Community Health Needs Assessment

2020



Cavalier Service Area, North Dakota



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Executive Summary

To help inform future decisions and strategic planning, Pembina County Memorial Hospital (PCMH) conducted a Community Health Needs Assessment (CHNA) in 2020, the previous CHNA having been conducted in 2017. The Center for Rural Health (CRH) at the University of North Dakota School of Medicine and Health Sciences (UNDSMHS) facilitated the assessment process, which solicited input from area community members and healthcare professionals, as well as analysis of community health-related data.

survey presents a snapshot of the health needs and concerns in the community.

well as analysis of community health-related data.

To gather feedback from the community, residents of the area were given the opportunity to participate in a survey. Sixty-eight PCMH service area residents completed the survey. Additional information was collected through 11 key informant interviews with community members. The input from the residents, who primarily reside in Pembina County, represented the broad interests of the communities in the service area. Together with secondary data gathered from a wide range of sources, the

With regard to demographics, Pembina County's population from 2010 to 2019 decreased by 8.1 percent. The average number of residents under age 18 (20.8%) for Pembina County comes in 2.7 percentage points lower than the North Dakota average (23.5%). The percentage of residents ages 65 and older, is almost 8% higher for Pembina County (23.1%) than the North Dakota average (15.3%), and the rate of education is slightly lower for Pembina County (88.6%) than the North Dakota average (92.5%). The median household income in Pembina County (\$64,962) is higher than the state average for North Dakota (\$63,473).

Data compiled by County Health Rankings show Pembina County is doing better than the North Dakota average in health outcomes/factors for 15 categories.

Pembina County, according to County Health Rankings data, is performing poorly relative to the rest of the state in 16 outcome / factor categories.

Of 106 potential community and health needs set forth in the survey, the 68 PCMH service area residents who completed the survey indicated the following ten needs as the most important:

- Alcohol use and abuse Youth
- Attracting and retaining young families
- Bullying/cyberbullying
- Cost of long-term/nursing home care
- Availability of resources to help the elderly stay in their homes
- Availability of vision care

- Assisted living options
- Availability of mental health services

Pembina Count

Memorial Hospital

embina County

EMERGENCY

norial Hospital

- Not enough jobs with livable wages
- Smoking & tobacco use or vaping/juuling -Youth

The survey also revealed the biggest barriers to receiving healthcare (as perceived by community members). They included having no or limited insurance (12), not enough evening or weekend hours (10), and not having enough specialists available (9).

When asked what the best aspects of the community were, respondents indicated the top community assets were:

- Safe place to live
- Healthcare
- Family-friendly
- People are friendly, helpful, supportive

- Active faith community
- Local events and festivals
- People living here are involved
- Feeling connected to the people who live here

Input from community members, provided via key informant interviews, echoed some of the concerns raised by survey respondents. Concerns emerging from these sessions were:

- Alcohol use and abuse Youth and Adults
- Attracting and retaining young families
- Availability of mental health services
- Availability of resources to help the elderly stay in their homes
- Cost of long-term/nursing home care

- Depression/anxiety Youth and Adults
- Drug use and abuse (including prescription drug use) – Adults
- Having enough child daycare services
- Not enough affordable housing

Overview and Community Resources

With assistance from CRH at the UNDSMHS, PCMH completed a CHNA of the PCMH service area. The hospital identifies its service area as the towns of Bathgate, Cavalier, Crystal, Edinburg, Gardar, Hamilton, Hoople, Hensel, Mountain, Neche, Pembina, St. Thomas, and Walhalla. Many community members and stakeholders worked together on the assessment.

PCMH is located in northeastern North Dakota, approximately 80 miles north of Grand Forks and 16 miles from the Canadian border. Along with the hospital, agricultural and border patrol operations provide the economic base for the town of Cavalier and Pembina County. It is located on the Red River in Pembina Township where it flows out of the state



and into the Canadian province of Manitoba. As of 2019, Pembina County had a population of 6,801, while Cavalier, the county seat, had a population of 1,264.

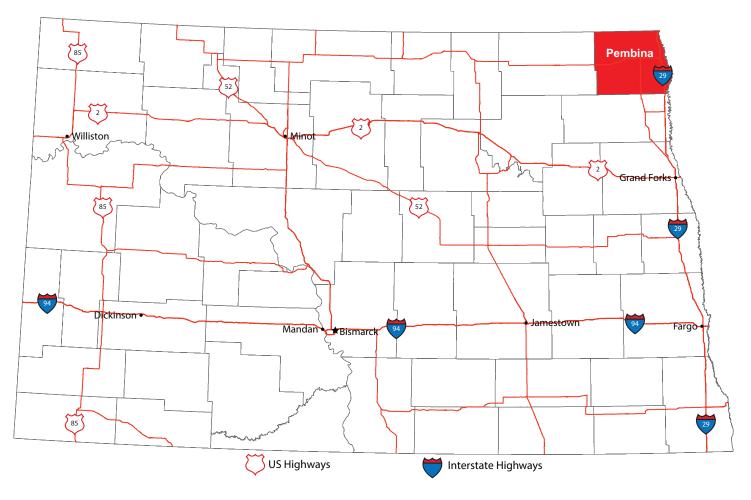


Pembina County has a number of community assets and resources that can be mobilized to address population health improvement. In terms of physical assets and features, the community includes a bike path, swimming pool, city park, tennis courts, golf course, skating rink, and movie theatre. Pembina Gorge State Recreation Area offers multi-use trails for biking, hiking, and ATV riding. Icelandic State Park offers recreation and camping opportunities as well as hosting the Pioneer Heritage Center and Gunlogson Homestead and Nature Preserve. Pembina County offers several cultural attractions such as the Pembina State Museum, which pays tribute to the early history of the region including several groups of native peoples and the fur trapping business, and Pembina County Historical Museum. Also, the Cavalier Air Force Station provides insights into the monitoring and tracking of earth-orbiting objects.

The Pembina County school system offers a comprehensive program for students K-12.

Other healthcare facilities and services in the area include the Altru Specialty Clinic in Cavalier, multiple pharmacies, dentist, and chiropractor. PCPH is located in Cavalier.

Figure 1: Pembina County



Pembina County Memorial Hospital, PCMH

Opened in 1953, PCMH is one of the most important assets in the community and the largest charitable organization in the Cavalier area. PCMH includes a 20-bed, Critical Access Hospital located in Cavalier. As

a hospital and designated Level IV trauma center, the hospital provides comprehensive care for a wide range of medical and emergency situations. PCMH is part of the local healthcare system which also includes Wedgewood Manor and CliniCare. PCMH provides comprehensive medical care with physicians and mid-level medical providers and consulting/visiting medical providers. With nearly 170 employees, PCMH is one of the largest employers in the region. It has two physicians, one general surgeon, and four mid-level providers.



The mission of PCMH and Wedgewood Manor is to:

"provide a family centered approach to the delivery of health services and to promote a healthy lifestyle to those we serve."

Services offered locally by PCMH include:

General and Acute Services

- Acne treatment
- Advanced care planning
- Allergy, flu & pneumonia shots
- Immunizations
- Blood pressure checks
- Cardiac rehab
- Chronic care management
- Clinic
- Diabetes prevention program and education
- 24-hour Emergency room and eEmergency
- Gynecology
- Hospital (acute care)
- Independent senior housing
- Mental health services (adult and adolescent)

- Mole/wart/skin lesion removal
- Nutrition counseling
- Orthopedics
- Pharmacy
- Physicals: annuals, D.O.T., sports, & insurance
- Respite care
- Sports medicine
- Steroid injections
- Surgical services-outpatient and inpatient (general surgery, laparoscopic, colonoscopy, and endoscopy)
- Swing bed services
- Trauma and stroke care
- Wellness services

Screening/Therapy Services

- Chronic disease management
- Holter monitoring
- Infusion services including rheumatology, chemotherapy, and antibiotics
- Lymphedema wrap
- Occupational therapy
- Pediatric services

- Physical therapy
- Respiratory care
- Sleep studies
- Social services
- Speech therapy
- Wound vac services

Radiology Services

- CT scan
- 3D/Digital mammography
- Echocardiograms
- EKG
- General X-ray

- Nuclear medicine
- Mammograms
- MRI
- Ultrasound

Laboratory Services

- Blood types
- Clot times
- Chemistry

- Drug Screens
- Hematology
- Urine testing

Pembina County Public Health, PCPH

Pembina County Public Health (PCPH) provides public health services that include environmental health, nursing services, the WIC (Women, Infants, and Children) program, health screenings, and education services. Each of these programs provides a wide variety of services in order to accomplish the mission of public health, which is to assure that North Dakota is a healthy place to live and each person has an equal opportunity to enjoy good health. To accomplish this mission, PCPH is committed to the promotion of healthy lifestyles, protection and enhancement of the environment, and provision of quality healthcare services for the people of North Dakota.

Specific services that Central Valley Health District provides are:

- Bicycle helmet safety education
- Blood pressure checks
- Blood sugar testing
- Breastfeeding resources
- Car seat program
- Child health (well-baby checks)
- Correctional facility health
- Emergency response and preparedness program
- Flu shots for children 18 and younger
- Health Tracks (child health screening)
- Home visits
- Immunizations

- Medication setup home visits
- Office visits and consults
- Preschool education programs
- Assist with preschool screenings
- Radon testing kits
- School health (vision screening, puberty talks, school immunizations)
- Tobacco prevention and control
- Tuberculosis testing and management
- West Nile program surveillance and education
- Women, Infant, and Children (WIC) program
- Youth education programs (first aid, bike safety)

Assessment Process

The purpose of conducting a CHNA is to describe the health of local people, identify areas for health improvement, identify use of local healthcare services, determine factors that contribute to health issues, identify and prioritize community needs, and help healthcare leaders identify potential action to address the community's health needs.

A CHNA benefits the community by:

- 1) Collecting timely input from local community members, providers, and staff;
- 2) Providing an analysis of secondary data related to health-related behaviors, conditions, risks, and outcomes;
- 3) Compiling and organizing information to guide decision making, education, and marketing efforts, and to facilitate the development of a strategic plan;
- 4) Engaging community members about the future of healthcare; and
- 5) Allowing the community hospital to meet the federal regulatory requirements of the Affordable Care Act, which requires not-for-profit hospitals to complete a CHNA at least every three years, as well as helping the local public health unit meet accreditation requirements.

This assessment examines health needs and concerns primarily in Pembina County, which is included in the PMCH service area. In addition, located in the service area are the communities of Edinburg and Hoople, which are located in Walsh County.

CRH, in partnership with PCMH and PCPH, facilitated the CHNA process. Community representatives met regularly in-person, by telephone conference, and email. A CHNA liaison was selected locally, who served as the main point of contact between CRH and PCMH. A small steering committee (see Figure 2) was formed that was responsible for planning and implementing the process locally. Representatives from CRH met and corresponded regularly by teleconference and/or via the eToolkit with the CHNA liaison. While a community group meeting would normally be held to provide in-depth information and inform the assessment process in terms of community perceptions, community resources, community needs, and ideas for improving the health of the population and healthcare services, the COVID-19 pandemic prevented an in-person meeting. Alternatively, additional key informants were utilized to gather this information. Eleven people, representing a cross section demographically, were interviewed.

Figure 2: Steering Committee

Carly Enger	RN, Altru Specialty Clinic
Julie Hardy	RN, Director, Pembina County Public Health
Lisa LeTexier	CEO, Pembina County Memorial Hospital
Ann Russell	Employee Specialist, PIO, Pembina County Memorial Hospital
Katie Werner	CFO, Pembina County Memorial Hospital

The original survey tool was developed and used by CRH. In order to revise the original survey tool to ensure the data gathered met the needs of hospitals and public health, CRH worked with the North Dakota Department of Health's public health liaison. CRH representatives also participated in a series of meetings that garnered input from the state's health officer, local North Dakota public health unit professionals, and representatives from North Dakota State University.

As part of the assessment's overall collaborative process, CRH spearheaded efforts to collect data for the assessment in a variety of ways:

- A survey solicited feedback from area residents;
- Community leaders representing the broad interests of the community took part in one-on-one key informant interviews; and,
- A wide range of secondary sources of data were examined, providing information on a multitude of measures, including demographics, health conditions, indicators, outcomes, rates of preventive measures, rates of disease, and at-risk behavior.

CRH is one of the nation's most experienced organizations committed to providing leadership in rural health. Its mission is to connect resources and knowledge to strengthen the health of people in rural communities. CRH is the designated State Office of Rural Health and administers the Medicare Rural Hospital Flexibility (Flex) program, funded by the Federal Office of Rural Health Policy, Health Resources Services Administration, and Department of Health and Human Services. CRH connects the UNDSMHS and other necessary resources, to rural communities and their healthcare organizations in order to maintain access to quality care for rural residents. In this capacity, CRH works at a national, state, and community level.

Detailed below are the methods undertaken to gather data for this assessment by conducting key informant interviews, soliciting feedback about health needs via a survey, and researching secondary data.

Interviews

One-on-one interviews with 11 key informants were conducted via phone in August of 2020. A representative from CRH conducted the interviews. Interviews were held with selected members of the community who could provide insights into the community's health needs. Included among the informants were public health

professionals with special knowledge in public health acquired through several years of direct experience in the community, including working with medically underserved, low income, and minority populations, as well as with populations with chronic diseases.

Topics covered during the interviews included the general health needs of the community, the general health of the community, community concerns, delivery of health care by local providers, awareness of health services offered locally, barriers to receiving health services, and suggestions for improving collaboration within the community.

Survey

A survey was distributed to solicit feedback from the community and was not intended to be a scientific or statistically valid sampling of the population. It was designed to be an additional tool for collecting qualitative data from the community at large – specifically, information related to community-perceived health needs. A copy of the survey instrument is included in Appendix A and a full listing of direct responses provided for the questions that included "Other" as an option are included in Appendix F.

The community member survey was distributed to various residents of Pembina County, with portions of Walsh County, which are included in the PCMH service area. The survey tool was designed to:

- Learn of the good things in the community and the community's concerns;
- Understand perceptions and attitudes about the health of the community and hear suggestions for improvement; and
- Learn more about how local health services are used by residents.

Specifically, the survey covered the following topics:

- Residents' perceptions about community assets;
- Broad areas of community and health concerns;
- Awareness of local health services:
- Barriers to using local healthcare;
- Basic demographic information;
- Suggestions to improve the delivery of local healthcare; and
- Suggestions for capital improvements.

To promote awareness of the assessment process, information was provided at PCMH and CliniCare registration areas, the facility's website, and through PCPH.

Fifty paper community member surveys were available for distribution in Pembina County. The surveys were distributed at PCMH and clinic registration areas, as well as at public health. Announcements were posted within the facilities and in local newspapers regarding access to the online availability of the survey.

To help ensure anonymity, included with each hard-copy survey was a postage-paid return envelope to CRH. In addition, to help make the survey as widely available as possible, residents could request a survey by calling PCMH or PCPH. The survey period ran from July 1, 2020 to August 12, 2020. Eight completed paper surveys were returned.

Area residents were also given the option of completing an online version of the survey, which was publicized in local newspapers and PCMH's website. Sixty online surveys were completed. In total, counting both paper and online surveys, sixty-eight community member surveys were completed, equating to a 1.2% response rate. This response rate is significantly low for this type of unsolicited survey methodology and indicates little engagement from the community.

Secondary Data

Secondary data was collected and analyzed to provide descriptions of: (1) population demographics, (2) general health issues (including any population groups with particular health issues), and (3) contributing causes of community health issues. Data was collected from a variety of sources, including the U. S. Census Bureau; Robert Wood Johnson Foundation's County Health Rankings, which pulls data from 20 primary data sources (www.countyhealthrankings.org); the National Survey of Children's Health, which touches on multiple intersecting aspects of children's lives (www.childhealthdata.org/learn/NSCH); and North Dakota KIDS COUNT, which is a national and state-by-state effort to track the status of children, sponsored by the Annie E. Casey Foundation (www.ndkidscount.org). and Youth Risk Behavior Surveillance System (YRBSS) data, which is published by the Centers for Disease Control and Prevention (https://www.cdc.gov/healthyyouth/data/yrbs/index.htm).

Social Determinants of Health

According to the World Health Organization, social determinants of health are, "The circumstances in which people are born, grow up, live, work, and age and the systems put in place to deal with illness. These circumstances are in turn shaped by wider set of forces: economics, social policies and politics."

Income-level, educational attainment, race/ethnicity, and health literacy all impact the ability of people to access health services. Basic needs such as clean air and water and safe and affordable housing are all essential to staying healthy and are also impacted by the social factors listed previously. The barriers already present in rural areas, such as limited public transportation options and fewer choices to acquire healthy food, can compound the impact of these challenges.

Healthy People 2020, (https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health) illustrates that health and healthcare, while vitally important, play only one small role (approximately 20%) in the overall health of individuals, and ultimately of a community. Social and community context, education, economic stability, neighborhood and built environment play a much larger part (80%) in impacting health outcomes. Therefore, as needs or concerns were raised through this community health needs assessment process, it was imperative to keep in mind how they impact the health of the community and what solutions can be implemented. See Figure 3.

