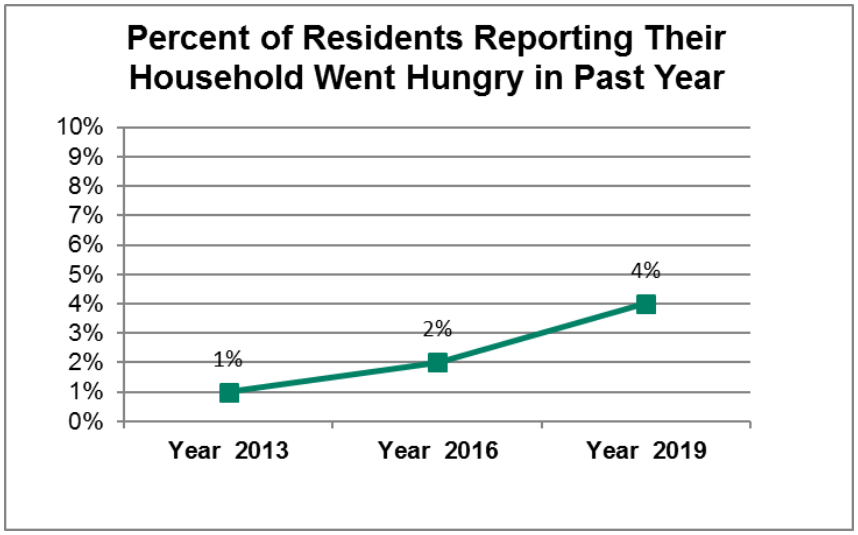
[23] Centers for Disease Control and Prevention – Smoking & Tobacco Use. Available at https://www.cdc.gov/tobacco/data_statistics/fact_sheets/index.htm?s_cid=osh-stu-home-spotlight-001. Accessed January 30, 2019.

Nutrition and physical activity | In 2019, 58% of respondents reported eating at least two servings of fruit per day, which has remained steady since 2007. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported eating at least three servings of vegetables per day, as well as from 2007 to 2019 (Source #1). From 2016 to 2019, there was no statistical change in the percent of respondents reporting their household went hungry because they couldn't afford enough food in the past year. The table below shows respondents who reported eating the recommended fruit and vegetable servings and reporting if the household went hungry (Source #1).

	Fruit Intake (2+ Servings Per Day)		Vegetable Intake (3+ Servings Per Day)		Household went hungry some time in past year	
	2016	2019	2016	2019	2016	2019
Manitowoc County	62%	58%	26%	30%	2%	4%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

From 2013 to 2019, there was a statistical increase in the percent of respondents reporting their household went hungry because they couldn't afford enough food in the past year, shown in the graph below (Source #1).



Why is this significant? A healthy and balanced diet, including eating fruits and vegetables, is associated with reduced risk for many diseases, including several of the leading causes of death: heart disease, cancer, stroke and diabetes. A poor diet can lead to energy imbalance (e.g., eating more calories than one expends through physical activity) and can increase one's risk for overweight and obesity. Healthy eating helps reduce one's risk for developing osteoporosis, some cancers, anxiety and depression.[24]

[24] Centers for Disease Control and Prevention – Nutrition. Available at https://www.cdc.gov/nutrition/about-nutrition/why-it-matters.html. Accessed January 30, 2019.

In 2019, 34% of respondents did moderate physical activity five times a week for 30 minutes. Twenty-nine percent of respondents did vigorous activity three times a week for 20 minutes. Combined, 45% of respondents met the recommended amount of moderate or vigorous physical activity. In 2019, 55% of respondents reported their 5 to 17-year-old child was physically active five times a week for at least 60 minutes each. Of the respondents who reported their child was not physically active, 29% reported school/homework/other activities as the reason for less physical activity. The table below shows respondents who reported engaging in physical activity (Source #1).

	Recommended Moderate or Vigorous Activity (Adult)		Physical Activity – 60 Mins/5 Times/Week (Child)	
	2016	**2019**	**2016**	**2019**
Manitowoc County	51%	45%	69%	55%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

– The *Healthy People 2020* target is to increase the percentage of adults engaged in the recommended moderate or vigorous physical activity to 47.9% and to reduce the percentage of students playing video games or using the computer for non-school work three or more hours on an average school day to 17.4%.

Why is this significant? Inactive adults have a higher risk for obesity, coronary heart disease, type 2 diabetes, stroke, some cancers, depression and other health conditions.[25]

[25] Centers for Disease Control and Prevention – Physical Activity. Available at https://www.cdc.gov/physicalactivity/index.html. Accessed January 30, 2019.

Health risk factors: high blood pressure and high blood cholesterol

High blood pressure and cholesterol | In 2019, 31% of respondents reported high blood pressure, which has remained steady since 2007. From 2016 to 2019, there was a statistical increase in the overall percent of respondents who reported high blood cholesterol. The table below shows adults who reported high blood pressure or high blood cholesterol in the past three years (Source #1).

	High Blood Pressure		High Blood Cholesterol	
	2016	**2019**	**2016**	**2019**
Manitowoc County	31%	31%	16%	24%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

- The *Healthy People 2020* goal of adults with high blood pressure is 26.9% and adults with high total blood cholesterol is 13.5%.

  Why is this significant? High blood pressure, the "silent killer" often lacks symptoms or warning signs and increases the risk for heart disease and stroke. Likewise, high cholesterol is also a risk factor for heart disease and stroke. Once identified and diagnosed, high blood pressure and cholesterol can be treated and controlled.[26]

Injury and Violence

Injury hospitalization | The 2017 Manitowoc County injury-related hospitalizations rate was 519.9 per 100,000, which is slightly higher compared to the state (513.1 per 100,000). Manitowoc County residents who are African American had higher rates of injury-related hospitalizations than the average rate. The 2016 injury-related death rate in Manitowoc County was 61.8 per 100,000 population, lower than the Wisconsin rate of 81.2 per 100,000 population, but higher than the Healthy People 2020 goal of 53.3 per 100,000 population. The top ranked cause of injury-related ED visits was falls (Source #2).

- The *Healthy People 2020* target for injury-related hospitalization rate is 555.8 per 100,000; the target for injury emergency department visit is 7,533.4 per 100,000. The target for injury related death rate is 53.3 per 100,000.

  Why is this significant? Injuries are a leading cause of death for people ages 1-44 in the United States. In 2013 alone, injuries cost the nation 671 billion dollars in lost productivity and medical care. Injuries can be prevented, and their consequences reduced for infants, children and adults.[27]

[26] Centers for Disease Control and Prevention – High Blood Pressure and Cholesterol. Available at https://www.cdc.gov/vitalsigns/cardiovasculardisease/index.html. Accessed January 30, 2019.
[27] Centers for Disease Control and Prevention – Injury Prevention and Control. Available at https://www.cdc.gov/injury/wisqars/overview/key_data.html. Accessed October 1, 2019.

Youth injury | In 2018, the total number of injury hospitalizations among Manitowoc County youth aged 0-17 years was 13, which is a rate of 77.9 per 100,000, lower than the state rate of 124.7 per 100,000.[28] Also in 2018, the total number of injury emergency department (ED) visits among Manitowoc County youth was 1,128 – a rate of 6,903.0 per 100,000, lower than the state rate of 7,787.6 per 100,000.[29] Of the ED visits by Manitowoc County youth, 348 resulted from falls.[30]

> **Why is this significant?** The leading cause of medical spending for children is injury treatment at nearly $11.5 billion annually in the United States. Almost nine million children aged 0 to 19 years are seen in EDs for injuries every year.[31]

Older adults injury | In 2018, the total number of injury emergency department (ED) visits among Manitowoc County adults aged 65 years and older was 930, which is a rate of 5,760.6 per 100,000, lower than the state rate of 7,054.0 per 100,000.[32] Of the ED visits by Manitowoc County adults aged 65 years and older, 516 resulted from falls.[33]

> **Why is this significant?** Of adults aged 65 years or older, one-third experience a fall each year, but less than half inform their healthcare providers about it. Most fractures among older adults are due to falls. Besides fractures, older adults who suffered from a fall have lacerations, traumatic brain injuries and experience a fear of falling, thus limiting their future activities.[34]

Sexual Violence | Sexual violence is defined as sexual activity when consent is not obtained or not given freely. The rate of rape for Manitowoc County was 55.3 per 100,000 in 2017, lower than the state rate of 91.8 per 100,000. However, sexual assault and rape are underreported, and the definition of sexual assault varies across different agencies; therefore, the number and rate may vary depending on the source.

> **Why is this significant?** Sexual violence can have harmful and lasting consequences for victims, families, and communities including, but not limited to, unintended pregnancy, sexually transmitted infections, long term physical consequences, immediate and chronic psychological consequences, health behavior risks and financial cost to victims, families and communities.[35]

Other violence | From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported a personal safety issue, as well as from 2007 to 2019 (Source #1). The table on the next page shows respondents who reported they were afraid for their safety, pushed, kicked, slapped, or hit in the past year (Source #1).

[28] Wisconsin Interactive Statistics on Health (WISH), Available at https://www.dhs.wisconsin.gov/wish/index.htm. Accessed October 1, 2019
[29] Wisconsin Interactive Statistics on Health (WISH), Available at https://www.dhs.wisconsin.gov/wish/index.htm. Accessed October 1, 2019
[30] Wisconsin Interactive Statistics on Health (WISH), Available at https://www.dhs.wisconsin.gov/wish/index.htm. Accessed October 1, 2019
[31] Centers for Disease Control and Prevention – Protect the Ones You Love: Child Injuries are Preventable. Available at http://www.cdc.gov/safechild/. Accessed March 1, 2019.
[32] Wisconsin Interactive Statistics on Health (WISH), Available at https://www.dhs.wisconsin.gov/wish/index.htm. Accessed October 1, 2019
[33] Wisconsin Interactive Statistics on Health (WISH), Available at https://www.dhs.wisconsin.gov/wish/index.htm. Accessed October 1, 2019
[34] Centers for Disease Control and Prevention – Older Adult Falls: Get the Facts. Available at http://www.cdc.gov/HomeandRecreationalSafety/Falls/adultfalls.html. Accessed March 1, 2019.
[35] Centers for Disease Control and Prevention -Violence Prevention/Sexual Violence: Consequences. Available at https://www.cdc.gov/violenceprevention/sexualviolence/consequences.html. Accessed February 25, 2019.

