

# Community Health Needs Assessment

Heart of America Medical Center

Rugby, North Dakota

# 2022

Anna Walter, BBA, Project Coordinator  
Kylie Nissen, BBA, CHA, Program Director



Center *for* Rural Health

University of North Dakota  
School of Medicine & Health Sciences

# Table of Contents

Executive Summary ..... 3

Overview and Community Resources ..... 4

Assessment Process ..... 10

Demographic Information ..... 15

Survey Results ..... 24

Findings of Key Informant Interviews and Community Group ..... 42

Priority of Health Needs ..... 44

Next Steps – Strategic Implementation Plan ..... 46

Appendix A – Critical Access Hospital Profile ..... 48

Appendix B – Economic Impact Analysis ..... 50

Appendix C – Survey Instrument ..... 51

Appendix D – County Health Rankings Explained ..... 57

Appendix E – Youth Risk Behavior Survey ..... 68

Appendix F – Prioritization of Community’s Health Needs ..... 71

Appendix G – Survey “Other” Responses ..... 72

This project was supported, in part, by the Federal Office of Rural Health, Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS), Medicare Rural Flexibility Hospital grant program and State Office of Rural Health grant program. This information content and conclusions are those of the author and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the U.S. Government.

# Executive Summary

To help inform future decisions and strategic planning, Heart of America Medical Center (HAMC) conducted a Community Health Needs Assessment (CHNA) in 2021, the previous CHNA having been conducted in 2019. The Center for Rural Health (CRH) at the University of North Dakota School of Medicine & 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.



To gather feedback from the community, residents of the area were given the opportunity to participate in a survey. One hundred eighty-three HAMC service area residents completed the survey. Additional information was collected through five key informant interviews with community members. The input from the residents, who primarily reside in Pierce County, represented the broad interests of the communities in the service area. Together with secondary data gathered from a wide range of sources, the survey presents a snapshot of the health needs and concerns in the community.

With regard to demographics, Pierce County's population from 2010 to 2019 decreased by 8.8%. The average number of residents younger than age 18 (22.8%) for Pierce County comes in 0.7 percentage points lower than the North Dakota average (23.5%). The percentage of residents, ages 65 and older, is 8.5% higher for Pierce County (23.8%) than the North Dakota average (15.3%), and the rate of education is slightly higher for Pierce County (93.3%) than the North Dakota average (92.5%). The median household income in Pierce County (\$55,660) is much lower than the state average for North Dakota (\$63,473).

Data, compiled by County Health Rankings, show Pierce County is doing better than North Dakota in health outcomes / factors for nine categories and is performing poorly, relative to the rest of the state, in 18 outcome / factor categories.

Of 106 potential community and health needs set forth in the survey, the 183 HAMC service area residents who completed the survey indicated the following 10 needs as the most important:

- Alcohol use and abuse – Youth and Adult
- 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 Adult
- Drug use and abuse – Youth
- Having enough child daycare services
- Not enough jobs with livable wages
- Stress – Adult

The survey also revealed the biggest barriers to receiving healthcare (as perceived by community members). They included not enough evening / weekend hours (N=45), not affordable (N=40), and no insurance or limited insurance (N=38).

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

- Active faith community
- Healthcare
- Quality school systems
- Family-friendly
- People are friendly, helpful, and supportive
- Safe place to live, little / no crime

Input from community leaders, provided via key informant interviews and the community focus group, echoed many of the concerns raised by survey respondents. Concerns, emerging from these sessions, were:

- Attracting and retaining young families
- Availability of mental health services
- Cost of long-term/nursing home care
- Depression/anxiety
- Having enough child daycare services

## Overview and Community Resources

With assistance from the Center for Rural Health (CRH) at the University of North Dakota School of Medicine & Health Sciences (UNDSMHS), Heart of America Medical Center (HAMC) completed a Community Health Needs Assessment (CHNA) of the HAMC service area. The hospital identifies its service area as a 50-mile radius around Rugby, North Dakota, which includes all of Pierce County and parts of the surrounding counties of Rolette, Benson, McHenry, Bottineau, Towner, Wells, and Sheridan. Many community members and stakeholders worked together on the assessment.

HAMC (Rugby) is located in north central North Dakota at the intersection of Highways 2 and 3 and is a licensed Critical Access Hospital with three provider-based rural health clinics (Rugby, Maddock, and Dunseith). Travel opportunities in these areas are abundant, whether you wish to fly, drive, or take the train.

HAMC is located in Rugby, approximately 60 miles east of Minot, 60 miles west of Devils Lake, and 45 miles south of the International Peace Garden at the Canadian border. Along with the hospital, agricultural and manufacturing operations provide the economic base for the town of Rugby and surrounding areas. Known as the Geographical Center of North America, Rugby boasts new housing developments along with



an excellent school system, a movie theater, several hotels, a small and large animal vet clinic, a public library, and varied dining and shopping options. Community activities include an active Village Arts Center, a civic orchestra and choir, historical lectures and art shows at the Prairie Village Museum, an interpretive Aurora Borealis center at the Northern Lights Tower, the Pierce County Fair, and weekly “Music in the Park” events during the summer months. Outdoor activities include numerous city parks, a walking path, an indoor swimming pool, a golf course, tennis courts, basketball courts, indoor and outdoor hockey /skating rinks, a summer sports complex, hunting, fishing, sledding, and groomed snowmobile trails.

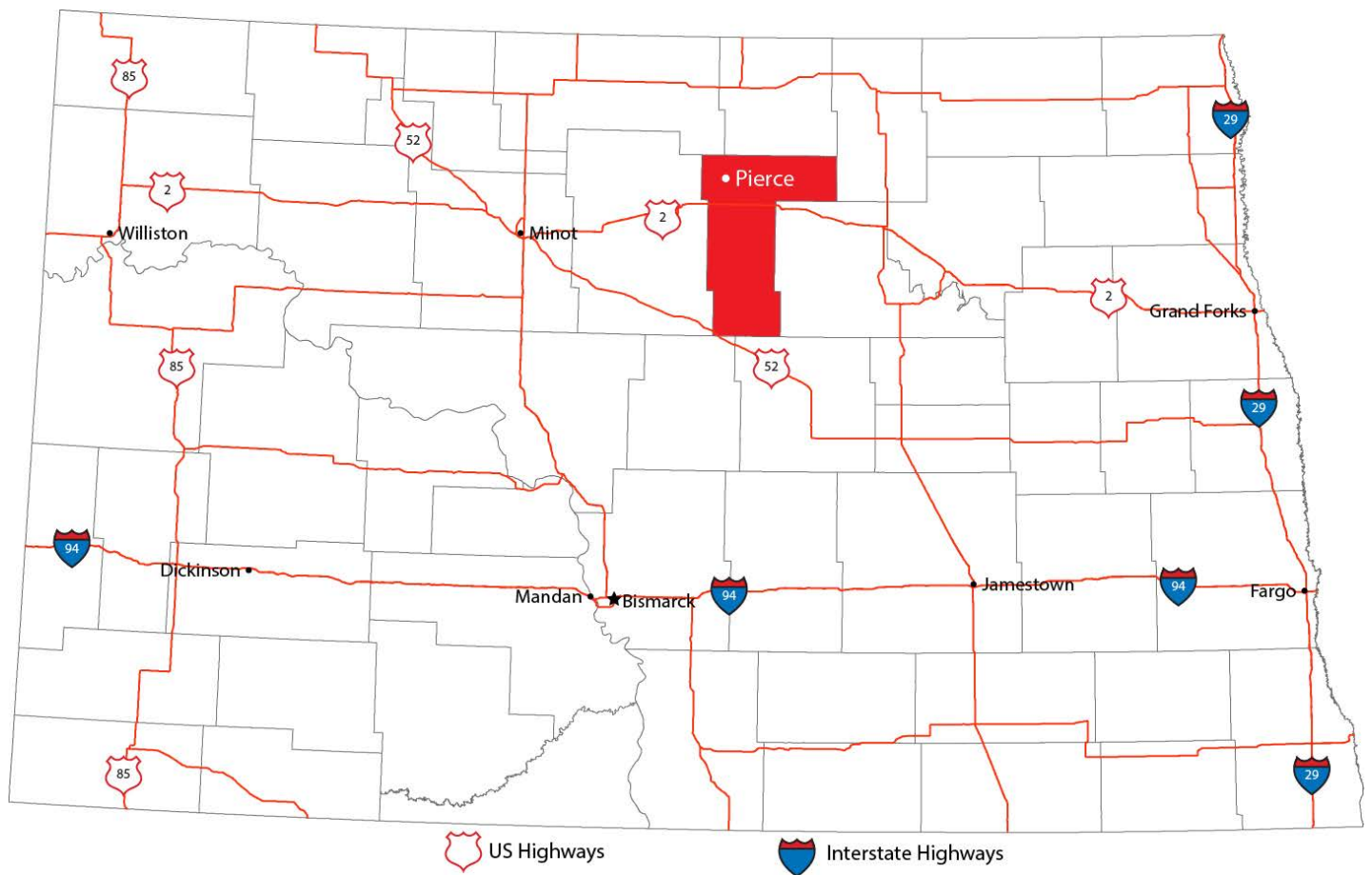
Located southeast of Rugby, Maddock is a small town that offers a variety of activities for all ages. Community-based attractions include the Business & Technology Center with extended stay rooms, Harriman’s Restaurant, an opera house, coffee shop, lounge, a city library, and the popular Rural Renaissance Festival. Maddock also boasts a community center that includes an indoor pool, basketball court, gym, meeting rooms, and kitchen. Maddock is situated close to Devils Lake’s world class walleye fishing, hunting, and water recreation opportunities.

North of Rugby in the Turtle Mountains, Dunseith provides a gateway to the International Peace Garden, International Music Camp, Lake Metigoshe, hunting, fishing, snowmobiling, hiking, bird watching, and many more outdoor activities. The Canadian border is just minutes away, and the area promotes nature’s beauty year-round.





**Figure 1: Pierce County**



## Heart of America Medical Center (HAMC)

Founded by farsighted Lutheran pastors who were dedicated to community service, the hospital opened its doors on January 9, 1910, under the name Sheyenne Kreds Hospital Association. In 1915, the name was changed to the Good Samaritan Hospital Association as a memorial to the staunch and noble pioneers who obeyed the command of the Great Physician to care for the sick and the suffering. To this day, the facility is supported by the community churches of all denominations.

While there have been several additions and changes to services provided, the loyal dedication to the communities has been sustained. The most recent addition occurred on August 1, 2010, when Johnson Clinics, PC merged with HAMC to form Heart of America Johnson Clinics, which are located in Rugby, Dunseith, and Maddock. Today, Good Samaritan Hospital Association, doing business as Heart of America Medical Center (HAMC), is a 25-bed Critical Access Hospital with a designated Level V trauma center, chemotherapy / infusion suite, surgical suite, pharmacy, lab, and radiology (including on-site MRI). An outpatient wellness center offers a full range of therapy services: physical, occupational, cardiac rehab, pulmonary rehab, and sports medicine. Heart of America Care Center, located on second and third floors, has 43 nursing home beds, including an Alzheimer's unit. Haaland Estates complex, which is on a separate campus, includes 37 assisted-living apartments and 60 basic-care beds that include a memory care unit.

Centered in Pierce County but serving parts of the surrounding counties of Rolette, Benson, McHenry, Bottineau, Towner, Wells, and Sheridan, HAMC provides crucial medical services to more than 13,000 people within a 50-mile radius of Rugby, North Dakota. With roughly 300 employees, including three MD's (one of which is a general surgeon), three physician assistants, six nurse practitioners, and one certified registered nurse anesthetist (CRNA), HAMC is the largest employer in the region. The Critical Access Hospital Profile for HAMC includes a summary of hospital-specific information and is available in Appendix A.

HAMC has a significant economic impact on the region. They directly employ 242 FTE employees with an annual payroll of over \$17.8 million (including benefits). These employees create an additional 101 jobs and nearly \$4.36 million in income as they interact with other sectors of the local economy, which results in a total impact of 343 jobs and more than \$22.1 million in income. Additional information is provided in Appendix B.

### **Mission**

The mission of Heart of America Medical Center is to deliver compassionate care by advancing the physical and spiritual wellbeing of the communities we serve through smart medicine and exceptional service.

### **Vision**

The vision of Heart of America Medical Center is to be the provider of choice for healthcare within our communities.

Services offered locally by HAMC:

#### **General and Acute Services**

- Ambulance
- Assisted living apartments
- Basic care with memory care unit available
- Chemotherapy
- Chronic care management
- Daycare
- Diabetes education
- Emergency room – level V trauma center
- Hospice
- Hospital (acute inpatient care and observation)
- Infusion therapy
- Inpatient rehab
- Oncology Infusion
- Pharmacy
- Respite care
- Skilled nursing care with memory care unit available
- Swing bed services
- Transitional care management

#### **Clinics**

- Allergy, flu, and pneumonia shots
- Blood pressure checks
- Chronic disease management
- Family practice
- Geriatric medicine
- Gynecology
- Mole/wart/skin lesion removal
- Physicals: annuals, D.O.T., sports and insurance
- Prenatal care up to 32 weeks
- Sports physicals

#### **Durable Medical Equipment Services**

- Braces
- Canes, crutches, walkers
- CPAP/BiPAP machines and supplies
- Diabetic shoes
- Nebulizers
- Ostomy supplies
- Oxygen
- Sleep studies

#### **Laboratory Services**

- Bacteriology
- Blood types
- Chemistry
- Clot times/Coagulation
- Hematology
- Serology
- Spinal/synovial fluid testing
- Urine testing

## **Pain Clinic Services**

- Fluoroscopic guided injections
- Injections of steroids
- Massage therapy
- Nutrition counseling
- Occipital nerve blocks
- Physical therapy
- Sphenopalatine ganglion blocks (SPG blocks)
- Trigger point injections

## **Radiology Services**

- 3D mammography
- Bone density scan
- CT scan
- DEXA scan
- Echocardiograms
- EEG
- EKG
- Fluoroscopy
- General X-ray with fluoroscopy
- Holter monitor/event monitor
- MRI
- Nuclear medicine (mobile unit)
- Portable X-rays
- Stress tests
- Ultrasound

## **Retail Pharmacy Services**

- Counseling for Medicare Part D open enrollment
- FlavoRx
- Flu and shingles vaccine
- Free delivery and mailouts
- Text alerts

## **Screening/Therapy Services**

- ADL retraining
- Amputee rehab
- Back pain rehab
- Balance/falls prevention
- Cardiac rehab
- Cognition test/screening
- Diabetes education
- Ergonomic assessments
- Hand therapy
- Home safety evaluations
- Lower extremity circulatory assessment/rehabilitation
- Lymphedema/edema evaluations and treatment
- Manual therapy/Graston IASTYM
- Medical nutrition therapy
- Neuro-rehabilitation
- Nutritional counseling
- Occupational health
- Occupational therapy
- Orthopedic rehabilitation
- Osteoporosis management
- Pediatric services
- Personal training
- Physical therapy
- Respiratory therapy
- Speech therapy
- Sports Acceleration
- Sports injury
- Swallowing evaluations and recommendations
- Ultrasound/e-stim modalities
- Upper extremity rehabilitation
- Vestibular Rehab-BPPV
- Wellness/fitness evaluations
- Work injury rehab
- Wound care

## Specialty Services

- Ophthalmology
- Orthotist/prosthetist

## Supportive Services

- Advanced healthcare directive
- Alzheimer's support group
- Breast cancer support group
- Chaplain
- Community care
- Diabetes education

## Surgical Services

- Abscess I&D/debridement
- Anesthesia
- Appendectomy – open
- Axillary node dissection
- Biopsy – needle localized and standard
- Burn care
- Carpal tunnel release
- Central line/port-a-cath placement
- Chest tube insertions
- Cholecystectomy – open and laparoscopic
- Colectomy
- Colonoscopy
- Common bile duct exploration
- EGD
- Excision of facial and scalp lesions
- Herniorrhaphy – femoral, incisional, inguinal, umbilical, and ventral repair
- Hydrocele repair
- Hysterectomy/salpingo-oophorectomy – open
- Laparotomy/laparoscopy
- Liver biopsy
- Lumpectomy

## Telehealth Services

- Behavioral health
- Cardiology
- Cardiothoracic surgery
- Dermatology
- Diabetes care

- Podiatrist

- Discharge planning
- Grief support group
- Homecare options
- Interpretive and TTY services
- Phones for hearing impaired
- Prescription assistance

- Major amputations
- Mastectomy
- Orchiectomy/testicular biopsy
- Parathyroidectomy
- PEG tube placement
- Peri-anal procedures – hemorrhoidectomy, anal fissure, anal fistula
- Pilonidal repair
- Proctoscopy
- Sigmoidoscopy
- Skin grafts
- Small bowel resection
- Splenectomy
- Thyroid needle aspiration
- Thyroidectomy
- Toenail removal – Ingrown and nail bed
- Tracheostomy
- Trauma care
- Tubal ligation – open or laparoscopic
- Vasectomy

- Gastrointestinal
- Infectious disease
- Nephrology
- Oncology
- Orthopedics

- Palliative
- Podiatry
- Psychiatry
- Pulmonology

- Speech therapy
- Urology
- Vascular surgery
- Wound care

### Services offered by other providers/organizations

- Chiropractic
- Dental
- Massage therapy
- Optometry / vision
- Physical therapy
- Speech therapy

## Lake Region District Health Unit

Serving the Lake Region area since 1950, Lake Region District Health Unit (LRDHU) provides public health services in Pierce County, Benson County, Eddy County, and Ramsey County. Headquartered in Devils Lake, LRDHU has one remote clinic in each county, providing services that include environmental health, emergency preparedness, WIC, substance awareness, tobacco prevention, immunizations, Women's Way, Health Tracks, family planning, maternal child health and safety, and nursing services.



The mission of public health is to make a positive impact on the health and welfare of the community by preventing the spread of disease, promoting good health, and protecting the environment. This mission is completed through the many services that LRDHU provides.

### Specific services that LRDHU provides are as follows:

- Bicycle helmet safety education
- Blood pressure checks
- Breastfeeding resources
- Car seat program and child passenger safety
- Child health (well-baby checks)
- Cholesterol and hemoglobin screening
- Correction facility health
- COVID-19 vaccinations and testing
- Emergency preparedness services (work with community partners as part of local emergency response team)
- Environmental health (water, sewer, health hazard abatement)
- Family planning (education, counseling, and medical services)
- Flu shots
- Foot care
- Health Tracks (child health screening)
- Home visits
- Immunizations
- Maternal child health and safety
- Medication setup—home visits
- Member of Child Protection Team and County Interagency Team
- Newborn home visits
- Nutrition education
- Preschool education programs and screening
- Rapid inspection (nursing assessment, blood pressure, dressing changes, suture removal)
- Responsible Beverage Service classes (detecting minors / fake ID)
- Safe sleep education (crib distribution program)
- School health—vision screening, immunizations, child passenger safety, nutrition education, growing up talks, lice checks, health education, and resource to the schools
- Substance awareness
- Tobacco prevention



- Tuberculosis testing and management
- West Nile program—surveillance and education
- WIC (Women, Infants and Children) program
- Women's Way program (breast and cervical screening)
- Worksite wellness – coordinator for county employees and Sheriff's Dept.
- Youth education programs (First Aid, bike safety)

## Assessment Process

The purpose of conducting a Community Health Needs Assessment (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 the 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 in Pierce County as well as parts of Rolette, Benson, McHenry, Bottineau, Towner, Wells, and Sheridan Counties, which are all included in the Heart of America Medical Center (HAMC) service area.

The Center for Rural Health (CRH), in partnership with HAMC and Lake Region District Health Unit (LRDHU), 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 HAMC. A 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 videoconference and /or via the eToolkit with the CHNA liaison. The community group (described in more detail below) provided in-depth information and informed the assessment process in terms of community perceptions, community resources, community needs, and ideas for improving the health of the population and healthcare services. Thirteen people, representing a cross section demographically, attended the focus group meeting. The meeting was highly interactive with good participation. HAMC staff and board members were in attendance as well but largely played a role of listening and learning.



**Figure 2: Steering Committee**

Jodi Schaan	Medical Staff Coordinator, Heart of America Medical Center
Darcie Rose	Marketing and Foundation Director, Heart of America Medical Center, Chamber of Commerce
Lauren McClintock	Human Resources Generalist, Heart of America Medical Center
Sara Radomski	Human Resource Manager, Heart of America Medical Center
Kim Bott	Hospital Board Member, Heart of America Medical Center
Sam Wentz	RN, Lake Region District Health Unit
Hannah Lemer	Executive Assistant, Heart of America Medical Center
Erik Christenson	CEO, Heart of America Medical Center
Melissa Shepard	CFO, Heart of America Medical Center

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;
- The community group, comprised of community leaders and area residents, was convened to discuss area health needs and inform the assessment process; 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 University of North Dakota School of Medicine & Health Sciences (UNDSMHS) and other necessary resources to rural communities and other 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 convening a community group, conducting key informant interviews, soliciting feedback about health needs via a survey, and researching secondary data.

## Community Group

A community group, consisting of 15 community members, was convened and first met on October 11, 2021. During this first community group meeting, group members were introduced to the needs assessment process, reviewed basic demographic information about the community, and served as a focus group. Focus group topics included community assets and challenges, the general health needs of the community, community concerns, and suggestions for improving the community's health.

