Community Health Needs Assessment

2019

Rugby, North Dakota

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Executive Summary

To help inform future decisions and strategic planning, Heart of America Medical Center (HAMC) conducted a community health needs assessment (CHNA) in 2019, the previous CHNA having been conducted in 2016. 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 seventy 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 2018 decreased 6.4%. The average age of residents under 18 (22.4%) for the county is slightly lower than the North Dakota average (23.3%), and the percentage of residents ages 65 and older is just over 8% higher (23.6%) than the North Dakota average (15.3%). The rates of education are slightly lower for Pierce County (90.4%) than the North Dakota average (92.3%), and the median household income ($45,996) is significantly lower than the state average for North Dakota ($61,285).

Data compiled by County Health Rankings show Pierce County is doing better than or equal to North Dakota in health outcomes/factors for 12 categories, while performing poorly relative to the rest of the state in 16 outcome/factor categories.

Of the 82 potential community and health needs set forth in the survey, the 170 HAMC service area residents who completed the survey indicated the following ten needs as the most important:

- Not enough jobs with livable wages
- Attracting and retaining young families
- Alcohol use and abuse – Youth
- Cost of long-term/nursing home care
- Depression/anxiety – Youth & Adult
- Availability of resources to help the elderly stay in their homes
- Having enough daycare services
- Cost of health insurance
- Drug use and abuse – Youth
- Alcohol use and abuse – Adult

The survey also revealed the biggest barriers to receiving healthcare (as perceived by community members). They included not being able to get appointments/limited hours (N=40), not enough evening or weekend hours (N=39), and having limited or no insurance (N=33).

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

- Safe place to live
- Family-friendly
- People are friendly, helpful and supportive
- Active faith community
- People who live here are involved in their community
- Quality school systems

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:

- Ability to retain primary care providers (MD, DO, NP, PA) and nurses
- Alcohol use and abuse – Youth and Adults
- Attracting and retaining young families
- Availability of mental health services
- Drug use and abuse - Youth
- Having enough child daycare services

Overview and Community Resources

With assistance from the CRH at the UNDSMHS, HAMC completed a CHNA of the HAMC service area. The hospital identifies its service area as a 50-mile radius around Rugby, North Dakota, which includes Pierce County. Many community members and stakeholders worked together on the assessment.

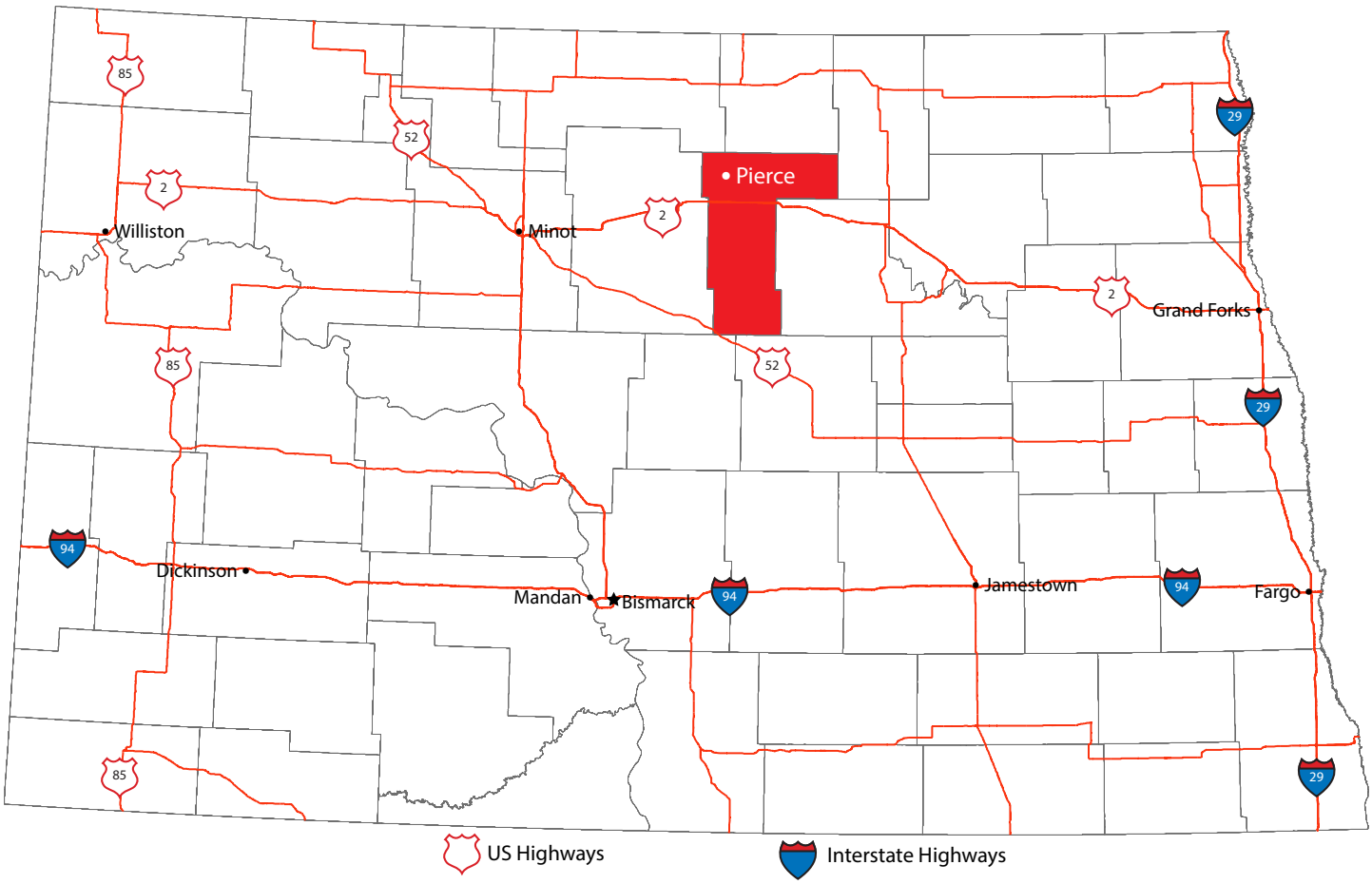
Rugby is located in north central North Dakota at the intersection of Highways 2 & 3, approximately 60 miles east of Minot, 60 miles west of Devils Lake and 45 miles south of the International Peace Garden at the Canadian border. Travel opportunities abound whether you wish to fly, drive, or take the train. Along with the hospital, agricultural and manufacturing operations provide the economic base for the town of Rugby and surrounding areas.

Resources abound in the areas HAMC serves. Heralded 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, and public library, as well as varied dining and shopping options. Cultural opportunities include an active arts community housed in the Village Arts Center, a civic orchestra including strings and civic choir, historical lectures and art shows at Prairie Village Museum, an interpretive center educating on the Aurora Borealis at the Northern Lights Tower, family fun and livestock exhibits at the Pierce County Fair, and weekly Music in the Park during the summer months. There are also outdoor activities available including numerous city parks, a beautiful walking path, an indoor swimming pool, golf course, tennis courts, basketball courts, indoor and outdoor hockey/skating rinks, summer sports complex, hunting, fishing, sledding hills, and groomed snowmobile trails.

Located in the Turtle Mountains, Dunseith provides a gateway to the International Peace Garden which hosts an International Music Camp. Additionally, the nearby Lake Metigoshe area offers many outdoor recreational opportunities including hunting, fishing, snowmobiling, hiking, and bird watching. The Canadian border is just minutes away and the area promotes nature's beauty year round.

A small town with big plans, Maddock is something to behold and enjoy! They truly think outside the box with a Community Center, a Business & Technology Center that includes several extended stay rooms, the very popular Rural Renaissance Festival, and Harriman's which houses the Opera House, a coffee shop, restaurant and lounge, and the city library. Recently, Maddock completed their Event Center which includes an indoor riding arena, basketball court, gym, indoor pool, meeting rooms and kitchen. Located in close proximity to Devils Lake, Maddock is situated close to world-class walleye fishing, hunting, and water recreation opportunities.

Figure 1: Pierce County



Heart of America Medical Center

Originally known as the Sheyenne Kreds Hospital Association, the facility opened its doors on January 9, 1910. It was founded by farsighted Lutheran pastors who were dedicated to community services and continued by area member churches of all denominations. In 1915, the name was changed to the Good Samaritan Hospital Association. This name was well chosen, to stand 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.

There have been many facility changes as well as the adding or reorganizing of services over the years, and the loyal dedication to the communities has been sustained. Today Good Samaritan Hospital Association, doing business as Heart of America Medical Center, 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 the second & third floors, has 55 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 includes a memory care unit. 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.

Centered in Pierce County, but serving surrounding the 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, ND.

With nearly 300 employees, HAMC is the largest employer in the region. It has five MDs (including one general surgeon), three physician assistants, six nurse practitioners and one certified registered nurse anesthetist.

Services offered locally by HAMC include:

Acute and General 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 & observation)
- Infusion therapy
- Inpatient Rehab
- Pharmacy
- Respite care
- Skilled nursing care with memory care unit available
- Swing bed services
- Transitional Care Management

Clinic Services

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

Durable Medical Equipment Services

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

Laboratory Services

- Bacteriology
- Blood types
- Chemistry
- Clot times/Coag
- 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

- CT scan
- Bone density 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
- 3D Mammography
- Ultrasound

Retail Pharmacy Services

- Counseling for Medicare Part D open enrollment
- FlavoRx
- Flu & Shingles vaccine
- Free delivery & 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 & treatment
- Manual therapy/Graston IASTM (Instrument Assisted Soft Tissue Mobilization)
- 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 & recommendations
- Ultrasound/electrical stimulation modalities
- Upper extremity rehabilitation
- Vestibular Rehab-BPPV
- Wellness/Fitness evaluations
- Work injury rehab
- Wound care

Specialty Services

- Ophthalmology
- Orthotist/Prosthetist
- Podiatrist

Supportive Services

- Advanced healthcare directive
- Alzheimer's support group
- Breast cancer support group
- Chaplain
- Community care
- Diabetes Education
- Discharge planning
- Grief support group
- Homecare options
- Interpretive & TTY services
- Phones for hearing impaired
- Prescription assistance

Surgical Services

- Abscess I&D/Debridement
- Anesthesia
- Appendectomy – open
- Axillary node dissection
- Biopsy – Needle localized & Standard
- Burn care
- Carpal tunnel release
- Central line/Port-a-cath placement
- Chest tube insertions
- Cholecystectomy – open & laparoscopic
- Colectomy
- Colonoscopy
- Common bile duct exploration
- EGD
- Excision of facial & scalp lesions
- Herniorrhaphy – femoral, incisional, inguinal, umbilical & ventral repair
- Hydrocele repair
- Hysterectomy/Salpingo-Oopherectomy – open
- Laparotomy/Laparoscopy
- Liver biopsy
- Lumpectomy
- 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 & Nail bed
- Tracheostomy
- Trauma care
- Tubal ligation – open or laparoscopic
- Vasectomy

Telehealth Services

- Behavioral health
- Cardiology
- Cardiothoracic surgery
- Dermatology
- Diabetes care
- Gastrointestinal
- Infectious disease
- Nephrology
- Oncology
- Orthopedics
- Nephrology
- 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

Lake Region District Health Unit (LRDHU) is a four-county district health unit providing services to the people of Benson, Eddy, Pierce, and Ramsey counties. It provides public health services that include environmental health, nursing services, and the WIC (women, infants, and children) program. Each of these programs provides a wide variety of services in order to accomplish the mission of public health, which is to assure that North Dakota is a healthy place to live and each person has an equal opportunity to enjoy good health. To accomplish this mission, LRDHU is committed to the promotion of healthy lifestyles, protection and enhancement of the environment, and provision of quality healthcare services for the people of North Dakota. LRDHU has been serving the Lake Region area since 1950.

Specific services that LRDHU provides are:

- Bicycle helmet safety education resources
- Blood pressure checks
- Breastfeeding resources
- Child passenger Safety Seat Distribution Program
- Child health
- Diabetes screening
- Emergency response and preparedness program
- Environmental health services
- Health Tracks (child health screening)
- Immunizations
- Medication setup
- Member of child Protection Team and County Interagency Team
- Home visits
- Nutrition education
- Office visits and consults
- School health (vision, hearing, health education)
- Preschool education programs and screening
- Substance abuse prevention program
- Referral services
- Tobacco Prevention and Control
- Tuberculosis testing and management
- West Nile program—surveillance and education
- WIC (Women, Infants & Children) Program
- Worksite Wellness
- Youth education programs (first aid, bike safety)

Assessment Process

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

A CHNA benefits the community by:

1) Collecting timely input from 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 for the more than 13,000 people within a 50-mile radius of Rugby, North Dakota.

The CRH, in partnership with HAMC and 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 the CRH and Rugby. A steering committee (see Figure 2) was formed that was responsible for planning and implementing the process locally. Representatives from the CRH met and corresponded regularly by teleconference 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. Nine 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, but largely played a role of listening and learning.

Figure 2: Steering Committee

Gary Dorn	Chaplain, HAMC
Mandy McNeff	College & Career Readiness Coordinator, North Central Education Cooperative
Darcie Rose	Executive Assistant, HAMC
Jodi Schaan	Medical Staff Coordinator, HAMC
Sue Steinke	Mayor, City of Rugby
Samantha Wentz	RN, LRDHU

The original survey tool was developed and used by the CRH. In order to revise the original survey tool to ensure the data gathered met the needs of hospitals and public health, the 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, the 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.

The 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. The 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. The CRH connects the UNDSMHS and other necessary resources, to rural communities and their healthcare organizations in order to maintain access to quality care for rural residents. In this capacity, the 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 nine community members was convened and first met on November 5, 2019. During this community group meeting, 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 December 3, 2019 with nine community members in attendance. At this second meeting the 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, law enforcement, agricultural, education, and faith community. Not all members of the group were present at both meetings.

Interviews

One-on-one interviews with four key informants were conducted in person in Rugby on November 5, 2019. One additional key informant interview was conducted over the phone in November of 2019. A representative from the CRH conducted the interview. 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 healthcare by local providers, awareness of health services offered locally, barriers to receiving health services, and suggestions for improving collaboration within the community.

Survey

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

The community member survey was distributed to various residents of Pierce County, which is 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; and
- Suggestions for capital improvements.

To promote awareness of the assessment process, a press release was printed in the Pierce County Tribune, a link to the survey was promoted on websites (HAMC, Rugby JDA, Rugby Chamber, cities of Rugby, Maddock and Dunseith), the HAMC Facebook page, the local Public Access Channel, and posted at the Heart of America Public Library. Approximately 100 paper community member surveys were available for distribution in Rugby, Dunseith, and Maddock. The surveys were distributed by HAMC, the three clinic locations, the clinic pharmacy, LRDHU, and Rugby's mayor.

To help ensure anonymity, included with each survey was a postage-paid return envelope to the 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 September 30, 2019 to November 7, 2019.

Area residents were also given the option of completing an online version of the survey, which was publicized as indicated above. One hundred fifty-one online surveys were completed. Four of those online respondents used the QR code to complete the survey. In total, counting both paper and online surveys, 170 community member surveys were completed, equating to an 8% response rate. This response rate is low for this type of unsolicited survey methodology.

Secondary Data

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

Casey Foundation (www.ndkidscount.org). and Youth Risk Behavior Surveillance System (YRBSS) data, which is published by the Centers for Disease Control and Prevention (https://www.cdc.gov/healthyyouth/data/yrbs/index.htm).

Social Determinants of Health

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

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

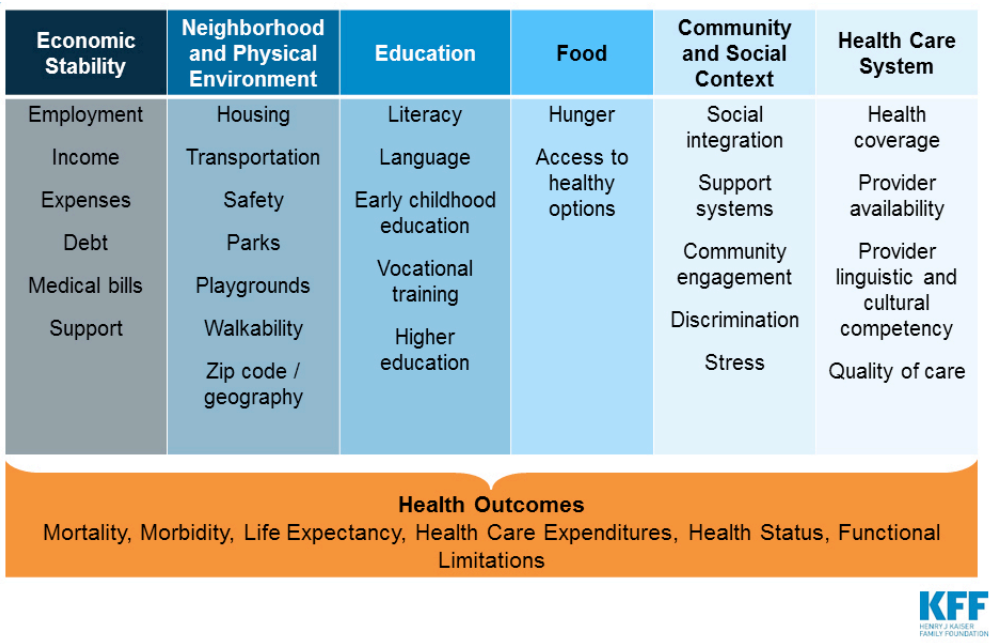
Healthy People 2020, (https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health) illustrates that health and healthcare, while vitally important, play only one small role (approximately 20%) in the overall health of individuals, and ultimately of a community. Social and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

Figure 3: Social Determinants of Health

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

For more information and resources on social determinants of health, visit the Rural Health Information Hub website, https://www.ruralhealthinfo.org/topics/social-determinants-of-health.

Figure 4: Social Determinants of Health



Demographic Information

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

	Pierce County	North Dakota
Population (2018)	4,081	760,077
Population change (2010-2018)	-6.4%	13.0%
People per square mile (2010)	4.3	9.7
Persons 65 years or older (2018)	23.6%	15.3%
Persons under 18 years (2018)	22.4%	23.5%
Median age (2017 est.)	46.1	35.2
White persons (2017)	93.1%	87.0%
Non-English speaking (2017)	1.5%	5.6%
High school graduates (2017)	90.4%	92.3%
Bachelor's degree or higher (2017)	15.8%	28.9%
Live below poverty line (2016)	11.8%	10.7%
Persons without health insurance, under age 65 years (2016)	10.3%	8.4%

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

While the population of North Dakota has grown in recent years, Pierce County has seen a decrease in population since 2010. The U.S. Census Bureau estimates show that the county's population decreased from 4,357 (2010) to 4,081 (2018).