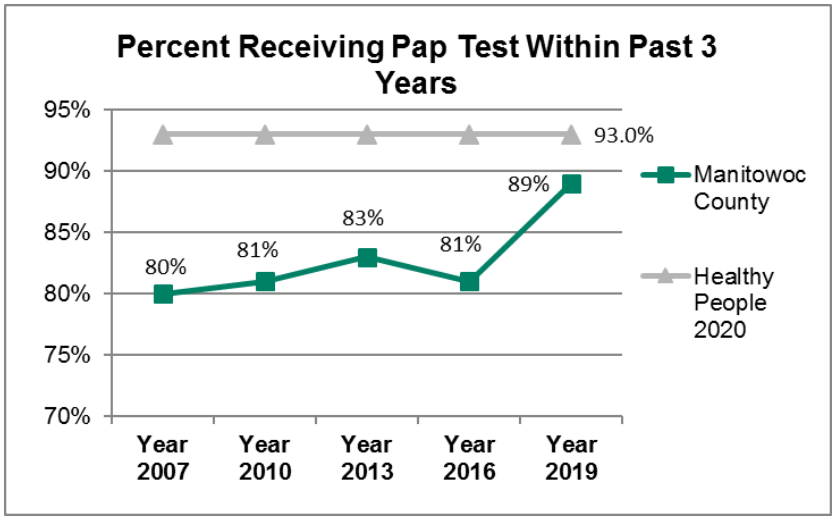
	Personal Safety Issues	
	2016	2019
Manitowoc County	4%	3%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

Why is this significant? Violence negatively impacts communities by reducing productivity, decreasing property values and disrupting social services (Source #2). Violence has a lasting effect throughout one's life. Survivors of violence may suffer from physical, emotional, social and other health problems.[36]

Reproductive Health

Pap smear | From 2016 to 2019, there was no statistical change in the percent of respondents 18 to 65 years old who reported having a pap smear within the past three years, while from 2007 to 2019, there has been a statistical increase (Source #1).



- The *Healthy People 2020* target for women having a pap test within three years is 93.0%.

Births receiving early prenatal care | In 2017, the percent of births receiving early (first trimester) prenatal care in Manitowoc County was 79.5%, higher compared to the state (75.8%) (Source #2).

- The *Healthy People 2020* target for births receiving first trimester care is 77.9%.

Preterm births | In 2017, the percent of mothers with premature births in Manitowoc County was 9.6%, the same as the state rate (Source #2). Premature birth is defined as births occurring before 37 weeks gestation.

- The *Healthy People 2020* target for premature births is 9.4%.

[36] Centers for Disease Control and Prevention – Violence Prevention. Available at https://www.cdc.gov/violenceprevention/. Accessed February 20, 2019.

Low birth weight | In 2017, the percent of mothers with low birth weight births (less than 2,500 grams or approximately 5.5 pounds) in Manitowoc County was 6.7% and was lower compared to the state average (7.7%) (Source #2).

- The *Healthy People 2020* target for low birth-weight births is 7.8%.

  Why is this significant? Preconception and early prenatal care improve mother and infant outcomes. Babies born prematurely (three weeks or earlier than their due date) or with a low birth weight (less than 2,500 grams or about 5.5 pounds) experience a greater risk for an adverse outcome including a serious disability or death. In 2015, preterm birth and low birth weight accounted for about 17% of infant deaths.[37]

Birth rate to teens | In 2017, births among Manitowoc County females aged 15-19 years was 13.3 per 1,000 females, lower than the state rate of 14.0 births per 1,000 females (Source #2).

Why is this significant? Teen pregnancy and childbearing bring substantial social and economic costs through immediate and long-term impacts on teen parents and their children. The children of teenage mothers are more likely to have lower school achievement and to drop out of high school, have more health problems, be incarcerated at some time during adolescence, give birth as a teenager, and face unemployment as a young adult.[38]

Infant mortality | In 2016, the rate of infants dying before their first birthday in Manitowoc County was 7.5 deaths per 1,000 live births, higher than the statewide rate of 6.2 deaths per 1,000 live births (Source #2).

- The *Healthy People 2020* target for rate of infant deaths (within one year) is 6.0 per 1,000 live births.

Mental Health

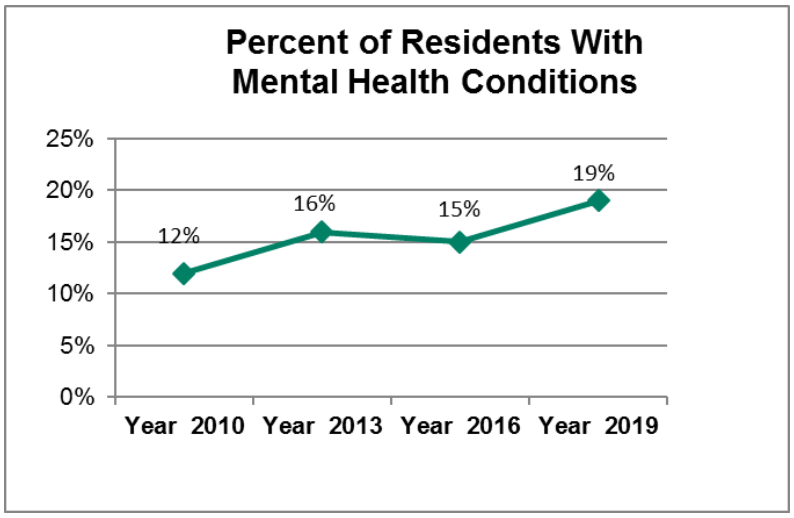
Mental health conditions | In 2019, 5% of respondents reported they always or nearly always felt sad/blue/depressed in the past month, which has remained steady since 2007. In 2019, 6% of respondents reported their child always or nearly always felt sad/blue/depressed in the past month, which has increased since 2016. From 2016 to 2019, there was no statistical change in the percent of respondents reporting a mental health condition (Source #1). Mental health was ranked a top health issue among key stakeholders (Source #3). The table below shows respondents who reported mental health issues or conditions (Source #1).

	Always/Nearly Always Felt Sad/Depressed Past 30 Days (Adult)		Always/Nearly Always Felt Sad/Depressed Past 6 Months (Child)		Mental Health Condition (Adult)	
	2016	2019	2016	2019	2016	2019
Manitowoc County	5%	5%	0%	6%	15%	19%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

[37] Centers for Disease Control and Prevention – Reproductive Health: Preterm Birth. Available at https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm. Accessed March 1, 2019.
[38] Centers for Disease Control and Prevention – Reproductive Health: About Teen Pregnancy. Available at https://www.cdc.gov/teenpregnancy/about/index.htm. Accessed March 1, 2019.

From 2007 to 2019, there was a statistical increase in the percent of respondents reporting a mental health condition, shown in the graph below (Source #1).



Why is this significant? Mental health conditions are associated with chronic diseases such as cardiovascular disease, diabetes and obesity, and related to risk behaviors for chronic disease, such as physical inactivity, smoking, excessive drinking and insufficient sleep.[39]

Suicide | From 2016 to 2019, there was a statistical increase in the percent of respondents who considered suicide in the past year, as well as from 2007 to 2019. The table below shows respondents who reported feeling so overwhelmed in the past year that they considered suicide (Source #1).

	Considered Suicide Past Year (Adult)	
	2016	**2019**
Manitowoc County	2%	7%

Key: =Improving, statistically significant =Worsening, statistically significant =No change or not statistically significant

- The *Healthy People 2020* target is 10.2 suicides per 100,000.

Why is this significant? Suicide is a serious public health problem that can have lasting harmful effects on individuals, families, and communities. While its causes are complex and determined by multiple factors, the goal of suicide prevention is to reduce factors that decrease risk factors and promote resilience.[40]

[39] Centers for Disease Control and Prevention – Mental Health. Available at https://www.cdc.gov/mentalhealth/learn/index.htm. Accessed January 30, 2019.
[40] Centers for Disease Control and Prevention – Suicide Prevention. Available at https://www.cdc.gov/violenceprevention/suicide/index.html. Accessed January 30, 2019.

Prioritization of Health Needs

During 2012 an ad hoc committee of the Aurora Health Care Board of Directors' Social Responsibility Committee undertook a five-month process to identify a common need in all Aurora Health Care service areas. The ad hoc committee presented its final recommendation to the Social Responsibility Committee in October of 2012 and, for the purpose of developing community benefit implementation strategies, a "signature community benefit focus" for all Aurora Health Care hospital facilities was determined to be: A demonstrable increase in "health home" capacity and utilization by underserved populations across Aurora's footprint (Medicaid-eligible and uninsured).

During 2019, Aurora hospital facility leaders prioritized significant needs based on the following criteria:

- Meets a defined community need (i.e., access for underserved populations)
- Aligns community benefit to organizational purpose and clinical service commitment to coordinate care across the continuum
- Aligns with hospital resources and expertise and the estimated feasibility for the hospital to effectively implement actions to address health issues and potential impact
- Reduces avoidable hospital costs by redirecting people to less costly forms of care and expands the care continuum
- Has evidence-basis in cross-section of the literature for management of chronic diseases in defined populations
- Leverages existing partnerships with free and community clinics and Federally Qualified Health Centers (FQHCs)
- Resonates with key stakeholders as a meaningful priority for the Aurora hospital to address
- Potential exists to leverage additional resources to extend impact
- Increases collaborative partnerships with others in the community by expanding the care continuum
- Improves the health of people in the community by providing high-quality preventive and primary care
- Aligns hospital resources and expertise to support strategies identified in municipal health department Community Health Improvement Plan (CHIP)
- Aligns with Advocate Aurora Health Community Strategy
- Quantifying health issues based on the *Hanlon Method for Prioritizing Health Problems*[41] (see Appendix E for details)

Using these criteria, Aurora Medical Center Manitowoc County prioritized the significant health needs to address in the 2020-2022 implementation strategy:

- Access and coverage
- Behavioral health
- Social determinants of health

There are general reasons for our hospitals not to address a need that has been identified.

- Resource constraints,
- Other facilities or organizations in the community are addressing the need,
- A lack of identified effective interventions to address the need.

[41] National Association of County & City Health Officials (NACCHO) – First Things First: Prioritizing Health Problems. Available at http://archived.naccho.org/topics/infrastructure/accreditation/upload/Prioritization-Summaries-and-Examples.pdf, accessed August 23, 2017.

Approval of CHNA by Governing Body

This Community Health Needs Assessment (CHNA) Report was adopted by the Aurora Health Care Community Board of the Advocate Aurora Health Board of Directors on December 2nd, 2019.

Community Resources and Assets

Available community resources and assets for each top community health issue as noted by interviewed community members are located in Appendix C. The organizations listed as providing key informants for interviews are resources for the community as well. Specific resources leveraged by the hospital are identified in the Implementation Strategy.

Community Feedback Mechanism

To submit written comments about the Community Health Needs Assessment (CHNA) report or request a paper version of the report, go to aurora.org/commbenefits and select “Contact Us.”

Appendices

Appendix A | Manitowoc County Community Health Survey Report (Source #1)

The report is available at aurora.org/commbenefits

Data collection and analysis: The community health survey, a comprehensive phone-based survey, gathers specific data on behavioral and lifestyle habits of the adult population and select information about the respondent's household. In addition, this report collects data on the prevalence of risk factors and disease conditions existing within the adult population, and compares, where appropriate and available, health data of residents to state and national measurements. Conducted every three years, the survey can be used to identify community trends and changes over time. The health topics covered by the community health survey are provided in the Manitowoc County Community Health Survey Report Summary (Appendix D).

