

# 22-County Health Indicator Report

Approved by the Board of Trustees/Board of Governors on December 28, 2021

**GUNDERSEN**  
**HEALTH SYSTEM®**

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# Introduction

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## Methodology & Data Sources

To identify the health needs of Gundersen Health System’s 22-county service area, analysis of publicly available data was completed. Secondary data — including population demographics, mortality, morbidity, health behavior, and clinical care — were used to identify and prioritize significant community health needs in each county. Population characteristics, socioeconomic, and health status data were also examined. Community-level data were compared to the state, nation, and Healthy People 2030 benchmarks, when available, to help identify key health issues in each county. This document informed the 2021 Gundersen Lutheran Medical Center Health Needs Assessment and Health Implementation Plan.

## Limitations

While the quantitative analysis used the most recent data sources available as of July 1, 2021, some of these sources contain data that are several years old. The data presented in this report may not necessarily represent the current situation in each county but are the best data available at the time of writing this assessment. Data sources and dates are provided. Where possible, comparisons to national data are given, but for some data sets, nationally available data is not comparable, due to differences in methodology or definitions. Many measures are also compared to a service area weighted average, based on population size.

The COVID-19 pandemic has had a significant impact on the health and economic stability of the people in the 22-county service area. The impact won’t be seen in some of the measures in this report for a few years and may have a disproportionate effect on some counties in the service area with the lowest socio-economic status.

This document is not meant to be an exhaustive list of metrics. In general, it follows the County Health Rankings model (described below).

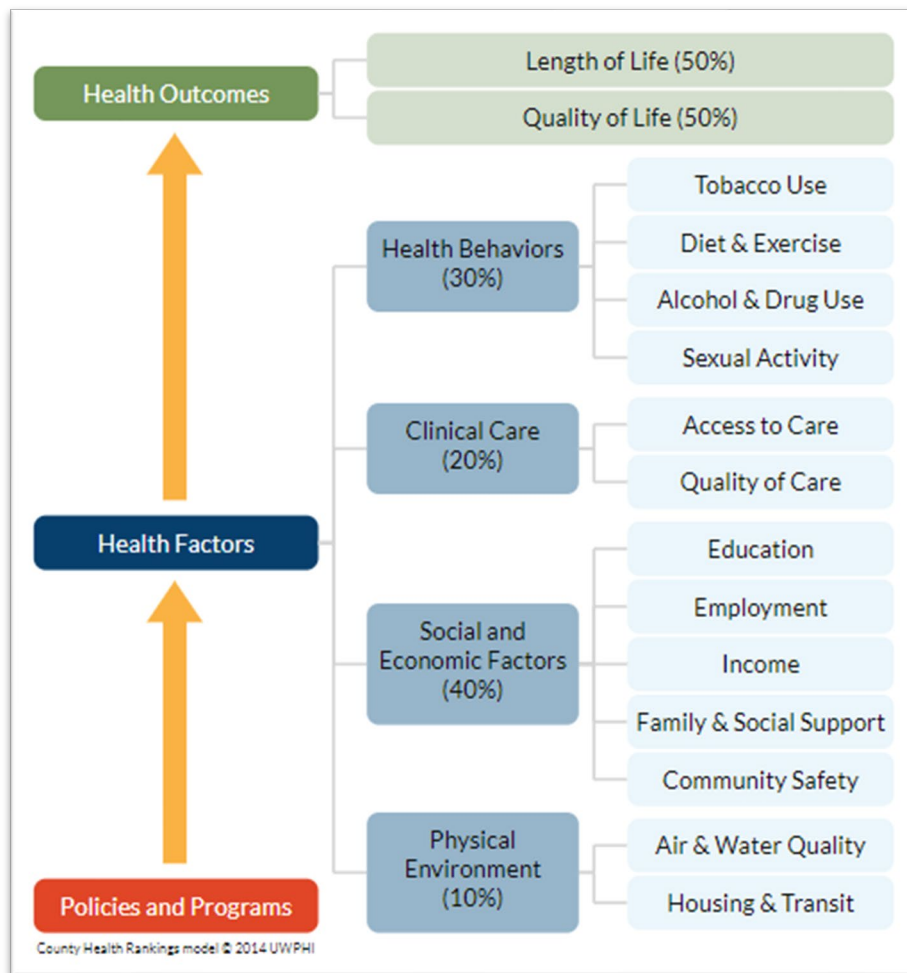
## County Health Rankings Model

The following figure is a well-accepted model illustrating the impact of health factors as contributors to future health outcomes. Health outcomes are a measure of current health in a community and based on a combination of how long people live (life expectancy and pre-mature mortality), and how well people live (quality of life). Health factors are a measure and predictor of a community’s future health. It is based on health factors, clinical care, social factors, and the physical environment. While clinical care and health behaviors contribute to 50% of a person’s health outcomes, 40% is a result of social factors like education, income, and employment (County Health Rankings and Roadmaps,

n.d.). It is important to include these dimensions when considering the overall health of the 22-county service area.

The County Health Rankings is an annual report measuring important health factors in each county. Each county is compared to other counties within their state, providing an understanding on how each county is meeting the health needs of its residents. (University of Wisconsin Population Health Institute, 2021).

## County Health Rankings Model



Source: County Health Rankings and Roadmaps. (n.d.). County Health Rankings Model.

Click [here](#) to see to view a table with County Health rankings and sub-rankings for all 22 counties.

## **Healthy People 2030 Objectives**

Begun in 1979, Healthy People goals and objectives have guided the nation’s leading health organizations, health leaders, policymakers, and the public to improve the health and well-being of the United States. Every 10 years, past objectives are reviewed, progress is evaluated, gaps are determined, and new goals and objectives are developed based on the latest science and research (ODPHP, 2021). If available, Healthy People 2030 objectives are listed for each related health indicator, providing a framework to understand the gaps or progress of the 22-county service area.

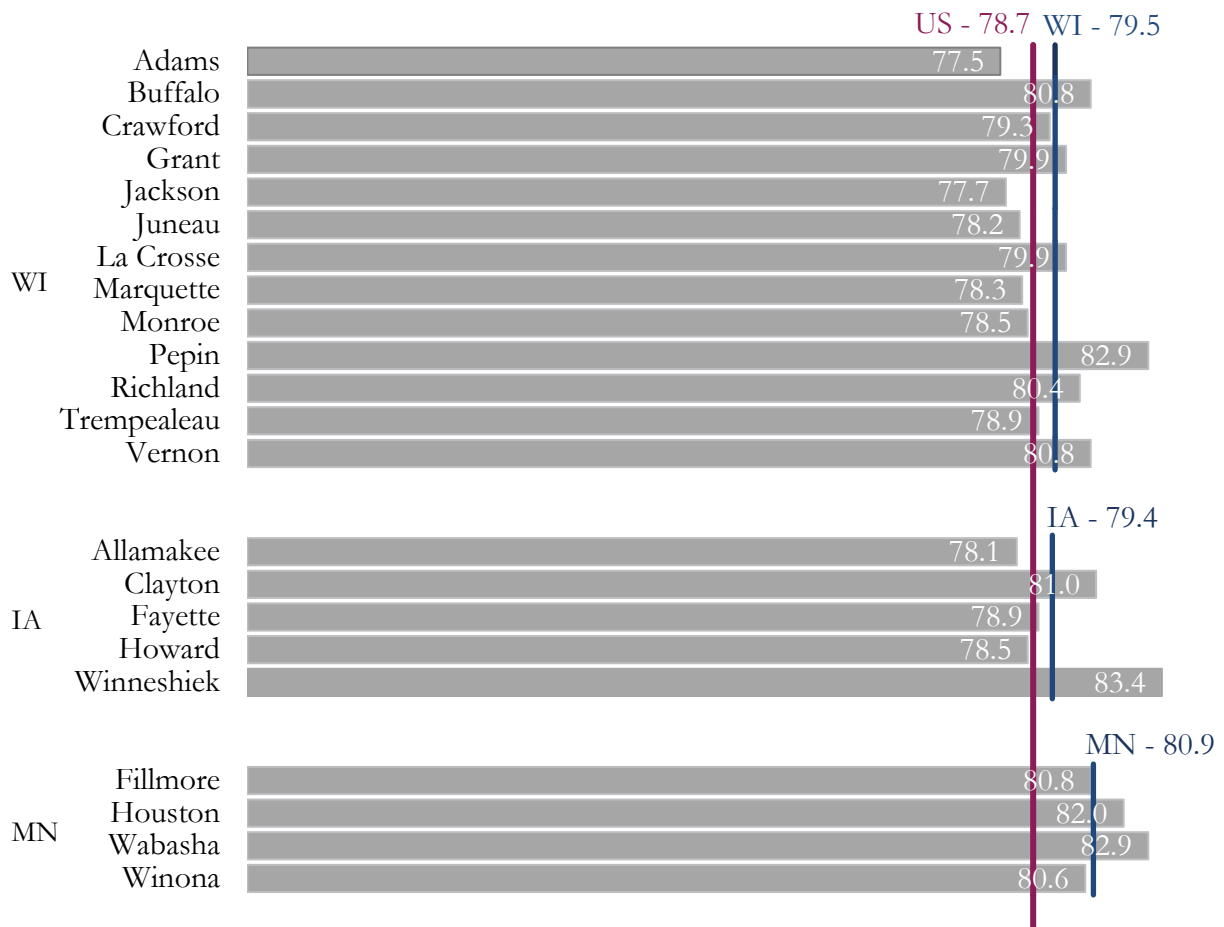
# Health Outcomes: Length of Life

## Life Expectancy

An estimate of the average number of years of life for individuals within a population, life expectancy is often used to measure the overall health of a community (Utah Department of Health, n.d.). Determining the length of life for individuals within a community, coupled with mortality and morbidity information, may provide insight on current and future areas of need.

Life expectancy is the highest in Winneshiek County, IA, and lowest in Adams County, WI

**Figure 1.** Life expectancy by county compared to state and United States



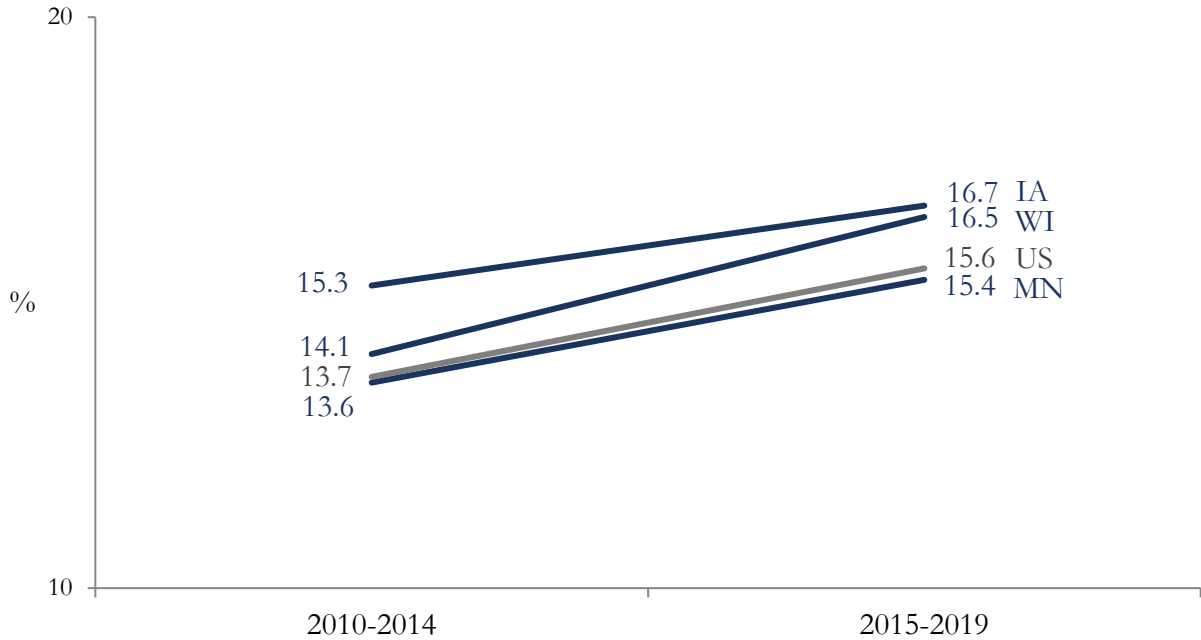
Source: University of Wisconsin Population Health Institute (2021). National Vital Statistics System (NVSS), 2017-19.

Statewide life expectancy is 79.5 in Wisconsin, 80.9 in Minnesota, and 79.4 in Iowa, which fall above the national average for life expectancy (78.7 years). About 70% of the 22-county service area meets or exceed the national average. However, approximately just under 50% of all counties meet or exceed their respective state averages (6 out of 13 counties in WI, 2 out of 5 counties in IA, and 2 out of 4 counties in MN). Winneshiek County has the highest life expectancy at 83.4 years, and Adams County has the lowest life expectancy at 77.5 years.

**Changing Populations:** The United States’ population continues to grow in age and in diversity. According to the United States Census Bureau (2021) the number of people age 65 and older increased from 40.3 million in 2010 to more than 54 million in 2019 and is projected to reach 95 million by 2060 (U.S. Census Bureau, 2021). The tristate service area reflects this aging trend as well. Growth in the 65 and older population in Wisconsin, Minnesota, Iowa, and the United States for years 2010-2014 and 2015-2019 is shown below. Overall, Iowa and Wisconsin had an older population than the U.S and Minnesota had a slightly younger population than the U.S.

The 22-county service area is aging, and less diverse than the US population.

**Figure 2.** Percentage of population aged 65 and older by Wisconsin, Minnesota, Iowa, and United States for years 2010-2014, 2015-2019.



Source: U.S. Census Bureau. 2015-2019 American Community Survey 5 Year Estimates; 2010-2014 American Community Survey 5 Year Estimates



Utilizing the same data as above, changes in populations according to race and ethnicity were analyzed. Changes between population estimates for years 2010-2014 and 2015-2019 were not significant for the 22-county service area compared to the United States. As discussed previously, disparities in health outcomes by race/ethnicity have been consistently found within the United States (ODPHP, n.d.). While the 22-county service area has not seen the same amount of growth in diversity, racial/ethnic differences in area health outcomes can be significant. Population demographics, especially race and ethnicity, should be considered when analyzing data and developing implementation plans. Individual county populations by race and ethnicity may not be accurately reflected in the table below and should be considered when programmatic planning is completed.

**Table 1.** Percentage of population by race and ethnicity by entire 22-county region and U.S.

	<b>22-County Region</b>	<b>United States</b>
Non-Hispanic White	95.2%	72.5%
Non-Hispanic Black	1.2%	12.7%
American Indian/Alaska Native	0.6%	0.8%
Asian	0.8%	5.5%
Native Hawaiian/Other Pacific Islander	0.0%	0.2%
Other	0.9%	4.9%
2 or more races	1.3%	3.3%
Hispanic or Latino-Any race	2.9%	18.0%
Not Hispanic or Latino	97.1%	82.0%

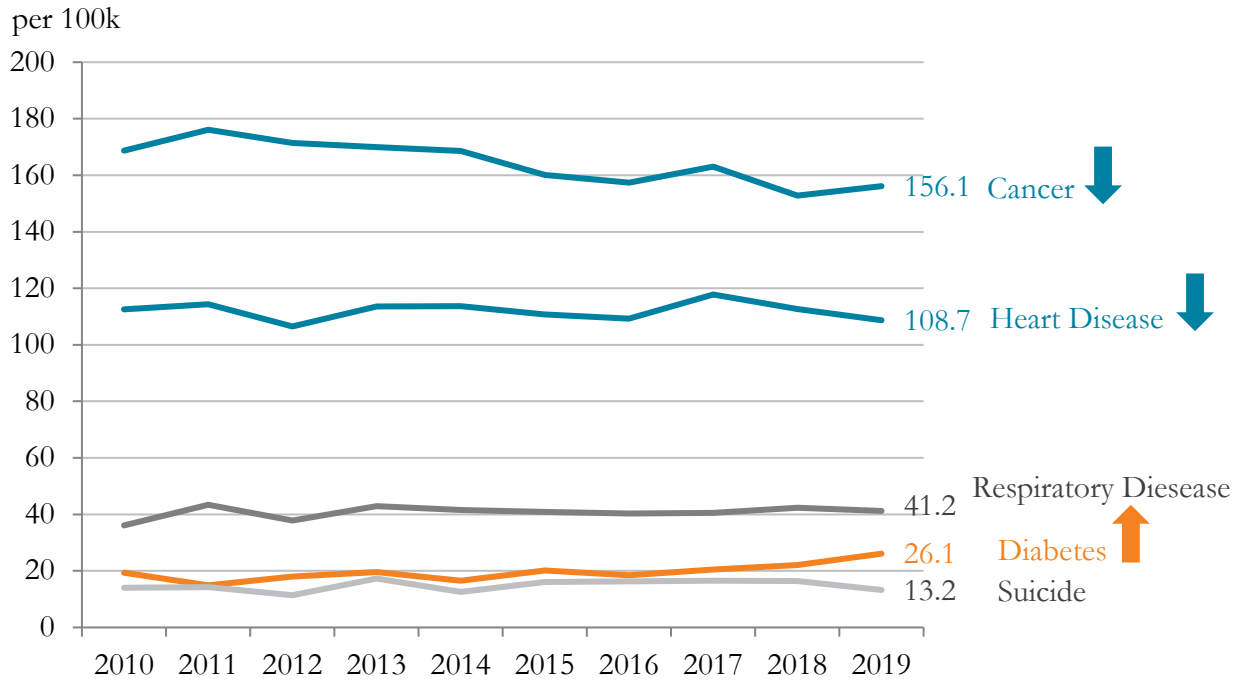
Source: U.S. Census Bureau. 2015-2019 American Community Survey 5 Year Estimates

## Cause-Specific Mortality & Morbidity

Mortality (death) rates are an important indicator of the burden of disease within a population. These rates, along with morbidity (rate of current disease), may provide insight on program effectiveness and/or need for intervention. The figure below depicts the age-adjusted mortality rates by year for specific causes for the entire 22-county service area. Mortality rates for the service area have remained consistent over the past 10 years; however, deaths due to cancer and heart disease have been trending downward. On the other hand, deaths due to diabetes have increased from 18.5 in 2016 to 26.1 in 2019.

Deaths due to some chronic diseases are decreasing while others are increasing. This is possibly due to earlier identification of some (e.g., cancer), and worsening health concerns for others (e.g., obesity and mental health).

**Figure 3.** Age adjusted mortality rates per 100,000, by year for 22-county service region



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released in 2020.

**Healthy People 2030 Objectives:**

- +Reduce the rate of all-cause mortality among adults with diagnosed **diabetes** from a baseline of 15.2 deaths per 1,000 person years to 13.7 deaths per 1,000 person years.
- +Reduce coronary **heart disease** deaths from 90.9 per 100,000 to 71.1 per 100,000
- +Reduce the overall **cancer** death rate from 149.1 per 100,000 to 122.7 per 100,000.
- +Reduce the **suicide** rate from 14.2 per 100,000 to 12.8 per 100,000.
- +Reduce the annual number of new cases of diagnosed diabetes in the population from a baseline of 6.5 new cases per 1,000 adults aged 18 to 84 to 5.6 new cases per 1,000.

## Cancer

Cancer is one of the leading causes of mortality in the United States and contributed to nearly 7,000 deaths in the 22-county service data from 2016-2019. Lung cancer is the leading cause of cancer deaths in the 22-county service region accounting for nearly one out of every four cancer deaths. The chart below reports the causes of all age-adjusted cancer deaths from 2016-2019 in the 22-county service region.

Many of the deaths from lung, colorectal, breast, and skin cancers in the 22-county service area are preventable, with a reduction in risk factors (tobacco use, and obesity) or earlier identification (screening) and treatment.

