Community Health Needs Assessment

Linton Hospital Service Area
Linton, North Dakota

2021

Kylie Nissen, BBA
Program Director

Amy Breigenzer, BS
Project Coordinator

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

Table of Contents

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

Executive Summary

To help inform future decisions and strategic planning, Linton Hospital conducted a Community Health Needs Assessment (CHNA) in 2021, the previous CHNA having been conducted in 2017-2018. 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. Forty-seven Linton Hospital service area residents completed the survey. Additional information was collected through 12 key informant interviews with community members. The input from the residents, who primarily reside in Emmons 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, Emmons County's population from 2010 to 2019 decreased by 8.6%. The average number of residents younger than 18 (19.5%) for the county comes in 4.1 percentage points lower than the North Dakota average (23.6%). The percentage of residents ages 65 and older is almost 12.4% higher for Emmons County (28.1%) than the North Dakota average (15.7%), and the rate of high school graduation is more than 5% lower for Emmons County (87.1%) than the North Dakota average (92.5%). The median household income for the county ($51,029) is significantly lower than the state average for North Dakota ($63,473).

Data compiled by County Health Rankings show Emmons County is doing better than North Dakota in health outcomes/factors for 12 categories, while performing poorly compared to the rest of the state in 13 categories

Of 106 potential community and health needs set forth in the survey, the 47 Linton Hospital service area residents who completed the survey indicated the following 10 needs as the most important:

- Alcohol use and abuse – Adults
- Alcohol use and abuse – Youth
- Attracting and retaining young families
- Availability of resources to help the elderly to stay in their homes
- Bullying/cyberbullying
- Child abuse or neglect
- Having enough child daycare services
- Not enough activities for children and youth
- Not enough jobs with livable wages
- Smoking and tobacco use, exposure to second-hand smoke, or vaping/juuling

The survey also revealed the biggest barriers to receiving healthcare (as perceived by community members). They included not being able to see the same provider over time (N=13), no or limited insurance (N=11), and not enough specialists (N=10).

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
- Quality school systems
- Healthcare
- People who live here are involved in their community

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

- Attracting and retaining young families
- Not enough jobs with livable wages
- Lack of mental health services
- Having enough child daycare
- Alcohol use and abuse – Adults and Youth
- Not enough activities for children
- Affordability of health services/insurance

Overview and Community Resources

With assistance from CRH at the UNDSMHS, Linton Hospital and Emmons County Public Health (ECPH) completed a CHNA of their service area. The hospital identifies its service area as Emmons County in its entirety and portions of Campbell County, South Dakota. Many community members and stakeholders worked together on the assessment.

The Linton Hospital is licensed as a Critical Access Hospital with three provider-based Rural Health Clinics. The Linton Medical Center is attached to the Linton Hospital, the Hazelton Clinic is located 16 miles to the north in Hazelton, North Dakota and the Campbell County Clinic is located 33 miles to the south in Herreid, South Dakota. Linton is located in south central North Dakota, 65 miles southeast of Bismarck, ND and 25 miles north of the South Dakota border.

Along with the hospital, the economy is based on agribusiness, service industries, and retail trade. According to the U.S. Census Bureau's estimated 2019 census, Emmons County has a population of 3,310, which is a decrease of 240 from the 2010 census. The racial makeup of the county is 96.4% White. Linton is the county seat and its 2019 population was 972, a decrease of 125 from the 2010 census. 2019's median household income was $48,750 and there were 1,585 households, down from 1,594 in 2010. Emmons County is 1,555 square miles of land located in south central North Dakota.

Other healthcare facilities and services in Emmons County include a pharmacy, optometrist, dentist, three chiropractors, two massage therapists, a long-term healthcare center, and an assisted living facility. The Emmons County Public Health Department is located on the hospital campus. Home services available in Emmons County include Meals on Wheels, Dakota Travel Nurse Home Care, Home Help provided through Social Services (bathing, light cleaning, laundry, cooking, grocery shopping), Hospice of the Red River Valley, Hands of Angels Home Healthcare and Staffing, varied free home equipment (toilet risers, life alert buttons) through the Linton Senior Center, and private service providers for nonmedical needs.