Respondents were scientifically selected so that the survey would be representative of all adults 18 years old and older. The sampling strategy was two-fold. 1) A random-digit-dial landline sample of telephone numbers which included listed and unlisted numbers. The respondent within each household was randomly selected by computer based on the number of adults in the household (n=200). 2) A cell phone-only sample where the person answering the phone was selected as the respondent (n=200). At least 8 attempts were made to contact a respondent in both samples. Screener questions verifying location were included.

A total of 400 telephone interviews were completed between January 28 and February 28, 2019. With a sample size of 400, we can be 95% sure that the sample percentage reported would not vary by more than ±5 percent from what would have been obtained by interviewing all persons 18 years old and older who lived in Manitowoc County. When applicable, the data was compared with measures from the *Behavioral Risk Factor Surveillance System* (BRFSS) and indicators established by *Healthy People 2020*.

When using percentages from this study, it is important to keep in mind what each percentage point, within the margin of error, actually represents in terms of the total adult population. One percentage point equals approximately 630 adults.

The margin of error for smaller subgroups will be larger. For the landline sample, weighting was based on the number of adults in the household and the number of residential phone numbers, excluding fax and computer lines, to take into account the probability of selection. For the cell-phone only sample, it was assumed the respondent was the primary cell phone user. Combined, post-stratification was conducted by sex and age to reflect the 2010 census proportion of these characteristics in the area. Throughout the report, some totals may be more or less than 100% due to rounding and response category distribution. Percentages occasionally may differ by one or two percentage points from previous reports or the Appendix as a result of rounding, recoding variables or response category distribution.

Partners & Contracts: This report was sponsored by Aurora Health Care and Holy Family Memorial, and in partnership with Manitowoc County Health Department, Lakeshore CAP, Lakeshore Community Health Care and the United Way of Manitowoc County. The data was analyzed and prepared by JKV Research, LLC. Data collection was conducted by Management Decisions Incorporated.

Appendix B | Manitowoc County Health Data Report: A summary of secondary data sources (Source #2)

The report is available at aurora.org/commbenefits

Data Collection & Analysis: In spring 2019, the Center for Urban Population Health was enlisted to compile secondary data to supplement the community health survey and key informant interviews. This report summarizes the demographic and health-related information for Manitowoc County.

Publicly available data sources used for the Secondary Data Report

Source	Description
American Community Survey	*American Community Survey* provides access to data about the United States. The data comes from several censuses and surveys. The American Community Survey (ACS) is a nationwide survey designed to provide information of how communities are changing. ACS collects and produces population and housing information every year and provides single and multi-year estimates. *Source: United States Department of Commerce, US Census Bureau*
County Health Rankings	Each year the overall health of almost every county in all 50 states is assessed and ranked using the latest publicly available data. Ranking includes health outcomes (mortality and morbidity) and health factors (health behaviors, clinical care, social and economic factors and physical environment). *Source: Collaboration of the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute.*
Wisconsin Department of Health Services – Data & Statistics	All reportable communicable disease case counts, including sexually transmitted diseases (STD) and HIV incidence, are based on case reports for 2014. Reports are available for Wisconsin statewide, the five DPH regions, and the 72 Wisconsin counties. *Source: Wisconsin Department of Health Services*
Wisconsin Interactive Statistics on Health (WISH)	WISH uses protected databases containing Wisconsin data from a variety of sources and provides information about health indicators (measure of health). Select topics include Behavioral Risk Factor Survey, birth counts, fertility, infant mortality, low birth weight, prenatal care, teen births, cancer, injury emergency department visits, injury hospitalizations, injury mortality, mortality and violent death. *Source: Wisconsin Department of Health Services, Division of Public Health, Office of Health Informatics*

Data for each indicator is presented by race, ethnicity and gender when the data is available. In some cases data is not presented by the system from which it was pulled due to internal confidentiality policies which specify that data will not be released when the number is less than five. In other cases, the data were available, but the rates or percentages are not presented in this report. This is due to the indicator having small numbers in the numerator or denominator resulting in rates or percentages that were subject to large year to year fluctuations and, as such, would not have provided a meaningful representation of the data for the population subset. When applicable, *Healthy People 2020* objectives are presented for each indictor. The objectives were not included unless the indicator directly matched with a *Healthy People 2020* objective.

Partners & Contracts: This report was sponsored by Aurora Health Care and Holy Family Memorial, and in partnership with Manitowoc County Health Department, Lakeshore CAP, Lakeshore Community Health Care and the United Way of Manitowoc County. The report was prepared by the Center for Urban Population Health.

Appendix C | Manitowoc County Health Needs Assessment: A summary of key informant interviews (Source #3)

The report is available at aurora.org/commbenefits

Data Collection and Analysis: Thirty-one individual interviews representing thirty-one organizations were conducted between January and May 2019. The organizations were selected based on the following criteria:

- Provided a broad interest of the community and the health needs in Manitowoc County,
- Comprised of leaders within the organization with knowledge or expertise relevant to the health needs of the community, health inequities or public health, and/or
- Served, represented, partnered or worked with members of the medically underserved, low income and/or minority populations

Key informant interviews were conducted with leaders with broad representation from public health, education and community organizations. Cumulatively, these organizations focus on a range of public health issues and represent the broad interests of community, including medically underserved, low-income and/or minority populations.

Summary of the organizations representing the broad interest of the community

Organization	Description of the organizations *The description is based on information provided on the organization's website, accessed April 23, 2019*
Aging and Disability Resource Center (ADRC)	"The Mission of the Manitowoc/Kewaunee County Aging and Disability Resource Center of the Lakeshore is to be a single source of information, assistance, and access to community resources for the aging population, people with disabilities, their families, and caregivers in both Kewaunee and Manitowoc County communities."
Ascend Services (formerly Holiday House)	"Ascend's mission is to promote individual growth through community experiences, education, and employment opportunities."
Chamber of Manitowoc County	"The Chamber of Manitowoc County is a membership driven organization that provides resources and services to promote and maintain a strong business environment."
City of Manitowoc Fire Department	"It is the mission of the Manitowoc Fire Department to utilize the cooperative efforts of supervisory and line personnel to protect the lives and property of our citizens and those who visit our community."
First Presbyterian Church	"Our mission states that we covenant to share, serve, and live the Gospel as we incorporate the strengths of each congregation in service to the Manitowoc community."
Haven of Manitowoc County	"The Haven's mission is to advocate for homeless men while providing community resources and an interfaith approach towards self-sufficiency."
Holy Family Memorial	"Holy Family Memorial is a network of health professionals who, rooted in the healing ministry of Jesus Christ, provide services to help individuals and our communities achieve healthier lives."
Hope House of Manitowoc County	"Hope House, a program of Lakeshore Interfaith Hospitality Network and an affiliate of Family Promise, is a non-profit organization whose purpose is to provide immediate shelter and guidance to homeless individuals and families, due to the impact of misfortunes upon their lives."
Human Services Department of Manitowoc County	"The mission of the Manitowoc County Human Services Department is to promote a healthy community by providing services that strengthen and empower individuals and families."

InCourage	InCourage, the Manitowoc County Domestic Violence Center (DVC), "is a non-profit organization providing supportive responses to people in the Manitowoc County area who are experiencing violence in their lives."
Lakeshore CAP, Inc.	The Lakeshore CAP Mission is, "to promote economic and personal self-sufficiency and well-being of low to moderate income persons and families through service programs, advocacy, community education and resource development in Door, Kewaunee, Manitowoc and Sheboygan counties and to enable and empower persons, parents and families through voluntary prevention, education and support programs."
Lakeshore Community Health Care	As a Federally Qualified Health Center (FQHC), "LCHC provides access to comprehensive, integrated health care, regardless of ability to pay, eliminating health disparities among the underserved."
Lakeshore Technical College	"To enrich lives and strengthen the economy by preparing a work force that is skilled, diverse, and flexible."
Lighthouse Recovery	The Lighthouse Recovery mission is "to empower those seeking recovery by resources, education, and recovery support services in a safe and social space. We aim to reduce the stigma surrounding Substance Use Disorder by providing education to the community"
Manitowoc County Health Department – Hmong Interpretation	The health department's mission is "to protect and promote the health of Manitowoc County in partnership with our community." The department leads the *Healthiest Manitowoc County (HMC)* process, "coordinates the Community Health Assessment and Improvement Planning process and establishes coalition to address the high priority needs in the community."
Manitowoc County Health Department – Spanish Interpretation	The health department's mission is "to protect and promote the health of Manitowoc County in partnership with our community." The department leads the *Healthiest Manitowoc County (HMC)* process, "coordinates the Community Health Assessment and Improvement Planning process and establishes coalition to address the high priority needs in the community."
Manitowoc County Jail	The Manitowoc County Jail works "to create a safe, secure environment for the employees, the incarcerated, and the community."
Manitowoc County University of Wisconsin Extension - Agriculture	"Purpose: We teach, learn, lead and serve, connecting people with the University of Wisconsin, and engaging with them in transforming lives and communities."
Manitowoc County Veteran's Office	"The Manitowoc County Veteran Services Office assists with understanding, applying for and helping to resolve problems affecting state and federal benefits for Veterans, Military Retirees, Active Duty Service Members on terminal leave, Active Reserve & National Guard Members, and their families."
Manitowoc Public School District	"The Manitowoc Public School District commits to educate, engage and inspire all learners to thrive in a global community."
Manitowoc Two Rivers YMCA	Mission: "To put Christian principals into practice through programs which build healthy spirit, mind and body for all."
MARCO Services	MARCO aims to "help residents affect positive changes in themselves – physically, emotionally, spiritually, and socially – in order to develop and maintain more productive, chemically-free lifestyles."
Maribel Food Pantry	"The Maribel Food Pantry is a non-profit commodities distribution site. We strive to supplement the food budgets of our participants by providing fresh and non-perishable food items. We receive products and commodities thru the Lakeshore Cap Office as a TEFAP food pantry. We are required by these regulations to collect an equal amount in donated commodities as we receive from the USDA. For this

	we have to rely on the generosity of our communities. Although we receive support from local churches and organizations the majority of our support comes directly from the people in the communities we service."
Mi Pueblo-Hispanic Community Center	Mission Statement: "The *'Mi Pueblo' Hispanic Community Center* is dedicated to empowering Hispanic families to become more integrated in the community and to improve their quality of life by creating, implementing and referring to programs of education, health, job opportunities and facilitate access to existing community resources."
Reedsville School District	Mission: "Helping every individual learn!"
Salvation Army of Wisconsin & Upper Michigan - Manitowoc	"The Salvation Army, an international movement, is an evangelical part of the universal Christian Church. Its message is based on the Bible. Its ministry is motivated by the love of God. Its mission is to preach the gospel of Jesus Christ and to meet human needs in His name without discrimination."
St. Thomas the Apostle	"St. Thomas the Apostle Catholic Community strives to radiate the true spirit of Jesus Christ at all times to all people, especially the poor and needy. We embrace our cultural differences while celebrating our oneness in Christ. Our focus is to include all ages through opportunities of education and evangelization to reach the ultimate goal of glorifying God's name in word and deed."
The Crossing	"Manitowoc County's premier source for pregnancy advice, counseling, parental training, and community support."
Two Rivers Ecumenical Pantry (TREP)	"Food assistance for those in need. Serving the Two Rivers and Mishicot school districts."
United Way Manitowoc County	Mission Statement: "The United Way Manitowoc County improves quality of life in our community through volunteer and resource development, partnership building, and advocacy."
Women's League of Voters	"The League of Women Voters (the "League") is an organization, made up of women and men, that is nonpartisan, and has fought to improve our systems of government and impact public policies through education and advocacy. It is active at the national, state, and local levels."