The community group met again on January 10, 2022, with 13 community members in attendance. At this second meeting, the community group was presented with survey results, findings from key informant interviews and the focus group, and a wide range of secondary data, relating to the general health of the population in Pierce County. The group was then tasked with identifying and prioritizing the community's health needs.

Members of the community group represented the broad interests of the community served by HAMC and LRDHU. They included representatives of the health community, business community, political bodies, education, faith community, and social service agencies. Not all members of the group were present at both meetings.

## Interviews

One-on-one interviews with five key informants were conducted virtually in October 2021. 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 C, and a full listing of direct responses, provided for the questions that included “Other” as an option, are included in Appendix G.

The community member survey was distributed to various residents of Pierce County, which is all included in the HAMC 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

To promote awareness of the assessment process, radio ads were aired as well as flyers and posters sent. Additionally, information was published on HAMC's website and Facebook page.

Approximately 50 community member surveys were available for distribution in Pierce County. The surveys were distributed by at HAMC and LRDHU.

To help ensure anonymity, included with each survey was a postage-paid return envelope to CRH. In addition, to help make the survey as widely available as possible, residents also could request a survey by calling HAMC or LRDHU. The survey period ran from October 8, 2021 to October 31, 2021. Three completed paper surveys were returned.

Area residents were also given the option of completing an online version of the survey, which was publicized on the radio, flyers at churches, posters at banks and the grocery store, and on the website and Facebook page of HAMC. One hundred eighty online surveys were completed. Twelve of those online respondents used the QR code to complete the survey. In total, counting both paper and online surveys, 183 community member surveys were completed, equating to a 6% response rate. This response rate is lower than expected for this type of unsolicited survey methodology but typical for surveys during the pandemic.

## 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 were collected from a variety of sources, including the United States Census Bureau; Robert Wood Johnson Foundation's County Health Rankings, which pulls data from 20 primary data sources ([www.countyhealthrankings.org](http://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](http://www.childhealthdata.org/learn/NSCH)); 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](http://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

Social determinants of health are, according to the World Health Organization, "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.

There are numerous models that depict the social determinants of health. While the models may vary slightly in the exact percentages that they attribute to various areas, the discrepancies are often because some models have combined factors when other models have kept them as separate factors.

For Figure 3, data has been derived from the County Health Rankings model (<https://www.countyhealthrankings.org/resources/county-health-rankings-model>) and it illustrates that healthcare, while vitally important, plays only one small role (approximately 20%) in the overall health of individuals and ultimately of a community. Physical environment, social and economic factors, and health behaviors 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.

**Figure 3: Social Determinants of Health**

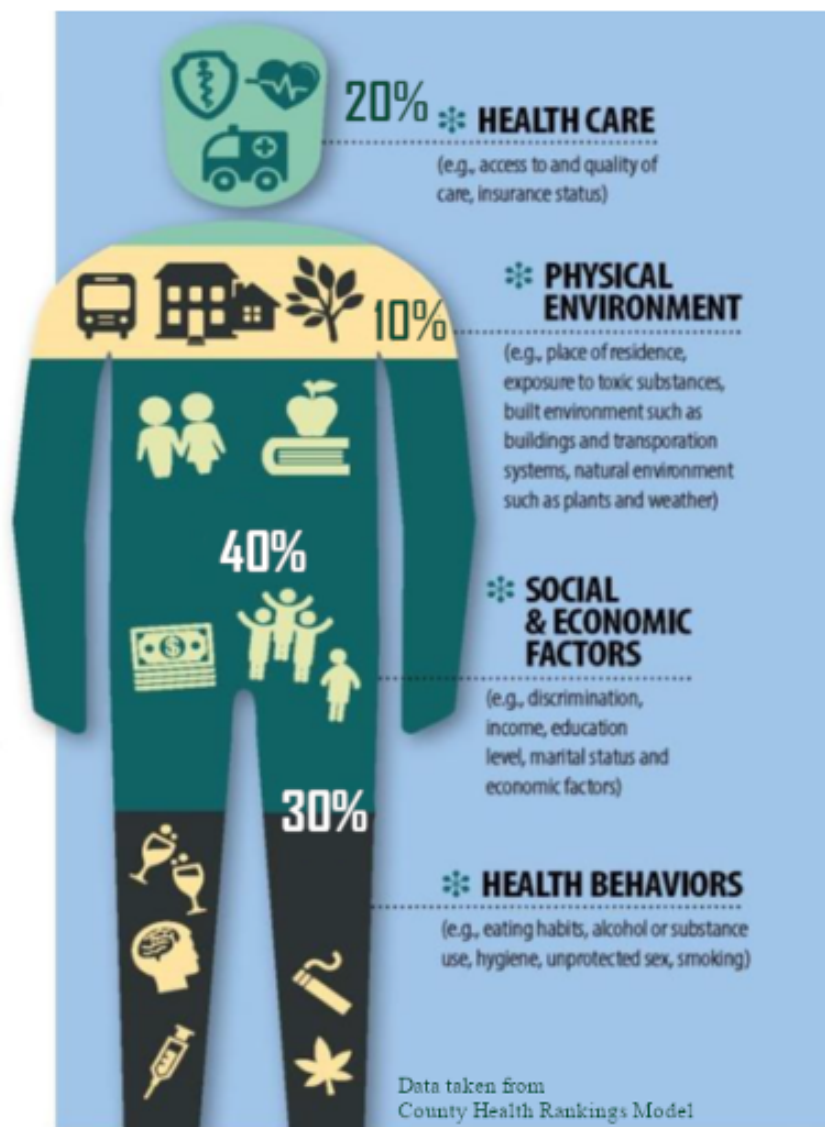
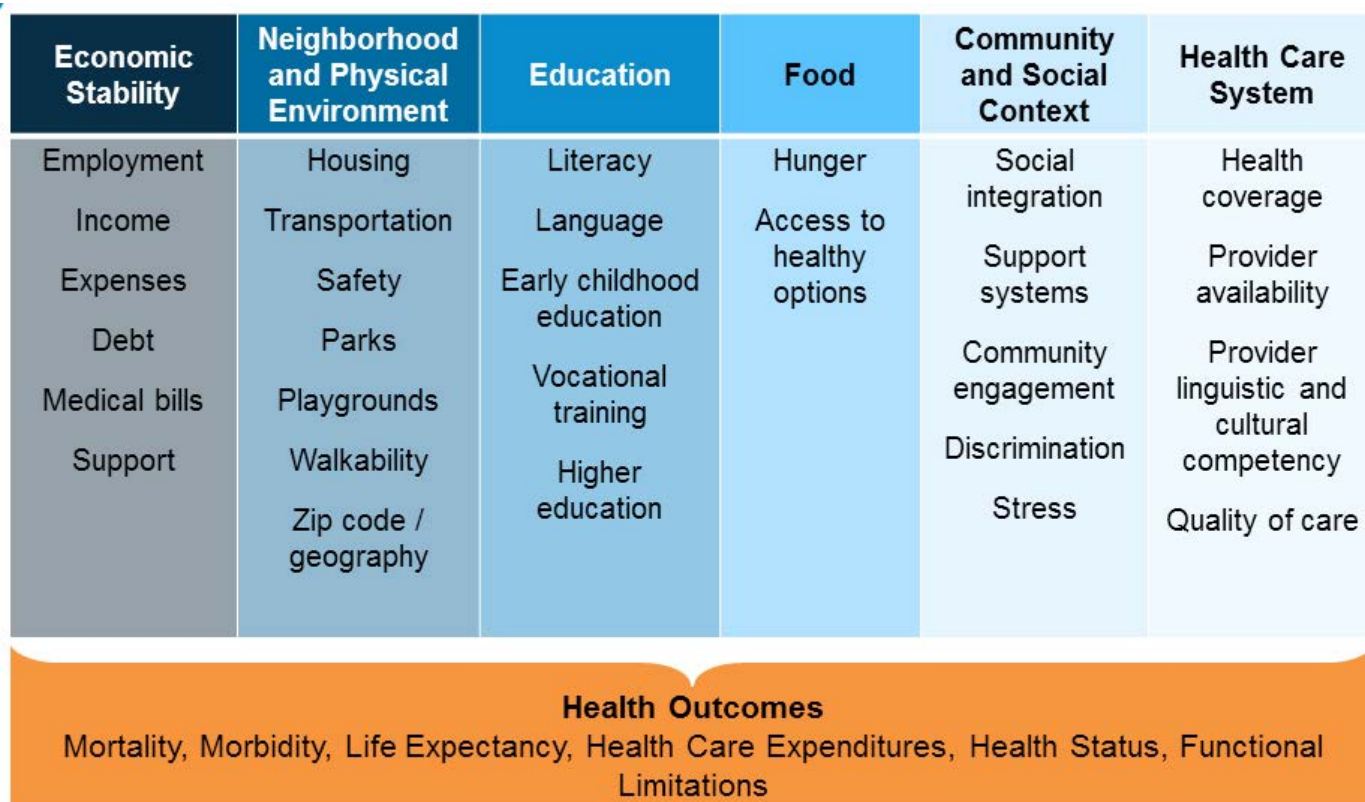


Figure 4 (Henry J. Kaiser Family Foundation, <https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/>), provides examples of factors that are included in each of the social determinants of health categories that lead 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**



## Demographic Information

Table 1 summarizes general demographic and geographic data about Pierce County.

	Pierce County	North Dakota
Population (2019)	3,975	762,062
Population change (2010-2019)	-8.8%	13.3%
People per square mile (2010)	4.3	9.7
Persons 65 years or older (2019)	23.8%	15.7%
Persons under 18 years (2019)	22.8%	23.6%
Median age (2019 est.)	48.5	35.1
White persons (2019)	92.2%	86.9%
High school graduates (2019)	93.3%	92.6%
Bachelor's degree or higher (2019)	21.0%	30.0%
Live below poverty line (2019)	11.6%	10.6%
Persons without health insurance, under age 65 years (2019)	6.7%	8.1%
Households with a broadband internet subscription (2019)	80.1%	80.7%

Source: <https://www.census.gov/quickfacts/fact/table/ND,US/INC910216#viewtop> and <https://data.census.gov/cedsci/profile?g=0400000US38&q=North%20Dakota>

While the population of North Dakota has grown in recent years, Pierce County has seen a decrease in population since 2010. The U.S. Census Bureau estimates show that Pierce County’s population decreased from 4,359 (2010) to 3,945 (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, Pierce 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 2021 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 2021 County Health Rankings – a flow chart of how a county’s rank is determined – may be found in Appendix D. For further information, visit [www.countyhealthrankings.org](http://www.countyhealthrankings.org).

Health Outcomes	Health Factors (continued)
<ul style="list-style-type: none"><li>• Length of life</li><li>• Quality of life</li></ul>	<ul style="list-style-type: none"><li>• Clinical care<ul style="list-style-type: none"><li>- Access to care</li><li>- Quality of care</li></ul></li><li>• Social and Economic Factors<ul style="list-style-type: none"><li>- Education</li><li>- Employment</li><li>- Income</li><li>- Family and social support</li><li>- Community safety</li></ul></li><li>• Physical Environment<ul style="list-style-type: none"><li>- Air and water quality</li><li>- Housing and transit</li></ul></li></ul>
Health Factors	
<ul style="list-style-type: none"><li>• Health behavior<ul style="list-style-type: none"><li>- Smoking</li><li>- Diet and exercise</li><li>- Alcohol and drug use</li><li>- Sexual activity</li></ul></li></ul>	

Table 2 summarizes the pertinent information, gathered by County Health Rankings as it relates to Pierce 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 Heart of America Medical Center (HAMC), Lake Region District Health Unit (LRDHU), 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 2021. 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).

Pierce County rankings within the state are included in the summary following. For example, Pierce County ranks 42 out of 46 ranked counties in North Dakota on health outcomes and 42 out of 45 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 shape 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 show that Pierce County is doing better than many counties, compared to the rest of the state on one of the outcomes, landing at or above rates for other North Dakota counties. However, the county, like many North Dakota counties, is doing poorly in many areas when it comes to the U.S. Top 10% ratings. One particular outcome where Pierce County does not meet the U.S. Top 10% ratings has a rate of poor or fair health in the county.

On health factors, Pierce County performs below the North Dakota average for counties in several areas as well.

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

- Poor mental health days
- Access to exercise opportunities
- Excessive drinking
- Sexually transmitted infections
- Uninsured
- Ratio of dentists
- Mammography screening (% of Medicare enrollees ages 65-74 receiving screening)
- Children in single-parent households
- Violent crime
- Drinking water violations

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

- Poor or fair health
- Poor physical health days
- Low birth weight
- Adult smoking
- Adult obesity
- Food environment index
- Physical inactivity
- Alcohol-impaired driving deaths
- Ratio of primary care physicians
- Rate of preventable hospital stays
- Flu vaccinations (% of Medicare enrollees ages 65-74 receiving screening)
- Unemployment
- Children in poverty
- Income inequality
- Social associations
- Injury deaths
- Air pollution – particulate matter
- Severe housing problems

**TABLE 2: SELECTED MEASURES FROM COUNTY HEALTH RANKINGS 2021 – PIERCE COUNTY**

● = 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 COUNTY HEALTH RANKINGS 2021 – PIERCE COUNTY			
	Pierce County	U.S. Top 10%	North Dakota
<b>Ranking: Outcomes</b>	<b>42<sup>nd</sup></b>		<b>(of 46)</b>
Premature death		5,400	6,600
Poor or fair health	16% ■ ●	14%	14%
Poor physical health days (in past 30 days)	3.5 ■ ●	3.4	3.2
Poor mental health days (in past 30 days)	3.8 +	3.8	3.8
Low birth weight	12% ■ ●	6%	6%
<b>Ranking: Factors</b>	<b>42<sup>nd</sup></b>		<b>(of 45)</b>
<i>Health Behaviors</i>			
Adult smoking	21% ■ ●	16%	20%
Adult obesity	40% ■ ●	26%	34%
Food environment index (10=best)	8.7 + ●	8.7	8.9
Physical inactivity	26% ■ ●	19%	23%
Access to exercise opportunities	72% ■ ●	91%	74%
Excessive drinking	23% ■	15%	24%
Alcohol-impaired driving deaths	50% ■ ●	11%	42%
Sexually transmitted infections	146.4 +	161.2	466.6
Teen birth rate		12	20
<i>Clinical Care</i>			
Uninsured	8% ■	6%	8%
Primary care physicians	1,360:1 ■ ●	1,030:1	1,300:1
Dentists	990:1 +	1,210:1	1,510:1
Mental health providers		270:1	510:1
Preventable hospital stays	8,752 ■ ●	2,565	4,037
Mammography screening (% of Medicare enrollees ages 65-74 receiving screening)	53% +	51%	53%
Flu vaccinations (% of fee-for-service Medicare enrollees receiving vaccination)	28% ■ ●	55%	50%
<i>Social and Economic Factors</i>			
Unemployment	3.2% ■ ●	2.6%	2.4%
Children in poverty	14% ■ ●	10%	11%
Income inequality	6.5 ■ ●	3.7	4.4
Children in single-parent households	20% ■	14%	20%
Social associations	12.3 ■ ●	18.2	16.0
Violent crime	138 ■	63	258
Injury deaths	92 ■ ●	59	71
<i>Physical Environment</i>			
Air pollution – particulate matter	4.8 + ●	5.2	4.7
Drinking water violations	No		
Severe housing problems	17% ■ ●	9%	12%

Source: <http://www.countyhealthrankings.org/app/north-dakota/2021/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, information on the child's family, neighborhood, and social context. Data is from 2019. More information about the survey may be found at [www.childhealthdata.org/learn/NSCH](http://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 ages 0-17 unless noted otherwise), 2019**

Health Status	North Dakota	National
Children born premature (3 or more weeks early)	9.6%	11.2%
Children 10-17 overweight or obese	24.8%	31.4%
Children 0-5 who were ever breastfed	84.6%	80.6%
Children 6-17 who missed 11 or more days of school	3.9%	4.5%
<b>Healthcare</b>		
Children currently insured	18.4%	93.4%
Children who had preventive medical visit in past year	75.4%	19.0%
Children who had preventive dental visit in past year	12.0%	79.6%
Young children (10 mos.-5 yrs.) receiving standardized screening for developmental or behavioral problems	1.2%	10.4%
Children aged 2-17 with problems requiring counseling who received needed mental healthcare	32.6%	2.3%
<b>Family Life</b>		
Children whose families eat meals together 4 or more times per week	75.5%	73.6%
Children who live in households where someone smokes	15.3%	14.4%
<b>Neighborhood</b>		
Children who live in neighborhood with a park, sidewalks, a library, and a community center	81.1%	75.4%
Children living in neighborhoods with poorly kept or rundown housing	9.1%	13.3%
Children living in neighborhood that's usually or always safe	97.4%	95.0%

Source: <https://www.childhealthdata.org/browse/survey>

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
- Young children (9-35 mos.) receiving standardized screening for developmental problems
- Children living in smoking households

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](http://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 Pierce County is performing more poorly than the North Dakota average on all of the examined measures except the percentage of the population who are Supplemental Nutrition Assistance Program (SNAP) recipients and the 4-year high school graduation rate. The most marked difference was on the rate of victims of child abuse and neglect requiring services (almost 2.5 times higher rate in Pierce County).

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

	<b>Pierce County</b>	<b>North Dakota</b>
Child food insecurity, 2019	15.0%	9.6%
Medicaid recipient (% of population age 0-20), 2019	27.5%	26.6%
Children enrolled in Healthy Steps (CHIP) (% of population age 0-18), 2020	2.4%	1.6%
Supplemental Nutrition Assistance Program (SNAP) recipients (% of population age 0-18), 2020	13.3%	16.9%
Licensed childcare capacity (# of children), 2020	162	36,701
4-year high school cohort graduation rate, 2019/2020	≥95%	89.0%
Victims of child abuse and neglect requiring services (rate per 1,000 children ages 0-17), 2019	24.44 (2018)	9.98

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), “↑” for an increased trend in the data changes from 2017 to 2019, and “↓” 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 E.

**TABLE 5: Youth Risk Behavior Survey Results**

North Dakota High School Survey

Rate Increase ↑, rate decrease ↓, or no statistical change = in rate from 2017-2019.

	ND 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
<b>Injury and Violence</b>							
% 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 one 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 one 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	↓	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	↓	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
<b>Tobacco, Alcohol, and Other Drug Use</b>							
% 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	↑	32.2	31.9	32.7
% 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
% 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 one 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 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 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
<b>Weight Management, Dietary Behaviors, and Physical Activity</b>							
% of students who were overweight ( $\geq$ 85th percentile but $<95^{\text{th}}$ percentile for body mass index)	14.7	16.1	16.5	=	16.6	15.6	16.1
% of students who had obesity ( $\geq$ 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 seven 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 seven days before the survey)	4.7	5.1	6.6	=	5.3	6.6	7.9

% of students who drank a can, bottle, or glass of soda or 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
% of students who did not drink milk (during the seven days before the survey)	13.9	14.9	20.5	↑	14.8	20.3	30.6
% of students who did not eat breakfast (during the seven days before the survey)	11.9	13.5	14.4	=	13.3	14.1	16.7
% 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
% 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
% of students who watched television 3 or more hours per day (on an average school day)	18.9	18.8	18.8	=	18.3	18.2	19.8
% of students who played video or computer games or used a computer three or more hours per day (for something that was not schoolwork on an average school day)	38.6	43.9	45.3	=	48.3	45.9	46.1
<b>Other</b>							
% of students who ever had sexual intercourse	38.9	36.6	38.3	=	35.4	36.1	38.4
% 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
% 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

Sources: <https://www.cdc.gov/healthyouth/data/yrbs/results.htm>; <https://www.nd.gov/dpi/districtschools/safety-health/youth-risk-behavior-survey>

## Low Income Needs

The North Dakota Community Action Agencies (CAAs), as nonprofit organizations, were originally established under the Economic Opportunity Act of 1964 to fight America's war on poverty. CAAs are required to conduct statewide needs assessments of people who were experiencing poverty. The more recent statewide needs assessment study of low-income people in North Dakota, sponsored by the CAAs, was performed in 2020. The needs assessment study was accomplished through the collaboration of the CAAs and North Dakota State University (NDSU) by means of several kinds of surveys (such as online or paper surveys, etc., depending on the suitability of these survey methods to different respondent groups) to low-income individuals and families across the state of North Dakota. In the study, the survey data were organized and analyzed in a statistical way to find out the priority needs of these people. The survey responses from low-income respondents were separated from the responses from non-low-income participants, which allows the research team to compare them and then identify the similarity, difference, and uniqueness of them in order to ensure the validity and accuracy of the survey study and avoid bias. Additionally, two comparison methods were used in the study, including cross-sectional and longitudinal comparisons. These methods allow the research team not only to identify the top specific needs under the seven need categories, including Employment, Income and Asset-Building, Education, Housing, Health and Social/Behavior Development, Civic Engagement, and Other Supports, through the cross-sectional comparison but also to be able to find out the top specific needs, regardless of which categories these needs belong through the longitudinal comparison.

