2022 Manitowoc County

# Community Health Assessment





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# **Executive Summary**

The Community Health Assessment (CHA) is a compilation of data that describes the health status of Manitowoc County. This report can be used to make data-informed decisions as to where our time and resources should be directed to increase the quality of our community's health.

The CHA report, prepared by Manitowoc County Health Department, provides an expansive review of Manitowoc County's health through community members' perspectives and measurable indicators of health. Data were collected from phone surveys, online surveys, key stakeholder interviews, community forums, and through review of secondary data.

The CHA report is organized according to the County Health Rankings Model, which explores areas of:

- Social & Economic Factors
- Health Behaviors & Outcomes
- Clinical Care
- Physical Environment

Over the course of the CHA process, three main health concerns surfaced: Mental Health, Physical Activity and Nutrition, and Substance Use. Community input emphasized the need to utilize a protective factor lens when looking at these priorities. By focusing on protective factors, which decrease the likelihood of negative health impacts, we can affect multiple areas of one's health including physical and mental at the same time. Common protective factors discussed during the CHA process included: supportive relationships, positive parenting, and safe/stable environments.

The top health priorities will become the core focus of our Community Health Improvement Plan (CHIP) as we collaborate with Healthiest Manitowoc County to create and implement timely, actionable, and data-based goals over the next five years.

- Manitowoc County Health Department

#### Top Health Priorities in Manitowoc County Local data highlights



70% of County Crisis Line calls were mental health related 1

20% of adults reported having depression<sup>2</sup>

of middle school students reported considering suicide<sup>3</sup>



of adults report no leisure-21% time physical activity 4

36% of high school students eat vegetables every day 5

**6.380** food insecure individuals <sup>6</sup>



**824** alcohol-related hospitalizations

**400** drug possession arrests

of women smoke tobacco during pregnancy 9

# **Top Strengths of Manitowoc County**

High School Graduation Rate

Unemployment Rate<sup>11</sup>

3%

92%

Uninsured Rate

Child Poverty Rate

10%

<sup>1.</sup> Manitowoc County Human Services Department, Crisis Intervention Report, 2022

<sup>2 &</sup>amp; 4. Centers for Disease Control and Prevention, PLACES, 2022

<sup>3 &</sup>amp; 5. Manitowoc County Youth Risk Behavior Survey, 2021 Feeding America, 2020
 Wisconsin Department of Health Services, Alcohol Hospitalizations Dashboard, 2021

<sup>8.</sup> Wisconsin Department of Justice, 2021 9. Wisconsin Department of Health Services. Birth Counts Module, 2020

<sup>10.</sup> County Health Rankings & Roadmaps, 2022 11. U.S. Bureau of Labor Statistics, 2022

# **Acknowledgements**

We would like to thank the residents of Manitowoc County who participated in the data collection process through the online survey, phone survey, stakeholder interviews, or community forums. Community engagement in the Community Health Assessment (CHA) provides the planning committee a better sense of health concerns in our community.

A special thank you to the members of the CHA Planning Committee, which include:

#### **Manitowoc County Health Department Team**

Sydney Herman Community Health Strategist

Stephanie Lambert Health Officer

Lexi Otis Health Educator, Emergency Preparedness Coordinator

## **Community Partners**

#### Aurora Health Care

Ann Christiansen Vice President of Community Health in Wisconsin

Cathie Kocourek Hospital President, Administration

Sarah Vanausdall Community Benefit Analyst, Sr., Community Health

#### Froedtert Holy Family Memorial Hospital

Andrew Dresang
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Community Engagement Coordinator Sr.
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Manager of Community Benefit and Impact

**Xue Yang** Community Relations Coordinator

#### Lakeshore Community Action Program, Inc.

Colleen Homb Executive Director

#### Lakeshore Community Health Care

Kristin Stearns Chief Executive Officer

#### Northeastern Wisconsin Area Health Education Center (NEW AHEC)

Annie Short Executive Director

#### United Way Manitowoc County, Inc.

Ashley Bender Executive Director

Thank You

Several local businesses and individuals contributed to the success of the CHA process, including Healthiest Manitowoc County (HMC), Dorothy Chaney of Impact Community Planning Group, JKV Research, Center for Urban Population Health, the Franciscan Center for Music Education and Performance, and those who volunteered to facilitate discussions at our community forums.

# **Our Approach**

#### What is the

Community Health Assessment?



In accordance with Wisconsin State Statute § 251.05, all local health departments are required to conduct a Community Health Assessment (CHA) every five years.1 Over the course of four phases, key community health concerns are identified using data collection, community meetings, and Manitowoc County resident feedback, Conclusions drawn from the CHA frame and focus top health priorities. strategies, and indicators used in a Community Health Improvement Plan (CHIP).

#### Timeline of Our CHA **CHA Phases** CHA Planning Meetings Begin Phase 1 **Data Collection** Stakeholder Interviews September 2021 through April 2022 JKV Phone Call Survey Phase 2 Online Survey Launch Community Forums August 2022 through October 2022 August 2022 Community Data Walk Phase September 2022 Health Prioritization Meeting **Priority Setting** October 2022 through November 2022 Listening Session October 2022 November 2022 Synthesize Data and Information Phase **CHA Report** December 2022 Submit CHA Report December 2022

# Community Change Model

Throughout the CHA and CHIP process, Results Based Accountability (RBA), a data-driven, decision-making framework, is being utilized to help frame complex issues into actionable problem statements. RBA for population health works backwards from identified issues using turn the curve thinking to move from problem to solution.

Figure 1: Results Based Accountability Turn the Curve Thinking



# **Community Health Assessment Process**

Breaking down the CHA Phases





## Data Collection: Primary & Secondary Data

Primary data is defined as information collected directly from a source. In terms of the CHA, the primary data sources consisted of members of the community, through the means of key stakeholder interviews, a phone survey, and an online survey. The CHA process hinges on the community's opinions and experiences.

## Key Stakeholder Interviews Total of 30 questions

**72** Interviews from providers, policy makers, local experts, and community members

The planning committee chose key stakeholders to represent various county populations and interests and conducted interviews from January through March 2022. Interview questions addressed pandemic-related needs or gaps, social determinants of health, populations most affected by health concerns, and major efforts needed in the community. The Center for Urban Population Health was commissioned to analyze the results in a comprehensive report.

## Phone Survey Total of 85 questions

**400** Completed Surveys

JKV Research, LLC conducted phone surveys between January 26 and April 2, 2022. The survey was offered in English and Spanish. Respondents were randomly selected. Callers anonymously answered questions about personal health conditions, health services, health care coverage, substance use, and economic hardship experienced in Manitowoc County.

## **Mode** of Communication



# 45% Cellphone

#### **Gender** of respondents 50% Female **49**% Male

All Others

## Age of respondent

Age of res	spondents			
18-34 yrs			22	2%
35-44 yrs	15	%		
45-54 yrs	1	79	%	
55-64 yrs		2	21	%
65+ yrs				26%

#### **Education** of respondents

30% High School Graduate or Less 35% Some Post High School 35% College Graduate

#### **Key Stakeholders**

Aging and Disability Resource Center of the Lakeshore Ascend Services, Inc.