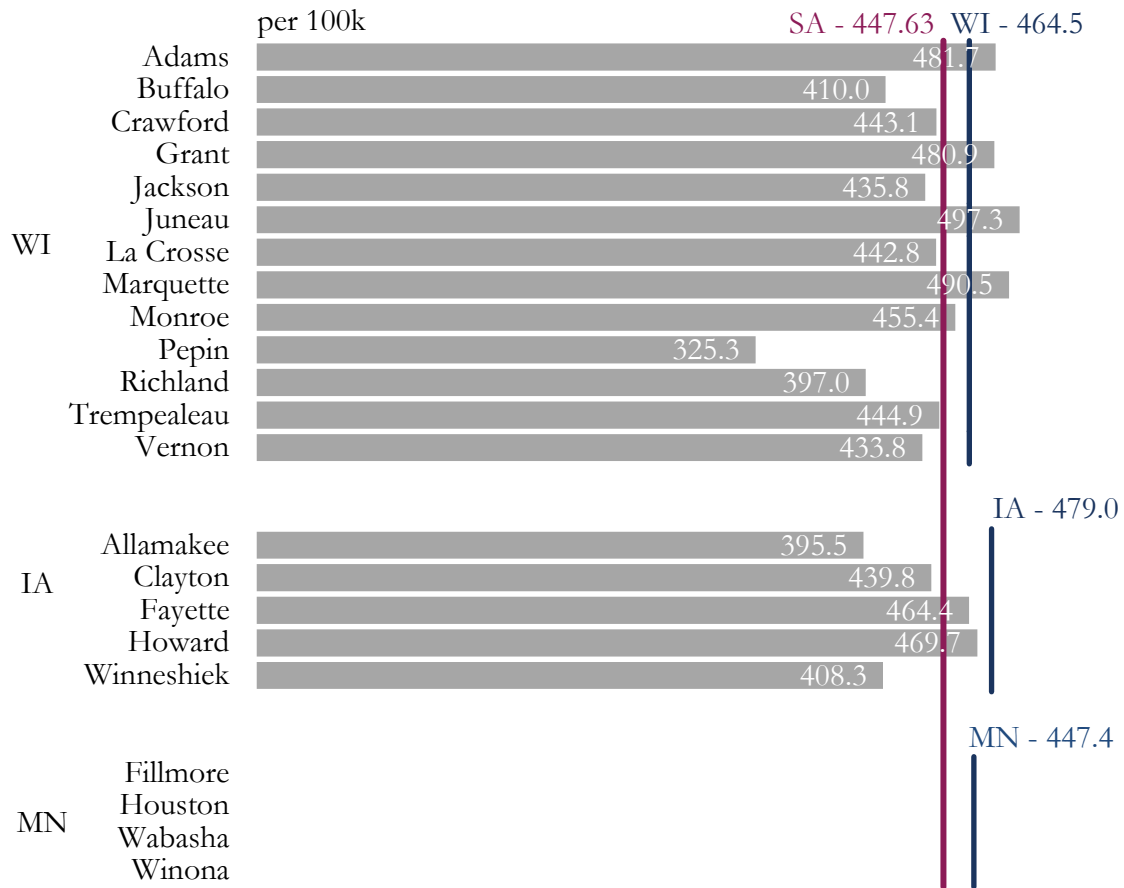
**Table 2.** Total and percentage of deaths by cancer type within 22-county region

<u>Cancer deaths by type (2015-2019 combined)</u>	<u># of deaths</u>	<u>% of deaths</u>
All cancers	6,680	
Lung	1,637	24.5%
Colorectal	597	8.9%
Breast	365	5.5%
Pancreas	476	7.1%
Prostate	393	5.9%
Non-Hodgkin's Lymphoma	262	3.9%
Esophagus	178	2.7%
Leukemia	305	4.6%
Liver	227	3.4%
Brain/CNS	189	2.8%
Bladder	177	2.6%
Kidney	200	3.0%
Multiple Myeloma and Immunoproliferative neoplasms	146	2.2%
Ovary	137	2.1%
All Other	1,391	20.8%

Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released in 2020.

Incidence of cancer is a metric in the Population Health Community Scorecard. The rate of new cancers in the most recent report of data was showing an improvement compared to the expected trend. The distribution of new cancers across the 22-county service area can be seen in the figure below. The highest rates of new cancers are in Adams, Grant, Juneau, and Marquette counties in WI.

**Figure 4.** Annual age-adjusted incidence rate of new cancer diagnoses per 100K by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



Source: U.S. News and World Report, Healthiest Communities Rankings

When reviewing the rate of cancer deaths and types of cancer, it is important to consider the possibility of prevention and the relation to other health risk factors. As discussed in the Cancer Center Community Needs Assessment (2021), the following table describes cancers that may be identified at an earlier stage with better treatment outcomes, or that could be prevented with risk behavior change.

**Table 3.** Preventable cancer type with preventable risk factors

Cancer Type	Early Identification by Screening	Preventable	Preventable risk factors
Lung	Yes	Yes – 33%	Obesity, alcohol use
Colorectal	Yes	Yes – 70%	Tobacco use, radon exposure
Cervix	Yes	Yes – 50%	Obesity, Tobacco use, alcohol use
	Yes	Yes	Tobacco use, HPV infection

Prostate	Yes	Possibly	Possibly obesity
Skin	Yes	Yes	Sun exposure (tanning - no protection)

Source: Gundersen Health System Cancer Center Community Needs Assessment. 2021.

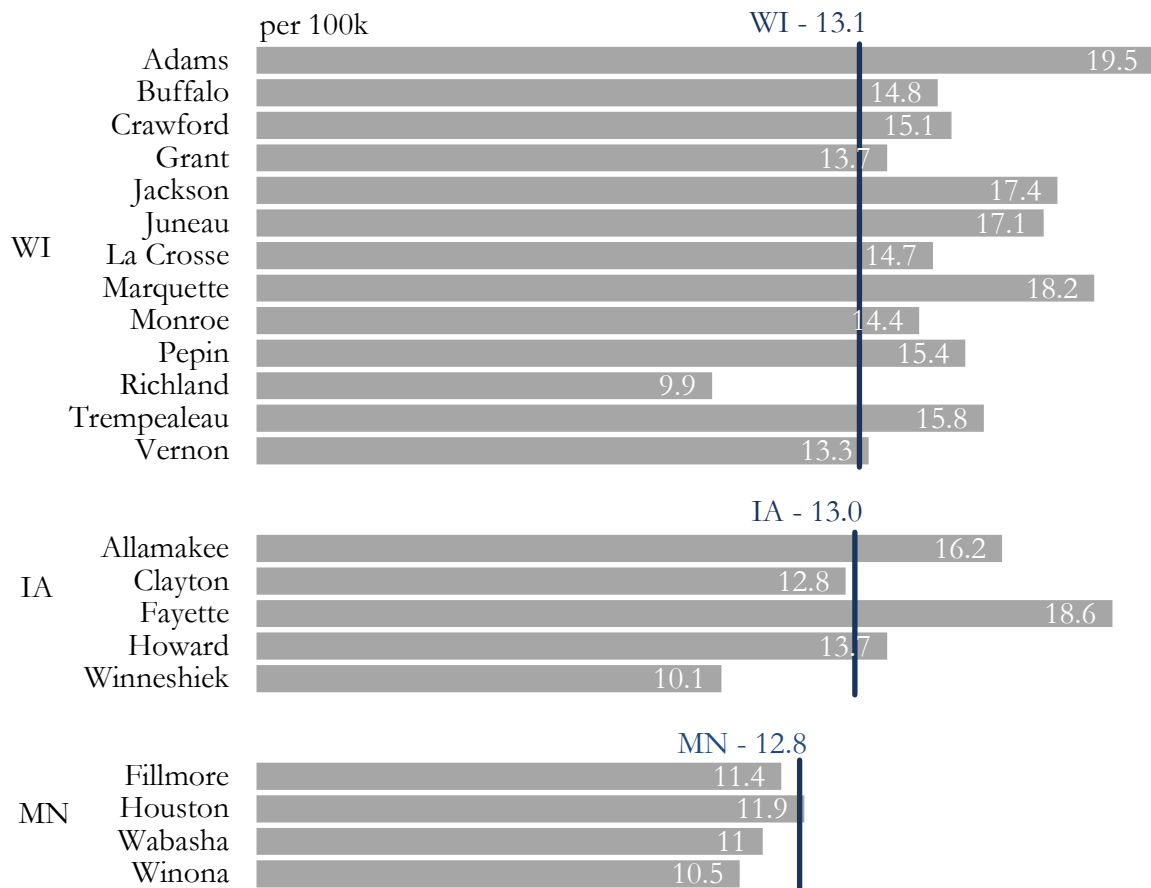
Further discussion on preventable risk factors, as well as strategies to address preventable risk factors and cancers will be considered throughout the remainder of this report.

### Suicide

Deaths rates due to suicide decreased in the 22-county service area from 16.3 in 2016 to 13.2 in 2019, which is below the three-state average. (CDC WONDER, 2020). The 2019 statewide rates of suicide were found to be 14.4 per 100,000 in Minnesota, 16.7 per 100,000 in Iowa, and 14.0 per 100,000 in Wisconsin. Although these numbers are trending downward, there is still a significant rate of suicide in the tri-state area. When analyzing suicide mortality rates from 2002-2019, Iowa had a rate of 13.0 deaths per 100,000, 11.8 deaths per 100,000 in Minnesota, and 13.1 deaths per 100,000 in Wisconsin. During this same period, over half (16 out of 22) counties had higher rates of suicide compared to the statewide data. Richland County recorded the lowest at 9.9 per 100,000 and Adams County recorded the highest amount at 19.5 deaths per 100,000. Individual county rates of suicide are shown in the chart below, compared to the three-state average. Of note, 7 counties had a suicide rate lower than the Healthy People 2030 goal of 12.8 per 100,000. These included Richland County in WI, Clayton and Winneshiek in Iowa, and Fillmore, Houston, Winona and Wabasha counties in MN. The significant rates of suicide within the service region, as well as poor mental health days and access to mental health services should be considered when developing an implementation plan.

Deaths by suicide were higher in Adams and Marquette counties in WI, and Fayette County in IA. Special attention to mental health services is important.

**Figure 5.** Age-adjusted mortality rates due to suicide 2002-2019 by county compared to state



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released in 2020.

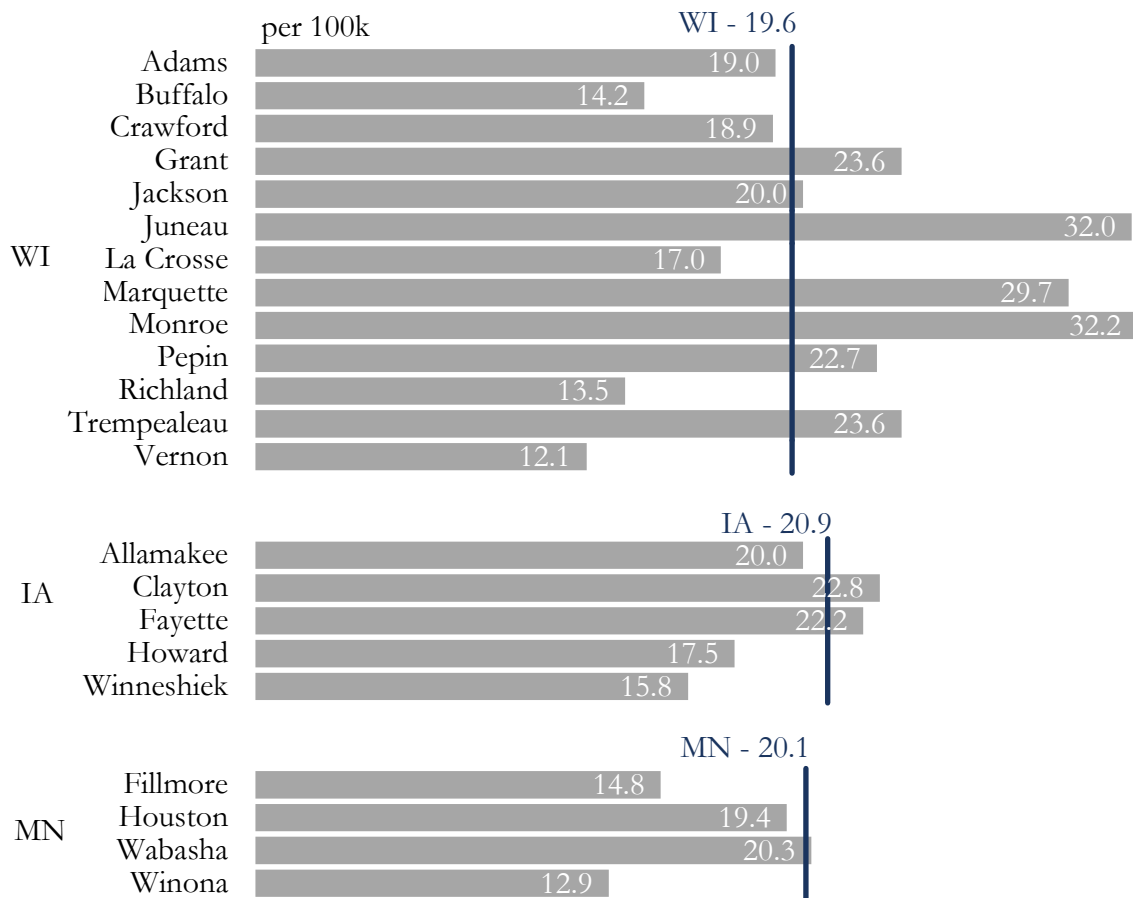
## Diabetes

Across the United States, diabetes affects an estimated 34.2 million Americans and is the 7<sup>th</sup> leading cause of death (Centers for Disease Control and Prevention. National Diabetes Statistics Report, 2020. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Dept of Health and Human Services; 2020). An individual with diabetes faces an increased risk for all-cause mortality and heart attack by 1.8 times compared to an individual without diabetes (ODPHP, 2016c). Also, the estimated cost of diabetes in 2017 was \$327 billion, including medical care, disability, and premature death (Economic Costs of Diabetes in the U.S. in 2017, American Diabetes Association, Diabetes Care Mar 2018).

Prevalence of diabetes is increasing and deaths from diabetes has also increased overall. Deaths are the highest in Juneau, Monroe, and Marquette counties in WI. Marquette County also has a high rate of obesity and low rate of physical activity and exercise opportunities. Adams County has the highest rate of diabetes overall.

The age-adjusted mortality rate due to diabetes increased in the 22-county service area from 18.5 in 2016 to 26.1 in 2019. The 2019 rate was substantially higher in the 22-county service area when compared to statewide rates for the same year (20.2 in Iowa, 19.8 in Minnesota, and 20.2 in Wisconsin). The statewide age-adjusted rates of death due to diabetes from 2002-2019 were found to be 20.1 per 100,000 in Minnesota, 20.9 per 100,000 in Iowa, and 19.6 per 100,000 in Wisconsin. At the county level, Vernon County recorded 12.1 deaths per 100,000 which was the lowest in the service area. On the other hand, Monroe County had the highest rate of 32.2 per 100,000. Less than a quarter (3 out of 22) of the counties had higher rates of death due to diabetes compared to statewide data during the same time. Of note, 3 counties had a diabetes mortality rate lower than the Healthy People 2030 goal of 13.7 per 100,000. These included Richland, and Vernon counties in WI, and Winona County in MN. Further discussion of rates of diagnosed diabetes, morbidity, and behavioral factors should be considered when developing an implementation plan.

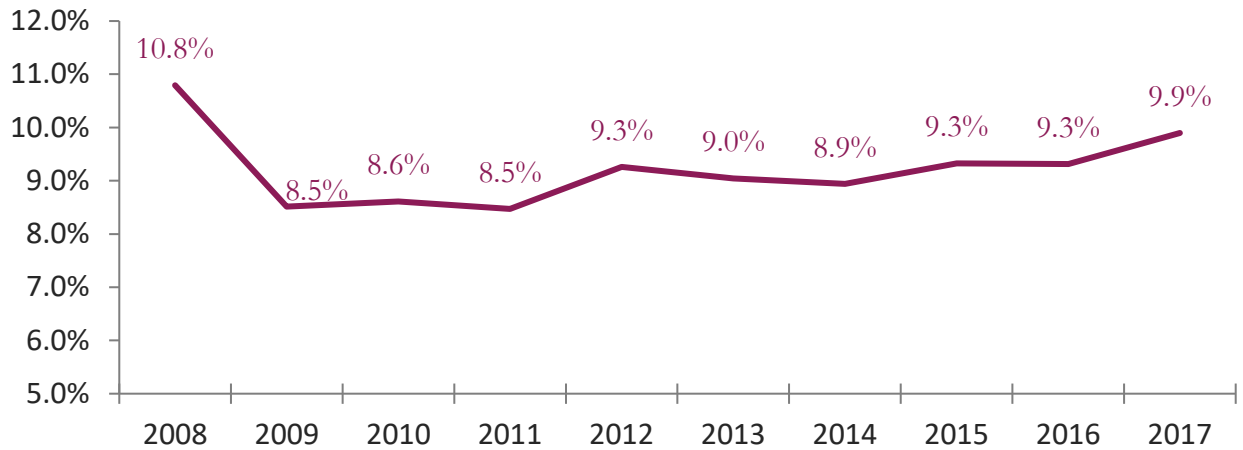
**Figure 6.** Age-adjusted mortality rates due to diabetes 2002-2019 by county compared to state



Source: Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2019 on CDC WONDER Online Database, released in 2020.

The combined, weighted-average of the prevalence of diabetes for the 22-county service area is shown below. The trend is increasing; but was lower than the expected in the most recent update of the data.

**Figure 7.** Percentage of population with diabetes for the Gundersen Health System’s service area (a weighted average)

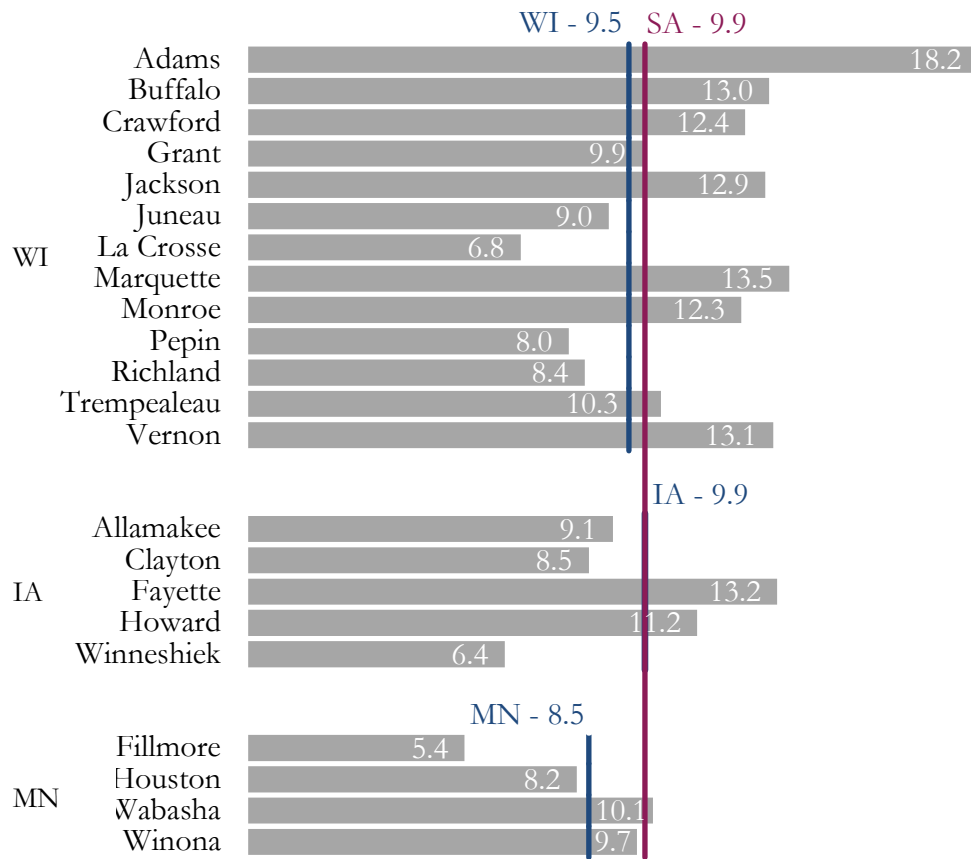


Source: County Health Rankings & Roadmaps - <http://www.countyhealthrankings.org>

The prevalence of diabetes by county is shown in the following figure. Counties with the highest rate of diabetes are Adams, Buffalo, Marquette and Vernon in WI, and Fayette in IA. These counties all have rates higher than their state average. Overall, 13 of the 22 counties are at or above their state average for diabetes. The county with the highest percentage of diabetes is Adams County at 18.2%, which is nearly twice as high as the state average. Of the 9 counties that are below their state average, Filmore has the lowest percentage of diabetes at 5.4%. One of the most important risk factors for diabetes is obesity. Most counties (16 out of 22) have obesity percentages that are greater than or equal to their state averages Half of the counties in the service area have both obesity and diabetes rates that are higher than their state averages.



**Figure 8.** Percentage of population with diabetes by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



Source: University of Wisconsin Population Health Institute (2021).