Figure 3: Social Determinants of Health

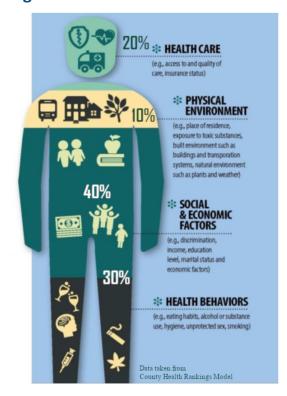


Figure 4 (Henry J. Kaiser Family Foundation, https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/), provides examples of factors that are included in each of the social determinants of health categories that lead to health outcomes. For more information and resources on social determinants of health, visit the Rural Health Information Hub website, https://www.ruralhealthinfo.org/topics/social-determinants-of-health.

Figure 4: Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System			
Employment Income Expenses Debt Medical bills Support	Housing Transportation Safety Parks Playgrounds Walkability Zip code / geography	Literacy Language Early childhood education Vocational training Higher education	Hunger Access to healthy options	Social integration Support systems Community engagement Discrimination Stress	Health coverage Provider availability Provider linguistic and cultural competency Quality of care			
Health Outcomes Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations								



Demographic Information

TABLE 1: Summarizes general demographic and geographic data about Pembina County.

	Pembina County	North Dakota
Population (2019)	6,801	762,062
Population change (2010-2019)	-8.1%	13.3%
People per square mile (2010)	6.6	9.7
Persons 65 years or older (2019)	23.1%	15.3%
Persons under 18 years (2019)	20.8%	23.5%
Median age (2018 est.)	47.9	35.4
White persons (2019)	93.3%	87.0%
Limited English speaking (2018)	0.4%	1.3%
High school graduates (2018)	88.6%	92.5%
Bachelor's degree or higher (2018)	20.1%	29.5%
Live below poverty line (2019)	10.3%	10.7%
Persons without health insurance, under age 65 years (2019)	9.8%	8.4%

 $Source: https://www.census.gov/quickfacts/fact/table/ND, US/INC910216 \#viewtop \ and \ https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml \#$

While the population of North Dakota has grown in recent years, Pembina County has seen a decrease in population since 2010. The U.S. Census Bureau estimates show that Pembina County's population decreased from 7,403 (2010) to 6,801 (2019).

County Health Rankings

The Robert Wood Johnson Foundation, in collaboration with the University of Wisconsin Population Health Institute, has developed County Health Rankings to illustrate community health needs and provide guidance for actions toward improved health. In this report, Pembina County is compared to North Dakota rates and national benchmarks on various topics ranging from individual health behaviors to the quality of healthcare.

The data used in the 2020 County Health Rankings are pulled from more than 20 data sources and then are compiled to create county rankings. Counties in each of the 50 states are ranked according to summaries of a variety of health measures. Those having high ranks, such as 1 or 2, are considered to be the "healthiest." Counties are ranked on both health outcomes and health factors. Following is a breakdown of the variables that influence a county's rank.

A model of the 2020 County Health Rankings – a flow chart of how a county's rank is determined – may be found in Appendix B. For further information, visit the County Health Rankings website at www. countyhealthrankings.org.

Health Outcomes

- Length of life
- Quality of life

Health Factors

- Health behavior
 - Smoking
 - Diet and exercise
 - Alcohol and drug use
 - Sexual activity

Health Factors (continued)

- Clinical care
 - Access to care
 - Quality of care
- Social and Economic Factors
 - Education
 - Employment
 - Income
 - Family and social support
 - Community safety
- Physical Environment
 - Air and water quality
 - Housing and transit

Table 2 summarizes the pertinent information gathered by County Health Rankings as it relates to Pembina County. It is important to note that these statistics describe the population of a county, regardless of where county residents choose to receive their medical care. In other words, all of the following statistics are based on the health behaviors and conditions of the county's residents, not necessarily the patients and clients of Pembina County Memorial Hospital, Pembina County Public Health, or of any particular medical facility.

For most of the measures included in the rankings, the County Health Rankings' authors have calculated the "Top U.S. Performers" for 2019. The Top Performer number marks the point at which only 10% of counties in the nation do better, i.e., the 90th percentile or 10th percentile, depending on whether the measure is framed positively (such as high school graduation) or negatively (such as adult smoking).

Pembina County rankings within the state are included in the summary following. For example, Pembina County ranks 14th out of 48 ranked counties in North Dakota on health outcomes and 41st on health factors. The measures marked with a bullet point (•) are those where a county is not measuring up to the state rate/percentage; a square (■) indicates that the county is not meeting the U.S. Top 10% rate on that measure. Measures that are not marked with a colored checkmark but are marked with a plus sign (+) indicate that the county is doing better than the U.S. Top 10%.

The data from County Health Rankings shows that Pembina County is doing better than many counties compared to the rest of the state on all but two of the outcomes, landing at or above rates for other North Dakota counties. However, both counties, like many North Dakota counties, are doing poor in many areas when it comes to the U.S. Top 10% ratings. One particular outcome where Pembina County does not meet the U.S. Top 10% ratings is the number of premature deaths.

Data compiled by County Health Rankings show Pembina County is doing better than North Dakota in health outcomes and factors for the following indicators:

- Poor or fair health
- Poor physical health days
- Poor mental health days
- Adult smoking
- Access to exercise opportunities
- Excessive drinking
- Sexually transmitted infections
- Teen birth rate

- Children in poverty
- Income inequality
- Children in single-parent households
- Social associations
- Violent crime
- Drinking water violations
- Severe housing problems

Outcomes and factors in which Pembina County is performing poorly relative to the rest of the state include:

- Premature death
- Low birth weight
- Adult obesity
- Food environment index
- Physical inactivity
- Alcohol-impaired driving deaths
- Uninsured
- Primary care physicians
- Dentists

- Mental health providers
- Preventable hospital stays
- Mammography screening (% of Medicare enrollees ages 65-74 receiving screening)
- Flu vaccinations (% of fee-for-service Medicare enrollees receiving vaccination)
- Unemployment
- Injury deaths
- Air pollution particulate matter

= Not meeting North Dakota average

■ = Not meeting U.S. Top 10% Performers

+ = Meeting or exceeding U.S. Top 10% Performers

Blank values reflect unreliable or missing data

TABLE 2: SELECTED MEASURES FROM <i>COUNTY HEALTH RANKINGS</i> 2020 – PEMBINA COUNTY						
	Pembina County	U.S. Top 10%	North Dakota			
Ranking: Outcomes	14 th		(of 48)			
Premature death	6,700	5,500	6,600			
Poor or fair health	13%	12%	15%			
Poor physical health days (in past 30 days)	2.7 +	3.1	3.3			
Poor mental health days (in past 30 days)	3.0 +	3.4	3.5			
Low birth weight	7% ●■	6%	6%			
Ranking: Factors	41 st		(of 48)			
Health Behaviors						
Adult smoking	16%	14%	18%			
Adult obesity	39% ●■	26%	33%			
Food environment index (10=best)	8.8 •	8.6	9.0			
Physical inactivity	32% ●■	20%	24%			
Access to exercise opportunities	75%	91%	74%			
Excessive drinking	22%	13%	24%			
Alcohol-impaired driving deaths	50% ●■	11%	43%			
Sexually transmitted infections	143.4 +	161.4	433.9			
Teen birth rate	14	13	21			
Clinical Care						
Uninsured	10% •	6%	9%			
Primary care physicians	3,490:1	1,030:1	1,300:1			
Dentists	2,320:1	1,240:1	1,540:1			
Mental health providers	3,470:1	290:1	530:1			
Preventable hospital stays	5,797 ●■	2,761	4,551			
Mammography screening (% of Medicare enrollees ages 65-74 receiving screening)	45% ●■	50%	52%			
Flu vaccinations (% of fee-for-service Medicare enrollees receiving vaccination)	25% ●■	53%	49%			
Social and Economic Factors						
Unemployment	3.9% ●■	2.6%	2.6%			
Children in poverty	11% +	11%	11%			
Income inequality	4.3	3.7	4.4			
Children in single-parent households	17% +	20%	27%			
Social associations	31.6 +	18.4	16.2			
Violent crime	86 ■	63	258			
Injury deaths	82 •	58	70			
Physical Environment						
Air pollution – particulate matter	6.6 ●■	6.1	5.4			
Drinking water violations	No					
Severe housing problems	5% +	9%	11%			

Source: http://www.countyhealthrankings.org/app/north-dakota/2020/rankings/outcomes/overall

Children's Health

The National Survey of Children's Health touches on multiple intersecting aspects of children's lives. Data are not available at the county level; listed below is information about children's health in North Dakota. The full survey includes physical and mental health status, access to quality healthcare, and information on the child's family, neighborhood, and social context. Data is from 2017-18. More information about the survey may be found at www.childhealthdata.org/learn/NSCH.

Key measures of the statewide data are summarized below. The rates highlighted in red signify that the state is faring worse on that measure than the national average.

TABLE 3: SELECTED MEASURES REGARDING CHILDREN'S HEALTH (For children aged 0-17 unless noted otherwise), 2017/2018

Health Status	North Dakota	National
Children born premature (3 or more weeks early)	9.9%	11.6%
Children 10-17 overweight or obese	27.1%	30.8%
Children 0-5 who were ever breastfed	82.2%	80.3%
Children 6-17 who missed 11 or more days of school	2.8%	4.0%
Healthcare		
Children currently insured	93.9%	93.6%
Children who spent less than 10 minutes with the provider at a preventive medical visit	17.3%	19.0%
Children (1-17 years) who had preventive dental visit in past year	75.7%	79.9%
Children (3-17 years) received mental health care	12.4%	9.6%
Children (3-17 years) with problems requiring treatment did not receive mental health care	0.8%	2.4%
Young children (9-35 mos.) receiving standardized screening for developmental problems	36.7%	33.5%
Family Life		
Children whose families eat meals together 4 or more times per week	73.3%	73.3%
Children who live in households where someone smokes	15.3%	14.9%
Neighborhood		
Children who live in neighborhood with a parks, recreation centers, sidewalks, and a library	36.2%	39.0%
Children living in neighborhoods with litter/garbage on the streets, poorly kept or rundown housing, and vandalism	1.4%	3.9%
Children living in neighborhood that's usually or always safe	98.1%	95.3%

Source: http://childhealthdata.org/browse/data-snapshots/nsch-profiles?geo=1&geo2=36&rpt=16

The data on children's health and conditions reveal that while North Dakota is doing better than the national averages on a few measures, it is not measuring up to the national averages with respect to:

- Children (1-17 years) who had a preventative dental visit in the past year
- Children living in smoking households
- Children living in neighborhoods with parks, recreation centers, sidewalks, and a library

Table 4 includes selected county-level measures regarding children's health in North Dakota. The data come from North Dakota KIDS COUNT, a national and state-by-state effort to track the status of children, sponsored by the Annie E. Casey Foundation. KIDS COUNT data focuses on the main components of children's well-being; more information about KIDS COUNT is available at www.ndkidscount.org. The measures highlighted in blue in the table are those in which the counties are doing worse than the state average. The year of the most recent data is noted.

The data show Pembina County is performing more poorly than the North Dakota average on all of the examined measures except the percentage of the population who are Medicaid recipients, Supplemental Nutrition Assistance Program (SNAP) recipients, and the 4-year high school graduation rate. The most marked difference was on the measure of licensed childcare capacity (just over 14% lower rate in Pembina County).

Table 4: Selected County-Level Measures Regarding children's Health

	Pembina County	North Dakota
Uninsured children (% of population age 0-18), 2017	9.2%	6.3%
Uninsured children below 200% of poverty (% of population), 2017	13.2%	30.1%
Medicaid recipient (% of population age 0-20), 2019	25.7%	26.6%
Children enrolled in Healthy Steps (% of population age 0-18), 2019	1.9%	1.6%
Supplemental Nutrition Assistance Program (SNAP) recipients (% of population age 0-18), 2019	14.1%	16.9%
Licensed childcare capacity (% of population age 0-13), 2020	25.8%	39.9%
4-Year High School Cohort Graduation Rate, 2018	97.5%	88.0%

Source: https://datacenter.kidscount.org/data#ND/5/0/char/0

Another means for obtaining data on the youth population is through the Youth Risk Behavior Survey (YRBS). The YRBS was developed in 1990 by the Centers for Disease Control and Prevention (CDC) to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability, and social problems among youth and adults in the United States. The YRBS was designed to monitor trends, compare state health risk behaviors to national health risk behaviors and intended for use to plan, evaluate and improve school and community programs. North Dakota began participating in the YRBS survey in 1995. Students in grades 7-8 and 9-12 are surveyed in the spring of odd years. The survey is voluntary and completely anonymous.

North Dakota has two survey groups, selected and voluntary. The selected school survey population is chosen using a scientific sampling procedure which ensures that the results can be generalized to the state's entire student population. The schools that are part of the voluntary sample, selected without scientific sampling procedures, will only be able to obtain information on the risk behavior percentages for their school and not in comparison to all the schools.

Table 5 depicts some of the YRBS data that has been collected in 2015, 2017, and 2019. They are further broken down by rural and urban percentages. The trend column shows a "=" for statistically insignificant change (no change)," \uparrow " for an increased trend in the data changes from 2017 to 2019, and " \downarrow " for a decreased trend in the data changes from 2017 to 2019. The final column shows the 2019 national average percentage. For a more complete listing of the YRBS data, see Appendix C.

Youth Behavioral Risk Survey Results

North Dakota High School Survey

Rate Increase \uparrow , rate decrease \downarrow , or no statistical change = in rate from 2017-2019.

Sources: https://www.cdc.gov/healthyyouth/data/yrbs/results.htm; https://www.nd.gov/dpi/districtsschools/safety-health/youth-risk-behavior-survey

	ND 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
Injury and Violence							
% of students who rarely or never wore a seat belt (when riding in a car driven by someone else)	8.5	8.1	5.9	=	8.8	5.4	6.5
% of students who rode in a vehicle with a driver who had been							
drinking alcohol (one or more times during the 30 prior to the survey)	17.7	16.5	14.2	=	17.7	12.7	16.7
% of students who talked on a cell phone while driving (on at least 1							
day during the 30 days before the survey)	NA	56.2	59.6	=	60.7	60.7	NA
% of students who texted or e-mailed while driving a car or other							
vehicle (on at least 1 day during the 30 days before the survey)	57.6	52.6	53.0	=	56.5	51.8	39.0
% of students who were in a physical fight on school property (one or							
more times during the 12 months before the survey)	5.4	7.2	7.1	=	7.4	6.4	8.0
% of students who experienced sexual violence (being forced by							
anyone to do sexual things [counting such things as kissing, touching,							
or being physically forced to have sexual intercourse] that they did not							
want to, one or more times during the 12 months before the survey)	NA	8.7	9.2	=	7.1	8.0	10.8
% of students who were bullied on school property (during the 12							
months before the survey)	24.0	24.3	19.9	Ψ	24.6	19.1	19.5
% of students who were electronically bullied (includes texting,							
Instagram, Facebook, or other social media ever during the 12 months							
before the survey)	15.9	18.8	14.7	Ψ	16.0	15.3	15.7
% of students who made a plan about how they would attempt suicide							
(during the 12 months before the survey)	13.5	14.5	15.3	=	16.3	16.0	15.7
Tobacco, Alcohol, and Other Drug Use				I			
% of students who currently use an electronic vapor product (e-							
cigarettes, vape e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs,	22.2	20.6	22.4		22.2	21.0	22.7
and hookah pens at least 1 day during the 30 days before the survey)	22.3	20.6	33.1	1	32.2	31.9	32.7
% of students who currently used cigarettes, cigars, or smokeless	NIA	101	12.2	N/A	15 1	10.0	10 E
tobacco (on at least 1 day during the 30 days before the survey)	NA	18.1	12.2	NA	15.1	10.9	10.5
% of students who currently were binge drinking (four or more drinks for female students, five or more for male students within a couple of							
hours on at least 1 day during the 30 days before the survey)	NA	16.4	15.6	=	17.2	14.0	13.7
% of students who currently used marijuana (one or more times during	IVA	10.4	13.0		17.2	14.0	13.7
the 30 days before the survey)	15.2	15.5	12.5	=	11.4	14.1	21.7
% of students who ever took prescription pain medicine without a	13.2	13.3	12.3	_	11.7	14.1	21.7
doctor's prescription or differently than how a doctor told them to use							
it (counting drugs such as codeine, Vicodin, OxyContin, Hydrocodone,							
and Percocet, one or more times during their life)	NA	14.4	14.5	=	12.8	13.3	14.3
Weight Management, Dietary Behaviors, and Physical Activity		ı					
% of students who were overweight (>= 85th percentile but <95 th							
percentile for body mass index)	14.7	16.1	16.5	=	16.6	15.6	16.1
% of students who had obesity (>= 95th percentile for body mass							
index)	13.9	14.9	14.0	=	17.4	14.0	15.5
% of students who did not eat fruit or drink 100% fruit juices (during							
the 7 days before the survey)	3.9	4.9	6.1	=	5.8	5.3	6.3
% of students who did not eat vegetables (green salad, potatoes							
[excluding French fries, fried potatoes, or potato chips], carrots, or							
other vegetables, during the 7 days before the survey)	4.7	5.1	6.6	=	5.3	6.6	7.9

18.7	16.3	15.9	=	17.4	15.1	15.1
13.9	14.9	20.5	^	14.8	20.3	30.6
11.9	13.5	14.4	=	13.3	14.1	16.7
NA	2.7	2.8	=	2.1	2.9	NA
NA	51.5	49.0	=	55.0	22.6	55.9
18.9	18.8	18.8	=	18.3	18.2	19.8
38.6	43.9	45.3	=	48.3	45.9	46.1
38.9	36.6	38.3	=	35.4	36.1	38.4
				_		
NA	31.8	29.5		31.8	33.1	NA
NA	69.1	66.8	=	63.0	68.2	NA
	13.9 11.9 NA NA 18.9 38.6	13.9 14.9 11.9 13.5 NA 2.7 NA 51.5 18.9 18.8 38.6 43.9 38.9 36.6 NA 31.8	13.9 14.9 20.5 11.9 13.5 14.4 NA 2.7 2.8 NA 51.5 49.0 18.9 18.8 18.8 38.6 43.9 45.3 NA 31.8 29.5	13.9 14.9 20.5	13.9 14.9 20.5	13.9 14.9 20.5

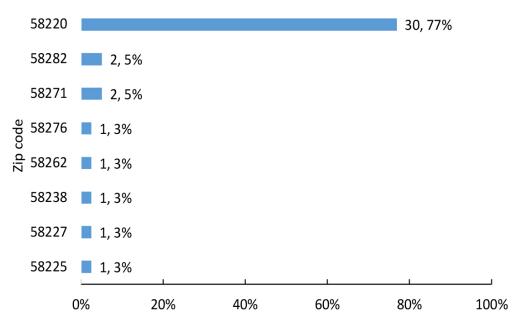
Sources: https://www.nd.gov/dpi/districtsschools/safety-health/youth-risk-behavior-survey

Survey Results

As noted previously, 68 community members completed the survey in communities throughout the PCMH service area. For all questions that contained an "Other" response, all of those direct responses may be found in Appendix G. In some cases, a summary of those comments is additionally included in the report narrative. The "Total respondents" number under each heading indicates the number of people who responded to that particular question.