### Top Needs Identified by People Experiencing Poverty Across North Dakota

Category	Need
Housing	Rental Assistance
Income	Financial Issues
Employment	Finding a job
Health	Dental Insurance/Affordable Dental Care
Education	Cost



## LOW INCOME COMMUNITY NEEDS

### KEY FINDINGS

1<sup>st</sup> Priority Need

**Rental  
Assistance**

"**Rental Assistance**" becomes the 1<sup>st</sup> priority need of people experiencing poverty across the state under the category of "**Housing**". This need, however, would represent their immediate (short-term) need, which could be partially or significantly affected by the pandemic of COVID-19.



**3,458**  
Total Survey  
Responses

**1,086**

Low-Incomes

**2,084**

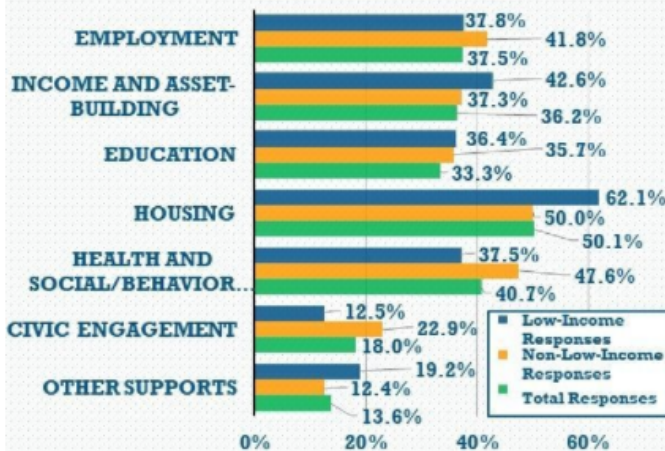
Non- Low-Incomes

**288**

Others (roles cannot be identified)

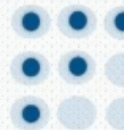
- ♥ The 1<sup>st</sup> priority need for the non-low-income respondents is "**Mental Health Service**".
- ♥ For the community (including both low-income and non-low-income people), the 1<sup>st</sup> priority need is "**Dental Insurance/Affordable Dental**".

### STATEWIDE OVERALL NEEDS



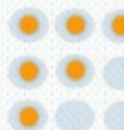
### TOP STATEWIDE SPECIFIC NEEDS

**Low-Incomes**



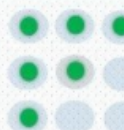
- Housing - Rental Assistance
- Health and Social/Behavior Development - Dental Insurance/Affordable Dental
- Other Needs - Food

**Non-Low-Incomes**



- Health and Social/Behavior Development - Mental Health Service
- Health and Social/Behavior Development - Health Insurance/Affordable Health Care
- Income and Asset-Building - Budget/Credit/Debit Counseling

**Community  
(Low-Income & Non-Low-Income)**



- Health and Social/Behavior Development - Dental Insurance/Affordable Dental
- Health and Social/Behavior Development - Health Insurance/Affordable Health Care
- Health and Social/Behavior Development - Mental Health Service

### TOP REGIONAL OVERALL NEEDS FOR LOW-INCOMES



### ACKNOWLEDGMENTS

This project was supported by the Consensus Council, Inc. (in partnership with the Bush Foundation) through the Community Innovation Grants.



[info@capnd.org](mailto:info@capnd.org)



701-232-2452



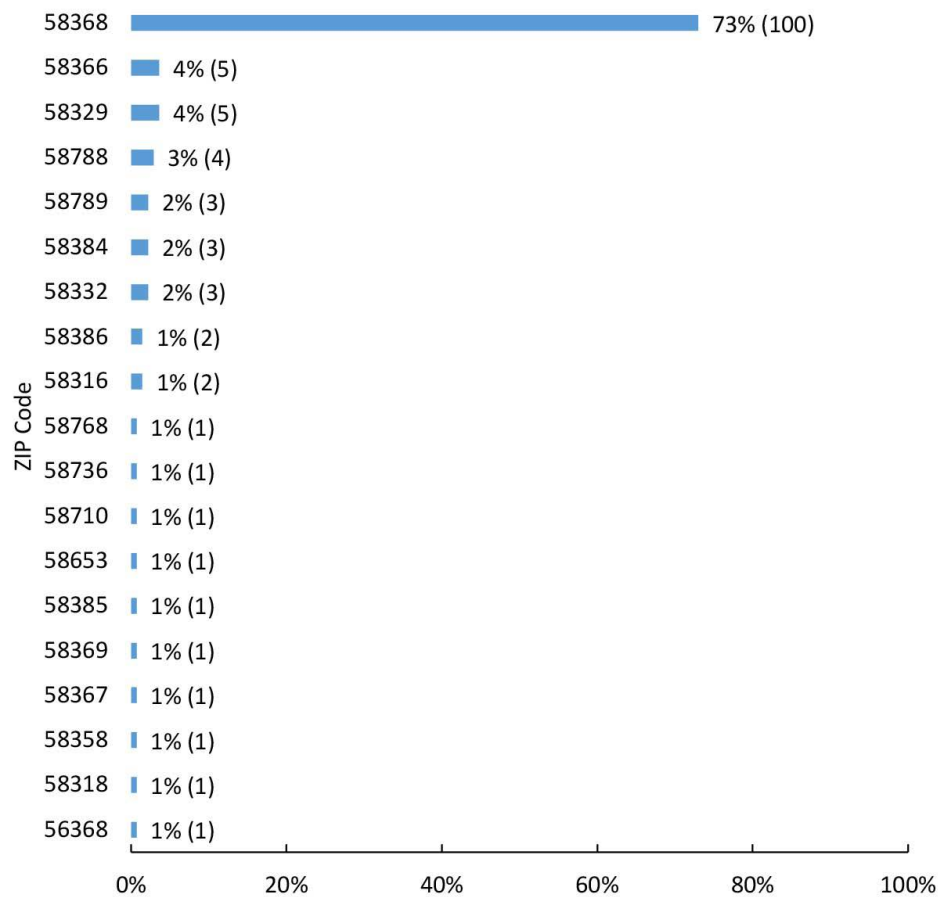
<https://www.capnd.org/>

# Survey Results

As noted previously, 183 community members completed the survey in communities throughout the counties in the Heart of America Medical Center (HAMC) 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, and the “Total responses” number under the heading depicts the number of responses selected for that question (some questions allow for selection of more than one response).

The survey requested that respondents list their home zip code. While not all respondents provided a zip code, 137 did, revealing that a large majority of respondents (73%, N=100) lived in Rugby. These results are shown in Figure 5.

**Figure 5: Survey Respondents’ Home Zip Code**  
**Total respondents: 137**



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.

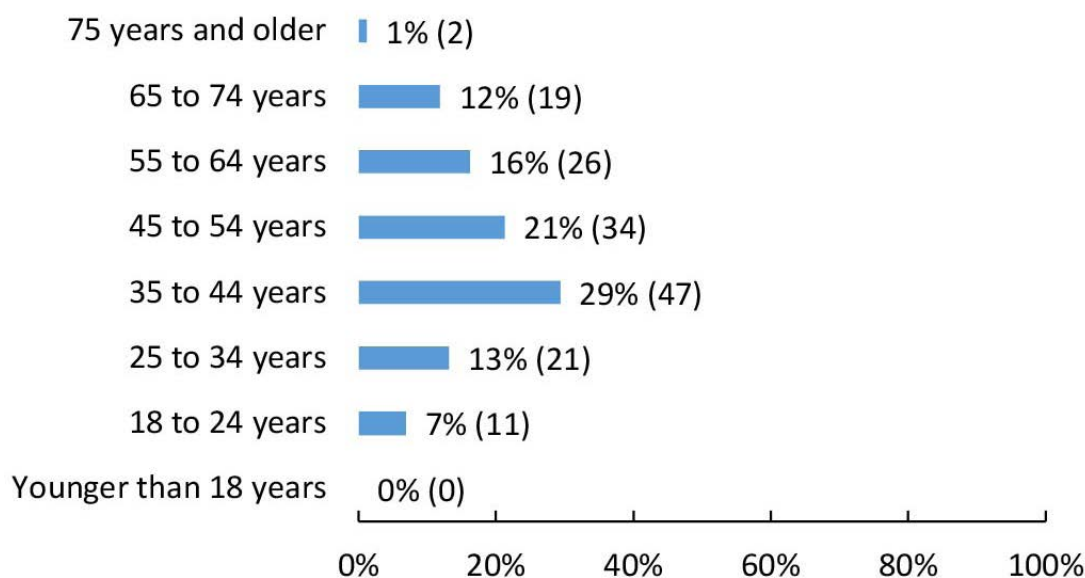
With respect to demographics of those who chose to complete the survey:

- 29% (N=47) were age 55 or older
- The majority (90%, N=143) were female
- Less than half of the respondents (40%, N=63) had bachelor's degrees or higher
- The number of those working full time (74%, N=118) was just over 13 times higher than those who were retired (6%, N=9)
- 92% (N=156) of those who reported their ethnicity / race were White / Caucasian
- 29% of the population (N=40) 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 of Survey Respondents

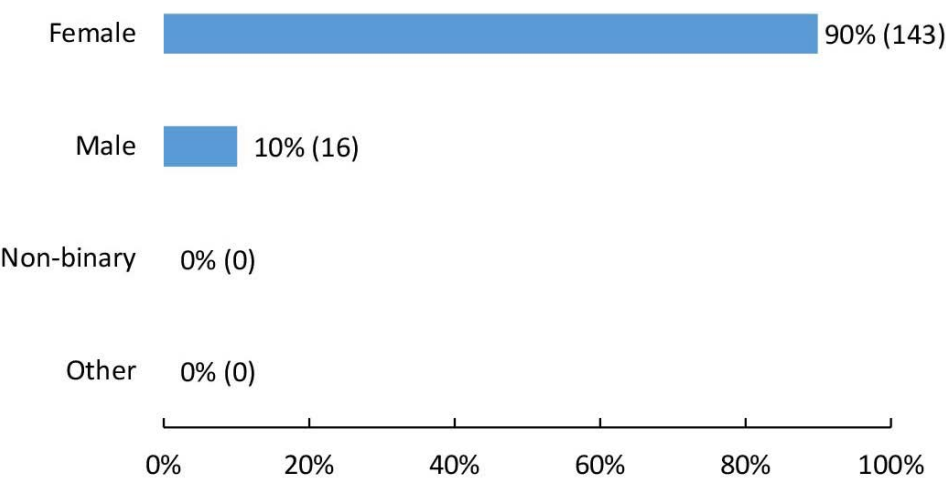
**Total respondents = 160**



People younger than age 18 are not questioned, using this survey method.

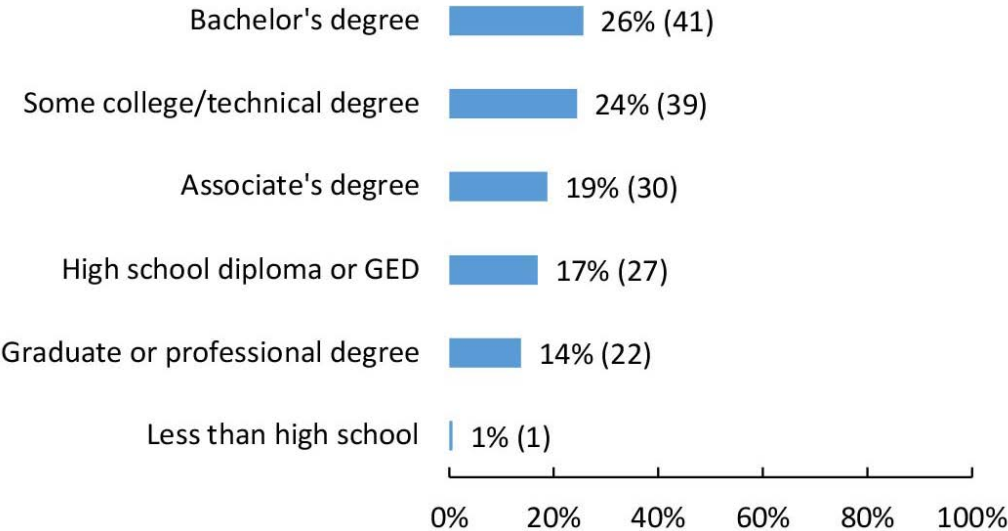
**Figure 7: Gender of Survey Respondents**

**Total respondents = 159**



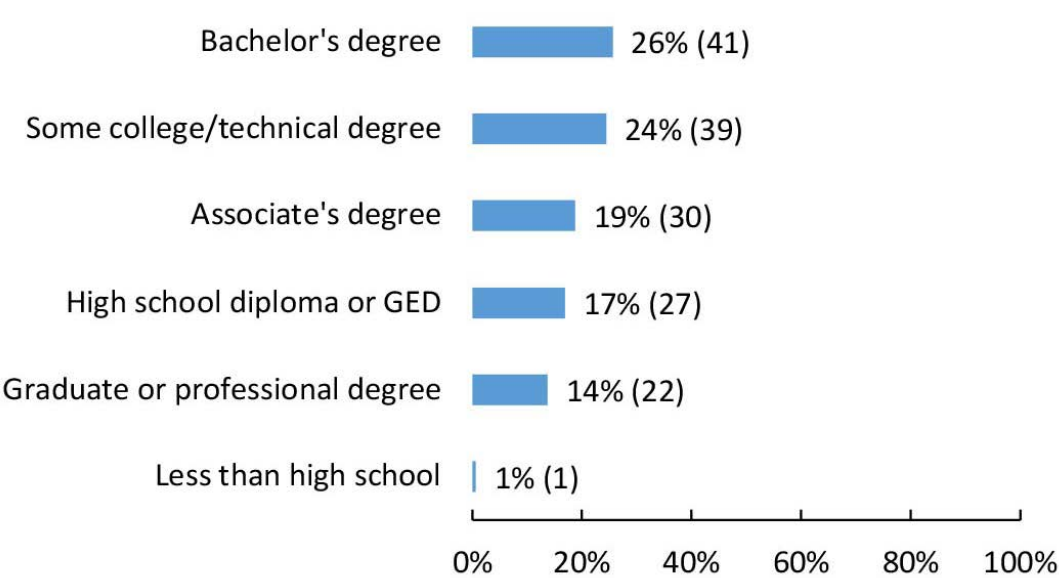
**Figure 8: Educational Level of Survey Respondents**

**Total respondents = 160**



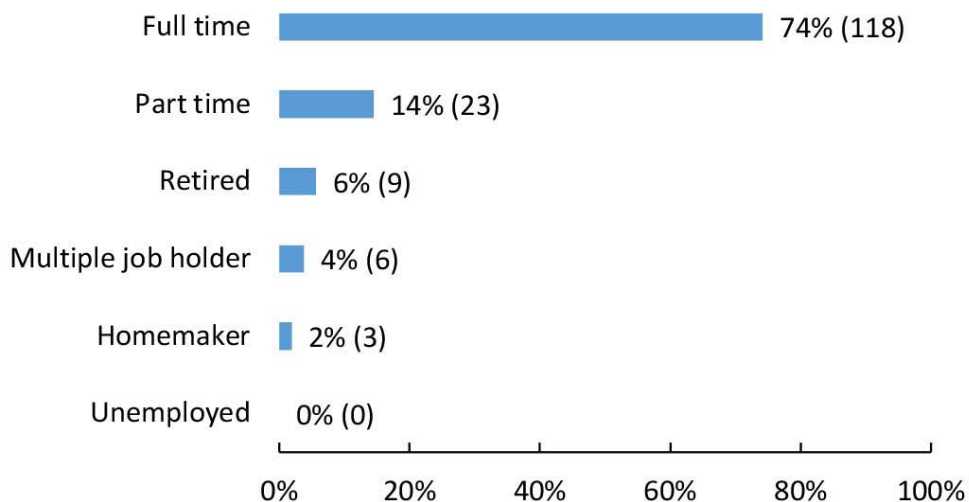
**Figure 8: Educational Level of Survey Respondents**

**Total respondents = 160**



**Figure 9: Employment Status of Survey Respondents**

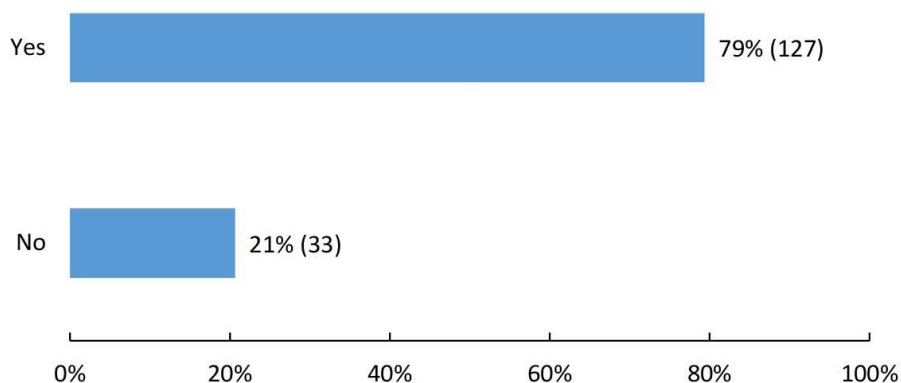
**Total respondents = 159**



Respondents were asked to indicate if they worked for the hospital, clinic, or public health unit. A majority of respondents did work for one of these entities. This item is important to keep in mind, as health professionals and staff may have a different view of health concerns in the community than those who do not work for one of these entities.

**Figure 10: Health Entity Employment Status of Survey Respondents**

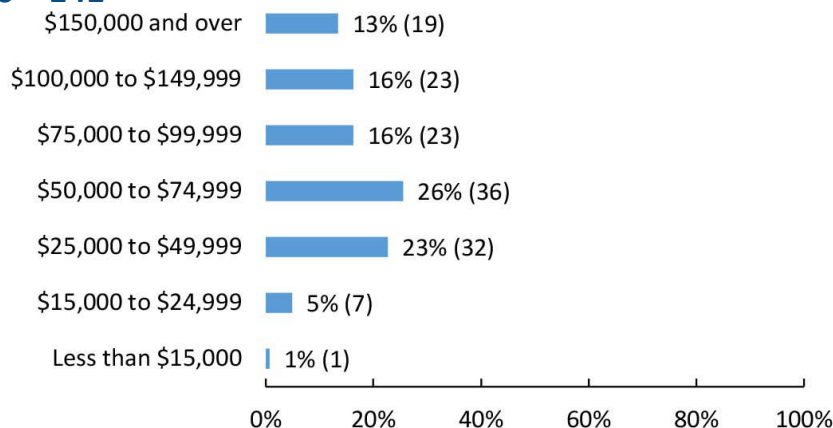
**Total respondents = 160**



Of those who provided a household income, 6% (N=8) of the community members reported a household income of less than \$25,000. Twenty-nine percent (N=42) indicated a household income of \$100,000 or more. This information is shown in Figure 10.

**Figure 11: Household Income of Survey Respondents**

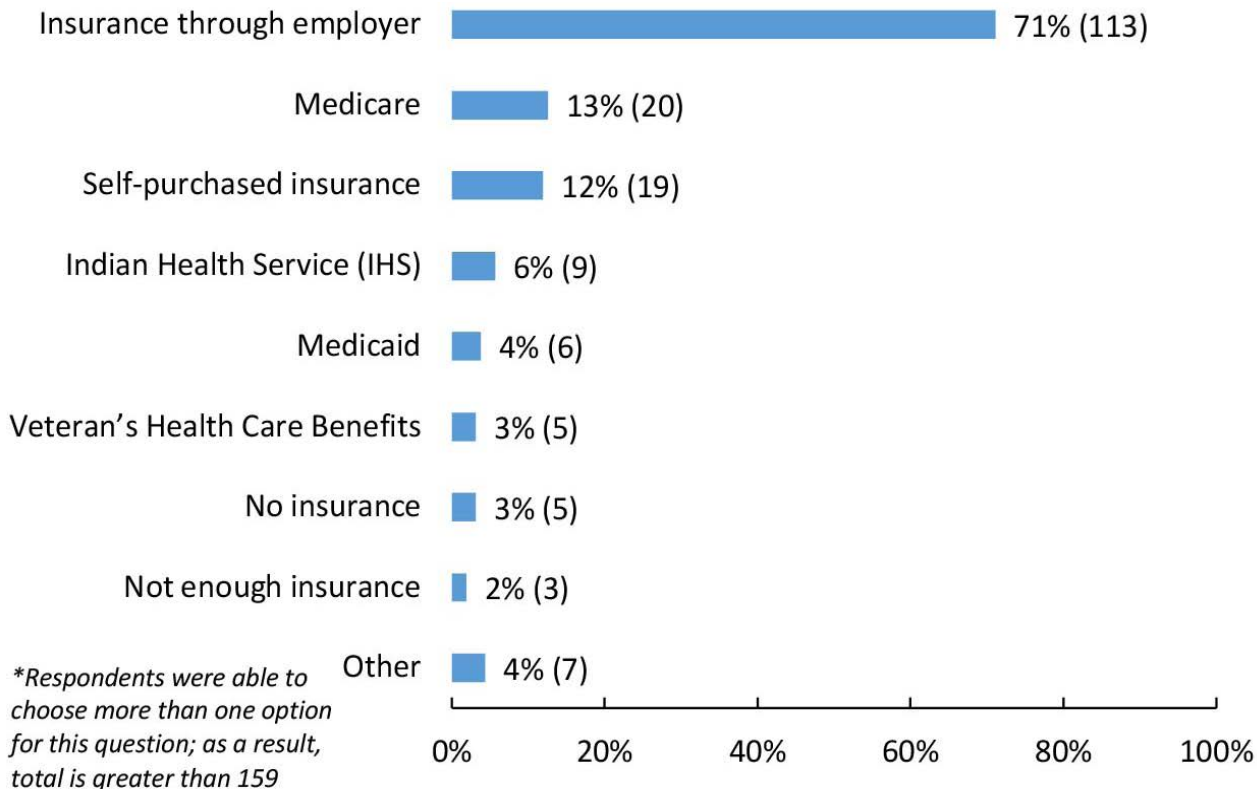
**Total respondents = 141**



Community members were asked about their health insurance status, which is often associated with whether people have access to healthcare. Five percent (N=8) of the respondents reported having no health insurance or being under-insured. The most common insurance types were insurance through one’s employer (N=113), followed by Medicare (N=20), and self-purchased (N=19).

