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A HEALTH PROFILE OF THE GREAT RIVERS REGION

Introduction

This portion of the COMPASS NOW Report serves as an overview of the Health of the Great Rivers Region. This segment is not meant to duplicate other available health reports but rather offer additional context to the COMPASS NOW 2015 community needs assessment and explore the influence health has on our community. It includes both a summary of the key health indicator data as well as related results from the COMPASS NOW 2015 Random Household Survey.

How healthy are we?

Measures of Overall Health

There are many measures that look at overall health of a population. Numerous organizations create and publish public reports on the overall health of specific states. One of the most widely known reports is “America’s Health Rankings” by United Healthcare. In 2014, Minnesota was ranked third in the nation and Wisconsin was ranked seventh.

The World Health Organization (WHO) defines health as the state of complete physical, mental, and social well-being, not merely the absence of disease or infirmity. This viewpoint has become increasingly accepted in recent decades. The health of a community depends on many different factors. These range from health behaviors, education, jobs, quality of health care, and the environment. The University of Wisconsin Population Health Institute and the Robert Wood Johnson Foundation have developed a national system of health rankings, by which every county within each state is ranked on data specific to their population¹. There are two rankings: an overall health outcomes score and an overall health factors score. The overall health outcomes measure indicates how long people live (mortality) and how healthy people feel while they are alive (morbidity). The health factors ranking is based on measures that are more predictive of future health outcomes – health behaviors, clinical care, socioeconomic factors, and the physical environment. The overall health outcomes scores for each county are shown in **Table 1**. La Crosse County ranked highest for overall health outcomes, while Monroe County ranked lowest. Houston County ranked highest for the mortality ranking, while Monroe County ranked lowest. Vernon County ranked highest for the morbidity ranking, while Trempealeau County ranked lowest.

County*	Health Outcomes Ranking	Mortality Ranking	Morbidity Ranking
La Crosse	19	25	18
Monroe	54	58	41
Trempealeau	43	38	48
Vernon	27	41	8
Houston	21	12	41

Source: County Health Rankings, Mobilizing Action Toward Community Health.
*Wisconsin counties’ rankings are out of 72 counties and Minnesota’s are out of 87 counties.

How healthy do we think we are we?

In the COMPASS NOW 2015 Random Household Survey, residents of the Great Rivers Region indicated their perception of the overall health of their community for both COMPASS NOW 2012 and COMPASS NOW 2015 (see **Figure 1** and **Figure 2**). In general, about 87% of the survey respondents rated the health of the people in their community as excellent or good. This is a considerable improvement from the 2011 survey, in which 76% rated their health as excellent or good. For county-specific response rates, see the report's Appendix.

Self-Reported Overall Health of People in Our Community

Figure 1: COMPASS NOW 2012

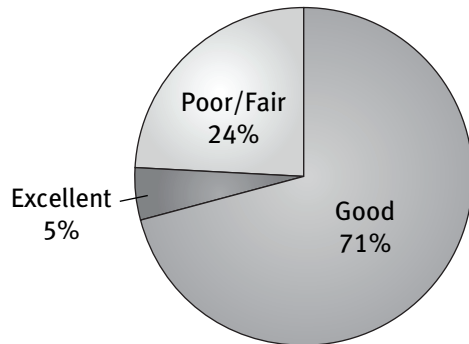


Figure 2: COMPASS NOW 2015



Source: COMPASS NOW 2012 Random Household Survey, COMPASS NOW 2015 Random Household Survey

Local Birth and Death Rates

Birth and death rates are important indicators of a community's health. They can reflect general age-sex structure, fertility, economic prosperity, education, and quality of life within a community. Higher live birth rates can be directly linked to better medical attention throughout pregnancy and the birthing process. Lower death rates can be attributed to life-saving medications and procedures that ultimately help people live longer.

Wisconsin consistently has a lower **birth rate** than Minnesota. In 2014, there were 11.7 live births per 1,000 population in Wisconsin compared to 12.8 in Minnesota. Both continue to decline. Houston County was continuously lower than the state average. Vernon County consistently has higher birth rates than Wisconsin as a whole, while La Crosse County's rates are lower than Wisconsin. The Great Rivers Region's average birth rate was 12.4 births per 1,000 population.

Crude **death rates** are calculated in the same way as birth rates. Between 2008 and 2013, Minnesota, with an average of 7.4 deaths per 1,000, consistently had a lower death rate than Wisconsin, with an average of 8.3 deaths per 1,000 population. In general, all counties within the Great Rivers Region had higher death rates than corresponding state averages.

Caution: Due to the small population size in some of our counties, a few additional births or deaths each year could alter the rates that are given above.

What affects birth rates?

A number of important statistics should be considered when examining birth rates. These maternal and child health figures include teen pregnancy, low birth weight, prenatal care, and infant mortality. A data comparison of the Great Rivers Region is found in **Table 2**.

County/Region	Teen Birth Rate (per 1,000 Births)	Low Birth Weight (%)	1st Trimester Prenatal Care (%)	Infant Mortality Rate (per 1,000 Births)
La Crosse	11.8	6.3	79.9	3.3
Monroe	27.9	6.1	69.1	7.5
Trempealeau	26.3	6.5	70.4	4.6
Vernon	11.0	4.8	54.3	7.6
Houston	12.4	3.3	86.4	8.4
Wisconsin	22.1	7.1	77.5	5.9
Minnesota	20.1	4.9	84.0	7.4

Source: Wisconsin Department of Health Services, Wisconsin Public Health Profiles; Minnesota Department of Health, Minnesota County Health Tables
For the purpose of this table, “teen” is defined as a woman under the age of 19 years old.

Teen pregnancy is an important factor, as it can lead to a huge economic and health strain on our society. Teen mothers and their children are less likely to complete high school and thus live at a poverty level. The negative health results of a teen pregnancy can include premature birth, a low birth weight infant, an increase in the infant death rate, child abuse and neglect, and father-absence. La Crosse and Vernon counties have lower teen birth rates than Wisconsin as a whole; however, Monroe and Trempealeau are both above the state average. Houston County has a lower teen birth rate than average in Minnesota.

Low birth weight is defined as a newborn weight of lower than 5 pounds, 8 ounces (2,500 grams). Many premature babies born before the thirty-seventh week of pregnancy have low birth weight. If a mother smokes, drinks alcohol, uses drugs, or has exposure to environmental toxins, the risk of low birth weight increases dramatically. In addition, the newborns face health risks such as respiratory illness and chronic lung disease, vision and hearing problems, and neuron-developmental impairments. Low birth weight deliveries are more common among women who begin prenatal care later in pregnancy, women with no health care coverage, lower socioeconomic status, and teens. All counties in the Great Rivers Region have birth weight rates that are lower than the state average.