The key informant interviews were conducted by Aurora Health Care, Holy Family Memorial, the Manitowoc County Health Department, Lakeshore CAP, and Lakeshore Community Health Care. The interviewers used a standard interview script that included the following elements:

1) Ranking of up to five public health issues, based on the focus areas presented in Wisconsin's State Health Plan, that are the most important issues for the County; and
2) For those five public health issues:
    a. Existing strategies to address the issue
    b. Barriers/challenges to addressing the issue
    c. Additional strategies needed
    d. Key groups in the community that hospitals should partner with to improve community health

The report summarized the health issue rankings, including a list of the five issues which were ranked most frequently by respondents. Also, the report describes the themes that presented across the top ranked health topics along with a summary of the strategies, barriers and partners described by the participants.

Top five issues that emerged as key health priorities for Manitowoc County and the identified community assets

The top five health issues that emerged as key priorities for Manitowoc County were: 1) mental health, 2) substance use and abuse, 3) alcohol abuse, 4) adverse childhood experiences, and 5) Access to health care.

Key community partners, resources and assets to address health issues:

1. **Mental health:** Hospitals should be partnering with school districts, Manitowoc County Human Services, YMCA, Kids at Hope, social workers, meditation coaches, family therapists, law enforcement, fire and rescue departments, Healthiest Manitowoc County, Painting Pathways, city, county, and state government, non-profit organizations that do this type of work, UW Extension, National Alliance on Mental Illness, Criminal Justice Coordinating Council, drug courts, and veterans courts.

2. **Substance use and abuse**: Hospitals should be partnering with schools, local non-profit organizations, YMCA, the business community, faith communities, safe rides, recovery coaches, law enforcement, judges, drug court, Manitowoc County Human Services, Lighthouse Recovery Community Center, Lakeshore CAP, Manitowoc County Public Health Department, Healthiest Manitowoc County, landlords in the community, and transitional and sober housing providers.

3. **Alcohol abuse**: Hospitals should be partnering with schools, the business community, faith communities, safe ride providers, bar owners, recovery coaches, children and youth, the Tavern League, Healthiest Manitowoc County Substance Abuse Prevention Coalition, counselors and therapists, law enforcement, Manitowoc County Human Services, the Manitowoc County Health Department, drug court, peer groups, alcohol-related task forces, Alcoholics Anonymous groups, and Lighthouse Recovery Center.

4. **Adverse childhood experiences**: Hospitals should be partnering with schools, churches, non-profit organizations, government at all levels, the business community and The Chamber, Healthiest Manitowoc County, Kids at Hope, Lakeshore CAP, Manitowoc County Human Services, law enforcement, Manitowoc County Health Department, youth serving organizations, Lakeshore Community Health Care, Lakeland Care District, and the general public.

5. **Access to health care**: Hospitals should be partnering with Manitowoc County Public Health Department, Lakeshore Community Health Care, rural insurance agents, lobbying groups, elected officials at all levels, and advocates who understand the barriers un- and under-insured individuals encounter.

Partners & Contracts: This report was sponsored by Aurora Health Care and Holy Family Memorial, and in partnership with Manitowoc County Health Department, Lakeshore CAP, Lakeshore Community Health Care and the United Way of Manitowoc County. The report was prepared by the Center for Urban Population Health.

Appendix D | Manitowoc County Community Health Survey Report Summary: 2019

Manitowoc County Community Health Survey Summary

This research provides valuable behavioral data, lifestyle habits, and the prevalence of risk factors and disease conditions of county residents. This summary was prepared by JKV Research for Aurora Health Care, Holy Family Memorial, Lakeshore CAP, Lakeshore Community Health Care, Manitowoc County Health Department and United Way Manitowoc County.

	Manitowoc					WI	US
Overall Health	2007	2010	2013	2016	2019	2017	2017
Excellent/Very Good	51%	57%	52%	51%	45%	52%	51%
Good	30%	30%	32%	31%	36%	NA	NA
Fair or Poor	18%	14%	16%	17%	19%	17%	18%

Health Care Coverage	Manitowoc					WI	US
Not Covered	2007	2010	2013	2016	2019	2017	2017
Personally (Currently) [HP2020 Goal: 0%]	7%	15%	6%	2%	3%	8%	13%
Personally (Past Year)	--	22%	9%	6%	5%	NA	NA
Household Member (Past Year)	19%	23%	13%	6%	8%	NA	NA

	Manitowoc					WI	US
Did Not Receive Care Needed in Past Year	2007	2010	2013	2016	2019	2017	2017
Delayed/Did Not Seek Care Due to Cost	--	--	--	16%	15%	11%	12%
Unmet Need/Care in Household							
Prescription Medication Not Taken Due to Cost [HP2020 Goal: 3%]	--	--	10%	12%	9%	NA	NA
Medical Care [HP2020 Goal: 4%]	--	--	11%	10%	7%	NA	NA
Dental Care [HP2020 Goal: 5%]	--	--	11%	11%	16%	NA	NA
Mental Health Care	--	--	2%	3%	4%	NA	NA

Health Information and Services	Manitowoc					WI	US
Primary Source of Health Information	2007	2010	2013	2016	2019	2017	2017
Doctor	--	--	--	55%	59%	NA	NA
Internet	--	--	--	18%	20%	NA	NA
Myself/Family Member in Health Field	--	--	--	8%	4%	NA	NA
Other Health Professional	--	--	--	7%	7%	NA	NA
Family/Friends	--	--	--	1%	6%	NA	NA
Have a Primary Care Physician [HP2020 Goal: 84%]	--	--	--	88%	90%	NA	NA
Primary Health Services							
Doctor/Nurse Practitioner's Office	72%	77%	78%	63%	65%	NA	NA
Urgent Care Center	10%	3%	9%	20%	18%	NA	NA
Public Health Clinic/Com. Health Center	11%	8%	6%	4%	5%	NA	NA
Hospital Outpatient	2%	3%	1%	<1%	3%	NA	NA
Hospital Emergency Room	1%	2%	1%	4%	2%	NA	NA
No Usual Place	3%	5%	4%	8%	7%	NA	NA
Advance Care Plan	37%	33%	38%	47%	43%	NA	NA

	Manitowoc					WI	US
Vaccinations (65 and Older)	2007	2010	2013	2016	2019	2017	2017
Flu Vaccination (Past Year)	67%	58%	73%	78%	71%	53%	61%
Pneumonia (Ever) [HP2020 Goal: 90%]	65%	65%	71%	70%	74%	80%	75%

	Manitowoc					WI	US
Fall/Injury as a Result (55 and Older)	2007	2010	2013	2016	2019	2017	2017
Fell (Past Year)	--	--	--	--	24%	NA	NA
Fall Resulted in Injury that Limited Activity for 1 Day or Saw a Doctor (Of Respondents Who Fell in Past Year)	--	--	--	--	32%	NA	NA

--Not asked. NA-WI and/or US data not available.

Health Conditions in Past 3 Years	Manitowoc					WI	US
Manitowoc County	2007	2010	2013	2016	2019	2017	2017
High Blood Pressure	28%	26%	30%	31%	31%	NA	NA
High Blood Cholesterol	28%	29%	26%	16%	24%	NA	NA
Mental Health Condition	9%	12%	16%	15%	19%	NA	NA
Diabetes	9%	6%	11%	9%	13%	NA	NA
Heart Disease/Condition	11%	9%	11%	10%	8%	NA	NA
Asthma (Current)	12%	7%	8%	13%	14%	10%	9%

Condition Controlled Through Meds, Therapy or Lifestyle Changes	Manitowoc					WI	US
	2007	2010	2013	2016	2019	2017	2017
High Blood Pressure	--	--	94%	94%	98%	NA	NA
High Blood Cholesterol	--	--	88%	91%	88%	NA	NA
Mental Health Condition	--	--	94%	98%	75%	NA	NA
Diabetes	--	--	98%	97%	92%	NA	NA
Heart Disease/Condition	--	--	91%	82%	97%	NA	NA
Asthma (Current)	--	--	100%	91%	100%	NA	NA

Routine Procedures	Manitowoc					WI	US
	2007	2010	2013	2016	2019	2017	2017
Routine Checkup (2 Years Ago or Less)	80%	77%	79%	86%	92%	82%	83%
Cholesterol Test (4 Years Ago or Less) [HP2020 Goal: 82%]	78%	73%	75%	79%	76%	83%	86%
Dental Checkup (Past Year) [HP2020 Goal: 49%]	71%	65%	70%	69%	70%	73%[1]	66%[1]
Eye Exam (Past Year)	48%	45%	46%	47%	45%	NA	NA

Physical Health	Manitowoc					WI	US
Physical Activity/Week	2007	2010	2013	2016	2019	2009	2009
Moderate Activity (5 Times/30 Min)	38%	42%	32%	36%	34%	NA	NA
Vigorous Activity (3 Times/20 Min)	24%	23%	20%	36%	29%	NA	NA
Recommended Moderate or Vigorous	48%	49%	42%	51%	45%	53%	51%
Sleep in Past 24 Hours (7+ Hours) [HP2020 Goal: 71%]	--	--	--	--	64%	NA	NA

Body Weight	Manitowoc					WI	US
Overweight Status	2007	2010	2013	2016	2019	2017	2017
Overweight (BMI 25.0+) [HP2020 Goal: 66%]	63%	66%	73%	71%	76%	67%	66%
Obese (BMI 30.0+) [HP2020 Goal: 31%]	21%	28%	34%	42%	43%	32%	31%

Nutrition and Food Security	Manitowoc					WI	US
	2007	2010	2013	2016	2019	2009	2009
Fruit Intake (2+ Servings/Day)	63%	65%	60%	62%	58%	NA	NA
Vegetable Intake (3+ Servings/Day)	24%	23%	23%	26%	30%	NA	NA
At Least 5 Fruit/Vegetables/Day	35%	40%	30%	40%	34%	23%	23%
Often Read Food Label or Nutritional Information on Food Product or When Order Food from Restaurant for First Time	--	--	--	52%	39%	NA	NA
Household Went Hungry in Past Year	--	--	1%	2%	4%	NA	NA

Colorectal Cancer Screenings (50 and Older)	Manitowoc					WI	US
	2007	2010	2013	2016	2019	2016	2016
Blood Stool Test (Within Past Year)	23%	--	12%	10%	13%	7%	8%
Sigmoidoscopy (Within Past 5 Years)	--	7%	7%	7%	9%	3%	2%
Colonoscopy (Within Past 10 Years)	--	70%	70%	74%	73%	70%	64%
One of the Screenings in Recommended Time Frame [HP2020 Goal: 71%]	--	71%	75%	77%	77%	74%	68%

--Not asked. NA-WI and/or US data not available.
[1]WI and US Data for Dental Checkup is from 2016.