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 2019 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 2019 County Health Rankings – a flow chart of how a county's rank is determined – may be found in Appendix B. For further information, visit the County Health Rankings website at www.countyhealthrankings.org.

Health Outcomes

- Length of life
- Quality of life

Health Factors

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

Health Factors (continued)

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

Table 2 summarizes the pertinent information gathered by County Health Rankings as it relates to 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 LRDHU and HAMC or of any particular medical facility.

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

Pierce County rankings within the state are included in the summary following. For example, the county ranks 46th out of 49 ranked counties in North Dakota on health outcomes and 38th on health factors. The measures marked with a with a bullet point (•) are those where a county is not measuring up to the state rate/percentage; a square (■) indicates that the county is not meeting the U.S. Top 10% rate on that measure. Measures that are not marked with a colored checkmark but are marked with a plus sign (+) indicate that the county is doing better than the U.S. Top 10%.

The data from County Health Rankings shows that Pierce County is doing better than many counties compared to the rest of the state on all but two of the outcomes, landing at or above rates for other North Dakota counties. However, the county, like many North Dakota counties, is doing poor in many areas when it comes to the U.S. Top 10% ratings.

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

- Poor or fair health
- Poor mental health days
- Adult smoking
- Excessive drinking
- Alcohol-impaired driving deaths
- Sexually transmitted infections
- Teen birth rate
- Dentists
- Mammography screenings
- Social associations
- Violent crime
- Air pollution – particulate matter

Outcomes and factors in which the county was performing poorly relative to the rest of the state include:

- Poor physical health days
- Low birth weight
- Adult obesity
- Food environment index
- Physical inactivity
- Access to exercise opportunities
- Uninsured
- Primary care physicians
- Preventable hospital stays
- Flu vaccinations
- Unemployment
- Children in poverty
- Income inequality
- Children in single-parent households
- Injury deaths
- Severe housing problems

● = 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* 2019 – PIERCE COUNTY

	Pierce County	U.S. Top 10%	North Dakota
Ranking: Outcomes	**46th**		**(of 49)**
Premature death		5,400	6,700
Poor or fair health	14% ■	12%	14%
Poor physical health days (in past 30 days)	3.1 ■●	3.0	3.0
Poor mental health days (in past 30 days)	3.0 +	3.1	3.1
Low birth weight	11% ■●	6%	6%
Ranking: Factors	**38th**		**(of 49)**
Health Behaviors			
Adult smoking	18% ■	14%	20%
Adult obesity	33% ■●	26%	32%
Food environment index (10=best)	8.4 ■●	8.7	9.1
Physical inactivity	25% ■●	19%	22%
Access to exercise opportunities	71% ■●	91%	74%
Excessive drinking	21% ■	13%	26%
Alcohol-impaired driving deaths	38% ■	13%	46%
Sexually transmitted infections	139.1 +	152.8	456.5
Teen birth rate	15 ■	14	23
Clinical Care			
Uninsured	10% ■●	6%	8%
Primary care physicians	1,420:1 ■●	1,050:1	1,320:1
Dentists	1,020:1 +	1,260:1	1,530:1
Mental health providers		310:1	570:1
Preventable hospital stays	4,738 ■●	2,765	4,452
Mammography screening (% of Medicare enrollees ages 67-69 receiving screening)	52% +	49%	50%
Flu vaccinations (% of fee-for-service Medicare enrollees receiving vaccination)	24% ■●	52%	47%
Social and Economic Factors			
Unemployment	3.2% ■●	2.9%	2.6%
Children in poverty	15% ■●	11%	11%
Income inequality	5.4 ■●	3.7	4.4
Children in single-parent households	30% ■●	20%	27%
Social associations	25.8 +	21.9	16.0
Violent crime	138 ■	63	258
Injury deaths	88 ■●	57	69
Physical Environment			
Air pollution – particulate matter	5.4 +	6.1	5.4
Drinking water violations	No		
Severe housing problems	17% ■●	9%	11%

Source: http://www.countyhealthrankings.org/app/north-dakota/2018/rankings/outcomes/overall

Children's Health

The National Survey of Children's Health touches on multiple intersecting aspects of children's lives. Data are not available at the county level; listed below is information about children's health in North Dakota. The full survey includes physical and mental health status, access to quality healthcare, and information on the child's family, neighborhood, and social context. Data is from 2016-17. More information about the survey may be found at www.childhealthdata.org/learn/NSCH.

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

Table 3: Selected Measures Regarding Children's Health (For children aged 0-17 unless noted otherwise)

Health Status	North Dakota	National
Children born premature (3 or more weeks early)	10.8%	11.6%
Children 10-17 overweight or obese	35.8%	31.3%
Children 0-5 who were ever breastfed	79.4%	79.2%
Children 6-17 who missed 11 or more days of school	4.6%	6.2%
Healthcare		
Children currently insured	93.5%	94.5%
Children who had preventive medical visit in past year	78.6%	84.4%
Children who had preventive dental visit in past year	74.6%	77.2%
Young children (10 mos.-5 yrs.) receiving standardized screening for developmental or behavioral problems	20.7%	30.8%
Children aged 2-17 with problems requiring counseling who received needed mental healthcare	86.3%	61.0%
Family Life		
Children whose families eat meals together 4 or more times per week	83.0%	78.4%
Children who live in households where someone smokes	29.8%	24.1%
Neighborhood		
Children who live in neighborhood with a parks, recreation centers, sidewalks and a library	58.9%	54.1%
Children living in neighborhoods with poorly kept or rundown housing	12.7%	16.2%
Children living in neighborhood that's usually or always safe	94.0%	86.6%

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

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

- Obese or overweight children ages 10-17;
- Children with health insurance;
- Preventive primary care and dentist visits;
- Developmental/behavioral screening for children 10 months to 5 years of age;

- Children ages 2-17 years who have received needed mental healthcare; and
- 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. 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 that Pierce County is performing more poorly than the North Dakota average on all of the examined measures except two: 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 measure of licensed childcare capacity (22.3% lower rate in Pierce County).

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

	Pierce County	North Dakota
Uninsured children (% of population age 0-18), 2016	9.3%	7.5%
Uninsured children below 200% of poverty (% of population), 2016	45.3%	43.6%
Medicaid recipient (% of population age 0-20), 2017	32.2%	27.3%
Children enrolled in Healthy Steps (% of population age 0-18), 2013	1.9%	1.6%
Supplemental Nutrition Assistance Program (SNAP) recipients (% of population age 0-18), 2017	17.8%	20.1%
Licensed childcare capacity (% of population age 0-13), 2018	22.0%	44.3%
4-Year High School Cohort Graduation Rate, 2017	100.0%	88.0%

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

Another means for obtaining data on the youth population is through the Youth Risk Behavior Survey (YRBS). The YRBS was developed in 1990 by the Centers for Disease Control and Prevention (CDC) to monitor priority health risk behaviors that contribute markedly to the leading causes of death, disability and social problems among youth and adults in the United States. The YRBS was designed to monitor trends, compare state health risk behaviors to national health risk behaviors and intended for use to plan, evaluate and improve school and community programs. North Dakota began participating in the YRBS survey in 1995. Students in grades, 7-8 & 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 2013, 2015, and 2017. At this time, the North Dakota-specific data for 2017 is not available, so data for 2013 and 2015 are shown for North Dakota. 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 2013 to 2015, and "↓" for a decreased trend in the data changes from 2013 to 2015. The final column shows the 2017 national average percentage. For a more complete listing of the YRBS data, see Appendix C.

TABLE 5: Youth Behavioral Risk Survey Results

North Dakota High School Survey

Sources: https://www.nd.gov/dpi/uploads/1298/2015NDHStatewideYRBSReport20151110FINAL2NoCover.pdf; https://www.nd.gov/dpi/uploads/1298/2015NDHTrendReportUpdated42016.pdf; https://www.cdc.gov/healthyyouth/data/yrbs/results.htm

	ND 2013	ND 2015*	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2017
Injury and Violence						
% of students who rarely or never wore a seat belt.	11.6	8.5	↓	10.5	7.5	5.9
% 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)	21.9	17.7	↓	21.1	15.2	16.5
% of students who talked on a cell phone while driving (on at least 1 day during the 30 days before the survey)	67.9	61.4	↓	60.7	58.8	NA
% of students who texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey)	59.3	57.6	=	56.7	54.4	39.2
% of students who were in a physical fight on school property (one or more times during the 12 months before the survey)	8.8	5.4	↓	6.9	6.1	8.5
% of students who were ever physically forced to have sexual intercourse (when they did not want to)	7.7	6.3	=	6.5	7.4	7.4
% of students who were bullied on school property (during the 12 months before the survey)	25.4	24.0	=	27.5	22.4	19.0
% of students who were electronically bullied (includes e-mail, chat rooms, instant messaging, websites, or texting during the 12 months before the survey)	17.1	15.9	=	17.7	15.8	14.9
% of students who made a plan about how they would attempt suicide (during the 12 months before the survey)	13.5	13.5	=	12.8	13.7	13.6
Tobacco, Alcohol, and Other Drug Use						
% 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 1 day during the 30 days before the survey)	NA	22.3	↑	19.7	22.8	13.2
% of students who currently used cigarettes, cigars, or smokeless tobacco (on at least 1 day during the 30 days before the survey)	27.5	20.9	↓	22.9	19.8	14.0
% of students who drank five or more drinks of alcohol in a row (within a couple of hours on at least 1 day during the 30 days before the survey)	21.9	17.6	↓	19.8	17.0	13.5
% of students who currently used marijuana (one or more times during the 30 days before the survey)	15.9	15.2	=	13.2	17.1	19.8
% of students who ever took prescription drugs without a doctor's prescription (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax, one or more times during their life)	17.6	14.5	↓	13.2	16.0	14.0

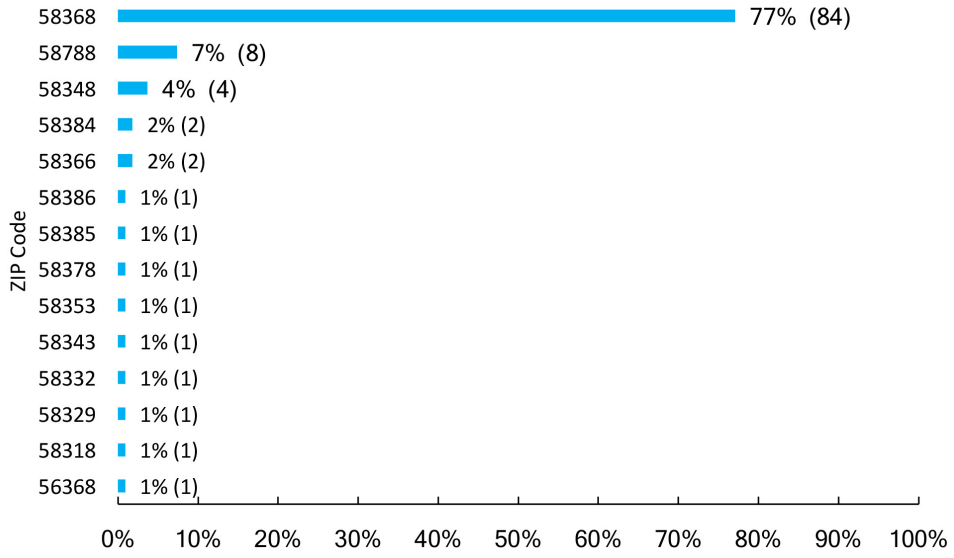
Weight Management, Dietary Behaviors, and Physical Activity						
% of students who were overweight (>= 85th percentile but <95th percentile for body mass index)	15.1	14.7	=	15.4	14.6	15.6
% of students who were obese (>= 95th percentile for body mass index)	13.5	14.0	=	16.3	12.9	14.8
% of students who did not eat fruit or drink 100% fruit juices (during the 7 days before the survey)	3.4	3.9	=	4.3	4.1	5.6
% of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the 7 days before the survey)	6.0	4.7	=	4.5	5.2	7.2
% 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 7 days before the survey)	23.4	18.7	=	21.4	18.0	18.7
% of students who did not drink milk (during the 7 days before the survey)	11.1	13.9	↑	11.6	13.7	26.7
% of students who did not eat breakfast (during the 7 days before the survey)	10.5	11.9	=	10.7	11.8	14.1
% 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)	3.1	2.2	=	2.4	2.8	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 7 days before the survey)	50.6	51.3	=	51.7	50.1	46.5
% of students who watched television 3 or more hours per day (on an average school day)	21.0	18.9	=	20.7	18.2	20.7
% of students who played video or computer games or used a computer 3 or more hours per day (for something that was not school work on an average school day)	34.4	38.6	↑	39.4	38.0	43.0
Other						
% of students who ever had sexual intercourse	44.9	38.9	↓	39.3	39.1	39.5
% of students who had 8 or more hours of sleep (on an average school night)	30.0	29.5	=	34.5	28.7	25.4
% of students who brushed their teeth on seven days (during the 7 days before the survey)	71.5	71.0	=	67.8	70.1	NA

Survey Results

As noted previously, 170 community members completed the survey in communities throughout the counties in the HAMC service area. For all questions that contained an "Other" response, all of those direct responses may be found in Appendix D. In some cases, a summary of those comments is additionally included in the report narrative. The "Total respondents" number under each heading indicates the number of people who responded to that particular question.

The survey requested that respondents list their home zip code. While not all respondents provided a zip code, 109 did, revealing that the large majority of respondents (77%, N=84) lived in Rugby. These results are shown in Figure 5.

Figure 5: Survey Respondents' Home Zip Code
Total respondents: 109



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:

- 45% (N=56) were age 55 or older.
- The majority (87%, N=107) were female.
- 42% (N=52) had bachelor's degrees or higher.
- The number of those working full time (67%, N=82) was just less than five times higher than those who were retired (14%, N=17).
- 96% (N=116) of those who reported their ethnicity/race were white/Caucasian.
- 30% of the population (N=35) had household incomes of less than $50,000.

Figures 6 through 12 show these demographic characteristics. It illustrates the range of community members' household incomes and indicates how this assessment took into account input from parties who represent the varied interests of the community served, including a balance of age ranges, those in diverse work situations, and community members with lower incomes.

Figure 6: Age Demographics of Survey Respondents
Total respondents = 124

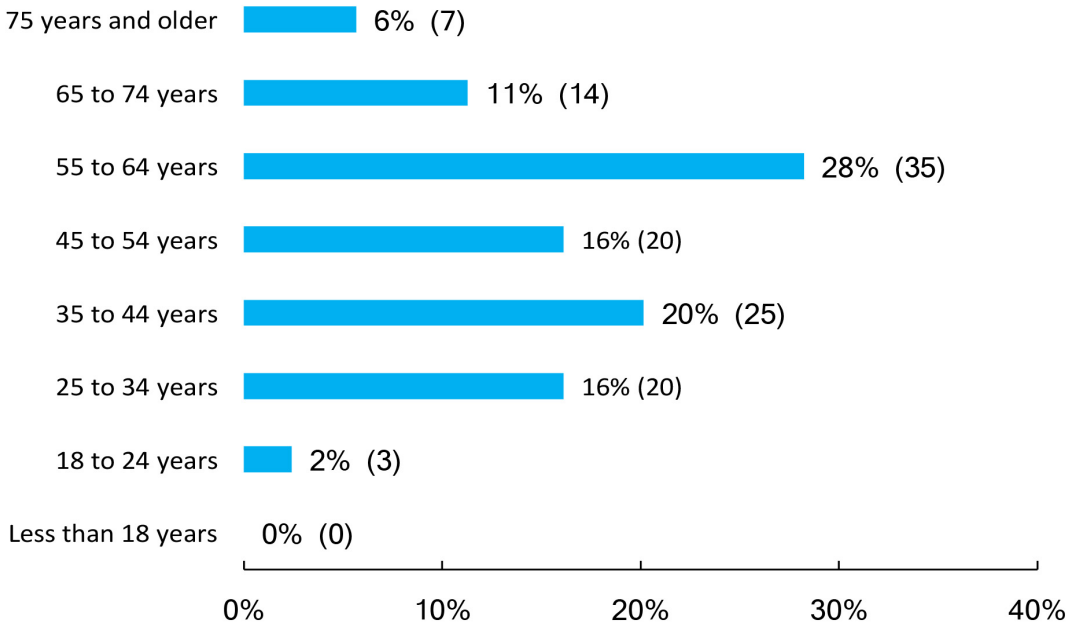


Figure 7: Gender Demographics of Survey Respondents
Total respondents = 123

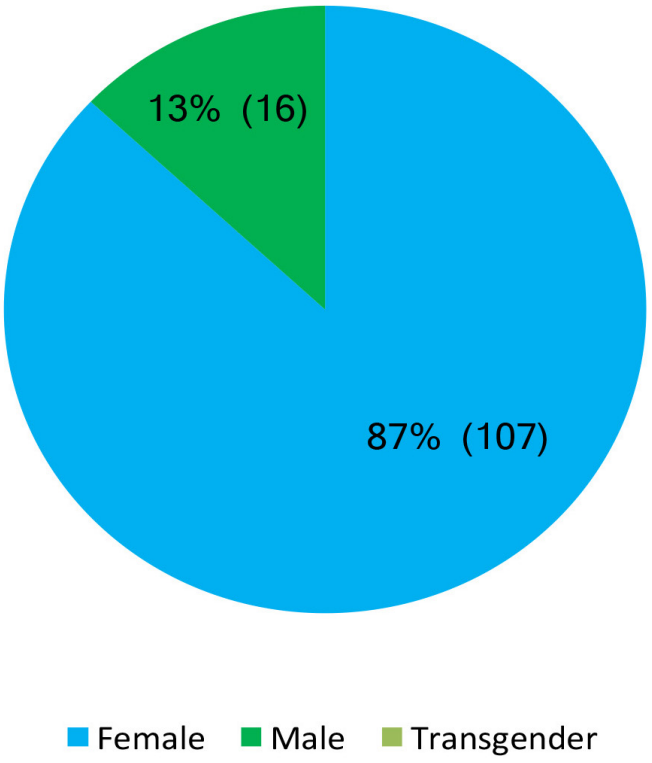


Figure 8: Educational Level Demographics of Survey Respondents
Total respondents = 125