Prenatal care that begins during the first trimester of a pregnancy has been shown to increase the odds of a healthy birth and a healthy baby. Medical conditions, environmental hazards, and lifestyle factors are just some of the risks that can be identified and addressed. The well-being of both mother and child is at risk when care is delayed or neglected altogether. Late prenatal care is related to low birth weight babies, pre-term deliveries, and an increase in infant mortality. Not only does early prenatal care improve the health of the mother and baby, but it has been shown to be cost effective in terms of health care. The Great Rivers Region average for mothers receiving first trimester prenatal care was approximately 72%, with Houston County being highest at 86.4%, and Vernon County having the lowest at 54.3%.

Prenatal care often includes identifying possible fetal problems and arranging modified prenatal care observation to best manage the outcome. Women who receive early prenatal care, preferably within the first trimester, are more likely to have a healthier pregnancy, delivery, and recovery overall. Prenatal care also

offers additional benefits to baby. One of these benefits includes a decreased likelihood of preterm labor, possibly resulting in a pre-term delivery. This is an important indicator of health because pre-term birth is the leading cause of newborn death and disability.

Infant mortality is measured by the number of infant (one year of age or younger) deaths per 1,000 live births. The infant mortality rate (IMR) is a useful indicator, used worldwide, as a measure of health and development. Health conditions originating in the prenatal period account for about 50% of infant deaths. There are an assortment of prenatal health conditions that occur just before, during, or after birth, such as pregnancy complications; complications of the placenta, cord, and membranes; and unspecified prematurity and low birth weight. Other causes of infant death may be attributed to infections and parasitic diseases, accidents, SIDS, congenital malformations, deformations, and chromosomal anomalies.

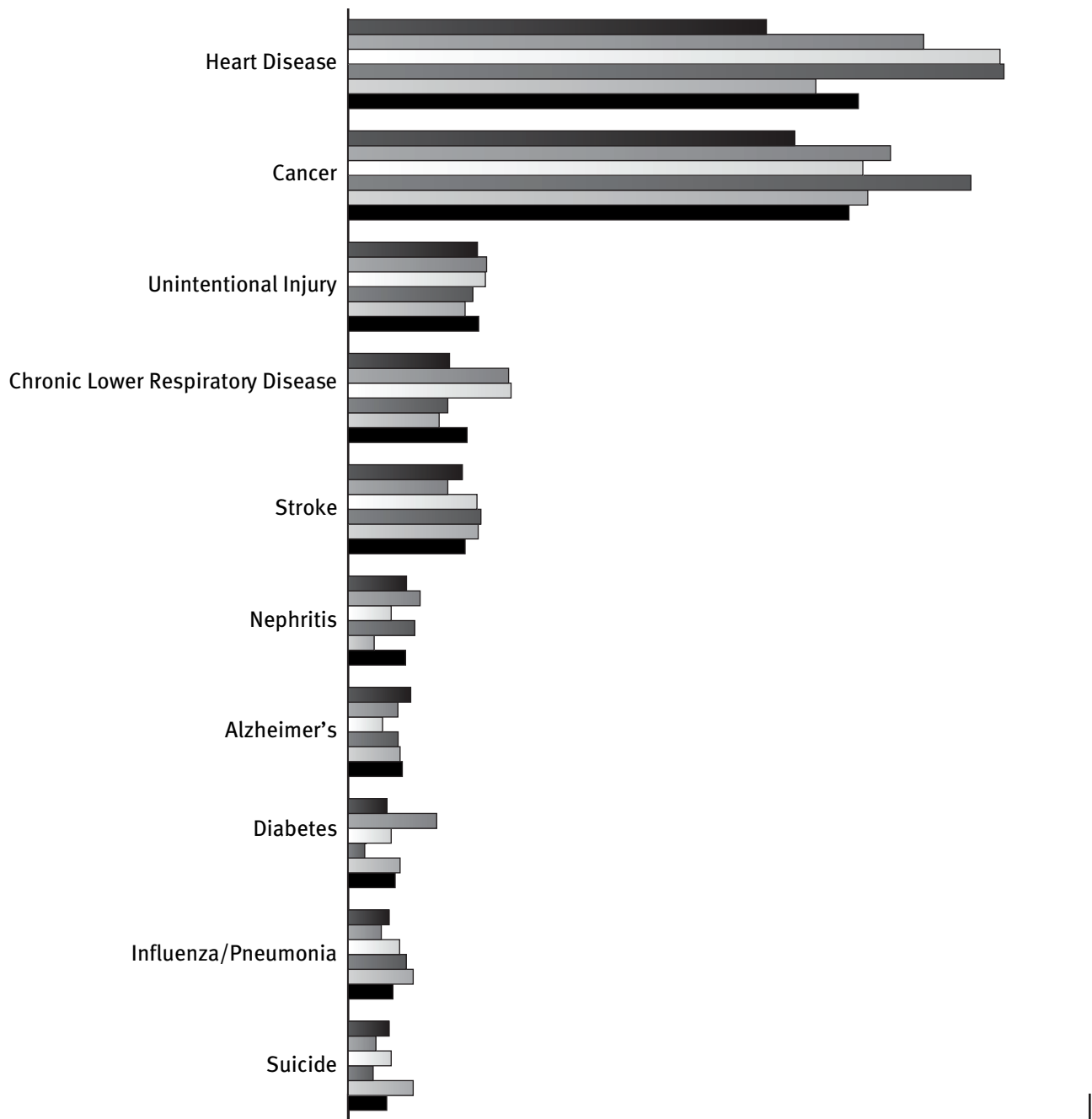
Overall, the Great Rivers Region infant mortality rate is 5.0 deaths per 1,000 births, which is slightly higher than state averages. La Crosse and Trempealeau Counties are lower than state and national averages.

It is important to note that some religious or ethnic groups within the Great Rivers Region do not believe in medical care except in an emergency. This may affect statistics like initiation of prenatal care. It can be difficult, as a county, to change these cultural practices; however, it is important to focus on outcomes and intervene when necessary.

What are the primary causes of death in the region?

The primary causes of death for counties in the Great Rivers Region are shown in **Figure 3**. Most of these causes are from chronic diseases which have a preventable component to them. Age also plays a part in how we die. Typically, chronic disease is the leading cause of death in older adults. Injury, unintentional, and accidental causes are more common for deaths occurring in the younger population.