**Figure 12: Health Insurance Coverage Status of Survey Respondents**

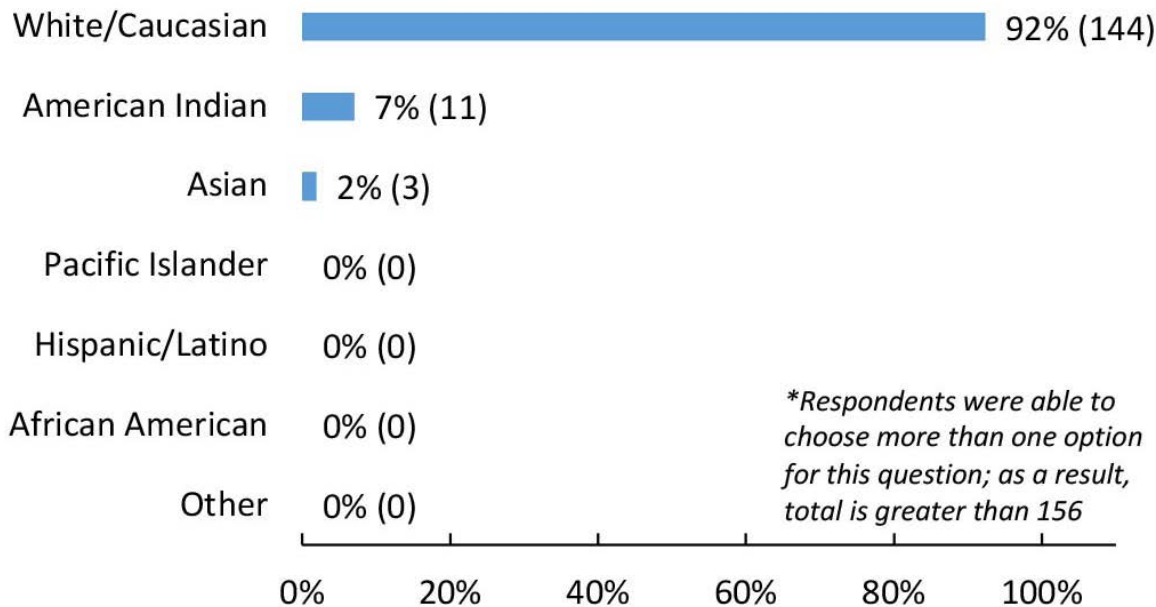
**Total respondents = 159\***



As shown in Figure 13, nearly all of the respondents were White/Caucasian (92%). This statistic was in line with the race/ethnicity of the overall population of Pierce County; the U.S. Census indicates that 92.2% of the population is White in Pierce County.

**Figure 13: Race/Ethnicity of Survey Respondents**

**Total respondents = 156\***



## Community Assets and Challenges

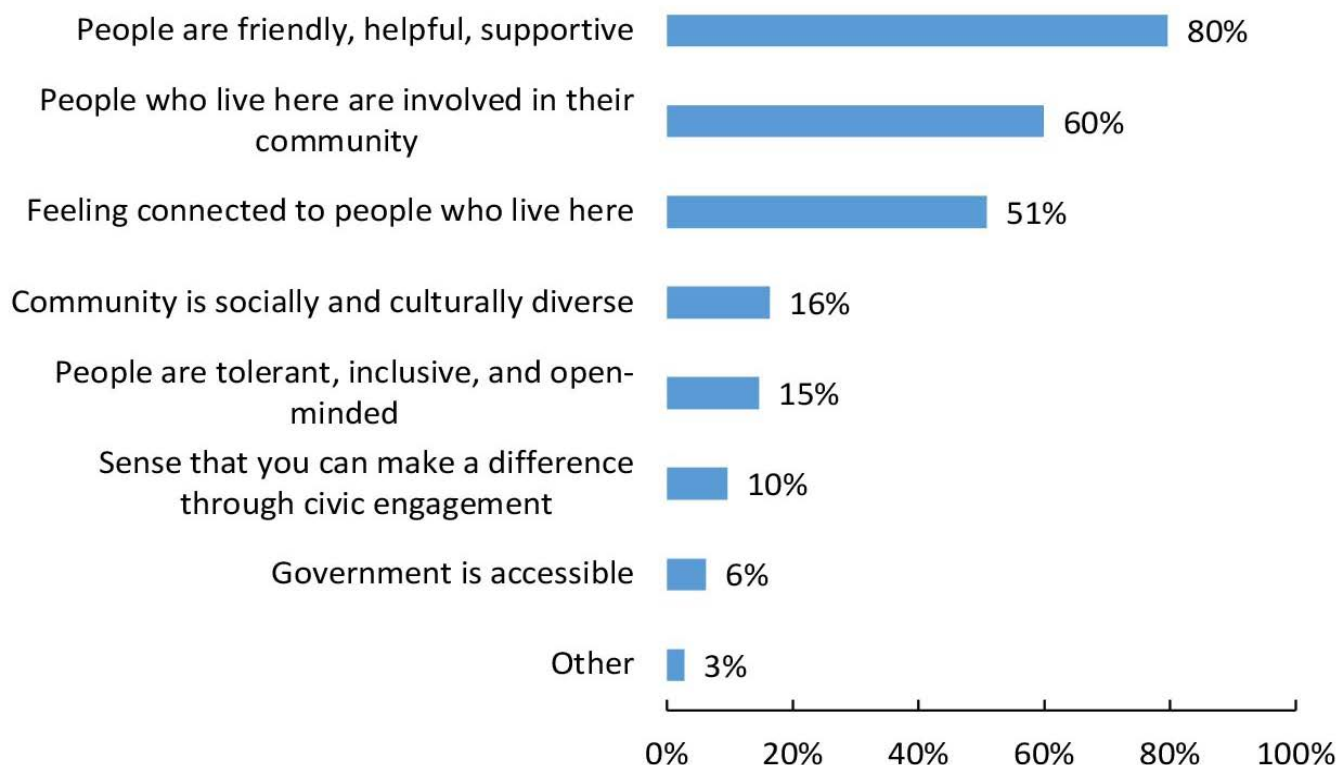
Survey respondents were asked what they perceived as the best things about their community in four categories: people, services and resources, quality of life, and activities. In each category, respondents were given a list of choices and asked to pick the three best things. Respondents occasionally 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 133 respondents agreeing) that community assets include:

- Safe place to live, little/no crime (N=145)
- People are friendly, helpful, supportive (N=141)
- Family-friendly (N=136)
- Healthcare (N=133)

Figures 14 to 17 illustrate the results of these questions.

### Figure 14: Best Things About the PEOPLE in Your Community

Total responses = 425

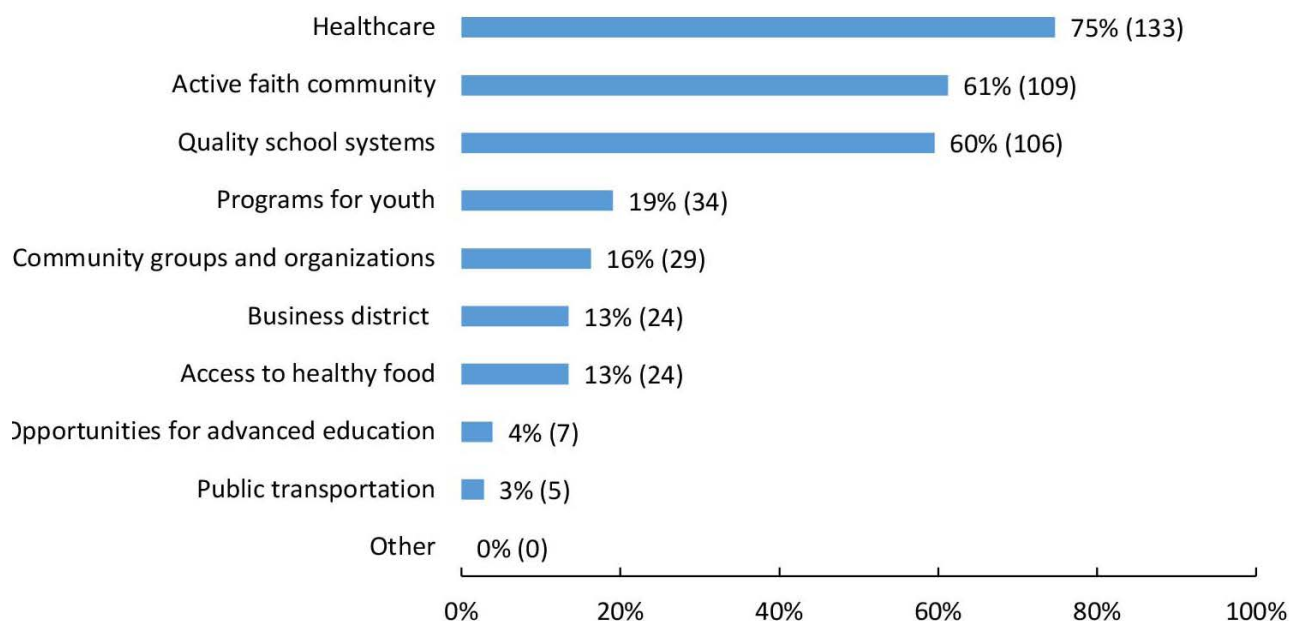


Included in the “Other” category of the best things about the people was that the community is not welcoming and none of the above.



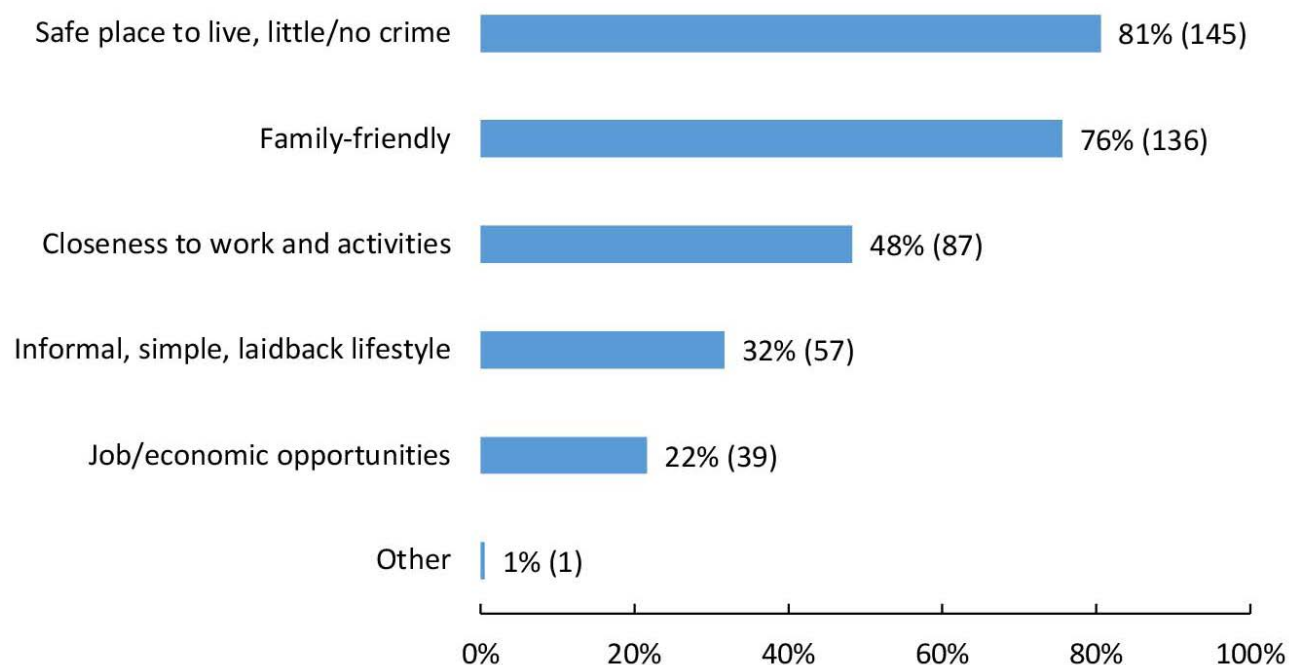
**Figure 15: Best Things About the SERVICES AND RESOURCES in Your Community**

**Total responses = 471**



**Figure 16: Best Things About the QUALITY OF LIFE in Your Community**

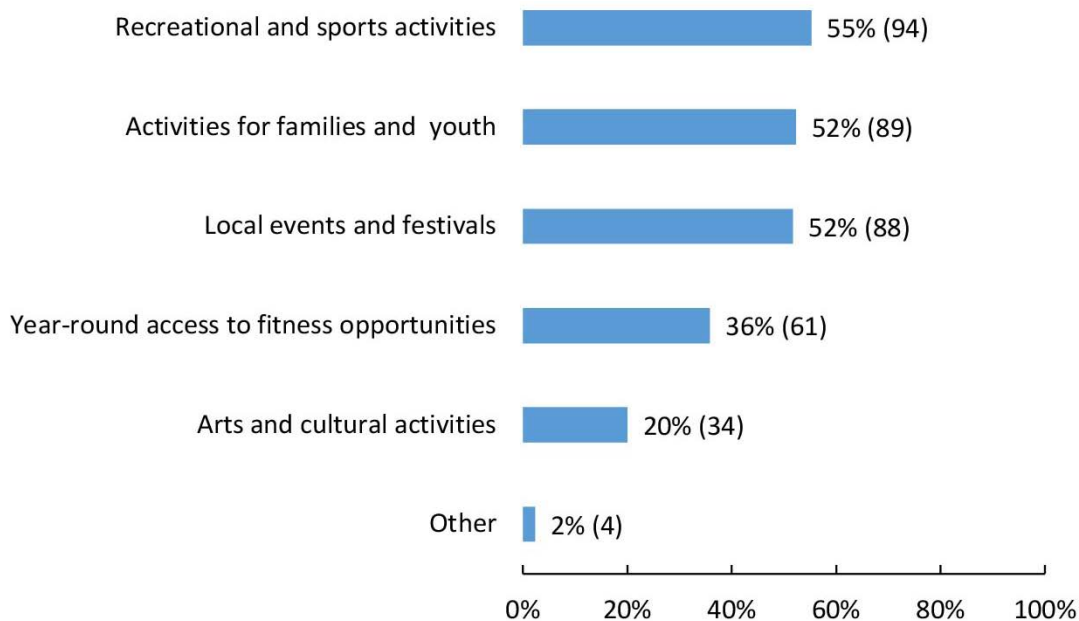
**Total responses = 465**



The one “Other” response, regarding the best things about the quality of life in the community, was that family lives here.

## Figure 17: Best Thing About the ACTIVITIES in Your Community

Total responses = 370



Respondents who selected “Other” specified that all of the available options are lacking.

## Community Concerns

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

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

With regard to responses about community challenges, the most highly voiced concerns (those having at least 60 respondents) were:

- Depression / anxiety – Youth (N=89)
- Having enough child daycare services (N=87)
- Depression / anxiety – Adults (N= 80)
- Attracting and retaining young families (N=72)
- Not enough jobs with livable wages (N=71)
- Alcohol use and abuse – Adults (N=63)
- Alcohol use and abuse – Youth (N=60)
- Cost of long-term / nursing home care (N=60)

The other issues that had at least 42 votes included:

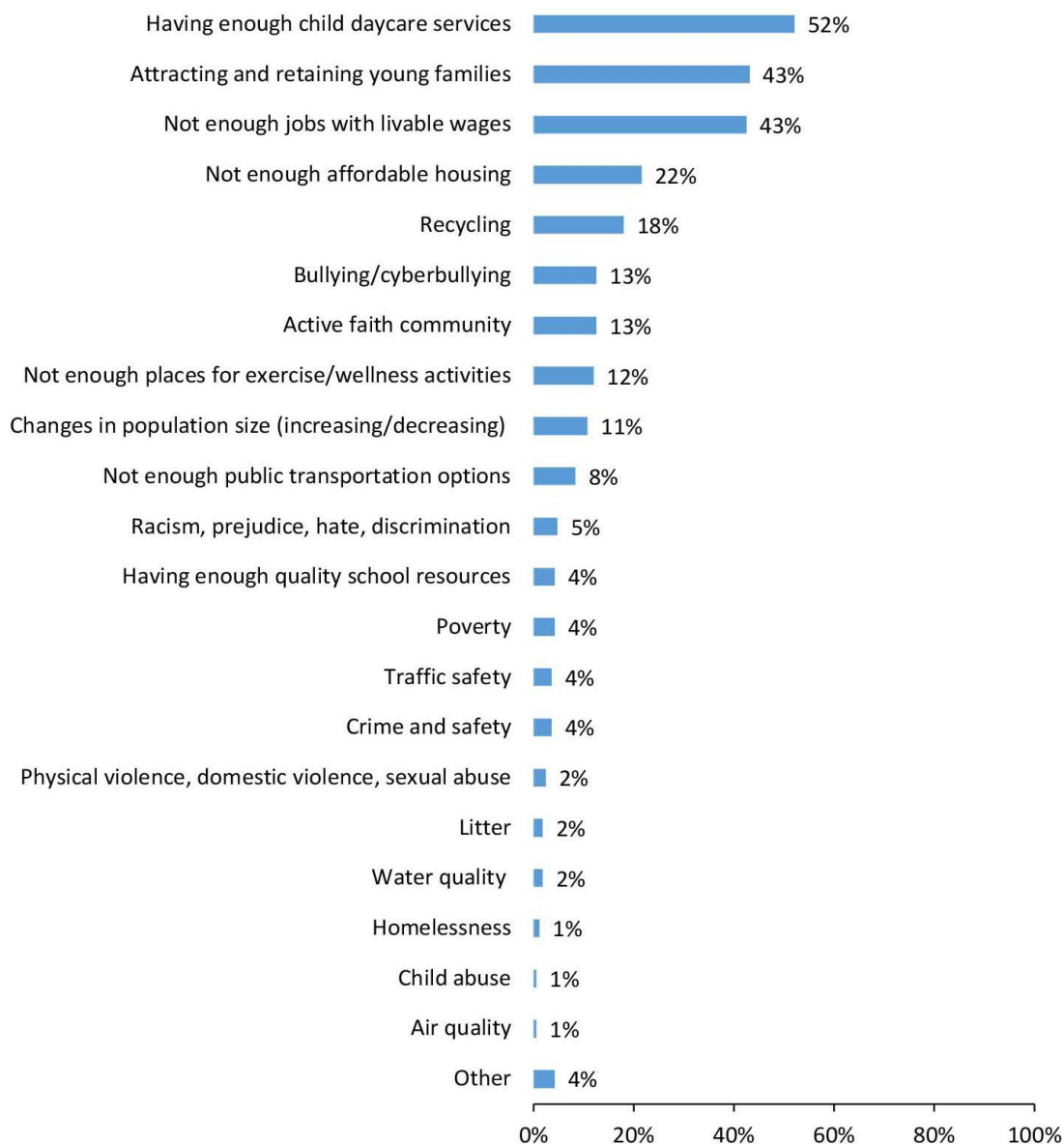
- Availability of resources to help the elderly stay in their homes (N=57)
- Drug use and abuse – Youth (N=56)

- Availability of mental health services (N=55)
- Stress – Adult (N=52)
- Long-term/nursing home care options (N=51)
- Not enough healthcare staff in general (N=48)
- Drug use and abuse – Adult (N=46)
- Cost of health insurance (N=43)
- Extra hours for appointments, such as evenings and weekends (N=42)

Figures 18 through 22 illustrate these results.