Big Brothers Big Sisters Wisconsin Shoreline

CORE Treatment Services. Inc.

Family Connections

Hope House of Manitowoc County

InCourage

Lakeshore Community Action Program (CAP), Inc.

Lakeshore Community Health Care

Lakeshore Technical College

League of Women Voters of Manitowoc County

Lighthouse Recovery Community Center

Manitowoc County Health Department

Manitowoc County Human Services Department

Manitowoc County Sheriff's Office

Manitowoc County Veterans' Services Office

Manitowoc Public Library

Manitowoc Public School District

Manitowoc-Two Rivers YMCA

Painting Pathways Clubhouse, Inc.

PFLAG Manitowoc County Chapter

Prevent Suicide-Manitowoc County

Reedsville School District

RUTH - Interfaith Justice Group

St. Thomas the Apostle Catholic Church

The Chamber of Manitowoc County

The Crossing of Manitowoc County

The Haven of Manitowoc County, Inc.

The Salvation Army Manitowoc County

Trinity Hmong Lutheran Church

United Way Manitowoc County

# Community Health Assessment Process (Continued)





Data Collection: Primary & Secondary Data continued

## Online Survey Total of 30 questions

958

Completed Surveys

The online survey was created using Survey Monkey and was active between April 8 and June 1, 2022, during which 958 surveys were completed. The survey was open to any resident or worker in Manitowoc County, 18 years old or older, and available in English, Spanish, and Hmong. Planning committee members distributed posters and flyers throughout the county and marketed the survey on social media. This was a perception survey, focusing on attitudes and experiences around health in Manitowoc County.

Age of responses 18-34 yrs 18-34 yrs 18-34 yrs 18-54 yrs 18-54 yrs 18-55-64 yrs 18-55-65 yrs 18-	23% 15% 17% 21% 25%	Geographic Areas of respondents  Manitowoc City Area 71% Two Rivers City Area 11% Northwest Manitowoc County 11% Southern Manitowoc County 4% Outside of County 3%	
Education of respondents  13% High School Graduate or Less 28% Some Post High School 59% College Graduate  Ethnicity of respondents 97% Not Hispanic or Latino 3% Hispanic or Latino		Race of respondents 94% White 2% Asian 2% Multiple Races <1% Black, African American <1% American Indian or Alaska Native 0% Native Hawaiian or Other Pacific Islander <1% Other Race	

Secondary Data is data that has already been collected by researchers. The Center for Urban Population Health was contracted by the planning committee to gather and analyze Manitowoc County data from existing local, state, and national sources. Many of these data points provide insight into longitudinal trends over several years that serve as indicators of improvement or decline in Manitowoc County's health

#### Manitowoc County Secondary Data Report Sources

American Community Survey

Behavioral Risk Factor Surveillance System

CDC PLACES

County Health Rankings & Roadmaps

US Census Bureau

US Department of Health and Human Services, Healthy People 2030

WI Department of Health Services, WISH

WI Department of Justice

# Community Health Assessment Process (Continued)





# **Community Forums**

After county data was collected from primary and secondary sources, a series of community forums were held to present the data and gather direct input from participants. All members of the community were invited and forums were advertised through flyers, social media, and press releases to local media.

## **Community Data Walk**

August 31, 2022

57 People in attendance

32

Organizations represented

Following an optional lunch, community members were assigned to groups of seven, including a table facilitator to moderate discussion and answer questions along the way. The data walk was in part prepared and led by Dorothy Chaney of Impact Community Planning Group, LLC. Participants walked around the room to view data posted on walls and eventually narrowed the scope of health issues down to the top three health priorities in Manitowoc County.

## **Health Prioritization Meeting**

September 30, 2022

43 People in attendance

28 °

Organizations represented

As a direct follow-up to the data walk, participants reviewed indepth data for each of the top three health priorities: mental health; substance use; and nutrition, physical activity, and obesity. Each group selected specific priorities for their chosen health priority with an emphasis on risk and protective factors.



# **Listening Session**

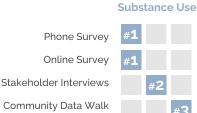
An evening listening session was offered on October 17, 2022 at the Manitowoc Public Library with an option to join via Zoom. This was an additional opportunity for community members to provide feedback.

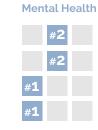




## Prioritization: Top Health Priorities

Results from the data collection process led to the selection of the following top three health priorities:





Physical Activity & Nutrition #3 #3 #3

<sup>\*</sup> Physical Activity & Nutrition was not chosen as one of the top 3 health priorities during the Data Walk.

# **Manitowoc County Profile**

#### **About Our Community**

Manitowoc County is situated along the coast of Lake Michigan and is surrounded by Kewaunee, Brown, Calumet, and Sheboygan counties.

Encompassing 589 square miles of land, Manitowoc County is home to approximately 81,505 people.

Manitowoc County's predominant employment industry is manufacturing (32%), followed by health care and social assistance (13%) and retail trade (10%).

81,505°
Manitowoc County
Population

The following townships, villages, and cities comprise Manitowoc County:

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



Photo credit: "City of Manitowoc Sign" by eyfoto



Ethnicity

95% Not Hispanic or Latino 5% Hispanic or Latino

Race<sup>5</sup>

89.9%

White

6.0% Multiple Races
2.5% Asian
0.4% Black or African American
0.2% American Indian or Alaska Native
0.1% Native Hawaiian or Other Pacific Islander
0.7% Other





Median Household Income

\$57,918

Poverty

12% of population is below the Federal Poverty Level (FPL)

Education <sup>9</sup>
Less than high school education

41% High school graduate

High school graduate

30% Some college/Associate's degree21% Bachelor's degree or higher

# **County Health Rankings & Roadmaps**

#### **Grounding our data**

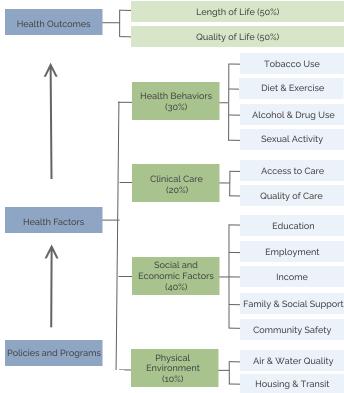
Data analysis of primary and secondary data, along with results from the community forums, was framed by the County Health Rankings Model (Figure 2).

This model outlines extensive factors of community health, which amounts to health behaviors (30%), clinical care (20%), social and economic factors (40%), and physical environment (10%). The health factors of an individual directly influences that person's overall health outcome.

Organizing the data according to the County Health Rankings Model, revealed longitudinal trends of health concerns and strengths in the county and informs health priorities.

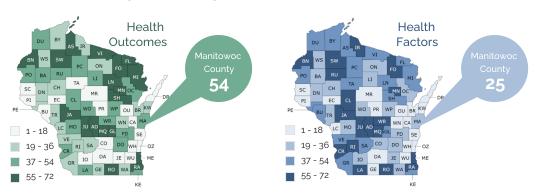
With the breakdown of health factors in mind, we chose unique health indicators for Manitowoc County based on significant trends over time.