The survey requested that respondents list their home zip code. While not all respondents provided a zip code, 39 did, revealing that a large majority of respondents (77%, N=30) lived in Cavalier. These results are shown in Figure 5.

Figure 5: Survey Respondents' Home Zip Code Total respondents: 39



Survey results are reported in six categories: demographics; healthcare access; community assets, challenges; community concerns; delivery of healthcare; and other concerns or suggestions to improve health.

Survey Demographics

To better understand the perspectives being offered by survey respondents, survey-takers were asked a few demographic questions. Throughout this report, numbers (N) instead of just percentages (%) are reported because percentages can be misleading with smaller numbers. Survey respondents were not required to answer all questions.

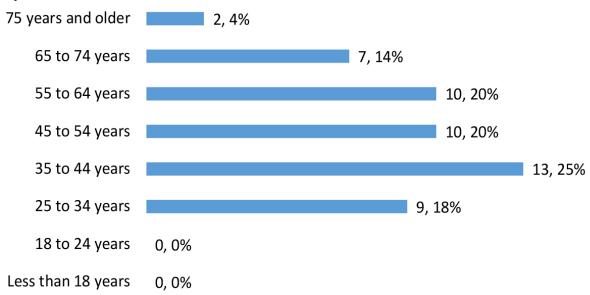
With respect to demographics of those who chose to complete the survey:

- 38% (N=19) were age 55 or older.
- The majority (86%, N=43) were female.
- Slightly more than half of the respondents (53%, N=27) had bachelor's degrees or higher.
- The number of those working full time (73%, N=37) was just over six times higher than those who were retired (12%, N=6).
- 100% (N=50) of those who reported their ethnicity/race were white/Caucasian.
- 20% of the population (N=9) had household incomes of less than \$50,000.

Figures 6 through 12 show these demographic characteristics. It illustrates the range of community members' household incomes and indicates how this assessment took into account input from parties who represent the

varied interests of the community served, including a balance of age ranges, those in diverse work situations, and community members with lower incomes.

Figure 6: Age Demographics of Survey Respondents Total respondents = 51



For the CHNA, children under age 18 are not questioned using this survey method.

Figure 7: Gender Demographics of Survey Respondents Total respondents = 50

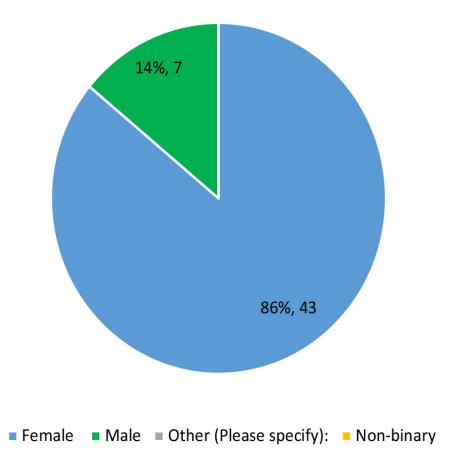


Figure 8: Educational Level Demographics of Survey Respondents Total respondents = 51

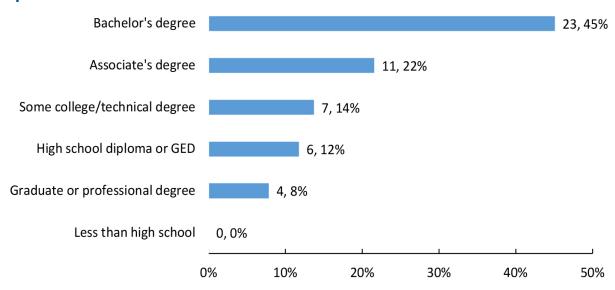
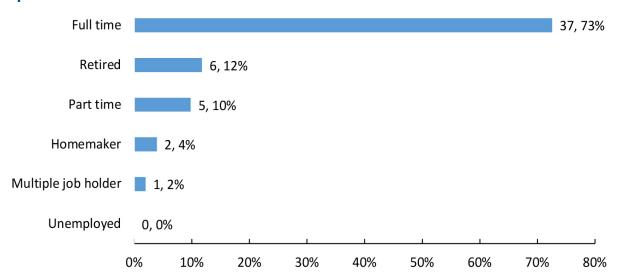
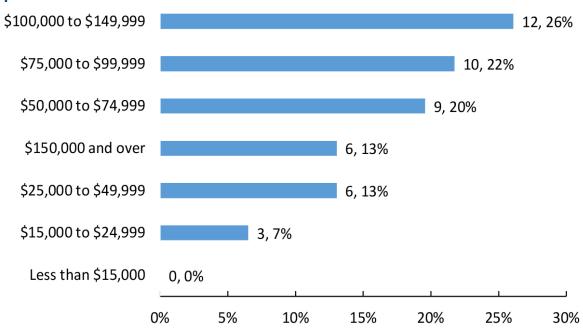


Figure 9: Employment Status Demographics of Survey Respondents Total respondents = 51



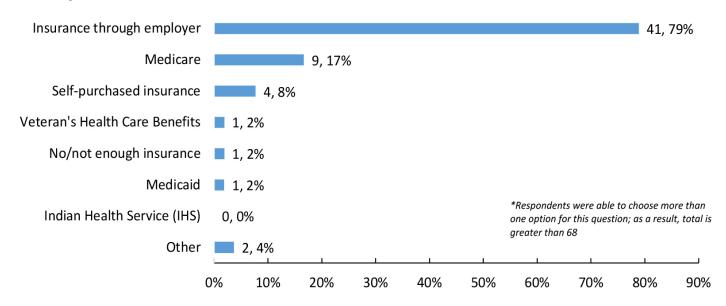
Of those who provided a household income, 7% (N=3) of community members reported a household income of less than \$25,000. Thirty-nine percent (N=18) indicated a household income of \$100,000 or more. This information is shown in Figure 10.

Figure 10: Household Income Demographics of Survey Respondents Total respondents = 46



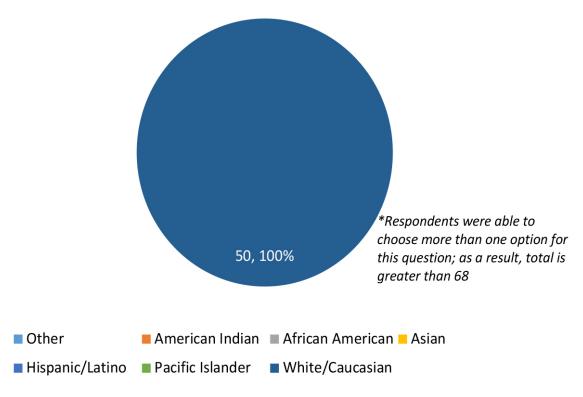
Community members were asked about their health insurance status, which is often associated with whether people have access to healthcare. Two percent (N=1) of the respondents reported having no health insurance or being under-insured. The most common insurance types were insurance through one's employer (N=41), followed by Medicare (N=9) and self-purchased insurance (N=8).

Figure 11: Health Insurance Coverage Status of Survey Respondents Total respondents = 52



As shown in Figure 12, all the respondents were white / Caucasian (100%). This was not in-line with the race / ethnicity of the overall population of Pembina County; the US Census indicates that 93.3% of the population is white in Pembina County.

Figure 12: Race/Ethnicity Demographics of Survey Respondents Total respondents = 50



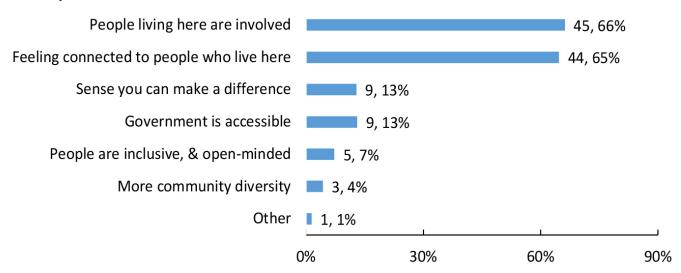
Community Assets and Challenges

Survey-respondents were asked what they perceived as the best things about their community in four categories: people, services and resources, quality of life, and activities. In each category, respondents were given a list of choices and asked to pick the three best things. Respondents occasionally chose less than three or more than three choices within each category. If more than three choices were selected, their responses were not included. The results indicate there is consensus (with at least 50 respondents agreeing) that community assets include:

- Safe place to live, little/no crime (N=61);
- Family-friendly; good place to raise kids (N=55);
- Healthcare (N=55); and
- People are friendly, helpful, supportive (N=54).

Figures 13 to 16 illustrate the results of these questions.

Figure 13: Best Things about the PEOPLE in Your Community Total responses = 68



The one "Other" response regarding the best things about the people was the small population.

Figure 14: Best Things about the SERVICES AND RESOURCES in Your Community Total responses = 68

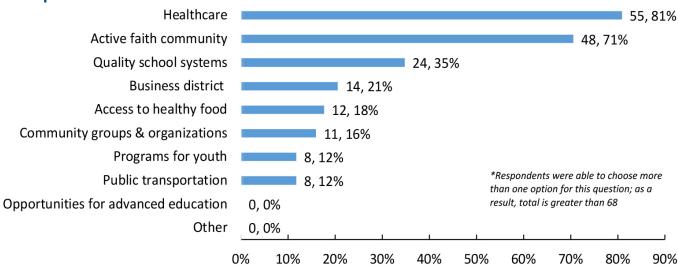


Figure 15: Best Things about the QUALITY OF LIFE in Your Community Total responses = 68

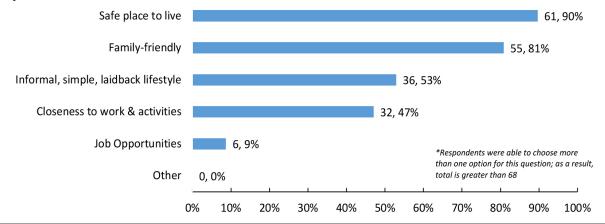
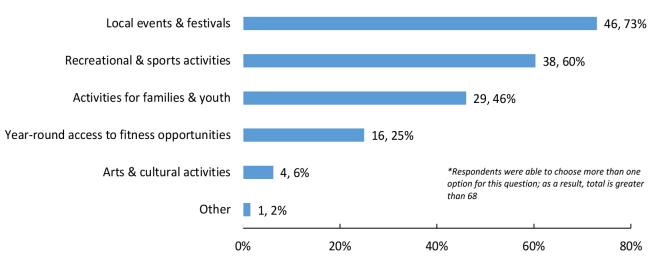


Figure 16: Best Thing about the ACTIVITIES in Your Community Total responses = 63



Community Concerns

At the heart of this community health assessment was a section on the survey asking survey respondents to review a wide array of potential community and health concerns in six categories and pick their top three concerns. The six categories of potential concerns were:

- Community/environmental health;
- Availability / delivery of health services;
- Youth population;
- Adult population; and
- Senior population
- Violence

With regard to responses about community challenges, the most highly voiced concerns (those having at least 25 respondents) were:

- Youth bullying / cyber-bullying (N=39);
- Attracting and retaining young families (N=30);
- Not enough jobs with livable wages (N=27);
- Availability of vision care (N=26);
- Availability of resources to help the elderly stay in their homes (N=25); and
- Youth smoking and tobacco use, exposure to second-hand smoke, or vaping/juuling (N=25).

The other issues that had at least 20 votes included:

- Availability of mental health services (N=23);
- Youth alcohol use and abuse (N=22);
- Assisted living options (N=22);
- Cost of long-term/nursing home care (N=22);
- Adult depression/anxiety (N=21);
- Youth drug use and abuse (N=21);
- Youth depression/anxiety (N=20); and
- Adult obesity/overweight (N=20).

Figure 17: Community/Environmental Health Concerns Total responses = 58

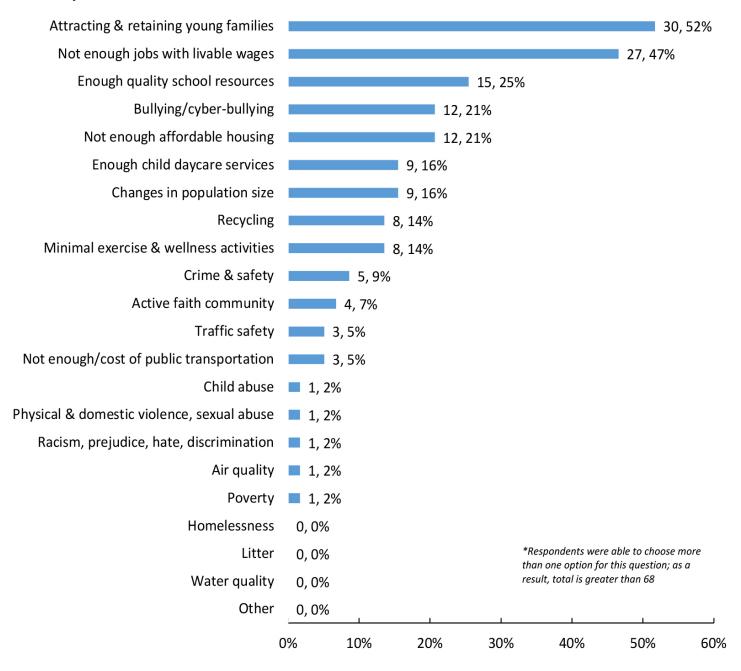


Figure 18: Availability/Delivery of Health Services Concerns Total responses = 57



Respondents who selected "Other" identified concerns in the availability/delivery of health services as needs for a pediatrician, kidney dialysis, and another pharmacy.