## Figure 18: Community/Environmental Health Concerns

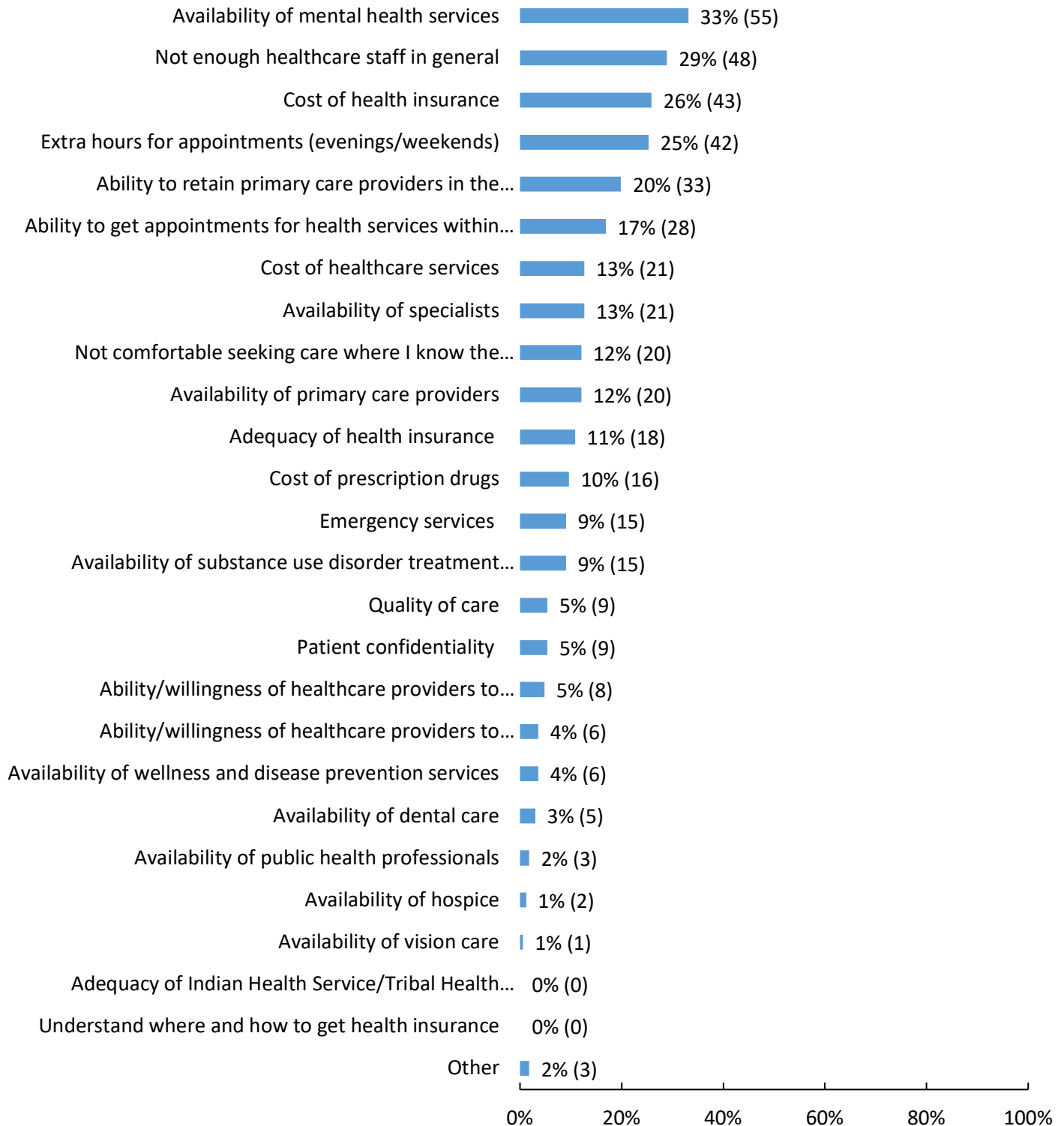
Total responses = 445



In the “Other” category for community and environmental health concerns, the following were listed: need for more senior housing, poorly funded healthcare and EMS, need for more snow removal services, high grocery prices with limited selection, new people not welcomed into the community, close-minded city government, and alcohol and drug use.

## Figure 19: Availability/Delivery of Health Services Concerns

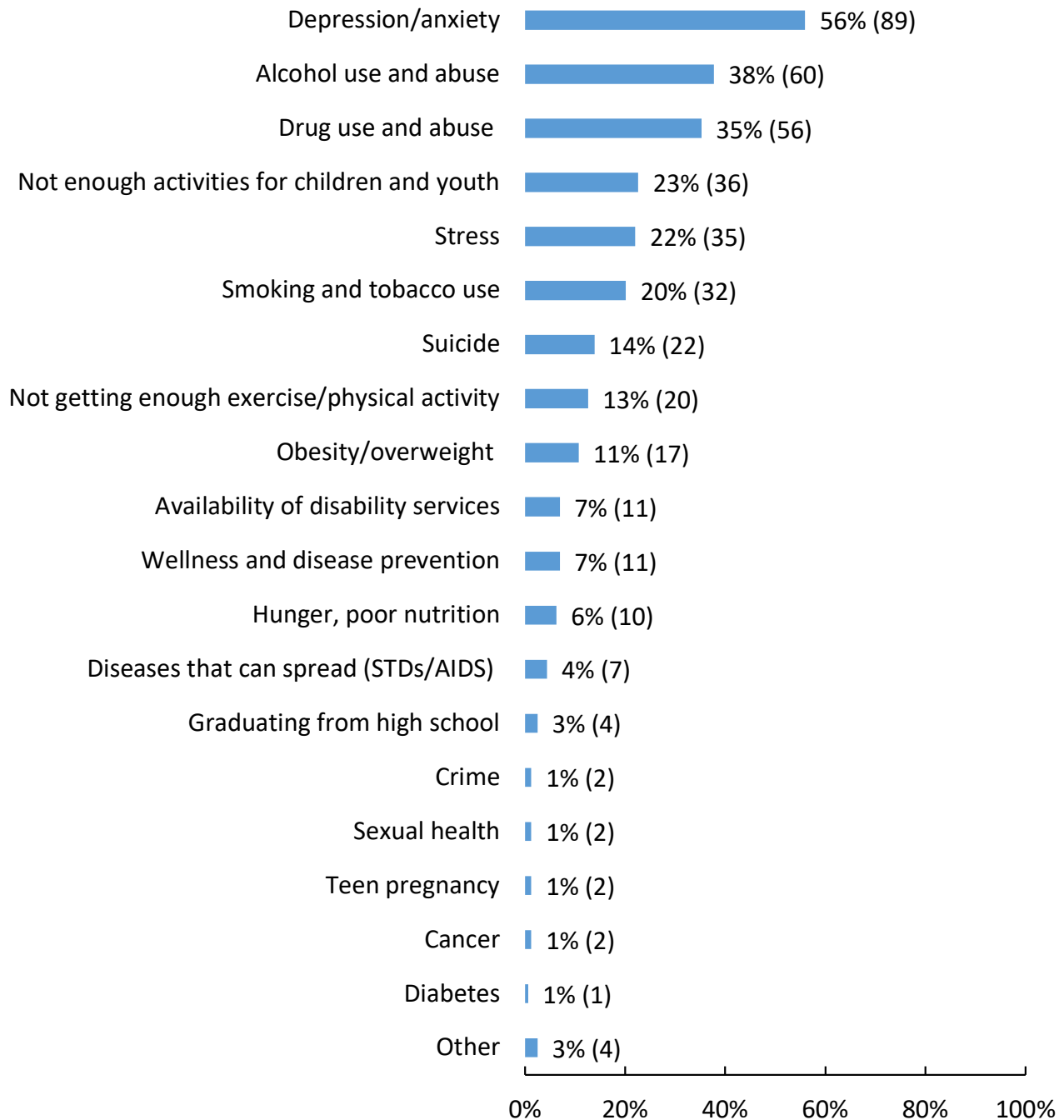
Total responses = 447



Respondents who selected “Other” identified concerns in the availability / delivery of health services as all of the above and need for elder care.

**Figure 20: Youth Population Health Concerns**

**Total responses = 423**

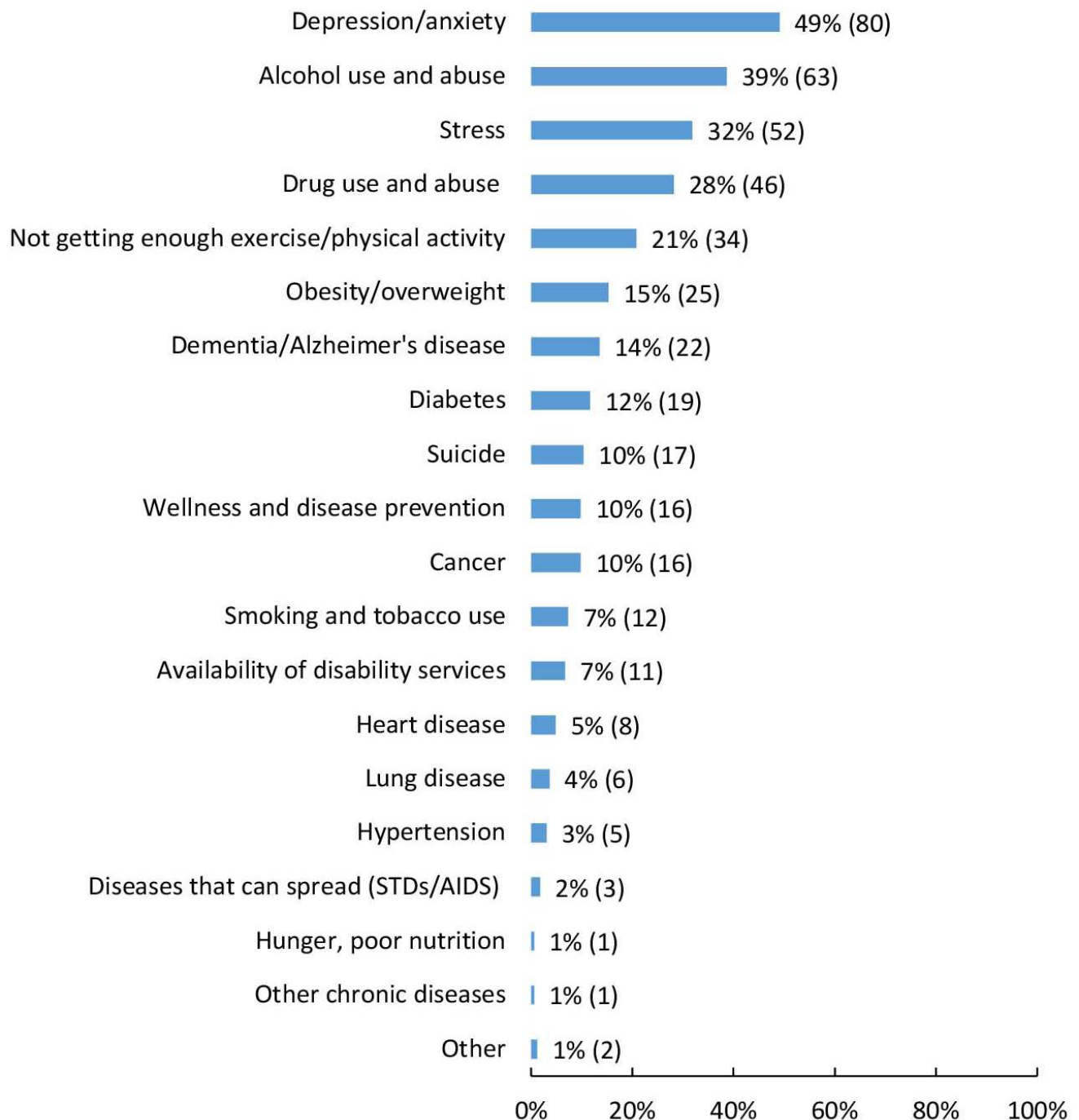


Listed in the “Other” category for youth population concerns were social media, lack of direction, and all of the above.



**Figure 21: Adult Population Concerns**

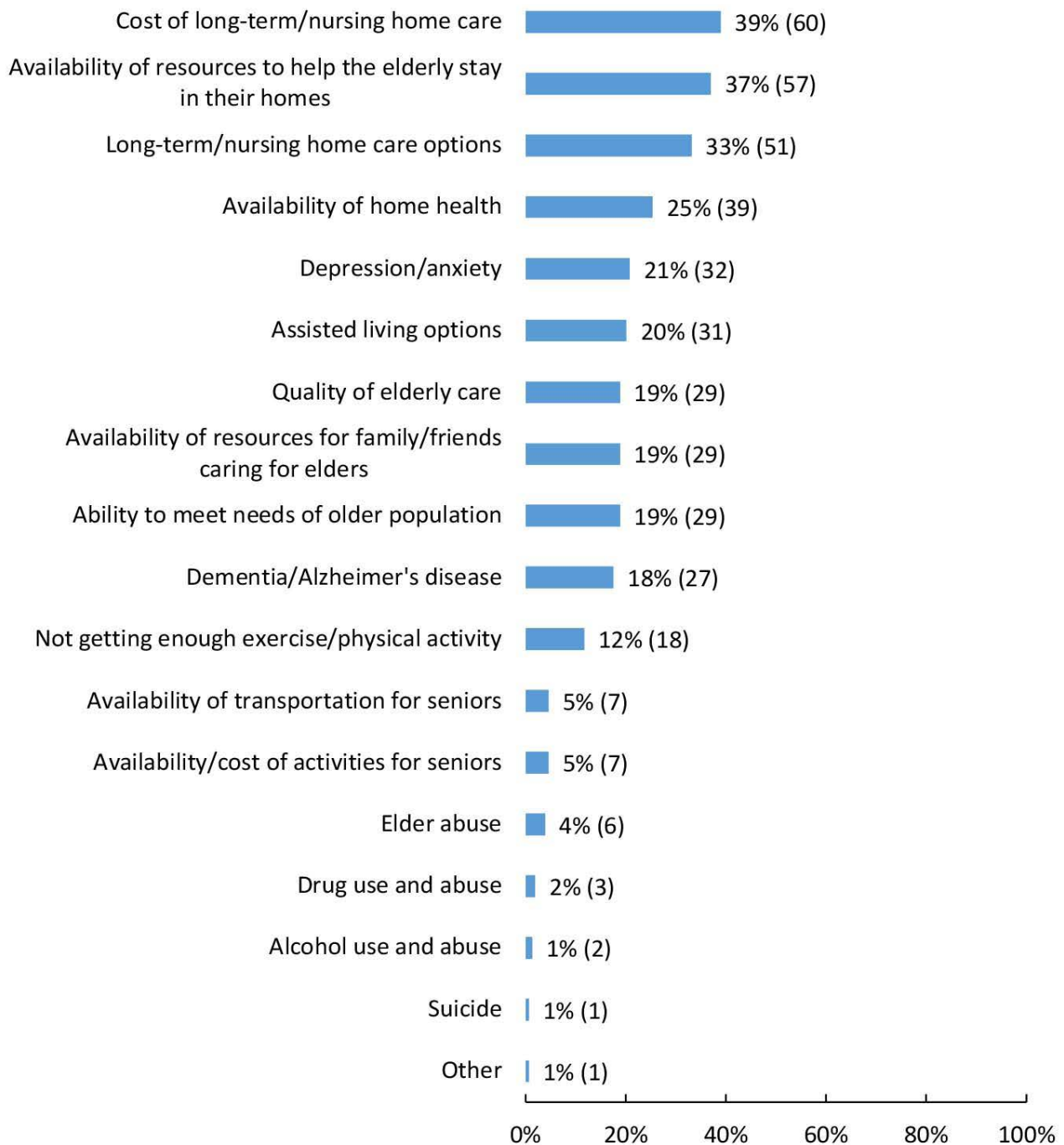
**Total responses = 439**



Wards of the state was indicated in the "Other" category for adult population concerns.

## Figure 22: Senior Population Concerns

Total responses = 429



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. Mental health concerns, availability of services
2. Community growth, attracting employees and young families

Other biggest challenges that were identified were an unwelcoming community, business retention, cost of healthcare, long-term nursing home care, medications, high taxes, high percentage of older citizens vs. younger, no home health, not enough activities for families or youth, and out migration of youth.

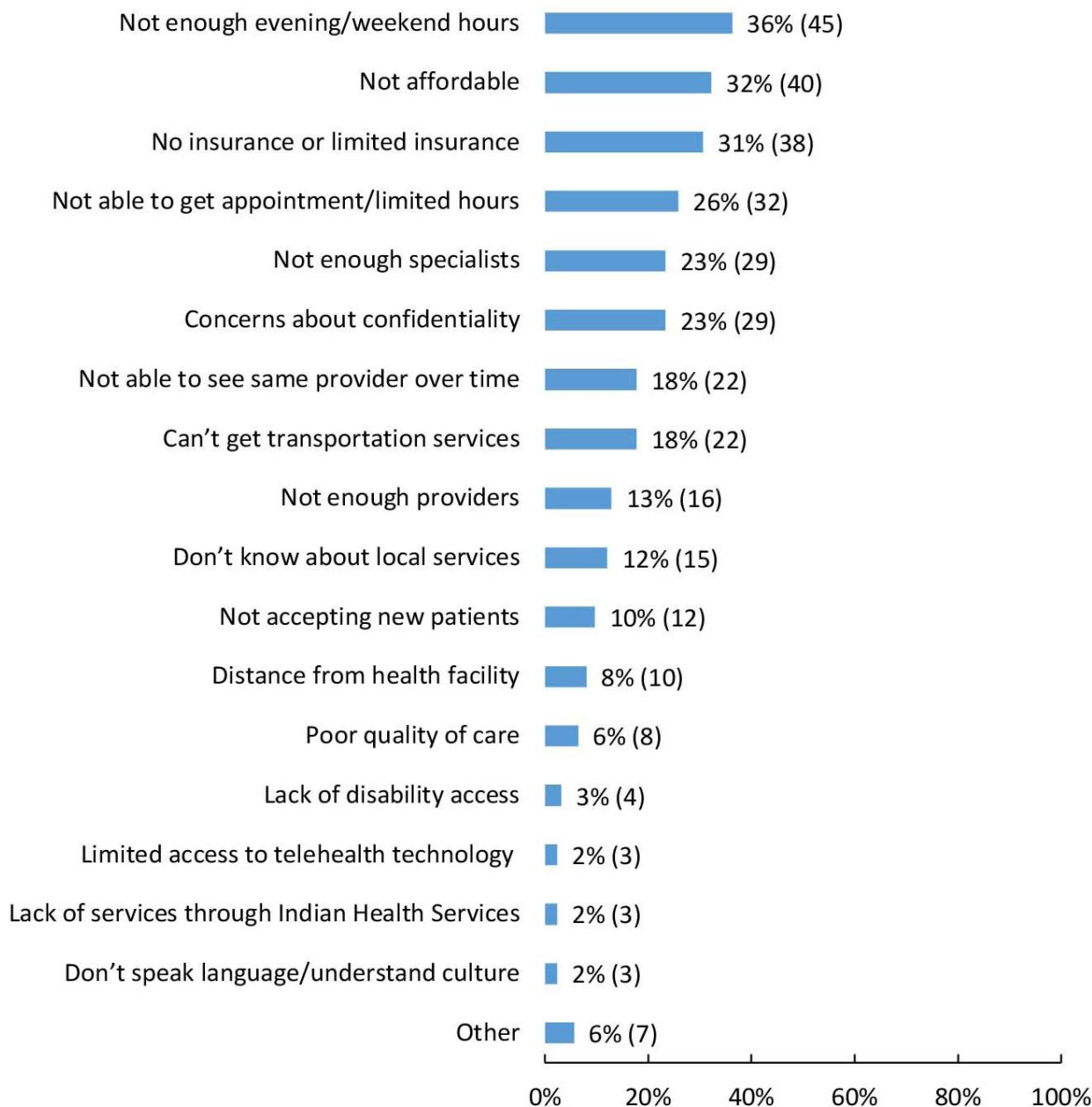
## Delivery of Healthcare

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 not enough evening or weekend hours (N=45), with the next highest item being not affordable (N=40). After these items, the next most commonly identified barriers were no insurance or limited insurance (N=38), not able to get appointment / limited hours (N=32), and not enough specialists (N=29). Concerns, indicated in the “Other” category, were high deductibles, wanting confidentiality, difficulty getting time off work, and weekend visits turn into expensive ER visits.

Figure 23 illustrates these results.