	Manitowoc					WI	US
Women's Health	2007	2010	2013	2016	2019	*2016*	*2016*
Mammogram (50+; Within Past 2 Years)	80%	80%	81%	80%	80%	*80%*	*78%*
Bone Density Scan (65 and Older)	59%	78%	84%	84%	78%	*NA*	*NA*
Cervical Cancer Screening						*2014*	*2014*
Pap Smear (18 – 65; Within Past 3 Years) [HP2020 Goal: 93%]	80%	81%	83%	81%	89%	*77%*	*75%*
HPV Test (18 – 65; Within Past 5 Years)	--	--	--	49%	63%	*NA*	*NA*
Screening in Recommended Time Frame (18-29: Pap Every 3 Years; 30 to 65: Pap and HPV Every 5 Years or Pap Only Every 3 Years)	--	--	--	85%	96%	*NA*	*NA*

	Manitowoc					WI	US
Tobacco Cigarette Smokers or Vaporers	2007	2010	2013	2016	2019	*2017*	*2017*
Current Smokers [HP2020 Goal: 12%]	20%	25%	19%	21%	16%	*16%*	*17%*
Current Vaporers (Past Month)	--	--	--	4%	3%	*5%*	*5%*
Of Current Smokers/Vaporers…						*2005*	*2005*
Quit Smoking/Vaping 1 Day or More in Past Year Because Trying to Quit [HP2020 Goal Quit Smoking: 80%]	32%	37%	44%	64%	31%	*49%*	*56%*
Saw a Health Care Professional in Past Year and Advised to Quit Smoking/Vaping	67%	80%	90%	75%	61%	*NA*	*NA*

Exposure to Smoke	Manitowoc					WI[1]	US
Smoking Policy at Home	2007	2010	2013	2016	2019	*'14-15*	*'14-15*
Not Allowed Anywhere	--	70%	78%	85%	83%	*84%*	*87%*
Allowed in Some Places/At Some Times	--	7%	9%	5%	10%	*NA*	*NA*
Allowed Anywhere	--	4%	2%	3%	1%	*NA*	*NA*
No Rules Inside Home	--	19%	11%	8%	7%	*NA*	*NA*
Nonsmokers/Nonvaporers Exposed to Second-Hand Smoke/Vapor in Past 7 Days [HP2020 Goal Nonsmokers: 34%]	--	12%	17%	10%	15%	*NA*	*NA*

	Manitowoc					WI	US
Other Tobacco Products in Past Month	2007	2010	2013	2016	2019	*2017*	*2017*
Smokeless Tobacco [HP2020 Goal: 0.2%]	--	--	--	3%	5%	*2%*	*2%*
Cigars, Cigarillos or Little Cigars	--	--	--	2%	3%	*NA*	*NA*

	Manitowoc					WI	US
Alcohol Use in Past Month	2007	2010	2013	2016	2019	*2017*	*2017*
Binge Drinker* [HP2020 Goal 5+ Drinks: 24%]	28%	23%	20%	40%	30%	*24%*	*17%*
Driver/Passenger When Driver Perhaps Had Too Much to Drink	4%	2%	3%	<1%	1%	*NA*	*NA*

	Manitowoc					WI	US
Household Problems Associated With…	2007	2010	2013	2016	2019	*2017*	*2017*
Alcohol	3%	3%	2%	3%	1%	*NA*	*NA*
Misuse of Prescription or OTC Drugs	--	--	<1%	<1%	3%	*NA*	*NA*
Marijuana	--	--	2%	<1%	<1%	*NA*	*NA*
Cocaine, Heroin or Other Street Drugs	--	--	0%	0%	<1%	*NA*	*NA*
Gambling	--	--	2%	<1%	<1%	*NA*	*NA*

	Manitowoc					WI	US
Personal Safety in Past Year	2007	2010	2013	2016	2019	*2017*	*2017*
Afraid for Their Safety	5%	3%	4%	3%	3%	*NA*	*NA*
Pushed, Kicked, Slapped, or Hit	2%	2%	5%	1%	<1%	*NA*	*NA*
At Least One of the Safety Issues	5%	4%	7%	4%	3%	*NA*	*NA*

--Not asked. NA-WI and/or US data not available. [1]Midwest data.

*In 2007 and 2010, binge drinking was defined as 5 or more drinks regardless of gender. Since 2013, binge drinking has been defined as 4 or more drinks for females and 5 or more drinks for males to account for metabolism differences.

	Manitowoc					WI	US
Times of Distress in Past Three Years	2007	2010	2013	2016	2019	*2017*	*2017*
Time of Distress and Someone in HH Looked for Community Support	--	--	--	15%	18%	*NA*	*NA*
Of Respondents Who Looked for Support							
Felt Somewhat/Slightly or Not at All Supported	--	--	--	47%	46%	*NA*	*NA*

	Manitowoc					WI	US
Mental Health Status	2007	2010	2013	2016	2019	*2017*	*2017*
Felt Sad, Blue or Depressed Always/Nearly Always (Past Month)	4%	4%	6%	5%	5%	*NA*	*NA*
Find Meaning & Purpose in Daily Life							
Seldom/Never	3%	5%	5%	4%	6%	*NA*	*NA*
Considered Suicide (Past Year)	3%	4%	3%	2%	7%	*NA*	*NA*

	Manitowoc					WI	US
Children in Household	2007	2010	2013	2016	2019	*2017*	*2017*
Personal Health Doctor/Nurse Who Knows Child Well and Familiar with History	--	--	--	96%	88%	*NA*	*NA*
Visited Personal Doctor/Nurse for Preventive Care (Past Year)	--	--	--	84%	94%	*NA*	*NA*
Did Not Receive Care Needed (Past Year)							
Medical Care	--	--	--	9%	3%	*NA*	*NA*
Dental Care	--	--	--	5%	6%	*NA*	*NA*
Specialist	--	--	--	5%	6%	*NA*	*NA*
Current Asthma	--	--	--	4%	4%	*NA*	*NA*
Safe in Community/Neighborhood (Seldom/Never)	--	--	--	0%	4%	*NA*	*NA*
Children 5 to 17 Years Old							
Fruit Intake (2+ Servings/Day)	--	--	--	75%	73%	*NA*	*NA*
Vegetable Intake (3+ Servings/Day)	--	--	--	25%	29%	*NA*	*NA*
5+ Fruit/Vegetables per Day	--	--	--	30%	45%	*NA*	*NA*
Physical Activity (60 Min./5 or More Days/Week)	--	--	--	69%	55%	*NA*	*NA*
Unhappy, Sad or Depressed Always/Nearly Always (Past 6 Mo.)	--	--	--	0%	6%	*NA*	*NA*
Experienced Some Form of Bullying (Past Year)	--	--	--	27%	21%	*NA*	*NA*
Verbally Bullied	--	--	--	27%	19%	*NA*	*NA*
Physically Bullied	--	--	--	2%	0%	*NA*	*NA*
Cyber Bullied	--	--	--	0%	4%	*NA*	*NA*

	Manitowoc					WI	US
Top County Health Issues*	2007	2010	2013	2016	2019	*2017*	*2017*
Illegal Drug Use	--	--	14%	45%	50%	*NA*	*NA*
Alcohol Use or Abuse	--	--	30%	24%	25%	*NA*	*NA*
Prescription or OTC Drug Abuse	--	--	5%	15%	22%	*NA*	*NA*
Access to Health Care	--	--	21%	11%	22%	*NA*	*NA*
Chronic Diseases	--	--	22%	17%	17%	*NA*	*NA*
Overweight or Obesity	--	--	28%	24%	17%	*NA*	*NA*
Mental Health or Depression	--	--	6%	9%	13%	*NA*	*NA*
Cancer	--	--	23%	20%	10%	*NA*	*NA*
Violence or Crime	--	--	3%	2%	7%	*NA*	*NA*
Affordable Health Care	--	--	--	5%	7%	*NA*	*NA*
Tobacco Use	--	--	11%	6%	6%	*NA*	*NA*
Access to Affordable Healthy Food	--	--	3%	<1%	4%	*NA*	*NA*
Environmental Issues	--	--	4%	2%	4%	*NA*	*NA*

--Not asked. NA-WI and/or US data not available.
*In 2013 and 2016, respondents were provided a list of health issues. In 2019, the question was open-ended.

General Health

In 2019, 45% of respondents reported their health as excellent or very good; 19% reported fair or poor. Respondents with a high school education or less, in the bottom 40 percent household income bracket, who were married, overweight, inactive or smokers were more likely to report fair or poor health. *From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported their health as fair or poor, as well as from 2016 to 2019.*

Health Care Coverage and Information

In 2019, 3% of respondents reported they were not currently covered by health care insurance. Five percent of respondents reported they personally did not have health care coverage at least part of the time in the past year; respondents 18 to 34 years old or in the bottom 40 percent household income bracket were more likely to report this. Eight percent of respondents reported someone in their household was not covered at least part of the time in the past year; respondents in the bottom 40 percent household income bracket were more likely to report this. *From 2007 to 2019, the overall percent statistically decreased for respondents 18 and older or 18 to 64 years old who reported no current personal health care coverage while from 2016 to 2019, there was no statistical change. From 2010 to 2019, the overall percent statistically decreased for respondents who reported no personal health care coverage at least part of the time in the past year while from 2016 to 2019, the overall percent statistically remained the same. From 2007 to 2019, the overall percent statistically decreased for respondents who reported someone in the household was not covered at least part of the time in the past year while from 2016 to 2019, there was no statistical change.*