Figure 19: Youth Population Health Concerns Total responses = 53

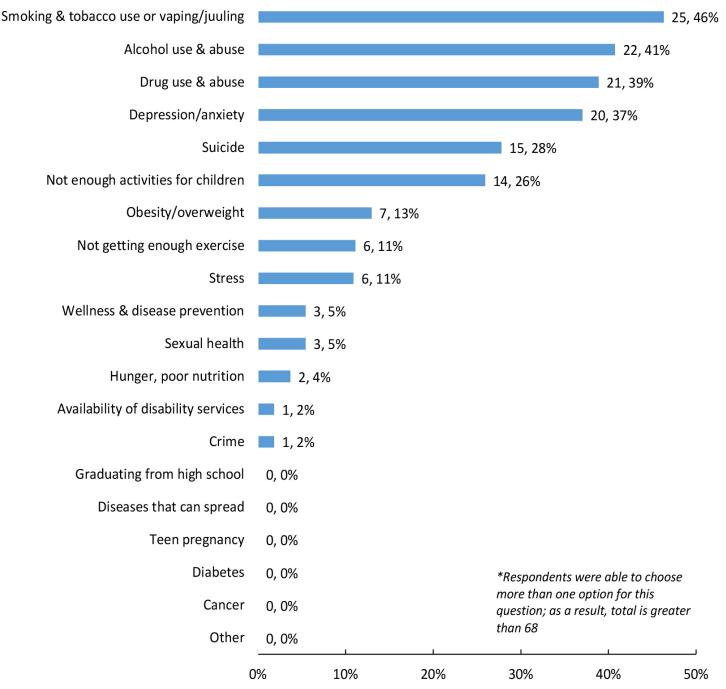


Figure 20: Adult Population Concerns Total responses = 54

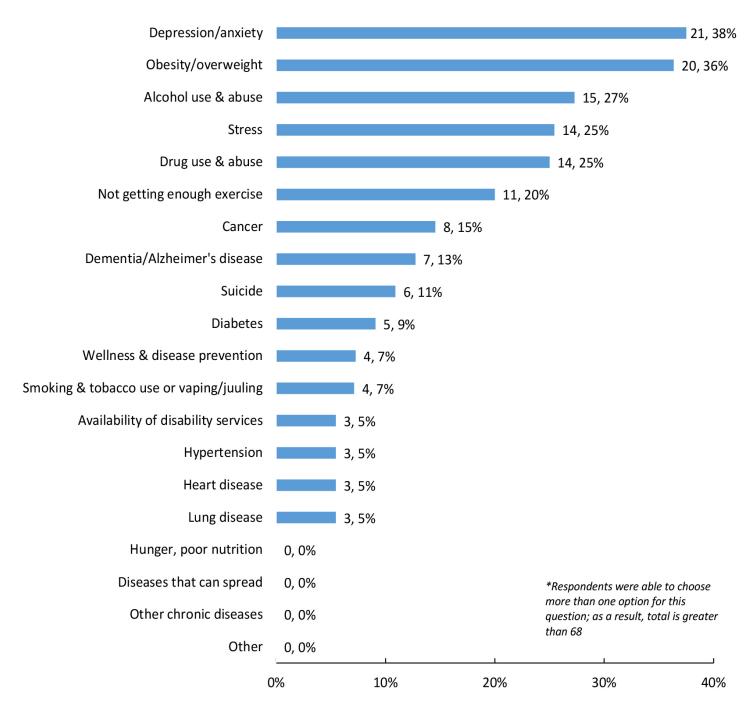


Figure 21: Senior Population Concerns Total responses = 51

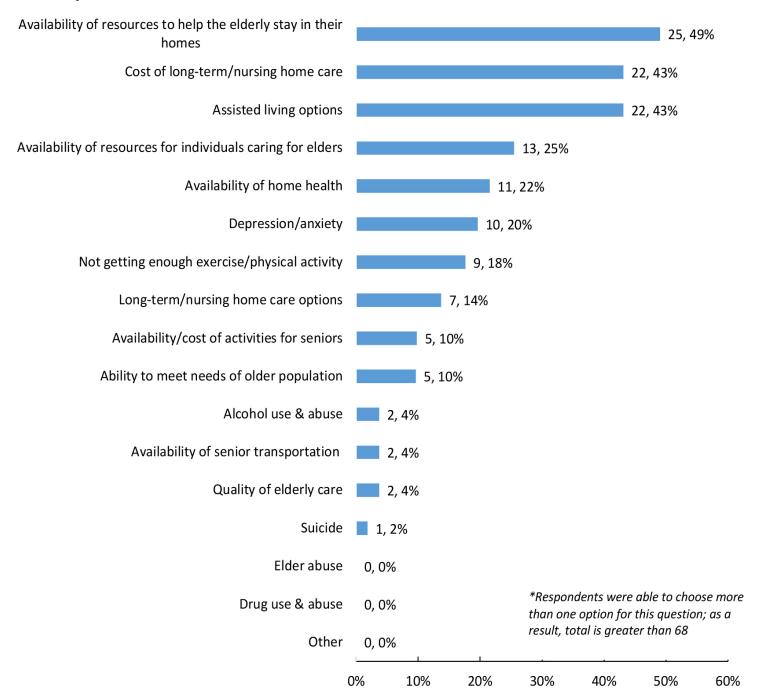
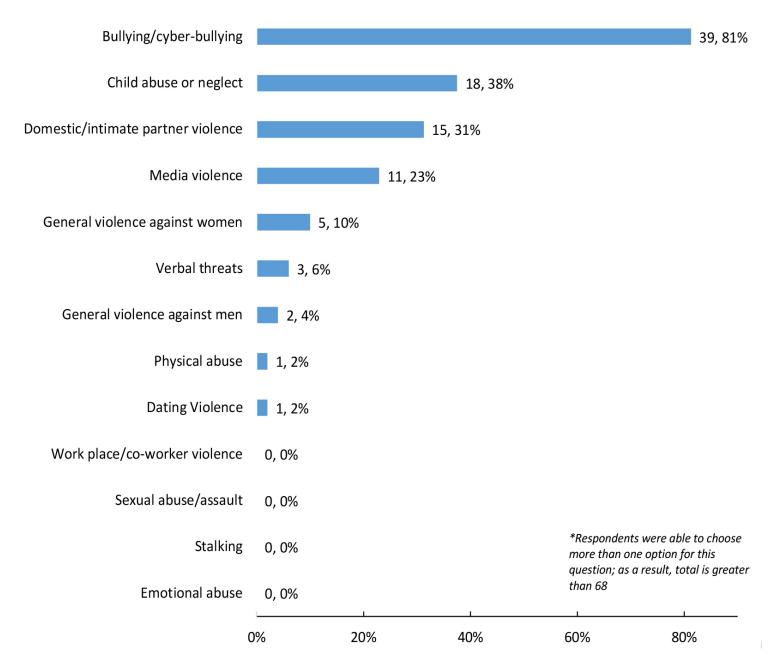


Figure 22: Violence Concerns Total responses = 48



In an open-ended question, respondents were asked what single issue they feel is the biggest challenge facing their community. Two categories emerged above all others as the top concerns:

- 1. Unstable economy/business closures
- 2. Lack of jobs with adequate pay/benefits

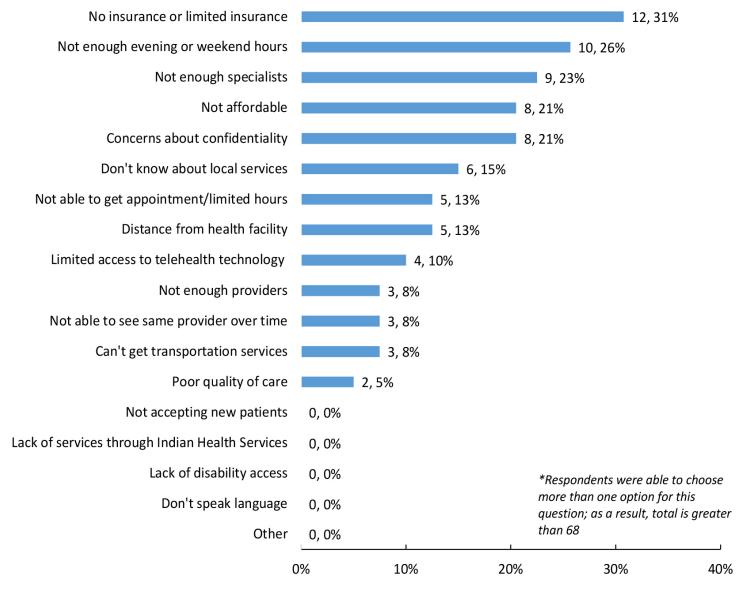
Other biggest challenges that were identified were the population decline/inability to attract families to live in the community, lack of mental healthcare, lack of specialists, youth juuling/substance abuse, and getting the community to work together for a common goal.

Delivery of Healthcare

The survey asked residents what they see as barriers that prevent them, or other community residents, from receiving healthcare. The most prevalent barrier perceived by residents was no insurance or limited insurance (N=12), with the next highest being not enough evening or weekend hours (N=10). The next most commonly identified barriers were not enough specialists (N=9), not affordable (N=8), and concerns about confidentiality (N=8).

Figure 23 illustrates these results.

Figure 23: Perceptions about Barriers to Care Total responses = 39



In an open-ended question, respondents were asked what specific healthcare services, if any, they think should be added locally. The number one desired service to add locally was mental health services. Other requested services included:

- Dialysis
- Homeopathic/naturopathic treatment

- In-home flu shots for elderly/home-bound population
- Pediatrics
- Vision services
- Weight loss treatment

While not a service, several respondents stated that they would like to add providers or specialists. One community member mentioned that they would like to see more services covered by insurance.

The key informants felt that the community members were aware of the majority of the services offered at PCMH. However, a sleep study was mentioned several times as a service that respondents were unaware of at the hospital, and there were also questions as to what the social services portion of the hospital does, indicating a need for promotion of their function. When asked the same about public health services, newborn visits, workplace wellness, and screening for children on Medicaid were mentioned. In general, interviewees felt that services for new parents should be a focus for promotion, as well as medication management.

Looking back at the survey, community members were asked of their awareness of more specific services offered by PCMH, public health, and other providers/organizations in the area. Figures 24 through 27 show these results.

Figure 24: Awareness of Public Health Services Total responses: 49

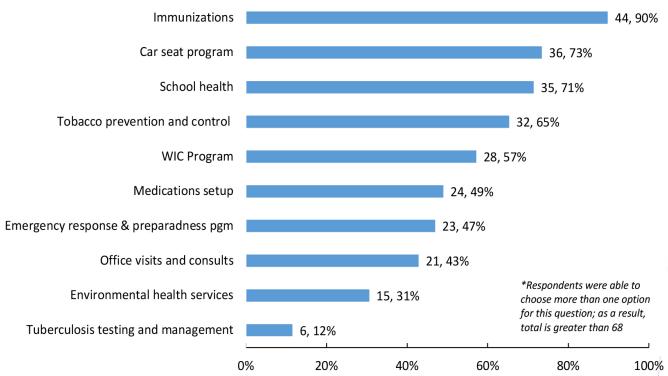


Figure 25: Awareness of Services at Pembina County Memorial Hospital Total responses = 53

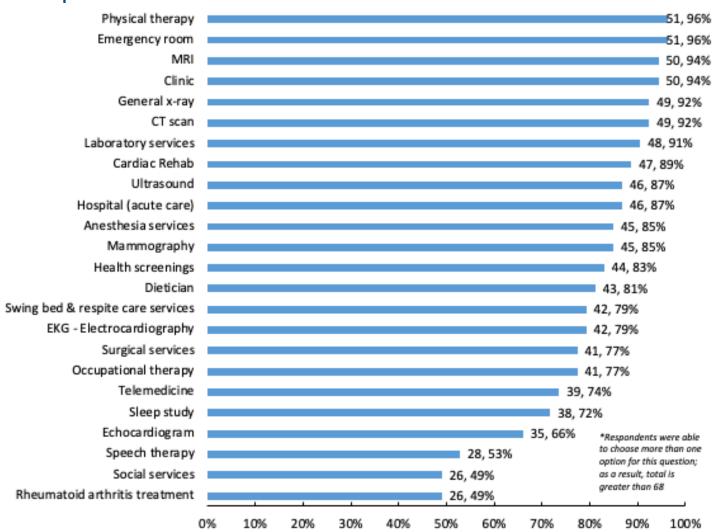


Figure 26: Awareness of Services Offered by Altru Specialty Care (Cavalier) Total responses = 48

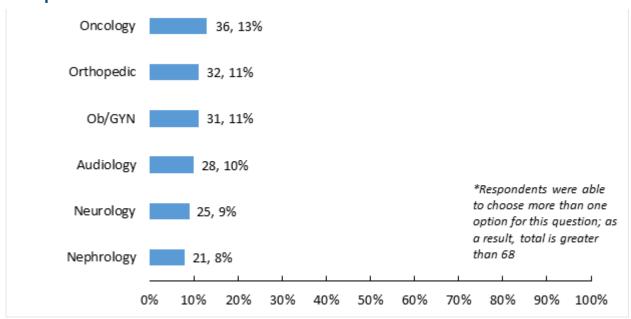
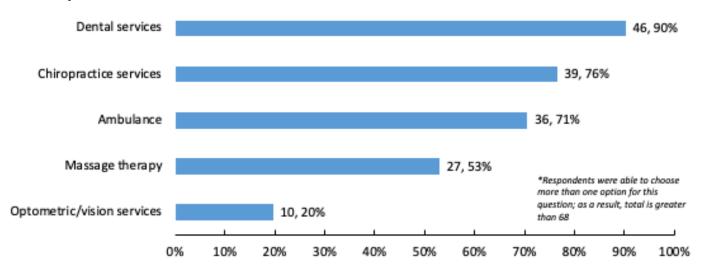


Figure 27: Awareness of Services Offered by Other Providers/Organizations in the Community Total responses = 51

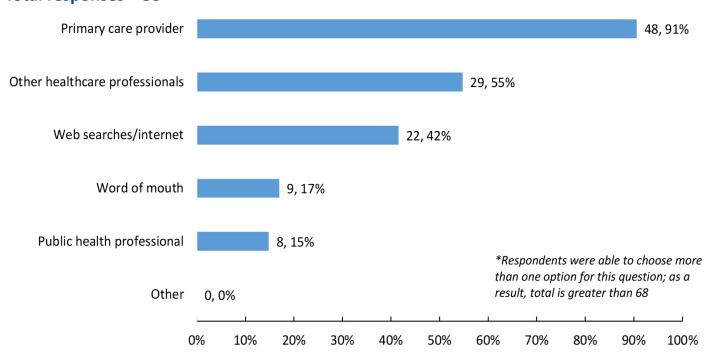


Two open-ended questions were posed to community members as to their awareness of support groups in the community, as well as groups they would like to see available in the community. By far the most commonly identified group mentioned was Alcoholics Anonymous, followed by dementia/Alzheimer's groups, Faith in Action, and domestic violence groups. When it came to support groups to add, requests for mental health groups heavily dominated the responses, but was followed closely by groups that focus on grief and suicide prevention. There was one mention each for incontinence and a Catholic support group.

Respondents were asked where they go to for trusted health information. Primary care providers (N=48) received the highest response rate, followed by other healthcare professionals (N=29), and then web/internet searches (N=22).

Results are shown in Figure 28.

Figure 28: Sources of Trusted Health Information Total responses = 53



The final question on the survey asked respondents to share concerns and suggestions to improve the delivery of local healthcare. Once again, the responses heavily focused on the addition of mental health services, which became thematic throughout the process. Community members stated that counselors and support groups should be added to the community to address the problem, with one specifically remarking that telemedicine was not as effective as these options. Adding more providers in general was also stated by one respondent. The need for resources to help the elderly and disabled stay in their homes was also included several times, with responses indicating that current resources are severely lacking and not affordable.

One community member used this portion to share concerns over the declining population of the community, as well as stating that economic development should be a priority. While initially this doesn't seem directly related to the delivery of healthcare, the respondent continued to mention that, with a declining community, the customer base of the hospital will decrease, which would affect their ability to provide a wide variety of services. The comment went on to relate concerns over the viability of having a hospital in the area should this trend continue.

Findings from Key Informant Interviews

Questions about the health and well-being of the community, similar to those posed in the survey, were explored during key informant interviews with community leaders and health professionals. The themes that emerged from these sources were wide-ranging, with some directly associated with healthcare and others more rooted in broader social and community matters.

Generally, overarching issues that developed during the interviews and community meeting can be grouped into five categories (listed in alphabetical order):

- Availability of mental health and substance use disorder treatment services
- Availability of resources to help the elderly stay in their homes
- Cost of long-term care
- Stress in all ages
- Substance use (alcohol and drugs) and abuse in both the adult and youth populations

To provide context for the identified needs, following are some of the comments made by those interviewed about these issues:

Availability of mental health services

- We are seeing an increase of mental health needs, not only in our area but in the state, and there aren't enough around to address the need
- Hearing about kids in schools acting out, and sometimes attributed to just being kids; adults concerned about finances and child issues; elderly want to stay in homes instead of losing independence, so they have issues.

Availability of resources to help the elderly stay in their homes

• Looking at the demographics and how large of a percentage of older people there are in the community, it is clear we are an elder community and we've lost population.

Cost of long-term/nursing home care

• This is something we hear about the most, and it seems like everybody has an issue with it, especially the aging community.

Stress

• Stress is the root cause of many of the other priority need areas; there are so many factors that weigh on the shoulders of people who live here; it would be great to get to the bottom of the issue, and stress contributes to much of that.

Substance use and abuse – all ages

- Everywhere you go you see it, and you have to start wondering how their health is, and then sometimes people want to start driving around on ATVs or snowmobiles
- The community is definitely seeing an uptick in substance abuse, and we don't have the services to address it on a larger scale.

Community Engagement and Collaboration

Key informants were asked to weigh in on community engagement and collaboration of various organizations and stakeholders in the community. Specifically, participants were asked, "On a scale of 1 to 5, with 1 being no collaboration/community engagement and 5 being excellent collaboration/community engagement, how would you rate the collaboration/engagement in the community among these various organizations?" This was not intended to rank services provided. They were presented with a list of 13 organizations or community segments to rank. According to these participants, the hospital, pharmacy, public health, and other long-term care (including nursing homes/assisted living) are the most engaged in the community. The averages of these rankings (with 5 being "excellent" engagement or collaboration) were:



- Emergency services, including ambulance and fire (4.5)
- Faith-based (4.5)
- Hospital (healthcare system) (4.5)
- Law enforcement (4.5)
- Public health (4.5)
- Schools (4.5)
- Business and industry (4.25)
- Pharmacy (4.0)
- Clinics not affiliated with the main health system (4.0)
- Other local health providers, such as dentists and chiropractors (3.75)
- Economic development organizations (3.5)
- Long-term care, including nursing homes and assisted living (3.5)
- Social services (3.5)
- Human services agencies (3.25)

Priority of Health Needs

In lieu of a second community group meeting, key informant interviewees were sent a pre-recorded presentation on September 29, 2020. The presentation included CRH representatives presenting the group with a summary of this report's findings, including background and explanation about the secondary data, highlights from the survey results (including perceived community assets and concerns and barriers to care), and findings from the key informant interviews.