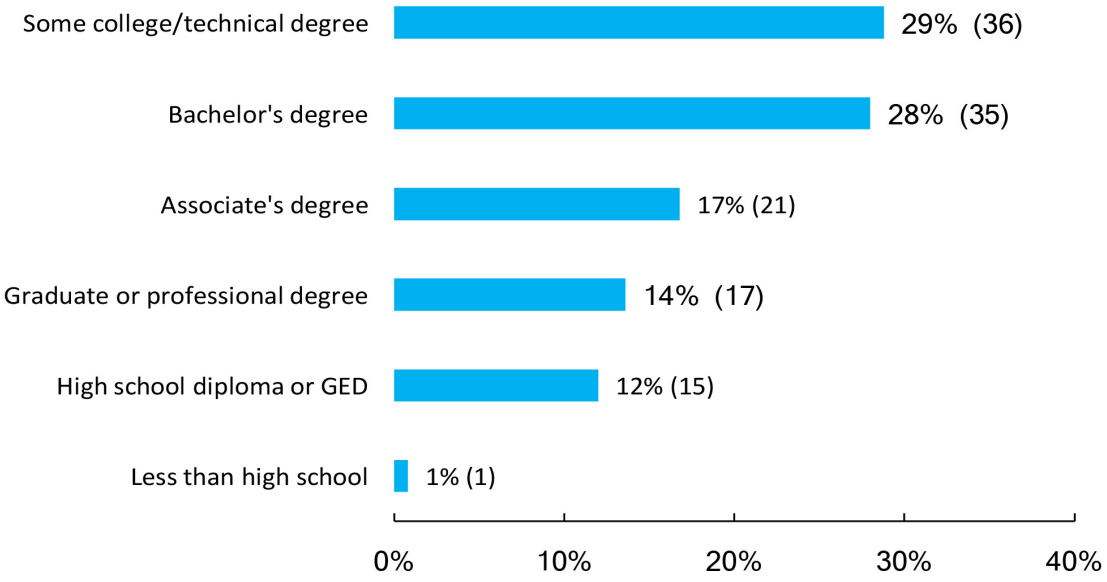
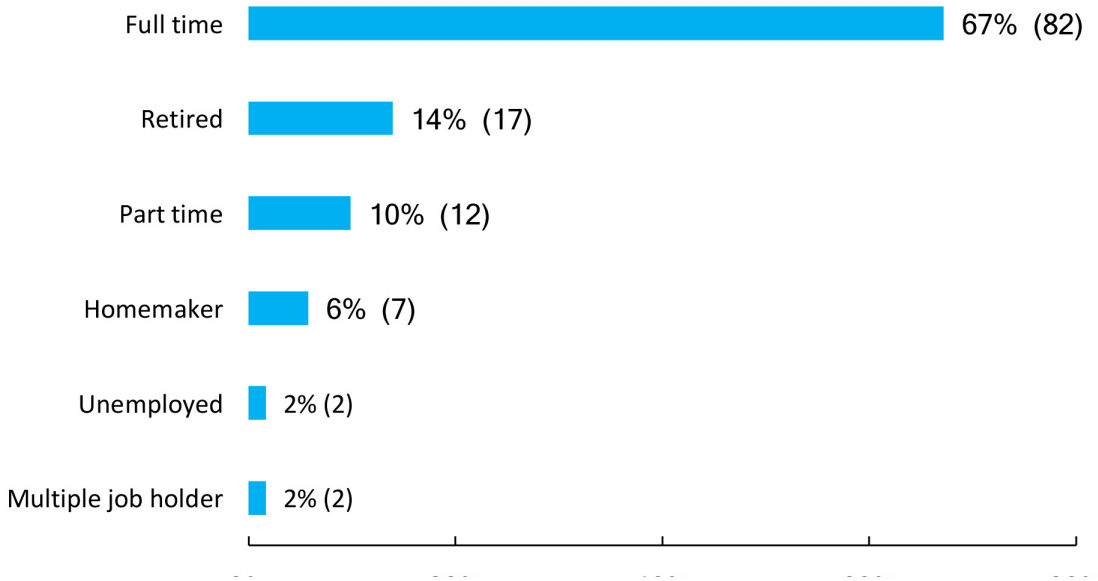
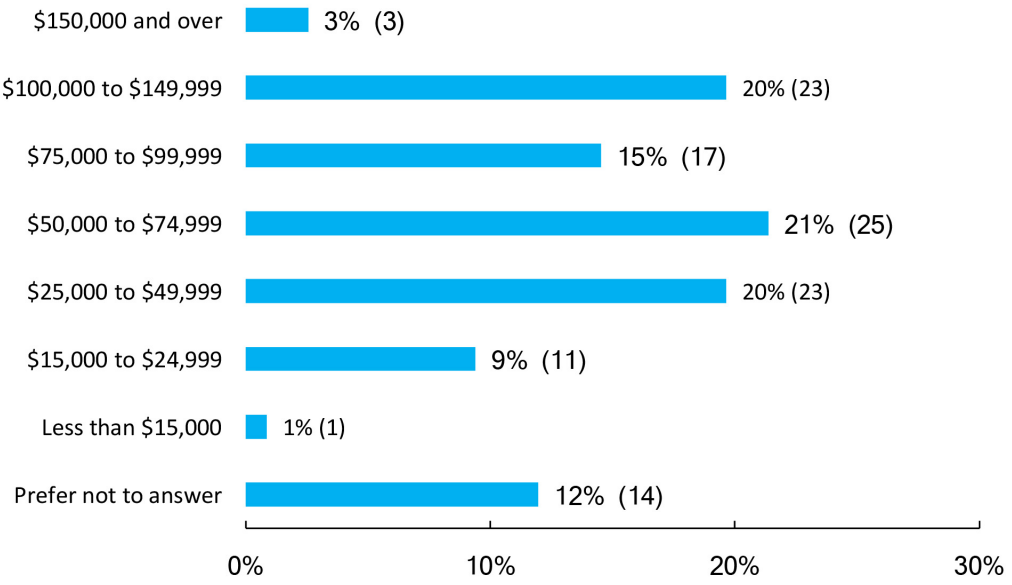


Figure 9: Employment Status Demographics of Survey Respondents
Total respondents = 122



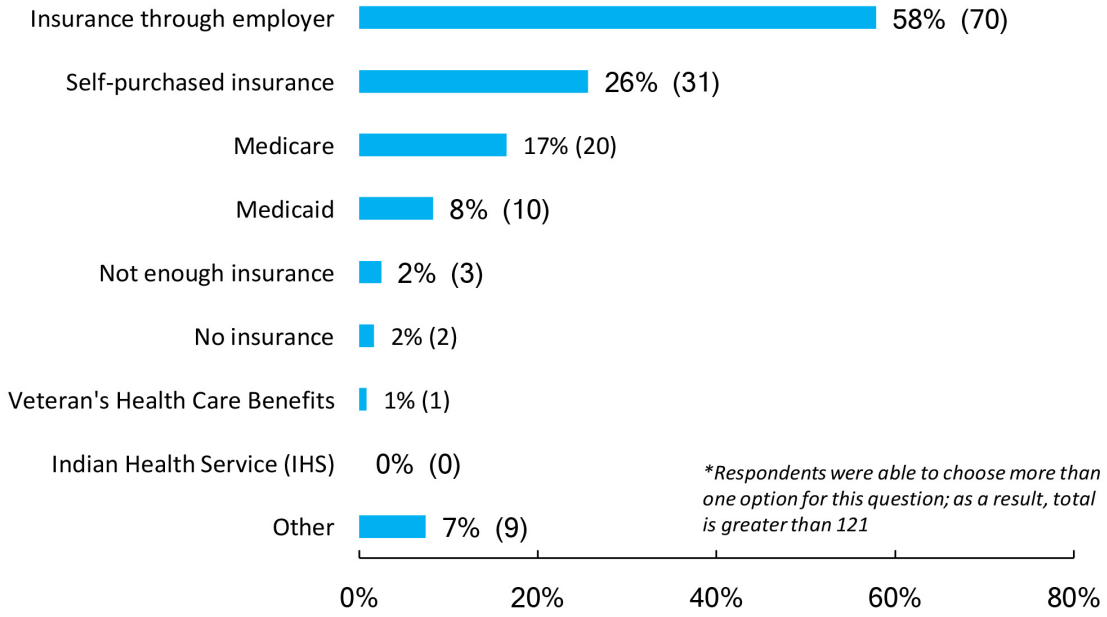
Of those who provided a household income, 10% (N=12) community members reported a household income of less than $25,000. Twenty-three percent (N=26) indicated a household income of $100,000 or more. This information is shown in Figure 10.

Figure 10: Household Income Demographics of Survey Respondents
Total respondents = 117



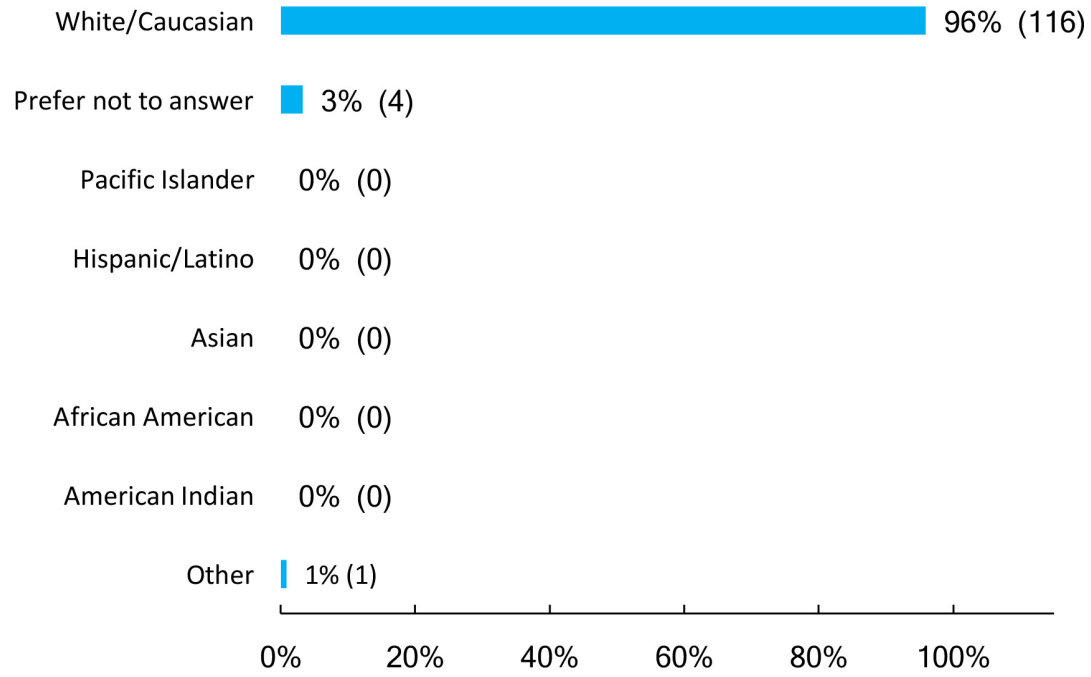
Community members were asked about their health insurance status, which is often associated with whether people have access to healthcare. Four percent (N=5) of the respondents reported having no health insurance or being under-insured. The most common insurance types were insurance through one's employer (N=70), followed by self-purchased (N=31) and Medicare (N=20).

Figure 11: Health Insurance Coverage Status of Survey Respondents
Total respondents = 121



As shown in Figure 12, nearly all of the respondents were white/Caucasian (96%). This was fairly close to the race/ethnicity of the overall population of Pierce County; the U.S. Census indicates that 93.1% of the population is white in the county.

Figure 12: Race/Ethnicity Demographics of Survey Respondents
Total respondents = 121



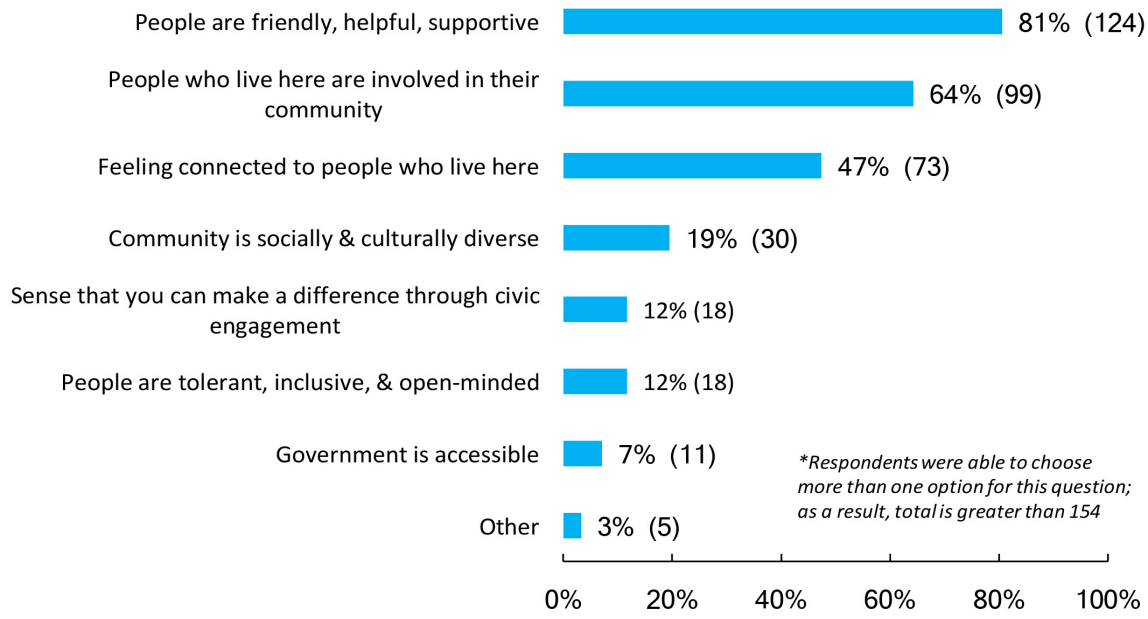
Community Assets and Challenges

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 100 respondents agreeing) that community assets include:

- Safe place to live (N=129)
- Family-friendly (N=129)
- People are friendly, helpful, supportive (N=124)
- Active faith community (N=112)

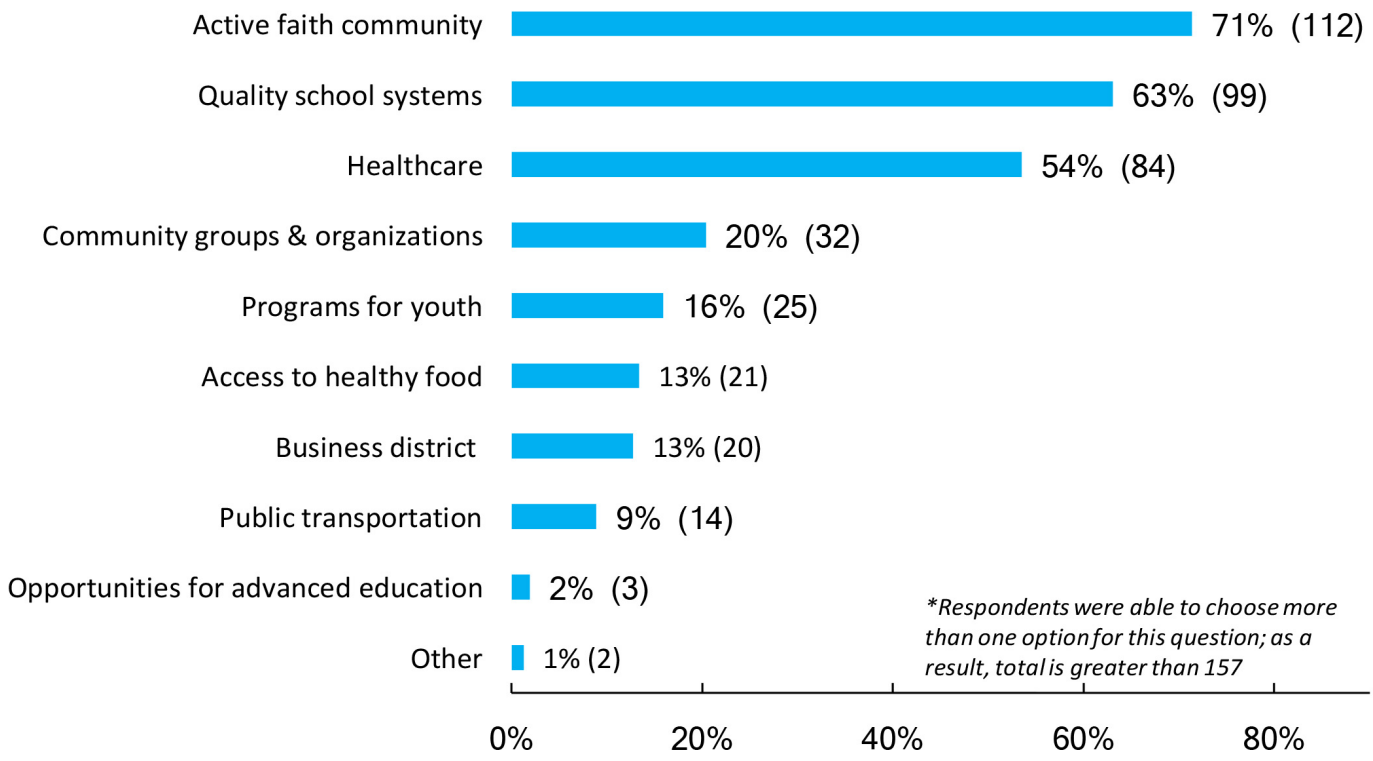
Figures 13 to 16 illustrate the results of these questions.