Figure 2: County Health Rankings Model



# **2022 County Health Rankings**

County Health Rankings and Roadmaps annually prepares rankings of all counties in the state based on specific health indicators. The counties are ranked in two different categories: health outcomes and health factors on a scale from 1 to 72 (1 being the best, 72 being the worst).



1. County Health Rankings & Roadmaps, 2022



# Health Factor #1

# **Social & Economic Factors**



factors in the County Health Rankings Model. This factor equates to another concept, social determinants of health, in which "conditions in the places where people live, learn, work, and play affect a wide-range of health and quality-of-life-risks and outcomes". 1 Such social and economic factors include: child care, education. employment, income, food access, and housing.



**Child Care** 



Education



**Employment** & Income



**Food Access** 



Housing





# Why is Child Care Important?

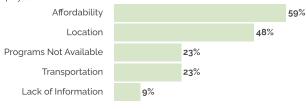
Access to affordable and quality child care is vital for working parents in order to support their families. Families who access child care can earn paid income or pursue higher education; however, many barriers exist to accessing care.

#### **Child Care Centers**

Earning an income during the day requires most parents or guardians to find suitable child care for their children, most often in the care of licensed daycares or family child care providers. There are 27 state-licensed child care facilities in Manitowoc County, 41% of which are located in the City of Manitowoc.

#### **Child Care Barriers**

What barriers are keeping you from accessing the programs and services you need for your children?  $^{2}$ 



# **Affordable and Accessible Child Care** consistently ranked in the top 2 social/economic issues in Manitowoc County among surveys and interviews

of respondents answered that there is a high need for full day child care in the community.<sup>2</sup>

of median household income is needed to pay child care in the community.

In a household making \$58,464, \$13,489 is needed to pay for child care for two children.



"A lack of access to child care and younger children doing virtual school from home during the pandemic meant parents, usually moms, or grandparents had to leave the workforce to stay home with children." - Key Stakeholder <sup>5</sup>

# Education

# Why is Education Important?

Education teaches and refines important skills and knowledge, which aid people in making informed choices about personal and familial health. Quality education promotes better health through prospects for higher paying jobs, often supplemented with health insurance and other benefits.

#### School Enrollment (2021)2 **Our Schools** 3-4 yrs 23% 16 Private Schools 91% 5-9 yrs 13 Public Elementary Schools 98% 10-14 yrs 7 Public Middle Schools 98% 15-17 yrs 6 Public High Schools 18-19 yrs 22% 2 Colleges Charter School 20-24 yrs 24% 25-34 yrs 6% 1% 35+ vrs

## High School Graduation (2019)3

Percent of ninth-grade cohort that graduated high school.

**92%** Manitowoc County 90% Wisconsin

#### Education Attainment (2021)4

Population 25 years and older

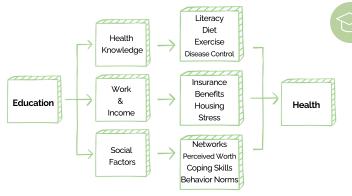
8% Less than High School Education

41% High School Graduate

30% Some College/Associate's Degree

21% Bachelor's Degree or Higher





# Did you know?

Our libraries offer educational tools such as: Homework help Reading programs Study rooms Online research resources and much more!

## What is the YRBS?

The Youth Risk Behavior Survey (YRBS) is a biennial survey taken by middle and high school students. The students are granted complete anonymity and in return school districts and the county receive valuable data about student experiences and perceptions. In the 2020-2021 school year, 6 public middle schools and 7 public high schools in Manitowoc County participated in the survey.

Middle	e School⁵	High S	chool
<b>1,302</b> stud	ent responses 2,	<b>311</b> studen	ıt responses
70%	students participate in ext	racurriculars	65%
64%	students feel like they belo	ong in school	57%
53%	students sleep 8 or more h	o <mark>urs per night</mark>	28%
43%	students use technology midnight and 5:00am on s		52%

# **Employment & Income (\$)**

# Why is Employment and Income Important?

Jobs accompanied with health insurance, paid-sick leave, retirement and other benefits are proven to positively impact health; however, these opportunities are typically limited to higher wage jobs.

# **Employment**

Top industries in Manitowoc County by number of employees <sup>2</sup>



In 2020, Manitowoc County's unemployment rate rose to 6%, up 3% from the previous year.<sup>3</sup> These rates match Wisconsin's unemployment rates for the same years and can partially be contributed to effects from the COVID-19 pandemic.4 As of September 2022, Manitowoc County's unemployment rate is back at 3%.5

83% of workers drive to work alone 6

of workers drive of workers dri more than 25 minutes to work 7

of high school students work 19% work 10-19 hours/week 14% work 20+ hours/week



Photo credit: "Numbered Days" by Bill Chizek

# **Poverty**

Federal Poverty Level Income Guidelines 9



Individual: \$13.590

Family of 4: \$27,750

10% Of 18 and under population in Manitowoc County are living in poverty 10

# Living Wage 11

The living wage shown is the hourly rate that an individual in a household in Manitowoc County must earn to support his or herself and their family. Minimum wage is currently \$7.25.12

1 Working Adult			2	2 Working Adults			
o Children	1 Child	2 Children	3 Children	o Children	1 Child	2 Children	3 Children
\$15.24	\$30.33	\$38.24	\$50.04	\$24.02	\$29.24	\$34.96	\$37.16

<sup>4.</sup> Manitowoc County Workforce Profile, 2021 5. U.S. Bureau of Labor Statistics, 2022

# **Food Access**

# Why is Food Access Important?

Lack of regular access to affordable healthy food can lead to increased incidences of obesity, diabetes, heart disease and other health conditions. Those facing food insecurity often face additional issues such as poor housing and lack of health insurance.1

# **Food Insecurity**

6,380 food insecure individuals in Manitowoc County in

2020<sup>2</sup>

**7**%

of low-income individuals do not live close to a arocerv store 3

34%

of students enrolled in public school are eligible for free or reduced lunch \$3,309,000

needed to cover the food budget shortfall in Manitowoc County annually 2

Percentage of Manitowoc County students who reported experiencing hunger due to a lack of food at home in the past 30 days:



Middle School Students



**High School Students** 

#### **Food Access**

Resources like Women, Infants, and Children Nutrition Program (WIC) and Supplemental Nutrition Assistance Program (SNAP) provide eligible individuals and families assistance in buving food. (



households received SNAP benefits in 2021



individuals received WIC benefits in 2021



meals delivered to homes by ADRC in 2021 9



# **Food Pantries**

Crusaders Closet

Crusaders of Justicia Drive Up Food Pantry

Faith's Food Pantry

Grow it Forward Food Pantry

Kiel Area Community Food Pantry, Inc.

Painting Pathways Emergency Food Pantry

Peter's Pantry

Salvation Army Food Pantry

St. Vincent De Paul Food Pantry

Two Rivers Christian Center Thrift Store

Two Rivers-Mishicot Ecumenical Pantry (TREP)

United Ministries Food Pantry

<sup>2.</sup> Feeding America, 2020

<sup>3 &</sup>amp; 4. County Health Rankings & Roadmaps, 2022

# Housing

# Why is Housing Important?

When quality housing is unavailable and/or unaffordable, it can put stress on individuals and families and increase their chances for poor health outcomes. Location of housing can also affect one's health by providing or preventing access to transportation, healthy foods, exercise opportunities, safe neighborhoods, and educational opportunities.