Figure 3: 2013 Leading Causes of Death (rates per 100,000)



	Suicide	Influenza/Pneumonia	Diabetes	Alzheimer's	Nephritis	Stroke	Chronic Lower Respiratory Disease	Un-intentional Injury	Cancer	Heart Disease
La Crosse	16.6	16.6	15.7	25.3	23.6	46.2	41.0	52.3	180.6	169.2
Monroe	11.2	13.4	35.8	20.1	29.1	40.3	64.9	56.0	219.4	232.8
Trempealeau	17.4	20.8	17.4	13.9	17.4	52.1	65.9	55.5	208.2	263.7
Vernon	10.1	23.5	6.7	20.2	26.9	53.7	40.3	50.4	251.9	265.3
Houston	26.3	26.3	21.0	21.0	10.5	52.6	36.8	47.3	210.2	189.2
Overall	15.6	18.1	19.0	21.9	23.2	47.3	48.1	52.8	202.6	206.4

Source: Wisconsin Dept. of Health Services, Division of Public Health, Office of Health Informatics. Wisconsin Interactive Statistics on Health (WISH) data query system; Minnesota Department of Health, County Health Tables.

What are the primary illnesses in the Great Rivers Region?

Not only do **chronic diseases** play a role in deaths in our community, they are also the primary cause of illness. Chronic diseases such as heart disease, hypertension, high cholesterol, cancers, and lung diseases like asthma and Chronic Obstructive Pulmonary Disease (COPD) are all too common among our community members. In 2012, about half of American adults (117 million people) had one or more chronic health conditions. One out of four adults had two or more chronic health conditions². In 2012, there were 26.6 million adults diagnosed with heart disease³. Approximately 70 million (29%) American adults have high blood pressure⁴. Furthermore, one in every six U.S. adults had high cholesterol⁵. In 2011 it was determined that 300 of every 100,000 Americans develop cancer annually⁶. This gives the U.S. the seventh highest cancer rate in the world⁶. It was estimated that 12.7 million U.S. adults have COPD; however, close to 24 million U.S. adults have evidence of impaired lung function, indicating an under-diagnosis of COPD⁷.

In the early 1900s, **infectious diseases** were the cause of most of our illnesses and deaths. Deaths from pneumonia, tuberculosis, and diarrhea were the primary causes of death. With the advancement of immunizations, antibiotics, and other treatments, deaths from these causes have been greatly reduced. Several infectious diseases are reportable illnesses that are now monitored at a local and national level. Immunization compliance rates by county for school age children range from 70-90%. As previously indicated, some population-based cultural differences may lead to a need to modify public health and health care provider's strategies to ensure adequate immunization to prevent outbreaks of vaccine preventable illnesses.

Table 3 shows a number of the infectious diseases that are monitored today.

	La Crosse	Monroe	Trempealeau	Vernon	Houston	WI	MN
Chlamydia	336.0	315.5	217.2	124.2	148.6	410.6	335.5
Food and Waterborne Illnesses	44.8	62.1	68.7	60.0	53.1	45.0	39.7
Vaccine Preventable	107.8	39.9	89.3	206.5	-	81.9	-
Lyme Disease	23.7	80.0	62.5	120.9	47.8	25.4	16.9

Source: Wisconsin Department of Health Services, Public Health Profiles; Minnesota Department of Health, County Health Tables.

Rate calculations were conducted using population data from 2010 census.

Food and waterborne illnesses for Wisconsin counties include E.coli, Hepatitis A, Salmonellosis, Shigellosis, and Campylobacter enteritis. Food and waterborne illnesses for Minnesota and Houston County include Salmonellosis, Shigellosis, and Campylobacter enteritis. Vaccine preventable diseases for Wisconsin counties include Haemophilus influenza type b, Hepatitis A, Hepatitis B, Influenza, Measles, Mumps, and Pertussis.

For cases reported as <5, 5 was the number used in calculations.

Risky sexual behavior leads to an increase in **sexually transmitted infection (STI)** and/or **sexually transmitted disease (STD)**. Rates of STIs have declined significantly from the late 1980s when HIV/AIDS was a major concern. Prevention efforts for HIV included major educational efforts within the secondary and higher educational systems. These efforts significantly decreased the rates of all STIs. As treatment for HIV has improved, the focus on prevention of STIs has decreased and there has been a gradual increase in the STI rates as a result. Statistics on STDs are based on the three conditions that physicians are required to report: chlamydia, gonorrhea, and syphilis. These represent only a fraction of the true burden of STDs. Some common diseases such as human papilloma virus (HPV) and genital herpes are not reported to the CDC. In 2013, the CDC estimated that there were nearly 20 million new STIs each year, half of these are among

young people aged 15-24 years old. In total, STIs account for approximately \$16 billion in health care costs⁸. During the same year, the U.S. chlamydia rate was 446.6 per 100,000 people, a 1.5% decrease since 2012. In the Great Rivers Region, chlamydia rates are highest among La Crosse County residents, probably in part due to the large college-age population, who participate in risky sexual behaviors more than other age groups. These students are also more likely to be diagnosed and treated in their college community, rather than in their home community. The gonorrhea rate was 106.1 per 100,000 people.

Food and waterborne illnesses that are known to arise locally include salmonella, giardia, and hepatitis. Salmonella and hepatitis are usually caused by consuming contaminated food. Giardia can be spread from person-to-person or through contaminated water. Most food and waterborne illnesses cause minor diarrhea, nausea, and vomiting, though these symptoms can become severe. Over the past several years, the rates of food and waterborne illnesses have decreased in our area; however, an accidental contamination of food at a large event can cause these statistics to spike.

Vaccine preventable illnesses that are reported and monitored include measles and pertussis. Pertussis, also known as whooping cough, is a bacterial respiratory infection characterized by severe spasms of coughing. Before the introduction of the vaccination in the 1940s, pertussis was a major cause of illness and death among infants. Since the introduction of the pertussis vaccination, case reports of this illness decreased more than 99%. However, an increasing number of pertussis cases have been reported to the CDC since the 1980s, especially among adolescents aged 10-19 years and adults⁹. It is also felt that pertussis is underreported since many people who develop the illness do not seek treatment. The best way for pertussis to be managed to a lower level in the community is to ensure that all adults are vaccinated for this by receiving the tetanus, diphtheria, and pertussis vaccine (Tdap) in place of the usual tetanus-diphtheria vaccine (Td). Due to religious, ethnic, or cultural differences within the region, immunization rates in some counties are not as high. There was a significant increase in pertussis cases between 2011 (34 cases) and 2012 (166 cases) for La Crosse County. Pertussis rates rose in all Great Rivers counties during that same time period. County health departments need to monitor outbreak rates and, when possible, develop appropriate solutions.

The bacterium *Borrelia burgdorferi* causes **Lyme disease**, which was first discovered in the 1980s¹⁰. It is common to the Great Rivers Region due to a specific tick (generally carried by white-tail deer) that spreads the disease. Disease prevention strategies include educating residents to identify the disease, how to properly remove ticks, and how to avoid being bitten. Lyme disease is treatable; however, those that go undiagnosed or are diagnosed later in the disease cycle have a slower recovery rate. In 2012, Vernon County had the highest rates of Lyme disease at 119.9 cases per 100,000 population.