Figure 13: Best Things about the PEOPLE in Your Community
Total respondents = 154



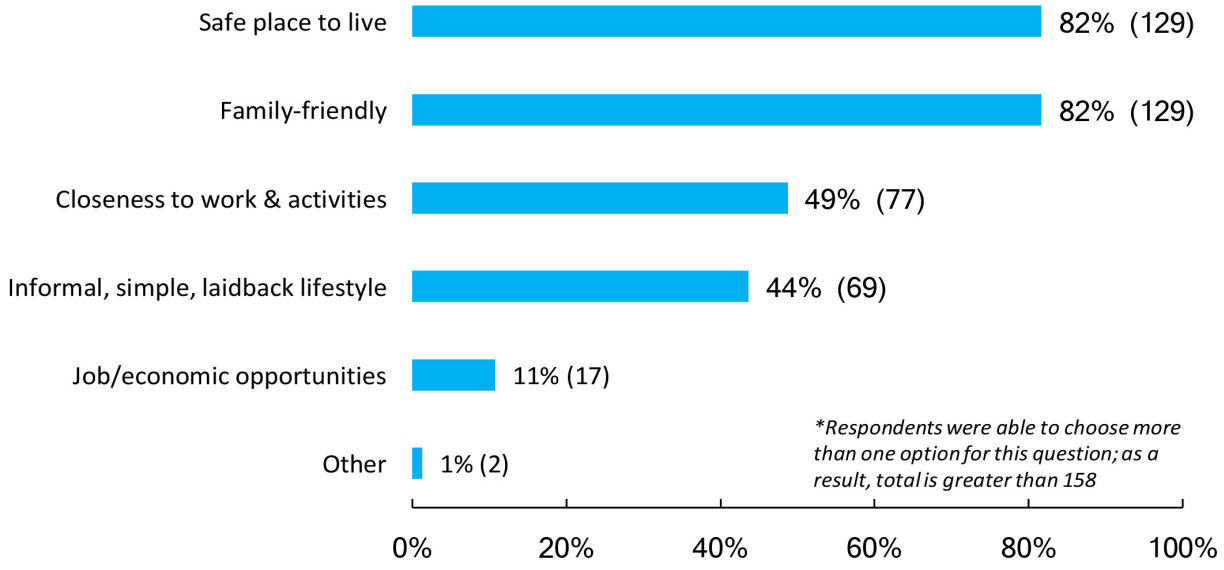
Included in the "Other" category of the best things about the people was the low rate of crime.

Figure 14: Best Things about the SERVICES AND RESOURCES in Your Community
Total respondents = 157



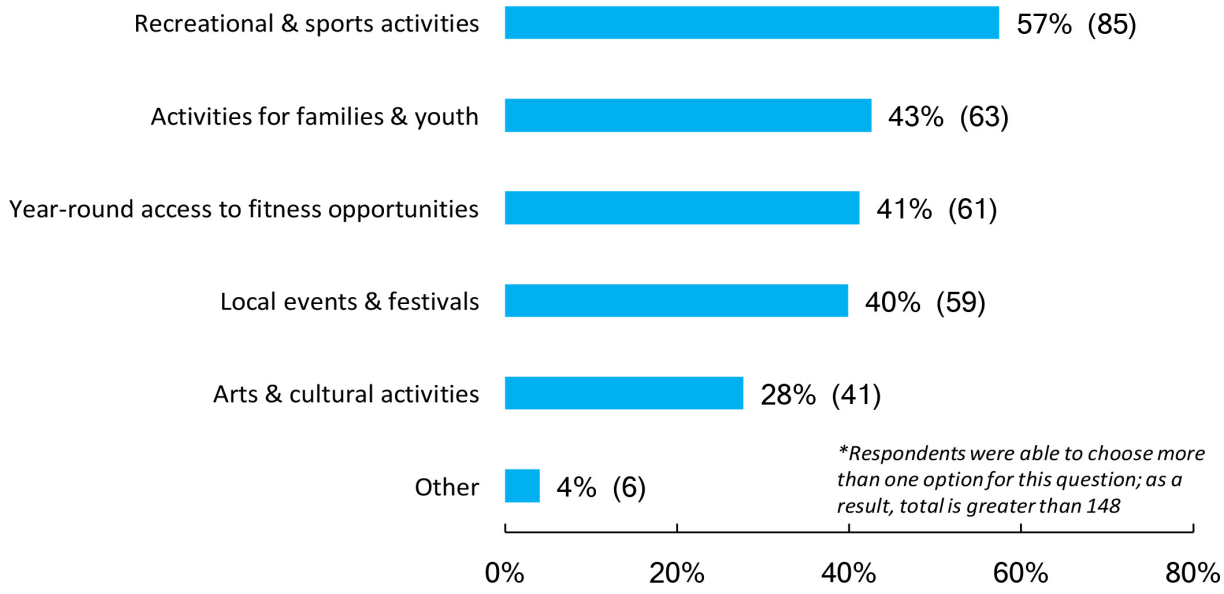
Respondents who selected "Other" specified that the best things about services and resources included active churches and that a Catholic school is in the area.

Figure 15: Best Things about the QUALITY OF LIFE in Your Community
Total respondents = 158



The "Other" responses regarding the best things about the quality of life in the community included no traffic.

Figure 16: Best Thing about the ACTIVITIES in Your Community
Total respondents = 148



Respondents who selected "Other" specified that the best things about the activities in the community included the community center, local walking & bike paths, and the county fair.

Community Concerns

At the heart of this community health assessment was a section on the survey asking survey respondents to review a wide array of potential community and health concerns in 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; and
- Senior population

With regard to responses about community challenges, the most highly voiced concerns (those having at least 55 respondents) were:

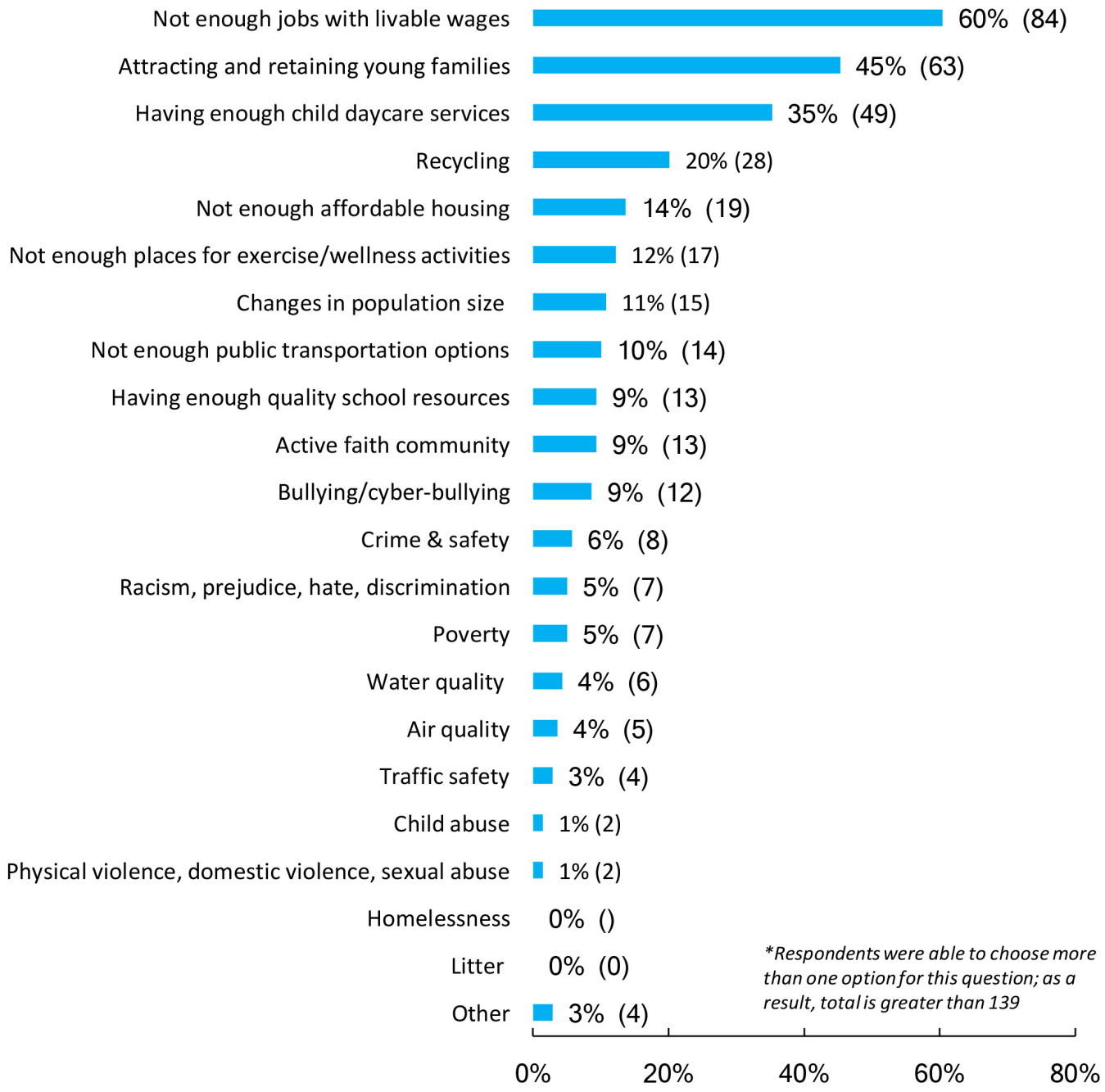
- Not enough jobs with livable wages (N=84)
- Attracting and retaining young families (N=63)
- Alcohol use and abuse – Youth (N=60)
- Cost of long-term/nursing home care (N=60)
- Depression/anxiety – Youth (N=59)
- Depression/anxiety – Adults (N=57)
- Availability of resources to help the elderly stay in their homes (N=56)

The other issues that had at least 35 votes included:

- Having enough child daycare services (N=49)
- Cost of health insurance (N=46)
- Alcohol use and abuse – Adults (N=45)
- Drug use and abuse – Youth (N=45)
- Drug use and abuse – Adults (N=43)
- Not enough activities for children and youth (N=38)
- Smoking and tobacco use or vaping/juuling – Youth (N=38)
- Stress – Adults (N=37)

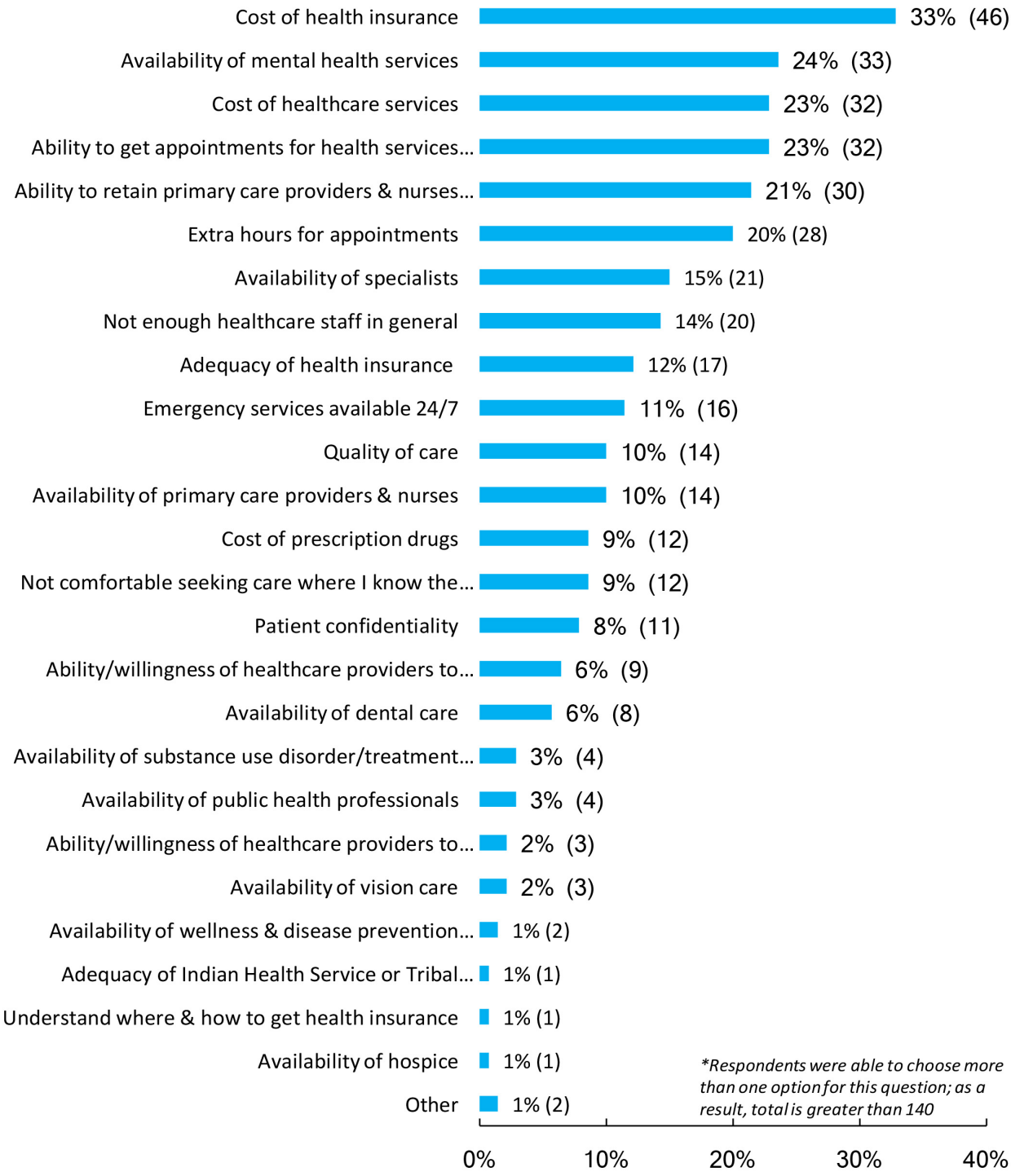
Figures 17 through 21 illustrate these results.

Figure 17: Community/Environmental Health Concerns
Total respondents = 139



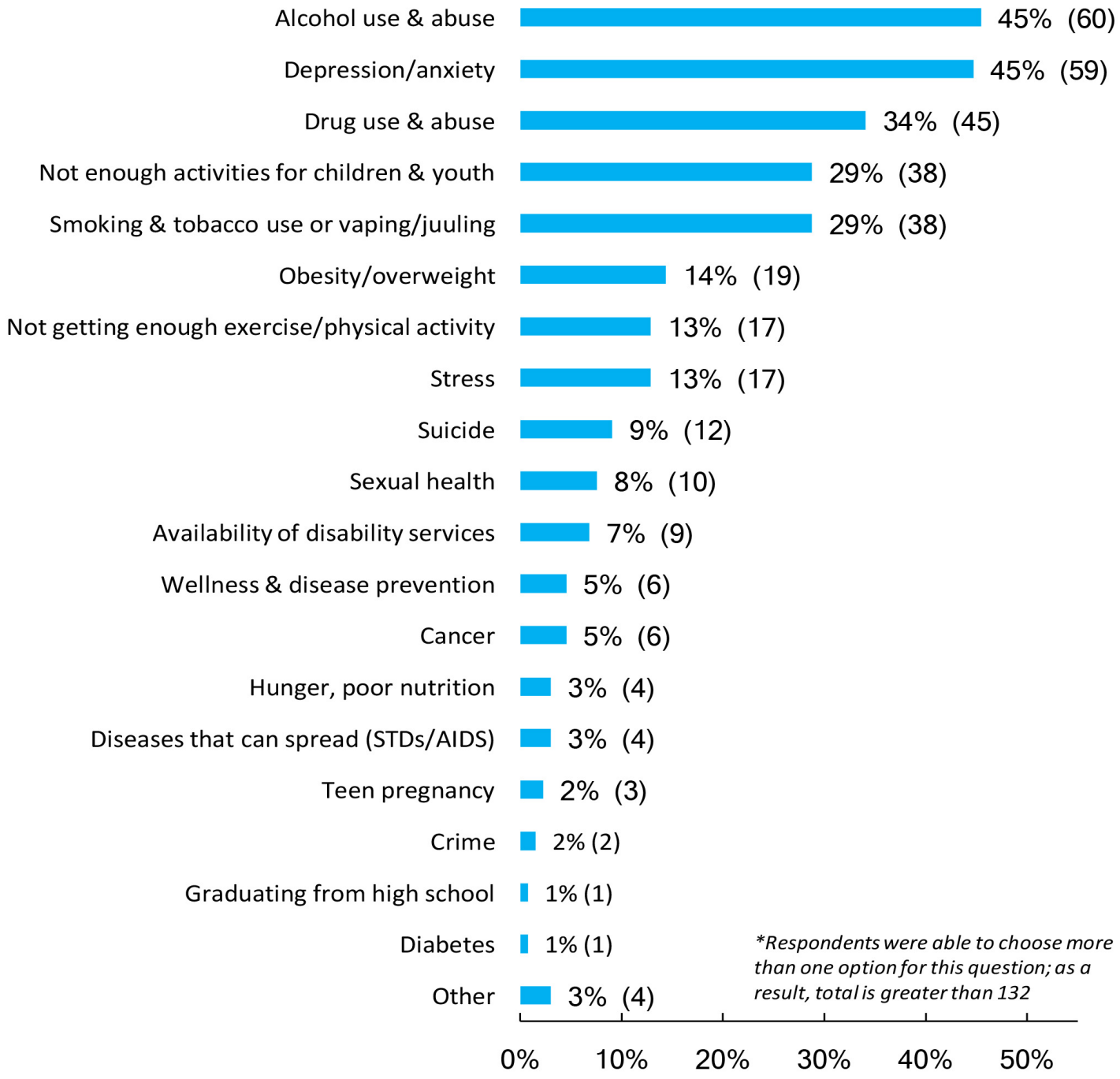
In the "Other" category for community and environmental health concerns, the following were listed: access to primary healthcare providers on a timely basis, drug use, hospital board and confidentiality, and the need for more condos or townhomes for seniors.

Figure 18: Availability/Delivery of Health Services Concerns
Total respondents = 140



Respondents who selected "Other" identified concerns in the availability / delivery of health services as availability of radiology services and administration at the hospital.

Figure 19: Youth Population Health Concerns
Total respondents = 132



Listed in the "Other" category for youth population concerns were bullying/cyber-bullying and mental health issues.