#### Homelessness

Manitowoc County has 3 shelters:

InCourage Women's domestic violence shelter The Haven Men's homeless shelter Hope House 90-day shelter program gegred towards families, but serving some without children

Demand that exceeds shelter capacity was one issue mentioned in key stakeholder interviews.

Capacity of	Waitlist for Hope House
Hope House <sup>2</sup>	at one point in 2022
7 households or	14 families
26 individuals	44 singles
	14 couples

A group of volunteers and local agencies conduct a biennial Point-In-Time (PIT) homeless count in Manitowoc and surrounding counties. The PIT count focuses on locating individuals who may be experiencing homelessness by searching streets, cars, and other areas.



Individuals identified in the summer 2022 Point-In-Time count for Manitowoc County

Key stakeholders noted the scope of homelessness in Manitowoc County goes beyond those identified in PIT counts and shelters. 4 The issue extends to those forced to couch surf. utilize 24/7 businesses. or those without permanent nighttime residence.







United Way of Manitowoc County's 211 helpline directs callers to resources in the community.<sup>7</sup>

24% of calls were related to Housing/Shelter 6% of calls were related to Utilities

> Subsidized Housing

> > **Facilities**

Independent **Apartments** 

Assisted Livina Facilities

Nursina Homes Adult Homes



Health Factor #2

# Health Behaviors & Outcomes



**30%** of health factors are associated with ealth behaviors. Everyday actions, such as alcohol consumption, diet, and physical activity can influence a person's overall health. Practicing healthy behaviors can protect individuals from disease and death.



Alcohol Use



Drug Use



Tobacco Use



Mental Health



Nutrition & Physical Activity



Injury & Mortality

# Alcohol Use



# Why is Alcohol Use Relevant?

Excessive consumption of alcohol is associated with various behavioral and health effects for both adults and youth. These may include injury, chronic illness, poor mental health, alcohol use disorders, or death as long-lasting effects of excessive alcohol use. <sup>1</sup>

# **Excessive Drinking**

Excessive drinking includes binge drinking, heavy drinking, and drinking while pregnant. Individuals who excessively drink are at risk for negative health effects.

The number of drinks for men and women varies for binge and heavy drinking.<sup>2</sup>



Binge Drinking per occasion

Heavy Drinking per week

Men

5 or more drinks

Men **15** or more drinks

Women 4 or more drinks

Women 8 or more drinks

Adults reporting binge or heavy drinking (2019)4

27%

Manitowoc County 25

25% Wisconsin





In Wisconsin, 6% of women drink alcohol in excess (8 or more drinks per week) 3 months before pregnancy<sup>5</sup>

### Short-Term Risks<sup>3</sup>

Alcohol poisoning Unintentional injuries Violence Poor pregnancy outcomes

#### Long-Term Risks

Memory problems

Cancer
High blood pressure
Heart disease
Liver disease
Learning/memory problems
Weakened immune system
Mental health problems
Alcohol use disorders

# **Underage Alcohol Use**

Consumption of alcohol before the legal age of 21 can have damaging effects on brain and body development. There is also evidence of linked mental health problems and other addictions <sup>6</sup>

Wisconsin is one of many states that allows minors to not only be present on alcohol serving premises but also consume alcohol under adult supervision. This normalization can lead to a low perception of risk towards excessive drinking.



1 in 4 high school students currently drink

(At least 1 drink in the past 30 days)

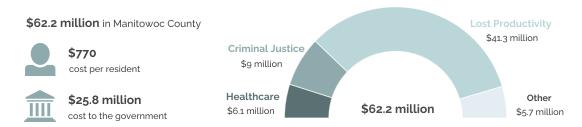
10% of those who currently drink, report binge drinking

# Alcohol Use (Continued)



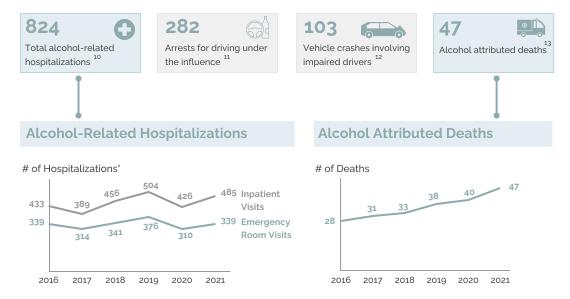


# **Estimated Annual Cost of Binge Drinking**<sup>9</sup>



#### **Alcohol-Related Outcomes**

Alcohol consumption in Manitowoc County contributed to the following in 2021:



Note that alcohol-related hospitalizations account for chronic hospitalizations as a result of long-term alcohol use. This does not include acute alcohol hospitalizations.

# **Drug Use**



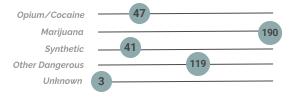


# Why is Drug Use Relevant?

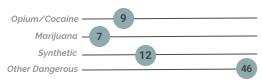
Drug use can lead to increased risk of chronic illness, heart disease, HIV/AIDS, Hepatitis C, and mental illness. The rising number of people who use drugs or illegal substances has led to an increase in issues surrounding drug-related crimes and violence, legal system capacity strain, decreased workforce productivity, increased healthcare needs, and increased social service needs.

## **Drug Crime Arrests in 2021**3

#### 400 possession arrests



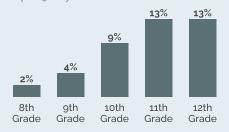
#### **74** sale arrests



# Youth Drug Use 4

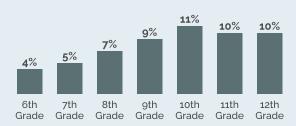
#### Marijuana Use

% of students who self-reported marijuana use in the past 30 days



# Legal Drug Misuse % of students who self-rep

% of students who self-reported misusing over-the-counter and/or prescription pain medication





Of the high school students who reported using marijuana, 15% reported starting before the age of 13.



7% of high school students reported being offered, sold, or given drugs on school property.

# Drug Use (Continued)





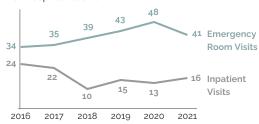
# **Community Input**

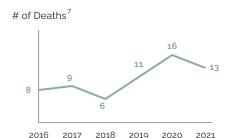
Key Stakeholders noted how trauma, mental illness and stress from lack of education, employment, housing, and social belonging feed into use and misuse of substances. Multiple stakeholders remarked that the impact of substance use goes beyond direct use and impacts families and friends with feelings of guilt, confusion, hopelessness, or anger. Substance use inside a home with young children can also normalize the behavior, which can lead to generational cycles of use.