### Figure 23: Perceptions About Barriers to Care

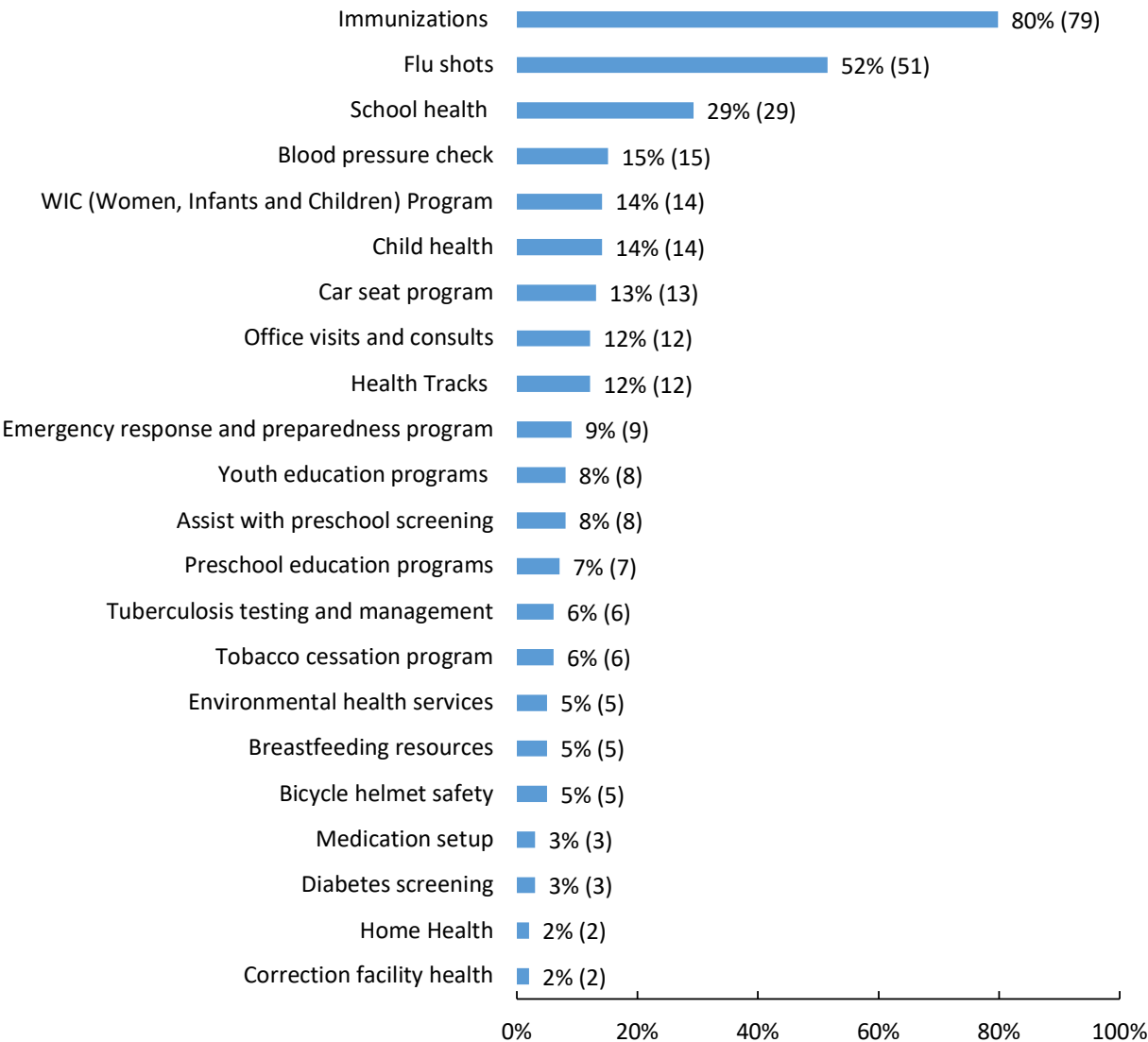
**Total responses = 338**



Considering a variety of healthcare services offered by Lake Region District Health Unit (LRDHU), respondents were asked to indicate if they were aware of or have utilized these services in the past year (See Figure 24).

**Figure 24: Awareness and Utilization of Public Health Services**

**Total responses = 308**



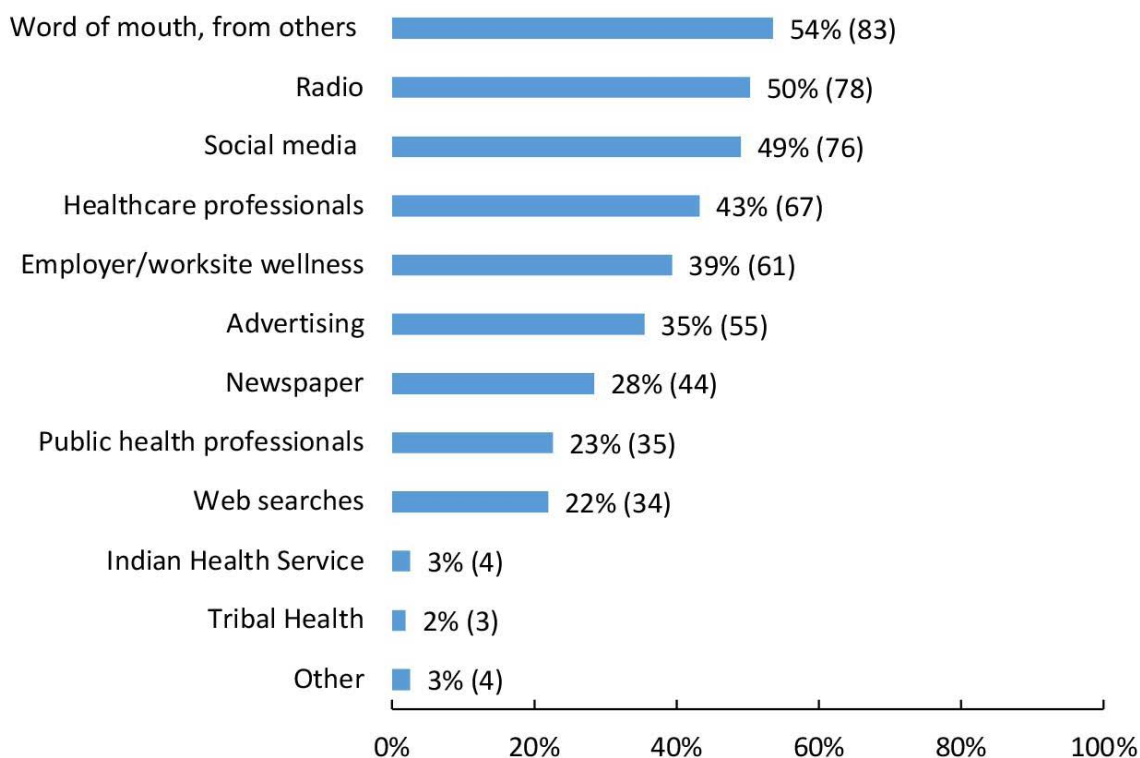
In an open-ended question, respondents were asked what specific healthcare services, if any, they think should be added locally. The number one desired service to add locally was mental health services. Other requested services included:

- Breast exam screenings
- Daycare
- Foot care
- Home healthcare – more than the basics
- Labor and delivery
- Lice checks and treatment
- Medical weight loss
- Pap smears
- Pediatrics
- Prostate exams
- Rheumatologist
- Walk-in clinic with evening/ weekend hours

The key informant and focus group members felt that the community members were aware of the majority of the health system and public health services. There were a number of services where they felt the hospital should increase marketing efforts, including the specific surgeries offered at HAMC, telehealth services, the shared OB program, increased focus on the quality of care at HAMC, and overall general services offered. Key informant and focus group members also felt that there needs to be increased marketing for medical staff, providers, and the clinic, as much of the competition is close by – indicating that community members might choose HAMC with increased marketing as opposed to going somewhere else for care.

**Figure 25: Sources of Information about Local Health Services**

**Total responses = 544**



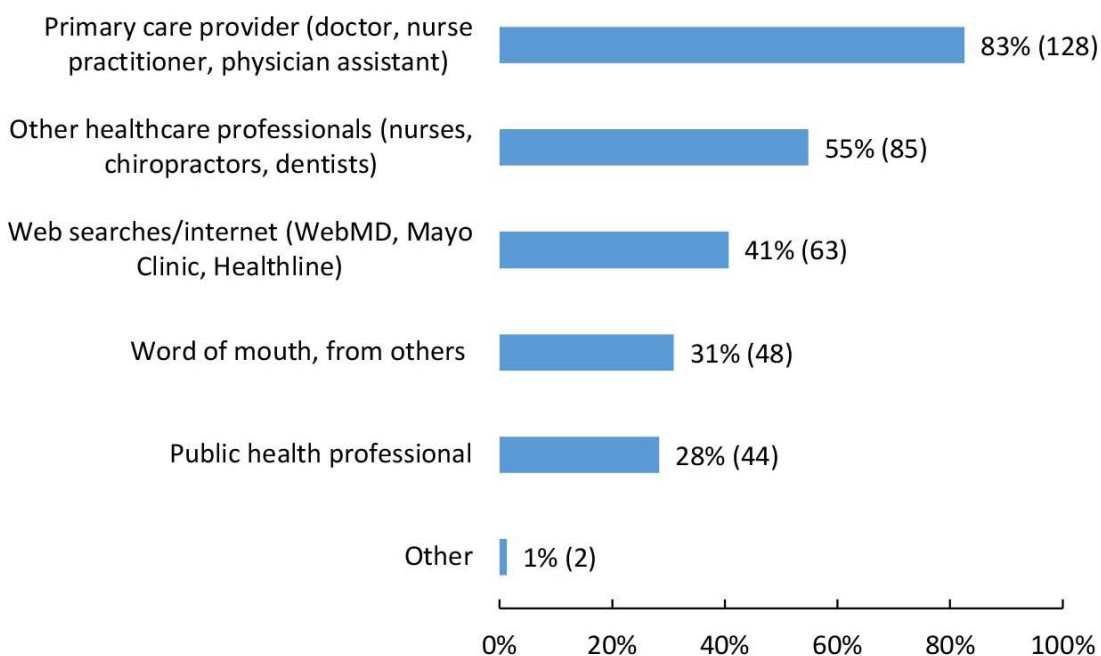
In the “Other” category, respondents listed the school and their employer as sources of information about local health services.

Respondents were asked where they go to for trusted health information. Primary care providers (N=128) received the highest response rate, followed by other healthcare professionals (N=85), and then web/internet searches (N=63).

Results are shown in Figure 26.

**Figure 26: Sources of Trusted Health Information**

**Total responses = 370**



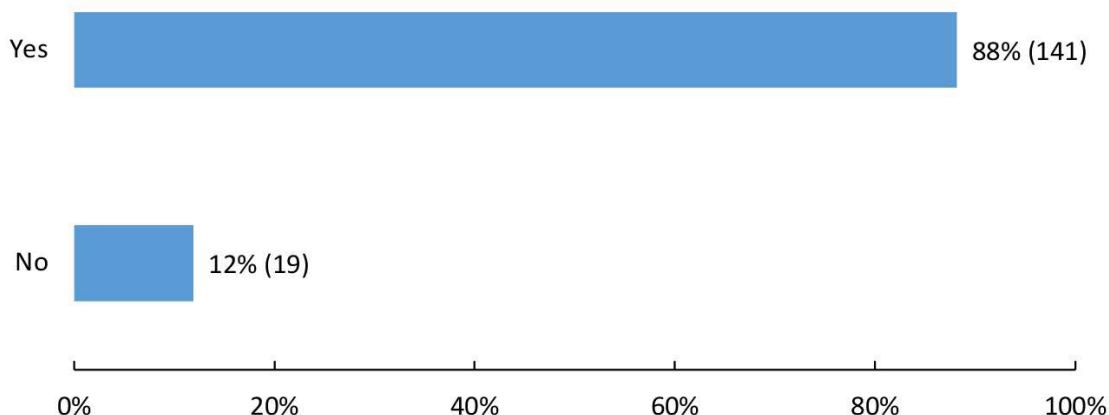
IHS and providers in Minot were listed in the “Other” responses.



Respondents were asked if they were aware of the Good Samaritan Health Service's Foundation. The majority of respondents indicated they were aware, shown in Figure 27.

**Figure 27: Awareness of Good Samaritan Health Service's Foundation**

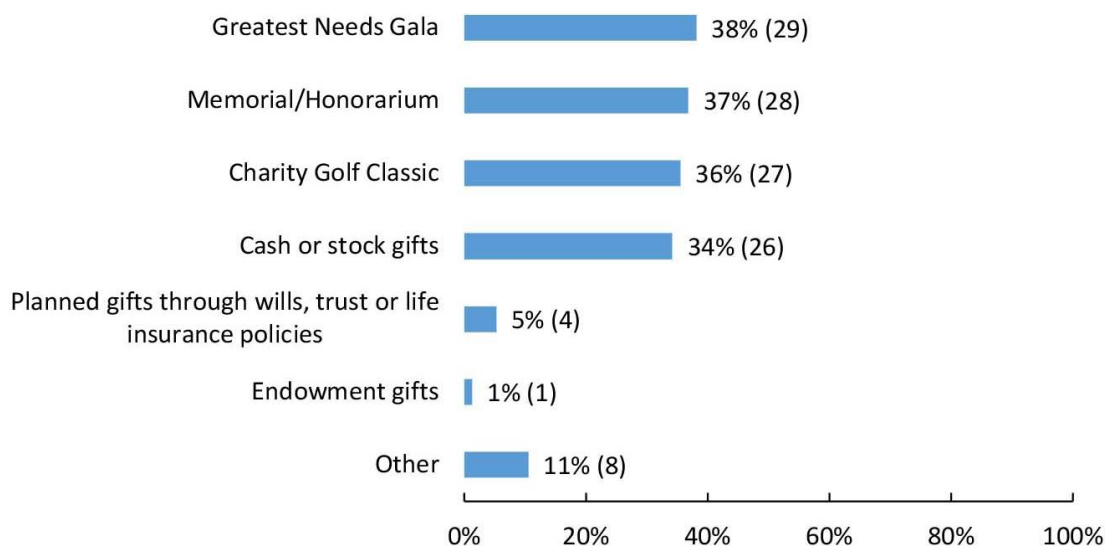
**Total responses = 160**



In an effort to gauge ways that community members financially support Good Samaritan Health Service's Foundation, a question was included, asking them to select ways they have supported the Foundation (see Figure 28). Responses in the "Other" category included Twice Blessed campaigns and fundraisers, and some indicated they have not supported yet.

**Figure 28: Support for Good Samaritan Health Service's Foundation**

**Total responses = 123**



The final question on the survey asked respondents to share concerns and suggestions to improve the delivery of local healthcare. Respondents had varied answers and felt that the building is outdated, which makes care inefficient, and a new building could attract new employees. Respondents also felt the older building also threatens financial stability and negatively impacts employee morale and retention. Employee appreciation was also a concern amongst respondents; some felt that HAMC had a disregard for long-term employees, and some were "just sent packing." Respondents who identified themselves as current employees stated that reasonable employee needs are dismissed, and it is easy for employees to leave if they continually feel unappreciated and unimportant.

Some respondents indicated that they feel sometimes the focus of HAMC is more on costs, profits, and the bottom line rather than providing the best care or making the most positive impact and outcomes for the community, patients, and staff. Confidentiality was also an issue indicated by some respondents.

COVID-19 has taken its toll on getting appointments in a timely matter. Respondents indicated it was difficult to get an appointment within two to three days. It was also indicated that there is always a wait time, and patients are always put on hold when attempting to schedule an appointment. A walk-in clinic would be helpful, and this item was indicated throughout the survey as a need in the community. Respondents remarked that they have driven to Minot multiple times for walk-in services, indicating that a walk-in clinic in Rugby would be utilized.

Other concerns, brought up by respondents, included the need for more visiting specialists, so older community members do not have to travel an hour or more to see those specialists. Respondents also indicated they feel healthcare services are too expensive for the community.

Respondents also indicated that they feel lucky to have healthcare services available in Rugby and that it is comforting to know they do not have to travel out of town for care.

# Findings from Key Informant Interviews & the Community Meeting

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, and also with the community group at the first meeting. 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):

- Attracting and retaining young families
- Availability of mental health services
- Cost of long-term/nursing home care
- Depression/anxiety
- Having enough child daycare services

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

## Attracting and retaining young families

- Population is declining and not a lot here to retain them
- Lack of amenities in the community, lack of competition allows higher costs for groceries, etc.
- If we can attract and retain families and workers, we can have a healthier community and medical system to keep the community going

## Availability of mental health services

- Lacking in the community
- Mental healthcare is a serious need in this community and nearly unaddressed
- Lack of services in the community and issues are also very prevalent; not easy to access services and need more
- Mental health services are hard to find

## Cost of long-term/nursing home care

- Quality elder care with excellent communication to the family is needed; should be personalized to the elderly person and listen to their needs
- Would be nice to have one-on-one eCare as an affordable option; would be nice to have a home-like atmosphere with outdoor spaces and activities
- This is a concern for the next generation to receive care

## Depression/anxiety

- The change in mental health of students over the past 20 years has been marked and disturbing. So little is being done to diagnose, treat, and maintain positive health
- A lot of need here
- A lot of loneliness in the community
- This is affecting everyone, young to old; pandemic has increased it too

## Having enough child daycare services

- This is an issue for many, a big shortage
- Very difficult to find services
- Without safe, adequate childcare, people can't go to work, and children get put in precarious situations

## Community Engagement and Collaboration

Key informants and focus group participants 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 question was not intended to rank services provided. They were presented with a list of 13 organizations or community segments to score. 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 scores (with 5 being "excellent" engagement or collaboration) were:

- Hospital (healthcare system) (4.0)
- Public health (4.25)
- Schools (3.0)
- Emergency services, including ambulance and fire (4.0)
- Pharmacies (3.75)
- Faith-based (2.75)
- Business and industry (4.0)
- Clinics not affiliated with the main health system (2.5)
- Other local health providers, such as dentists and chiropractors (3.0)
- Economic development organizations (3.5)
- Law enforcement (3.5)
- Long-term care, including nursing homes and assisted living (3.5)
- Tribal health/ Indian Health Service (1.75)
- Human/ Social Services (3.25)



# Priority of Health Needs

A community group met on January 10, 2022. Thirteen community members attended the meeting. Representatives from the Center for Rural Health (CRH) presented 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 presentation of the assessment findings and after considering and discussing the findings, all members of the group were asked to identify what they perceived as the top four community health needs. All of the potential needs were listed on large poster boards, and each member was given four stickers to place next to each of the four needs that they considered the most significant.

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

- Availability of mental health services (11 votes)
- Having enough child daycare services (5 votes)
- Not enough affordable housing (4 votes)
- Depression/ anxiety (4 votes)
- Having enough quality school resources (3 votes)

From those top four priorities, each person put one sticker on the item that they felt was the most important. The rankings were:

- 1.Attracting and retaining young families (6 votes)
- 2.Availability of mental health services (3 votes)
- 3.Not enough healthcare staff in general (2 votes)
- 4.Having enough child daycare services (2 votes)
- 5.Cost of health insurance (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.

## Comparison of Needs Identified Previously

Top Needs Identified 2019 CHNA Process	Top Needs Identified 2022 CHNA Process
Attracting and retaining young families	Attracting and retaining young families
Ability to meet the needs of the older population	Availability of mental health services
Youth depression/anxiety	Not enough healthcare staff in general
Cost of health insurance	Having enough child daycare services



The current process identified one identical common need from 2019, which was attracting and retaining young families.

Heart of America Medical Center (HAMC) invited written comments on the most recent CHNA report and implementation Strategy both in the documents and on the website, where they are widely available to the public. No written comments have been received.

Upon adoption of this CHNA Report by the HAMC Board vote, a notation will be documented in the board minutes, reflecting the approval, and then the report will be widely available to the public on the hospital's website; a paper copy will be available for inspection, upon request, at the hospital. Written comments on this report can be submitted to HAMC.

## **Hospital and Community Projects and Programs Implemented to Address Needs Identified in 2019**

In response to the needs identified in the 2019 CHNA process, the following actions were taken:

Need 1: Attracting and retaining young families – Following the implementation plan from 2019, HAMC has looked into daycare services. Low staffing levels has made it difficult to fill shifts at the on-site daycare. Focusing on keeping the doors of the daycare open has been priority.

Need 2: Ability to meet the needs of the older population – To help the elderly population, more screening has been implemented into our care center, allowing for a better idea of what services each person needs. Our capabilities for at-home care are very limited; however, HAMC does offer a hypertension improvement program for people over the age of 60. This program utilizes cellular Diasyst blood pressure cuff systems that are useful in remotely monitoring patients from their homes. HAMC has been searching for a mental health provider but has been unable to hire one at this time.

Need 3: Youth depression/anxiety and Need 4: Cost of health insurance were not addressed in the previous CHNA cycle. HAMC indicated in the implementation plan that these needs would not be addressed by the hospital as they are addressed by numerous existing programs, operated by the hospital and other organizations as well as other community partners. Limited resources only allowed for addressing two needs.

The above implementation plan for Heart of America Medical Center is posted on the Heart of America Medical Center website at <https://hamc.com/CHNA/>.

# Next Steps – Strategic Implementation Plan

Although a Community Health Needs Assessment (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?

While not required, the Center for Rural Health (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: Rugby, North Dakota Heart of America Medical Center

### Quick Facts

**Administrator:**

Erik Christenson

**Chief of Medical Staff:**

Dr. Steve Schoneberg

**Board Chair:** Will Griffen

**City Population:**

2,724 (2019 estimate)<sup>1</sup>

**County Population:**

4,126 (2019 estimate)<sup>1</sup>

**County Median Household**

**Income:** \$55,660 (2019 estimate)<sup>1</sup>

**County Median Age:**

45.8 years (2019 estimate)<sup>1</sup>

**Service Area Population:**

13,000

**Owned by:** Nonprofit

**Hospital Beds:** 18

**Skilled Nursing Facility**

**Beds:** 52

**Trauma Level:** V

**Critical Access Hospital**

**Designation:** 2007

**Economic Impact on the County**<sup>2</sup>

**Employment Impact:**

Direct – 95

Secondary – 36

Total – 131

**Financial Impact:**

Direct – \$6.35 million

Secondary – \$1.5 million

Total – \$7.8 million

**Mission:**

To deliver compassionate care by advancing the physical and spiritual well-being of the communities we serve through smart medicine and exceptional service.