Figure 20: Adult Population Concerns
Total respondents = 133

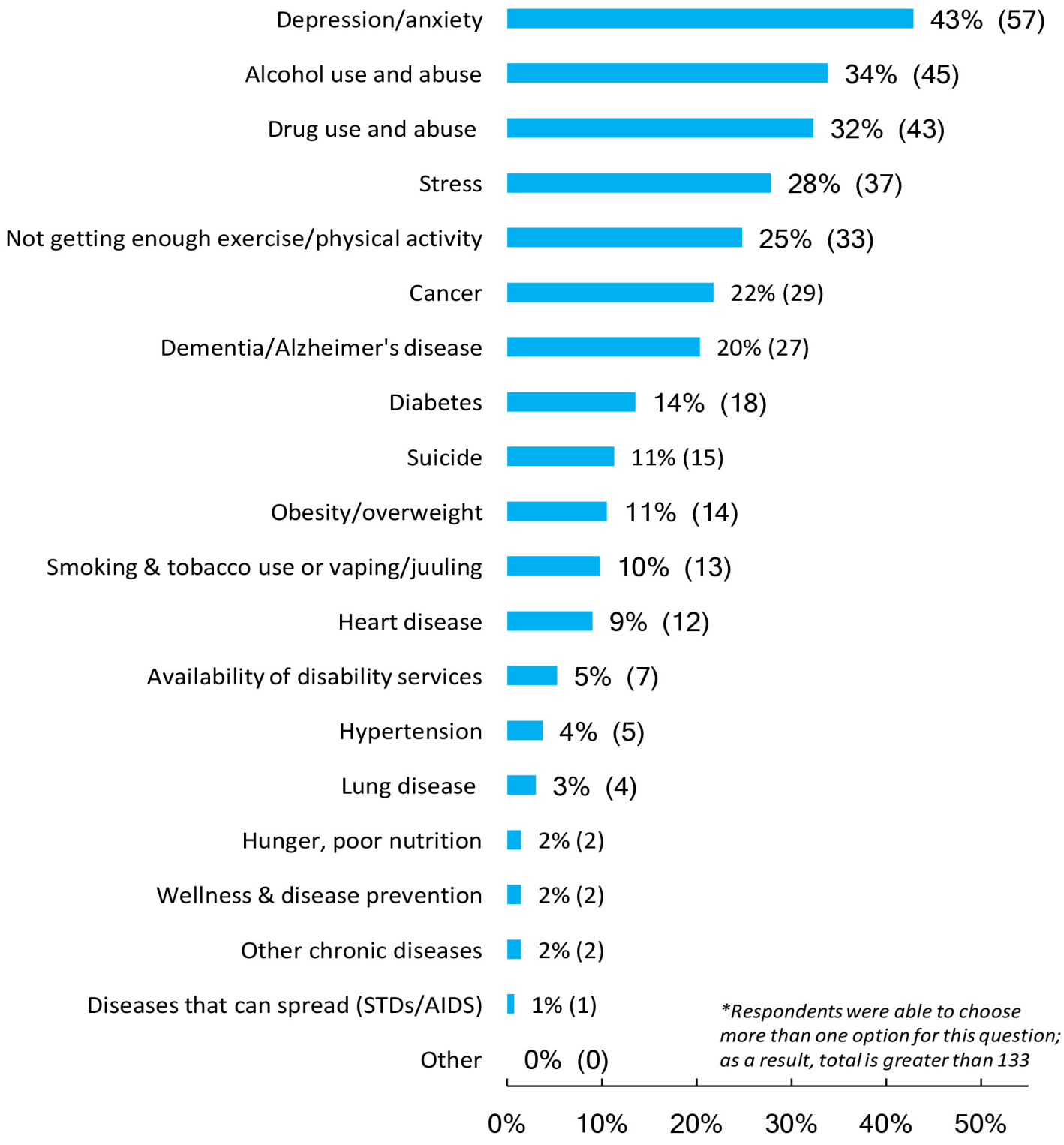
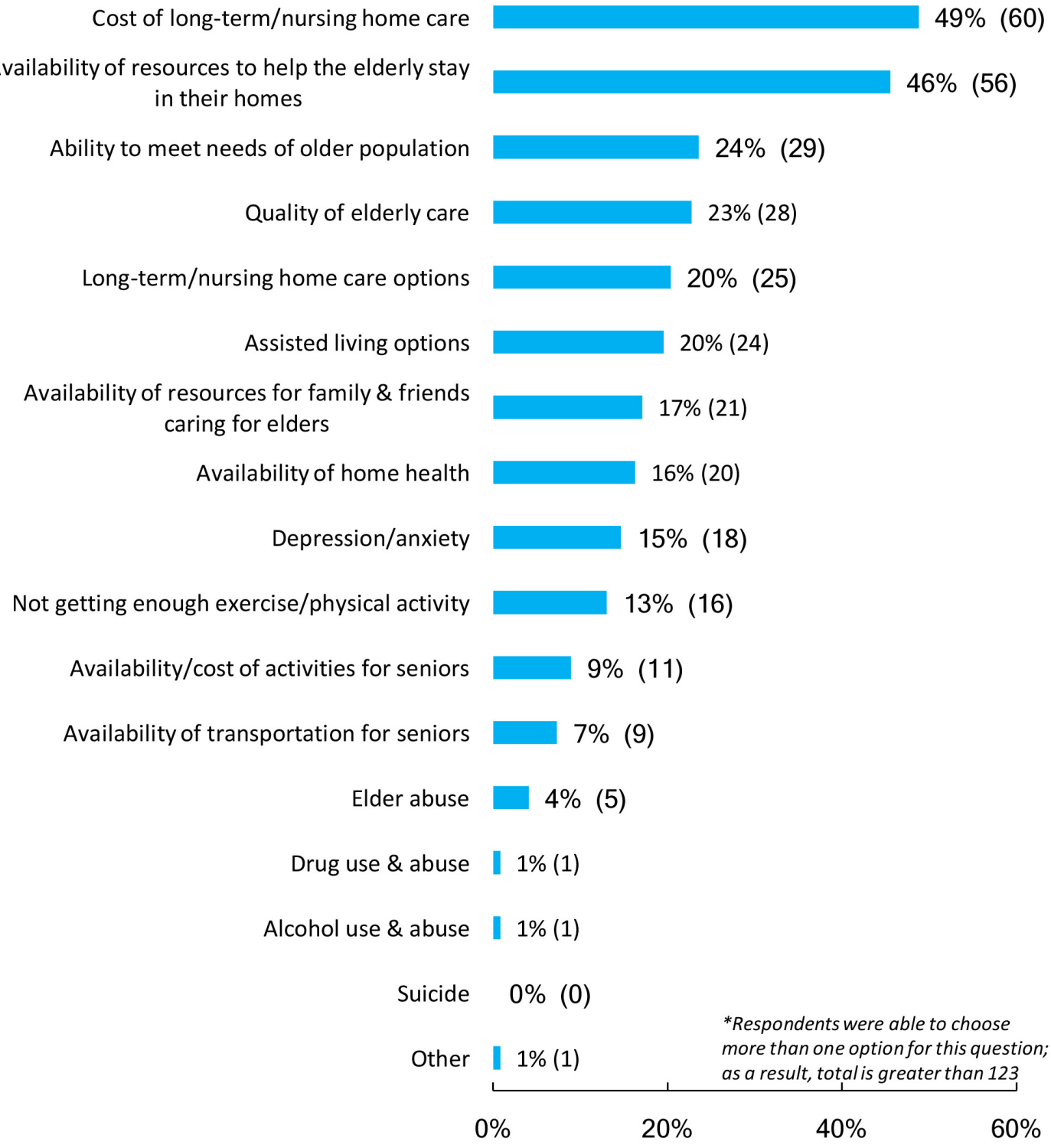


Figure 21: Senior Population Concerns
Total respondents = 123



In the "Other" category, dementia was the only concern stated.

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. Cost of living/not enough jobs with livable wages
2. Lack of mental health services

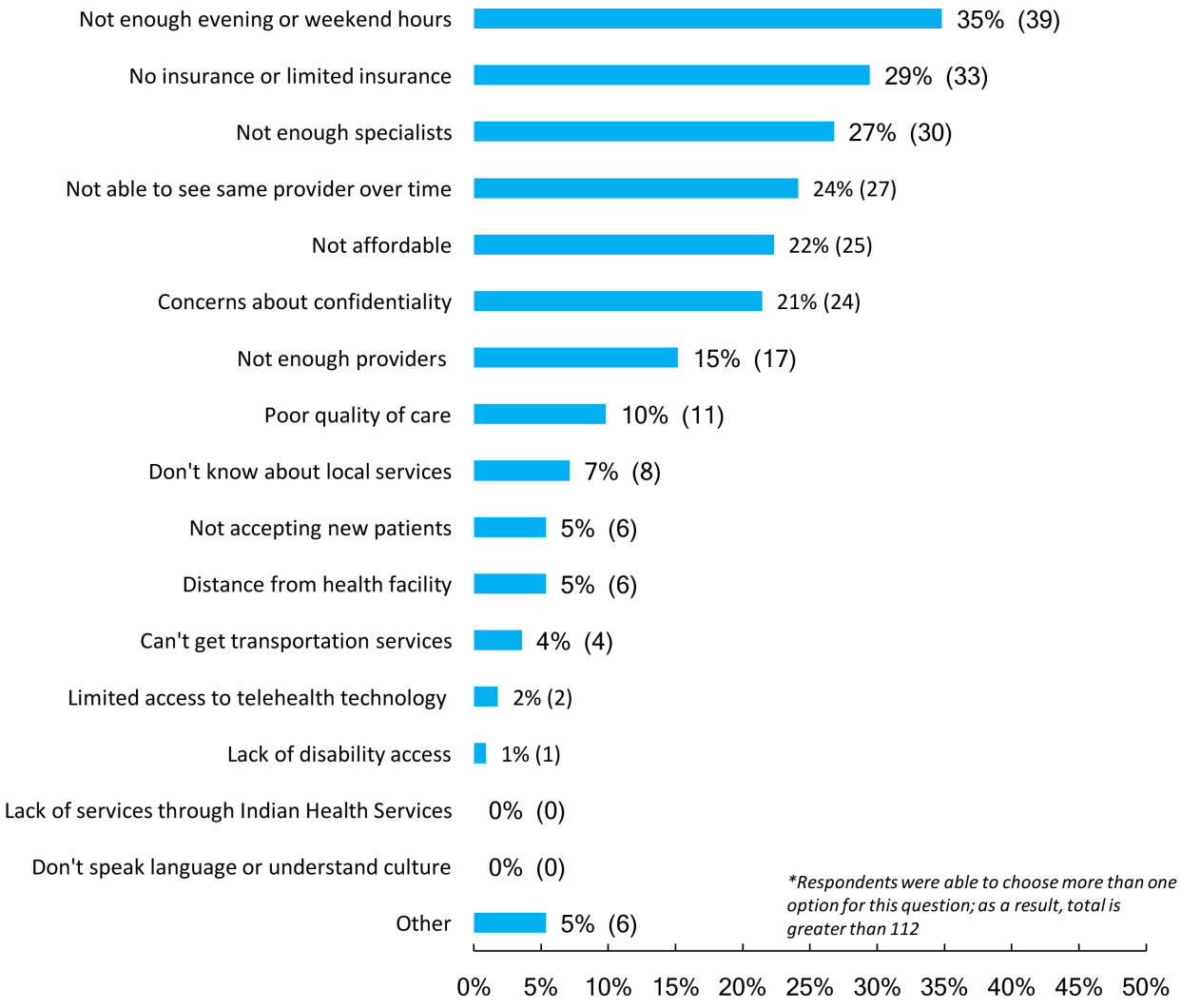
Other biggest challenges that were identified were drug use, cost of healthcare and health insurance, attracting young families, a lack of amenities and activities, quality of healthcare services, population decline/slow growth, retaining hospital staff, and a lack of affordable housing.

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 being able to get appointments/limited hours (N=40), with the next highest being not enough evening or weekend hours (N=39). After these, the next most commonly identified barriers were having little or no insurance (N=33), not enough specialists (N=30), and not being able to see the same provider over time (N=27). Some of the concerns listed in the "Other" category were in regards to high insurance deductibles, not having certain resources, and not having direct access to providers in a big system for seamless care.

Figure 22 illustrates these results.

Figure 22: Perceptions about Barriers to Care
Total respondents = 112



Considering a variety of healthcare services offered by HAMC, respondents were asked to indicate if they were aware of healthcare services offered though HAMC and to also indicate what, if any, services they or a family member have used at these facilities and at LRDHU. (See Figure 23-26).

Figure 23: Awareness and Utilization of General and Acute Services
Total respondents = 117

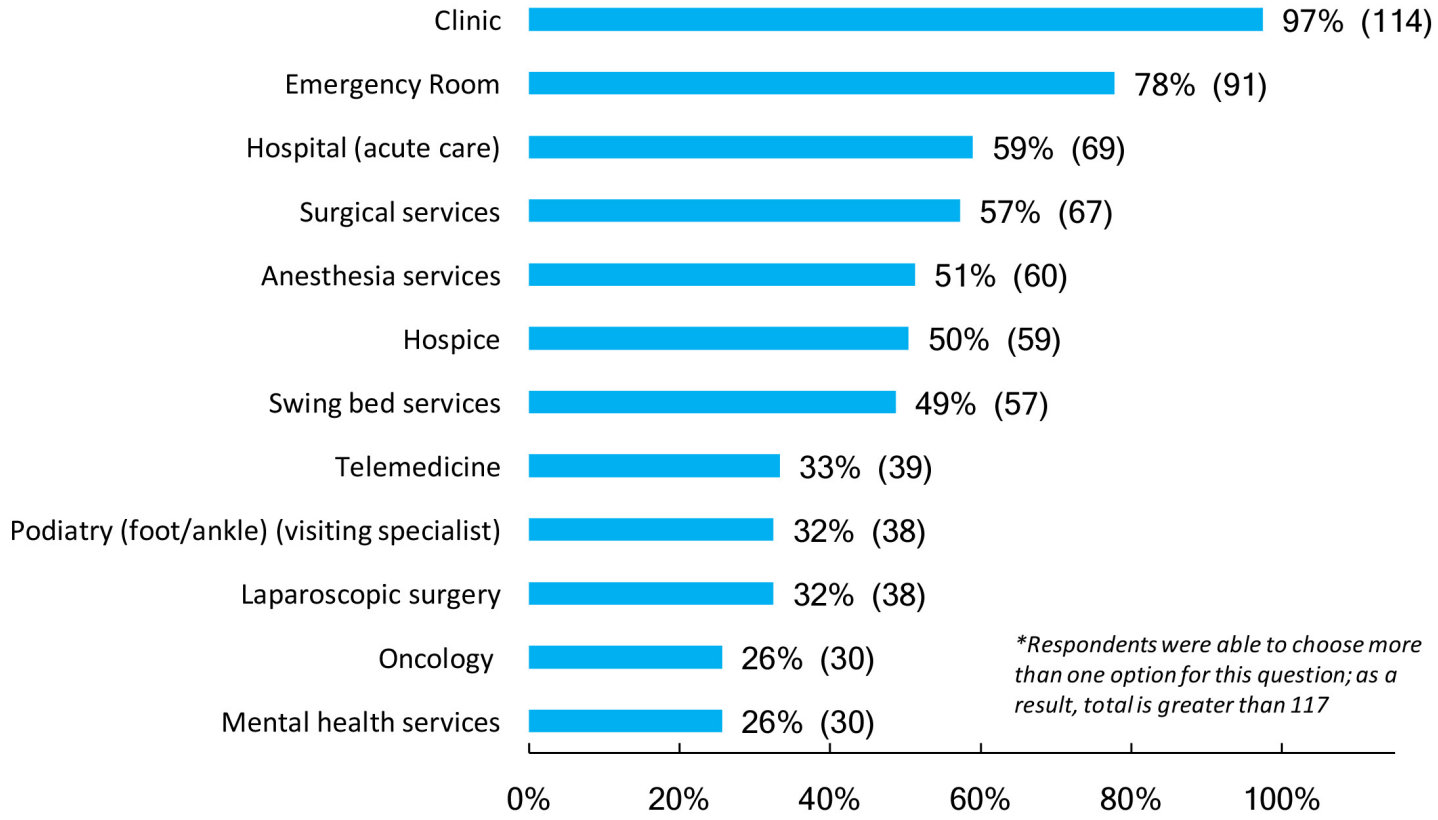


Figure 24: Awareness and Utilization of Screening/Therapy Services
Total respondents = 109

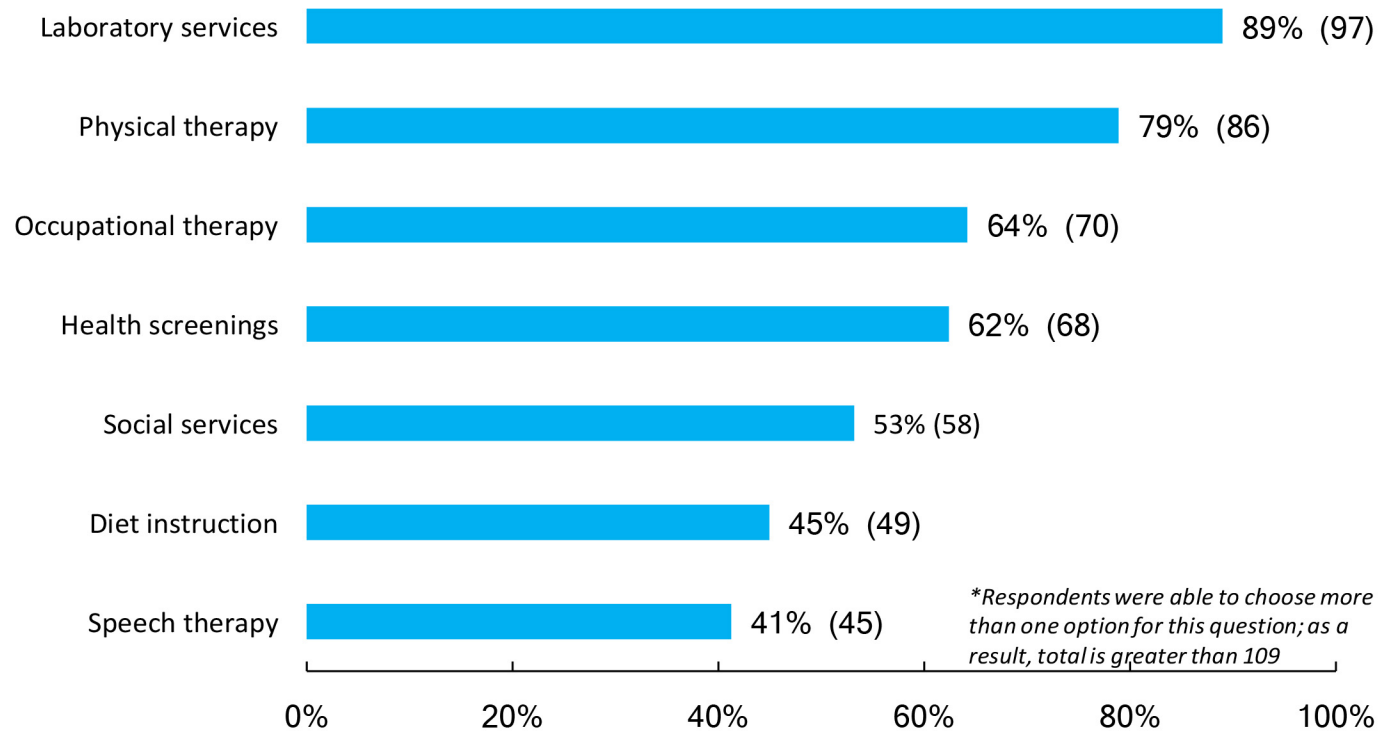


Figure 25: Awareness and Utilization of Radiology Services
Total respondents = 112