#### **Opioid-Related Outcomes** in Manitowoc County

89% of Manitowoc County overdoses involved opioids

# of Hospitalizations 6

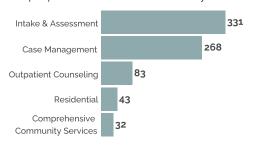




# Manitowoc County Services<sup>8</sup>

#### Top 5 most used services in 2020

# of people served in Manitowoc County



#### Top 5 most common substances in 2020 # of people served in Manitowoc County

Opioids 111 106 **Amphetamines** 64 Marijuana 40 Alcohol Cocaine 12

201 pounds of unwanted or unused medications were collected at the 2022 Annual Drug Take Back Event.9

#### Permanent drug disposal box locations:

Kiel Police Department

Manitowoc City Police Department Manitowoc County Sheriff's Office Mishicot Police Department Two Rivers Police Department



The Manitowoc County Crisis Line provides 24/7 crisis support to those in need.

920-683-4230

1-888-552-6642 M-F 8:00AM - 4:30PM Nights, holidays, weekends

substance use disorder related calls placed to the County Crisis Line between January and October 2022. 10

# Tobacco Use



# Why is Tobacco Use Relevant?

Tobacco consumption affects all areas of the body and can lead to disease, disability, or death in adults and vouth. Smoking is one of Wisconsin's top causes of preventable death.

#### **Health Effects**

The toxic chemicals in tobacco products can lead to dangerous health outcomes, including eye diseases, cardiovascular disease, and several forms of cancer.

Incidence rates of cancer (per 100,000) 5

		D	nchus
-0119	MIIM	-	1101100

61 Manitowoc County

59 Wisconsin

#### **Oral Cavity and Pharynx**

13 Manitowoc County

13 Wisconsin

#### **Tobacco Products**

Nicotine is the addictive ingredient in the tobacco plant.<sup>6</sup> Its presence in almost all tobacco products makes it difficult for users to quit. 7







Hookah Tobacco



Roll-Your-Own Tobacco



Dissolvables



Nicotine Gels



Vapes, E-Ciaarettes



Smokeless Tobacco



**Tobacco Prevalence** 

Adults

18% of adults *currently smoke tobacco* in Manitowoc County, compared to 16% statewide.



13% of women use tobacco during pregnancy in Manitowoc County, compared to 8% statewide.

Youth 10

Students who currently vape

4% Middle school 13% High school

Students who currently smoke tobacco

2% Middle school

5% High school

Of the high school students who reported smoking/vaping, 49% tried to quit in

the past 12 months.

Smoking Rules at Home according to Manitowoc County citizens 11

Not allowed anywhere 81% Allowed in some place at some times Healthy People 2030 Allowed anywhere 2% target is 93% No rules inside home 11%



4. U.S. Food and Drug Administration, 2021

- 6. U.S. Food and Drug Administration, 2022
- 9. Wisconsin Department of Health Services, Birth Counts Module, 2020 10. Manitowoc County Youth Risk Behavior Survey, 2021
- 11. Manitowoc County Phone Survey, 2022

# Mental Health



# Why is Mental Health Important?

Mental health is an ever-changing balance of our emotional, psychological, and social well-being affecting how someone thinks, feels, and acts. Mental health can influence one's ability to cope with stress, interact with others, and affect choices they make in regard to health. Mental illnesses are diagnosable conditions that affect a person's mental health. Common mental illnesses include anxiety, depression, personality disorders, and post-traumatic stress disorders, and can be caused by use of drugs or alcohol, battles with chronic health conditions, biological factors, and past traumatic experiences. <sup>1</sup>



Manitowoc County adults report an average of **4.4 poor mental health** days per month. **14**% of adults report 14 or more poor mental health days in the past 30 days.<sup>2</sup>

20% of Manitowoc County adults report having depression.<sup>3</sup>



3,049 calls placed to the County Crisis Line between January and October 2022 were mental health related, making up 70% of the total calls. <sup>4</sup>

17% of Wisconsin mothers report experiencing depression during pregnancy.<sup>5</sup>

# Manitowoc County Services

1,234	people served in 2020 by Manitowoc County mental health services
141	served had high intensity* ongoing needs
228	served had low intensity** ongoing needs
868	served had short term/ situational needs

'has a primary diagnosis of a major mental illness or severe emotional disturbance with substantial need for psychiatric and medical treatment

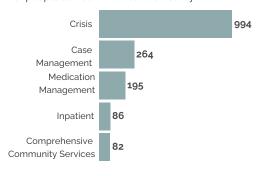
"has a diagnosed mental disorder, but is functioning in a fairly stable manner

The mental health provider ratio shows how many individuals would need to be served by 1 professional to cover the population. A high ratio can lead to high case loads and long wait lists.



#### Top 5 most used services in 2020

# of people served in Manitowoc County



The resources we have are either unaffordable for many on *\(\)* sic\(\) our community or insufficient to meet the need of those accessing services due to high demand of patient loads. Care is often superficial and a "band-aid" approach rather than actual treatment.

-Online Survey comment

<sup>1.</sup> Centers for Disease Control and Prevention, 2021

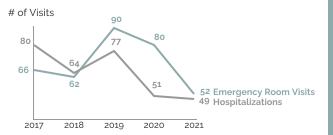
<sup>2 &</sup>amp; 7. County Health Rankings & Roadmaps, 2022
3. Centers for Disease Control and Prevention, PLACES, 2022

<sup>4.</sup> Manitowoc County Human Services Department, Crisis Intervention Report, 2022 5. Wisconsin PRAMS Surveillance Report, 2019

# Mental Health (Continued)



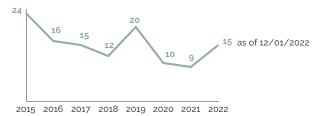
## Self-inflicted Injury Hospitalizations 9, 10



#### Suicide

In 2020, **861** Wisconsinites died by suicide. <sup>11</sup> The impact of suicide reaches far and wide. Survivors may continue to feel depressed and develop mental health conditions while loved ones experience a range of emotions from anger, confusion, and depression to guilt.



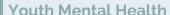


In July 2022, the National Suicide Prevention Lifeline (1-800-273-TALK) launched a replacement Suicide & Crisis Lifeline (9-8-8). 13 All calls to the original lifeline will automatically be rerouted to 9-8-8. The new number will continue to provide 24/7 confidential help to those in crisis.









Youth with mental health conditions are more likely to experience social isolation, discrimination, development of other health conditions, educational difficulties, and are at higher risk of choosing risky behaviors."



telephone survey respondents stated a child in their household was diagnosed with one or more mental health conditions. 15

Mental Health

#### 2021 YRBS Results<sup>16</sup>

Every 2 years students take a self-reported survey about various health topics.

	Middle School 1,302 Responses	High School 2,311 Responses
Had Anxiety	50%	47%
Had Depression	29%	29%
Self-harmed	22%	17%
Considered Suicide	16%	14%
Had a Suicide Plan	11%	12%
Attempted Suicide	5%	7%

Bullying affects short and long-term health of both those that experience bullying and those that bully others. It can lead to depression, school related challenges, and violence.