Mental illnesses are common in the United States and throughout the world. The National Institute of Mental Health estimates 26.2% of Americans (ages 18 and older) suffer from a diagnosable mental illness in any given year¹¹. Even though mental disorders are widespread, the main burden of illness is typically concentrated in a much smaller proportion (about 6%) of the population; primarily, those who suffer from a serious mental illness. Additionally, mental disorders are the leading cause of disability in the U.S. for people ages 15 to 44. Mental illness has a significant impact on the workplace that often goes unrecognized. Mental illness causes more days of work loss and work impairment than chronic health conditions such as asthma, diabetes, and heart disease. Data surrounding the issues of mental illness is scarce. A recent project, "The Burden of Mental Illness for the La Crosse and the Surrounding Region," highlights some of the data that has been gathered to illustrate the picture of mental illness in the Great Rivers Region¹². More than half of all mental disorders and problems with substance abuse begin by the age of 14¹³. The most common mental disorder experienced among adolescents is depression, occurring in more than 25% of high school students surveyed¹⁴. Unfortunately, many teens do not seek treatment for their disorder for fear of being stigmatized by peers or others¹⁵. The rate of psychiatric hospitalizations has remained stable over the past three to five years (see **Figure 4**). Although hospitalizations are stable, health care charges are substantial

and rising. Charges for clinic and emergency room visits and hospital stays due to mental illnesses for 2009-2010 in our region were over \$52.4 million (approximately \$24.9 million in 2009, and \$27.6 million in 2010).

Figure 4: Rate of Psychiatric Hospitalizations for Wisconsin Counties, 2008-2012

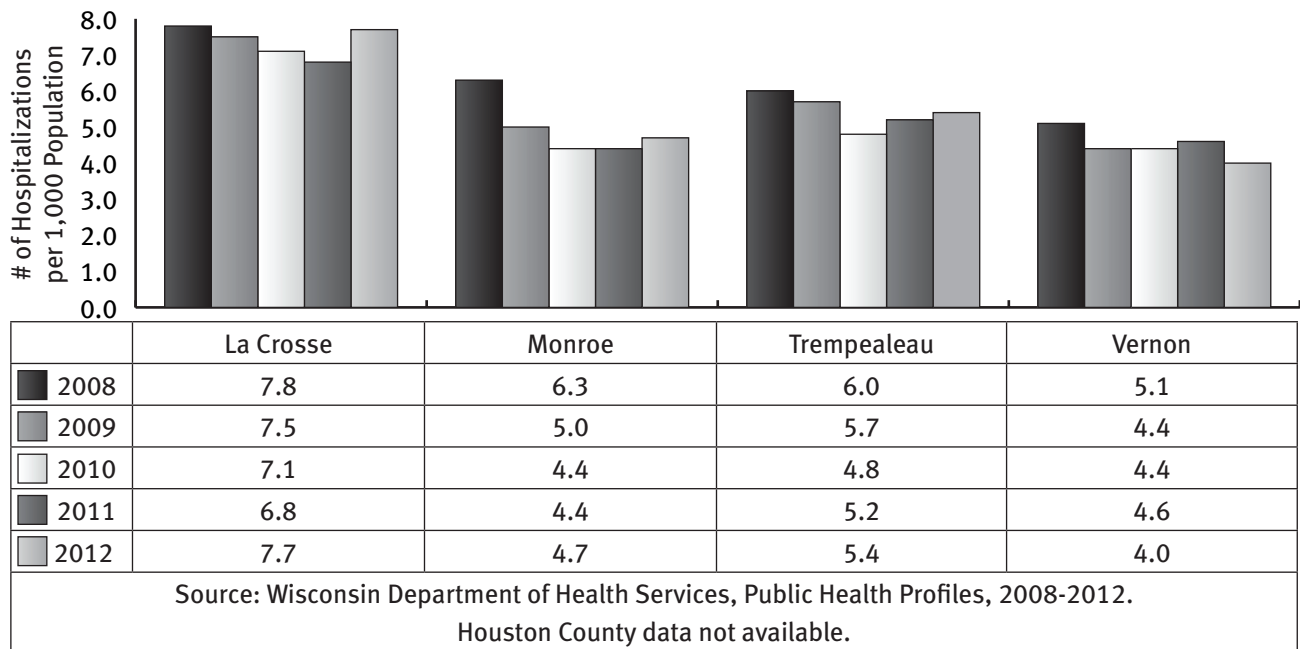


Table 4 indicates the number of deaths by suicide in the counties of the Great Rivers Region for 2012-2014. Suicide is one of the leading causes of death among younger generations (11- to 24-year-olds), resulting in many years of productive life lost. This is measured by the statistic years of potential life lost (YPLL). La Crosse County had a record number of suicides in 2014; however, Trempealeau County has the highest rate of suicides between 2012 and 2014. “The Burden of Suicide in Wisconsin” report released in 2008 indicates a higher rate of suicide in Wisconsin than in neighboring states¹⁶.

Table 4: Suicide rate for 2012-2014 (all age groups)

County	Deaths by Suicide (2012-2014)		Years of Potential Life Lost (YPLL)
	#	Rate/100,000	# of Years
La Crosse	59	16.9	1,973
Monroe	10	7.4	310
Trempealeau	18	20.5	647
Vernon	7	7.7	168
Houston*	10	17.5	N/A

Source: Wisconsin Department of Health Services, Wisconsin Public Health Profiles; Minnesota Department of Health, County Health Tables
*The calculated rate of suicides per 100,000 population in Houston County is based on population estimates from the 2010 U.S. Census. The number of suicides in Houston County were those occurring between the years 2011 and 2013.

Oral health is not only important for quality of life, but is related to the health of the rest of the body. The state of Wisconsin released “*The Burden of Oral Disease*” report in 2010¹⁷. The report states, “While Wisconsin has made sufficient progress in improving the overall health status of Wisconsinites, oral disease continues to be a key health concern for the state.” There is little information available on the overall oral health of children and adults in the Great Rivers Region. What is available is at a state level. In 2008-2009, 26% of Wisconsin Head Start children had untreated tooth decay, compared to 19% nationally. Of Wisconsin adults ages 35-44, 75% have no tooth loss, compared with 38% nationally. Of Wisconsin adults aged 65-74, 15% are toothless, compared with 24% nationally. Regarding oral preventive care, 51% of children have had sealants on their molars (32% nationally), and 75% of children and adults had a dental visit within the past twelve months (45% nationally). According to the Wisconsin Family Health Survey, in 2015, 25.8% of Wisconsin counties in the Great Rivers Region did not receive a dental visit within the last twelve months. This was slightly higher than the state average of 24%.