Emmons County has a number of community assets and resources that can be mobilized to address population health improvement. In terms of physical assets and features, the community includes a bike/walking path, fitness center, swimming pool, city park, golf course, and a baseball/softball diamond. To the north of Linton, Appert Lake National Wildlife Refuge and Long Lake National Refuge offer excellent birding and fishing opportunities. The Missouri River is within a short drive of Linton and offers boating, fishing, swimming, and camping. The area's terrain is suitable for cross country skiing, snowmobiling, and hunting. Pheasant, grouse, turkey, antelope, and deer abound in the area, as well as a variety of raptors, waterfowl, and songbirds. Emmons County also offers cultural attractions such as the Emmons County Museum, which is located in Linton and pays tribute to the early history of the region, and the Lawrence Welk Homestead outside Strasburg, North Dakota.

Linton offers public transportation to and from surrounding areas through South Central Transit. The community also has a grocery store with delivery services and a pharmacy that also has curb-side pick-up and home delivery via the U.S. Post Office. The communities of Linton, Hazelton, and Strasburg offer K-12 education with pre-K education also being available in Linton and Strasburg. Some licensed as well as unlicensed daycares are available in the area.

Figure 1: Emmons County

Linton Hospital

The Linton Hospital was opened in 1953 by the seven Sisters of St. Francis of Tiffin, Ohio, and it was managed by them until an administrator was hired in 1962. It is one of the most important assets in the community and the largest charitable organization in the Linton area. Linton Hospital includes a 14-bed, Critical Access Hospital located in Linton. The National Rural Health Association named the Linton Hospital among the top 100 Critical Access Hospital in 2018, 2019, 2020, 2021 as well as one of the top 20 Critical Access Hospital in 2019. As a hospital and designated level V trauma center, as well as a certified Acute Stroke Ready Hospital by the American Heart Association, the hospital provides comprehensive care for a wide range of medical and emergency situations. Linton Hospital also has three affiliated clinics. The Hazelton Clinic in Hazelton and the Linton Medical Center in Linton offer health services to Emmons County, North Dakota as well as surrounding areas and the Campbell County Clinic, located in Herreid, South Dakota, offers health services to Campbell County, South Dakota. The Linton Hospital and Clinics provide comprehensive medical care with physician and mid-level medical providers and consulting/visiting medical providers. With nearly 110 employees, Linton Hospital is the largest employer in the region. It has one full-time physician, three nurse practitioners, two physician assistants, and nine registered nurses for a total of 15 healthcare providers.

As of 2017, the Linton Hospital had a total labor income impact of $4.7 million. The Critical Access Hospital Profile for Linton Hospital, which includes a summary of hospital-specific information, is available in Appendix A.

Mission

The mission of the Linton Hospital and Clinics is to enhance the health, well-being, and quality of life of the people we serve. This will be achieved through a philosophy which values and supports:

- Quality and continuous improvements in patient care.
- Professionalism, education, and career development of our staff.
- Responsible, efficient, and effective use of our resources.
- Respect for the contribution each staff member/volunteer makes to the delivery of patient care.
- Recognize the rights of patients, families, public, staff, and allied professionals to be treated in a dignified, courteous, confidential, and respectful manner.
- A strong commitment through service and education to the people and communities we serve.

Vision

We will focus on primary healthcare services and the development of our skills to provide the best possible service and to improve the healthcare of the people that we serve.

We will continue to adapt to the ever-changing needs of the people we serve, recognizing that public information and education will be an integral part of our services.

Services offered locally by Linton Hospital include:

General and Acute Services

- Acne treatment
- Allergy, flu, and pneumonia shots
- Ambulance-24/7 ALS ambulance service
- Cardiology (visiting provider)
- Clinic
- Diabetic education
- Emergency room services, including eEmergency
- Hospital (acute care)
- Mole/wart/skin lesion removal
- Nutrition counseling
- OB/GYN (visiting provider)
- Orthopedics
- Pharmacy
- Physicals: annuals, D.O.T., sports, and insurance
- Podiatry
- Prenatal care
- Stress testing
- Surgical services – biopsies
- Surgical services – outpatient
- Swing bed services
- Urology (visiting provider)

Screening/Therapy Services

- Chronic disease management
- Holter monitoring
- Laboratory services
- Lower extremity circulatory assessment
- Occupational physicals
- Occupational therapy
- Pediatric services
- Physical therapy, including sports preventative and post-injury
- Respiratory care
- Sleep studies (visiting service)
- Social services

Radiology Services

- Bone density
- CT scans
- Echocardiograms
- EKG
- General x-ray
- 3D Mammograms
- MRI (mobile unit)
- Ultrasound (mobile unit)

Laboratory Services

- Blood types
- Clot times
- Chemistry
- Hematology microbiology
- Urine testing

Services Offered by Other Providers/Organizations

- Assisted living
- Chiropractic services
- Dental services
- Fitness center
- Massage therapy
- Optometric/vision services
- Personal training
- Pharmacy

Emmons County Public Health

Emmons County Public Health (ECPH) provides comprehensive public health services to the residents of Emmons County and surrounding areas. Located in south central North Dakota, ECPH is a single county district health unit. The health unit was organized in 1983 to fill a void of much-needed community health and nursing services. It is governed by a local Board of Health and has a local health officer, all appointed by the Emmons County commissioners. A staff of three registered nurses, an administrative assistant, and a contract for environmental health services compose the public health office. The public health services are available Monday through Friday.