Following the community group viewing the pre-recorded presentation of the assessment findings, they completed an online survey in which they identified what they perceived as the top four community health needs. All of the top needs were included in the online survey and each member selected the four needs they considered the most significant. They were also given the opportunity to leave comments.

The results were totaled and the concerns most often cited were:

- Attracting and retaining young families (4 votes)
- Availability of mental health services (4 votes)
- Availability of substance use disorder/treatment services (3 votes)
- Depression/anxiety Youth (3 votes)
- Not enough affordable housing (3 votes)

From those top five priorities, each person was emailed a second survey listing the top five choices and were instructed to select the one item they felt was the most important. They were also given the opportunity to write in recommendations. The rankings were:

- 1. Attracting and retaining young families (3 votes)
- 2. Availability of mental health services (2 votes)
- 3. Depression/anxiety all ages (1 vote) (respondents chose to add all ages together for this concern)
- 4. Availability of substance use disorder/treatment services (1 vote)
- 5. Not enough affordable housing (0 votes)

Following the prioritization process during the second meeting of the community group and key informants, the number one identified need was attracting and retaining young families. A summary of this prioritization may be found in Appendix F.

Top Needs Identified 2017 CHNA Process

- Adult and youth drug use/ availability of substance use treatment and services
- Attracting and retaining young families
- Assisted living options
- Mental health services

Top Needs Identified 2020 CHNA Process

- Attracting and retaining young families
- Availability of mental health services
- Depression/anxiety (all ages)
- Availability of substance use disorder/treatment services
- Not enough affordable housing

As seen in the table above, there were three shared concerns between the last and current assessments in attracting and retaining young families, the availability of mental health services, and the availability of substance use disorder/treatment services. While assisted living options was not at the forefront for this process, it was heavily mentioned throughout interviews and survey responses

Hospital and Community Projects and Programs Implemented to Address Needs Identified in 2017

In response to the needs identified in the 2017 CHNA process, the following actions were taken:

Adult and youth drug use and abuse and availability of substance abuse treatment and services -The facility continues its work with the behavioral health workgroup sponsoring several educational speakers and programs throughout the years. The community resource guide was updated with all available mental health resources within the area. PCMH provides space for AA and AL-Anon groups to meet.

Attracting and retaining young families - PCMH cannot directly affect this on a large scale but works with the city of Cavalier and the Cavalier Chamber to attract and retain as many residents to the area as possible. PCMH co-sponsored the Cavlandic Bike Share Program to attract and promote healthy living opportunities.

Assisted living options - PCMH continues to look at options to provide this service. Their independent living apartments are able to support the services available to residents though collaboration with other healthcare agencies. Respite services are offered both at the hospital and nursing home.

Mental health - PCMH has hired a mental health family nurse practitioner to see patients for their mental health needs in CliniCare. Northeast Human Services still has documentation space allocated to them in CliniCare. Altru offers tele-psychiatry appointments within the space leased at PCMH as well.

The above implementation plan for Pembina County Memorial Hospital is posted on the PCMH website at https://www.cavalierhospital.com/file_download/eac7f055-d8ff-4912-952e-2bc4fc59ab5b

Next Steps – Strategic Implementation Plan

Although a CHNA and strategic implementation plan are required by hospitals and local public health units considering accreditation, it is important to keep in mind the needs identified, at this point, will be broad community-wide needs along with healthcare system-specific needs. This process is simply a first step to identify needs and determine areas of priority. The second step will be to convene the steering committee, or other community group, to select an agreed upon prioritized need on which to begin working. The strategic planning process will begin with identifying current initiatives, programs, and resources already in place to address the identified community need(s). Additional steps include identifying what is needed and feasible to address (taking community resources into consideration) and what role and responsibility the hospital, clinic, and various community organizations play in developing strategies and implementing specific activities to address the community health need selected. Community engagement is essential for successfully developing a plan and executing the action steps for addressing one or more of the needs identified.

"If you want to go fast, go alone. If you want to go far, go together." Proverb

Community Benefit Report

While not required, CRH strongly encourages a review of the most recent Community Benefit Report to determine how/if it aligns with the needs identified, through the CHNA, as well as the implementation plan.

The community benefit requirement is a long-standing requirement of nonprofit hospitals and is reported in Part I of the hospital's Form 990. The strategic implementation requirement was added as part of the ACA's CHNA requirement. It is reported on Part V of the 990. Not-for-profit healthcare organizations demonstrate their commitment to community service through organized and sustainable community benefit programs providing:

• Free and discounted care to those unable to afford healthcare.

- Care to low-income beneficiaries of Medicaid and other indigent care programs.
- Services designed to improve community health and increase access to healthcare.

Community benefit is also the basis of the tax-exemption of not-for-profit hospitals. The Internal Revenue Service (IRS), in its Revenue Ruling 69–545, describes the community benefit standard for charitable tax-exempt hospitals. Since 2008, tax-exempt hospitals have been required to report their community benefit and other information related to tax-exemption on the IRS Form 990 Schedule H.

What Are Community Benefits?

Community benefits are programs or activities that provide treatment and/or promote health and healing as a response to identified community needs. They increase access to healthcare and improve community health.

A community benefit must respond to an identified community need and meet at least one of the following criteria:

- Improve access to healthcare services
- Enhance health of the community
- Advance medical or health knowledge
- Relieve or reduce the burden of government or other community efforts

A program or activity should not be reported as community benefit if it is:

- Provided for marketing purposes
- Restricted to hospital employees and physicians
- Required of all healthcare providers by rules or standards
- Questionable as to whether it should be reported
- Unrelated to health or the mission of the organization

Appendix A – Critical Access Hospital Profile



Critical Access Hospital Profile Spotlight on: Cavalier, North Dakota

Pembina County Memorial Hospital

Administrator:

Lisa LeTexier, CEO

Chief of Medical Staff:

K.S. Sumra, M.D

Board Chair:

Tom Ford

City Population:

1,191 (2018 estimate)¹

County Population:

7,016 (2018 estimate)1

County Median Household

Income:

\$64,962 (2018 estimate)¹

County Median Age:

47.9 (2018 estimate)¹

Area Population: 8,585 people

Hospital Beds: 20

Trauma Level: IV

Critical Access Hospital

Designation: 2001

Economic Impact on the Community*

Jobs:

Primary – 122

Secondary – 42

Total-164

Financial Impact:

Primary – \$6,669,137 Secondary – \$1,266,762 Total – \$7,935,900

Mission:

The mission of Pembina County Memorial Hospital and Wedgewood Manor is to provide a family centered approach to the delivery of health services and to promote a healthy lifestyle to those we serve.

Vision Paragraph:

The vision that guides Pembina County Memorial Hospital and Wedgewood Manor is to develop a Family Centered Integrated Healthcare Organization which provides services that meet the needs of the region, thereby making us their provider of choice.

County: Pembina

Address: 301 Mountain St East

Cavalier, ND 58220

Phone: 701.265.8461 **Fax:** 701.265.6269

Web: www.cavalierhospital.com

Services:

Pembina County Memorial Hospital and Wedgewood Manor provide the following services directly:

- 24-hour Emergency Room
- CliniCare
- Acute Care
- Care Coordination
- Inpatient and Ambulatory Surgery
- EGD's and Colonoscopies
- Dietician/Diabetes Education
- Long-Term Care
- Adult Day Care
- Respite Care

• Outpatient Services

Ambulatory Services Cardiac Rehab Chemotherapy

Lab

Physical Therapy Radiology

Sleep Apnea Testing

Pembina County Memorial Hospital provides the following services through contract or agreement:

- Anesthesia
- Social Worker
- Telemedicine

Visiting Physician Services Offered:

- Neurology
- Orthopedics
- Ophthalmology
- Ob/Gyn
- Podiatry

Staffing:

Physicians:	2
Nurse Practitioners	2
Physician Assistants	2
RNs:	27
LPNs:	10
Total Employees:	166

Local Sponsors and Grant Funding Sources

- SHIP
- Flex
- Victor & Nina Cranley Foundation
- PCMHA Auxiliary and PCMHA Foundation

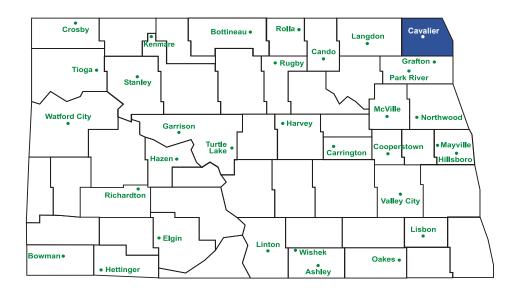
Sources

United States Census Bureau. 2018
 American Community Survey
 5-Year Estimates



This project is supported by the Medicare Rural Hospital Flexibility Grant Program at the Center for Rural Health, University of North Dakota School of Medicine & Health Sciences located in Grand Forks, North Dakota.

ruralhealth.und.edu



History:

The history of Pembina County Memorial Hospital dates back to the Summer of 1945 when a group of area residents met to discuss the ways they might honor the veterans of World Wars I and II. The suffering, the devastation, and the loss of untold numbers of human lives-all products of armed conflicts- was still fresh on the minds of many; therefore, it was only natural and fitting that the group settled on building a "living" memorial. That memorial would be in the form of a county hospital. It would be a place of healing, a perfect tribute to the veterans of World Wars I and II. A planning committee, including representatives from each of the county's townships, was formed and the project was set in motion. Given its central location, Cavalier was selected as the site of the facility, and in 1952, ground breaking took place. In 1953 Pembina County Memorial Hospital opened its doors to the public. Since that time, a 50-bed skilled nursing facility and a 20 unit senior apartment complex have been added.

Recreation:

Cavalier is the county seat of the state's oldest county, Pembina. Recreational facilities include a swimming pool, tennis courts, bowling alley, city park, movie theatre, skating rink and golf course. The nearest major shopping center is in Grand Forks, ND 80 miles south or Winnipeg, Manitoba, 90 miles north.

The Icelandic State Park is six miles west of Cavalier and is located on the north shore of Lake Renwick. A bike path connects the city of Cavalier to Icelandic State Park where camping, boating, swimming, hiking, cross-country skiing and fishing are popular activities. The campgrounds offer full amenities, including electrical hook-ups, modern comfort stations with showers and sleeping cabins. Within the park are the Pioneer Heritage Center, the Gunlogson Homestead and Nature Preserve and restored historic buildings. This early homestead preserves the state's pioneer spirit, while the 200 acre natural wooded area along the Tongue River is a sanctuary for plants, birds and wildlife.

Updated 12/20

Appendix B – Economic Impact Analysis

Pembina County Memorial Hospital



Healthcare, especially a hospital, plays a vital role in local economies.

Economic Impact

Pembina County Memorial Hospital is composed of a Critical Access Hospital (CAH), a Rural Health Clinic, and a nursing home located in Cavalier, North Dakota.

Pembina County Memorial Hospital **directly** employs **121.8 FTE employees** with an annual payroll of nearly **\$6.67 million** (including benefits).

- After application of the employment multiplier of 1.35, these employees created an additional 42 jobs.
- The same methodology is applied to derive the income impact. The income multiplier of 1.19 is applied to create nearly **\$1.27 million** in income as they interact with other sectors of the local economy.
- Total impacts = 164 jobs and more than \$7.9 million in income.

Healthcare and Your Local Economy

The health sector in a rural community, anchored by a CAH, is responsible for a number of full- and part-time jobs and the resulting wages, salaries, and benefits. Research findings from the National Center for Rural Health Works indicate that rural hospitals typically are one of the top employers in the rural community. The employment and the resulting wages, salaries, and benefits from a CAH are critical to the rural community economy. Figure 1 depicts the interaction between an industry like a healthcare institution and the community, containing other industries and households.

Key Contributions of the Health System Include

- Attracts retirees and families
- Appeals to businesses looking to establish and/or relocate
- High quality healthcare services and infrastructure foster community development
- Positive impact on retail sales of local economy
- · Provides higher-skilled and higher-wage employment
- · Increases the local tax base used by local government

Data analysis was completed by the Center for Rural Health at the Oklahoma State University Center for Health Sciences utilizing IMPLAN data.

Fact Sheet Author: Kylie Nissen, BBA

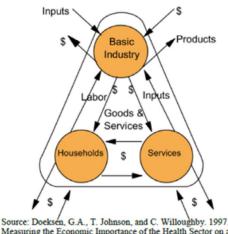
For additional information, please contact: Kylie Nissen, Program Director, Center for Rural Health kylie.nissen@und.edu • (701) 777-5380







Figure 1. An overview of the community economic system.



Source: Doeksen, G.A., T. Johnson, and C. Willoughby. 1997. Measuring the Economic Importance of the Health Sector on a Local Economy: A Brief Literature Review and Procedures to Measure Local Impacts

This project is/was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) through the Medicare Rural Hospital Flexibility Grant Program and the State Office of Rural Health Grant.

Appendix C – CHNA Survey Instrument







Cavalier Area Health Survey

Pembina County Memorial Hospital and Pembina County Public Health are interested in hearing from you about community health concerns.

The focus of this effort is to:

- Learn of the good things in your community as well as concerns in the community
- Understand perceptions and attitudes about the health of the community, and hear suggestions for improvement
- Learn more about how local health services are used by you and other residents

If you prefer, you may take the survey online at http://tinyurl.com/CavalierND20 or by scanning on the QR Code at the right.

Surveys will be tabulated by the Center for Rural Health at the University of North Dakota School of Medicine and Health Sciences. Your responses are anonymous, and you may skip any question you do not want to answer. Your answers will be combined with other responses and reported only in total. If you have questions about the survey, you may contact Shawn Larson at 701-330-0224.

Surveys will be accepted through July 22, 2020. Your opinion matters - thank you in advance!

Community Assets: Please tell us about your community by **choosing up to three options** you most agree with in each category below.

1. (Considering the PEOPLE in your community, the best thing	gs ar	e (choose up to <u>THREE</u>):
	Community is socially and culturally diverse or becoming more diverse Feeling connected to people who live here Government is accessible People are friendly, helpful, supportive		People who live here are involved in their community People are tolerant, inclusive, and open-minded Sense that you can make a difference through civic engagement Other (please specify):
2. (Considering the SERVICES AND RESOURCES in your comm	unit	y, the best things are (choose up to <u>THREE</u>):
	Access to healthy food Active faith community Business district (restaurants, availability of goods) Community groups and organizations Healthcare		Opportunities for advanced education Public transportation Programs for youth Quality school systems Other (please specify):
3. (Considering the QUALITY OF LIFE in your community, the l	best	things are (choose up to THREE):
	Closeness to work and activities Family-friendly; good place to raise kids Informal, simple, laidback lifestyle		Job opportunities or economic opportunities Safe place to live, little/no crime Other (please specify):
4. (Considering the ACTIVITIES in your community, the best the	nings	s are (choose up to <u>THREE</u>):
	Activities for families and youth Arts and cultural activities Local events and festivals		Recreational and sports activities Year-round access to fitness opportunities Other (please specify):

Community Concerns: Please tell us about your community by choosing up to three options you most agree with in each category.