Wisconsin counties within the Great Rivers Region vary on their availability of fluoridation, with the rural counties having more wells and private water systems (see **Table 5**).

Table 5: Percent of Population exposed to Fluoridation		
County	% of Population Served with Fluoridated Water:	
	Community Water Systems	All Water systems
La Crosse	50-74.9%	50-74.9%
Monroe	25-49.9%	0-24.9%
Trempealeau	50-74.9%	25-49.9%
Vernon	0-24.9%	0-24.9%*
Houston	N/A	N/A

Source: Wisconsin Department of Health Services. 2010 Burden of Oral Disease in Wisconsin. Available at: <http://www.google.com/url?q=http://www.dhs.wisconsin.gov/publications/P0/P00209.pdf>
 N/A=Data not available for Houston County
 *0% of Vernon County Community Water Systems have fluoridated water.

What are the underlying risk factors or causes of illnesses?

How Lifestyle Affects Health

There is a clear connection between certain lifestyles or health habits. These habits are known as modifiable risk factors and are considered to be the major causes of death today. Research has suggested that between 35 and 40% of all deaths are caused by these risk factors. **Table 6** shows the connection between the risk factors and chronic diseases.

Table 6: Relationship of Risk Factors to Chronic Disease

Risk Factor	Heart Disease Stroke	Cancer	Diabetes	Chronic Lung Disease/Asthma	Injury & Violence
Tobacco	X	X		X	
Poor Diet and Physical Inactivity	X	X	X		
Alcohol Consumption		X			X
Excess Stress	X				X
Lack of Preventative Care	X	X	X	X	

Source: The Epidemic of Chronic Disease in Wisconsin. WI Department of Health Services. 2011. Available at <https://www.dhs.wisconsin.gov/publications/p0/p00238.pdf>

Table 7 shows the actual causes of death in the Great Rivers Region.

Table 7: Actual Causes of Death in Great Rivers Region, 2012

County	Cause of Death	Rate per 100,000
La Crosse	Cancer all types	191.9
	Heart disease	150.9
	Stroke	52.3
	Unintentional injuries (including motor vehicle accidents)	46.2
	Chronic lower respiratory disease	44.5
Monroe	Cancer all types	235.0
	Heart disease	210.4
	Chronic lower respiratory disease	56.0
	Diabetes	53.7
	Stroke	51.5
Trempealeau	Cancer all types	225.6
	Heart disease	215.2
	Chronic lower respiratory disease	65.9
	Stroke	48.6
	Unintentional Injuries (including motor vehicle accidents)	38.2
Vernon	Heart disease	228.4
	Cancer all types	208.2
	Unintentional Injuries (including motor vehicle accidents)	77.3
	Stroke	53.7
	Nephritis	40.3
Houston	Cancer all types	189.2
	Heart disease	131.4
	Unintentional Injuries (including motor vehicle accidents)	73.6
	Stroke	68.3
	Pneumonia/influenza	47.3

Source: Scorecard, Health Science Consortium, University of Wisconsin-La Crosse

How common are these behaviors among adults in the Great Rivers Region?

According to the 2015 County Health Rankings, La Crosse County ranked fourth for health behaviors. This rank is based on a combination of behavioral factors (smoking, obesity, exercises, food and exercise environment, alcohol use, STIs, and teen births). Monroe County ranked the lowest of all Great Rivers counties at 59th. See **Table 8** for more details.

County/Region	Health Behavior Ranking (2015)	Adult Smoking (2006-2012)	Adult Obesity 2011	Excessive Drinking (2006-2012)	Motor Vehicle Mortality Rate (per 100,000; 2006-2012)
La Crosse	4	15%	23%	26%	9
Monroe	59	23%	30%	26%	12
Trempealeau	36	19%	30%	24%	18
Vernon	48	23%	30%	23%	21
Houston	8	13%	26%	22%	13
Wisconsin	-	18%	29%	24%	11
Minnesota	-	16%	26%	19%	9

Source: County Health Rankings
Wisconsin has 72 counties and Minnesota has 87 counties.

*Please note that the rates in **Table 8** are reported in the County Health Rankings for 2015. These rates represent a combination of several years worth of data. For example, adult smoking is based on data combined from 2006-2012. Excessive drinking is a combination of binge and excessive drinking over this time frame. These statistics come from the Behavior Risk Factor Surveillance Survey, a telephone survey of residents in La Crosse County. Unfortunately, survey numbers are too small to report a yearly rate with any confidence. Thus, any recent changes in the rates of these behaviors are not reflect in the number in **Table 6**. However, short of completing a new survey, these are the best estimates available.*

Tobacco use is the leading cause of death in the United States, causing over 480,000 deaths in 2013, including nearly 42,000 deaths from secondhand smoke exposure. This is the equivalent of one in five deaths annually, or 1,300 deaths every day¹⁸. Tobacco use has declined nationally from 23.2% in 2000 to 17.3% in 2010. Wisconsin's tobacco use rate has also declined from 24% in 2000 to 19% in 2010, and Minnesota's rate went from 19.8% to 14.9%¹⁹.

Obesity, the second leading cause of death in the United States, has increased significantly from 2000 to 2010. This increase has occurred nationally as well as within Minnesota, Wisconsin, and the Great Rivers Region. According to the CDC, between 2011 and 2012, 69% of U.S. adults age 20 years and older were overweight; 35% of them were obese. In 2013, 49.4% of adults 18 years and over met the Physical Activity Guidelines, and 23.9% of adults 18 years and over met the guidelines for muscle strengthening²⁰. According to the CDC, in 2012, 29% of Great Rivers Region adults were obese. This is the same as the Wisconsin average and higher than the Minnesota average of 23%.

Obesity is a significant issue in all of the counties in our region. Several initiatives which attempt to address obesity issues have been launched in the Great Rivers Region. These efforts increase access to fresh and affordable fruits and vegetables and other whole grains, and increase the bikeability and walkability of our region. These programs are intended to have long-term effects on obesity. Unfortunately, there is little uniformity to these programs in all areas of the Great Rivers Region. Several areas within the Great

Rivers Region, mainly located in Vernon and Monroe Counties, have been labeled “food deserts.” See the Community profile for more information on this.