### Heart Disease

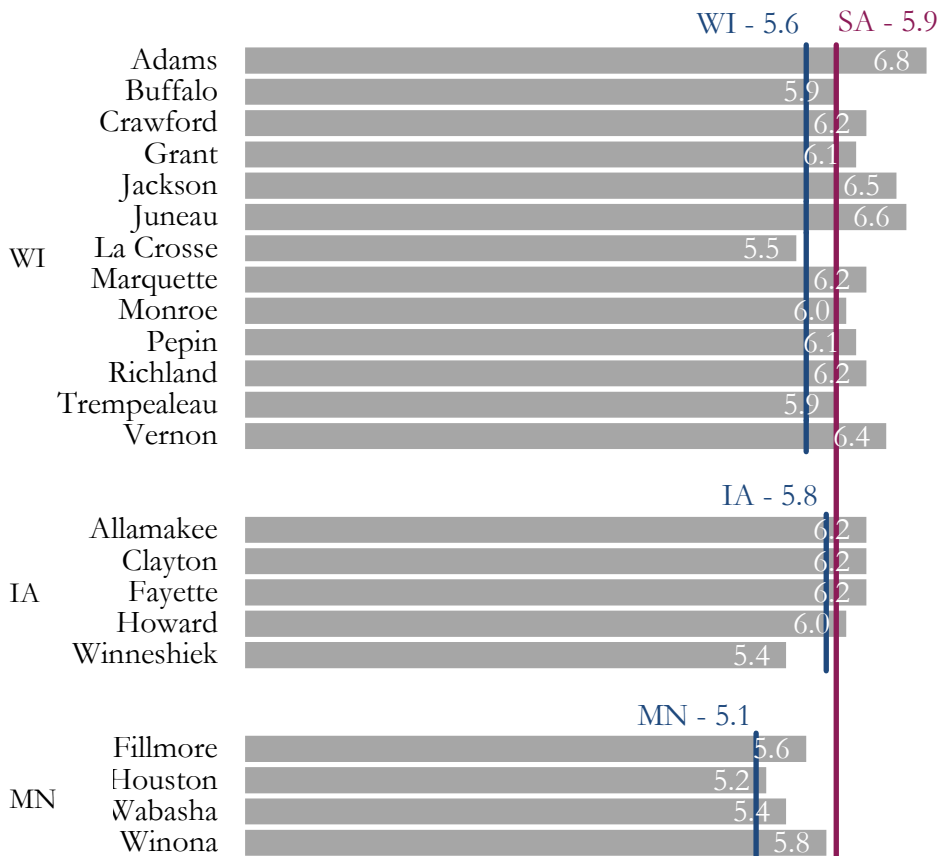
The age-adjusted mortality rate due to heart disease decreased in the 22-county service area from 112.5 in 2016 to 108.7 in 2019. The main contributors to heart disease are a combination of tobacco use, obesity, poor diet, lack of physical activity, and genetics. Deaths from heart disease has seen a dramatic decline over the past few decades due to improved treatment of hypertension and high cholesterol. The heart disease mortality rate is much higher than the Healthy People 2030 goal of 71.1 per 100,000.

The prevalence of heart disease as reported in the County Health Rankings is the percent of adults who have been told by their health care provider that they have heart disease or angina. This may be an under-reporting of the actual

Deaths from heart disease in the 22-county service area are declining; but are far from HP2030 goals. Intervening on tobacco use could accelerate these improvements.

prevalence of disease. The percentages for each county in the 22-county service area is shown in the figure below for the most recently reported year (2018). Counties with a higher rate of heart disease included Adams, Jackson, Juneau, and Vernon counties in WI. Adams, Jackson and Juneau counties also have a much higher smoking rate. Significant gains could be achieved with behavior risk reduction and should be considered in implementation plans.

**Figure 9.** Percentage of population with heart disease state and a weighted average for the Gundersen Health System’s service area (SA)



Source: U.S. News and World Report, Healthiest Communities Rankings

# Health Outcomes: Quality of Life

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## Self-reported Health Status

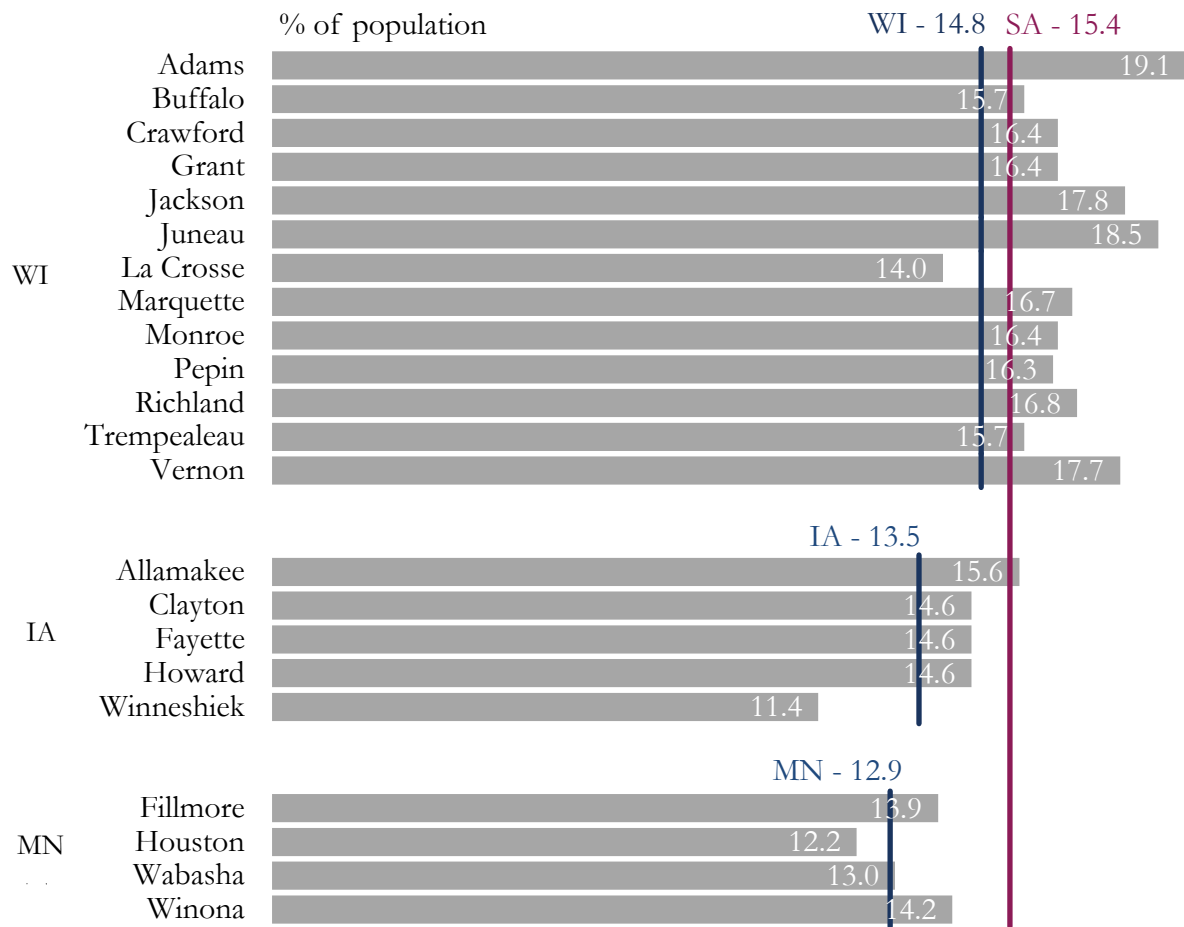
In addition to measuring how long people live, it is important to also include measures that consider how healthy people are while alive, their quality of life. An increased rate of disease within a population impacts the burden upon the individual and the community. Health care cost, loss of work time, and risk for other health complications decrease the quality of life within a region.

Quality of life is often measured by using self-reported health status. This is a question used on national health surveys that asks about how an individual would rate their overall health (on a scale from poor to excellent.) (University of Wisconsin Population Health Institute, 2021). Individuals reporting their health fair or poor are considered as having a poor quality of life. Healthy People 2030 has not set goals for self-reported health but monitor it as a broad, comprehensive measure that reflects the contributions of the Healthy People 2030 objectives to overall health and well-being.

Wisconsin has a higher (worse) rating of fair or poor health than Minnesota or Iowa. Adams, Juneau, and Vernon counties all have higher rates of fair or poor health compared to the overall Wisconsin rate. The overall rates are age-adjusted, so worse self-rated health could be a result of an older population. Self-reported health may also differ by race/ethnicity, in part, because cultural differences in reporting patterns due to different definitions of health may exist. It is important to be aware of these differences when comparing across the Gundersen Health Service Area.

Self-rated health and poor mental health days is poorest in Adams, Juneau, Marquette, and Vernon counties in WI. Most people in the 22-county service area rate their health worse than their respective state averages. This may be partially explained by the age composition of the service area and other ethnic factors.

**Figure 10.** Age-adjusted self-reported health % fair or poor by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



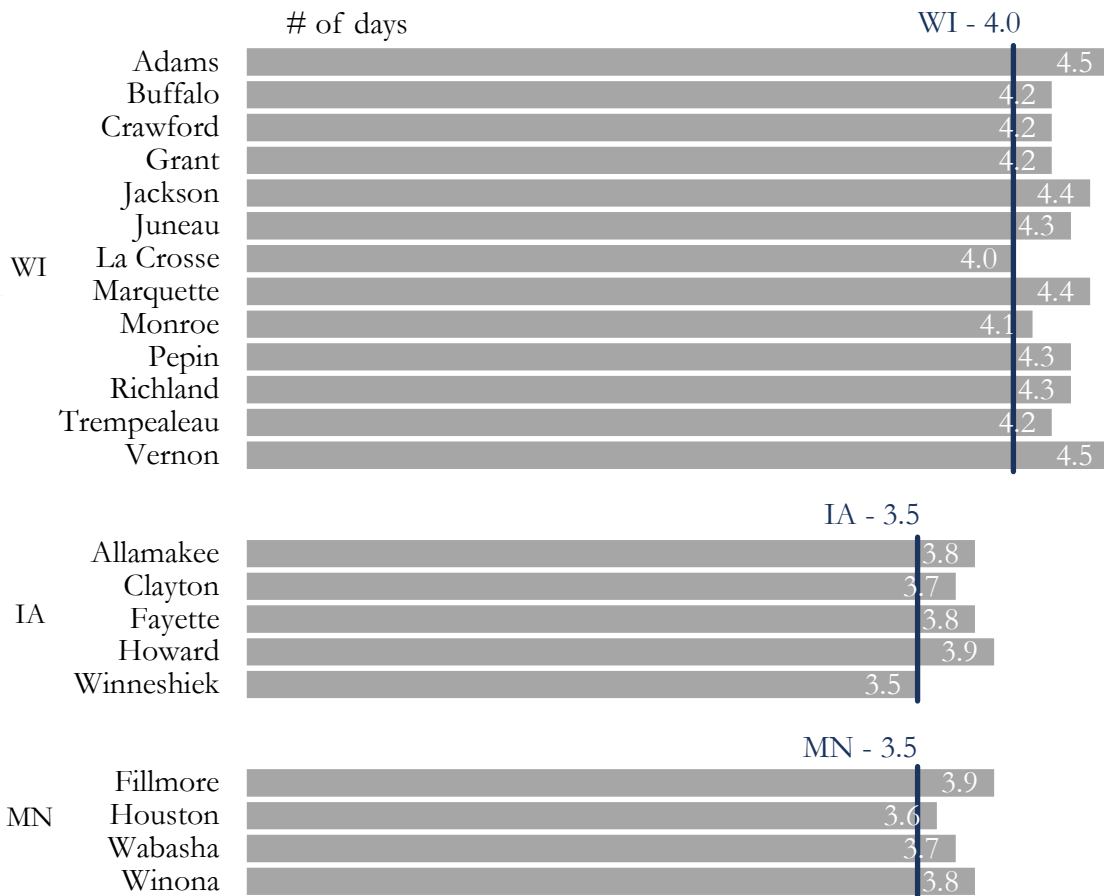
Source: University of Wisconsin Population Health Institute (2021).

## Poor Mental Health Days

A person’s overall health includes mental well-being. The average poor mental health days for individuals is considered an aspect of the health-related quality of life indicator. Counties with more unhealthy days have higher rates of unemployment, poverty, percentage of adults who did not complete high school, mortality rates, and disability (University of Wisconsin Population Health Institute, 2021). Mental health can be intimately tied to ACEs, chronic illness, homelessness, and alcohol/substance abuse, influencing health behaviors and outcomes (Office of Disease Prevention and Health Promotion, 2021).

Overall, the average poor mental health days per month for the 22-county service region range between 3.5-4.5 days. All counties meet or exceed their respective state averages. Statewide averages are 3.5 days per month in Minnesota and Iowa, and 4.0 days per month in Wisconsin (University of Wisconsin Population Health Institute, 2021).

**Figure 11.** Average poor mental health days by county compared to state (age adjusted)



Source: University of Wisconsin Population Health Institute (2021).

Program development and implementation plans should consider those counties with the highest rate of poor mental health days, high rates of suicide, limited access to mental health services, as well as the impact of ACEs. The Wisconsin Child Abuse and Neglect Prevention Board (2018), found that as the number of ACEs increased, so did the prevalence of depression. (See below for more information about ACEs.) The preceding data also does not reflect the mental health of youth within the service area, which may have higher or lower rates of poor mental health days and require different strategies to address need.

# Health Factors

## Health Behaviors

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### Smoking

Tobacco use is the leading cause of preventable death, disability, and illness in the United States. More than 16 million Americans suffer from a disease caused by smoking, and smoking-related illnesses lead to over 480,000 deaths annually (ODPHP, n.d.). Each year, smoking-related illness costs the nation more than \$300 billion in direct medical costs and lost productivity due to early death and secondhand smoke exposure (Centers for Disease Control and Prevention, 2021). Estimates show that as much as 80% of lung cancers for women and 90% of lung cancers for men can be linked to smoking (Gundersen Center for Cancer and Blood Disorders Cancer Needs Assessment, released 2021).

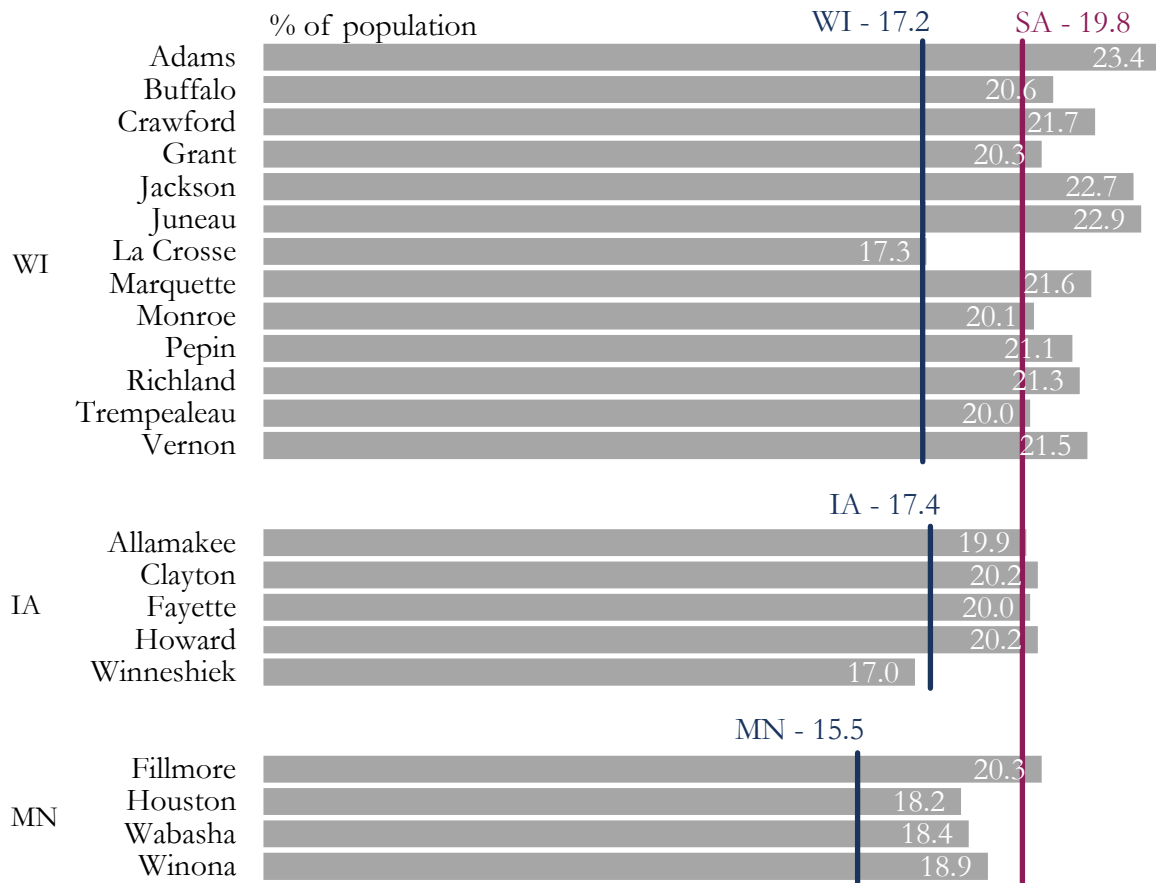
Smoking rates are highest in Adams, Jackson, and Juneau counties in WI, and lowest in La Crosse County in WI and Winneshiek County in IA. Those most likely to use tobacco are older, have lower incomes and tend to have higher health disparities.

#### Healthy People 2030 Objective:

- +Reduce cigarette smoking by adults from a baseline of 13.9% of adults aged 18 years and older to 5.0%.
- +Reduce the current use of combustible tobacco products among adults aged 18 years and over from a baseline of 16.8% to 5.0%.
- +Increase recent smoking cessation success among adult smokers aged 18 years and over from a baseline of 8.3% to 10.2%.
- +Increase the proportion of smoke-free homes from a baseline of 86.5% to 92.9%.

The smoking rates below are age-adjusted to reflect the age of the population. The service area average is 19.8%. Overall, county smoking rates ranged between 17% and 23%, which is higher than state averages. Juneau county had the highest percentage of population who smoke at 22.9%, and Winneshiek county had the least at 17.0%, which is below the Iowa state average of 17.4%. Prior to a methodology change in how this data was reported, the service area weighted average and many of the county rates were lower than their respective state averages. This illustrates the impact of age on the smoking rate.

**Figure 12.** Percent of population who smoke by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



Source: University of Wisconsin Population Health Institute, (2021)

## Obesity

Obesity (defined as a body mass index of 30 kg/m<sup>2</sup> or higher) is a measure of excess weight and serves as a proxy for poor diet and limited physical activity. Obesity increases the risk for health conditions such as coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia, stroke, liver and gallbladder disease, sleep apnea and respiratory problems (such as asthma), osteoarthritis, and poor health status (Centers for Disease Control and Prevention, 2021). Nationally, the rate of obesity has been increasing over the past several decades as well as in the 22-county service area. The rate of obesity for the 22-county service area in

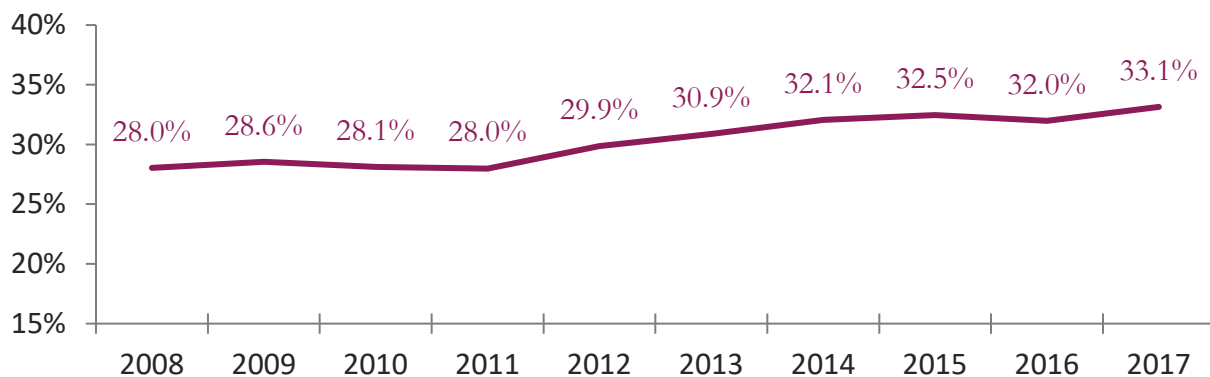
Obesity and physical inactivity rates are highest in Marquette County, where a significant percent of the population is without opportunities for physical activity. Obesity is also high in Clayton and Allamakee counties, which are mainly rural. A better understanding of opportunities for primary prevention of obesity in rural locations would be important to consider.

2017 was 33%. The increase was lower than the expected trend based on prior years and is better than the HP2030 goal of 36%.

**Healthy People 2030 Objective:**

+Reduce the proportion of adults who are obese from 38.6% of persons aged 20 or over to 36.0%.