**County:** Pierce

**Address:** 800 South Main Avenue  
Rugby, ND 58368-2118

**Phone:** (701) 776-5261

**Fax:** (701) 776-5448

**Web:** www.hamc.com

The hospital was constructed in 1948, with the latest addition constructed in 1991, and houses a multitude of services. Services include major and minor surgery, an intensive care unit, comprehensive laboratory and X-Ray facilities and a Level V-certified emergency room which has over 2,200 annual visits.

HAMC is committed to providing quality and individualized nursing home care. There is a 50-bed long-term-care unit, an Alzheimer's program, a 60-bed licensed basic care facility, with memory care unit and a 37-unit assisted living center.

In 2010 HAMC merged with Johnson Clinics in Rugby, Dunseith, and Maddock, and expanded their coverage area.

**Services:**

Heart of America Medical Center provides the following services:

- Emergency services
- Acute care
- Swing bed services
- EMS services
- Home care services
  - Hospice
  - PRO Care (Home Med Equipment)
- Intensive care unit
- Medical – post surgical care
- Surgical services
- Social services
- Dietary
- Radiology
- Mammography
- Laboratory
- Clinic prenatal care
- Chemotherapy infusion
- Telemedicine
- Diabetes education
- Cardiology
- Outpatient wellness center
  - Sports medicine
  - Athletic republic acceleration
- Rehabilitative services
  - Cardiac rehab & stress tests
  - Occupational therapy
  - Physical therapy
  - Respiratory therapy
  - Durable medical equipment

## Staffing

<b>Physicians:</b> .....	3
<b>Nurse Practitioners:</b> .....	6
<b>PAs:</b> .....	3
<b>CRNAs:</b> .....	1
<b>RNs:</b> .....	35
<b>LPNs:</b> .....	19
<b>Ancillary Personnel:</b> .....	245
<b>Total Employees:</b> .....	312

## Local Sponsors and Grant Funding Sources

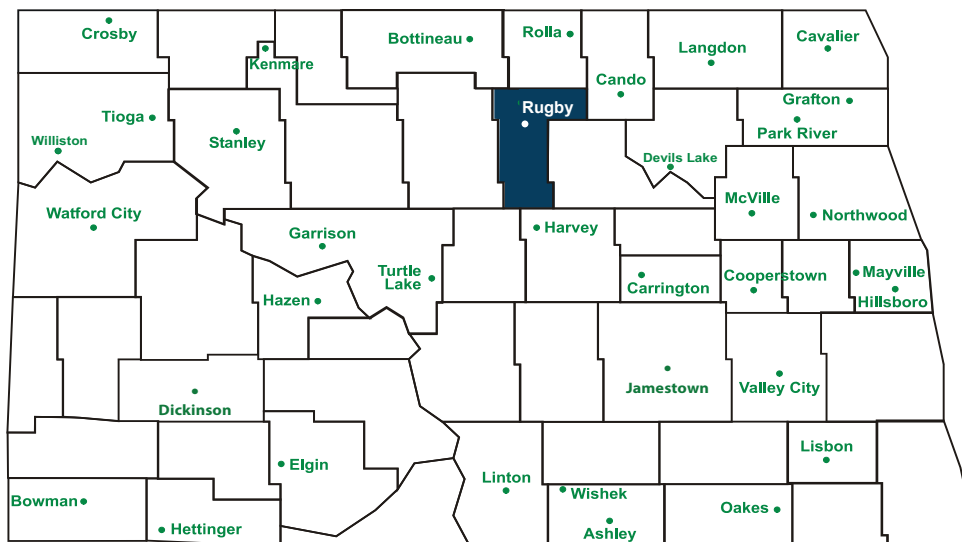
- America Heart Association, Inc. Go Red Community
- Center for Rural Health
  - SHIP Grant (Small Hospital Improvement Program)
- CoBank, a US Farm Credit Services Financial Institution
- Disaster Services of Pierce County - Homeland Security
- Enbridge Pipeline, Minot and BNSF
- First International Bank and Trust
- Fraternal Order of Eagles (Rugby)
- Frank L Wedge Memorial - ND Long Term Care Association HAMC Auxiliary
- Go Red for Women
- Lake Region District Health Unit
- Midco
- Otter Tail Power Company Community Connections
- Otto Bremer Foundation
- Pat-NOW! Community Fund by ND Farm Credit Services
- Pierce County Endowment Fund
- Rugby Endowment Fund
- Rugby Jaycees
- Rugby Lions Club
- Rugby Job Development Authority
- St. Joseph's Community Health Foundation - Twice Blessed Campaign
- Thrivent Financial
- USDA RD Community Facilities Grant and Loan Program

## Sources

<sup>1</sup> US Census Bureau; American Factfinder; Community Facts

<sup>2</sup> Economic Impact 2020 Center for Rural Health Oklahoma State University and Center for Rural Health University of North Dakota

## North Dakota Critical Access Hospitals



## History:

Established in 1910 by a group of dedicated ministers, this non-profit medical center is sustained by 22 area churches of all denominations which comprise the Good Samaritan Hospital Association. It is with the continual commitment to excellence that the Heart of America Medical Center brings personalized quality care, education, community service, and innovative programs with a sense of home town healing.

## Recreation:

Rugby is located in north central North Dakota, two-and-one-half hours from Bismarck, and four hours from Fargo. The community is served by the Minot airport, an hour away, and by Amtrak's Empire Builder. Rugby is also the gateway to the International Peace Gardens on the United States/Canadian border.

Agriculture is the largest segment of the economy, followed by manufacturing retail trade, health services, professional services, and transportation. Rugby supports both private and public school opportunities and higher education is available at nearby colleges. The nearby Turtle Mountains offer excellent recreational activities and local lakes offer fishing, swimming, and camping. Community recreational facilities include four parks, a swimming pool, indoor and outdoor skating rink, ball fields, tennis courts, a golf course, a trap shooting range, and a paved walking path and nature trail. Rugby has some great attractions, including historical sites such as the Prairie Village Museum, the Pierce County Courthouse, the authentically restored Amtrak Train Depot, and the Victorian Dress Museum. The Northern Lights Tower is especially appealing with its multi-colored beams lit to simulate the Northern Lights. For shopping, Rugby offers unique gift shops, and exclusive boutiques.

Updated 09/2021



Center for Rural Health  
University of North Dakota  
School of Medicine & Health Sciences

This project is supported by the Medicare Rural Hospital Flexibility Grant Program and the State Office of Rural Health 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](http://ruralhealth.und.edu)



# Appendix B – Economic Impact Analysis

December 2020

## Heart of America Medical Center



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

### Economic Impact

Heart of America Medical Center is composed of a Critical Access Hospital (CAH) in Rugby, North Dakota, three Rural Health Clinics (located in Rugby, Maddock, and Dunseith), an ambulance service, a 50-bed skilled nursing facility, a 27-bed assisted living facility, and hospice.

Heart of America Medical Center **directly** employs **242 FTE employees** with an annual payroll of over **\$17.8 million** (including benefits).

- After application of the employment multiplier of 1.42, these employees created an additional **101 jobs**.
- The same methodology is applied to derive the income impact. The income multiplier of 1.24 is applied to create nearly **\$4.36 million** in income as they interact with other sectors of the local economy.
- **Total impacts = 343 jobs and more than \$22.1 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

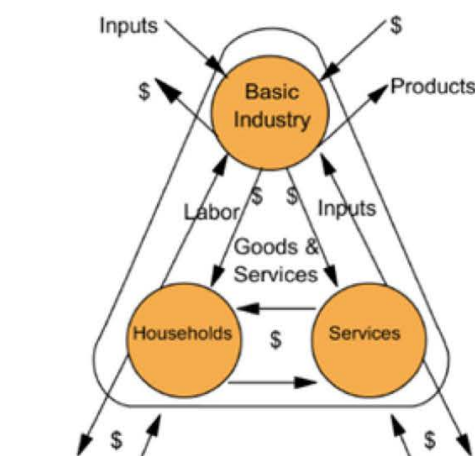


CENTER FOR  
**RURAL HEALTH**  
OSU Center for Health Sciences



Center for Rural Health  
University of North Dakota  
School of Medicine & Health Sciences

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



## Rugby Area Health Survey

Heart of America Medical Center and Lake Region District Health Unit 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



Scan here to take survey online

If you prefer, you may take the survey online at <https://tinyurl.com/RugbyCHNA21> 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 Kylie Nissen at 701.777.5380.

***Surveys will be accepted through October 31, 2021. 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 things are (choose up to **THREE**):

- |  |  |
|--|--|
| <input type="checkbox"/> Community is socially and culturally diverse or becoming more diverse | <input type="checkbox"/> People who live here are involved in their community          |
| <input type="checkbox"/> Feeling connected to people who live here                             | <input type="checkbox"/> People are tolerant, inclusive, and open-minded               |
| <input type="checkbox"/> Government is accessible  | <input type="checkbox"/> Sense that you can make a difference through civic engagement |
| <input type="checkbox"/> People are friendly, helpful, supportive                              | <input type="checkbox"/> Other (please specify): _____                                 |

2. Considering the **SERVICES AND RESOURCES** in your community, the best things are (choose up to **THREE**):

- |   |   |
|---|---|
| <input type="checkbox"/> Access to healthy food                                 | <input type="checkbox"/> Opportunities for advanced education |
| <input type="checkbox"/> Active faith community                                 | <input type="checkbox"/> Public transportation                |
| <input type="checkbox"/> Business district (restaurants, availability of goods) | <input type="checkbox"/> Programs for youth                   |
| <input type="checkbox"/> Community groups and organizations                     | <input type="checkbox"/> Quality school systems               |
| <input type="checkbox"/> Healthcare   | <input type="checkbox"/> Other (please specify): _____        |

3. Considering the **QUALITY OF LIFE** in your community, the best things are (choose up to **THREE**):

- |  |  |
|--|--|
| <input type="checkbox"/> Closeness to work and activities          | <input type="checkbox"/> Job opportunities or economic opportunities |
| <input type="checkbox"/> Family-friendly; good place to raise kids | <input type="checkbox"/> Safe place to live, little/no crime         |
| <input type="checkbox"/> Informal, simple, laidback lifestyle      | <input type="checkbox"/> Other (please specify): _____               |

4. Considering the **ACTIVITIES** in your community, the best things are (choose up to **THREE**):

- |  |   |
|--|---|
| <input type="checkbox"/> Activities for families and youth | <input type="checkbox"/> Recreational and sports activities         |
| <input type="checkbox"/> Arts and cultural activities      | <input type="checkbox"/> Year-round access to fitness opportunities |
| <input type="checkbox"/> Local events and festivals        | <input type="checkbox"/> 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** in your community, concerns are (choose up to THREE):

- |  |  |
|--|--|
| <input type="checkbox"/> Active faith community                                    | <input type="checkbox"/> Having enough quality school resources  |
| <input type="checkbox"/> Attracting and retaining young families                   | <input type="checkbox"/> Not enough places for exercise and wellness activities                                      |
| <input type="checkbox"/> Not enough jobs with livable wages, not enough to live on | <input type="checkbox"/> Not enough public transportation options, cost of public transportation                     |
| <input type="checkbox"/> Not enough affordable housing                             | <input type="checkbox"/> Racism, prejudice, hate, discrimination   |
| <input type="checkbox"/> Poverty   | <input type="checkbox"/> Traffic safety, including speeding, road safety, seatbelt use, and drunk/distracted driving |
| <input type="checkbox"/> Changes in population size (increasing or decreasing)     | <input type="checkbox"/> Physical violence, domestic violence, sexual abuse  |
| <input type="checkbox"/> Crime and safety, adequate law enforcement personnel      | <input type="checkbox"/> Child abuse   |
| <input type="checkbox"/> Water quality (well water, lakes, streams, rivers)        | <input type="checkbox"/> Bullying/cyber-bullying   |
| <input type="checkbox"/> Air quality   | <input type="checkbox"/> Recycling   |
| <input type="checkbox"/> Litter (amount of litter, adequate garbage collection)    | <input type="checkbox"/> Homelessness  |
| <input type="checkbox"/> Having enough child daycare services                      | <input type="checkbox"/> Other (please specify): _____   |

6. Considering the **AVAILABILITY/DELIVERY OF HEALTH SERVICES** in your community, concerns are (choose up to THREE):

- |   |   |
|---|---|
| <input type="checkbox"/> Ability to get appointments for health services within 48 hours.                   | <input type="checkbox"/> Emergency services (ambulance & 911) available 24/7  |
| <input type="checkbox"/> Extra hours for appointments, such as evenings and weekends                        | <input type="checkbox"/> Ability/willingness of healthcare providers to work together to coordinate patient care within the health system.    |
| <input type="checkbox"/> Availability of primary care providers (MD,DO,NP,PA) and nurses                    | <input type="checkbox"/> Ability/willingness of healthcare providers to work together to coordinate patient care outside the local community. |
| <input type="checkbox"/> Ability to retain primary care providers (MD,DO,NP,PA) and nurses in the community | <input type="checkbox"/> Patient confidentiality (inappropriate sharing of personal health information)                                       |
| <input type="checkbox"/> Availability of public health professionals  | <input type="checkbox"/> Not comfortable seeking care where I know the employees at the facility on a personal level                          |
| <input type="checkbox"/> Availability of specialists  | <input type="checkbox"/> Quality of care  |
| <input type="checkbox"/> Not enough health care staff in general  | <input type="checkbox"/> Cost of health care services   |
| <input type="checkbox"/> Availability of wellness and disease prevention services                           | <input type="checkbox"/> Cost of prescription drugs   |
| <input type="checkbox"/> Availability of mental health services   | <input type="checkbox"/> Cost of health insurance   |
| <input type="checkbox"/> Availability of substance use disorder treatment services                          | <input type="checkbox"/> Adequacy of health insurance (concerns about out-of-pocket costs)  |
| <input type="checkbox"/> Availability of hospice  | <input type="checkbox"/> Understand where and how to get health insurance   |
| <input type="checkbox"/> Availability of dental care  | <input type="checkbox"/> Adequacy of Indian Health Service or Tribal Health Services  |
| <input type="checkbox"/> Availability of vision care  | <input type="checkbox"/> Other (please specify): _____  |

7. Considering the **YOUTH POPULATION** in your community, concerns are (choose up to THREE):

- |   |  |
|---|--|
| <input type="checkbox"/> Alcohol use and abuse  | <input type="checkbox"/> Diseases that can spread, such as sexually transmitted diseases or AIDS |
| <input type="checkbox"/> Drug use and abuse (including prescription drug abuse)                     | <input type="checkbox"/> Wellness and disease prevention, including vaccine-preventable diseases |
| <input type="checkbox"/> Smoking and tobacco use, exposure to second-hand smoke or vaping (juuling) | <input type="checkbox"/> Not getting enough exercise/physical activity                           |
| <input type="checkbox"/> Cancer   | <input type="checkbox"/> Obesity/overweight  |
| <input type="checkbox"/> Diabetes   | <input type="checkbox"/> Hunger, poor nutrition  |
| <input type="checkbox"/> Depression/anxiety   | <input type="checkbox"/> Crime   |
| <input type="checkbox"/> Stress   | <input type="checkbox"/> Graduating from high school   |
| <input type="checkbox"/> Suicide  | <input type="checkbox"/> Availability of disability services                                     |
| <input type="checkbox"/> Not enough activities for children and youth                               | <input type="checkbox"/> Other (please specify): _____   |
| <input type="checkbox"/> Teen pregnancy   |  |
| <input type="checkbox"/> Sexual health  |  |

8. Considering the **ADULT POPULATION** in your community, concerns are (choose up to THREE):

- |   |  |
|---|--|
| <input type="checkbox"/> Alcohol use and abuse  | <input type="checkbox"/> Stress  |
| <input type="checkbox"/> Drug use and abuse (including prescription drug abuse)                     | <input type="checkbox"/> Suicide   |
| <input type="checkbox"/> Smoking and tobacco use, exposure to second-hand smoke or vaping (juuling) | <input type="checkbox"/> Diseases that can spread, such as sexually transmitted diseases or AIDS |
| <input type="checkbox"/> Cancer   | <input type="checkbox"/> Wellness and disease prevention, including vaccine-preventable diseases |
| <input type="checkbox"/> Lung disease (i.e. emphysema, COPD, asthma)                                | <input type="checkbox"/> Not getting enough exercise/physical activity                           |
| <input type="checkbox"/> Diabetes   | <input type="checkbox"/> Obesity/overweight  |
| <input type="checkbox"/> Heart disease  | <input type="checkbox"/> Hunger, poor nutrition  |
| <input type="checkbox"/> Hypertension   | <input type="checkbox"/> Availability of disability services                                     |
| <input type="checkbox"/> Dementia/Alzheimer's disease   | <input type="checkbox"/> Other (please specify): _____   |
| <input type="checkbox"/> Other chronic diseases: _____  |  |
| <input type="checkbox"/> Depression/anxiety   |  |

9. Considering the **SENIOR POPULATION** in your community, concerns are (choose up to THREE):

- |   |   |
|---|---|
| <input type="checkbox"/> Ability to meet needs of older population                          | <input type="checkbox"/> Availability of transportation for seniors             |
| <input type="checkbox"/> Long-term/nursing home care options                                | <input type="checkbox"/> Availability of home health                            |
| <input type="checkbox"/> Assisted living options  | <input type="checkbox"/> Not getting enough exercise/physical activity          |
| <input type="checkbox"/> Availability of resources to help the elderly stay in their homes  | <input type="checkbox"/> Dementia/Alzheimer's disease                           |
| <input type="checkbox"/> Cost of activities for seniors                                     | <input type="checkbox"/> Depression/anxiety                                     |
| <input type="checkbox"/> Availability of activities for seniors                             | <input type="checkbox"/> Suicide  |
| <input type="checkbox"/> Availability of resources for family and friends caring for elders | <input type="checkbox"/> Alcohol use and abuse                                  |
| <input type="checkbox"/> Quality of elderly care  | <input type="checkbox"/> Drug use and abuse (including prescription drug abuse) |
| <input type="checkbox"/> Cost of long-term/nursing home care                                | <input type="checkbox"/> Availability of activities for seniors                 |
|   | <input type="checkbox"/> Elder abuse  |
|   | <input type="checkbox"/> Other (please specify): _____                          |

10. What single issue do you feel is the biggest challenge facing your community?

---

---



## Delivery of Healthcare

11. Considering **SERVICES** at Heart of America Medical Center, which are you aware of (or have you used in the past year)? (Choose ALL that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Anesthesia Services                              | <input type="checkbox"/> Diet Instruction        |
| <input type="checkbox"/> Clinic   | <input type="checkbox"/> Health Screenings       |
| <input type="checkbox"/> Emergency room                                   | <input type="checkbox"/> Laboratory Services     |
| <input type="checkbox"/> Hospice  | <input type="checkbox"/> Occupational Therapy    |
| <input type="checkbox"/> Hospital (acute care)                            | <input type="checkbox"/> Physical Therapy        |
| <input type="checkbox"/> Infusion/Chemotherapy                            | <input type="checkbox"/> Social Services         |
| <input type="checkbox"/> Telehealth Mental Health Services                | <input type="checkbox"/> Speech Therapy          |
| <input type="checkbox"/> Oncology   | <input type="checkbox"/> EKG—Electrocardiography |
| <input type="checkbox"/> Ophthalmology (eye/vision) (visiting specialist) | <input type="checkbox"/> CT scan                 |
| <input type="checkbox"/> Pain Management Clinic                           | <input type="checkbox"/> Echocardiogram          |
| <input type="checkbox"/> Podiatry (foot/ankle) (visiting specialist)      | <input type="checkbox"/> General x-ray           |
| <input type="checkbox"/> Shared OB  | <input type="checkbox"/> Mammography (3D)        |
| <input type="checkbox"/> Surgical services                                | <input type="checkbox"/> MRI                     |
| <input type="checkbox"/> Swing Bed and respite care services              | <input type="checkbox"/> Ultrasound              |
| <input type="checkbox"/> Telemedicine via eEmergency                      |  |

12. Which of the following **SERVICES** provided by your local **PUBLIC HEALTH** unit (Lake Region District Health) have you or a family member used in the past year? (Choose ALL that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> Bicycle helmet safety   | <input type="checkbox"/> Home health   |
| <input type="checkbox"/> Blood pressure check  | <input type="checkbox"/> Immunizations   |
| <input type="checkbox"/> Breastfeeding resources   | <input type="checkbox"/> Medications setup—home visits   |
| <input type="checkbox"/> Car seat program  | <input type="checkbox"/> Office visits and consults  |
| <input type="checkbox"/> Child health (well baby)  | <input type="checkbox"/> School health (vision screening, puberty talks, school immunizations) |
| <input type="checkbox"/> Correction facility health  | <input type="checkbox"/> Preschool education programs  |
| <input type="checkbox"/> Diabetes screening  | <input type="checkbox"/> Assist with preschool screening                                       |
| <input type="checkbox"/> Emergency response & preparedness program                             | <input type="checkbox"/> Tobacco prevention and control  |
| <input type="checkbox"/> Flu shots   | <input type="checkbox"/> Tuberculosis testing and management                                   |
| <input type="checkbox"/> Environmental health services (water, sewer, health hazard abatement) | <input type="checkbox"/> WIC (Women, Infants & Children) Program                               |
| <input type="checkbox"/> Health Tracks (child health screening)                                | <input type="checkbox"/> Youth education programs (First Aid, Bike Safety)                     |

13. What specific healthcare services, if any, do you think should be added locally?

---



---

14. Where do you find out about **LOCAL HEALTH SERVICES** available in your area? (Choose ALL that apply)

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Advertising                | <input type="checkbox"/> Public health professionals            | <input type="checkbox"/> Word of mouth, from others     |
| <input type="checkbox"/> Employer/worksite wellness | <input type="checkbox"/> Radio (which): _____                   | (friends, neighbors, co-workers, etc.)                  |
| <input type="checkbox"/> Health care professionals  | <input type="checkbox"/> Social media (Facebook, Twitter, etc.) | <input type="checkbox"/> Other: (please specify): _____ |
| <input type="checkbox"/> Indian Health Service      | <input type="checkbox"/> Tribal Health                          |   |
| <input type="checkbox"/> Newspaper (which): _____   | <input type="checkbox"/> Web searches                           |   |

15. What **PREVENTS** community residents from receiving healthcare? (Choose ALL that apply)

- |   |  |
|---|--|
| <input type="checkbox"/> Can't get transportation services  | <input type="checkbox"/> Not able to get appointment/limited hours |
| <input type="checkbox"/> Concerns about confidentiality   | <input type="checkbox"/> Not able to see same provider over time   |
| <input type="checkbox"/> Distance from health facility  | <input type="checkbox"/> Not accepting new patients                |
| <input type="checkbox"/> Don't know about local services  | <input type="checkbox"/> Not affordable                            |
| <input type="checkbox"/> Don't speak language or understand culture   | <input type="checkbox"/> Not enough providers (MD, DO, NP, PA)     |
| <input type="checkbox"/> Lack of disability access  | <input type="checkbox"/> Not enough evening or weekend hours       |
| <input type="checkbox"/> Lack of services through Indian Health Services  | <input type="checkbox"/> Not enough specialists                    |
| <input type="checkbox"/> Limited access to telehealth technology (patients seen by providers at another facility through a monitor/TV screen) | <input type="checkbox"/> Poor quality of care                      |
| <input type="checkbox"/> No insurance or limited insurance  | <input type="checkbox"/> Other (please specify): _____             |

16. Where do you turn for trusted health information? (Choose ALL that apply)

- |  |  |
|--|--|
| <input type="checkbox"/> Other healthcare professionals (nurses, chiropractors, dentists, etc.)  | <input type="checkbox"/> Web searches/internet (WebMD, Mayo Clinic, Healthline, etc.)      |
| <input type="checkbox"/> Primary care provider (doctor, nurse practitioner, physician assistant) | <input type="checkbox"/> Word of mouth, from others (friends, neighbors, co-workers, etc.) |
| <input type="checkbox"/> Public health professional  | <input type="checkbox"/> Other (please specify): _____                                     |

17. Are you aware of Good Samaritan Health Service's Foundation, which exists to financially support Heart of America Medical Center and Haaland Estates?