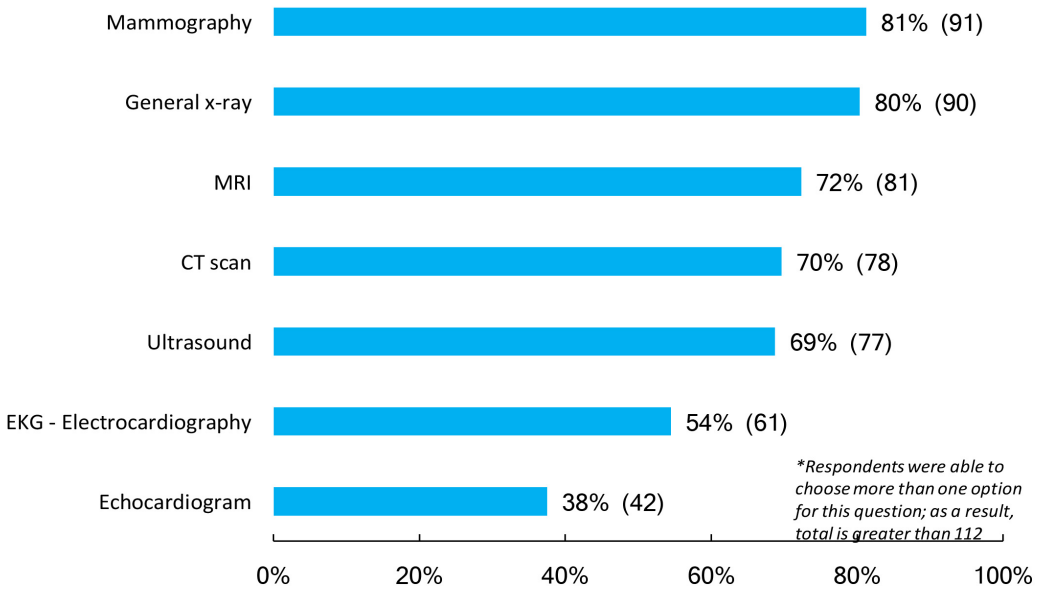
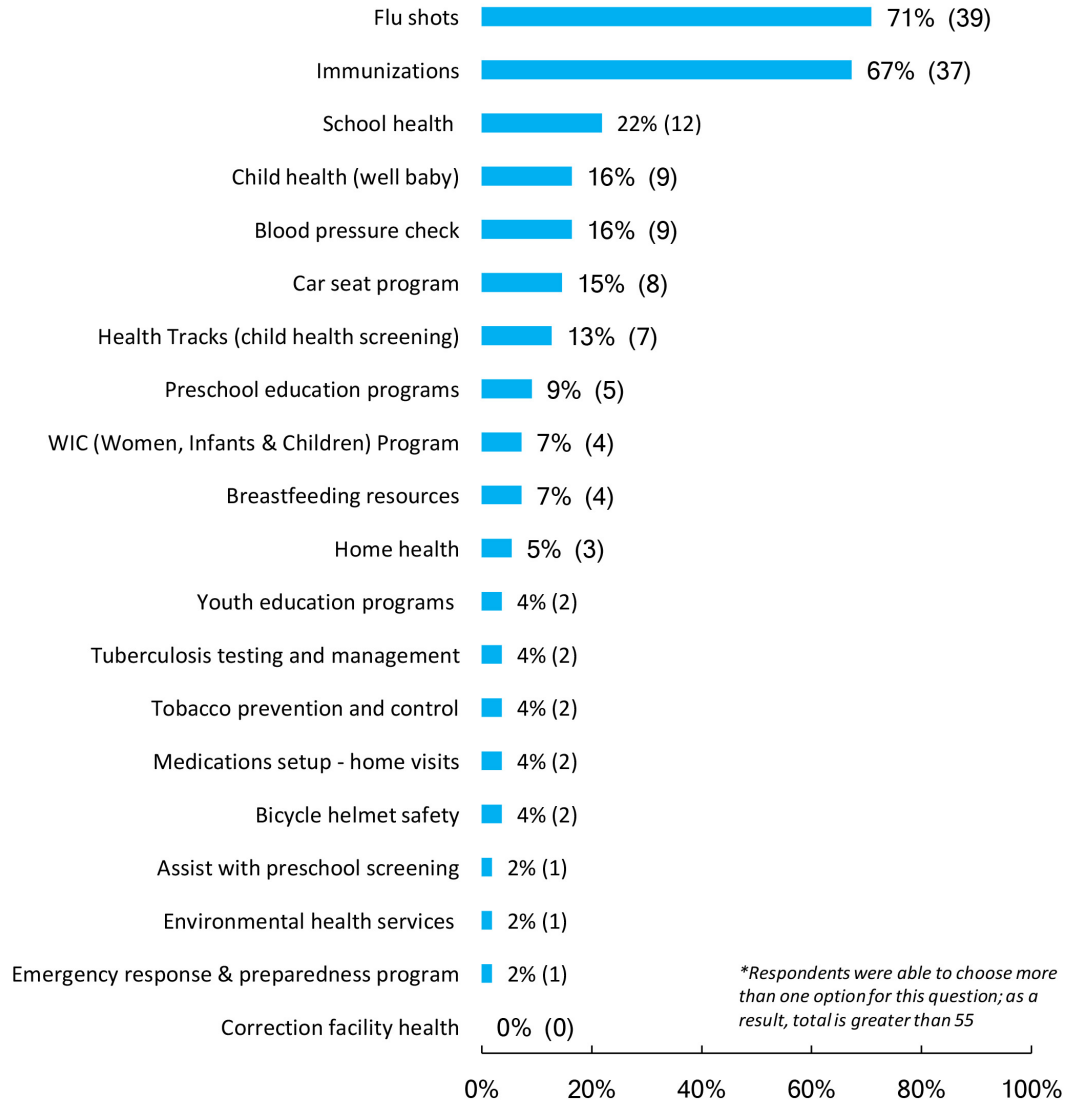
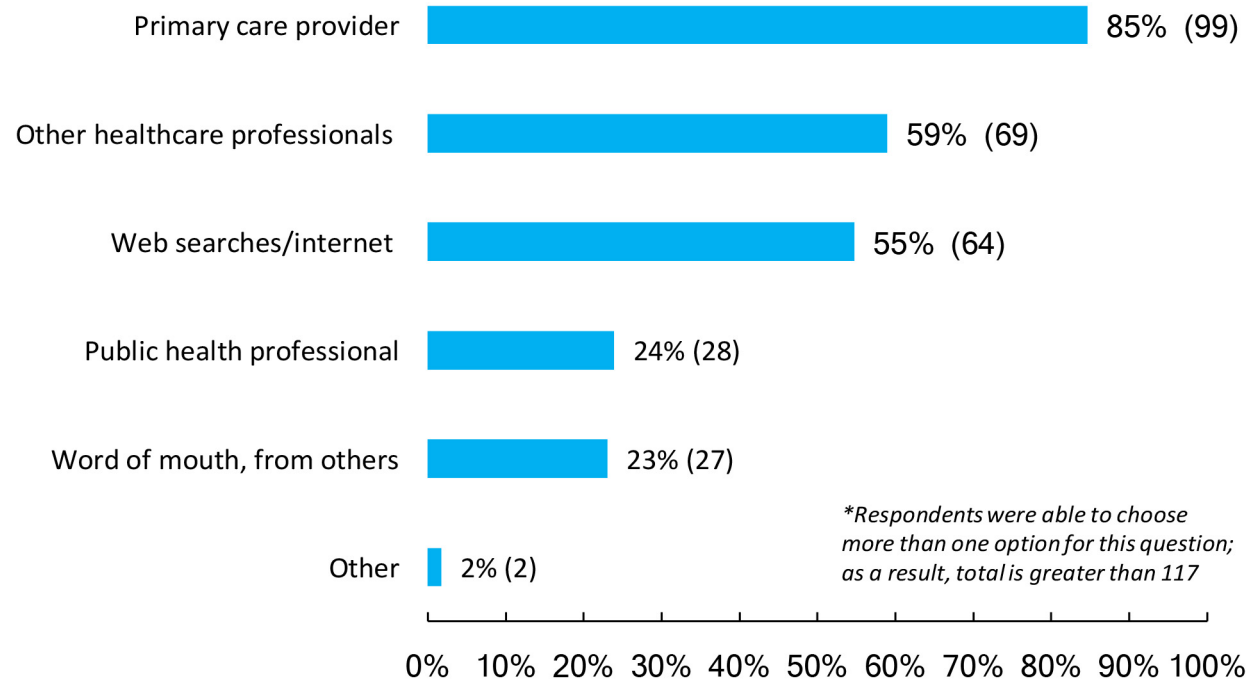


Figure 26: Utilization of Lake Region District Health Unit Services
Total respondents = 55



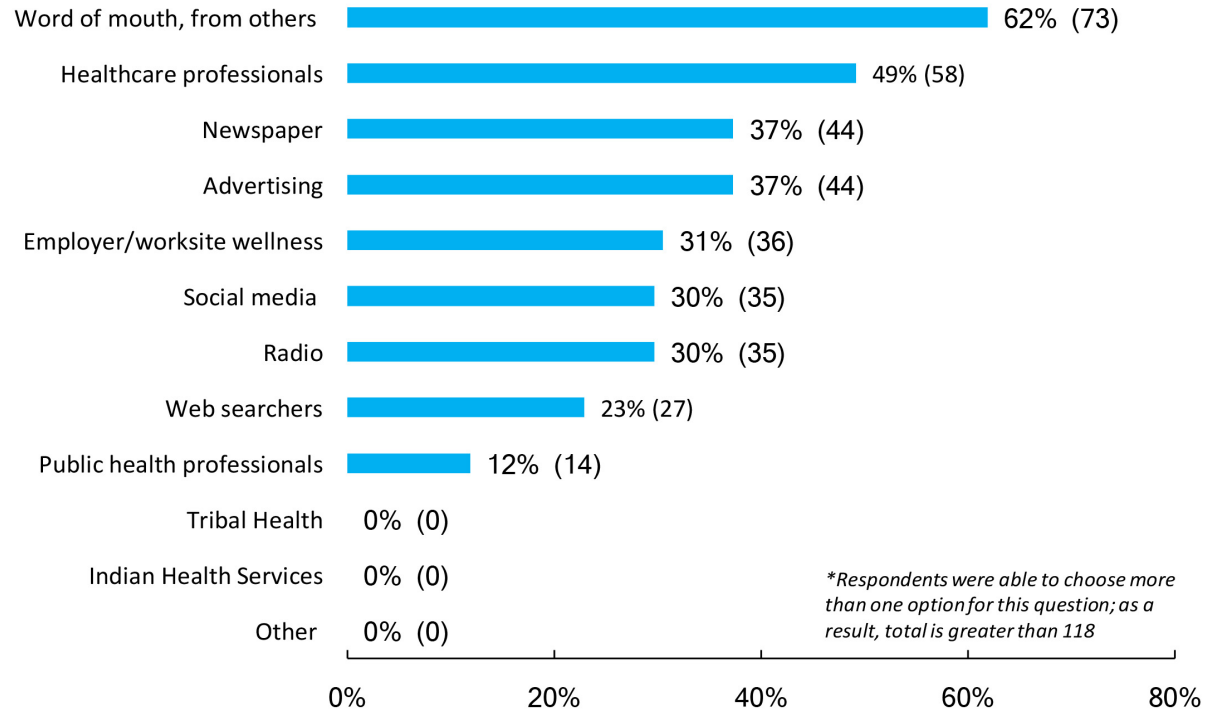
For Figures 27 and 28, results are shown from asking respondents where they turn to for trusted health information and where they find out about what services are available in their area, respectively.

Figure 27: Sources of Trusted Health Information
Total respondents = 117



The two "Other" concerns for source of trusted health information both stated asking healthcare professionals outside of the local area.

Figure 28: Sources of Trusted Health Information
Total respondents = 118



Respondents were asked about their awareness of the Good Samaritan Health Services Foundation and ways in which they have supported the foundation (Figures 29 and 30).

Figure 29: Awareness of the Good Samaritan Health Services Foundation (GSHS)
Total respondents = 122

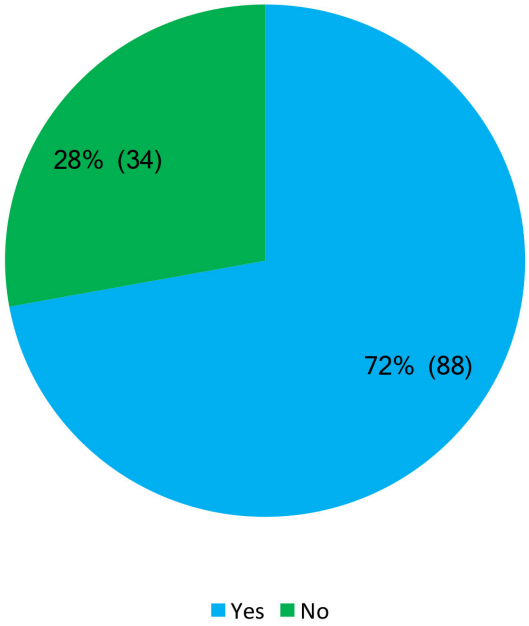
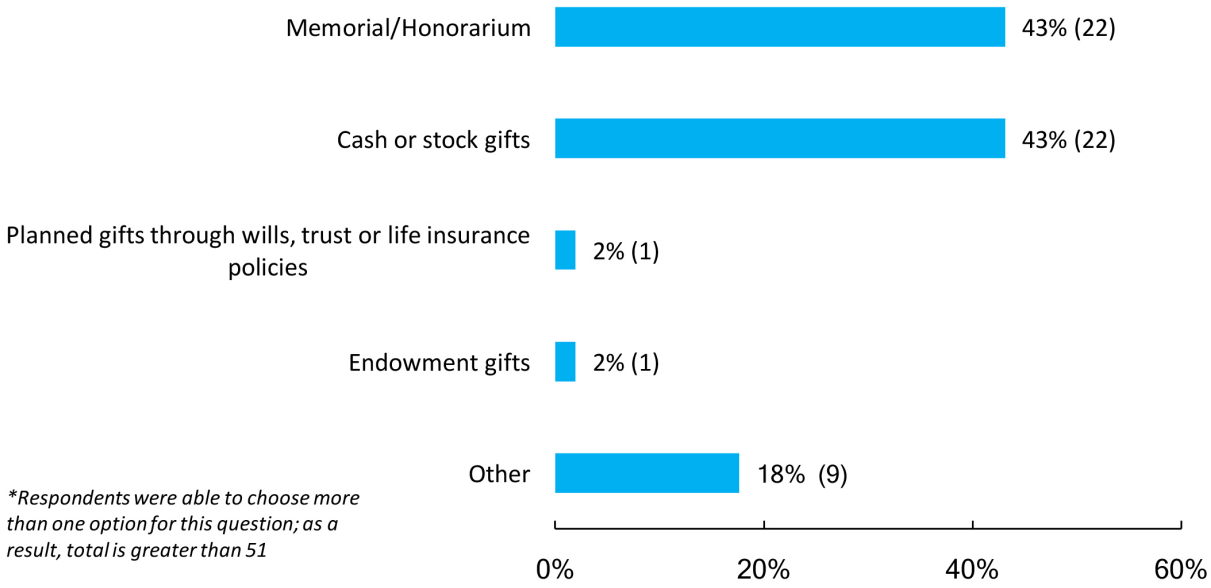


Figure 30: Ways of Supporting GSHS Foundation
Total respondents = 51

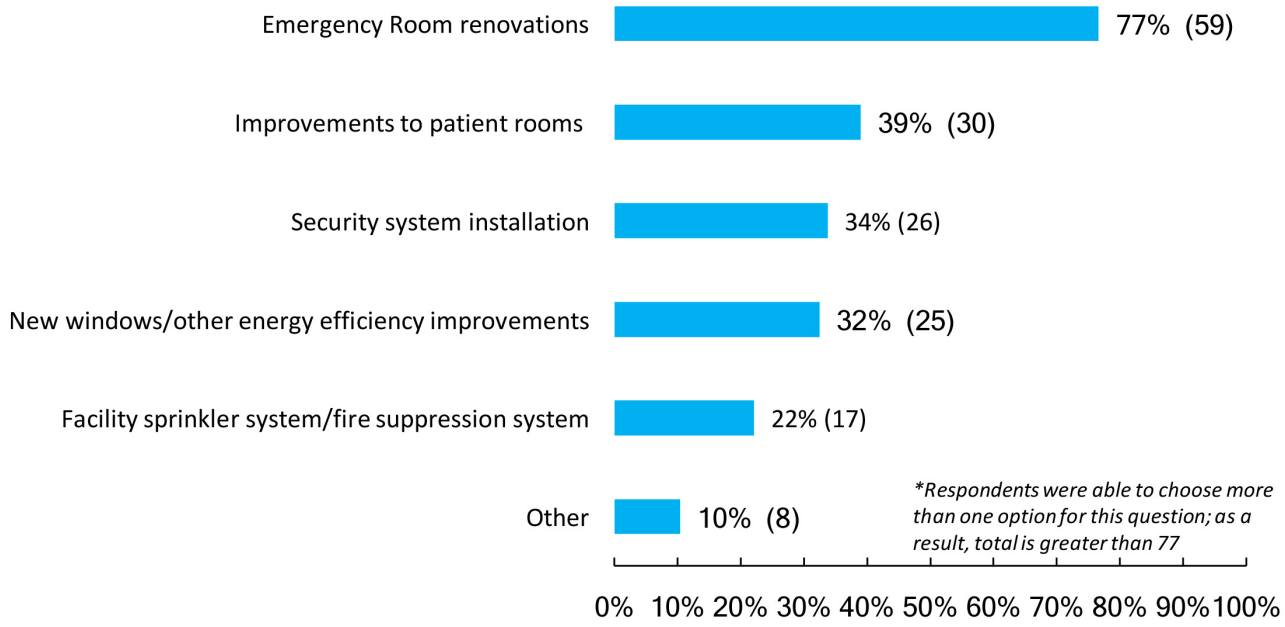


**Respondents were able to choose more than one option for this question; as a result, total is greater than 51*

The "Other" ways respondents reported having supported the foundation were mainly through fundraisers and donations for gift baskets.