**Figure 13.** Percentage of population with obesity for the Gundersen Health System’s service area (a weighted average)

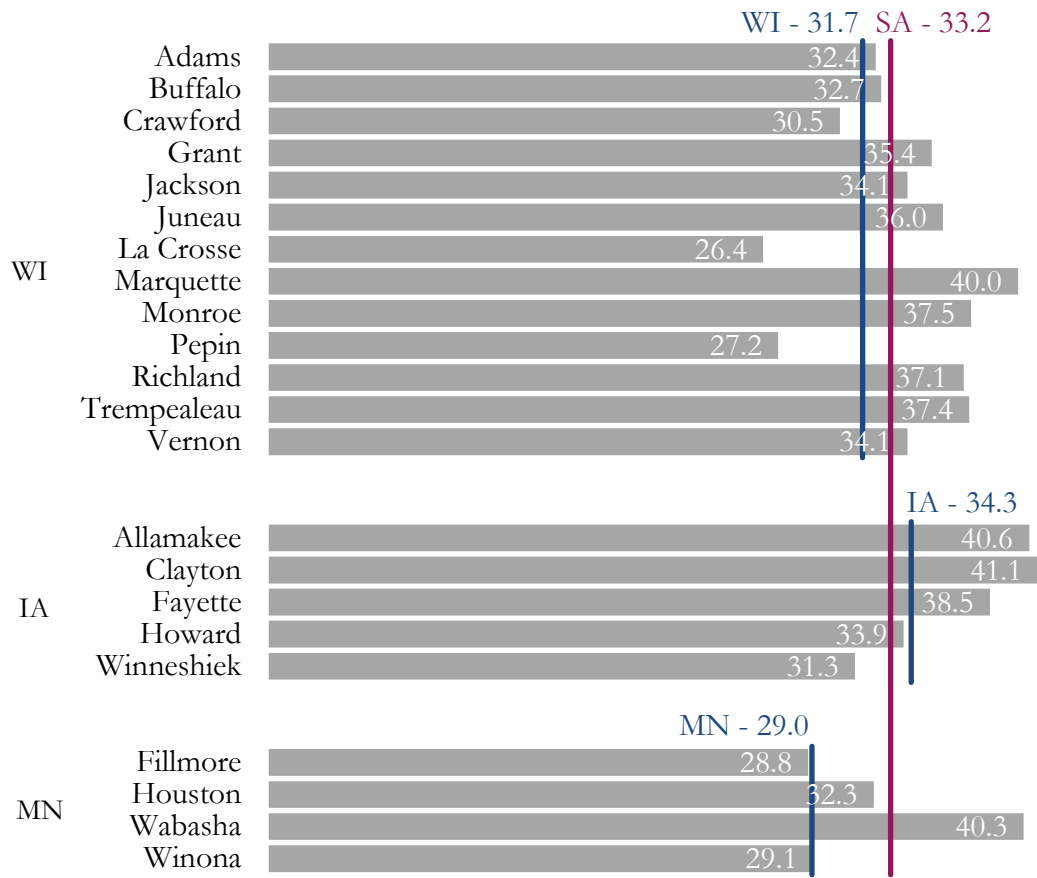


Source: County Health Rankings & Roadmaps - <http://www.countyhealthrankings.org>

Overall, county obesity rates ranged between 26% and 41%. Fourteen counties in the 22-county service area have met the HP2030 goal of less than 36% obese. Clayton County in Iowa had the highest obesity rate of all the 22-counties. Other counties with rates above the HP2030 goal include Allamakee and Fayette counties in Iowa, Marquette, Monroe, Richland, and Trempealeau counties in Wisconsin, and Wabasha County in Minnesota.



**Figure 14.** Percentage of population with obesity by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



## Physical Activity & Access to Exercise

Obesity is greatly influenced by an individual's inactivity (Centers for Disease Control and Prevention, 2021). It is recommended that adults spend at least 150 minutes per week in moderate intensity activity; however, only about 50% of adults meet this recommendation according to self-reported data (Centers for Disease Control and Prevention, 2021b). Additionally, it is recommended that adolescents spend at least 60 minutes a day being active, yet less than one quarter of youth ages 6-17 years old meet this guideline daily (Centers for Disease Control and Prevention, 2020b).

Physical activity is influenced by the environment in which one lives, including such things as safety, presence of natural or built structures like parks, sidewalks, bicycle lanes, and other opportunities such as fitness facilities and municipal swimming pools. Opportunities to be physically active and physical activity may “look” different in rural communities, where towns are further apart, more of the population live on farms, and occupations tend to be more manual.

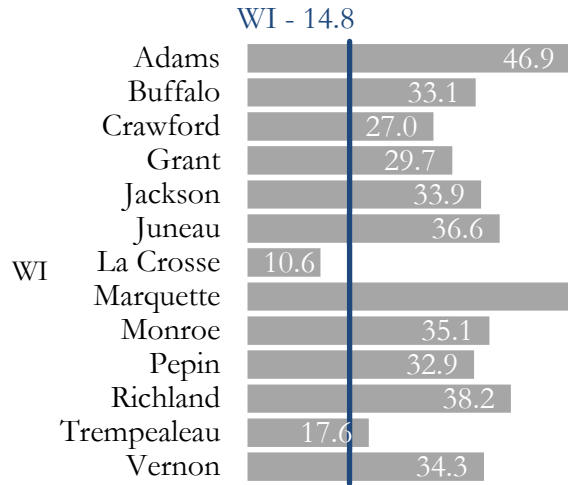
### **Healthy People 2030 Objectives:**

- +Reduce the proportion of adults 18 and older who engage in no leisure-time physical activity from a baseline of 25.4% to 21.2%.

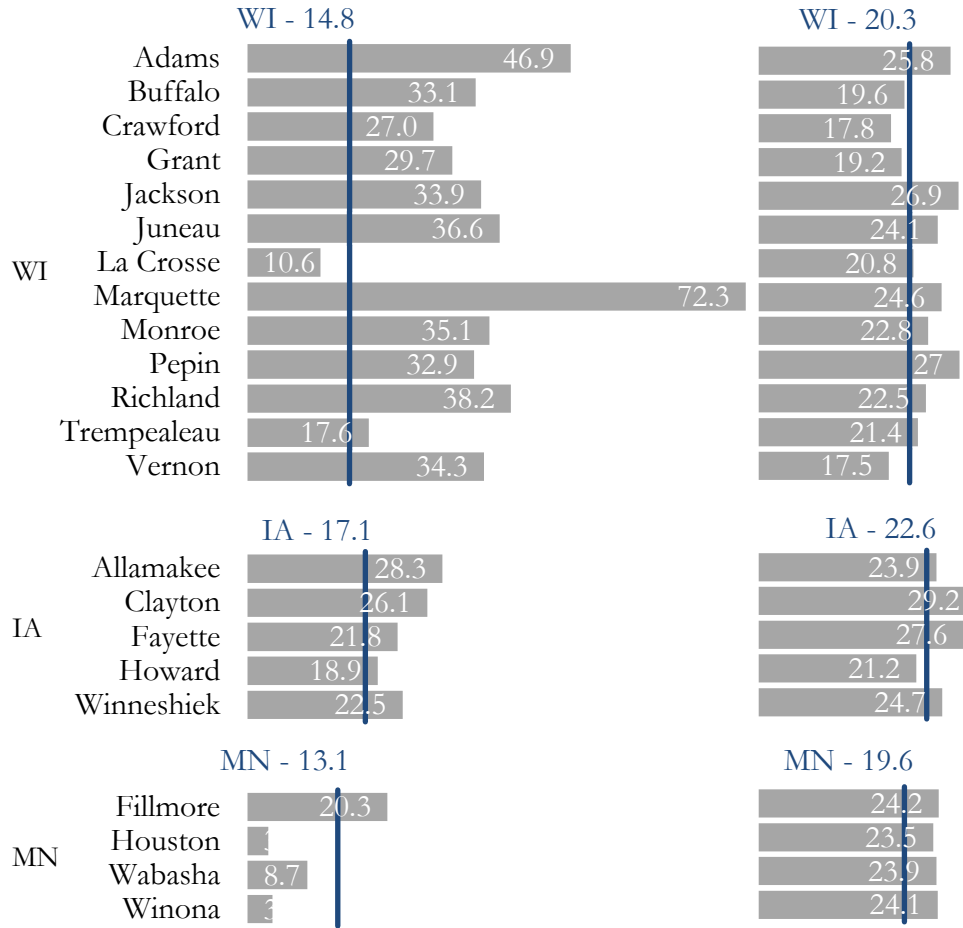
- +Increase the proportion of adolescents who meet the current aerobic physical activity guideline from a baseline of 26.1% of students in grades 9-12 to 30.6%.

- +Increase the proportion of adults who meet the current minimum aerobic physical activity guideline needed for substantial health benefits from a baseline of 54.2% to 59.2%.

**Figure 15a.** Percentage of population who are without access to exercise opportunities by county compared to state



**Figure 15b.** Percentage of population who are inactive by county compared to state



Sources: University of Wisconsin Population Health Institute, (2021).

Overall, residents of the 22-county region feel they have less access to exercise opportunities compared to state average. Just over 75% of counties (17 of 22) exceed their state averages for physical inactivity. As discussed previously, rates of obesity are high throughout the region. Physical inactivity may contribute to obesity, as well as other negative health outcomes. Increasing opportunities and providing strategies to increase activity for all residents, regardless of geographic location, race or ethnicity, age, sex, education, or disability should be imperative to addressing chronic illness and other health outcomes.

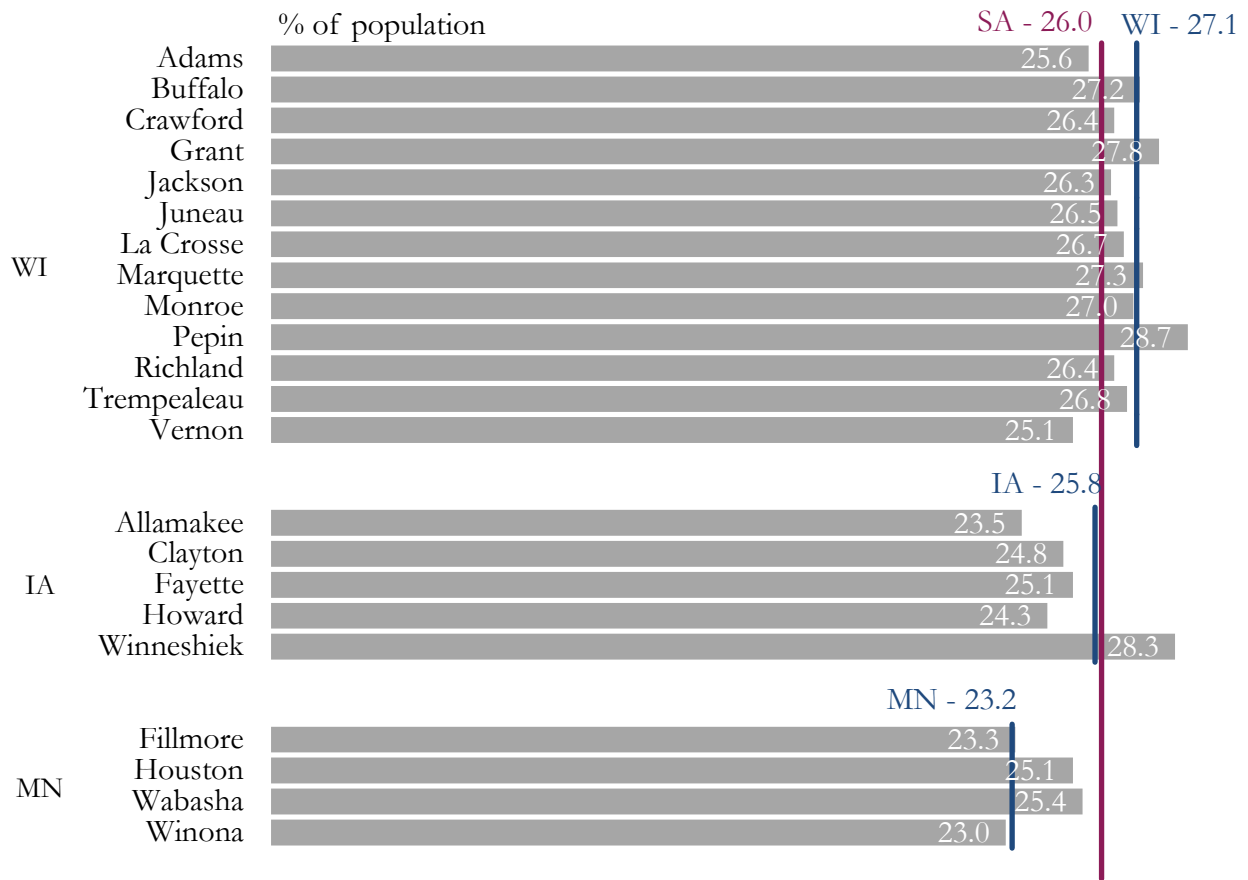
## Excessive Alcohol Use

A risk factor for several health outcomes, such as alcohol poisoning, hypertension, suicide, interpersonal violence, and motor vehicle accidents, excessive drinking has been attributed to approximately 95,000 deaths per year and \$249 billion in economic cost. Excessive drinking includes binge drinking (for females, 4 or more drinks on a single occasion, for males, 5 or more drinks), heavy drinking (for females 1+/day, and for males 2+/day), and any drinking by pregnant women or people younger than age 21 (Centers for Disease Control and Prevention, 2020). Alcohol abuse can be a risk factor in child maltreatment cases, mental health, and certain diseases (like breast and colorectal cancers). Excessive alcohol use should be addressed to lessen the impact of these risk factors, as well as to reduce injuries and fatalities due to use.

Alcohol and substance abuse are significant risk factors in the 22-county service area. Excessive alcohol use is common. Drug use, especially opioids, has become more common in the service area. Local efforts should seek better data on the extent of the problem and ways to address these issues relative to the resources available in the community.

Wisconsin counties had the highest rates of excessive drinking ranging from approximately 25-29% of the population, followed by Iowa (23-28%) and Minnesota (23-25%) counties. Wisconsin counties with the highest rates of excessive drinkers were Buffalo, Grant, Pepin, and Marquette counties which exceeded the Wisconsin state average of 27.1% while Winneshiek county exceeded the Iowa state average of 25.8%. Houston and Wabasha counties reported 25.1% and 25.4% respectively, which is above the Minnesota state average of 23.2%.

**Figure 16.** Percentage of population engaging in excessive alcohol use by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



Source: University of Wisconsin Population Health Institute, (2021). Excessive drinking data from BRFSS-2018.

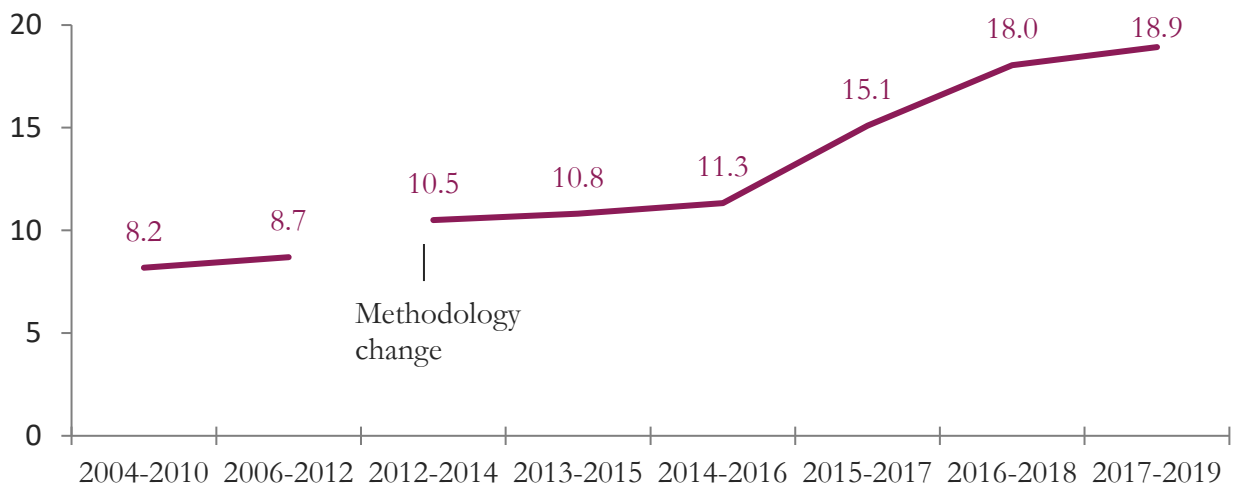
## Substance Abuse

Substance abuse has been found to be cumulative and is a great cost to social, physical, mental, and public health problems. Early initiation of drug use in life has been shown to increase possibility of substance abuse and develop into a chronic health issue (ODPHP, 2016). Adults who have had ACEs initiate use of alcohol at a younger age and have a higher risk for developing a substance use disorder (SAMSHA, 2018). Unfortunately, there are no good sources of summary data across the 22-county service area on substance use to examine the extent of the problem. Deaths from drug overdose is one measure that is available. Nationally, the rate of drug overdose deaths has been increasing over the past decades as well as in the 22-county service area. The overdose death rate for the 22-county service area for 2017-2019 was 18.9 per 100,000. The increase was lower than the expected trend based on prior years and is better than the HP2030 goal of 20.7 per 100,000.

### Healthy People 2030 Objective:

- +Maintain the baseline of drug overdose deaths of 20.7 age-adjusted deaths per 100,000.
- +Increase the proportion of persons 12 years and older who need alcohol and/or illicit drug treatment who received specialty treatment for substance use in the past year from a baseline of 11.1% to 14.0%.
- +Reduce the proportion of persons aged 12 years and older with an illicit drug use disorder in the past year from a baseline of 3.0% to 2.7%.
- +Maintain the baseline of 12.0% of adults aged 18 years and over that report use of any illicit drugs during the past 30 days.

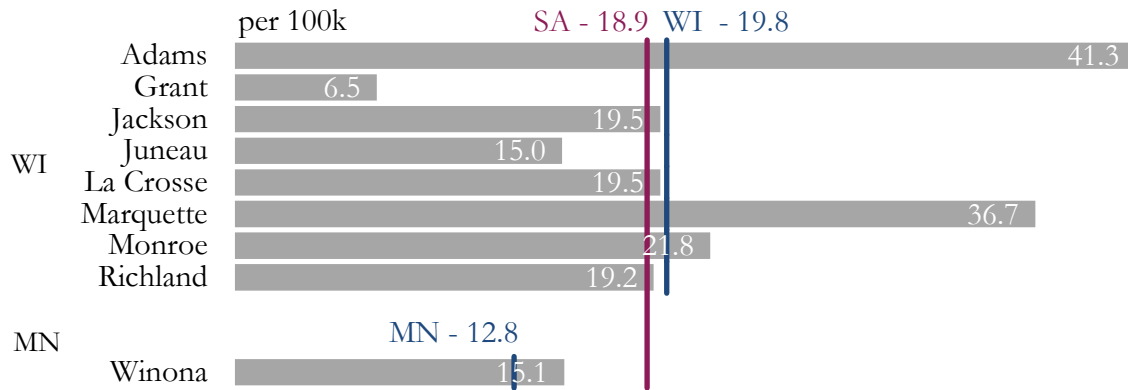
**Figure 17.** Drug overdose deaths per 100,000 for the Gundersen Health System’s service area (a weighted average)



Source: County Health Rankings & Roadmaps - <http://www.countyhealthrankings.org>

Drug overdose deaths have increased in Wisconsin and Minnesota. Data from 2017-2019 show an increase in Wisconsin and Minnesota, increasing from 16 to 19.8 and 12.5 to 12.8 deaths per 100,000 population respectively. Iowa’s rate of deaths slightly decreased from 10.6 to 10.4 deaths per 100,000 population (University of Wisconsin Population Health Institute, 2021). Reliable county level data is known for 9 out of the 22 counties within the service area. Of these, 3 exceed the HP2030 goal of 20.7 per 100,000. Overall, Adams County had the highest reported rates of drug overdose deaths at 41.3 per 100,000 population, followed by Marquette (36.7 deaths per 100,000 population) and Monroe counties (21.8 deaths per 100,000) which is above the Wisconsin state average (19.8) and the Healthy people 2030 goal (20.7). Caution should be taken in using this as a measure of the burden of overall drug use. Small population size can greatly affect these numbers.

**Figure 18.** Age-adjusted drug overdose deaths per 100,000 for known counties compared to state and a weighted average for the Gundersen Health System’s service area (SA)



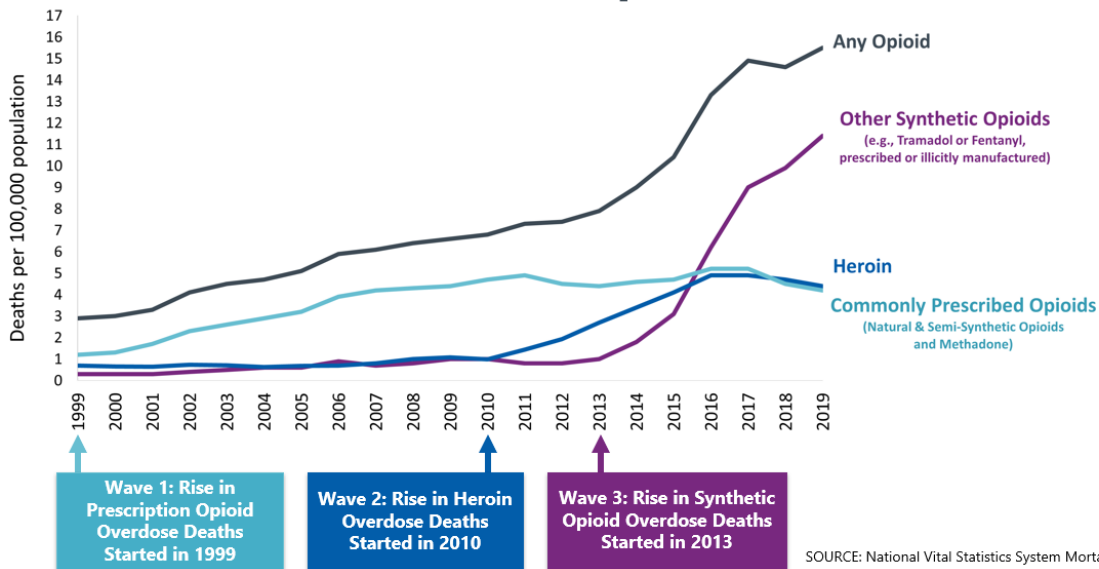
Source: 2017-2019 County level data-University of Wisconsin Population Health Institute, (2021). From CDC Wonder-Compressed Mortality Data 2017-2019.