Bullied on School Property	31%	19%
Bullied Online	19%	17%
Think Bullying is a Problem at	46%	42%

<sup>9.</sup> Wisconsin Department of Health Services, Injury-Related Emergency Dept. Visits Module 10. Wisconsin Department of Health Services, Injury-Related Hospitalization Module

<sup>11.</sup> Wisconsin Department of Health Services, 2022

<sup>12.</sup> Wisconsin Department of Health Services, State Vital Records, 2022

<sup>14.</sup> World Health Organization, 2021

# Nutrition & Physical Activity



# Why is Nutrition and Physical Activity Important?

Healthy eating habits and physical activity are crucial elements of good physical and mental health. Individuals lacking a balanced diet of nutrient-dense foods and adequate exercise are more at risk for chronic diseases and other poor health outcomes.

#### Nutrition

Consuming the proper amount of protein, fruits, vegetables, and grains all contribute to numerous health benefits, including lower risk of chronic disease. bone health issues, and cardiovascular disease.2

Youth in Manitowoc County<sup>3</sup>

37%

of high school students ate fruit every day

of high school students ate vegetables every day

Adults in Wisconsin 4

60%

of adults eat fruits more than once a day 80%

of adults eat vegetables more than once a day

# 2020-2025 Dietary Guidelines



Maintain a balance of Vegetables, fruits, grains, dairy, protein foods. and oils

Limit foods and beverages with Added sugars, saturated fat. sodium, and alcoholic beverages

#### Breastfeeding

Healthy nutrition can begin as early as infancy, especially during the first 6 months. Breastfeeding provides infants with important nutrients and antibodies which establish a stable foundation of health. Of the 729 babies born in Manitowoc County during 2020, 71% were breastfed before leaving the hospital. 5

# **Physical Activity**

Frequent exercise provides immediate and long-term benefits for both adults and youth. These include improved cognition, sleep, mood, and bone health.

Physical activity also reduces risk of obesity, cardiovascular disease, type 2 diabetes, depression, dementia, and cancer.<sup>2</sup>

## Physical Activity Recommendations

Adults 150 minutes of moderate intensity aerobic activity a week

Youth At least 60 minutes of moderate-to-vigorous activity daily.

# Did you know?

Throughout Manitowoc County, there are many opportunities for exercise.

85+ Parks

10+ Fitness Centers

Several trails, including:

Devil's River Trail Ice Age Trail Mariner's Trail

Point Beach State Park Rahr Memorial School Forest and many more!

Youth in Manitowoc County 3



of high school students exercise in 2021

Adults in Manitowoc County



of adults report no of adults report no leisure-time physical activity in 2020

1. County Health Rankings & Roadmaps, 2022 Dietary Guidelines for Americans, 2020

3. Manitowoc County Youth Risk Behavior Survey, 2021 6. Physical Activity Guidelines for Americans, 2018

4. Centers for Disease Control and Prevention, BRFSS, 2021 5. Wisconsin Department of Health Services, Birth Counts Module, 2020

7 Centers for Disease Control and Prevention, PLACES, 2022

# Injury & Mortality 🕮

# Why is Injury and Mortality Relevant?

Causes of injury and length of life inform us of our community's health and whether people live long, healthy lives. <sup>1</sup> Manitowoc County is ranked 54 out of 72 counties for health outcomes, 1 being the best, 72 being the worst.

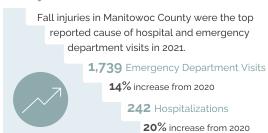
## **Injury**

In 2021, there were **5,241** emergency department visits and **390** hospitalizations due to injury. <sup>2, 3</sup>

Top 3 Causes of Injury in Manitowoc County:

Hospitalizations	<b>Emergency Department Visits</b>
Fall	Fall
Poisoning	Struck by or against object or person
Motor Vehicle	Cutting or piercing objects

## Fall Injuries 2,3



# **Mortality**

Length and quality of life of residents are evaluated to rank counties for health outcomes. <sup>4</sup> Various measures of mortality can help us identify preventable causes of death.

# Infant Mortality 6

Infant mortality is calculated as the number of infant deaths per 1,000 live births.

Manitowoc County 5 infant deaths per 1,000 live births
Wisconsin 6 infant deaths per 1,000 live births

#### **Premature Deaths**

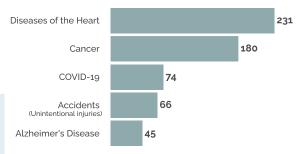
The average life expectancy in Manitowoc County is **78.6** years, while the Wisconsin's average is **78.9**.

Premature death is a rate measured as the years of potential life lost before age 75 per 100,000 population. 8

Manitowoc County 7,000 years of life lost per 100,000 people

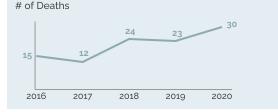
Wisconsin 6,600 years of life lost per

## Top 5 Causes of Death in Manitowoc County in 2021 5



# Fall Injury Deaths<sup>9</sup>

According to the World Health Organization, "Falls are the second leading cause of unintentional injury deaths worldwide". <sup>10</sup> In the past five years, fall-related deaths have increased significantly in Manitowoc County.





# Health Factor #3 Clinical Care



Clinical Care represents **20**% of health factors in the County Health Rankings Model. Affordable, quality, and prompt health care are key qualities that have the potential to limit disease and identify health issues quickly.



**Health Care Access** 



**Preventative Care** 



Communicable Diseases



Chronic Diseases

# **Health Care Access**



# Why is Health Care Access Important?

Access to health care, especially affordable and available services, is a valuable asset in a healthy community. Financial resources including health insurance, Medicaid, BadgerCare Plus, and programs for the uninsured are all opportunities for individuals to receive aid while accessing care.

## **Health Care Providers**

There are 2 hospital systems in Manitowoc County, along with several other behavioral, mental, and dental health clinics.

## Ratio of People to Providers 1

Provider ratios depict the number of individuals who need to be served by 1 professional to cover the entire population. A high ratio implies challenges to accessing care.

Primary	Manitowoc County	2,030	to	1
Care				

Providers Wisconsin 1,260 to 1

Dental Manitowoc County 1,610 to 1
Care Wisconsin 1,390 to 1

Mental Manitowoc County 920 to 1
Health
Providers Wisconsin 440 to 1



# **Insurance Coverage**

Without insurance or a means of affording health care, uninsured individuals can face serious illness or health problems if they avoid receiving care. Others may be unable to pay medical bills, resulting in debt.

7%

of population under age 65 did not have health insurance in 2019. <sup>2</sup>

13,574

people were enrolled in
BadgerCare Plus in October 2022.
4.956 of which were children.<sup>3</sup>



of respondents have a primary care provider where they regularly go for checkups and when they are sick.  $^4$ 



of respondents agree there are affordable health care services in the community. 4

#### Lakeshore Community Health Care



Lakeshore Community Health Care serves both Manitowoc and Sheboygan counties with medical, mental health, dental, pharmaceutical, and support services. These services are available to everyone, regardless of insurance coverage.<sup>5</sup>

# BadgerCare Plus Eligibility <sup>6</sup>

Must be

Wisconsin Resident U.S. citizen or qualifying immigrant

And one of the following



#### Child

age 18 or younger with income at or below 300% of the FPL\*.

#### **Pregnant Woman**

with income at or below 300% of the FPL.

\*Federal Poverty Level (FPL)

#### Young Adult

under age 26, and were in a foster home, court-ordered Kinship Care, or subsidized guardianship when they turned 18, regardless of income.