In 2019, 15% of respondents reported they delayed or did not seek medical care because of a high deductible, high co-pay or because they did not have coverage for the care in the past year; respondents who were female, 18 to 34 years old or 55 to 64 years old were more likely to report this. Nine percent of respondents reported that someone in their household had not taken their prescribed medication due to prescription costs in the past year. Seven percent of respondents reported there was a time in the past year they did not receive the medical care needed. Sixteen percent of respondents reported there was a time in the past year they did not receive the dental care needed; respondents who were in the bottom 40 percent household income bracket or unmarried were more likely to report this. Four percent of respondents reported there was a time in the past year they did not receive the mental health care needed; respondents who were in the bottom 60 percent household income bracket or unmarried were more likely to report this. *From 2016 to 2019, the overall percent statistically remained the same for respondents who reported in the past year they delayed or did not seek medical care because of a high deductible, high co-pay or because they did not have coverage for the medical care. From 2013 to 2019, the overall percent statistically remained the same for respondents who reported someone in their household had not taken their prescribed medication due to prescription costs in the past year, as well as from 2016 to 2019. From 2013 to 2019, the overall percent statistically remained the same for respondents who reported unmet medical care or unmet mental health care in the past year, as well as from 2016 to 2019. From 2013 to 2019, the overall percent statistically increased for respondents who reported unmet dental care in the past year, as well as from 2016 to 2019.*

In 2019, 59% of respondents reported they contact a doctor when looking for health information or clarification while 20% reported they look on the Internet. Seven percent reported other health professional. Six percent reported family/friends while 4% reported they were, or a family member was, in the healthcare field. Respondents who were male, 18 to 34 years old or with some post high school education or less were more likely to report they contact a doctor. Female respondents were more likely to report the Internet as their source for health information. Respondents 45 to 54 years old or in the bottom 40 percent household income bracket were more likely to report family/friends. Respondents 35 to 44 years old or 55 to 64 years old were more likely to report themselves or a family member in the health field. Ninety percent of respondents reported they have a primary care physician they regularly see for check-ups and when they are sick; respondents 65 and older were more likely to report a primary care physician. Sixty-five percent of respondents reported their primary place for health services when they are sick was from a doctor's or nurse practitioner's office while 18% reported an urgent care center followed by 5% reporting a public health clinic/community health center. Respondents who were female or 55 and older were more likely to report a doctor's or nurse practitioner's office as their primary health care when they are sick. Respondents 35 to 44 years old, in the middle 20 percent household income bracket or married respondents were more likely to report an urgent care center as their primary health care. Respondents who were male, 18 to 34 years old, with some post high school education, in the bottom 40 percent household income bracket or unmarried respondents were more likely to report a public health clinic/community health center as their primary health care. Forty-three percent of respondents had an advance care plan; respondents who were male, 65 and older or married were more likely to report an advance care plan. *From 2016 to 2019, there was no statistical change in the overall percent of respondents reporting doctor, the Internet or other health professional as their source of health information/clarification. From 2016 to 2019, there was a statistical increase in the overall percent of respondents reporting family/friends as their source of health information/ clarification. From 2016 to 2019, there was a statistical decrease in the overall percent of respondents reporting they were, or a family*

member was in the health field and their source of health information/clarification. From 2016 to 2019, there was no statistical change in the overall percent of respondents reporting they have a primary care physician. From 2007 to 2019, there was a statistical decrease in the overall percent of respondents reporting their primary place for health services when they are sick was a doctor's/nurse practitioner's office or a public health clinic/community health center while from 2016 to 2019, there was no statistical change. From 2007 to 2019, there was a statistical increase in the overall percent of respondents reporting their primary place for health services when they are sick was an urgent care center while from 2016 to 2019, there was no statistical change. From 2007 to 2019, there was no statistical change in the overall percent of respondents having an advance care plan, as well as from 2016 to 2019.

Routine Procedures

In 2019, 92% of respondents reported a routine medical checkup two years ago or less while 76% reported a cholesterol test four years ago or less. Seventy percent of respondents reported a visit to the dentist in the past year while 45% reported an eye exam in the past year. Respondents who were 65 and older or unmarried were more likely to report a routine checkup two years ago or less. Respondents 45 to 54 years old, with a high school education or less, with a college education, in the top 40 percent household income bracket or married respondents were more likely to report a cholesterol test four years ago or less. Respondents 55 and older or in the top 40 percent household income bracket were more likely to report a dental checkup in the past year. Respondents 65 and older, with a college education or married respondents were more likely to report an eye exam in the past year. *From 2007 to 2019, there was a statistical increase in the overall percent of respondents reporting a routine checkup two years ago or less, as well as from 2016 to 2019. From 2007 to 2019, there was no statistical change in the overall percent of respondents reporting a cholesterol test four years ago or less, a dental checkup or an eye exam in the past year, as well as from 2016 to 2019.*

Vaccinations

In 2019, 53% of respondents had a flu vaccination in the past year. Respondents 65 and older were more likely to report a flu vaccination. Seventy-four percent of respondents 65 and older had a pneumonia vaccination in their lifetime. *From 2007 to 2019, there was a statistical increase in the overall percent of respondents 18 and older who reported a flu vaccination in the past year while from 2016 to 2019, there was no statistical change. From 2007 to 2019, there was no statistical change in the overall percent of respondents 65 and older who reported a flu vaccination in the past year, as well as from 2016 to 2019. From 2007 to 2019, there was no statistical change in the overall percent of respondents 65 and older who had a pneumonia vaccination, as well as from 2016 to 2019.*

Fallen/Injuries Limited Activities

In 2019, 24% of respondents 55 and older reported in the past year they have fallen at least once. Of the respondents who had fallen in the past year, 32% reported at least one of the falls caused an injury that limited their regular activities for at least a day or caused them to see a doctor.

Health Conditions

In 2019, out of six health conditions listed, the most often mentioned in the past three years was high blood pressure (31%) or high blood cholesterol (24%). Respondents 65 and older, with a high school education or less, in the bottom 40 percent household income bracket or who were overweight were more likely to report high blood pressure. Respondents 65 and older, with a high school education or less, in the bottom 40 percent household income bracket or overweight respondents were more likely to report high blood cholesterol. Nineteen percent reported a mental health condition; respondents who were female, 35 to 44 years old, with a high school education or less or in the middle 20 percent household income bracket were more likely to report this. Thirteen percent of respondents reported diabetes. Respondents 45 and older, with a high school education or less, in the bottom 40 percent household income bracket, who were overweight or smokers were more likely to report diabetes. Eight percent reported they were treated for, or told they had heart disease/condition in the past three years; respondents 65 and older were more likely to report this. Fourteen percent reported current asthma; respondents with a high school education or less, with a college education or married respondents were more likely to report current asthma. *From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported high blood pressure, diabetes, heart disease/condition or current asthma, as well as from 2016 to 2019. From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported high blood cholesterol while from 2016 to 2019, there was a statistical increase. From 2007 to 2019, there was a statistical increase in the overall percent of respondents who reported a mental health condition while from 2016 to 2019, there was no statistical change.*

Times of Distress
In 2019, 18% of respondents reported someone in their household experienced times of distress in the past three years and looked for community support; respondents who were in the bottom 60 percent household income bracket or unmarried more likely to report this. Forty-six percent of respondents who looked for community resource support reported they felt somewhat, slightly or not at all supported. *From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported someone in their household experienced times of distress in the past three years or they felt somewhat, slightly or not at all supported by the community resources.*

Mental Health Status
In 2019, 5% of respondents reported they always or nearly always felt sad, blue or depressed in the past month; respondents who were in the bottom 40 percent household income bracket or unmarried were more likely to report this. Seven percent of respondents felt so overwhelmed they considered suicide in the past year; respondents 18 to 34 years old, with a high school education or less, in the middle 20 percent household income bracket or unmarried respondents were more likely to report this. Six percent of respondents reported they seldom or never find meaning and purpose in daily life; respondents 18 to 34 years old, with some post high school education or less, in the bottom 60 percent household income bracket or unmarried respondents were more likely to report this. *From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported they always or nearly always felt sad, blue or depressed in the past month or they seldom or never find meaning and purpose in daily life, as well as from 2016 to 2019. From 2007 to 2019, there was a statistical increase in the overall percent of respondents who reported they considered suicide in the past year, as well as from 2016 to 2019.*

Physical Health
In 2019, 34% of respondents did moderate physical activity five times a week for 30 minutes. Twenty-nine percent of respondents did vigorous activity three times a week for 20 minutes. Combined, 45% met the recommended amount of physical activity; respondents who were not overweight were more likely to report this. Sixty-four percent of respondents reported they get at least seven hours of sleep in a 24-hour period; respondents who were 65 and older or not overweight were more likely to report this. *From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported moderate physical activity five times a week for at least 30 minutes, as well as from 2016 to 2019. From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported vigorous physical activity three times a week for at least 20 minutes while from 2016 to 2019, there was a statistical decrease. From 2007 to 2019, there was no statistical change in the overall percent of respondents who met the recommended amount of physical activity, as well as from 2016 to 2019.*

In 2019, 76% of respondents were classified as at least overweight while 43% were obese. Respondents who were 35 to 44 years old or did an insufficient amount of physical activity were more likely to be classified as at least overweight. Respondents who were 35 to 54 years old, married or did an insufficient amount of physical activity were more likely to be obese. *From 2007 to 2019, there was a statistical increase in the overall percent of respondents being at least overweight or being obese while from 2016 to 2019, there was no statistical change.*

Nutrition and Food Insecurity
In 2019, 58% of respondents reported two or more servings of fruit while 30% reported three or more servings of vegetables on an average day. Respondents with a college education, in the top 40 percent household income bracket, who were married or met the recommended amount of physical activity were more likely to report at least two servings of fruit. Respondents 18 to 44 years old, with some post high school education, in the middle 20 percent household income bracket or who did at least some physical activity were more likely to report at least three servings of vegetables on an average day. Thirty-four percent of respondents reported five or more servings of fruit/vegetables on an average day; respondents 18 to 34 years old, with some post high school education, in the middle 20 percent household income bracket, who were unmarried or did at least some physical activity were more likely to report this. Thirty-nine percent of respondents reported when they buy a food product or order food from a restaurant for the first time, they often read the food label or nutrition information; respondents who were not overweight or met the recommended amount of physical activity were more likely to report this. Four percent of respondents reported their household went hungry because they couldn't afford enough food in the past year; respondents in the bottom 40 percent household income bracket were more likely to report this. *From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported at least two servings of fruit or at least three servings of vegetables on an average day, as well as from 2016 to 2019. From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported at least five servings of fruit/vegetables, as well as from 2016 to 2019. From 2016 to 2019, there was a statistical decrease in the overall percent of respondents who reported when they buy a food product or order food from a restaurant for the first time, they often read the food label or nutrition information. From*

2013 to 2019, there was a statistical increase in the overall percent of respondents who reported their household went hungry because they couldn't afford enough food in the past year while from 2016 to 2019, there was no statistical change.