In an attempt to measure backing for capital improvements by HAMC, individuals were asked what, if any, developments they believed would be supported by the community (Figure 31).

Figure 31: Capital Improvements Supported by the Community
Total respondents = 77



Some of the "Other" responses for what capital improvements would be supported by the community included better privacy with the ER and clinic, bigger restrooms, improving the grounds, and either renovations to HAMC or a new building altogether.

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(s) to add locally was obstetrics/gynecology.

- Audiology
- Cardiology
- Daycare for elderly
- Dermatology
- Dialysis
- ENT
- Mental health
- Oncology
- Orthopedics
- Pediatrics

While not a service, many respondents indicated that they would like more hours added to the clinic, either extended during the week, weekend hours, or a combination of both. Adding more physicians also received attention, as well as general requests for more specialists.

Although the key informant and focus group members felt that the community members were generally aware of the services offered by HAMC and LRDHU, there were several areas where they felt the hospital should increase marketing efforts, mainly telehealth services and physical and occupational therapy. Some of the surgical services available were also mentioned as needing extra promotion.

The final question on the survey asked respondents to share concerns and suggestions to improve the delivery of local healthcare. The area that received the most attention in this portion was adding clinic hours for people to make appointments, a request that was mentioned several times throughout the survey. Both weekend and evening hours were requested, as well as bringing in urgent care.

Staffing issues were also cited. Several community members remarked that a more stable core of providers and nurses should be brought in. The need for specialists was also voiced, but having local employees was stressed as well. While changes to the administration were also stated, most of those remarks were referring to the previous administration. Since the closing of the survey, there were changes in administration, thus addressing the concerns respondents indicated. However, the attitudes of the current staff members was mentioned as a concern, with respondents seeking more caring employees. Of course, several comments were made in favor of the treatment by the staff, while also being sympathetic to perceived low wages for employees.

The cost of health insurance and healthcare services received attention as well, but billing issues were also mentioned several times. The latter responses indicated that the billing isn't detailed or timely enough, and that members actively choose to receive care elsewhere specifically for this reason.

Several members pointed out that the service they have received by HAMC has always been good, particularly for such a small area.

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 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 four categories (listed in alphabetical order):

- Attracting and retaining young families
- Availability of mental health services
- Cost of health insurance
- Not enough jobs with livable wages

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

Attracting and retaining young families

- We attract them but we don't have jobs that pay enough to keep them here, and if we do, we don't have daycare for them. Have people turn down jobs because they can't afford the healthcare plan and they can't find daycare.
- This leads to more business everywhere in town and boosts the economy.

Availability of mental health services

- Ages 4-18 there has been a huge uptick in anxiety, depression, anger, and social and emotional issues and later they begin self-medicating with alcohol and illegal substances.
- The youth is the most in need regarding mental health. There was a licensed social work counselor that was at the school three days a week, but now she is gone and there is a need.
- Even if you can get in somewhere, it takes a long time to be seen.

Cost of health insurance

- Many in the community don't have insurance because they can't afford it, or can't afford the medication.
- This trickles to many factors. People are staying in jobs and places they don't like because they are tied to their health insurance and can't leave to come to Rugby because of that. If it was more affordable, people would be more willing to go in and prevent health issues.

Not enough jobs with livable wages

- Lots of jobs that can't be filled because they don't pay enough to get quality people; always a need for quality workers, but the pay isn't there.

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 was not intended to rank services provided. They were presented with a list of 13 organizations or community segments to rank. According to these participants, the hospital, pharmacy, public health, and other long-term care (including nursing homes/assisted living) are the most engaged in the community. The averages of these rankings (with 5 being "excellent" engagement or collaboration) were:

- Schools (4.75)
- Hospital (healthcare system) (4.55)
- Emergency services, including ambulance and fire (4.44)
- Business and industry (4.38)
- Public Health (4.33)
- Economic development organizations (4.22)
- Faith-based (4.11)
- Other local health providers, such as dentists and chiropractors (4.11)
- Social Services (3.75)
- Human services agencies (3.75)
- Long-term care, including nursing homes and assisted living (3.63)
- Pharmacy (3.63)
- Clinics not affiliated with HAMC (3.33)
- Law enforcement (3.0)
- Indian Health Services (1.33)
- Tribal Health (1.33)

Priority of Health Needs

A community group met on December 3, 2019. Nine community members attended the meeting. Representatives from the 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 they considered the most significant.

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

- Attracting and retaining young families (6 votes)
- Cost of health insurance (4 votes)
- Depression/anxiety – Youth (4 votes)
- Availability of resources to help the elderly stay in their homes (4 votes)

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

1. Attracting and retaining young families (6 votes)
2. Availability of resources to help the elderly stay in their homes (1 votes)
3. Depression/anxiety – Youth (1 votes)
4. 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 D.

Comparison of Needs Identified Previously

Top Needs Identified 2016 CHNA Process	Top Needs Identified 2019 CHNA Process
• Psych (mental health) • Community Care expansion • Cancer care suite • Hospice program • Diabetes education • Internal medicine specialists • Shortage of providers • ER abuse	• Attracting and retaining young families • Availability of resources to help the elderly stay in their homes • Depression/anxiety – Youth • Cost of health insurance

While several concerns mentioned throughout the process were similar to the needs identified in 2016, the prioritized needs for the current process largely revealed a new set of top concerns. However, the recent top need of depression/anxiety in youth is related to the 2016 "psych" need as both are directly related to mental health.

Hospital and Community Projects and Programs Implemented to Address Needs Identified in 2016

In response to the needs identified in the 2016 CHNA process, the following actions were taken:

Chemotherapy services: Since the last CHNA process, HAMC has developed a chemo preparation site and created an infusion therapy suite for the delivery of chemotherapy and infusion medications. On October 12, 2017, HAMC began offering cancer care close to home. The infusion suite is staffed by pharmacists and nurses who are highly skilled and certified to administer infusion medicines for cancer, chronic infections, immune

disorders or other conditions that require intravenous therapy. The suite is equipped with features to help make patients as comfortable as possible, such as soothing massage chairs, soft lighting, televisions, tablets, and Wi-Fi.

Physician/Provider Recruitment: There was concern expressed during the 2016 CHNA process about the lack of providers available and the need for bringing in locum coverage. Changes were made to HAMC's recruitment process, including simplifying and improving contract language to assure equity and marketplace competitiveness. Since January 2017, HAMC has hired and continues to employ three additional MDs, a certified registered nurse anesthetist, a nurse practitioner, and a physician assistant.

Psych: HAMC partnered with Rural Psychiatry Associates to provide mental health services for HAMC patients, both face-to-face and via telehealth. Eight providers, ranging from counselors to psychiatrists, provide this service.

Dunseith Radiology: Originally, a radiology tech was going to Dunseith once a week but that ceased due to staff shortages in radiology. However, HAMC's main provider, who is a nurse practitioner, received her certification to perform basic radiology and so limited radiology is now offered every day at their Dunseith clinic location.

The above implementation plan for HAMC is posted on their website at www.hamc.com/CHNA/.

Next Steps – Strategic Implementation Plan

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

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

Community Benefit Report

While not required, the 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 – CHNA Survey Instrument

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

Heart of America medical center
your health. our passion.

Lake Region District Health Unit

Heart of America Service 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

If you prefer, you may take the survey online at http://tinyurl.com/RugbyND19 or by scanning on the QR Code at the right.

Surveys will be tabulated by the Center for Rural Health at the University of North Dakota School of Medicine and Health Sciences. Your responses are anonymous, and you may skip any question you do not want to answer. Your answers will be combined with other responses and reported only in total. If you have questions about the survey, you may contact Shawn Larson at 701.777.5588.

Surveys will be accepted through October 14, 2019. 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):

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

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

- ☐ Access to healthy food
- ☐ Active faith community
- ☐ Business district (restaurants, availability of goods)
- ☐ Community groups and organizations
- ☐ Healthcare
- ☐ Opportunities for advanced education
- ☐ Public transportation
- ☐ Programs for youth
- ☐ Quality school systems
- ☐ Other: (please specify) _____

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

- ☐ Closeness to work and activities
- ☐ Family-friendly; good place to raise kids
- ☐ Informal, simple, laidback lifestyle
- ☐ Job opportunities or economic opportunities
- ☐ Safe place to live, little/no crime
- ☐ Other: (please specify) _____

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

- ☐ Activities for families and youth
- ☐ Arts and cultural activities
- ☐ Local events and festivals
- ☐ Recreational and sports activities
- ☐ Year-round access to fitness opportunities
- ☐ Other: (please specify) _____

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

5. Considering the **COMMUNITY /ENVIRONMENTAL HEALTH** in your community, concerns are (choose up to THREE):

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

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

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

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

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

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

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

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

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

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

_____

_____

Delivery of Healthcare:

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

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

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

- ☐ Anesthesia services
- ☐ Clinic
- ☐ Emergency room
- ☐ Hospice
- ☐ Hospital (acute care)
- ☐ Laparoscopic surgery
- ☐ Mental health services
- ☐ Oncology
- ☐ Podiatry (foot/ankle) (visiting specialist)
- ☐ Surgical services
- ☐ Swing bed services
- ☐ Telemedicine

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

- ☐ Diet instruction
- ☐ Health screenings
- ☐ Laboratory services
- ☐ Occupational therapy
- ☐ Physical therapy
- ☐ Social services
- ☐ Speech therapy

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

- ☐ EKG—Electrocardiography
- ☐ CT scan
- ☐ Echocardiogram
- ☐ General x-ray
- ☐ Mammography
- ☐ MRI
- ☐ Nuclear Medicine
- ☐ Ultrasound

15. Which of the following **SERVICES** provided by **LAKE REGION DISTRICT HEALTH UNIT** have you or a family member used in the past year? (Choose ALL that apply)

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

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

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

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

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

18. Are you aware of Good Samaritan Health Services Foundation, which exists to financially support Heart of America Medical Center?

- ☐ Yes
- ☐ No

19. Have you supported the Good Samaritan Health Services Foundation in any of the following ways? (Choose ALL that apply)

- ☐ Cash or stock gift
- ☐ Endowment gifts
- ☐ Memorial/Honorarium
- ☐ Planned gifts through wills, trusts or life insurance policies
- ☐ Other: (please specify) _____

20. Do you believe individuals in the community would financially support any of the following capital improvements by Heart of America Medical Center? (Choose ALL that apply)

- ☐ Emergency room renovations
- ☐ Security system installation
- ☐ New windows/other energy efficiency improvements
- ☐ Facility sprinkler system/fire suppression system
- ☐ Improvements to patient rooms (e.g., larger bathrooms)
- ☐ Other: (Please specify other capital improvements that you believe the community would financially support) _____

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

_____

_____

Demographic Information: Please tell us about yourself.

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

- ☐ Yes
- ☐ No

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

- ☐ Indian Health Service (IHS)
- ☐ Insurance through employer
- ☐ Self-purchased insurance
- ☐ Medicaid
- ☐ Medicare
- ☐ No insurance
- ☐ Veteran's Healthcare Benefits
- ☐ Other: (please specify) _____

24. Age:

- ☐ Less than 18 years
- ☐ 18 to 24 years
- ☐ 25 to 34 years
- ☐ 35 to 44 years
- ☐ 45 to 54 years
- ☐ 55 to 64 years
- ☐ 65 to 74 years
- ☐ 75 years and older

25. Highest level of education:

- ☐ Less than high school
- ☐ High school diploma or GED
- ☐ Some college/technical degree
- ☐ Associate's degree
- ☐ Bachelor's degree
- ☐ Graduate or professional degree

26. Gender:

- ☐ Female
- ☐ Male
- ☐ Transgender

27. Employment status:

- ☐ Full time
- ☐ Part time
- ☐ Homemaker
- ☐ Multiple job holder
- ☐ Unemployed
- ☐ Retired

28. Your zip code: _____

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

- ☐ American Indian
- ☐ African American
- ☐ Asian
- ☐ Hispanic/Latino
- ☐ Pacific Islander
- ☐ White/Caucasian
- ☐ Other: _____
- ☐ Prefer not to answer

30. Annual household income before taxes:

- ☐ Less than $15,000
- ☐ $15,000 to $24,999
- ☐ $25,000 to $49,999
- ☐ $50,000 to $74,999
- ☐ $75,000 to $99,999
- ☐ $100,000 to $149,999
- ☐ $150,000 and over
- ☐ Prefer not to answer

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

_____

_____

Thank you for assisting us with this important survey!

Appendix B – County Health Rankings Explained

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

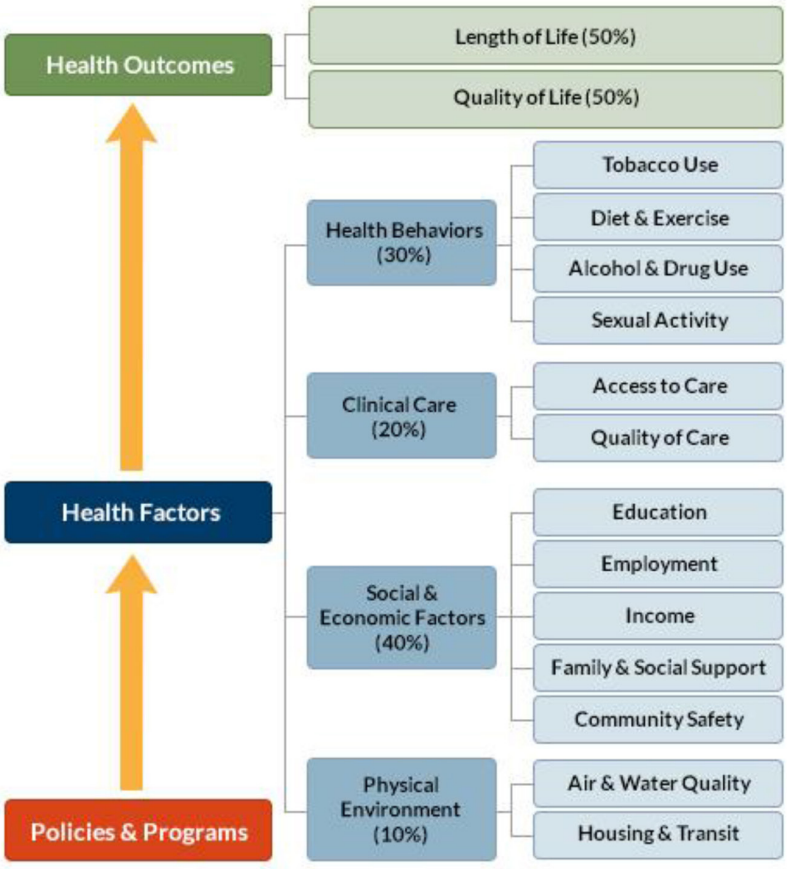
Methods

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

What is Ranked

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

Ranking System



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

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

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

Data Sources and Measures

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

Data Quality

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

Calculating Scores and Ranks

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

Health Outcomes and Factors

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

Health Outcomes

Premature Death (YPLL)

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

Reason for Ranking

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

Poor or Fair Health

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

Reason for Ranking

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

Poor Physical Health Days

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

Reason for Ranking

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

Poor Mental Health Days

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

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

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

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

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

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

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

Health Factors

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

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

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

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

Food Environment Index

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

1) Limited access to healthy foods estimates the percentage of the population that is low income and does not live close to a grocery store. Living close to a grocery store is defined differently in rural and nonrural areas; in rural areas, it means living less than 10 miles from a grocery store whereas in nonrural areas, it means less than 1 mile. "Low income" is defined as having an annual family income of less than or equal to 200 percent of the federal poverty threshold for the family size.

2) Food insecurity estimates the percentage of the population who did not have access to a reliable source of food during the past year. A two-stage fixed effects model was created using information from the Community Population Survey, Bureau of Labor Statistics, and American Community Survey.

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

Reason for Ranking

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

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

Physical Inactivity

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

Reason for Ranking

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

Access to Exercise Opportunities

Change in measure calculation in 2018: Access to exercise opportunities measures the percentage of individuals in a county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Parks include local, state, and national parks. Recreational facilities include YMCAs as well as businesses identified by the following Standard Industry Classification (SIC) codes and include a wide variety of facilities including gyms, community centers, dance studios and pools: 799101, 799102, 799103, 799106, 799107, 799108, 799109, 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 US, for example, was approximately 15.6 billion dollars in 2008.[4]

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

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

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

Uninsured

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

Reason for Ranking

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

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

Primary Care Physicians

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

Reason for Ranking

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

Dentists

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

Reason for Ranking

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

Mental Health Providers

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

Reason for Ranking

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

Preventable Hospital Stays
Preventable hospital stays is the hospital discharge rate for ambulatory care-sensitive conditions per 1,000 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 US like heart attacks, strokes, and lung cancer.[1] While repercussions resulting from poverty are present at all ages, children in poverty may experience lasting effects on academic achievement, health, and income into adulthood. Low-income children have an increased risk of injuries from accidents and physical abuse and are susceptible to more frequent and severe chronic conditions and their complications such as asthma, obesity, and diabetes than children living in high income households.[2]

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

Income Inequality

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

Reason for Ranking

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

Children in Single-Parent Households

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

Reason for Ranking

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

Violent Crime Rate

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

Reason for Ranking

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

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

Injury Deaths

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

Reason for Ranking

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

Air Pollution-Particulate matter

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

Reason for Ranking

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

Drinking Water Violations

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

Reason for Ranking

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

Severe Housing Problems

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

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

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

Reason for Ranking

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

Appendix C – Youth Behavioral Risk Survey Results

North Dakota High School Survey

*2017 YRBS North Dakota Data is not yet available, so the 2015 data was used.

Rate Increase ↑, rate decrease↓, or no statistical change = in rate.