#### Adult

with income at or below 100% of the FPL.

# Preventative Care



# Why is Preventative Care Important?

Routine checkups, screenings, and vaccinations are all steps an individual should take throughout their life to ensure a healthy lifestyle. Regularly scheduled care can detect and prevent chronic diseases.

#### Vaccinations

Vaccines are a preventative measure that equip an individual's immune system to defend against potentially life-threatening diseases.

Routine vaccinations are highly recommended for young children as early as birth. Many vaccines are given as a series over the course of several weeks to ensure complete protection. As children reach school-age, several vaccines are required by the state of Wisconsin unless parents complete an immunization waiver. 1

While most vaccines are administered through adolescence, adults are encouraged to receive additional immunizations, including an annual influenza vaccine and the occasional tetanus booster. 2

#### **Adolescent Vaccinations**

Adolescent vaccination rates in Manitowoc County are considerably low.

Only 55% of adolescents completed the recommended doses of HPV. while Healthy People 2030 target is 80%.

633 students (all ages) have at least one waiver for required school vaccines in Manitowoc County

#### 2021 Vaccination Rates

		- 101000			
<b>Children</b> (up to age 2) <sup>5</sup>		Adolescents (aged :	Adolescents (aged 13 through 18) 6		
Dtap	<b>77</b> %	HPV (1)	66%		
Hepatitis A (1)*	84%	HPV Complete	55%		
Hepatitis A (2)	<b>55</b> %	Mening ACWY (1)	<b>7</b> 9%		
Hepatitis B	88%	Mening ACWY UTD**	53%		
HiB	84%	Tdap (1)	86%		
MMR	85%	Mening B (1)	38%		
Polio	87%	Mening B (2)	26%		
Pneumoccocal	82%			For r	

Adults (age 18 and older) 7 Tdap (1) 74% HPV Complete 47% Zoster Complete 22% PCV13 (1) 58% PPSV23 (1) 62% Hepatitis A UTD 18%

For more information about recommended vaccines, visit Wisconsin Dept. of Health Services.

\*The number following the vaccine refers to the dose in the series. \*\* Certain vaccines require a number of doses to be considered up-to-date (UTD).

Varicella 84%

Routine Screenings	Manitowoc County <sup>8</sup>	Wisconsin <sup>9</sup>
Visit to doctor for checkup (past year among adults 18+)	72%	72%
Visit to dentist or dental clinic (past year among adults 18+)	66%	71%
Cervical Cancer Screening (past 3 years for women aged 21-65)	82%	78%
Colorectal Cancer Screening (among adults aged 50-75)	61%	67%

75%

81%

## **Prenatal Care**

Prenatal care visits include physical exams, weight checks, ultrasounds, and blood tests, Receiving routine care during pregnancy informs women of recommendations and aids a healthy pregnancy. 10



Increase intake of folic acid

Avoid smoking, drinking, and using drugs

Control existing health conditions (diabetes or high blood pressure)

In 2020, 79% of pregnant women received care during the first trimester in Manitowoc County.

Mammography

5, 6 & 7, Wisconsin Department of Health Services, Vaccination Coverage, 2022

<sup>(</sup>past 2 years for women aged 50-74) 1 & 2. Wisconsin Department of Health Services, 2022

<sup>3.</sup> Healthy People 2030

Wisconsin Department of Health Services, REDCap, 2022

<sup>8.</sup> Centers for Disease Control and Prevention, PLACES, 2022 9. Centers for Disease Control and Prevention, BRFSS, 2020

<sup>10.</sup> National Institute of Child Health and Human Development, 2017

<sup>11.</sup> Wisconsin Department of Health Services, Birth Counts Module, 2020

# Communicable Diseases



# Why are Communicable Diseases Relevant?

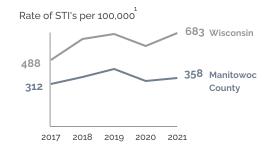
While most communicable disease infections are mild, some can lead to severe disease, disability, or death. Reporting and surveillance of infectious diseases mitigates widespread outbreaks and protects the public's health.



Sexually transmitted infections (STI's) in Manitowoc County make up some of the highest reportable incidences of disease in 2021.

#### Reported Incidences in 2021

Chlamydia **234** cases Gonorrhea 41 cases Syphilis 8 cases



**Enteric** Diseases

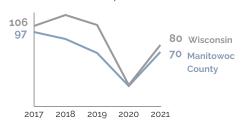


Enteric diseases occur in the intestines as a result of consuming contaminated substances. Despite the recent decline of infections, both Manitowoc County and the State are experiencing a rise of cases.

#### Reported Incidences in 2021<sup>1</sup>

Salmonellosis 13 cases Cryptosporidiosis 6 cases Giardiasis 6 cases Yersiniosis <5 cases

Rate of enteric disease per 100.000



Diseases



Respiratory diseases are infections affecting the lungs, bronchus, or respiration. Common diseases include influenza, respiratory syncytial virus (RSV), adenovirus, and many others.

#### Reported Incidences in 2021<sup>1</sup>

Active tuberculosis (TB) <5 cases Latent TB (LTBI) 10 cases





Tick-borne diseases are spread to humans through the bite of an infected tick. Left untreated, the infection can spread throughout the body.

Reported Incidences in 2021

Lyme Disease 22 cases

Ehrlichiosis/Anaplasmosis <5 cases

# Communicable Diseases (Continued)



## COVID-19

COVID-19 is a disease caused by the SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) virus. It is transmissible through respiratory droplets or particles that can be inhaled or land on other people's eyes, nose, or mouth.3

The World Health Organization (WHO) declared the COVID-19 outbreak as a global pandemic on March 11, 2020 and Manitowoc County identified its first COVID-19 case on April 3, 2020. Since then. Manitowoc County encountered two large waves of COVID-19 incidences, peaking in November 2020 and January 2022.

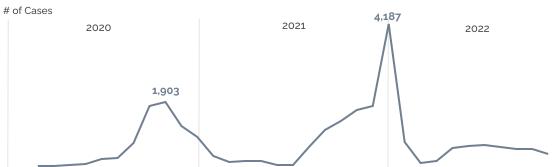
Between March 2020 and November 2022. Manitowoc County experienced: 5

**22.870** Cases

206 Deaths



#### **COVID-19 Cases in Manitowoc County**



Jan Feb Mar Apr May June July Aug Sep Oct Nov Dec Jan Feb Mar Apr May June July Aug Sep Oct Nov Dec Jan Feb Mar Apr May June July Aug Sep Oct Nov

## **Vaccinations**

The initial COVID-19 vaccine became available to the public in December 2020. It is recommended that all eligible individuals stay up to date on their COVID-19 vaccines, including boosters.