5. (Considering the COMMUNITY /ENVIRONMENTAL HEALTH	l in y	your community, concerns are (choose up to <u>THREE</u>):
	Active faith community		Having enough quality school resources
	Attracting and retaining young families		Not enough places for exercise and wellness activities
	Not enough jobs with livable wages, not enough to live on		Not enough public transportation options, cost of public transportation
	Not enough affordable housing		Racism, prejudice, hate, discrimination
	Poverty		Traffic safety, including speeding, road safety, seatbelt
	Changes in population size (increasing or decreasing)		use, and drunk/distracted driving
	Crime and safety, adequate law enforcement personnel		Physical violence, domestic violence, sexual abuse Child abuse
	Water quality (well water, lakes, streams, rivers)		Bullying/cyber-bullying
	Air quality		Recycling
	Litter (amount of litter, adequate garbage collection)		Homelessness
	Having enough child daycare services		Other (please specify):
	Considering the AVAILABILITY/DELIVERY OF HEALTH SERV REE):	_	
Ц	Ability to get appointments for health services within 48 hours.		Ability/willingness of healthcare providers to work together to coordinate patient care within the health
	Extra hours for appointments, such as evenings and weekends		system. Ability/willingness of healthcare providers to work
	Availability of primary care providers (MD,DO,NP,PA) and nurses	_	together to coordinate patient care outside the local community.
	Ability to retain primary care providers (MD,DO,NP,PA) and nurses in the community		Patient confidentiality (inappropriate sharing of personal health information) Not comfortable seeking care where I know the
	Availability of public health professionals		employees at the facility on a personal level
	Availability of specialists		Quality of care
	Not enough health care staff in general		Cost of health care services
	Availability of wellness and disease prevention services		Cost of prescription drugs Cost of health insurance
	Availability of mental health services		Adequacy of health insurance (concerns about out-of-
	Availability of substance use disorder/treatment	_	pocket costs)
	services		Understand where and how to get health insurance
	Availability of hospice		Adequacy of Indian Health Service or Tribal Health
	Availability of dental care		Services Other (please specify):
	Availability of vision care		Other (please specify)
	Emergency services (ambulance & 911) available 24/7		

/. (Considering the YOUTH POPULATION in your community,	con	cerns are (choose up to <u>THREE</u>):
	Alcohol use and abuse Drug use and abuse (including prescription drug abuse) Smoking and tobacco use, exposure to second-hand smoke or vaping (juuling) Cancer Diabetes Depression/anxiety Stress Suicide Not enough activities for children and youth Teen pregnancy Sexual health		Crime Graduating from high school Availability of disability services
8. (Considering the ADULT POPULATION in your community,	cond	cerns are (choose up to <u>THREE</u>):
	Diabetes Heart disease Hypertension		Stress Suicide Diseases that can spread, such as sexually transmitted diseases or AIDS Wellness and disease prevention, including vaccine-preventable diseases Not getting enough exercise/physical activity Obesity/overweight Hunger, poor nutrition Availability of disability services Other (please specify):
9.	Considering the SENIOR POPULATION in your community	, cor	cerns are (choose up to <u>THREE</u>):
	Ability to meet needs of older population Long-term/nursing home care options Assisted living options Availability of resources to help the elderly stay in their homes Cost of activities for seniors Availability of activities for seniors Availability of resources for family and friends caring for elders Quality of elderly care Cost of long-term/nursing home care		Availability of transportation for seniors Availability of home health Not getting enough exercise/physical activity Depression/anxiety Suicide Alcohol use and abuse Drug use and abuse (including prescription drug abuse) Availability of activities for seniors Elder abuse Other (please specify):
10	Regarding various forms of VIOLENCE in your community	<u>/</u> , co	ncerns are (choose up to <u>THREE</u>):
	Bullying/cyber-bullying Child abuse or neglect Dating violence Domestic/intimate partner violence Emotional abuse (ex. intimidation, isolation, verbal threats, withholding of funds) General violence against women General violence against men		Media violence Physical abuse Stalking Sexual abuse/assault Verbal threats Work place/co-worker violence

11.	. What single issue do you feel is the	bigge	est challenge fac	ing y	our community	?	
De	elivery of Healthcare						
12.	. What PREVENTS community reside	nts fr	om receiving he	alth	care? (Choose <u>Al</u>	<u>.L</u> th	at apply)
	Can't get transportation services Concerns about confidentiality Distance from health facility Don't know about local services Don't speak language or understand Lack of disability access Lack of services through Indian Hea Limited access to telehealth techno providers at another facility through a mon No insurance or limited insurance	Ith S logy	ervices (patients seen by		Not able to see Not accepting r Not affordable Not enough pro Not enough eve Not enough spe Poor quality of	sam new ovide enin ecial care	ers (MD, DO, NP, PA) g or weekend hours ists
13.	. Where do you turn for trusted healt	:h inf	ormation? (Cho	ose <u>/</u>	ALL that apply)		
 Other healthcare professionals (nurses, chiropractors, dentists, etc.) Primary care provider (doctor, nurse practitioner, physician assistant) Public health professional What specific healthcare services, if any, do you think shape 			 □ Web searches/internet (WebMD, Mayo Clinic, Healthline, etc. □ Word of mouth, from others (friends, neighbors, co-workers etc.) □ Other (please specify): hould be added locally? 				
	Considering SERVICES provided at Pat apply) Anesthesia services Cardiac Rehab Clinic CT scan Dietician Echocardiogram EKG—Electrocardiography Emergency room General x-ray	emb	ina County Mem Health screenir Hospital (acute Laboratory serv Mammography MRI Occupational tl Physical therap Rheumatoid Ar treatment/Med	ngs care vices / hera y thrit	py is		vices are you aware of? (Choose ALL Sleep Study Social services Speech therapy Surgical services/laparoscopic surgery Swing bed and respite care services Telemedicine Ultrasound

16. app	-	ru Sp	pecialty Care (Cavalier), which service	es ar	e you aware of? (Choose <u>ALL</u> that
	Audiology Cardiology Ear, Nose, Throat (ENT)		Nephrology Neurology OB/GYN		Oncology Orthopedic Podiatry
	Considering services offered by OTH are of, or have used in the past year?		ROVIDERS/ORGANIZATIONS in your pose <u>ALL</u> that apply)	con	nmunity, which services are you
	Ambulance Chiropractic services		Dental services Massage therapy		Optometric/vision services
	Which of the following SERVICES protable tapply)	ovide	ed by Pembina County Public Health a	are y	ou aware of? (Choose <u>ALL</u>
	Car seat program Emergency response & preparedness program Environmental health services (water, sewer, health hazard abatement)		Immunizations Medications setup Office visits and consults School Health Tobacco prevention and control		Tuberculosis testing and management WIC (Women, Infants & Children) Program
19.	What support groups are you aware	of ir	n the community?		
20.	What support groups would you like	to s	ee available in the community?		
De	mographic Information: Pleas	se te	ll us about yourself.		
21.	Do you work for the hospital, clinic,	or pu	ublic health unit?		
	Yes		□ No		
22.	Health insurance or health coverage	stat	us (choose <u>ALL</u> that apply):		
	Indian Health Service (IHS) Insurance through employer (self, spouse, or parent) Self-purchased insurance		Medicaid Medicare No/not enough insurance Veteran's Healthcare Benefits		Other (please specify):
23.	Age:				
	Less than 18 years 18 to 24 years 25 to 34 years		35 to 44 years 45 to 54 years 55 to 64 years		65 to 74 years 75 years and older
24.	Highest level of education:				
	Less than high school High school diploma or GED		Some college/technical degree Associate's degree		Bachelor's degree Graduate or professional degree
25.	Sex:				
	Female		Male		Non-binary

☐ Other (please specify):		
26. Employment status:		
☐ Full time ☐ Part time	☐ Homemaker ☐ Multiple job holder	☐ Unemployed ☐ Retired
27. Your zip code:		
28. Race/Ethnicity (choose <u>ALL</u> that app	oly):	
☐ American Indian☐ African American☐ Asian	☐ Hispanic/Latino☐ Pacific Islander☐ White/Caucasian	☐ Other:
29. Annual household income before to	axes:	
☐ Less than \$15,000 ☐ \$15,000 to \$24,999 ☐ \$25,000 to \$49,999	□ \$50,000 to \$74,999 □ \$75,000 to \$99,999 □ \$100,000 to \$149,999	□ \$150,000 and over
30. Overall, please share concerns and	suggestions to improve the delivery of loc	cal healthcare.

Appendix D – County Health Rankings Explained

Source: http://www.countyhealthrankings.org/

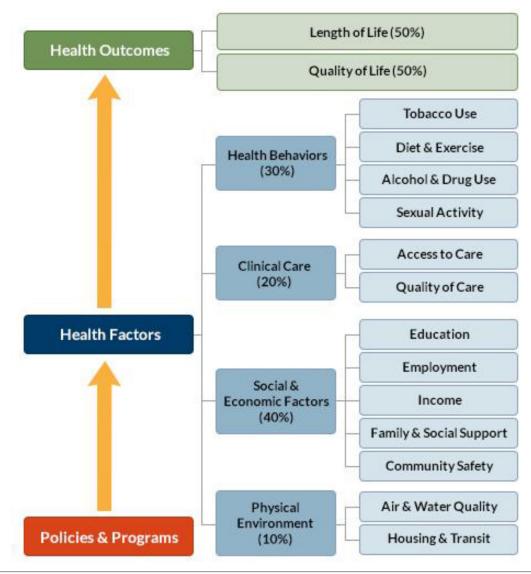
Methods

The County Health Rankings, a collaboration between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute, measure the health of nearly all counties in the nation and rank them within states. The Rankings are compiled using county-level measures from a variety of national and state data sources. These measures are standardized and combined using scientifically-informed weights.

What is Ranked

The County Health Rankings are based on counties and county equivalents (ranked places). Any entity that has its own Federal Information Processing Standard (FIPS) county code is included in the Rankings. We only rank counties and county equivalents within a state. The major goal of the Rankings is to raise awareness about the many factors that influence health and that health varies from place to place, not to produce a list of the healthiest 10 or 20 counties in the nation and only focus on that.

Ranking System



The County Health Rankings model (shown above) provides the foundation for the entire ranking process.

Counties in each of the 50 states are ranked according to summaries of a variety of health measures. Those having high ranks, e.g. 1 or 2, are considered to be the "healthiest." Counties are ranked relative to the health of other counties in the same state. We calculate and rank eight summary composite scores:

1. Overall Health Outcomes

- 2. Health Outcomes Length of life
- 3. Health Outcomes Quality of life
- 4. Overall Health Factors
- 5. Health Factors **Health behaviors**
- 6. Health Factors Clinical care
- 7. Health Factors Social and economic factors
- 8. Health Factors Physical environment

Data Sources and Measures

The County Health Rankings team synthesizes health information from a variety of national data sources to create the Rankings. Most of the data used are public data available at no charge. Measures based on vital statistics, sexually transmitted infections, and Behavioral Risk Factor Surveillance System (BRFSS) survey data were calculated by staff at the National Center for Health Statistics and other units of the Centers for Disease Control and Prevention (CDC). Measures of healthcare quality were calculated by staff at The Dartmouth Institute.

Data Quality

The County Health Rankings team draws upon the most reliable and valid measures available to compile the Rankings. Where possible, margins of error (95% confidence intervals) are provided for measure values. In many cases, the values of specific measures in different counties are not statistically different from one another; however, when combined using this model, those various measures produce the different rankings.

Calculating Scores and Ranks

The County Health Rankings are compiled from many different types of data. To calculate the ranks, they first standardize each of the measures. The ranks are then calculated based on weighted sums of the standardized measures within each state. The county with the lowest score (best health) gets a rank of #1 for that state and the county with the highest score (worst health) is assigned a rank corresponding to the number of places we rank in that state.

Health Outcomes and Factors

Source: http://www.countyhealthrankings.org/explore-health-rankings/what-and-why-we-rank

Health Outcomes

Premature Death (YPLL)

Premature death is the years of potential life lost before age 75 (YPLL-75). Every death occurring before the age of 75 contributes to the total number of years of potential life lost. For example, a person dying at age 25 contributes 50 years of life lost, whereas a person who dies at age 65 contributes 10 years of life lost to a county's YPLL. The YPLL measure is presented as a rate per 100,000 population and is age-adjusted to the 2000 US population.

Reason for Ranking

Measuring premature mortality, rather than overall mortality, reflects the County Health Rankings' intent to focus attention on deaths that could have been prevented. Measuring YPLL allows communities to target resources to high-risk areas and further investigate the causes of premature death.

Poor or Fair Health

Self-reported health status is a general measure of health-related quality of life (HRQoL) in a population. This measure is based on survey responses to the question: "In general, would you say that your health is excellent, very good, good, fair, or poor?" The value reported in the County Health Rankings is the percentage of adult respondents who rate their health "fair" or "poor." The measure is modeled and age-adjusted to the 2000 US population. Please note that the methods for calculating this measure changed in the 2016 Rankings.

Reason for Ranking

Measuring HRQoL helps characterize the burden of disabilities and chronic diseases in a population. Self-reported health status is a widely used measure of people's health-related quality of life. In addition to measuring how long people live, it is important to also include measures that consider how healthy people are while alive.

Poor Physical Health Days

Poor physical health days is based on survey responses to the question: "Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?" The value reported in the County Health Rankings is the average number of days a county's adult respondents report that their physical health was not good. The measure is age-adjusted to the 2000 US population. Please note that the methods for calculating this measure changed in the 2016 Rankings.

Reason for Ranking

Measuring health-related quality of life (HRQoL) helps characterize the burden of disabilities and chronic diseases in a population. In addition to measuring how long people live, it is also important to include measures of how healthy people are while alive – and people's reports of days when their physical health was not good are a reliable estimate of their recent health.

Poor Mental Health Days

Poor mental health days is based on survey responses to the question: "Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" The value reported in the County Health Rankings is the average number of days a county's adult respondents report that their mental health was not good. The measure is age-adjusted to the 2000 US population. Please note that the methods for calculating this measure changed in the 2016 Rankings.

Reason for Ranking

Overall health depends on both physical and mental well-being. Measuring the number of days when people report that their mental health was not good, i.e., poor mental health days, represents an important facet of health-related quality of life.

Low Birth Weight

Birth outcomes are a category of measures that describe health at birth. These outcomes, such as low birthweight (LBW), represent a child's current and future morbidity — or whether a child has a "healthy start" — and serve as a health outcome related to maternal health risk.

Reason for Ranking

LBW is unique as a health outcome because it represents multiple factors: infant current and future morbidity, as well as premature mortality risk, and maternal exposure to health risks. The health associations and impacts of LBW are numerous.

In terms of the infant's health outcomes, LBW serves as a predictor of premature mortality and/or morbidity over the life course.[1] LBW children have greater developmental and growth problems, are at higher risk of cardiovascular disease later in life, and have a greater rate of respiratory conditions.[2-4]

From the perspective of maternal health outcomes, LBW indicates maternal exposure to health risks in all categories of health factors, including her health behaviors, access to healthcare, the social and economic environment the mother inhabits, and environmental risks to which she is exposed. Authors have found that modifiable maternal health behaviors, including nutrition and weight gain, smoking, and alcohol and substance use or abuse can result in LBW.[5]

LBW has also been associated with cognitive development problems. Several studies show that LBW children have higher rates of sensorineural impairments, such as cerebral palsy, and visual, auditory, and intellectual impairments. [2,3,6] As a consequence, LBW can "impose a substantial burden on special education and social services, on families and caretakers of the infants, and on society generally." [7]

Health Factors

Adult Smoking

Adult smoking is the percentage of the adult population that currently smokes every day or most days and has smoked at least 100 cigarettes in their lifetime. Please note that the methods for calculating this measure changed in the 2016 Rankings.

Reason for Ranking

Each year approximately 443,000 premature deaths can be attributed to smoking. Cigarette smoking is identified as a cause of various cancers, cardiovascular disease, and respiratory conditions, as well as low birthweight and other adverse health outcomes. Measuring the prevalence of tobacco use in the population can alert communities to potential adverse health outcomes and can be valuable for assessing the need for cessation programs or the effectiveness of existing programs.

Adult Obesity

Adult obesity is the percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2.

Reason for Ranking

Obesity is often the result of an overall energy imbalance due to poor diet and limited physical activity. Obesity increases the risk for health conditions such as coronary heart disease, type 2 diabetes, cancer, hypertension, dyslipidemia, stroke, liver and gallbladder disease, sleep apnea and respiratory problems, osteoarthritis, and poor health status.[1,2]

Food Environment Index

The food environment index ranges from 0 (worst) to 10 (best) and equally weights two indicators of the food environment:

- 1) Limited access to healthy foods estimates the percentage of the population that is low income and does not live close to a grocery store. Living close to a grocery store is defined differently in rural and nonrural areas; in rural areas, it means living less than 10 miles from a grocery store whereas in nonrural areas, it means less than 1 mile. "Low income" is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size.
- 2) Food insecurity estimates the percentage of the population who did not have access to a reliable source of food during the past year. A two-stage fixed effects model was created using information from the Community Population Survey, Bureau of Labor Statistics, and American Community Survey.

More information on each of these can be found among the additional measures.

Reason for Ranking

There are many facets to a healthy food environment, such as the cost, distance, and availability of healthy food options. This measure includes access to healthy foods by considering the distance an individual lives from a grocery store or supermarket; there is strong evidence that food deserts are correlated with high prevalence of overweight, obesity, and premature death.[1-3] Supermarkets traditionally provide healthier options than convenience stores or smaller grocery stores.[4]

Additionally, access in regards to a constant source of healthy food due to low income can be another barrier to healthy food access. Food insecurity, the other food environment measure included in the index, attempts to capture the access issue by understanding the barrier of cost. Lacking constant access to food is related to negative health outcomes such as weight-gain and premature mortality.[5,6] In addition to asking about having a constant food supply in the past year, the module also addresses the ability of individuals and families to provide balanced meals further addressing barriers to healthy eating. It is important to have adequate access to a constant food supply, but it may be equally important to have nutritious food available.

Physical Inactivity

Physical inactivity is the percentage of adults age 20 and over reporting no leisure-time physical activity. Examples of physical activities provided include running, calisthenics, golf, gardening, or walking for exercise.

Reason for Ranking

Decreased physical activity has been related to several disease conditions such as type 2 diabetes, cancer, stroke, hypertension, cardiovascular disease, and premature mortality, independent of obesity. Inactivity causes 11% of premature mortality in the United States, and caused more than 5.3 million of the 57 million deaths that occurred worldwide in 2008.[1] In addition, physical inactivity at the county level is related to healthcare expenditures for circulatory system diseases.[2]

Access to Exercise Opportunities

Change in measure calculation in 2018: Access to exercise opportunities measures the percentage of individuals in a county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Parks include local, state, and national parks. Recreational facilities include YMCAs as well as businesses identified by the following Standard Industry Classification (SIC) codes and include a wide variety of facilities including gyms, community centers, dance studios and pools: 799101, 799102, 799103, 799106, 799107, 799108, 799109, 799111, 799111, 799112, 799201, 799701, 799702, 799703, 799704, 799707, 799711, 799717, 799723, 799901, 799908, 799958, 799969, 799971, 799984, or 799998.