	ND 2013	ND 2015*	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2017
Injury and Violence						
Percentage of students who rarely or never wore a seat belt.	11.6	8.5	↓	10.5	7.5	5.9
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)	21.9	17.7	↓	21.1	15.2	16.5
Percentage of students who talked on a cell phone while driving (on at least 1 day during the 30 days before the survey, among students who drove a car or other vehicle)	67.9	61.4	↓	60.7	58.8	NA
Percentage of students who texted or e-mailed while driving a car or other vehicle (on at least 1 day during the 30 days before the survey, among students who had driven a car or other vehicle during the 30 days before the survey)	59.3	57.6	=	56.7	54.4	39.2
Percentage of students who never or rarely wore a helmet (during the 12 months before the survey, among students who rode a motorcycle)	29.8	28.7	=	32.8	24.7	NA
Percentage of students who carried a weapon on school property (such as a gun, knife, or club on at least 1 day during the 30 days before the survey)	6.4	5.2	=	6.6	4.5	3.8
Percentage of students who were in a physical fight on school property (one or more times during the 12 months before the survey)	8.8	5.4	↓	6.9	6.1	8.5
Percentage of students who were ever physically forced to have sexual intercourse (when they did not want to)	7.7	6.3	=	6.5	7.4	7.4
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)	9.7	7.6	=	6.9	8.0	8.0
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)	9.6	9.7	=	10.4	9.7	NA
Percentage of students who were bullied on school property (during the 12 months before the survey)	25.4	24.0	=	27.5	22.4	19.0
Percentage of students who were electronically bullied (including being bullied through e-mail, chat rooms, instant messaging, websites, or texting during the 12 months before the survey)	17.1	15.9	=	17.7	15.8	14.9
Percentage of students who felt sad or hopeless (almost every day for 2 or more weeks in a row so that they stopped doing some usual activities during the 12 months before the survey)	25.4	27.2	=	24.9	28.9	31.5
Percentage of students who seriously considered attempting suicide (during the 12 months before the survey)	16.1	16.2	=	15.8	16.7	17.2
Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)	13.5	13.5	=	12.8	13.7	13.6
Percentage of students who attempted suicide (one or more times during the 12 months before the survey)	11.5	9.4	↓	10.3	11.3	7.4

	ND 2013	ND 2015*	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2017
Tobacco Use						
Percentage of students who ever tried cigarette smoking (even one or two puffs)	41.4	35.1	↓	37.3	32.5	28.9
Percentage of students who smoked a whole cigarette before age 13 years (for the first time)	7.9	7.2	=	7.3	6.7	9.5
Percentage of students who currently smoked cigarettes (on at least 1 day during the 30 days before the survey)	19.0	11.7	↓	13.2	11.8	8.8
Percentage of students who currently frequently smoked cigarettes (on 20 or more days during the 30 days before the survey)	6.6	4.3	↓	4.3	4.7	2.6
Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)	3.9	3.2	=	3.2	3.2	2.0
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)	7.8	16.9	↑	0.2	1.0	NA
Percentage of students who tried to quit smoking cigarettes (among students who currently smoked cigarettes during the 12 months before the survey)	55.5	47.4	=	49.1	52.7	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 1 day during the 30 days before the survey)	NA	22.3	↑	19.7	22.8	13.2
Percentage of students who currently used smokeless tobacco (chewing tobacco, snuff, or dip on at least 1 day during the 30 days before the survey)	13.8	10.6	↓	12.6	9.5	5.5
Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars on at least 1 day during the 30 days before the survey)	11.7	9.2	↓	9.7	9.7	8.0
Percentage of students who currently used cigarettes, cigars, or smokeless tobacco (on at least 1 day during the 30 days before the survey)	27.5	20.9	↓	22.9	19.8	14.0
Alcohol and Other Drug Use						
Percentage of students who ever drank alcohol (at least one drink of alcohol on at least 1 day during their life)	65.8	62.1	=	64.5	59.9	60.4
Percentage of students who drank alcohol before age 13 years (for the first time other than a few sips)	15.2	12.4	=	15.3	12.9	15.5
Percentage of students who currently drank alcohol (at least one drink of alcohol on at least 1 day during the 30 days before the survey)	35.3	30.8	↓	32.8	29.3	29.8
Percentage of students who drank five or more drinks of alcohol in a row (within a couple of hours on at least 1 day during the 30 days before the survey)	21.9	17.6	↓	19.8	17.0	13.5
Percentage of students who usually obtained the alcohol they drank by someone giving it to them (among students who currently drank alcohol)	37.0	41.3	=	41.1	40.4	43.5
Percentage of students who tried marijuana before age 13 years (for the first time)	5.6	6.3	=	5.8	5.8	6.8
Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)	15.9	15.2	=	13.2	17.1	19.8
Percentage of students who ever took prescription drugs without a doctor's prescription (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, or Xanax, one or more times during their life)	17.6	14.5	↓	13.2	16.0	14.0
Percentage of students who were offered, sold, or given an illegal drug on school property (during the 12 months before the survey)	14.1	18.2	↑	15.9	19.9	19.8

	ND 2013	ND 2015*	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2017
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)	9.9	8.6	=	7.9	9.0	NA
Sexual Behaviors						
Percentage of students who ever had sexual intercourse	44.9	38.9	↓	39.3	39.1	39.5
Percentage of students who had sexual intercourse before age 13 years (for the first time)	3.8	2.6	=	3.3	3.3	3.4
Weight Management and Dietary Behaviors						
Percentage of students who were overweight (>= 85th percentile but <95th percentile for body mass index, based on sex and age-specific reference data from the 2000 CDC growth chart)	15.1	14.7	=	15.4	14.6	15.6
Percentage of students who were obese (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth chart)	13.5	14.0	=	16.3	12.9	14.8
Percentage of students who described themselves as slightly or very overweight	32.0	32.2	=	34.2	31.5	31.5
Percentage of students who were trying to lose weight	45.4	44.7	=	45.0	43.0	47.1
Percentage of students who did not eat fruit or drink 100% fruit juices (during the 7 days before the survey)	3.4	3.9	=	4.3	4.1	5.6
Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (during the 7 days before the survey)	64.7	62.5	=	8.5	8.8	60.8
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 7 days before the survey)	6.0	4.7	=	4.5	5.2	7.2
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 7 days before the survey)	62.8	58.5	↓	61.2	60.0	59.4
Percentage of students who did not drink a can, bottle, or glass of soda or pop (not including diet soda or diet pop, during the 7 days before the survey)	25.3	25.6	=	23.5	21.7	27.8
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 7 days before the survey)	23.4	18.7	=	21.4	18.0	18.7
Percentage of students who did not drink milk (during the 7 days before the survey)	11.1	13.9	↑	11.6	13.7	26.7
Percentage of students who drank two or more glasses per day of milk (during the 7 days before the survey)	42.4	35.8	↓	36.6	35.3	17.5
Percentage of students who did not eat breakfast (during the 7 days before the survey)	10.5	11.9	=	10.7	11.8	14.1
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)	3.1	2.2	=	2.4	2.8	NA
Physical Activity						
Percentage of students who were physically active at least 60 minutes per day on 5 or more days (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the 7 days before the survey)	50.6	51.3	=	51.7	50.1	46.5
Percentage of students who watched television 3 or more hours per day (on an average school day)	21.0	18.9	=	20.7	18.2	20.7
Percentage of students who played video or computer games or used a computer 3 or more hours per day (for something that was not school work on an average school day)	34.4	38.6	↑	39.4	38.0	43.0

	ND 2013	ND 2015*	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2017
Other						
Percentage of students who had 8 or more hours of sleep (on an average school night)	30.0	29.5	=	34.5	28.7	25.4
Percentage of students who brushed their teeth on seven days (during the 7 days before the survey)	71.5	71.0	=	67.8	70.1	NA
Percentage of students who most of the time or always wear sunscreen (with an SPF of 15 or higher when they are outside for more than one hour on a sunny day)	11.2	12.5	=	10.3	12.8	NA
Percentage of students who used an indoor tanning device (such as a sunlamp, sunbed, or tanning booth [not including getting a spray-on tan] one or more times during the 12 months before the survey)	19.6	12.2	↓	13.3	12.8	NA

Appendix D – Prioritization of Community's Health Needs

Appendix D – Prioritization of Community's Health Needs

Community Health Needs Assessment
Rugby, North Dakota
Ranking of Concerns

The top four concerns for each of the seven 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 four 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 four highest ranked priorities.

	Priorities	Most Important
COMMUNITY/ENVIRONMENTAL HEALTH CONCERNS		
Not enough jobs with livable wages	3	
Attracting and retaining young families	6	6
Having enough child daycare services	1	
Recycling	1	
AVAILABILITY/DELIVERY OF HEALTH SERVICES CONCERNS		
Cost of health insurance	4	0
Availability of mental health services	0	
Cost of healthcare services	0	
Ability to get appointments for health services within 48 hours	1	
YOUTH POPULATION HEALTH CONCERNS		
Alcohol use and abuse	3	
Depression/anxiety	4	1
Drug use and abuse	0	
Not enough activities for children	3	
ADULT POPULATION HEALTH CONCERNS		
Depression/anxiety	2	
Alcohol use and abuse	0	
Drug use and abuse	0	
Stress	0	
SENIOR POPULATION HEALTH CONCERNS		
Cost of long-term/nursing home care	1	
Availability of resources to help elderly stay in their homes	4	1
Ability to meet the needs of the older population	1	
Quality of elderly care	0	

Appendix E – Survey "Other" Responses

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

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

1. Considering the PEOPLE in your community, the best things are: "Other" responses:
    - Depending on the cause, a large number of supportive persons can be brought together
    - Low crime
    - None above
    - Not the first four
    - People are clique-y
2. Considering the SERVICES AND RESOURCES in your community, the best things are: "Other" responses:
    - Active churches
    - Catholic school available
3. Considering the QUALITY OF LIFE in your community, the best things are: "Other" responses:
    - No traffic
    - There needs to be more crackdown on illegal drug sales
4. Considering the ACTIVITIES in your community, the best things are: "Other" responses:
    - Community center
    - County fair
    - Local walking/biking path
    - Need more activities for youth and families
    - None of the above
5. Considering the COMMUNITY /ENVIRONMENTAL HEALTH in your community, concerns are: "Other" responses:
    - Access to primary healthcare providers on a timely basis
    - Drug use
    - Hospital board and confidentiality
    - Need more condos or townhomes for seniors
6. Considering the AVAILABILITY/DELIVERY OF HEALTH SERVICES in your community, concerns are: "Other" responses:
    - Administration at hospital
    - Availability of radiology services
7. Considering the YOUTH POPULATION in your community, concerns are: "Other" responses:
    - (2) Bullying

- Cyber-bullying
- Mental health issues including but not limited to depression and anxiety

9. Considering the SENIOR POPULATION in your community, concerns are ("Other" responses):

- Dementia

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

- Enough individuals with work ethic to fill positions. Right now it is like recycling mediocrity.
- Ability to meet the needs of the older population
- Access to mental healthcare services
- Adolescent drug use and availability along with activities for our youth. Sure we have high school sports, but what about those adolescents whom are not or do not care for sports? Not much to do in this town for the kids of all ages. We do have a movie theater that is open on the weekends, but not a central location or activity hall where kids of all ages could go for fun with different activities planned for each age group and reminiscing. We need to keep kids off of the streets and away from illegal drugs. Illegal drugs are definitely an issue in this town beginning with elementary age (so sad).
- Agricultural community members' mental health
- Attracting skilled jobs (not just in healthcare)
- Attracting young families/high-paying jobs
- Being short staffed in the care center and residents not getting what they need to meet their needs
- Cost of healthcare
- Cost of living
- Cost of living, healthcare, insurance, upkeep of vehicles/maintenance etc. to support a family
- Cost of long-term/nursing home care
- Drug abuse
- Drugs in the high school
- Elderly opinions have more pull than younger people. Elderly don't want to change to make things better.
- Elderly transportation to specialty healthcare services
- Finding things to do, especially throughout the winter months
- Hard for businesses to make a living
- Having better care for our elderly in long-term care
- Having special activities for everyone
- Hospital board is going to cause the community to lose their hospital
- I feel our community is resistive to change and growth
- If the hospital goes out of business the city would die away
- Keeping a thriving Main Street for all community citizens plus expanded mid-range housing options for seniors
- Lack of amenities
- Lack of jobs and accessible resources
- Lack of trained workforce staff for healthcare and all other businesses. Lack of salaries and benefits to keep good employees in our area.
- Little to no jobs, child care providers
- Mental health
- Need healthier lifestyle options especially for food quality and knowledge
- Not enough mental healthcare in our community. The school counsellor focuses more on career other than helping students with mental health issues. There is not a therapist available on a regular basis in this community and it is a much needed care option, not only for adults and elders but our youth.
- Not enough people actively involved in the community. Our community functions thru a lot of volunteers that provide opportunities for activities but the same people are helping in multiple organizations, subject to burn out...we need others to get active and help keep the community going!

- People are having to outsource to get better healthcare, activities and shop
- Quality of healthcare services
- Quality, caring hospital and eldercare personnel
- Retaining staff at the hospital and nursing home to give good quality care
- Right now affordable housing for families, single persons and elderly. For the elderly one level with attached garage.
- Short staffing of the hospital due to low wages
- Slow growth
- The crime rate/break-in rate is high
- The lack of integration of providers in one healthcare system. Fracture care here, having to go to bigger communities for further care. Why aren't the bigger providers here in Rugby?
- We live in a small, mixed-generational community. I think the biggest challenge we face is meeting the needs equally of such a varying group when considering age.
- We need an eating place that is open 24/7 for when the truckers come through town

11. What PREVENTS community residents from receiving healthcare? "Other" responses:

- High insurance deductibles
- If I choose to go somewhere outside of the community it is because I know the clinicians on a personal level and it would be embarrassing to see them
- No direct access to providers in a big system for seamless care
- None
- Not having resources on site such as x-ray
- Walk-in clinic is need on weekends

16. Where do you turn for trusted health information ("Other" responses):

- Anywhere but HAMC
- St. Alexius

19. Have you supported the Good Samaritan Health Services Foundation in any of the following ways ("Other" responses):

- Donations for gift baskets
- (3) Fundraiser
- None
- Not that I know of

20. Do you believe individuals in the community would financially support any of the following capital improvements by Heart of America Medical Center ("Other" responses):

- Better privacy with ER and clinic
- Bigger restrooms
- Don't know
- If cost raise then we need nothing
- Improve grounds
- New building
- Renovation of clinic or new clinic
- Updated medical equipment

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

- Any programs to help fight obesity
- Audiology, dermatology
- Counseling for mental healthcare

- Daycare for elderly
- Dermatology and cardiology
- Dermatology
- Dialysis would be helpful due to the time required to travel and spend doing it for individuals in the area/surrounding area.
- ENT
- ENT specialist/surgeon and dialysis
- Fitness programs/challenges
- Gyno/pregnancy & delivery
- Holistic health
- I don't know
- I just want to remark that we do not at this time have cardiology in person provider visits it is done via telemed, we also have oncology services in this way and are working with Altru for Medical Director of our chemotherapy department and ANP will be visiting from Grand Forks once per month. Our clinic providers can then start referring our patient to Grand Forks or Devils Lake Altru and get their chemotherapy at home in Rugby.
- Internal medicine/dermatology/mental health
- Mental wellness and counseling for all—even if have insurance and deductible is too high
- More physicians, pediatricians, and internal medicine (MDs not Pas). OB/GYN physicians (MDs) and labor and delivery services
- More physicians
- More specialty services such as ENT, cardiology, orthopedics…even just on a monthly or biweekly basis
- OB
- OB doctor, pediatrician
- OB/GYN: baby delivery
- Oncology
- Specialists close to use
- There is a need locally for early intervention services to be utilized more! Local providers and public health need to be working with Minot Infant Development in getting those referrals made.
- To be able to have an emergency exam right away if going through ER instead of making appointments through the clinic.

23. Health insurance coverage status ("Other" responses):

- Coverage through spouse's employer as it is way more affordable
- (4) Health insurance through spouse's employer
- High premiums/high deductible
- Need more affordable – shouldn't go poor paying for health insurance.
- Sanford

31. Overall, please share concerns and suggestions to improve the delivery of local healthcare.
- Some incentive for patient to take responsibility for their own healthcare. Need to follow through on what health instructions that are given and consequences if the repeatedly seek health services but do not do their part to get health.
- Better advertising, lack of community involvement, not enough true info getting into the community
- A walk-in clinic available weekends or evenings would be wonderful. I've used the ER several times due to nothing else being available.
- Ability to have primary care physician, access to weekend/evening clinic, affordable healthcare
- Always have had good healthcare
- A new billing system needs to be adopted; receiving your first bill with a past due notice on it is not acceptable
- Better medical benefits at the hospital to bring in more employees and make it affordable for the

employees that are already there.

- Concerns regarding having to travel for special needs sand the elderly traveling to other cities but overall good health services for such a small town.
- Contract health employees are more expensive than local people that provide better care. Our facility really hurt the community when they laid so many people off then tried to hire back. Not knowing if you will have a job or not isn't the way for a facility to stay afloat and get employees.
- Delays in radiology, dialysis unit
- Get doctors that will actually help someone
- Group exercise fitness options& in-person counseling options
- I have concerns about the lack of medical doctors employed by HAMC. I also have concerns that pediatrics and internal medicine doctors are not on staff full time. I would like to see these added. I also believe that the community would benefit from a walk-in clinic in the evenings till 9pm as well as on the weekends. Most of the time it is very difficult to get an appointment the day you call in and after 5 the only option is the ER.
- Lack of detailed billing. Prefer to go somewhere where they do detailed billing so you know what charges are for. Have heard many people say they go elsewhere because of the billing.
- Many awesome healthcare professionals have left HAMC due to lower wages and poor benefits.
- Maybe a list of different healthcare insurance to choose from and like more offices in Rugby.
- Mental health needed
- More affordable health insurance
- New better administration to manage finances
- New management
- Not sure the long-term care nurses really care about their patients. More activities are needed besides setting patients in front of a TV.
- Outsiders representing themselves as HAMC employees in the billing department. You want local healthcare used but not local jobs—hypocritical.
- Remove the (now former) CEO and replace him with someone who cares about our community and our healthcare!
- Should be able to receive exams in ER right away instead of waiting for an appointment in Rugby.
- The cost of healthcare insurance and the high deductibles prevent or delay use of facility – need to find more affordable and lower deductible.
- There is a need for local providers and public health to be working with Minot Infant Development to be making referrals to the Early Intervention Program to be serving children 0-3 years. Early detection and intervention is best!
- Walk-in clinic hours with Saturdays available
- Walk-in clinic and after-hours clinic – urgent care
- Walk-In Clinic Hours during evenings/weekends. On-call Nurse Line for evenings/weekends to answer simple medical questions/advice. This service was something we used often in Fargo when we lived there and they were able to tell us if we could wait a couple days or needed to come in right away. Emergency Room Services are so expensive and many people if able travel elsewhere to walk-in clinics to save money.
- We need more accessibility. We need to work on what is best for the patient and not always what fits into our schedule.