Women's Health

In 2019, 80% of female respondents 50 and older reported a mammogram within the past two years. Seventy-eight percent of female respondents 65 and older had a bone density scan. Eighty-nine percent of female respondents 18 to 65 years old reported a pap smear within the past three years. Sixty-three percent of respondents 18 to 65 years old reported an HPV test within the past five years. Ninety-six percent of respondents reported they received a cervical cancer test in the time frame recommended (18 to 29 years old: pap smear within past three years; 30 to 65 years old: pap smear and HPV test within past five years or pap smear only within past three years). *From 2007 to 2019, there was no statistical change in the overall percent of respondents 50 and older who reported having a mammogram within the past two years, as well as from 2016 to 2019. From 2007 to 2019, there was a statistical increase in the overall percent of respondents 65 and older who reported a bone density scan while from 2016 to 2019, there was no statistical change. From 2007 to 2019, there was a statistical increase in the overall percent of respondents 18 to 65 years old who reported having a pap smear within the past three years while from 2016 to 2019, there was no statistical change. From 2016 to 2019, there was a statistical increase in the overall percent of respondents 18 to 65 years old reporting an HPV test within the past five years. From 2016 to 2019, there was a statistical increase in the overall percent of respondents 18 to 65 years old reporting a cervical cancer screen within the recommended time frame.*

Colorectal Cancer Screening

In 2019, 13% of respondents 50 and older reported a blood stool test within the past year. Nine percent of respondents 50 and older reported a sigmoidoscopy within the past five years while 73% reported a colonoscopy within the past ten years. This results in 77% of respondents meeting the current colorectal cancer screening recommendations; respondents with a college education were more likely to report this. *From 2007 to 2019, there was a statistical decrease in the overall percent of respondents who reported a blood stool test within the past year while from 2016 to 2019, there was no statistical change. From 2010 to 2019, there was no statistical change in the overall percent of respondents who reported a sigmoidoscopy within the past five years or a colonoscopy within the past ten years, as well as from 2016 to 2019. From 2010 to 2019, there was no statistical change in the overall percent of respondents who reported at least one of these tests in the recommended time frame, as well as from 2016 to 2019.*

Alcohol Use

In 2019, 30% of respondents were binge drinkers in the past month (females 4+ drinks and males 5+ drinks). Respondents who were male, 35 to 44 years old, with some post high school education or in the top 40 percent household income bracket were more likely to have binged at least once in the past month. One percent of respondents reported they had been a driver or a passenger when the driver perhaps had too much to drink in the past month. *From 2007 to 2019, there was no statistical change in the overall percent of respondents who reported binge drinking in the past month while from 2016 to 2019, there was a noted decrease. From 2007 to 2019, there was a statistical decrease in the overall percent of respondents who reported they were a driver or passenger in a vehicle when the driver perhaps had too much to drink in the past month while from 2016 to 2019, there was no statistical change.*

Tobacco Use

In 2019, 16% of respondents were current tobacco cigarette smokers; respondents with some post high school education or less, in the bottom 40 percent household income bracket or unmarried respondents were more likely to be a smoker. Three percent of respondents used electronic cigarettes in the past month. Thirty-one percent of current smokers or vaporers quit for one day or longer because they were trying to quit in the past year. Sixty-one percent of current smokers/vaporers who saw a health professional in the past year reported the professional advised them to quit smoking or vaping. *From 2007 to 2019, there was no statistical change in the overall percent of respondents who were current tobacco cigarette smokers while from 2016 to 2019, there was a statistical decrease. From 2016 to 2019, there was no statistical change in the overall percent of respondents reporting electronic vapor product use in the past month. From 2007 to 2019, there was no statistical change in the overall percent of current tobacco cigarette smokers or vaporers who quit smoking or vaping for at least one day because they were trying to quit while from 2016 to 2019, there was a statistical decrease. From 2007 to 2019, there was no statistical change in the overall percent of current smokers or vaporers who reported their health professional advised them to quit smoking or vaping, as well as from 2016 to 2019. Please note: in 2019, tobacco cessation and health professional advised quitting included current vaporers. In previous years, both questions were asked of current smokers only.*

In 2019, 83% of respondents reported smoking is not allowed anywhere inside the home. Respondents who were in the top 40 percent household income bracket, married, nonsmokers or in households with children were more likely to report

smoking is not allowed anywhere inside the home. Fifteen percent of nonsmoking or nonvaping respondents reported they were exposed to second-hand smoke or vapor in the past seven days; respondents who were male, 18 to 34 years old, with some post high school education or less or unmarried respondents were more likely to report this. *From 2010 to 2019, there was a statistical increase in the overall percent of respondents who reported smoking is not allowed anywhere inside the home while from 2016 to 2019, there was no statistical change. From 2010 to 2019, there was no statistical change in the overall percent of nonsmoking or nonvaping respondents who reported they were exposed to second-hand smoke or vapor in the past seven days while from 2016 to 2019, there was a statistical increase. Please note: in 2019, second-hand smoke exposure included vaping.*

In 2019, 5% of respondents used smokeless tobacco in the past month while 3% of respondents used cigars, cigarillos or little cigars. Respondents who were female, 18 to 34 years old, 45 to 54 years old, with some post high school education or in the middle 20 percent household income bracket were more likely to report smokeless tobacco use. *From 2016 to 2019, there was no statistical change in the overall percent of respondents who used smokeless tobacco or used cigars/cigarillos/little cigars in the past month.*

Household Problems

In 2019, 1% of respondents reported someone in their household experienced a problem, such as legal, social, personal or physical in connection with drinking alcohol in the past year. Three percent of respondents reported someone in their household experienced some kind of problem with the misuse of prescription drugs/over-the-counter drugs. Less than one percent of respondents each reported a household problem in connection with marijuana, cocaine/heroin/other street drugs or gambling. *From 2007 to 2019, there was no statistical change in the overall percent of respondents reporting a household problem in connection with drinking alcohol in the past year, as well as from 2016 to 2019. From 2013 to 2019, there was a statistical increase in the overall percent of respondents reporting a household problem with the misuse of prescription drugs/over-the-counter drugs in the past year, as well as from 2016 to 2019. From 2013 to 2019, there was no statistical change in the overall percent of respondents reporting a household problem with marijuana, cocaine/heroin/other street drugs or gambling, as well as from 2016 to 2019.*

Personal Safety

In 2019, 3% of respondents reported someone made them afraid for their personal safety in the past year. Less than one percent of respondents reported they had been pushed, kicked, slapped or hit in the past year. A total of 3% reported at least one of these two situations. *From 2007 to 2019, there was no statistical change in the overall percent of respondents reporting they were afraid for their personal safety or they were pushed/kicked/slapped/hit, as well as from 2016 to 2019. From 2007 to 2019, there was no statistical change in the overall percent of respondents reporting at least one of the two personal safety issues, as well as from 2016 to 2019.*

Children in Household

In 2019, the respondent was asked if they make health care decisions for children living in the household. If yes, they were asked a series of questions about the health and behavior of a randomly selected child. Eighty-eight percent of respondents reported they have one or more persons they think of as their child's personal doctor or nurse, with 94% reporting their child visited their personal doctor or nurse for preventive care during the past year. Six percent of respondents each reported in the past year their child did not receive the dental care needed or their child did not visit a specialist they needed while 3% reported their child did not receive the medical care needed. Four percent of respondents reported their child currently had asthma. Four percent of respondents reported their child was seldom/never safe in their community. Seventy-three percent of respondents reported their 5 to 17 year old child ate at least two servings of fruit on an average day while 29% reported three or more servings of vegetables. Forty-five percent of respondents reported their child ate five or more servings of fruit/vegetables on an average day. Fifty-five percent of respondents reported their 5 to 17 year old child was physically active for 60 minutes five times a week. Six percent of respondents reported their 5 to 17 year old child always or nearly always felt unhappy, sad or depressed in the past six months. Twenty-one percent reported their 5 to 17 year old child experienced some form of bullying in the past year; 19% reported verbal bullying, 4% cyber bullying and 0% reported physical bullying. *From 2016 to 2019, there was a statistical decrease in the overall percent of respondents reporting their child had a personal doctor or nurse. From 2016 to 2019, there was a statistical increase in the overall percent of respondents reporting their child visited their personal doctor/nurse for preventive care. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported their child had an unmet dental care need or was unable to see a specialist when needed. From 2016 to 2019, there was a statistical decrease in the overall percent of respondents who reported their child had an unmet medical care need. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported their child currently had asthma or their child was seldom/never safe in their community. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported*

their child ate at least two servings of fruit, ate at least three servings of vegetables or met the recommendation of at least five servings of fruit/vegetables. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported their 5 to 17 year old child was physically active for at least 60 minutes five times a week. From 2016 to 2019, there was a statistical increase in the overall percent of respondents who reported their 5 to 17 year old child always or nearly always felt unhappy/sad/depressed. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported their child was bullied in some way. From 2016 to 2019, there was no statistical change in the overall percent of respondents who reported in the past year their child was verbally bullied, cyber bullied or physically bullied.

Top County Health Issues

In 2019, respondents were asked to list the top three health issues in the county. The most often cited were illegal drug use (50%), alcohol use/abuse (25%) or prescription/over-the-counter drug abuse or access to health care (22% each). Respondents 18 to 34 years old were more likely to report illegal drug use as a top health issue. Respondents who were 18 to 34 years old or unmarried were more likely to report alcohol use or abuse. Respondents 18 to 34 years old were more likely to report prescription or over-the-counter drug abuse. Respondents who were female, 55 to 64 years old or with a college education were more likely to report access to health care. Seventeen percent of respondents reported chronic diseases as a top issue; male respondents were more likely to report this. Seventeen percent of respondents reported overweight or obesity; respondents 35 to 44 years old, with a college education, in the top 40 percent household income bracket or married respondents were more likely to report this. Thirteen percent of respondents reported mental health/depression; respondents 35 to 44 years old, with a college education or married respondents were more likely to report this. Ten percent of respondents reported cancer as a top issue; respondents in the top 40 percent household income bracket were more likely to report this. Seven percent of respondents reported violence or crime; respondents 18 to 34 years old, 45 to 54 years old or in the bottom 40 percent household income bracket were more likely to report this. Seven percent of respondents reported affordable health care; married respondents were more likely to report this. Six percent reported tobacco use as a top issue. Four percent of respondents reported access to affordable healthy food; respondents in the middle 20 percent household income bracket were more likely to report this. Four percent of respondents reported environmental issues; respondents who were male, 35 to 44 years old or 55 to 64 years old were more likely to report this. *From 2013 to 2019, there was a statistical increase in the overall percent of respondents who reported illegal drug use or mental health/depression as one of the top health issues in the county while from 2016 to 2019, there was no statistical change. From 2013 to 2019, there was a statistical increase in the overall percent of respondents who reported prescription/over-the-counter drug abuse or violence/crime as one of the top health issues in the county, as well as from 2016 to 2019. From 2013 to 2019, there was a statistical decrease in the overall percent of respondents who reported overweight/obesity or cancer as one of the top health issues in the county, as well as from 2016 to 2019. From 2013 to 2019, there was a statistical decrease in the overall percent of respondents who reported tobacco use as one of the top health issues while from 2016 to 2019, there was no statistical change. From 2013 to 2019, there was no statistical change in the overall percent of respondents who reported access to health care or access to affordable healthy food as one of the top health issues in the county while from 2016 to 2019, there was a statistical increase. From 2013 to 2019, there was no statistical change in the overall percent of respondents who reported alcohol use/abuse, chronic diseases or environmental issues, as well as from 2016 to 2019. From 2016 to 2019, there was no statistical change in the overall percent of respondents reporting affordable health care. Please note: prior to 2019, respondents were provided a list of 17 health issues to select the top three.*

Appendix E | Hanlon Method for Prioritizing Health Problems

To prioritize health issues, we recommend use of the Hanlon Method. Developed by J.J. Hanlon, the *Hanlon Method for Prioritizing Health Problems* is a well-respected technique which quantitatively and objectively ranks specific health problems based on the criteria of seriousness, magnitude, and effectiveness. Below is a description of this method. *Scales have been customized for Aurora's CHNA purposes.*

Step #1: Give each health problem a numerical rating on a scale of 0-10 for each of the three criteria shown in the columns.