### Opioid Abuse

Across the nation, states have seen a steady increase in opioid abuse, and deaths related to opioid use. According to the National Institute on Drug Abuse, rates for opioid-involved overdose deaths include Wisconsin at 15.3 deaths per 100,000 and Minnesota at 6.3 deaths per 100,000 in 2018. Iowa did slightly better overall, at 4.8 deaths per 100,000 in 2018 (National Institute on Drug Abuse, 2021). Opioid use should be monitored throughout the 22-county service region.

**Figure 19.** Trend in opioid related deaths per 100,000 in the United States

## Three Waves of the Rise in Opioid Overdose Deaths



Source: Centers for Disease Control, (2021). Three waves of opioid overdose deaths.

# Health Factors

## Clinical Care

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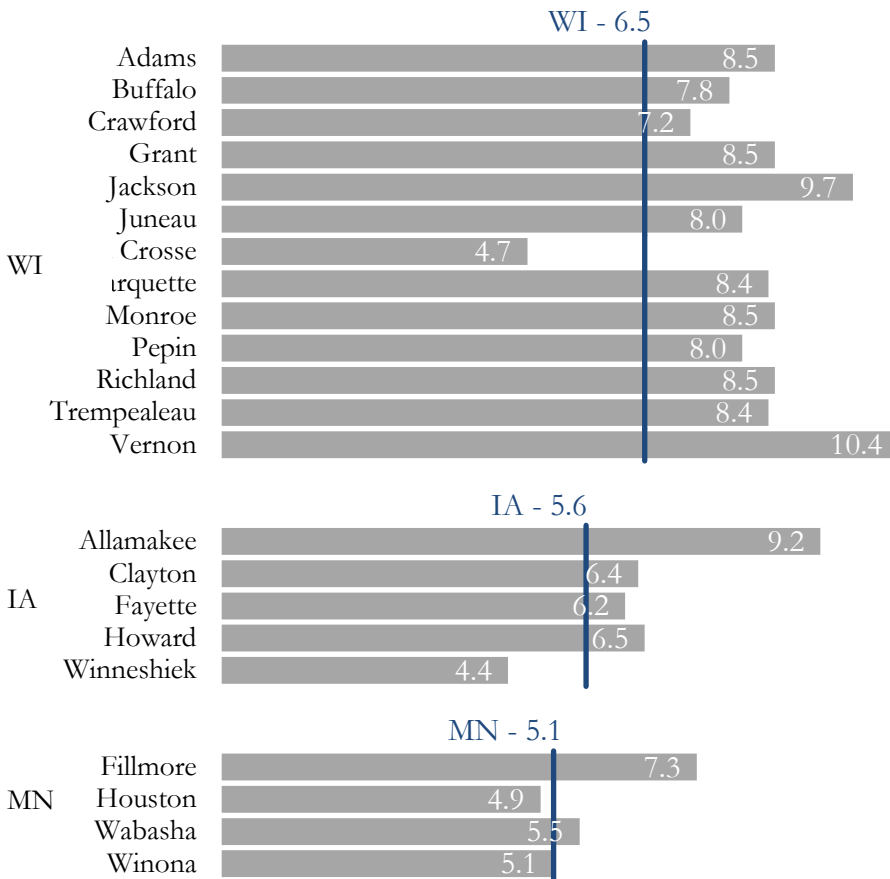
### Uninsured

Lack of health insurance coverage is a significant barrier to accessing needed health care and to maintaining financial security. People who lack consistent insurance tend to seek medical care only when they have a serious health problem. Thus, preventive care screenings that could reduce serious illness and death are delayed. Seeking medical care when one is uninsured can also lead to serious financial consequences, with many unable to pay their medical bills, resulting in medical debt. The Affordable Care Act passed in 2010, along with state-wide expansion of Medicaid has greatly decreased the number of people that are uninsured. Wisconsin has the highest rate of uninsured at 6.5%, compared to Iowa at 5.6%, and Minnesota at 5.1%. Vernon County has the highest rate at 10.4%, followed by Jackson County (9.7%). Allamakee County in Iowa, and Fillmore County in Minnesota also have higher rates of uninsured. These counties tend to also have more racial/ethnic diversity (Native American population in Jackson County and Amish in Fillmore and Vernon counties) and may choose non-traditional healthcare. The COVID-19 pandemic may also affect the number of people that have access to reliable insurance through their employer.

Clinical care is dependent on the availability of providers, the ability to pay for care, and for the quality of care offered. There are also cultural differences in healthcare seeking behavior that should be considered when assuring the population in the 22-county service area have access to the highest quality care. Rural underserved communities are at highest risk of unmet needs.



**Figure 20.** Percentage of population under age 65 without health insurance by county compared to state



Source: University of Wisconsin Population Health Institute (2021).

## Access to Mental and Dental Health

Clinical care involves access to care and quality of care and contributes to both length of life and quality of life (County Health Rankings and Roadmaps, 2021). When people lack adequate access to mental health providers, they are at higher risk for poorer health outcomes and premature mortality (Centers for Disease Control and Prevention, 2021). Additionally, mental health can also contribute to one’s ability to maintain good physical health. One aspect of physical health is oral health. When a community lacks dental health providers, people lack preventative care, ultimately resulting in a higher incidence of oral diseases (Centers for Disease Control and Prevention, 2021). Data for access to mental and dental health providers for the 22-county service area and individual states from the County Health Rankings is shown in the figure below.

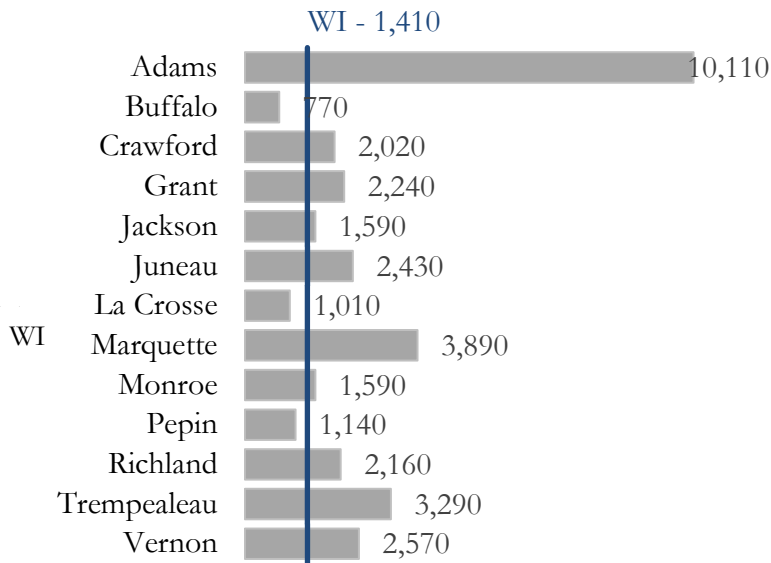
### **Healthy People 2030 Objectives:**

+Increase the proportion of primary care office visits where persons aged 12 years and older are screened for **depression** from a baseline of 8.5% to 13.5%.

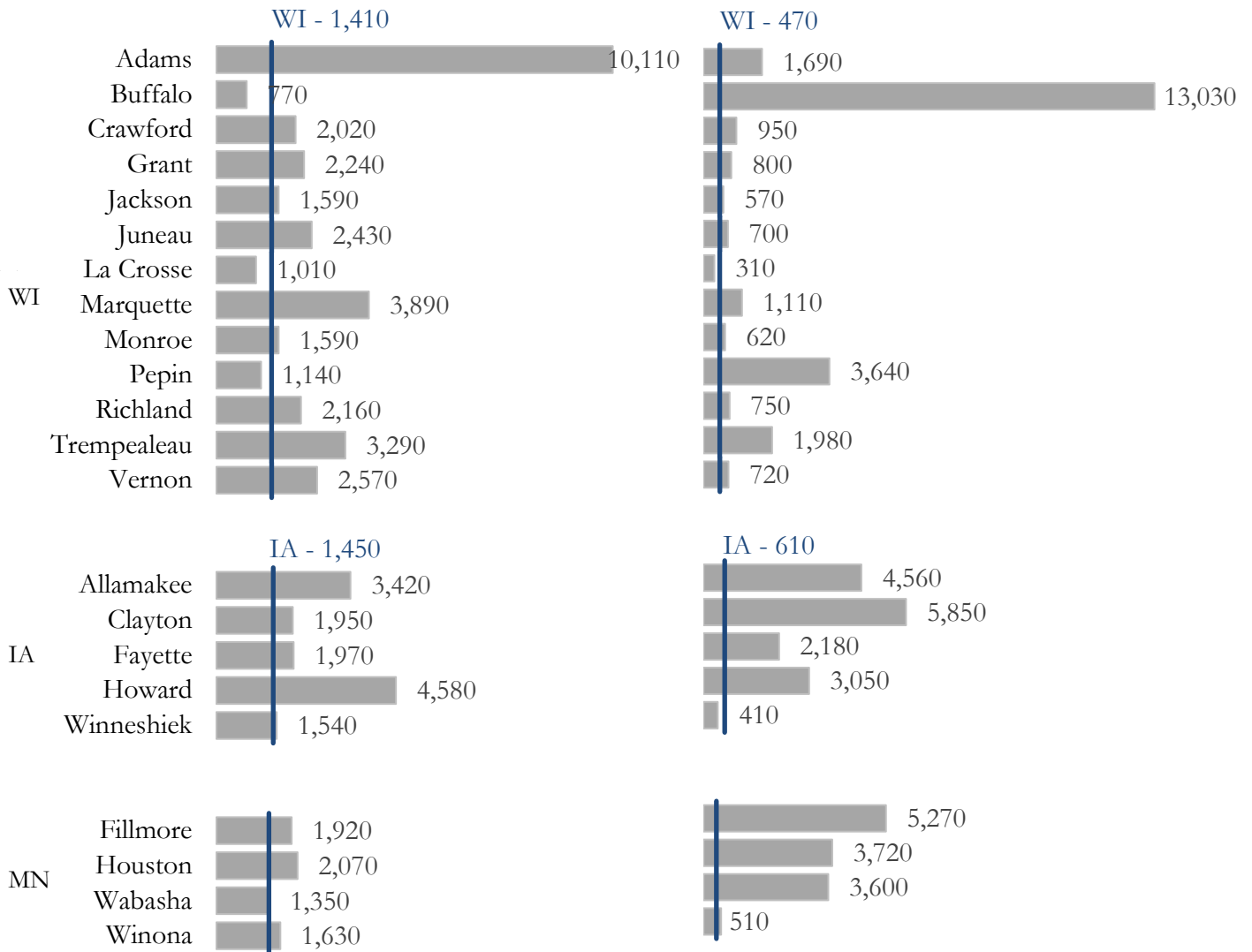
+Reduce the proportion of persons who are unable to obtain or delay in obtaining necessary **dental care** from a baseline of 4.6% to 4.1%.

For mental health providers, Winneshiek County fell below the Iowa state ratio (610 to 1) at 410 residents to 1 mental health provider, followed by La Crosse County which fell below the Wisconsin state ratio (470 to 1) at 310 residents per 1 mental health provider. Buffalo County's ratio of dental health providers to residents fell well below national and state ratios at 770 to 1, followed by La Crosse County at 1,010 to 1 and Pepin County at 1,140 to 1. The three counties facing the greatest disparity in access to mental health providers are Buffalo, Fillmore, and Clayton. Buffalo County had the least access at 13,030 residents to 1 mental health provider. The counties facing the greatest disparity in access to dental health providers are Adams, Marquette, Trempealeau, Allamakee, and Howard. Adams had the lowest access and at 10,110 residents to 1 dental health provider.

**Figure 21a.** Number of residents per dental provider by county compared to state



**Figure 21b.** Number of residents per mental health provider by county compared to state



Source: University of Wisconsin Population Health Institute (2021).

## Preventive Care Screening Compliance

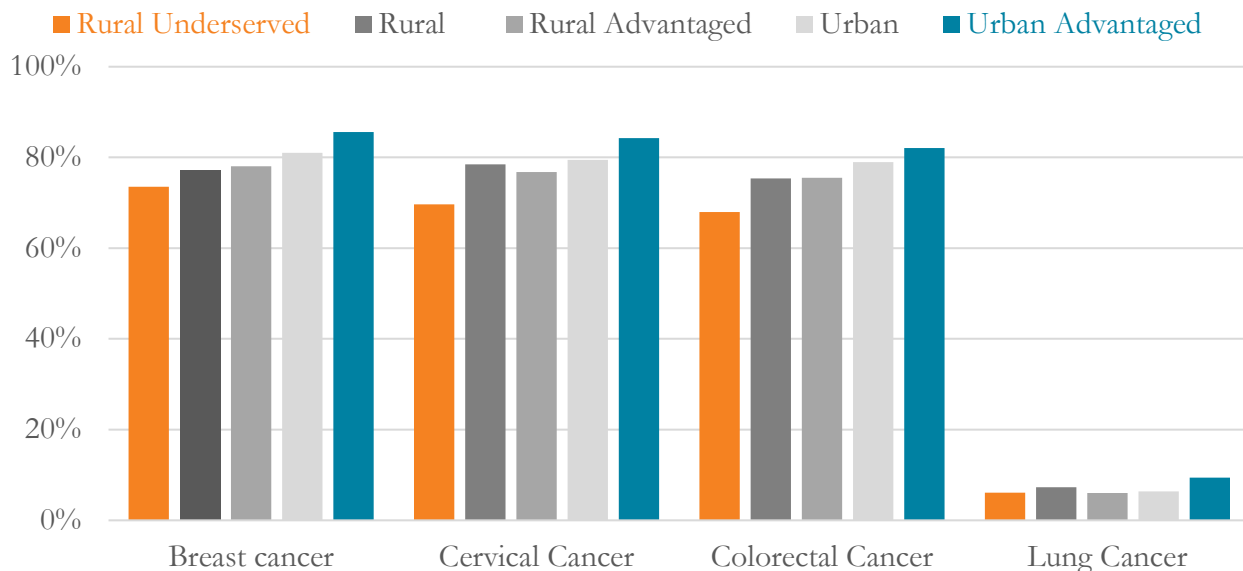
Screening for cancer is the best way to identify cancer in an earlier stage which usually results in better prognosis and longer life. Cancer screening compliance can be used as a proxy for overall quality of care metrics.

In 2019, the Wisconsin Collaborative for Healthcare Quality released a report on quality metrics by race/ethnicity, and ability to pay for care (payer) (Wisconsin Collaborative for Healthcare Quality, 2019). In 2020, they released a similar report on these same quality metrics based on living location. (Wisconsin Collaborative for Healthcare Quality, 2020). Living location was defined by zip code of residence and was categorized into rural versus urban communities. These were then further broken down into underserved, average, or advantaged communities based on a combination of socioeconomic variables (Health Innovation Program, 2020).

The recent Cancer Needs Assessment examined four cancer screening measures for breast, colorectal, cervical, and lung cancer by race, payer, and living location. (Gundersen Center for Cancer and Blood Disorders Cancer Needs Assessment, released 2021). Overall, communities considered to be rural underserved were consistently 1.2 times less likely to be screened than patients in urban advantaged communities.

There are disparities in screening of low-insured, non-white patients, particularly living in rural and underserved communities in the 22-county service area.

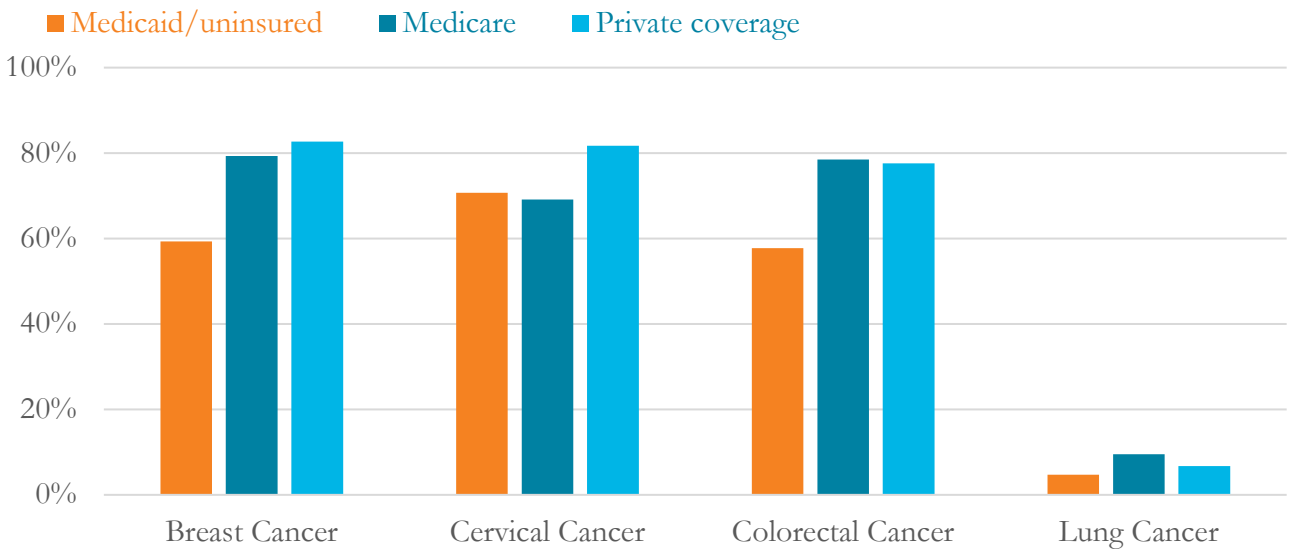
**Figure 22.** Cancer screening rates by living location.



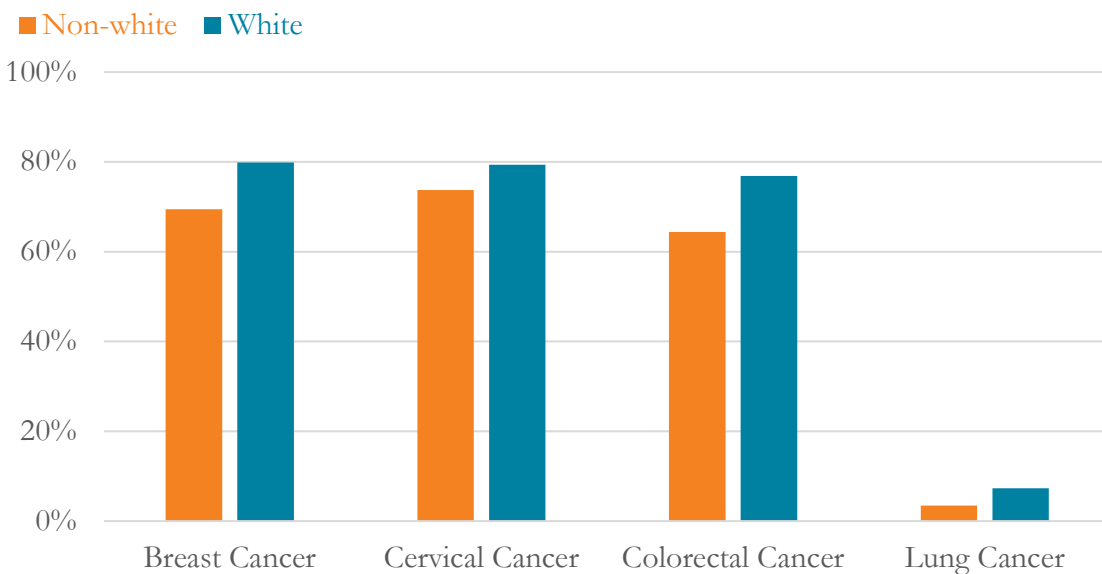
Source: Gundersen Center for Cancer and Blood Disorders Cancer Needs Assessment, released 2021

Other findings from this analysis showed significant differences in completion of these tests by payer and race. Patients with Medicaid or that were uninsured were 1.3 to 1.4 times less likely to be screened for breast, cervical, colorectal and lung cancers. Non-white patients were 1.1 to 1.2 times less likely to be screened for these cancers. These findings are worsened when examining race and payer status by living location, where those patients from rural underserved communities with low insurance or that were non-white, were 1.3 to 1.5 times less likely to be screened.

**Figure 23.** Cancer screening rates by payer.



**Figure 24.** Cancer screening rates by race.



Source: Gundersen Center for Cancer and Blood Disorders Cancer Needs Assessment, released 2021

# Health Factors

## Social Determinants of Health

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Social determinants of health are the conditions in which people are born, grow, live, work and age that impact quality of life, health, and wellbeing (Healthy People 2030, n.d.). Specific examples of social determinants of health include safe housing, access to food, financial security, and transportation (Healthy People 2030, n.d.). When someone has needs within their social, economic, or physical environment, they are at an increased risk of poor health outcomes, including chronic diseases (Healthy People 2030, n.d.). There is significant overlap in these needs. If a person has limited finances, they will likely lack safe housing, have poor access to healthy food, and lack reliable transportation. Furthermore, many of these issues are deep-rooted and generational. Living with many of these conditions has led to a large field of research on adverse childhood experiences and the long-lasting impact they may have on one's health.