Individuals who:

- reside in a census block within a half mile of a park or
- in urban census blocks: reside within one mile of a recreational facility or

- in rural census blocks: reside within three miles of a recreational facility
- are considered to have adequate access for opportunities for physical activity.

Reason for Ranking

Increased physical activity is associated with lower risks of type 2 diabetes, cancer, stroke, hypertension, cardiovascular disease, and premature mortality, independent of obesity. The role of the built environment is important for encouraging physical activity. Individuals who live closer to sidewalks, parks, and gyms are more likely to exercise.[1-3]

Excessive Drinking

Excessive drinking is the percentage of adults that report either binge drinking, defined as consuming more than 4 (women) or 5 (men) alcoholic beverages on a single occasion in the past 30 days, or heavy drinking, defined as drinking more than one (women) or 2 (men) drinks per day on average. Please note that the methods for calculating this measure changed in the 2011 Rankings and again in the 2016 Rankings.

Reason for Ranking

Excessive drinking is a risk factor for a number of adverse health outcomes, such as alcohol poisoning, hypertension, acute myocardial infarction, sexually transmitted infections, unintended pregnancy, fetal alcohol syndrome, sudden infant death syndrome, suicide, interpersonal violence, and motor vehicle crashes. [1] Approximately 80,000 deaths are attributed annually to excessive drinking. Excessive drinking is the third leading lifestyle-related cause of death in the United States. [2]

Alcohol-Impaired Driving Deaths

Alcohol-impaired driving deaths is the percentage of motor vehicle crash deaths with alcohol involvement.

Reason for Ranking

Approximately 17,000 Americans are killed annually in alcohol-related motor vehicle crashes. Binge/heavy drinkers account for most episodes of alcohol-impaired driving.[1,2]

Sexually Transmitted Infection Rate

Sexually transmitted infections (STI) are measured as the chlamydia incidence (number of new cases reported) per 100,000 population.

Reason for Ranking

Chlamydia is the most common bacterial STI in North America and is one of the major causes of tubal infertility, ectopic pregnancy, pelvic inflammatory disease, and chronic pelvic pain.[1,2] STIs are associated with a significantly increased risk of morbidity and mortality, including increased risk of cervical cancer, infertility, and premature death.[3] STIs also have a high economic burden on society. The direct medical costs of managing sexually transmitted infections and their complications in the US, for example, was approximately 15.6 billion dollars in 2008.[4]

Teen Births

Teen births are the number of births per 1,000 female population, ages 15-19.

Reason for Ranking

Evidence suggests teen pregnancy significantly increases the risk of repeat pregnancy and of contracting a sexually transmitted infection (STI), both of which can result in adverse health outcomes for mothers, children, families, and communities. A systematic review of the sexual risk among pregnant and mothering teens concludes that pregnancy is a marker for current and future sexual risk behavior and adverse outcomes [1]. Pregnant teens are more likely than older women to receive late or no prenatal care, have eclampsia, puerperal endometritis, systemic infections, low birthweight, preterm delivery, and severe neonatal conditions [2, 3]. Pre-term delivery and low birthweight babies have increased risk of child developmental delay, illness, and mortality [4]. Additionally, there are strong ties between teen birth and poor socioeconomic, behavioral, and mental outcomes. Teenage women who bear a child are much less likely to achieve an education level at or

beyond high school, much more likely to be overweight/obese in adulthood, and more likely to experience depression and psychological distress [5-7].

Uninsured

Uninsured is the percentage of the population under age 65 that has no health insurance coverage. The Small Area Health Insurance Estimates uses the American Community Survey (ACS) definition of insured: Is this person CURRENTLY covered by any of the following types of health insurance or health coverage plans: Insurance through a current or former employer or union, insurance purchased directly from an insurance company, Medicare, Medicaid, Medical Assistance, or any kind of government-assistance plan for those with low incomes or a disability, TRICARE or other military healthcare, Indian Health Services, VA or any other type of health insurance or health coverage plan? Please note that the methods for calculating this measure changed in the 2012 Rankings.

Reason for Ranking

Lack of health insurance coverage is a significant barrier to accessing needed healthcare and to maintaining financial security.

The Kaiser Family Foundation released a report in December 2017 that outlines the effects insurance has on access to healthcare and financial independence. One key finding was that "Going without coverage can have serious health consequences for the uninsured because they receive less preventative care, and delayed care often results in serious illness or other health problems. Being uninsured can also have serious financial consequences, with many unable to pay their medical bills, resulting in medical debt."[1]

Primary Care Physicians

Primary care physicians is the ratio of the population to total primary care physicians. Primary care physicians include non-federal, practicing physicians (M.D.'s and D.O.'s) under age 75 specializing in general practice medicine, family medicine, internal medicine, and pediatrics. Please note this measure was modified in the 2011 Rankings and again in the 2013 Rankings.

Reason for Ranking

Access to care requires not only financial coverage, but also access to providers. While high rates of specialist physicians have been shown to be associated with higher (and perhaps unnecessary) utilization, sufficient availability of primary care physicians is essential for preventive and primary care, and, when needed, referrals to appropriate specialty care.[1,2]

Dentists

Dentists are measured as the ratio of the county population to total dentists in the county.

Reason for Ranking

Untreated dental disease can lead to serious health effects including pain, infection, and tooth loss. Although lack of sufficient providers is only one barrier to accessing oral healthcare, much of the country suffers from shortages. According to the Health Resources and Services Administration, as of December 2012, there were 4,585 Dental Health Professional Shortage Areas (HPSAs), with 45 million people total living in them.[1]

Mental Health Providers

Mental health providers is the ratio of the county population to the number of mental health providers including psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, mental health providers that treat alcohol and other drug abuse, and advanced practice nurses specializing in mental healthcare. In 2015, marriage and family therapists and mental health providers that treat alcohol and other drug abuse were added to this measure.

Reason for Ranking

Thirty percent of the population lives in a county designated as a Mental Health Professional Shortage Area. As the mental health parity aspects of the Affordable Care Act create increased coverage for mental health services, many anticipate increased workforce shortages.

Preventable Hospital Stays

Preventable hospital stays is the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 feefor-service Medicare enrollees. Ambulatory care-sensitive conditions include: convulsions, chronic obstructive pulmonary disease, bacterial pneumonia, asthma, congestive heart failure, hypertension, angina, cellulitis, diabetes, gastroenteritis, kidney/urinary infection, and dehydration. This measure is age-adjusted.

Reason for Ranking

Hospitalization for diagnoses treatable in outpatient services suggests that the quality of care provided in the outpatient setting was less than ideal. The measure may also represent a tendency to overuse hospitals as a main source of care.

Diabetes Monitoring

Diabetes monitoring is the percentage of diabetic fee-for-service Medicare patients ages 65-75 whose blood sugar control was monitored in the past year using a test of their glycated hemoglobin (HbA1c) levels.

Reason for Ranking

Regular HbA1c monitoring among diabetic patients is considered the standard of care. It helps assess the management of diabetes over the long term by providing an estimate of how well a patient has managed his or her diabetes over the past two to three months. When hyperglycemia is addressed and controlled, complications from diabetes can be delayed or prevented.

Mammography Screening

Mammography screening is the percentage of female fee-for-service Medicare enrollees age 67-69 that had at least one mammogram over a two-year period.

Reason for Ranking

Evidence suggests that mammography screening reduces breast cancer mortality, especially among older women.[1] A physician's recommendation or referral—and satisfaction with physicians—are major factors facilitating breast cancer screening. The percent of women ages 40-69 receiving a mammogram is a widely endorsed quality of care measure.

Unemployment

Unemployment is the percentage of the civilian labor force, age 16 and older, that is unemployed but seeking work.

Reason for Ranking

The unemployed population experiences worse health and higher mortality rates than the employed population.[1-4] Unemployment has been shown to lead to an increase in unhealthy behaviors related to alcohol and tobacco consumption, diet, exercise, and other health-related behaviors, which in turn can lead to increased risk for disease or mortality, especially suicide.[5] Because employer-sponsored health insurance is the most common source of health insurance coverage, unemployment can also limit access to healthcare.

Children in Poverty

Children in poverty is the percentage of children under age 18 living in poverty. Poverty status is defined by family; either everyone in the family is in poverty or no one in the family is in poverty. The characteristics of the family used to determine the poverty threshold are: number of people, number of related children under 18, and whether or not the primary householder is over age 65. Family income is then compared to the poverty threshold; if that family's income is below that threshold, the family is in poverty. For more information, please see Poverty Definition and/or Poverty.

In the data table for this measure, we report child poverty rates for black, Hispanic and white children. The rates for race and ethnic groups come from the American Community Survey, which is the major source of data used by the Small Area Income and Poverty Estimates to construct the overall county estimates. However, estimates for race and ethnic groups are created using combined five year estimates from 2012-2016.

Reason for Ranking

Poverty can result in an increased risk of mortality, morbidity, depression, and poor health behaviors. A 2011 study found that poverty and other social factors contribute a number of deaths comparable to leading causes of death in the US like heart attacks, strokes, and lung cancer.[1] While repercussions resulting from poverty are present at all ages, children in poverty may experience lasting effects on academic achievement, health, and income into adulthood. Low-income children have an increased risk of injuries from accidents and physical abuse and are susceptible to more frequent and severe chronic conditions and their complications such as asthma, obesity, and diabetes than children living in high income households.[2]

Beginning in early childhood, poverty takes a toll on mental health and brain development, particularly in the areas associated with skills essential for educational success such as cognitive flexibility, sustained focus, and planning. Low income children are more susceptible to mental health conditions like ADHD, behavior disorders, and anxiety which can limit learning opportunities and social competence leading to academic deficits that may persist into adulthood.[2,3] The children in poverty measure is highly correlated with overall poverty rates.

Income Inequality

Income inequality is the ratio of household income at the 80th percentile to that at the 20th percentile, i.e., when the incomes of all households in a county are listed from highest to lowest, the 80th percentile is the level of income at which only 20% of households have higher incomes, and the 20th percentile is the level of income at which only 20% of households have lower incomes. A higher inequality ratio indicates greater division between the top and bottom ends of the income spectrum. Please note that the methods for calculating this measure changed in the 2015 Rankings.

Reason for Ranking

Income inequality within US communities can have broad health impacts, including increased risk of mortality, poor health, and increased cardiovascular disease risks. Inequalities in a community can accentuate differences in social class and status and serve as a social stressor. Communities with greater income inequality can experience a loss of social connectedness, as well as decreases in trust, social support, and a sense of community for all residents.

Children in Single-Parent Households

Children in single-parent households is the percentage of children in family households where the household is headed by a single parent (male or female head of household with no spouse present). Please note that the methods for calculating this measure changed in the 2011 Rankings.

Reason for Ranking

Adults and children in single-parent households are at risk for adverse health outcomes, including mental illness (e.g. substance abuse, depression, suicide) and unhealthy behaviors (e.g. smoking, excessive alcohol use).[1-4] Self-reported health has been shown to be worse among lone parents (male and female) than for parents living as couples, even when controlling for socioeconomic characteristics. Mortality risk is also higher among lone parents.[4,5] Children in single-parent households are at greater risk of severe morbidity and all-cause mortality than their peers in two-parent households.[2,6]

Violent Crime Rate

Violent crime is the number of violent crimes reported per 100,000 population. Violent crimes are defined as offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, rape, robbery, and aggravated assault. Please note that the methods for calculating this measure changed in the 2012 Rankings.

Reason for Ranking

High levels of violent crime compromise physical safety and psychological well-being. High crime rates can also deter residents from pursuing healthy behaviors, such as exercising outdoors. Additionally, exposure to crime and violence has been shown to increase stress, which may exacerbate hypertension and other stress-related disorders and may contribute to obesity prevalence.[1] Exposure to chronic stress also contributes to the

increased prevalence of certain illnesses, such as upper respiratory illness, and asthma in neighborhoods with high levels of violence.[2]

Injury Deaths

Injury deaths is the number of deaths from intentional and unintentional injuries per 100,000 population. Deaths included are those with an underlying cause of injury (ICD-10 codes *U01-*U03, V01-Y36, Y85-Y87, Y89).

Reason for Ranking

Injuries are one of the leading causes of death; unintentional injuries were the 4th leading cause, and intentional injuries the 10th leading cause, of US mortality in 2014.[1] The leading causes of death in 2014 among unintentional injuries, respectively, are: poisoning, motor vehicle traffic, and falls. Among intentional injuries, the leading causes of death in 2014, respectively, are: suicide firearm, suicide suffocation, and homicide firearm. Unintentional injuries are a substantial contributor to premature death. Among the following age groups, unintentional injuries were the leading cause of death in 2014: 1-4, 5-9, 10-14, 15-24, 25-34, 35-44.[2] Injuries account for 17% of all emergency department visits, and falls account for over 1/3 of those visits.[3]

Air Pollution-Particulate matter

Air pollution-particulate matter is the average daily density of fine particulate matter in micrograms per cubic meter (PM2.5) in a county. Fine particulate matter is defined as particles of air pollutants with an aerodynamic diameter less than 2.5 micrometers. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air.

Reason for Ranking

The relationship between elevated air pollution (especially fine particulate matter and ozone) and compromised health has been well documented.[1,2,3] Negative consequences of ambient air pollution include decreased lung function, chronic bronchitis, asthma, and other adverse pulmonary effects.[1] Long-term exposure to fine particulate matter increases premature death risk among people age 65 and older, even when exposure is at levels below the National Ambient Air Quality Standards.[3]

Drinking Water Violations

Change in measure calculation in 2018: Drinking Water Violations is an indicator of the presence or absence of health-based drinking water violations in counties served by community water systems. Health-based violations include Maximum Contaminant Level, Maximum Residual Disinfectant Level and Treatment Technique violations. A "Yes" indicates that at least one community water system in the county received a violation during the specified time frame, while a "No" indicates that there were no health-based drinking water violations in any community water system in the county. Please note that the methods for calculating this measure changed in the 2016 Rankings.

Reason for Ranking

Recent studies estimate that contaminants in drinking water sicken 1.1 million people each year. Ensuring the safety of drinking water is important to prevent illness, birth defects, and death for those with compromised immune systems. A number of other health problems have been associated with contaminated water, including nausea, lung and skin irritation, cancer, kidney, liver, and nervous system damage.

Severe Housing Problems

Severe housing problems is the percentage of households with at least one or more of the following housing problems:

- housing unit lacks complete kitchen facilities;
- housing unit lacks complete plumbing facilities;
- household is severely overcrowded; or

- household is severely cost burdened.
- Severe overcrowding is defined as more than 1.5 persons per room. Severe cost burden is defined as monthly housing costs (including utilities) that exceed 50% of monthly income.

Reason for Ranking

Good health depends on having homes that are safe and free from physical hazards. When adequate housing protects individuals and families from harmful exposures and provides them with a sense of privacy, security, stability and control, it can make important contributions to health. In contrast, poor quality and inadequate housing contributes to health problems such as infectious and chronic diseases, injuries and poor childhood development.