Excessive and risky alcohol use has long been an issue of concern in the Great Rivers Region. It has been identified as a major problem in each of the previous COMPASS NOW Reports. Alcohol use has a deep-rooted culture in our community going back to the late 1800s, in part due to the strong role of the brewing industry in our region. According to the Centers for Disease Control (CDC), excessive alcohol use, either in the form of heavy drinking (more than two drinks per day on average for men, or more than one for women) or binge drinking (drinking five or more drinks on a single occasion for men, or four or more for women), can lead to increased risk of health problems such as liver disease and/or unintentional injuries²¹. Excessive alcohol use is the third leading cause of death for people in the United States each year. Rates of alcohol dependence and alcohol abuse continue to be higher in Wisconsin than throughout United States. Counties in the Great River Region have similar rates of heavy drinking and binge drinking. The environment plays an important role in whether or not these behaviors have a significant public health impact. Rural areas of our region have a greater chance of alcohol-related motor vehicle crashes, whereas urban areas of our region are more likely to see alcohol poisoning, drowning, and other acts of violence worsened by high alcohol concentrations.

In 2012, the Wisconsin Department of Health Services determined that there were 43 alcohol-related deaths in the Great Rivers Region; however, death is not the only unintended consequence of excessive and risky alcohol use. The average rate of alcohol-related hospitalizations in the Great Rivers Region in 2014 was 2.3 hospitalizations per 1,000 people. La Crosse County had the highest rate at 3.4, which was significantly higher than the state average of 2 per 1,000 population. In 2014, approximately 24.2% of adults in the Great Rivers Region reported excessively drinking in the past 30 days. This was similar to the Wisconsin average of 24%, but higher than the Minnesota average of 19%.

According to the *2011 National Hospital Ambulatory Medical Care Survey*, **motor vehicle crashes (MVC)** accounted for 33,804 deaths, or 10.7 deaths per 100,000 population. Unintentional injuries are the fourth leading cause of death in the United States, and motor vehicle crashes (MVC) top this category nationally. Rates of MVCs vary significantly between counties in the Great Rivers Region. As stated above, counties with a greater percent of their highways as county roads, such as Monroe, Trempealeau, Vernon, and Houston, have a higher crash rate than La Crosse County. These rates are also higher than Wisconsin and Minnesota. Rates of alcohol-related motor vehicle fatalities have also been higher in Wisconsin than throughout the United States for many years. Wisconsin has 1.5 times the national rate of arrests for operating a motor vehicle while intoxicated and more than three times other liquor law violations.

How common are risky behaviors among our youth?

High school youth in the Great Rivers Region were surveyed on various health risks by completing the Youth Risk Behavior Survey (YRBS) in Wisconsin or the Minnesota Student Survey in Houston County. Results of key health behaviors are shown in **Table 9**.

Tobacco use among students has been on the decline for many years. In the 1990s, over 40% of high school students reported smoking in the past 30 days. Today, 17.3% of the youth in the Great Rivers Region reported using tobacco in the past 30 days. Houston County had the highest rate at 31%, while Trempealeau County had the lowest rate at 10.2%.

According to national results of the 2013 YRBS survey, approximately 17.3% of youth in the Great Rivers Region binge drank in the past 30 days, and 8% drove after drinking. This is a significant concern, especially given the nature of many poorly lit and narrow rural roads in our area. The combination of high speed, inexperience driving, and alcohol are potentially very dangerous.

Marijuana and other drug use continue to be on the rise in Wisconsin over recent years. Of youth who participated in the YRBS in the Great Rivers Region, 22.8% reported having ever used marijuana. The highest rates were found in La Crosse County and the lowest rates were in Houston County.

Although the majority of students in the Great Rivers Region reported feeling safe at school, reports of **violence**, bullying, and especially cyber-bullying have increased since the last COMPASS NOW Report.

Many of the **high risk sexual behaviors** reported by high school students on the YRBS have decreased significantly since 1993; however, a significant percentage of students are still engaging in risky sexual behaviors. Between 30-45% of youth in the Great Rivers Region reported ever having sexual intercourse.

The percent of youth in our area reporting that they considered a **suicide** attempt in the past 12 months ranged from about 7% to as high as 17%. Females are more likely to report this than males. Students reporting they feel less connected to their school are also more likely to report considering suicide.

Table 9: Select 2013 Youth Risk Behaviors

YRBS Data	La Crosse	Monroe	Trempealeau	Vernon	WI	Houston
Tobacco Use						
Used tobacco products in past 30 days	19.8%	11.6%	10.2%	14.0%	8.0%	31.0%
Smoked in past 30 days	13.5%	17.4%	12.6%	10.4%	12.0%	9.5%
Alcohol Use						
Binge drinking in past 30 days	15.8%	22.5%	16.5%	16.4%	18.4%	5.5%
Drove after drinking in past 30 days	6.9%	8.8%	8.8%	7.6%	8.9%	N/A
Drug Use						
Marijuana use ever	33.2%	28.3%	23.3%	16.0%	31.2%	13.0% (used alcohol and marijuana in past 30 days)
Used inhalant ever	7.4%	9.0%	5.6%	5.2%	5.9%	N/A
Used ecstasy ever	5.2%	5.1%	4.3%	4.0%	N/A	N/A
Used prescription drug without a doctor's permission	16.1%	8.4%	13.1%	17.6%	14.9%	N/A
Violence						
Were ever hit, slapped or physically hurt by their boyfriend or girlfriend during the past 12 months	12.4%	10.6%	8.8%	3.2%	8.5%	6.2%

Bullied on school property in past 12 months	29.5%	28.8%	32.1%	24.0%	22.7%	10.0%
Electronically bullied in past 12 months	N/A	21.5%	20.8%	16.8%	17.6%	13%
Sexual Activity						
Ever had sex	38.2%	45.0%	36.3%	32.4%	35.3%	39.2%
Mental Health						
Seriously considered suicide in past 12 months	16.8%	12.8%	12.2%	6.8%	13.2%	9.5%
Feeling sad or hopeless almost every day for 2 weeks	28.9%	23.9%	22.1%	15.2%	24.6%	30.5% (over last 12 months)
Hurt or injured yourself over the past 12 months without wanting to die	18.1%	15.7%	14.4%	10.0%	N/A	8.0%
Have attempted suicide	6.6%	6.8%	6.3%	3.6%	2.5%	5.0% (within last 12 months)

Source: Centers for Disease Control and Prevention (CDC). 1991-2013 High School Youth Risk Behavior Survey Data. Available at <http://nccd.cdc.gov/youthonline/>. Accessed on December 1, 2014; Minnesota Student Survey, 2013.