### Adverse Childhood Experiences

Adverse childhood experiences (ACEs) are traumatic events occurring during an individual's childhood that have been found to be correlated to risky health behaviors and negative health outcomes as an adult. These events could be maltreatment, exposure to domestic violence, having members of the household incarcerated, divorced, substance abuse, or mental illness (Centers for Disease Control and Prevention, 2021). The original research study on ACEs and health found majority of people experience at least one ACE, and as an individual's number of ACEs increases, the poorer the health outcome later in life (Felitti, et. al., 1998).

For example, in Wisconsin, adults who have a higher number of co-occurring ACEs have been shown to have higher rates of depression, increased health risk behaviors (including tobacco use, excessive drinking, limited exercise), poor general health (obesity, lost teeth, daily feeling of unwellness), and chronic health conditions (asthma, cancer, arthritis, diabetes) (Wisconsin Child Abuse and Neglect Prevention Board, 2018).

Adverse Childhood Experiences (ACEs) can lead to significant long-term health consequences. Many of the conditions considered to be ACEs are common in the 22-county service area. Child abuse is also higher than targeted health goals and without proper intervention can have life-long implications.

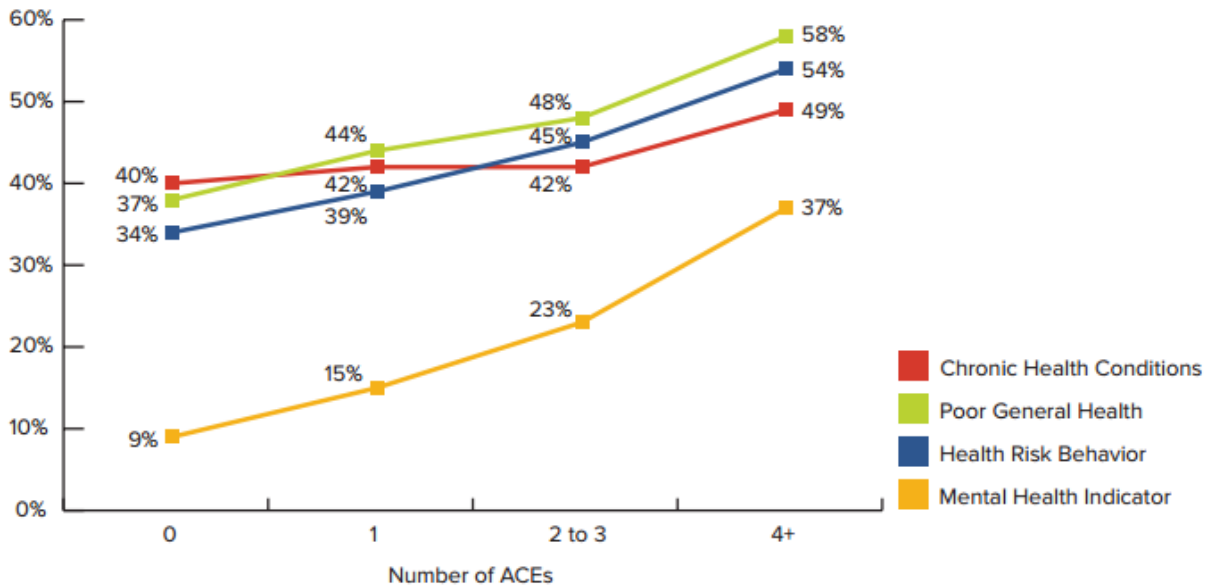
#### Healthy People 2030 Objectives:

+Reduce the proportion of children aged 17 years and under who have ever experienced a parent or guardian who has served time in jail from a baseline of 7.7% to 5.2%.

+Increase the proportion of children aged 6-17 years who communicate positively with their parents from a baseline of 68.5% to 73.0%.

In Iowa, 63.7% of adults report experiencing at least one ACE, with 16.7% experiencing 4 or more ACEs (Central Iowa ACEs Coalition, Released September 2020). Fifty-five percent of adults in Minnesota report experiencing one or more ACEs, with 9% reporting 4 or more (Minnesota Department of Health, 2019). For Wisconsin, 59% of respondents between 2017-2018 reported at least 1 ACE, with 16% experiencing 4 or more ACEs (Wisconsin Department of Health Services, 2020). Specific county level data is limited. However, based on the cumulative state and national research, it can be assumed that over half of the service region has experienced at least one ACE and that these experiences impact the overall health and well-being of the population.

**Figure 25.** Correlation between ACE scores and health outcomes in Wisconsin



Source: Wisconsin Child Abuse and Neglect Prevention Board (2018).

## Child Abuse

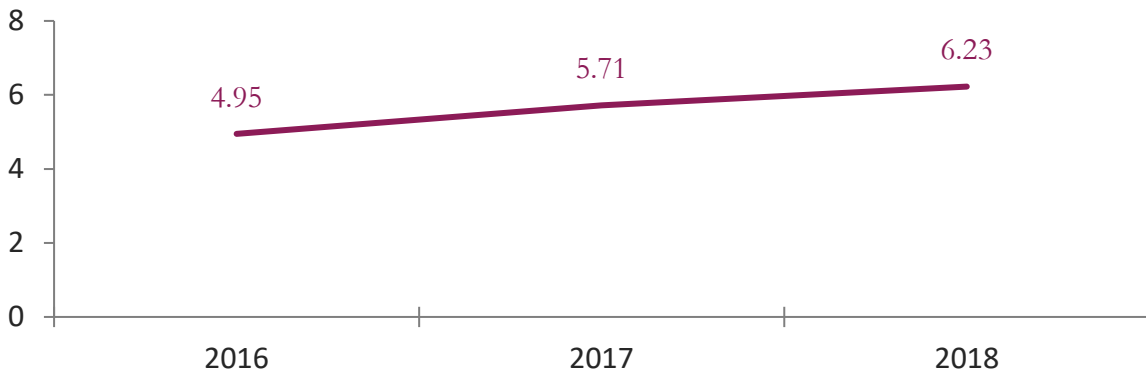
According to the U.S. Department of Health and Human Services' Child Maltreatment report [USDHHS] (2021), 16.7% of children who were reported to Child Protective Services were found to be victims of maltreatment in 2019 (national rate of 9.0 per 1,000 children). Overall, the highest rate of victimization was among children in the first year of life at 25.7 per 1000 children. When differentiated by race or ethnicity, the rate of maltreatment was highest among American Indian and Alaska native children at 14.8 per 1,000 children. African American children had the second highest rate of child maltreatment at 13.7 per 1,000 children (USDHHS, 2021). Adverse childhood experiences, such as abuse or neglect, can impact an infant's brain development, disrupting a child's

ability to think, learn, and develop normally (Central Iowa ACEs Coalition, Released September 2020). The 22-county service area average for child abuse per 1,000 children has increased over the past few years and is about the HP2030 goal.

**Healthy People 2030 Objective:**

- +Reduce nonfatal child maltreatment from a baseline of 9.0 victims per 1,000 children under age 18 to 8.7 victims per 1,000 children.
- +Reduce child abuse and neglect deaths from a baseline of 2.4 deaths per 100,000 children under 18 years to 1.9 deaths per 100,000 children.

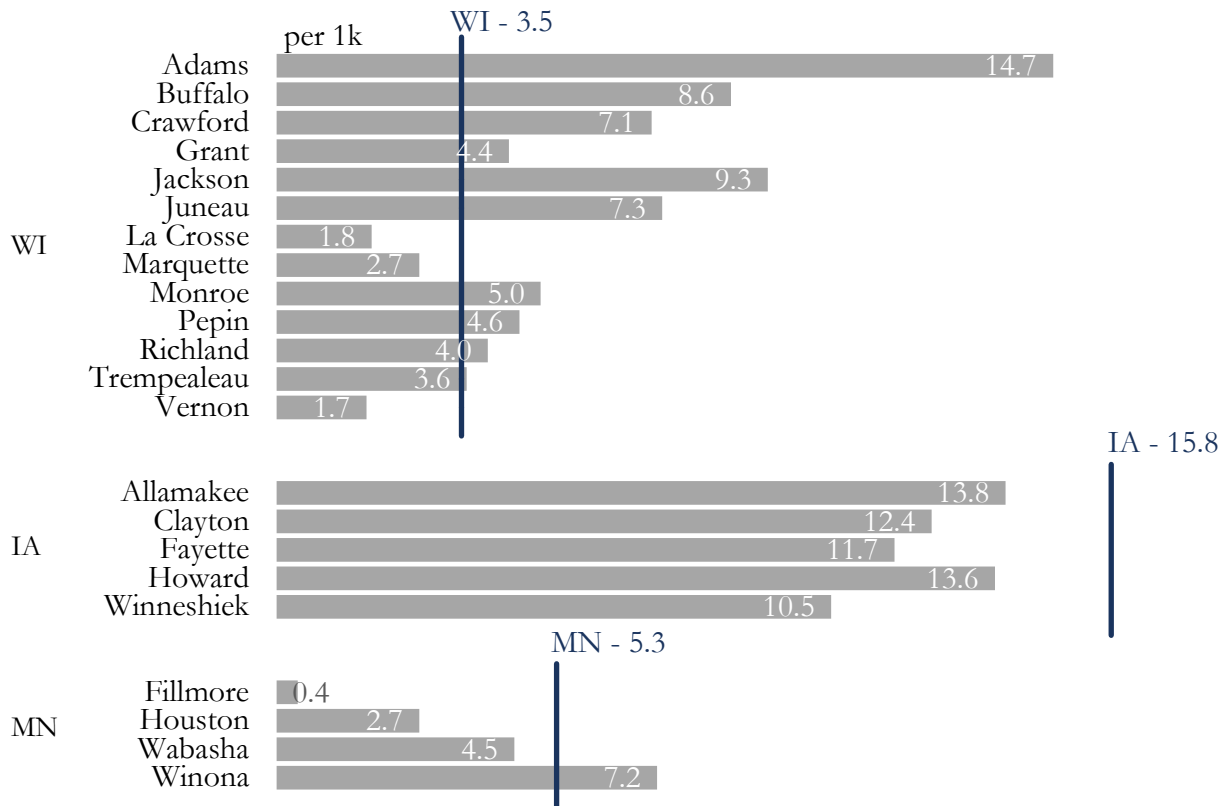
**Figure 26.** Child abuse rate per 1000 children for the Gundersen Health System’s service area (a weighted average)



Source: Data Source: Minnesota Department of Human Services. Minnesota's Child Maltreatment Report; Iowa Department of Human Services. Child Welfare Data Report; Wisconsin Department of Human Services Child Abuse and Neglect Report



**Figure 27.** Known rates of child abuse per 1,000, by county compared to state



Sources: University of Wisconsin Population Health (released 2018). County health rankings and roadmaps. Iowa Department of Human Services (2018). Minnesota Department of Human Services (released 2020). USDHH (2021). Wisconsin Department of Health Services (released 2020)

Nearly one third of the 22 counties with known child abuse rates exceed the national rate of 9 children per 1,000 population, as well as the Healthy People 2030 goal to reduce nonfatal maltreatment to 8.7 victims per 1,000 children. Statewide rates vary with Iowa having the highest rate at 15.8 per 1,000 children. This rate has increased and remains higher than the national rate. Iowa counties in the 22-county service area fall below the Iowa state average while remaining considerably higher than the national average. Minnesota and Wisconsin’s rate of child abuse are 5.3 and 3.5 per 1,000 children respectively (USDHH, 2021). As discussed earlier, children and youth who experience traumatic events have a greater chance of developing mental or physical diseases or disabilities as adults, as well as greater disparity in social determinants of health that could provide resources capable of building resiliency (Centers for Disease Control and Prevention, 2021; Wisconsin Child Abuse and Neglect Prevention Board, 2018).

## Financial Insecurity

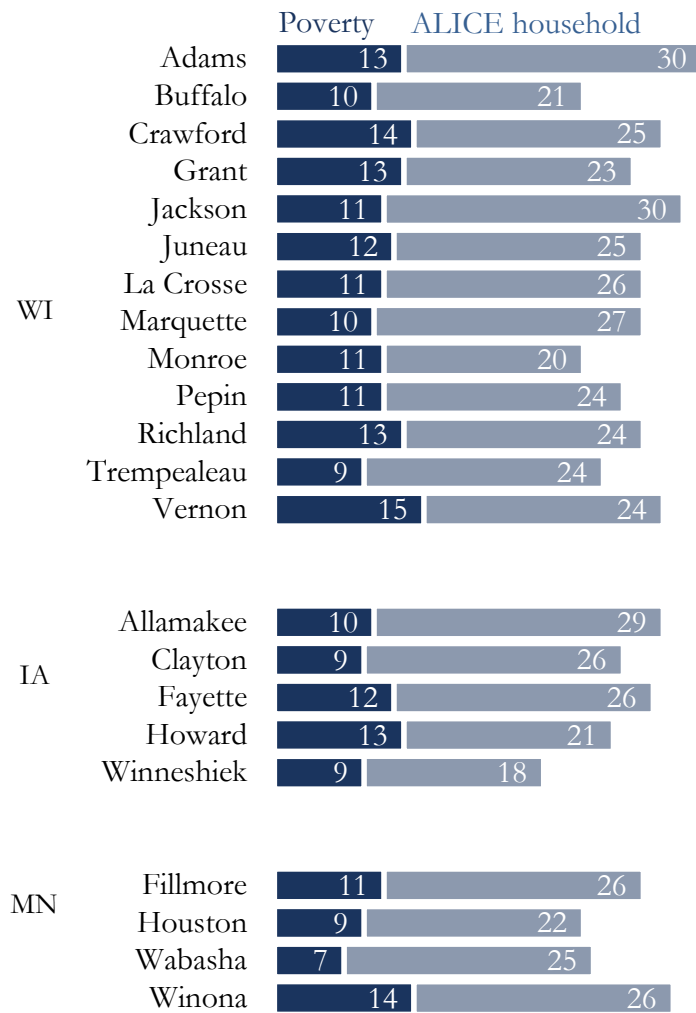
Financial insecurity is the inability to pay for basic necessities, including childcare, food, transportation and housing, due to a lack of income or resources (United for ALICE, 2021). According to the United States Census Bureau, nearly 11.8% of the United States population lived in poverty in 2018 (United States Census Bureau, 2019). This percentage does not include the 29 million other households that were above the poverty line in 2018 but still unable to pay for basic human needs (United for Alice, 2021). These households are considered ALICE: Asset Limited, Income Constrained, Employed (United for Alice, 2021). In 2018, 14 of the 22 counties in the service area were equal to or above their state poverty average (Iowa 11%, Minnesota 10%, and Wisconsin 11%). Additionally, 17 of the 22 counties were equal to or above their state average for ALICE households (United for Alice, 2021). When combining the percentages of poverty and ALICE households to analyze financial insecurity, Adams County is the highest at 43%. Only Wabasha County in Minnesota is below the HP2030 goal to be below 8%; however, combining poverty and ALICE levels, Winneshiek is the lowest overall, at 27%.

There is a significant amount of financial insecurity leading to food, housing, and transportation challenges. Counties with a challenge in one area, typically have a challenge in multiple areas. These include Adams, Jackson, and Vernon counties in WI and Winona County in MN.

### Healthy People 2030 Objectives:

+Reduce the proportion of persons living below the **poverty** threshold from a baseline of 11.8% to 8.0%.

**Figure 28.** Percentage of population living in poverty or an ALICE household.



Source: United for Alice. (2021). Research Center National Overview.

## Food Insecurity

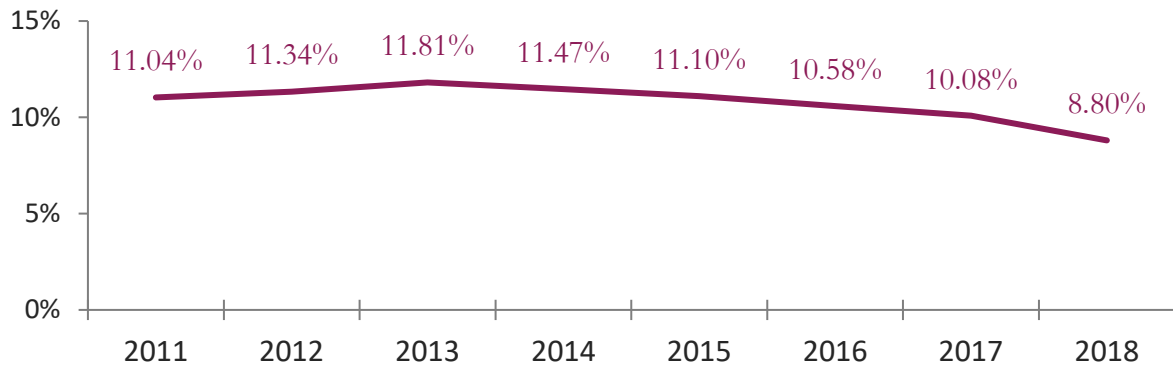
Food insecurity is the lack of access to adequate food due to an insufficient source of money and/or resources (U.S. Department of Agriculture, 2020). There are two levels of food insecurity, low and very low. Low food insecurity is when there is a decrease in the quality and variety of food but not a noticeable difference in consumption levels. Very low food insecurity is when in addition to a decrease in quality and variety of food, there is also a decreased consumption of food--people report going hungry (U.S. Department of Agriculture, 2020). There are several contributors to food insecurity, including income, transportation, and neighborhood conditions (Healthy People 2030, n.d.). Overall, the rate of food insecurity for the population in the 22-county service area has decreased from a high of nearly 12% to 8.8% in 2018. In 2018, 11 of the 22 counties in the service

area were equal to or above their state percentage. Wabasha County had the lowest percentage of food insecurity in the service region in 2018 at 6.8% and Adams County had the highest at 12.2%. Currently, no county has a level of food insecurity below the HP2030 goal of 6%.

**Healthy People 2030 Objectives:**

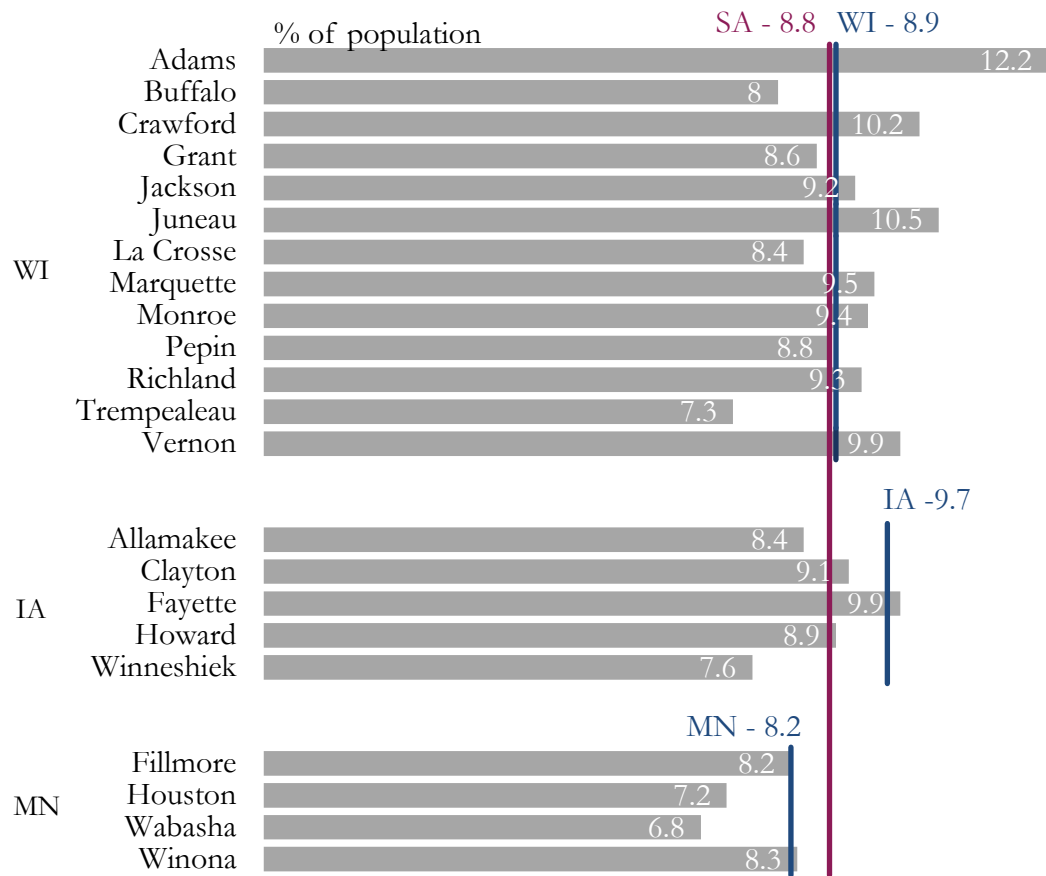
+Reduce household **food insecurity** from a baseline of 11.1% to 6.0%.