Rating	Size of Health Problem (% of population) A	Seriousness of Health Problem B	Effectiveness of Interventions C
9 or 10	>50%	Very Serious	46% - 100% effective
7 or 8	40% - 49.9%	Relatively Serious	36% - 45% effective
5 or 6	30% - 39.9%	Serious	26% - 35% effective
3 or 4	20% - 29.9%	Moderately Serious	16% - 25% effective
1 or 2	10% - 19%	Relatively Not Serious	5% - 15% effective
0	<10%	Not Serious	<5% effective
Guiding considerations when ranking health issues against the three criteria	Size of the health problem should be based on data collected from the individual community	Does it require immediate attention? Is there public demand? What is the economic impact? What is the impact on quality of life? Is there a high hospitalization rate? Does it affect other health issues?	Determine upper and lower measures for effectiveness and rate health issues relative to those limits.

Step #2: Apply the 'PEARL' Test – Once health problems have been rated for all criteria, use the 'PEARL' Test to screen out health problems based on the following feasibility factors:

Propriety – Is a program for the health problem suitable?

Economics – Does it make economic sense to address the problem? Are there economic consequences if a problem is not carried out?

Acceptability – Will a community accept the program? Is it wanted?

Resources – Is funding available or potentially available for a program?

Legality – Do current laws allow program activities to be implemented?

Step #3: Calculate priority scores – Based on the three criteria rankings assigned to each health problem in Step 1 of the Hanlon Method, calculate the priority scores using the following formula:

D = [A + (2 x B)] x C

Where: D = Priority Score

A = Size of health problem ranking

B = Seriousness of health problem ranking

C = Effectiveness of intervention ranking

Step #4: Rank the health problems– Based on the priority scores calculated in Step 3 of the Hanlon Method, assign ranks to the health problems with the highest priority score receiving a rank of '1,' the next high priority score receiving a rank of '2,' and so on.

Manitowoc Hanlon Rankings of Health Problems					
Ranking	**Health Issue Based on CHNA Data**	**A**	**B**	**C**	**D**
1	**Delayed/Did not seek care due to cost**	**2**	**10**	**9**	**198**
2	**Mental health condition**	**2**	**9**	**9**	**180**
3	**Did not get recommended moderate/vigorous activity**	**9**	**5**	**4**	**180**
4	**Overweight**	**10**	**8**	**4**	
5	**Did not eat at least 5 fruits/vegetables per day**	**9**	**5**	**9**	**171**
6	**Binge drinking**	**5**	**8**	**4**	**84**
7	Smoking				
Ranking	**Older Adults Subset**	**A**	**B**	**C**	**D**
1	Fell (55 and older)	3	10	8	184
2	Did not meet current colorectal cancer screening recommendations (50 and older)	3	7	9	153
Ranking	**Women's Health Subset**	**A**	**B**	**C**	**D**
1	No mammogram (50+, within past 2 years)	3	6	9	135
2	No bone density scan (65 and older)	3	6	9	135

Appendix F | Evaluation of Impact

Focus | Access

Intended Impact

- Increased number of Medicaid-eligible and uninsured patients establish a relationship with a primary care provider
- Decreased ED admissions for primary care
- Improved care for LCHC and SARSMC patients
- Increased access to care for individuals with transportation limitations

Results

2017

- 950 non-emergent ED visits without a primary care physician; 215 of those saw an AHC primary care provider within 28 days
- 12 patients referred from LCHC or SARSMC were provided with diagnostic imaging services at no cost
- 1,683 complimentary rides to AMCMC were provided
- 99 individuals received tele-intake services in the ED for behavioral health issues*
- 30 inpatients received telepsychiatry consultations*

2018

- 1,016 non-emergent ED visits without a primary care physician; 203 of those saw an AHC primary care provider within 28 days
- 1 patient referred from LCHC was provided with diagnostic imaging services at no cost
- 1,655 complimentary rides to AMCMC were provided

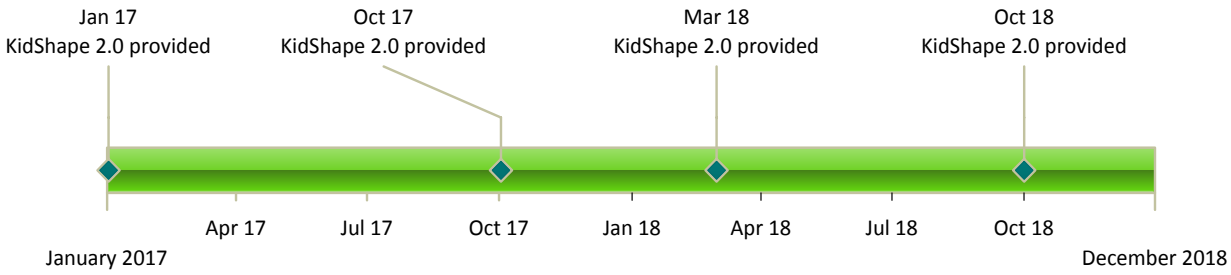
**Reporting became system-wide in 2018*

Focus | Nutrition, physical activity, overweight/obesity and the link to diabetes

Intended Impact

- Increased healthy lifestyle habits among program participants
- Increased community awareness on prevention of sports injuries
- Local food pantries are able to provide additional meals for those in need
- Increased community access to exercise equipment to encourage physical activity

Actions Taken Timeline



Results

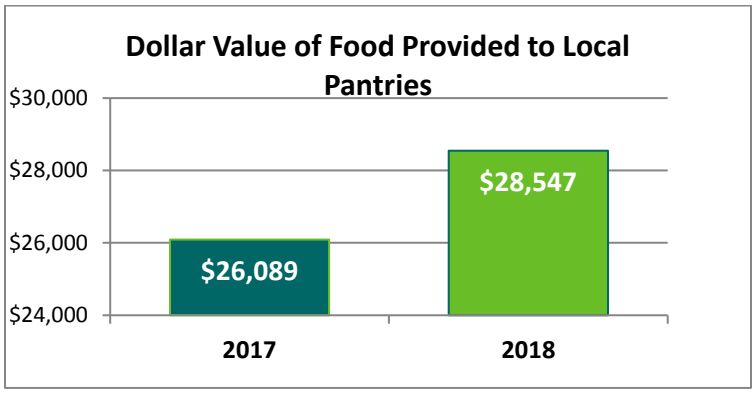
2017

- 2 KidShape 2.0 sessions held with 12 children and 24 adults from 11 families participating; 4 of those children were Hispanic
    - Of the 12 children participating, 11 completed the entire 6-week session of classes, 5 had a decreased BMI after the 6 weeks, 8 reported getting the recommended amount of physical activity and 11 showed improvement on the behavioral modification assessment
- 26 free community presentations/seminars on physical health and fitness were provided to 541 students, 118 faculty and 290 community members
- $26,089 worth of cafeteria food was provided to local food pantries
- 480lbs. of food was collected at a food drive
- 830 meals were subsidized through the Two Rivers Meals-on-Wheels program*
- Development of an exercise park/trail was completed

2018

- 2 Kid Shape 2.0 programs were provided to 14 children and 20 adults from 9 families
    - 9 children and 10 adults completed all classes; 6 children decreased their BMI, 9 children reported getting the recommended amount of physical activity, and 10 children and 12 adults showed improvement on the behavioral modification assessment
    - Outreach strategy: Actively working with our Spanish Interpreter to provide services to our families both during classes and follow-up
- 21 free community presentations/seminars on physical health and fitness were provided to 145 students, 104 faculty, and 100 community members at local high schools
- $28,547 in food was provided to local food pantries
- LCHC Diabetic Education Class Development - In November of 2018 LCHC hosted a Diabetes Education course with a cooking class and provided patients with a token for fresh vegetables/fruit from the farmers market and groceries to make three recipes shown in class. Items that were provided for each of the 95 diabetes patients invited to the event included: measuring cups/spoons, vegetable peelers, can openers, knives, crockpots, and reusable grocery bags. A total of 19 families attended the classes offered

** Program discontinued in 2018*



Focus | Behavioral health and memory care (new in 2018)

	Intended Impact • Increased community education and awareness of behavior health options • Increased access to care for memory related illnesses

Results

2018

- 2 behavioral health informational and educational programs were provided for 36 individuals
- 79 patients received a memory assessment; 9 ages 65-70, 14 ages 71-75, 16 ages 76-80, 24 ages 81-85, and 16 ages 85+
    - 128 RN hours were provided

Focus | Sexual Assault Nurse Examiner (SANE) program

	Intended Impact • Increased access to care for victims of sexual assault and violence in our communities • Improved community response to sexual assault and violence

Results

2017

- 34 people were provided with Forensic Program services related to sexual assault, 1 for domestic violence, 1 for human trafficking, and 5 victims of other crime (41 total)
- 42 referrals to counseling and social service agencies were made
- 16 community education/prevention/outreach trainings provided with a total of 231 attendees
    - 90 attendees were law enforcement, 5 were RNs, 6 were advocates, 67 were EMS and 63 were community members

2018

- 17 people were provided with Forensic Program services related to sexual assault, 5 for domestic violence, 5 pediatric victims and 2 victims of other crime (29 total)
- 22 referrals to counseling and social service agencies were made
- 5 community education/prevention/outreach presentations were provided to 59 attendees
    - 4 attendees were law enforcement, 2 were RNs, 5 were advocates, 20 were EMS and 28 were community members

Focus | Hepatitis C

	Intended Impact • Decreased burden of hepatitis C in our communities

Results

2017

- 2,463 patients in the Green Bay, Manitowoc & Marinette service area were tested for hepatitis C
  - 51 tested positive, 25 had positive confirmatory tests and 24 patients entered treatment

2018

- 2,707 patients in the Green Bay, Manitowoc & Marinette service area were tested for hepatitis C
  - 72 tested positive, 31 had positive confirmatory tests and 28 patients entered treatment