- ☐ Yes ☐ No

18. Have you supported the Good Samaritan Health Service's Foundation in any of the following ways? (Choose ALL that apply)

- |  |   |  |
|--|---|--|
| <input type="checkbox"/> Cash or stock gift  | <input type="checkbox"/> Planned gifts through wills, trusts or life insurance policies | <input type="checkbox"/> Greatest Needs Gala           |
| <input type="checkbox"/> Endowment gifts     | <input type="checkbox"/> Charity Golf Classic   | <input type="checkbox"/> Other (please specify): _____ |
| <input type="checkbox"/> Memorial/Honorarium |   |  |

**Demographic Information:** Please tell us about yourself.

19. Do you work for the hospital, clinic, or public health unit?

- ☐ Yes ☐ No

20. How did you acquire the survey (or survey link) that you are completing?

- |   |  |
|---|--|
| <input type="checkbox"/> Hospital or public health website                          | <input type="checkbox"/> Church bulletin                                     |
| <input type="checkbox"/> Hospital or public health social media page                | <input type="checkbox"/> Flyer sent home from school                         |
| <input type="checkbox"/> Hospital or public health employee                         | <input type="checkbox"/> Flyer at local business                             |
| <input type="checkbox"/> Hospital or public health facility                         | <input type="checkbox"/> Flyer in the mail                                   |
| <input type="checkbox"/> Economic development website or social media               | <input type="checkbox"/> Word of mouth                                       |
| <input type="checkbox"/> Other website or social media page (please specify): _____ | <input type="checkbox"/> Direct email (if so, from what organization): _____ |
| <input type="checkbox"/> Newspaper advertisement                                    | <input type="checkbox"/> Other (please specify): _____                       |
| <input type="checkbox"/> Newsletter (if so, what one): _____                        |  |

21. Health insurance or health coverage status (choose ALL that apply):

- |   |  |   |
|---|--|---|
| <input type="checkbox"/> Indian Health Service (IHS)                          | <input type="checkbox"/> Medicaid                      | <input type="checkbox"/> Other (please specify):<br>_____ |
| <input type="checkbox"/> Insurance through employer (self, spouse, or parent) | <input type="checkbox"/> Medicare                      |   |
| <input type="checkbox"/> Self-purchased insurance                             | <input type="checkbox"/> No insurance                  |   |
|   | <input type="checkbox"/> Veteran's Healthcare Benefits |   |

22. Age:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Less than 18 years | <input type="checkbox"/> 35 to 44 years | <input type="checkbox"/> 65 to 74 years     |
| <input type="checkbox"/> 18 to 24 years     | <input type="checkbox"/> 45 to 54 years | <input type="checkbox"/> 75 years and older |
| <input type="checkbox"/> 25 to 34 years     | <input type="checkbox"/> 55 to 64 years |   |

23. Highest level of education:

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Less than high school      | <input type="checkbox"/> Some college/technical degree | <input type="checkbox"/> Bachelor's degree               |
| <input type="checkbox"/> High school diploma or GED | <input type="checkbox"/> Associate's degree            | <input type="checkbox"/> Graduate or professional degree |

24. Sex:

- |   |                               |                                     |
|---|-------------------------------|-------------------------------------|
| <input type="checkbox"/> Female                           | <input type="checkbox"/> Male | <input type="checkbox"/> Non-binary |
| <input type="checkbox"/> Other (please specify):<br>_____ |                               |                                     |

25. Employment status:

- |                                    |  |                                     |
|------------------------------------|--|-------------------------------------|
| <input type="checkbox"/> Full time | <input type="checkbox"/> Homemaker           | <input type="checkbox"/> Unemployed |
| <input type="checkbox"/> Part time | <input type="checkbox"/> Multiple job holder | <input type="checkbox"/> Retired    |

26. Your zip code: \_\_\_\_\_

27. Race/Ethnicity (choose ALL that apply):

- |   |   |                                       |
|---|---|---------------------------------------|
| <input type="checkbox"/> American Indian  | <input type="checkbox"/> Hispanic/Latino  | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> African American | <input type="checkbox"/> Pacific Islander |                                       |
| <input type="checkbox"/> Asian            | <input type="checkbox"/> White/Caucasian  |                                       |

28. Annual household income before taxes:

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Less than \$15,000   | <input type="checkbox"/> \$50,000 to \$74,999   | <input type="checkbox"/> \$150,000 and over |
| <input type="checkbox"/> \$15,000 to \$24,999 | <input type="checkbox"/> \$75,000 to \$99,999   |   |
| <input type="checkbox"/> \$25,000 to \$49,999 | <input type="checkbox"/> \$100,000 to \$149,999 |   |

29. Overall, please share concerns and suggestions to improve the delivery of local healthcare.

---

---



# Appendix D – County Health Rankings Explained

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

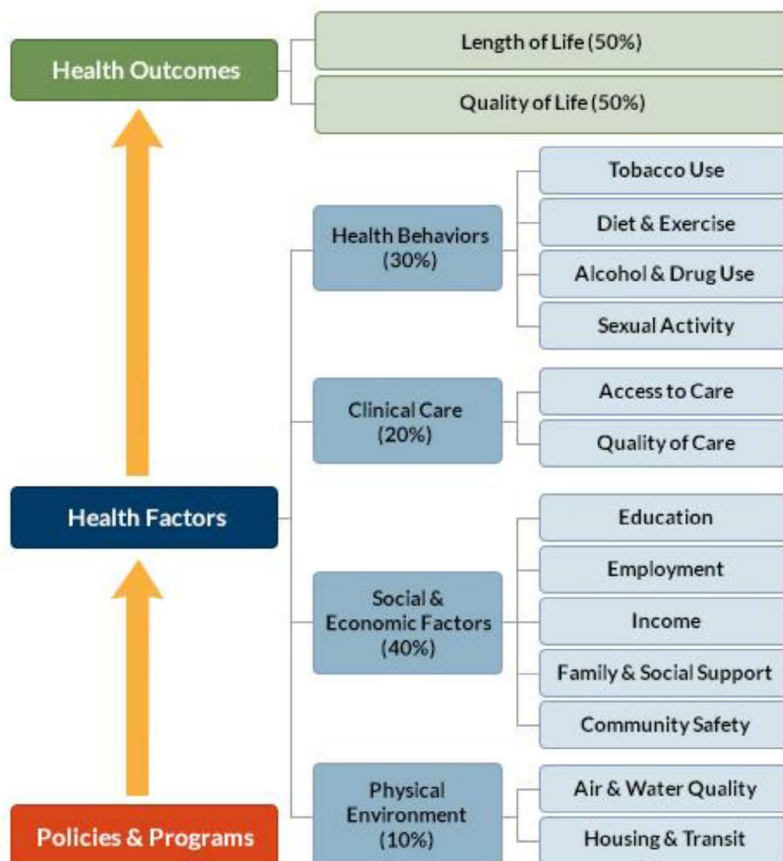
## Methods

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 U.S. 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 U.S. 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 U.S. 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/m<sup>2</sup>.

### *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, 799110, 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 U.S., 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 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 fee-for-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 U.S. 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 U.S. 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 (PM<sub>2.5</sub>) 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 Risk Behavior Survey

## Youth Behavioral Risk Survey Results

### North Dakota High School Survey

Rate Increase “↑” rate decrease “↓”, or no statistical change = in rate from 2017-2019

	ND 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
<b>Injury and Violence</b>							
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 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 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 (during the 12 months before the survey)	24.0	24.3	19.9	↓	24.6	19.1	19.5
Percentage of students who were electronically bullied (including being bullied through texting, Instagram, Facebook, or other social media during the 12 months before the survey)	15.9	18.8	14.7	↓	16.0	15.3	15.7
Percentage of students who felt sad or hopeless (almost every day 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
	ND 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National 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)							
<b>Tobacco Use</b>							
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 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 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 by buying them in a store or gas station (during the 30 days before the survey among students who currently smoked cigarettes and 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	↑	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	↓	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	↓	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)							
<b>Alcohol and Other Drug Use</b>							
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 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 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 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 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 currently drank alcohol)	41.3	37.7	NA	NA	NA	NA	40.5
	ND 2013	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National 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 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 drug on school property (during the 12 months before the survey)							
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
<b>Sexual Behaviors</b>							
Percentage of students who ever had sexual intercourse							

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
<b>Weight Management and Dietary Behaviors</b>							
Percentage of students who were overweight ( $\geq$ 85th percentile but $<$ 95th 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 ( $\geq$ 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	↓	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 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 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 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 days before the survey)	13.9	14.9	20.5	↑	14.8	20.3	30.6
Percentage of students who drank two or more glasses per day of 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 seven days before the survey)							
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 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
<b>Physical Activity</b>							
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)							
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
<b>Other</b>							
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

# Appendix F – Prioritization of Community’s Health Needs

## Community Health Needs Assessment Rugby, North Dakota Ranking of Concerns

The top concerns for each of the five topic areas, based on the community survey results, were listed on flipcharts. The numbers below indicate the total number of votes (dots) by the people in attendance at the second community meeting. The “Priorities” column lists the number of yellow/green/blue dots placed on the concerns indicating which areas are felt to be priorities. Each person was given four dots to place on the items they felt were priorities. The “Most Important” column lists the number of red dots placed on the flipcharts. After the first round of voting, the top five priorities were selected based on the highest number of votes. Each person was given one dot to place on the item they felt was the most important priority of the top five highest ranked priorities.

	Priorities	Most Important
<b>COMMUNITY/ENVIRONMENTAL HEALTH CONCERNS</b>		
Not enough affordable housing	2	
Having enough child daycare services	8	2
Not enough jobs with livable wages	3	
Attracting and retaining young families	8	6
<b>AVAILABILITY/DELIVERY OF HEALTH SERVICES CONCERNS</b>		
Cost of health insurance	3	0
Availability of specialists	1	
Not enough healthcare staff in general	3	2
Availability of Mental Health services	8	3
Extra hours for appointments	2	
<b>YOUTH POPULATION HEALTH CONCERNS</b>		
Depression/Anxiety (all ages)	2	
Alcohol use and abuse (all ages)	2	
Drug use and abuse (including prescription drugs) (all ages)	1	
Suicide	0	
Not getting enough exercise/physical activity (all ages)	1	
Not enough activities for children and youth	1	
<b>ADULT POPULATION HEALTH CONCERNS</b>		
Stress	1	
Obesity/overweight	0	
<b>SENIOR POPULATION HEALTH CONCERNS</b>		
Availability of resources to help the elderly stay in their homes	2	
Long-term/nursing home care options	2	
Availability of home health	0	
Availability to meet the needs of older population	1	

# Appendix G – Survey “Other” Responses

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:
  - Community is pretty “tight” and does not make newcomers feel welcome.
  - None
  - None of the above
  - Not welcome if don’t have the ‘right’ name
3. Considering the QUALITY OF LIFE in your community, the best things are: “Other” responses:
  - Family lives here
4. Considering the ACTIVITIES in your community, the best things are: “Other” responses:
  - All options lacking.
  - DNA
  - Need for all of these

## 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 in your community, concerns are: “Other” responses:
  - Alcohol, drug use
  - Closed minded city government
  - Do not accept new people very well
  - High grocery prices with limited selection
  - More snow removal needed
  - Poorly funded healthcare and EMS
  - Would like to see more SENIOR HOUSING
6. Considering the AVAILABILITY / DELIVERY OF HEALTH SERVICES in your community, concerns are: “Other” responses:
  - All of them should be checked
  - Elder care is a need in a community with 65% of population over age 55
  - Need for all of the above
7. Considering the YOUTH POPULATION in your community, concerns are: “Other” responses:
  - Check all of the items
  - Kids given no direction in life
  - Social media use & its effect on them

8. Considering the ADULT POPULATION in your community, concerns are: “Other” responses:

- Wards of the state

10. What single issue do you feel is the biggest challenge facing your community?

- • A true sense of community. You aren’t welcomed into the community easily unless you were born here.
- Ability to find employees to support the businesses.
- Accountability
- Business retention and people wanting to stay in the community long term
- Continue to provide access to medical care in general
- Cost of healthcare
- Cost of long-term/nursing home care
- Cost of medications. We see that the elderly may not take the prescribed medication due to the cost. Do they pay for food and shelter or pay for their medications.
- Depression due to Covid isolation in our care facilities and homes
- Depression/anxiety across all populations.
- Drugs
- Getting people off the system and getting them to work.
- Growth opportunities, if we fail to push to grow and attract young families to this community, it will be inevitable that we will slowly see a decline in our population and ability to provide services to the ones who remain.
- Help to remain in their homes
- High taxes in this county.
- I think mental health and addiction on some very serious issues in our community and people bully people with those issues. There needs to be available help for those of us who suffer from depression and have had suicidal ideation. Instead of shipping them off to the next town or putting them in jail, get to the root of the issue because a lot of things can be affected by depression and mental illness, such as your job quality, even holding a job, people should be allowed mental health days each month without the consequences of losing their job. Most of the time I just lie and say I’m sick when in fact I’m sick all right, I can’t get out of bed because I wish I wouldn’t wake up some days. My life is stressful at home and I love coming to work because I feel like I have a purpose when I’m here. Outside of here though I don’t have a lot of friends and its lonely if you don’t fit in.
- In home care.
- Jobs. Attractions. Too high % of elder citizens vs younger. “Stuck in their ways” of doing things. Schools are great, other than that, what is driving a family to move to rugby? Need to have companies prospect Rugby as a community to invest in. City council now that Wayne Trottier is there is better, but still too many folks who do not know how to run a city are on the board. If you aren’t involved in the agriculture industry, it makes a difficult barrier to enter and “fit in”, let alone there is not many jobs that don’t involve the ag industry.
- Keeping our fully staffed and taking pressure off of the existing employees in certain departments. There is a lot of stress.
- Keeping our healthcare facility and staff!
- Lack of employable people.
- Lack of housing for families.
- Lack of involvement
- Lack of labor force
- Lack of mental health care (psych)
- Lack of mental health services
- Lack of mental health services in this area
- Lack of people wanting to work, especially on LTC
- Lack of Support from residents and local leaders



- Lack of understanding of healthcare and managing expectations of the community members
- Local resources to help elderly stay in their homes
- Mental health concerns
- Mental health services
- No home health for those who need it.
- Not able to attract and retain staff for nursing homes makes it a largely impossible situation to provide resilient, top quality nursing home care in this area
- Not enough activities for youth (sports not included). I feel the community should have a building with different activities for our youth.
- Not enough services in the community to assist with caring for people in their own home
- Not enough things to do for families
- Not having enough support for the elderly with no families to visit or take them where they need to go weather its shopping or dr. appointments. Its in all communities very sad.
- Obesity
- People not willing to get out and work for what they need! Society is getting to a freebie state
- People want health care but only when they need it badly, and most people don't show up for their appointments so they only want health care when they really need it.
- Physical fitness programs for the elderly-something to get them to get motivated to move. Exp. Yoga for the elderly or simple exercises to keep their balance/core strong
- Political Divisiveness
- Quality of care... Not enough staff
- Stigma of a pt's past and present.
- Stress
- The ability to come together as a community as a whole.
- The cost of living for the elderly who are in a fixed income
- The out migration of the youth, leaving an aging population.
- The people need to stand together to build and support the community. They don't do that enough. The people that do or try to do it get ridiculed and don't get the support of the community. We need to work together not against each one another. It takes a village!
- Unable to identify a single issue

## Delivery of Healthcare

13. What specific healthcare services, if any, do you think should be added locally?

- Daycare
- Foot care
- I think our public health services are coving our main concerns at this time.
- Labor and delivery, walk-in clinic with evening/ weekend hours
- Lice checks and treatment
- Medical weight loss
- Mental health
- Mental health
- Mental Health
- Mental Health Counseling - Christian based
- Mental Health services (including for youth in the schools)
- More mental health for kids
- My Dad Dr.s at Heart of America not me.

- N/a
  - Pap smears, prostate, breast exam screenings
  - Pediatrics
  - Rheumatologist Specialist
  - Rugby NEEDS a home healthcare other than first light homecare, which lacks expertise and is too “basic” of services. Some elder folks need more health care such as delivering medicine for a person and has nurse capabilities.
  - Walk in clinic
  - Walk-in clinic in evenings/weekends
  - Weekend or after hours clinic
14. Where do you find out about LOCAL HEALTH SERVICES available in your area? “Other” responses:
- Employed
  - I’m HAMC employee
  - My own profession and the knowledge I have gained about the services Public Health Provides
  - School
15. What PREVENTS community residents from receiving healthcare? “Other” responses:
- Er is too expensive and evening and weekend appointments end up in er
  - Getting time off from work
  - Internal med doctor
  - None
  - None
  - Too high deductible
  - Wanting more anonymity / separation from your provider, work life, and personal life
16. Where do you turn for trusted health information? “Other” responses:
- Jennifer Napora from Lakeview Health Clinic in Minot she helps me with my mental health problems.
  - IHS
18. Have you supported the Good Samaritan Health Service’s Foundation in any of the following ways?  
“Other” responses:
- Fundraisers
  - Have not
  - N/a
  - No
  - No not yet
  - Twice Blessed campaigns
29. Overall, please share concerns and suggestions to improve the delivery of local healthcare.
- Building outdated by a couple decades makes care delivery inefficient, threatens financial stability, and also negatively impacts morale and ability to attract and retain staff.
  - Confidentiality.
  - COVID has taken its toll on performing regular appointments in a timely matter, whether patient doesn’t feel care is needed or can’t get in for 2-3 days
  - Employee appreciation is alarming. During the termination period of HAMC; I have seen a disregard for long-term employees. Maybe it was needed, but employees of 25 years and more were just sent packing. That unsettles me as a current employee. Employee needs (reasonable needs) and concerns are habitually disregarded. It is easy for an employee to leave if they feel unappreciated and unimportant.
  - It needs to be cheaper!!!!!!
  - More visiting specialties that our older population see to come here instead of patients having to travel

at least an hour sometimes more to see.

- New building to draw new workers.
- Sometimes the focus is more on costs/profits/bottom lines than making the decision for the best care or the most positive/impactful outcomes for our communities, patients, or staff
- There is always a wait time on hold when we I try to schedule an appointment. A walk in clinic would helpful. We have driven to Minot for walk-in clinics multiple times.
- We are lucky to have the healthcare services available that we do, right here in Rugby. It is comforting knowing we do not have to travel out of town to get healthcare services. I think many take it for granted.