**Figure 29.** Food insecurity for the Gundersen Health System’s service area (a weighted average)



Source: County Health Rankings & Roadmaps - <http://www.countyhealthrankings.org>

**Figure 30.** Percentage of population living with food insecurity by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



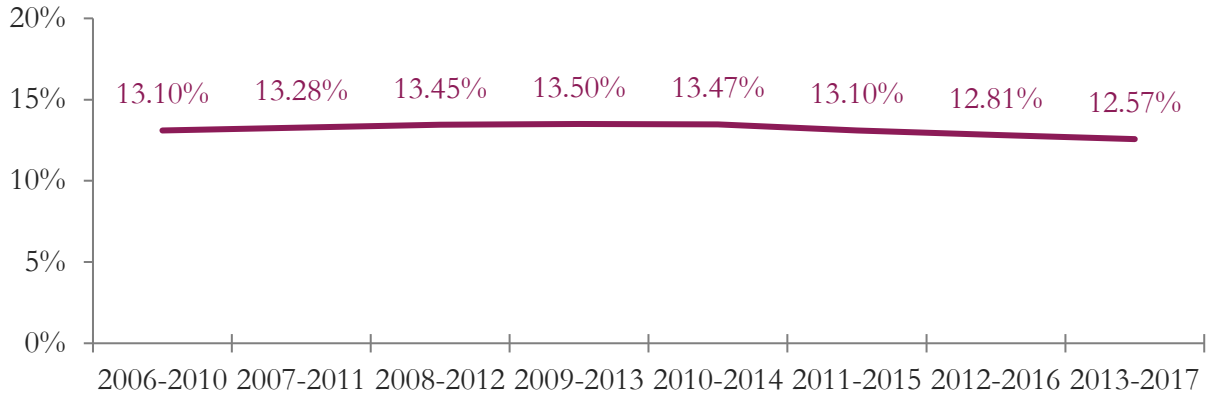
Source: Community Health Rankings and Roadmaps (2021).

## Housing Insecurity

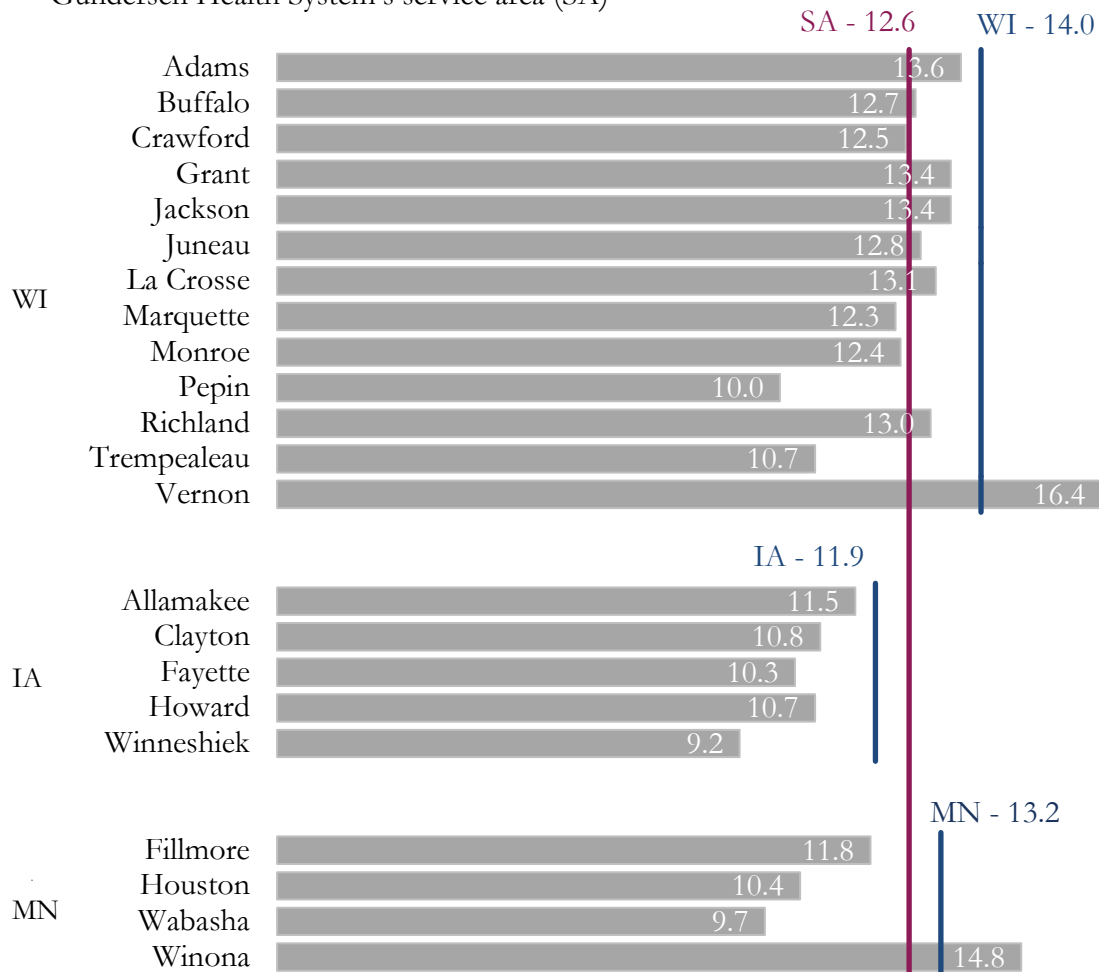
Housing insecurity is a lack of security in a shelter due to a variety of reasons, including overcrowding, frequent moves, environmental concerns, and spending 30% or more of household income on housing (Healthy People 2020, n.d.). County Health Rankings and Roadmaps defines severe housing problems as households having at least one of the following: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities (County Health Rankings and Roadmaps, 2021). The overall percentage of families living in substandard housing has declined slightly since 2009-2013, with 12.6% reporting this in the most recent report. Two of the 22 counties in the GHS service area were above their state average, with Vernon County ranking the highest at 16.4% and Winneshiek ranking the lowest at 9.2%. Other counties with significant quality

housing include Adams, Jackson, and Grant counties in Wisconsin, and Winona County in Minnesota.

**Figure 31.** Severe Housing Problems for Gundersen Health System’s service area (a weighted average)



**Figure 32.** Severe Housing problems by county compared to state and a weighted average for the Gundersen Health System’s service area (SA)



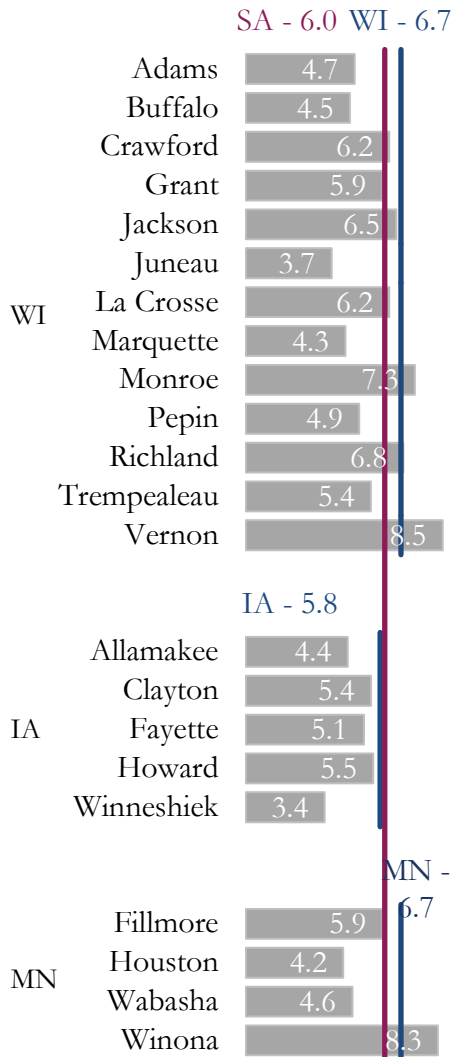
Source: Community Health Rankings and Roadmaps (2021).

## Transportation Insecurity

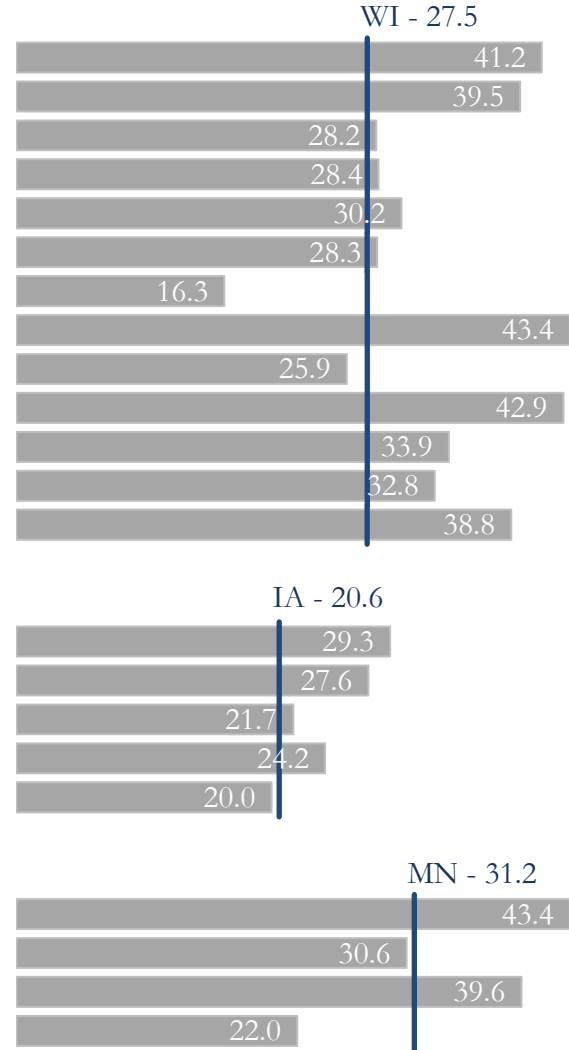
Having access to a working and reliable vehicle is very important in rural locations. In urban locations, public transportation can be an affordable alternative to owning a vehicle. Access to reliable transportation can affect one’s ability to keep medical appointments, get people to work or school, and allow them to access a regular source of food. Overall, about 6% of the population in the 22-county service area report not having access to a vehicle. This is higher in Wisconsin and Minnesota, both reporting 6.7% without access. Counties with the highest percent without access include Jackson, Monroe, Richland, and Vernon counties in Wisconsin, and Winona County in Minnesota. Rural counties also tend to have longer commutes. Workers who have long commutes are more likely to experience high blood pressure and BMI and lower physical activity rates (Community Health Rankings and Roadmaps, 2021). Vernon county has high rates of both households with no vehicle and workers with long commutes which creates a severe transportation

burden. In total, 17 of the 22 counties in our service area have a higher percentage of workers with long commutes than the state averages.

**Figure 33a.** Percent of households with no vehicle by county.



**Figure 33b.** Percent of workers who have a long commute by county.



Source: Community Health Rankings and Roadmaps (2021).



# County Characteristics

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## Wisconsin

[Adams](#)

[Buffalo](#)

[Crawford](#)

[Grant](#)

[Jackson](#)

[Juneau](#)

[La Crosse](#)

[Marquette](#)

[Monroe](#)

[Pepin](#)

[Richland](#)

[Trempealeau](#)

[Vernon](#)

## Minnesota

[Fillmore](#)

[Houston](#)

[Wabasha](#)

[Winona](#)

## Iowa

[Allamakee](#)

[Clayton](#)

[Fayette](#)

[Howard](#)

[Winneschick](#)

Click [here](#) to see to view a table with County Health rankings and sub-rankings for all 22 counties.

## Adams, Wisconsin

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Health Outcomes State Ranking: 69 out of 72

Health Factors State Ranking: 71 out of 72

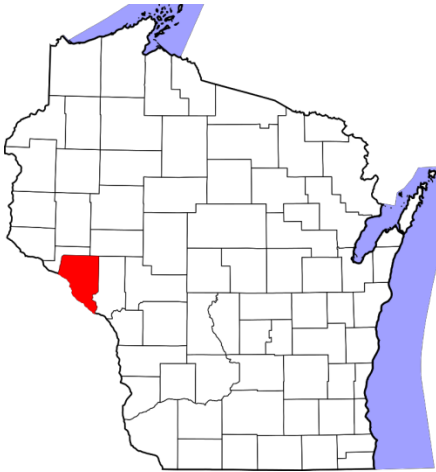
### Social determinants of health indicator

- High school education or less—51.8%
- Children living in poverty—18.2%
- Children Living in Single Parent Households—19.4%
- Uninsured—8.5%
- Primary Care Providers per 100k—9.8
- Mental Health Providers per 100k—59.3
- Households Spending Over 50% of Income on Housing—11.9%
- Severe Housing Problems—13.6%
- Population with Limited Access to Large Grocery Store—3.3%
- Food Insecurity—12.2%
- No Broadband Access—25.6%
- Long commute, driving alone—41.2%
- Households with no vehicle – 4.7%

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## Buffalo, Wisconsin

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Health Outcomes State Ranking: 28 out of 72

Health Factors State Ranking: 32 out of 72

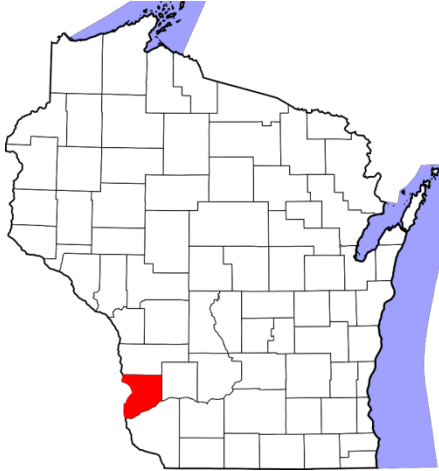
### Social determinants of health indicators

- High school education or less—36.3%
- Children living in poverty—12.4%
- Children Living in Single Parent Households—13.5%
- Uninsured—7.8%
- Primary Care Providers per 100k—15.2
- Mental Health Providers per 100k—7.7
- Households Spending Over 50% of Income on Housing—10%
- Severe Housing Problems—12.7%
- Population with Limited Access to Large Grocery Store—6.6%
- Food Insecurity—8%
- No Broadband Access—19.4%
- Long commute, driving alone—39.5%
- Households with no vehicle – 4.5%

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## Crawford, Wisconsin

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Health Outcomes State Ranking: 52 out of 72

Health Factors State Ranking: 49 out of 72

### Social determinants of health indicators

- High school education or less—38.1%
- Children living in poverty—16.1%
- Children Living in Single Parent Households—20.3%
- Uninsured—7.2%
- Primary Care Providers per 100k—67.5
- Mental Health Providers per 100k—105.4
- Households Spending Over 50% of Income on Housing—9.5%
- Severe Housing Problems—12.5%
- Population with Limited Access to Large Grocery Store—4.6%
- Food Insecurity—10.2%
- No Broadband Access—24.3%
- Long commute, driving alone—28.2%
- Households with no vehicle – 6.2%

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## Grant, Wisconsin

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Health Outcomes State Ranking: 23 out of 72

Health Factors State Ranking: 39 out of 72

### Social determinants of health indicators

- 
- High school education or less—29.3%
  - Children living in poverty—15.4%
  - Children Living in Single Parent Households—18.1%
  - Uninsured—8.5%
  - Primary Care Providers per 100k—38.8
  - Mental Health Providers per 100k—124.4
  - Households Spending Over 50% of Income on Housing—11.3%
  - Severe Housing Problems—13.4%
  - Population with Limited Access to Large Grocery Store—4%
  - Food Insecurity—8.6%
  - No Broadband Access—21.4%
  - Long commute, driving alone—28.4%
  - Households with no vehicle – 5.9%

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## Jackson, Wisconsin

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Health Outcomes State Ranking: 64 out of 72

Health Factors State Ranking: 60 out of 72

### Social determinants of health indicators

- High school education or less—45.6%
- Children living in poverty—16%
- Children Living in Single Parent Households—20%
- Uninsured—9.7%
- Primary Care Providers per 100k—102.5
- Mental Health Providers per 100k—174.4
- Households Spending Over 50% of Income on Housing—9.7%
- Severe Housing Problems—13.4%
- Population with Limited Access to Large Grocery Store—13%
- Food Insecurity—9.2%
- No Broadband Access—25%
- Long commute, driving alone—30.2%
- Households with no vehicle – 6.5%

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## Juneau, Wisconsin

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Health Outcomes State Ranking: 67 out of 72

Health Factors State Ranking: 63 out of 72



### Social determinants of health indicators

- High school education or less—46.8%
- Children living in poverty—19.3%
- Children Living in Single Parent Households—13.7%
- Uninsured—8%
- Primary Care Providers per 100k—78.9
- Mental Health Providers per 100k—142.4
- Households Spending Over 50% of Income on Housing—11%
- Severe Housing Problems—12.8%
- Population with Limited Access to Large Grocery Store—8.4%
- Food Insecurity—10.5%
- No Broadband Access—23.7%
- Long commute, driving alone—28.3%
- Households with no vehicle – 3.7%

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## La Crosse, Wisconsin

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Health Outcomes State Ranking: 25 out of 72

Health Factors State Ranking: 4 out of 72



### Social determinants of health indicators

- High school education or less—21.6%
- Children living in poverty—9.6%
- Children Living in Single Parent Households—17.6%
- Uninsured—4.7%
- Primary Care Providers per 100k—137.9
- Mental Health Providers per 100k—322
- Households Spending Over 50% of Income on Housing—11.4%
- Severe Housing Problems—13.1%
- Population with Limited Access to Large Grocery Store—5.7%
- Food Insecurity—8.4%
- No Broadband Access—15.6%
- Long commute, driving alone—16.3%
- Households with no vehicle – 6.2%

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## Marquette, Wisconsin

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Health Outcomes State Ranking: 56 out of 72

Health Factors State Ranking: 65 out of 72

### Social determinants of health indicators

- High school education or less—43.1%
  - Children living in poverty—14.3%
  - Children Living in Single Parent Households—18.2%
  - Uninsured—8.4%
  - Primary Care Providers per 100k—6.5
  - Mental Health Providers per 100k—89.9
- 
- Households Spending Over 50% of Income on Housing—9.6%
  - Severe Housing Problems—12.3%
  - Population with Limited Access to Large Grocery Store—0.3%
  - Food Insecurity—9.5%
  - No Broadband Access—22.9%
  - Long commute, driving alone—43.4%
  - Households with no vehicle – 4.3%

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## Monroe, Wisconsin

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Health Outcomes State Ranking: 50 out of 72

Health Factors State Ranking: 31 out of 72

### Social determinants of health indicators

- High school education or less—37.9%
- Children living in poverty—16.4%
- Children Living in Single Parent Households—18.2%
- Uninsured—8.5%
- Primary Care Providers per 100k—63
- Mental Health Providers per 100k—162.2
- Households Spending Over 50% of Income on Housing—



10.1%

- Severe Housing Problems—12.4%
- Population with Limited Access to Large Grocery Store—7.3%
- Food Insecurity—9.4%
- No Broadband Access—21.7%
- Long commute, driving alone—25.9%
- Households with no vehicle – 7.3%

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## Pepin, Wisconsin

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Health Outcomes State Ranking: 22 out of 72

Health Factors State Ranking: 44 out of 72



### Social determinants of health indicators

- High school education or less—35.7%
- Children living in poverty—14.1%
- Children Living in Single Parent Households—12.8%
- Uninsured—8%
- Primary Care Providers per 100k—41.2
- Mental Health Providers per 100k—27.4
- Households Spending Over 50% of Income on

Housing—9.1%

- Severe Housing Problems—10%
- Population with Limited Access to Large Grocery Store—na
- Food Insecurity—8.8%
- No Broadband Access—19.3%
- Long commute, driving alone—42.9%
- Households with no vehicle – 4.9%

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## Richland, Wisconsin

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Health Outcomes State Ranking: 29 out of 72

Health Factors State Ranking: 54 out of 72

### Social determinants of health indicators



- High school education or less—47.6
- Children living in poverty—18.5%
- Children Living in Single Parent Households—20.1%
- Uninsured—8.5%
- Primary Care Providers per 100k—69.1
- Mental Health Providers per 100k—133.3
- Households Spending Over 50% of Income on Housing—10.7%
- Severe Housing Problems—13%
- Population with Limited Access to Large Grocery Store—7.7%
- Food Insecurity—9.3%
- No Broadband Access—27.4%
- Long commute, driving alone—33.9%
- Households with no vehicle – 6.8%

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## Trempealeau, Wisconsin

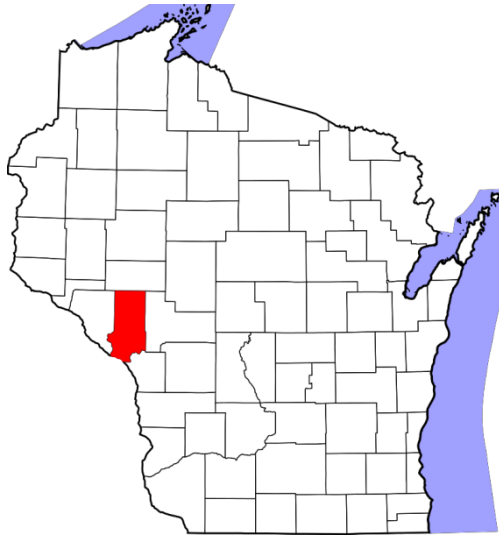
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Health Outcomes State Ranking: 38 out of 72