Available COVID-19 vaccines in the United States:

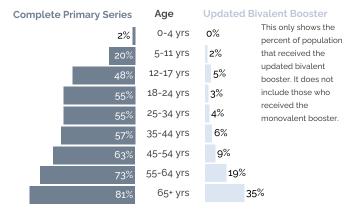
Moderna

Pfizer-BioNtech

Johnson and Johnson's Janssen

Novavax

## Manitowoc County Vaccination Rates as of 11/30/2022



<sup>3.</sup> Centers for Disease Control and Prevention, 2022

<sup>4.</sup> WHO Declares COVID-19 a Pandemic, 2020 5 & 6. Wisconsin Department of Health Services, Daily COVID-19 Summary Report, 2022

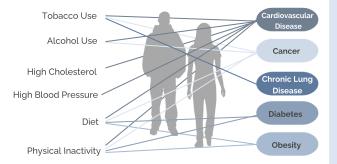
# Chronic Diseases 9Y



## Why are Chronic Diseases Relevant?

Chronic diseases are the leading cause of death and disability in the United States and are the number one cost to the health care system. They are long lasting conditions that reduce one's daily activities or requires ongoing medical attention. Many chronic diseases can be avoided by reducing or eliminating health behaviors such as: smoking, poor diet, physical inactivity, and excessive drinking.1

Figure 4: The Web of Chronic Disease 2 Adapted from Alaska's Department of Health's The Web of Chronic Disease



## Adult Risk Factors in Manitowoc County 3

Tobacco Use

18% report smoking tobacco

Alcohol Use

26% report heavy drinking or binge drinking

**High Blood Pressure** 

30% report having high blood pressure

**High Cholesterol** 

79% report being screened for high cholesterol in the last year

20% report having high cholesterol

**Physical Inactivity** 

21% report no leisure-time activity

## Adult Disease Rates



#### OBESITY

Obesity is measured by a person's body mass index (BMI). BMI is calculated by dividing weight in kilograms by height in meters squared.4

#### **DIABETES**

Diabetes affects how the body responds to the breakdown of sugar from food into energy. Untreated diabetes can cause vision loss, kidney and heart disease, or loss of limbs, 5

#### STROKE

Stokes happen when blood is blocked from the brain or a blood vessel bursts inside the brain causing brain tissue to die. About 80% of strokes are preventable. 6

#### **ARTHRITIS**

There are more than 100 types of arthritis affecting one's joints and tissues around joints. It causes pain and stiffness making daily activities difficult and painful.



#### **ASTHMA**

Asthma affects the body's lungs causing episodes of wheezina, couahina. shortness of breath, and chest pain. 9

#### COPD

6%

Chronic Obstructive Pulmonary Disease (COPD) is a group of diseases that cause breathing difficulties and airflow blockage. Smoking tobacco is the primary cause.10

#### CORONARY **HEART DISEASE**

affects the functionality and

#### **CANCER**

\*excludes skin cancer The most common types of cancers in Manitowoc County are Breast, Lung, Prostate, Colorectal and Melanoma

# Coronary heart disease

structure of the heart by failing to bring oxygen-rich blood to the heart. 11

- 2. Alaska Department of Health
- 3. Centers for Disease Control and Prevention, PLACES, 2019 & 2020

# Health Factor #4

# **Physical Environment**





Physical Environment accounts for 10% of health factors in the County Health Rankings Model. There are aspects of the environment that an individual has little control over such as the quality of air and water. However, monitoring and testing the surrounding environment can detect harmful elements including radon and lead.



Air Quality



Radon



Lead



Water



# Why is Air Quality Important?

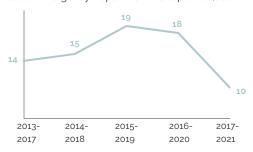
The Environmental Protection Agency (EPA) identified 6 pollutants to monitor air quality due to their potentially negative environmental and human health effects. These pollutants include: carbon monoxide, lead, nitrogen oxides, ground-level ozone, particle matter, and sulfur oxides.

#### Carbon Monoxide

When inhaled, carbon monoxide will replace the oxygen in one's body. When exposed to high levels of carbon monoxide for long periods of time, nausea, vomiting, muscle weakness, confusion, or loss of consciousness can occur.2

Carbon Monoxide Poisonings in Manitowoc County (5-year average)

Rate of Emergency Department visits per 100,000

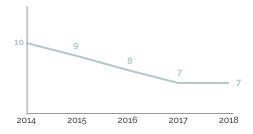


#### Particulate Matter (PM)

Particulate matter such as dust, dirt, soot, smoke, and liquid droplets are especially harmful to humans. Larger particles can irritate one's eyes, nose, and throat while smaller particles have potential to travel deep into one's lungs, and sometimes, bloodstream.4

Particulate Matter Pollution in Manitowoc County 5

Average density (µg/m³) of fine particulate matter



# Radon .

# Why is Radon Relevant?

Radon is the leading cause of lung cancer in nonsmokers in the U.S. It is an odorless, colorless gas that can naturally be released into the environment by rock, soil and water. Radon can enter homes and businesses through cracks in the floors and walls.6

#### Radon Test Results in Manitowoc County % of tests results ≥ EPA action standard 4 pCi/L

25% Manitowoc 35% Wisconsin

# Did you know?

The Manitowoc County Health Department offers low cost shortterm and long-term radon test kits available for purchase.

- 3. Environmental Public Health Data Tracker













# Why is Lead Relevant?

Lead is a toxic, naturally occurring element that can cause serious health effects in young children and adults. Children younger than 6 years old are especially susceptible to reduced IQ, learning disabilities, and other behavioral effects as a result of lead poisoning.3

Lead was commonly used before the 1980's in residential paint, varnish, gasoline, and plastics. Despite lead being banned from paint and varnish due to its toxicity in 1978, its presence in products still lingers. 3

#### Blood Lead Reference Value (BLRV)

Lead exposure is confirmed if the patient has a blood lead level greater than or equal to 5 micrograms of lead per deciliter of blood (µg/dL).

As of May 2021, the CDC changed the BLRV from 5 μg/dL to 3.5 μg/dL. Lowering the reference value allows more time for parents, doctors, public health officials, and communities to reduce the child's future exposure to lead.4

In 2021, the blood lead levels of 49 children younger than 6 years old were greater than or equal to 5 µg/dL.

Houses built before 1978 are at risk for having lead-based paint. 3 of housing units in

Manitowoc County were

built before 1979.6

# Water (

# Why is Water Important?

Ensuring clean, safe water in homes and businesses is imperative to the health of the community. Throughout Manitowoc County, there are 11 different municipal water systems serving over 45,000 residents. Those who are not connected to public water systems receive water from private wells.

# **Private Well Quality**

Private wells can be exposed to natural contaminants in groundwater, which is why it is important to regularly test wells. Contaminants can include arsenic, nitrate, nitrite, bacteria, and lead, a

Test results above EPA standard of 10µg/L



# Fluoride Levels Population on fluoridated public water system.10 86%

# **Beach Monitoring**

In Summer 2021, 11 Manitowoc County beaches along Lake Michigan were monitored frequently for bacteria. During that time, a total of 322 samples were collected leading to 41 advisories and 11 closures.<sup>5</sup>

# References

#### **Our Approach**

- 1. Clear Impact. (n.d.). Turn the Curve Thinking. https://clearimpact.com/results-based-accountability/turn-the-curve-thinking/
- 2. Wisconsin Department of Health Services. (2022, July 12). Community Health Improvement Assessment and Plans. https://www.dhs.wisconsin.gov/chip/index.htm

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