Appendix E – Youth Behavioral Risk Survey Results

Youth Behavioral Risk Survey Results

North Dakota High School Survey

Rate Increase \uparrow , rate decrease \downarrow , or no statistical change = in rate from 2017-2019

				ND	Rural ND	Urban	National
	ND	ND	ND	Trend	Town	ND Town	Average
	2015	2017	2019	Λ, Ψ, =	Average	Average	2019
Injury and Violence	2013	2017	2013	1, •,-	Meruge	Meruge	2013
Percentage of students who rarely or never wore a seat belt (when							
riding in a car driven by someone else)	8.5	8.1	5.9	=	8.8	5.4	6.5
Percentage of students who rode in a vehicle with a driver who	0.0	5.12	0.0		0.0	<u> </u>	0.0
had been drinking alcohol (one or more times during the 30 prior							
to the survey)	17.7	16.5	14.2	=	17.7	12.7	16.7
Percentage of students who talked on a cell phone while driving							
(on at least one day during the 30 days before the survey, among							
students who drove a car or other vehicle)	NA	56.2	59.6	=	60.7	60.7	NA
Percentage of students who texted or e-mailed while driving a car							
or other vehicle (on at least one day during the 30 days before the							
survey, among students who had driven a car or other vehicle							
during the 30 days before the survey)	57.6	52.6	53.0	=	56.5	51.8	39.0
Percentage of students who never or rarely wore a helmet (during							
the 12 months before the survey, among students who rode a							
motorcycle)	NA	20.6	NA	NA	NA	NA	NA
Percentage of students who carried a weapon on school property							
(such as a gun, knife, or club on at least one day during the 30 days							
before the survey)	5.2	5.9	4.9	=	6.2	4.2	2.8
Percentage of students who were in a physical fight on school							
property (one or more times during the 12 months before the							
survey)	5.4	7.2	7.1	=	7.4	6.4	8.0
Percentage of students who experienced sexual violence (being							
forced by anyone to do sexual things [counting such things as							
kissing, touching, or being physically forced to have sexual							
intercourse] that they did not want to, one or more times during							
the 12 months before the survey)	NA	8.7	9.2	=	7.1	8.0	10.8
Percentage of students who experienced physical dating violence							
(one or more times during the 12 months before the survey,							
including being hit, slammed into something, or injured with an							
object or weapon on purpose by someone they were dating or							
going out with among students who dated or went out with	7.0		N1.0	212	NI A	NI A	0.0
someone during the 12 months before the survey)	7.6	NA	NA	NA	NA	NA	8.2
Percentage of students who have been the victim of teasing or							
name calling because someone thought they were gay, lesbian, or bisexual (during the 12 months before the survey)	NA	11.4	11.6	=	12.6	11.4	NA
Percentage of students who were bullied on school property	INA	11.4	11.0	-	12.0	11.4	INA
(during the 12 months before the survey)	24.0	24.3	19.9	Ψ	24.6	19.1	19.5
Percentage of students who were electronically bullied (including	24.0	24.5	19.9	•	24.0	13.1	19.5
being bullied through texting, Instagram, Facebook, or other social							
media during the 12 months before the survey)	15.9	18.8	14.7	Ψ	16.0	15.3	15.7
Percentage of students who felt sad or hopeless (almost every day	13.3	10.0	17.7	•	10.0	15.5	15.7
for two or more weeks in a row so that they stopped doing some							
usual activities during the 12 months before the survey)	27.2	28.9	30.5	=	31.8	33.1	36.7
asaar activities during the 12 months before the survey	27.2	20.5	30.5	_	51.0	55.1	50.7

					5 1115		
				ND .	Rural ND	Urban	National
	ND	ND	ND	Trend	Town	ND Town	Average
	2015	2017	2019	↑, √, =	Average	Average	2019
Percentage of students who seriously considered attempting							
suicide (during the 12 months before the survey)	16.2	16.7	18.8	=	18.6	19.7	18.8
Percentage of students who made a plan about how they would							
attempt suicide (during the 12 months before the survey)	13.5	14.5	15.3	=	16.3	16.0	15.7
Percentage of students who attempted suicide (one or more times							
during the 12 months before the survey)	9.4	13.5	13.0	=	12.5	11.7	8.9
Tobacco Use							
Percentage of students who ever tried cigarette smoking (even							
one or two puffs)	35.1	30.5	29.3	=	32.4	23.8	24.1
Percentage of students who smoked a whole cigarette before age							
13 years (even one or two puffs)	NA	11.2	NA	NA	NA	NA	NA
Percentage of students who currently smoked cigarettes (on at							
least one day during the 30 days before the survey)	11.7	12.6	8.3	₩	10.9	7.3	6.0
Percentage of students who currently frequently smoked			0.0	•	20.0	7.0	0.0
cigarettes (on 20 or more days during the 30 days before the							
survey)	4.3	3.8	2.1	₩	2.3	1.7	1.3
Percentage of students who currently smoked cigarettes daily (on	7.5	3.0	2.1		2.3	1.7	1.5
all 30 days during the 30 days before the survey)	3.2	3.0	1.4	₩	1.6	1.2	1.1
Percentage of students who usually obtained their own cigarettes	3.2	3.0	1.4	•	1.0	1.2	1.1
,							
by buying them in a store or gas station (during the 30 days before							
the survey among students who currently smoked cigarettes and			42.2		0.4	40.4	0.4
who were aged <18 years)	NA	7.5	13.2	=	9.4	10.1	8.1
Percentage of students who tried to quit smoking cigarettes							
(among students who currently smoked cigarettes during the 12							
months before the survey)	NA	50.3	54.0	=	52.8	51.4	NA
Percentage of students who currently use an electronic vapor							
product (e-cigarettes, vape e-cigars, e-pipes, vape pipes, vaping							
pens, e-hookahs, and hookah pens at least one day during the 30							
days before the survey)	22.3	20.6	33.1	1	32.2	31.9	32.7
Percentage of students who currently used smokeless tobacco							
(chewing tobacco, snuff, or dip on at least one day during the 30							
days before the survey)	NA	8.0	4.5	\downarrow	5.7	3.8	3.8
Percentage of students who currently smoked cigars (cigars,							
cigarillos, or little cigars on at least one day during the 30 days							
before the survey)	9.2	8.2	5.2	\downarrow	6.3	4.3	5.7
Percentage of students who currently used cigarettes, cigars, or							
smokeless tobacco (on at least one day during the 30 days before							
the survey)	NA	18.1	12.2	NA	15.1	10.9	10.5
Alcohol and Other Drug Use	ı.	ı				1	
Percentage of students who ever drank alcohol (at least one drink							
of alcohol on at least one day during their life)	62.1	59.2	56.6	=	60.6	54.0	NA
Percentage of students who drank alcohol before age 13 years (for		55.2	23.0		23.0	20	,
the first time other than a few sips)	12.4	14.5	12.9	=	16.4	13.2	15.0
Percentage of students who currently drank alcohol (at least one	12.7	17.5	12.5		10.7	15.2	13.0
drink of alcohol on at least one day during the 30 days before the							
survey)	30.8	29.1	27.6	=	29.4	25.4	29.2
Percentage of students who currently were binge drinking (four or	30.6	23.1	27.0	_	23.4	25.4	23.2
more drinks of alcohol in a row for female students, five or more							
for male students within a couple of hours on at least one day	N/ A	16.4	15.0		17.3	14.0	12.7
during the 30 days before the survey)	NA	16.4	15.6	=	17.2	14.0	13.7
Percentage of students who usually obtained the alcohol they							
drank by someone giving it to them (among students who	44.0	2= =					40.5
currently drank alcohol)	41.3	37.7	NA	NA	NA	NA	40.5

				ND _	Rural ND	Urban	National
	ND	ND	ND	Trend	Town	ND Town	Average
	2013	2017	2019	↑, √, =	Average	Average	2019
Percentage of students who tried marijuana before age 13 years							
(for the first time)	5.3	5.6	5.0	=	5.5	5.1	5.6
Percentage of students who currently used marijuana (one or		4	40.5				0.4 =
more times during the 30 days before the survey)	15.2	15.5	12.5	=	11.4	14.1	21.7
Percentage of students who ever took prescription pain medicine							
without a doctor's prescription or differently than how a doctor							
told them to use it (counting drugs such as codeine, Vicodin,							
OxyContin, Hydrocodone, and Percocet, one or more times during							
their life)	NA	14.4	14.5	=	12.8	13.3	14.3
Percentage of students who were offered, sold, or given an illegal	40.0						24.0
drug on school property (during the 12 months before the survey)	18.2	12.1	NA	NA	NA	NA	21.8
Percentage of students who attended school under the influence							
of alcohol or other drugs (on at least one day during the 30 days							
before the survey)	NA	NA	NA	NA	NA	NA	NA
	l Behavi		ı	1		T	
Percentage of students who ever had sexual intercourse	38.9	36.6	38.3	=	35.4	36.1	38.4
Percentage of students who had sexual intercourse before age 13							
years (for the first time)	2.6	2.8	NA	NA	NA	NA	3.0
Weight Manageme	nt and D	ietary Be	haviors				
Percentage of students who were overweight (>= 85th percentile							
but <95 th percentile for body mass index, based on sex and age-							
specific reference data from the 2000 CDC growth chart)	14.7	16.1	16.5	=	16.6	15.6	16.1
Percentage of students who had obesity (>= 95th percentile for							
body mass index, based on sex- and age-specific reference data							
from the 2000 CDC growth chart)	13.9	14.9	14.0	=	17.4	14.0	15.5
Percentage of students who described themselves as slightly or							
very overweight	32.2	31.4	32.6	=	35.7	33.0	32.4
Percentage of students who were trying to lose weight	NA	44.5	44.7	=	46.8	45.5	NA
Percentage of students who did not eat fruit or drink 100% fruit							
juices (during the seven days before the survey)	3.9	4.9	6.1	=	5.8	5.3	6.3
Percentage of students who ate fruit or drank 100% fruit juices							
one or more times per day (during the seven days before the							
survey)	NA	61.2	54.1	\downarrow	54.1	57.2	NA
Percentage of students who did not eat vegetables (green salad,							
potatoes [excluding French fries, fried potatoes, or potato chips],							
carrots, or other vegetables, during the seven days before the							
survey)	4.7	5.1	6.6	=	5.3	6.6	7.9
Percentage of students who ate vegetables one or more times per			0.0				
day (green salad, potatoes [excluding French fries, fried potatoes,							
or potato chips], carrots, or other vegetables, during the seven							
days before the survey)	NA	60.9	57.1	₩	58.2	59.1	NA
Percentage of students who did not drink a can, bottle, or glass of	,, .	55.5	0.11	•	33.E	55.1	,
soda or pop (such as Coke, Pepsi, or Sprite, not including diet soda							
or diet pop, during the seven days before the survey)	NA	28.8	28.1	=	26.4	30.5	NA
Percentage of students who drank a can, bottle, or glass of soda or	IVA	20.0	20.1	_	20.7	30.3	14/4
pop one or more times per day (not including diet soda or diet							
pop, during the seven days before the survey)	18.7	16.3	15.9	=	17.4	15.1	15.1
Percentage of students who did not drink milk (during the seven	10.7	10.3	13.5	_	17.4	13.1	13.1
days before the survey)	13.9	14.9	20.5	1	14.8	20.3	30.6
Percentage of students who drank two or more glasses per day of	13.9	14.9	20.5	'1'	14.8	20.3	30.0
	NIA	22.0	NIA	NIA	NI A	NIA	NIA
milk (during the seven days before the survey)	NA	33.9	NA	NA	NA	NA	NA
Percentage of students who did not eat breakfast (during the	11.0	12.5	1.0.0		12.2	101	16.7
seven days before the survey)	11.9	13.5	14.4	=	13.3	14.1	16.7

Percentage of students who most of the time or always went							
hungry because there was not enough food in their home (during							
the 30 days before the survey)	NA	2.7	2.8	=	2.1	2.9	NA
				ND	Rural ND	Urban	National
	ND	ND	ND	Trend	Town	ND Town	Average
	2015	2017	2019	1, √, =	Average	Average	2019
Physical Activity							
Percentage of students who were physically active at least 60							
minutes per day on 5 or more days (doing any kind of physical							
activity that increased their heart rate and made them breathe							
hard some of the time during the seven days before the survey)	NA	51.5	49.0	=	55.0	22.6	55.9
Percentage of students who watched television three or more							
hours per day (on an average school day)	18.9	18.8	18.8	=	18.3	18.2	19.8
Percentage of students who played video or computer games or							
used a computer three or more hours per day (counting time							
spent on things such as Xbox, PlayStation, an iPad or other tablet,							
a smartphone, texting, YouTube, Instagram, Facebook, or other							
social media, for something that was not school work on an							
average school day)	38.6	43.9	45.3	=	48.3	45.9	46.1
Other							
Percentage of students who had eight or more hours of sleep (on							
an average school night)	NA	31.8	29.5	=	31.8	33.1	NA
Percentage of students who brushed their teeth on seven days							
(during the seven days before the survey)	NA	69.1	66.8	=	63.0	68.2	NA
Percentage of students who most of the time or always wear							
sunscreen (with an SPF of 15 or higher when they are outside for							
more than one hour on a sunny day)	NA	12.8	NA	NA	NA	NA	NA
Percentage of students who used an indoor tanning device (such							
as a sunlamp, sunbed, or tanning booth [not including getting a							
spray-on tan] one or more times during the 12 months before the							
survey)	NA	8.3	7.0	=	6.0	5.9	4.5

Sources: https://www.cdc.gov/healthyyouth/data/yrbs/results.htm;
https://www.nd.gov/dpi/districtsschools/safety-health/youth-risk-behavior-survey

Appendix F – Prioritization of Community's Health Needs

Community Health Needs Assessment Cavalier, North Dakota Ranking of Concerns

The top four concerns for each of the six topic areas, based on the community survey results, were presented in a prerecorded esentation and in an online survey. The numbers below indicate the total number of votes by the key informants who participated in the survey which took place in lieu of a group meeting. The "Priorities" column lists the number of votes on the concerns indicating which areas are felt to be priorities. Each person was asked to choose their top four concerns. The "Most Important" plumn lists the top concerns after a second survey. After the first round of voting, the top five priorities were selected based on the nighest number of votes. Each person was then asked to vote on the item they felt was the most important priority of the top five highest ranked priorities.

	Priorities	Most Important
COMMUNITY/ENVIRONMENTAL HEALTH CONCERNS		
Attracting & retaining young families	4	3
Having enough child daycare services	0	
Not enough affordable housing	3	0
Not enough jobs with livable wages	2	
AVAILABILITY/DELIVERY OF HEALTH SERVICES CONCERNS		
Availability of mental health services	4	2
Availability of vision care	2	
Cost of health insurance	1	
Availability of substance use disorder treatment services	3	1
YOUTH POPULATION HEALTH CONCERNS		
Alcohol use and abuse	0	
	0	
Drug use and abuse (including prescription drugs)	0	
Depression/anxiety (combined with adult/all ages)	0	1
Smoking & tobacco use or vaping/juuling	0	
ADULT POPULATION HEALTH CONCERNS		
Depression/anxiety	2	
Obesity/overweight	1	
Alcohol use and abuse	1	
Drug use and abuse (including prescription drugs)	1	
SENIOR POPULATION HEALTH CONCERNS		
Availability of resources to help elderly stay in their homes	2	
Cost of long-term/nursing home care	0	
Assisted living options	1	
Availability of resources for individuals caring for elders	0	
VIOLENCE CONCERNS		
Bullying/cyber-bullying (Youth)	2	
Child abuse/neglect	0	
Domestic/intimate partner violence	0	
Media Violence	0	

Appendix G – Survey "Other" Responses

The number in parenthesis () indicates the number of people who indicated that EXACT same answer. All comments below are directly taken from the survey results and have not been summarized.

Community Assets: Please tell us about your community by choosing up to three options you most agree with in each category below.

- 1. Considering the PEOPLE in your community, the best things are: "Other" responses:
 - Small population
- 4. Considering the ACTIVITIES in your community, the best things are: "Other" responses:
 - None

Community Concerns: Please tell us about your community by choosing up to three options you most agree with in each category.

- 6. Considering the AVAILABILITY/DELIVERY OF HEALTH SERVICES in your community, concerns are: "Other" responses:
 - Kidney dialysis
 - Need a pediatrician
 - We need another pharmacy
 - Businesses closing and no new ones opening
 - Concerns for the kids that are juuling and other harmful substances. How are they getting them? Parents providing their own children with alcohol, allowing them to have parties in their homes for underage drinking.
 - Feeding our young children
 - Holding on to population which needs good-paying jobs with health insurance benefits to keep population here
 - Lack of mental health care
 - Not enough variety for good paying jobs to be able to afford things such as health insurance, day care, etc.
 - Retaining families; businesses
 - Specialty doctors...either occasional onsite visits or permanent. Would be really nice to have a pediatrician. Nearest one is 1 hour away.
 - Stigma
 - Supporting businesses
 - The community working together on a common goal, too many in our community do not want to get involved.
 - Unstable economy. Better paying jobs offer better health insurance coverage.
 - We need more money at our jobs to live here bigger cities pay better.

Delivery of Healthcare

- 14. What specific healthcare services, if any, do you think should be added locally?
 - Another MD
 - Dialysis, mental health services
 - Eye clinic
 - Eye doctor
 - Homeopathic/naturopathic treatment of disease to get wholly well.
 - In home flu shots for the elderly/homebound population

- Kidney dialysis
- Mental Health services
- Pediatrician
- Pharmacy
- Psych
- Psychologist
- Renal dialysis
- Vision care, mental health services
- Weight loss treatment covered by insurance
- 19. What support groups are you aware of in the community?
 - AA (7)
 - (2) AA and Alanon
 - AA, Addiction, Al Anon;
 - AA, Alanon, Grief, Caretakers of those with dementia, domestic violence
 - Alcoholics Anonymous is the only one I can think of right now
 - Allzheimer's but that is not active, AA, Our Hope Support group
 - Alzheimers
 - Dementia
 - Dementia care providers support, AA, AlAnon, churches
 - Diabetes Prevention Program
 - Domestic violence, AA
 - Faith in Action, Pembina County Transportation, Cavalier Thrift store, Domestic Violence,
 - Faith in Action, churches
 - LOAN, Backpack food program, Social services,
 - New to the commnity
 - None
- 20. What support groups would you like to see available in the community?
 - Grief
 - Mental health
 - Depression/anxety
 - Catholic support group
 - Unsure
- 30. Overall, please share concerns and suggestions to improve the delivery of local healthcare.
 - Mental health services, opportunities for the community to hear about services offered
 - More mental health care onsite is needed versus telemed. Community needs counselors, support groups and the availability of psychiatry onsite
 - Need for affordable homemaker/home healthcare for elderly and disabled
 - New to the area, still assessing the situation
 - Resources to help people stay in their homes (i.e.hospice and wellness care) is severely lacking, along with available mental health professionals. Also, we need younger people in the community to share their time and talents to help ambulance and fire departments.
 - The population in Pembina County keeps decreasing. Economic development should be a priority to attract/retain residents. Hospitals in Langdon, Park River. Hallock and Grafton also provide medical services to county residents. If the population does not increase, the customer base for the hospital decreases.
 - We need more mental health and counselors locally in our area
 - Would like to see another male provider and mental health services