Health Factors State Ranking: 35 out of 72

### Social determinants of health indicators

- High school education or less—41.4%
- Children living in poverty—11.3%
- Children Living in Single Parent Households—16.6%
- Uninsured—8.4%
- Primary Care Providers per 100k—23.8
- Mental Health Providers per 100k—50.6
- Households Spending Over 50% of Income on



Housing—8.1%

- Severe Housing Problems—10.7%
- Population with Limited Access to Large Grocery Store—0.3%
- Food Insecurity—7.3%
- No Broadband Access—21.8%
- Long commute, driving alone—32.8%
- Households with no vehicle – 5.4%

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## Vernon, Wisconsin

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Health Outcomes State Ranking: 26 out of 72

Health Factors State Ranking: 55 out of 72



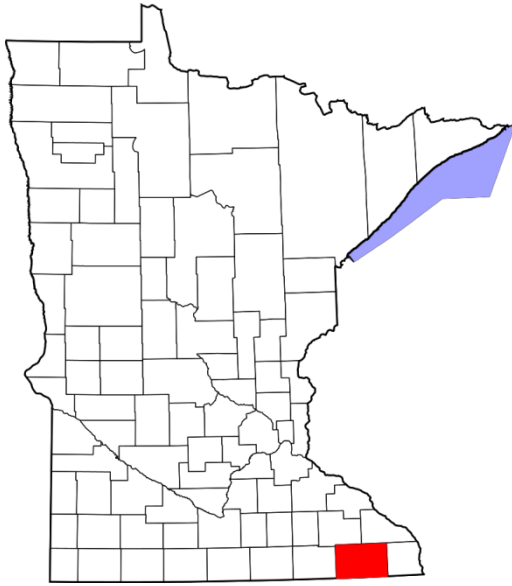
### Social determinants of health indicators

- High school education or less—42.4%
- Children living in poverty—23.8%
- Children Living in Single Parent Households—12.6%
- Uninsured—10.4%
- Primary Care Providers per 100k—100.7
- Mental Health Providers per 100k—139.5
- Households Spending Over 50% of Income on Housing—10.7%
- Severe Housing Problems—16.4%
- Population with Limited Access to Large Grocery Store—6.1%
- Food Insecurity—9.9%
- No Broadband Access—27.1%
- Long commute, driving alone—38.3%
- Households with no vehicle – 8.5%

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## Fillmore, Minnesota

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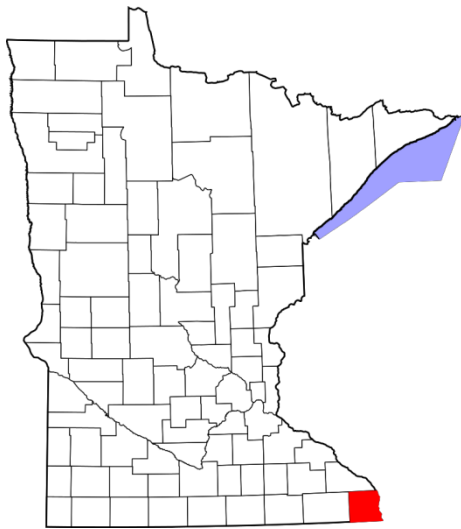
Health Outcomes State Ranking: 21 out of 87

Health Factors State Ranking: 32 out of 87

### Social determinants of health indicators

- High school education or less— 33.7%
- Children living in poverty— 13.3%
- Children Living in Single Parent Households— 11.7%
- Uninsured— 7.3%
- Primary Care Providers per 100k— 33.2
- Mental Health Providers per 100k— 19.0
- Households Spending Over 50% of Income on Housing— 8.9%
- Severe Housing Problems— 11.8%
- Population with Limited Access to Large Grocery Store— 0.5%
- Food Insecurity— 8.2%
- No Broadband Access— 23.2%
- Long commute, driving alone— 43.4%
- Households with no vehicle – 5.9%

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## Houston, Minnesota

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Health Outcomes State Ranking: 5 out of 87

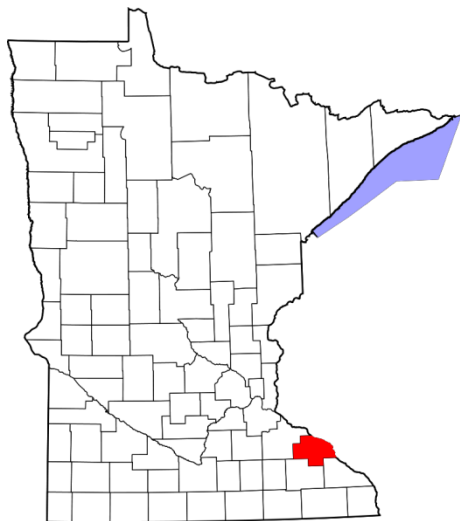
Health Factors State Ranking: 9 out of 87

### Social determinants of health indicators

- High school education or less— 24.6%
- Children living in poverty— 9.3%
- Children Living in Single Parent Households— 16.1%
- Uninsured— 4.9%
- Primary Care Providers per 100k— 59.2
- Mental Health Providers per 100k— 26.9
- Households Spending Over 50% of Income on Housing— 8.6%
- Severe Housing Problems— 10.4%
- Population with Limited Access to Large Grocery Store— 3.0%
- Food Insecurity— 7.2%
- No Broadband Access— 17.2%
- Long commute, driving alone— 30.6%
- Households with no vehicle – 4.2%

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## Wabasha, Minnesota

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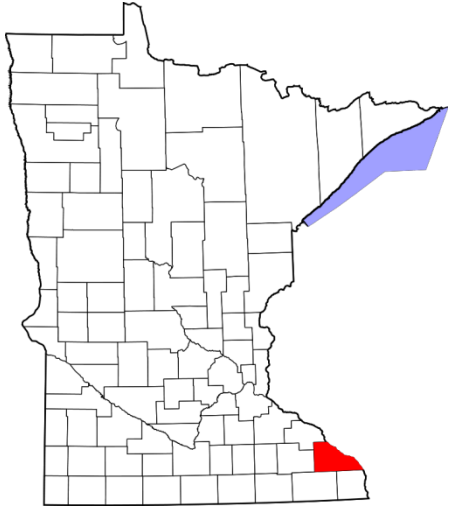
Health Outcomes State Ranking: 7 out of 87

Health Factors State Ranking: 28 out of 87

### Social determinants of health indicators

- High school education or less— 32.5
- Children living in poverty— 10.2%
- Children Living in Single Parent Households— 18.3%
- Uninsured— 5.5%
- Primary Care Providers per 100k— 78.5
- Mental Health Providers per 100k— 27.7
- Households Spending Over 50% of Income on Housing— 9.9%
- Severe Housing Problems— 9.7%
- Population with Limited Access to Large Grocery Store— 2.5%
- Food Insecurity— 6.8%
- No Broadband Access— 18.4%
- Long commute, driving alone— 39.6%
- Households with no vehicle – 4.6%

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## Winona, Minnesota

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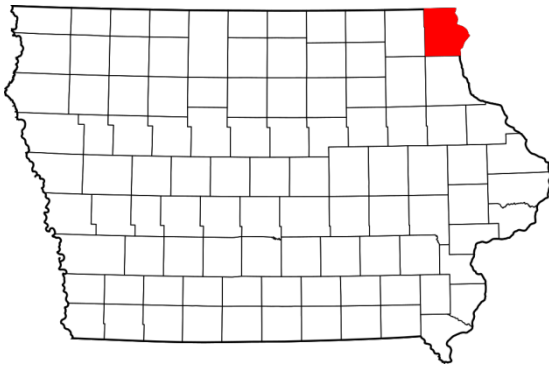
Health Outcomes State Ranking: 49 out of 87

Health Factors State Ranking: 17 out of 87

### Social determinants of health indicators

- High school education or less— 23.6%
- Children living in poverty— 11.3%
- Children Living in Single Parent Households— 15.7%
- Uninsured— 5.1%
- Primary Care Providers per 100k— **39.4**
- Mental Health Providers per 100k— 196.1
- Households Spending Over 50% of Income on Housing— 11.2%
- Severe Housing Problems— 14.8%
- Population with Limited Access to Large Grocery Store— 4.1%
- Food Insecurity— 8.3%
- No Broadband Access— 16.5%
- Long commute, driving alone— 22.0%
- Households with no vehicle – 8.3%

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## Allamakee, Iowa

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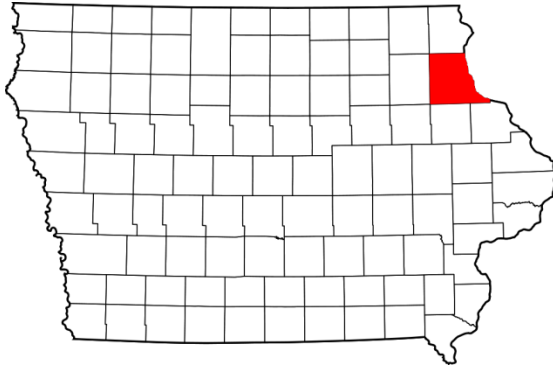
Health Outcomes State Ranking: 51 out of 99

Health Factors State Ranking: 78 out of 99

### Social determinants of health indicators

- High school education or less— 39.3%
- Children living in poverty— 15.6%
- Children Living in Single Parent Households— 14.9%
- Uninsured— **9.2%**
- Primary Care Providers per 100k— 57.8
- Mental Health Providers per 100k— 21.9
- Households Spending Over 50% of Income on Housing— 9.4%
- Severe Housing Problems— 11.5%
- Population with Limited Access to Large Grocery Store— 2,2%
- Food Insecurity— 8.4%
- No Broadband Access— 28.3%
- Long commute, driving alone— 29.3%
- Households with no vehicle – 4.4%

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## Clayton, Iowa

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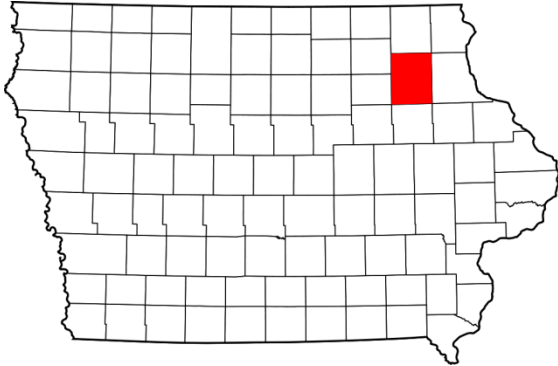
Health Outcomes State Ranking: 25 out of 99

Health Factors State Ranking: 79 out of 99

### Social determinants of health indicators

- High school education or less— 40.0%
- Children living in poverty— 14.0%
- Children Living in Single Parent Households— 17.3%
- Uninsured— 6.4%
- Primary Care Providers per 100k— **28.5**
- Mental Health Providers per 100k— 17.1
- Households Spending Over 50% of Income on Housing— 9.2%
- Severe Housing Problems— 10.8%
- Population with Limited Access to Large Grocery Store— 1.1%
- Food Insecurity— 9.1%
- No Broadband Access— 26.3%
- Long commute, driving alone— 27.6%
- Households with no vehicle – 5.4%

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## Fayette, Iowa

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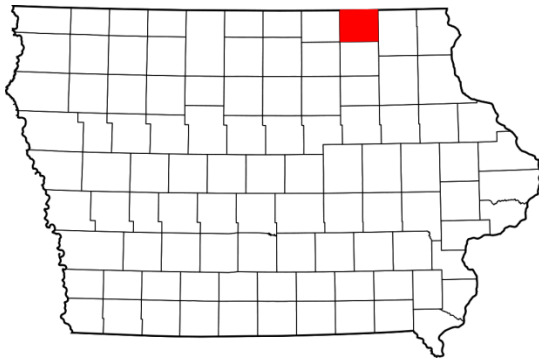
Health Outcomes State Ranking: 47 out of 99

Health Factors State Ranking: 73 out of 99

### Social determinants of health indicators

- High school education or less— 34.9%
- Children living in poverty— 16.8%
- Children Living in Single Parent Households— 20.7%
- Uninsured— 6.2%
- Primary Care Providers per 100k— **35.6**
- Mental Health Providers per 100k— 45.8
- Households Spending Over 50% of Income on Housing— 9.5%
- Severe Housing Problems— 10.3%
- Population with Limited Access to Large Grocery Store— 1.6%
- Food Insecurity— 9.9%
- No Broadband Access— 23.6%
- Long commute, driving alone— 21.7%
- Households with no vehicle - 5.1%

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## Howard, Iowa

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Health Outcomes State Ranking: 53 out of 99

Health Factors State Ranking: 36 out of 99

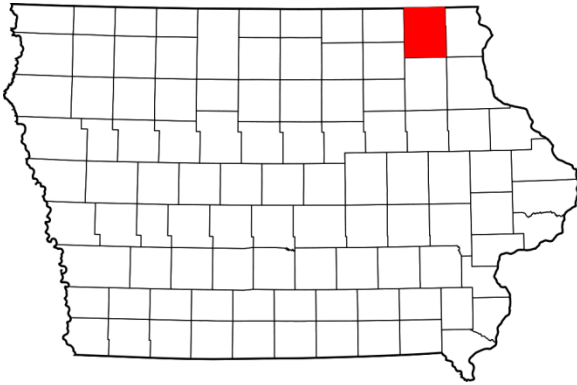
### Social determinants of health indicators

- High school education or less— 36.1%
- Children living in poverty— 13.4%
- Children Living in Single Parent Households— 9.7%
- Uninsured— 6.5%
- Primary Care Providers per 100k— 54.4
- Mental Health Providers per 100k— 32.8
- Households Spending Over 50% of Income on Housing— 5.6%
- Severe Housing Problems— 10.7%
- Population with Limited Access to Large Grocery Store— 12.1%
- Food Insecurity— 8.9%
- No Broadband Access— 26.6%
- Long commute, driving alone— 24.2%
- Households with no vehicle – 5.5%

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## Winneshiek, Iowa

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Health Outcomes State Ranking: 1 out of 99

Health Factors State Ranking: 6 out of 99

### Social determinants of health indicators

- High school education or less— 18.7%
- Children living in poverty— 8.5%
- Children Living in Single Parent Households— 17.6%
- Uninsured— 4.4%
- Primary Care Providers per 100k— 109.8
- Mental Health Providers per 100k— 245.1
- Households Spending Over 50% of Income on Housing— 10.2%
- Severe Housing Problems— 9.2%
- Population with Limited Access to Large Grocery Store— 3.4%
- Food Insecurity— 7.6%
- No Broadband Access— 18.3%
- Long commute, driving alone— 20.0%
- Households with no vehicle – 3.4%

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## Appendix A1 – County Health Rankings of 22 Counties in Gundersen Health System Service Area

County Ranking Quartiles	Lowest 0-25%	Lower 25-50%	Higher 50-75%	Highest 76%-100%				
County, State	Overall - Health Outcomes	Length of Life	Quality of Life	Overall - Health Factors	Health Behaviors	Quality of Clinical Care	Social Determinants	Physical Environment
Adams, WI	69/72	70/72	69/72	71/72	69/72	68/72	69/72	42/72
Buffalo, WI	28/72	14/72	44/72	32/72	22/72	53/72	38/72	25/72
Crawford, WI	52/72	50/72	48/72	49/72	29/72	61/72	52/72	28/72
Grant, WI	23/72	13/72	33/72	39/72	34/72	66/72	23/72	47/72
Jackson, WI	64/72	66/72	45/72	60/72	61/72	48/72	60/72	51/72
Juneau, WI	67/72	63/72	67/72	63/72	66/72	60/72	59/72	58/72
La Crosse, WI	25/72	29/72	23/72	4/72	7/72	1/72	7/72	12/72
Marquette, WI	56/72	61/72	52/72	65/72	67/72	65/72	58/72	38/72
Monroe, WI	50/72	54/72	43/72	31/72	53/72	25/72	34/72	20/72
Pepin, WI	22/73	23/72	24/72	44/72	51/72	59/72	40/72	13/72
Richland, WI	29/72	24/72	32/72	54/72	39/72	63/72	46/72	32/72
Trempealeau, WI	38/72	40/72	42/72	35/72	47/72	46/72	32/72	17/72
Vernon, WI	26/72	17/72	41/72	55/72	33/72	55/72	50/72	64/72
Fillmore, MN	21/87	34/87	17/87	32/87	24/87	52/87	11/87	43/87
Houston, MN	5/87	11/87	5/87	9/87	14/87	7/87	11/87	57/87
Wabasha, MN	7/87	8/87	8/87	28/87	38/87	19/87	29/87	36/87
Winona, MN	49/87	33/87	57/87	17/87	16/87	18/87	18/87	59/87
Allamakee, IA	51/99	66/99	42/99	78/99	69/99	71/99	83/99	40/99
Clayton, IA	25/99	30/99	23/99	79/99	72/99	85/99	72/99	64/99
Fayette, IA	47/99	48/99	51/99	73/99	70/99	48/99	84/99	51/99
Howard, IA	53/99	36/99	71/99	36/99	33/99	51/99	42/99	16/99
Winneshiek, IA	1/99	1/99	5/99	6/99	10/99	2/99	11/99	2/99

Source: County Health Rankings, 2021, UW Population Health Institute

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## Appendix A2 – Additional Measures for 22 Counties – unfavorable values are the darkest

	HS diploma or less %	Children Living in Poverty %	Children living in Single-Parent Households %	Uninsured %	Primary Care Providers per 100K	Mental Health Providers per 100K	Households Spending Over 50 % income on housing %	Severe Housing Problems %	Limited Access to Large Grocery Store %	Food Insecurity %	No Broadband access %	Long commute, driving alone %
Adams, WI	51.8	18.2	19.4	8.5	9.8	59.3	11.9	13.6	3.3	12.2	25.6	41.2
Buffalo, WI	36.3	12.4	13.5	7.8	15.2	7.7	10.0	12.7	6.6	8.0	19.4	39.5
Crawford, WI	38.1	16.1	20.3	7.2	67.5	105.4	9.5	12.5	4.6	10.2	24.3	28.2
Grant, WI	29.3	15.4	18.1	8.5	38.8	124.4	11.3	13.4	4.0	8.6	21.4	28.4
Jackson, WI	45.6	16.0	20.0	9.7	102.5	174.4	9.7	13.4	13.0	9.2	25.0	30.2
Juneau, WI	46.8	19.3	13.7	8.0	78.9	142.4	11.0	12.8	8.4	10.5	23.7	28.3
La Crosse, WI	21.6	9.6	17.6	4.7	137.9	322.0	11.4	13.1	5.7	8.4	15.6	16.3
Marquette, WI	43.1	14.3	18.2	8.4	6.5	89.9	9.6	12.3	0.3	9.5	22.9	43.4
Monroe, WI	37.9	16.4	18.2	8.5	63.0	162.2	10.1	12.4	7.3	9.4	21.7	25.9
Pepin, WI	35.7	14.1	12.8	8.0	41.2	27.4	9.1	10.0	na	8.8	19.3	42.9
Richland, WI	47.6	18.5	20.1	8.5	69.1	133.3	10.7	13.0	7.7	9.3	27.4	33.9
Trempealeau, WI	41.4	11.3	16.6	8.4	23.8	50.6	8.1	10.7	0.3	7.3	21.8	32.8
Vernon, WI	42.4	23.8	12.6	10.4	100.7	139.5	10.7	16.4	6.1	9.9	27.1	38.3
Fillmore, MN	33.7	13.3	11.7	7.3	33.2	19.0	8.9	11.8	0.5	8.2	23.2	43.4
Houston, MN	24.6	9.3	16.1	4.9	59.2	26.9	8.6	10.4	3.0	7.2	17.2	30.6
Wabasha, MN	32.5	10.2	18.3	5.5	78.5	27.7	9.9	9.7	2.5	6.8	18.4	39.6
Winona, MN	23.6	11.3	15.7	5.1	39.4	196.1	11.2	14.8	4.1	8.3	16.5	22.0
Allamakee, IA	39.3	15.6	14.9	9.2	57.8	21.9	9.4	11.5	2.2	8.4	28.3	29.3
Clayton, IA	40.0	14.0	17.3	6.4	28.5	17.1	9.2	10.8	1.1	9.1	26.3	27.6
Fayette, IA	34.9	16.8	20.7	6.2	35.6	45.8	9.5	10.3	1.6	9.9	23.6	21.7
Howard, IA	36.1	13.4	9.7	6.5	54.4	32.8	5.6	10.7	12.1	8.9	26.6	24.2
Winneschiek, IA	18.7	8.5	17.6	4.4	109.8	245.1	10.2	9.2	3.4	7.6	18.3	20.0

Source: County Health Rankings, 2021, UW Population Health Institute