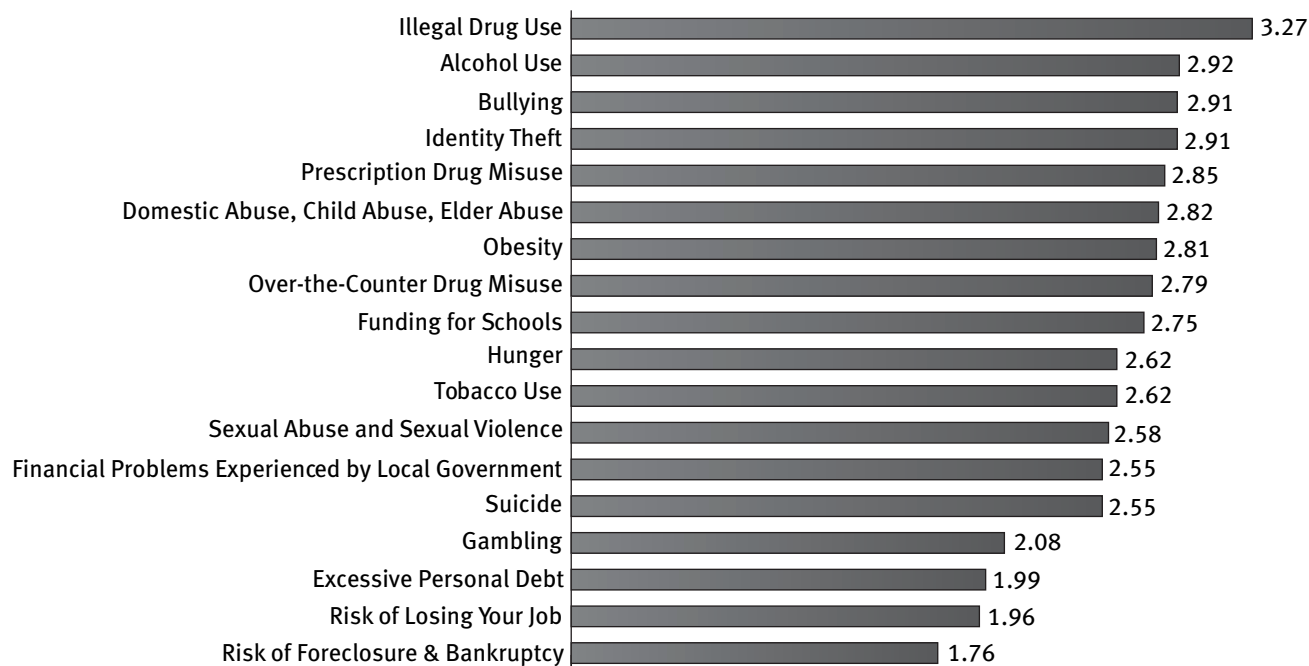
The CDC website represents this data at a state and national level. However, not all school districts within each county were required to participate in this survey. As part of a CDC grant, the YRBS was collected for La Crosse County in 2013. The YRBS is not generally available by county unless the county or school district voluntarily completes the online survey. Current cigarette use is defined as those who smoked at least one cigarette every day for 30 days. All high schools from La Crosse and Monroe counties participated in the online YRBS survey. The State of Wisconsin did not include a question regarding self-harm on the 2013 questionnaire.

It is important to note that Wisconsin and Minnesota administer different surveys to their high school students. Students in grades 6, 9, and 12 from Houston County complete the Minnesota Student Survey every three years. Not all indicators were comparable to the YRBS. Not all questions are asked at every school or reported in the county summaries.

How concerned are we about these health risks?

In the COMPASS NOW 2015 Random Household Survey, residents were asked to rate a series of eighteen concerns in the community. These results are shown in **Figure 5**. Health issues such as illegal drug use, bullying, alcohol use, obesity, prescription drug misuse, and over-the-counter drug misuse all ranked in the top half of community concerns. A comparison of issues by county is also shown in **Table 10**. Illegal drug use was the top rated concern for all counties. Suicide was one of the lowest rated concerns for all counties except Houston County, which ranked suicide as their eighth highest community concern.

Figure 5: Rating of Community Concerns



Source: COMPASS NOW 2015 Random Household Survey
Scale: No Concern=1; Very Concerned=4

Table 10: Ranking of Health Concerns by County out of 18 Topics

Concern	All Counties	La Crosse	Monroe	Trempealeau	Vernon	Houston
Illegal Drug Use	1	1	1	1	1	1
Alcohol Use	4	2	3	6	2	5
Obesity	5	8	8	5	3	6
Prescription Drug Misuse	7	4	2	10	9	11
Over-the-Counter Drug Misuse	9	6	6	12	10	9
Tobacco Use	10	13	11	9	8	10
Hunger	12	10	13	14	12	12
Suicide	14	12	14	8	14	8

Source: COMPASS NOW 2015 Random Household Survey

What are we doing to manage our health?

Quality of Health Care

Many national and regional organizations measure the quality of our health care. Minnesota and Wisconsin have consistently ranked very high in most of these measurements. In 2013, according to the Agency for Healthcare Research and Quality (AHRQ), Minnesota ranked first nationally, while Wisconsin ranked third in 2013. Wisconsin did especially well, ranking in the top 10% of states, for several measures, including adults age 40 years and older with diabetes who received at least two hemoglobin A1c measures in a calendar year, hospital heart attack patients who received angioplasty within 90 minutes of arrival, and hospice

patients who received care consistent with their end-of-life wishes. Minnesota leads the nation in most of the AHRQ measures, including having the highest ranked hospital in the nation (Mayo Clinic in Rochester), lowering the number of uninsured by 41%, and being ranked the best state in the country for long-term care.

Within the state of Wisconsin, 19 of the largest health systems have partnered to create the Wisconsin Collaborative for Healthcare Quality (WCHQ)²². Founded in 2003, the collaborative began developing, sharing, and publishing measures of clinical quality that were critical to overall health care improvement. The participants stated, “We see performance measurement and public reporting as vital and dual mechanisms for promoting greater transparency, improvement, efficiency, and equity within health care.” Sharing health system level results and learning from each other has had a significant impact on overall health care quality. Gundersen Health System and Mayo Clinic Health System are the two primary healthcare providers within the Great Rivers Region that participate in this collaborative. Both organizations provide data on all of their hospital and clinic encounters.

Quality of clinical care is one of the measures included in the “2015 County Health Rankings Report.” The clinical care measures include seven specific measurements within two dimensions: access to care and quality of care. According to these measures, La Crosse County ranked second in Wisconsin, and Houston County ranked sixth in Minnesota (Table 11). Houston County has the lowest preventable hospital stay rate in the region, followed by La Crosse County. All counties have between 89-92% of their diabetic Medicare enrollees screened. Houston County has the highest mammography screening rate, while Vernon County the lowest.

Table 11: 2015 Quality of Clinical Care & Measures of Access to Care

	La Crosse	Monroe	Trempealeau	Vernon	Houston
Clinical Care Rank in State	2	48	43	65	6
Measures of Quality of Care					
Preventable hospitals stays (rate per 1,000 Medicare enrollees)	39	61	59	59	30
Diabetic screening (% of diabetic Medicare enrollees screened)	92%	92%	92%	89%	91%
Mammography screening (% of female Medicare enrollees screened)	75.3%	70.2%	74.1%	59.3%	76.0%
Primary care providers (ratio of population to providers)	710:1	1,611:1	3,255:1	1,375:1	1,570:1
Uninsured (% under 65 without insurance in 2012)	9%	13%	11%	14%	9%
Dentists	1167:1	2265:1	4226:1	2757:1	2089:1
Mental Health Providers	423:1	755:1	1972:1	820:1	4700:1
Source: County Health Rankings, Mobilizing Action Toward Community Health. Wisconsin counties' rankings are out of 72 counties. Minnesota's are out of 87 counties.					

Access to Health Care

Two measures of access are identified in the County Health Rankings Report and are available for Great Rivers Region counties (see Table 11). These measures are the rate of uninsured adults (based on 2012 data)

and the number of people per primary care providers (based on 2012 data). La Crosse and Houston scored the highest on the rate of uninsured adults. La Crosse County scored highest on the number of people per primary care provider. Trempealeau had the highest patient to primary care provider ratio at 3,255:1.

Access to dental care is also difficult to measure. Several areas within the Great Rivers Region are designated to be Federal Health Professional Shortage areas for dental care. This indicates a shortage of dentists providing care to low income populations. These areas include Vernon, Monroe, and parts of Trempealeau counties.

Participants in the COMPASS NOW 2015 Random Household Survey rated access to health care as one of the highest strengths, scoring an average of 3.36 on a scale of 1 to 4. Overall, 56% of Great Rivers Region respondents rated access to health care as excellent, and 35% rated access to health care as good. Access to mental health also rated fairly high by participants, with 37.9% rating it as excellent and 55% rating it as good. Access to dental care was rated slightly lower overall, with 31.3% rating it as excellent and just under 53% rating it as good. Older adults rated overall access to health care higher than younger adults. Those with a higher level of education rated access to health care better than those with a lower level of education, as did those with higher incomes. Males and females rated access to health care equally (see **Figure 6**).

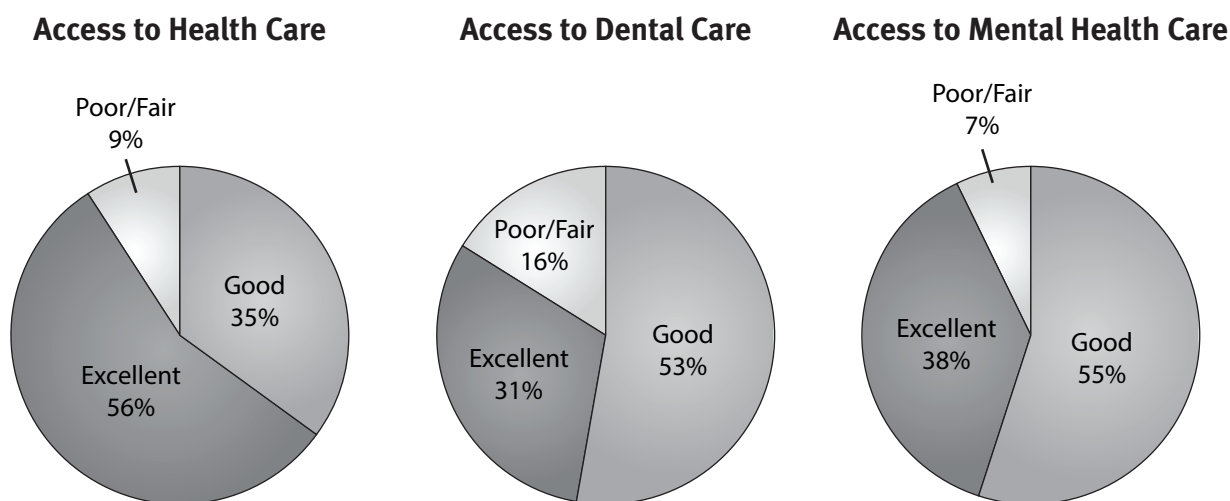


Figure 6: Access to Health Care, Dental Care, and Mental Health Care

Source: COMPASS NOW 2015 Random Household Survey

Access to all health care services was a reoccurring topic for discussion at COMPASS Council meetings and community conversations. This was especially true for mental health services and dental care access. Access could mean proximity to home, availability of public transportation to these areas, hours of operation, and/or the ability to utilize insurance at the most convenient or preferred health care institution.

The cost of health care

The cost of health care is a topic that continues to be discussed and debated, even after the passing of the Affordable Care Act (ACA), which was created in an attempt to make health care more available for those with little or no coverage. According to the U.S. Department of Health and Human Services, in 2013, U.S. health care spending was about \$9,255 per resident and accounted for 17.4% of the Gross Domestic Product (GDP). The Robert Wood Johnson Foundation identified some factors that are driving the cost of health care in the U.S., including fee-for-service reimbursement; fragmented care delivery systems; administrative burden of providers, payers, and patients; aging population, rising rates of chronic disease and co-morbidities; and lifestyle factors/health choices.

With the enactment of the Affordable Care Act, millions of previously uninsured individuals have gained insurance coverage by purchasing private insurance packages or receiving Medicaid. According to the Kaiser Family Foundation, some key points from the implementation of the ACA are:

- On average, an uninsured person will incur considerably lower medical expenses than someone who is insured for the full year. In 2013, the average uninsured person had half the amount of medical expenditures as the average insured person (\$2,443 versus \$4,876)²³.
- In 2013, the cost of “uncompensated care” provided to uninsured individuals was \$84.9 billion. Uncompensated care includes health care services without a direct source of payment. In addition, people who are uninsured paid an additional \$25.8 billion out-of-pocket for their care²³.
- The majority of uncompensated care (60%) is provided in hospitals. Community based providers (including clinics and health centers) and office-based physicians provide the rest, providing 26% and 14% of uncompensated care, respectively²³.
- In 2013, \$53.3 billion was paid to help providers offset uncompensated care costs. Most of these funds (\$32.8 billion) came from the federal government through a variety of programs, including Medicaid and Medicare, the Veterans Health Administration, and other programs. States and localities provided \$19.8 billion, and the private sector provided \$0.7 billion²³.

COMPASS NOW 2015 Random Household Survey respondents were asked to rate their ability to pay for health care, dental care, and mental health care in the Great Rivers Region. **Figure 7** shows these results. Female respondents rated their ability to pay for dental care worse than males. The ability to pay for health care, dental care, and mental health care was ranked lower by respondents under age 65, those without a college degree, and those earning lower incomes. There were no significant differences based on race.

Figure 7: Affordability of Health Care, Dental Care, and Mental Health Care



Source: COMPASS NOW 2015 Random Household Survey

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