The public health office works collaboratively with other health and community partners in Emmons County. Referrals are accepted from healthcare providers, other community agencies, or self-referrals. Public health services include in-home nursing services with medication management, monthly senior citizen health maintenance clinics, routine infant, child, and adult immunizations, school nursing, rapid inspection, Health Tracks screenings, newborn home visits, well child checks, lifestyle coaching, health education and promotion, tobacco prevention and cessation programs, substance use prevention, environmental health, and Women, Infant, Children (WIC) services. Emergency preparedness activities include pandemic and other public health emergencies planning, as well as testing and vaccinating for COVID-19. The nursing staff also serve on many local committees, such as child protection, interagency, and school advisory committees, and statewide committees, such as the State Association of County and City Officials (SACCHO) and the public health association.

Funding for public health services comes from a variety of funding sources, including local mill levy county funds, state and federal funding, and competitive applicable grants. Client donations are accepted for services, but no one is refused services due to inability to pay.

Specific services that SDHU provides are:

- Blood pressure screenings and education
- Breastfeeding resources and education
- Car safety seat program
- Child health (Healthy Baby Clinics)
- Correction facility health – resource only for sheriff's department
- Diabetes screening at monthly senior citizen clinics and anytime in the office
- Emergency preparedness services – work with community partners as part of local emergency response team/COVID testing, education, and vaccination
- Environmental Health Services (water, sewer, health hazard abatement, public nuisances)
- Fall prevention
- Flu shots
- Heart Health Education
- Health Tracks (child-health screening – Medicaid participants)
- Home health – in-home nursing care for elderly and disabled
- Immunizations for infants, children, and adults
- Lifestyle coaching classes
- Medication setup – home visits
- Member of Child Protection Team and County Interagency Team
- Newborn home visits
- Preschool education programs and screening
- School health – hearing health education and resource to the schools
- Substance abuse prevention
- Tobacco prevention, cessation, and control
- Tuberculosis monitoring
- West Nile program – surveillance and education
- WIC program
- Worksite Wellness – coordinator for county employees and sheriff's department
- Youth education programs (First Aid, bike safety, babysitting classes, farm safety, etc.)
- Foot care – home of community setting

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 Emmons County. In addition to Linton, located in the service area are the communities of Braddock, Hazelton, Strasburg, Hague, and Westfield.

CRH, in partnership with Linton Hospital and ECPH, facilitated the CHNA process. Community representatives met regularly in-person, by telephone conference, and email. A CHNA liaison was selected locally, who served as the main point of contact between CRH and Linton Hospital. A small 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 key informant interviews (described in more detail as follows) 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. Twelve people, representing a cross section demographically, were interviewed via phone and videoconference. The interviews were highly interactive with good participation.

Figure 2: Steering Committee

Delrae Baumgartner	RN, Director of Nursing – ECPH
Liz Hanson	Quality and Compliance Manager – Linton Hospital
Sandy Meidinger	Teacher with Linton Public Schools, Board President – Linton Hospital
Kasandra Wald	Nursing Manager – Linton Hospital

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

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

- A survey solicited feedback from area residents;
- Community leaders representing the broad interests of the community took part in one-on-one key informant interviews;
- 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. CRH connects the UNDSMHS and other necessary resources to rural communities and their healthcare organizations in order to maintain access to quality care for rural residents. In this capacity, CRH works at a national, state, and community level.

Detailed as follows 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.

Interviews

One-on-one interviews with 12 key informants were conducted via phone or videoconference between November 2020 and January 2021. A representative from the CRH conducted the interviews. Interviews were held with selected members of the community who could provide insights into the community's health needs. Included among the informants were public health professionals with special knowledge in public health acquired through several years of direct experience in the community, including working with medically underserved, low-income, and minority populations, as well as with populations with chronic diseases. Other key informants represented the health community, business community, political bodies, law enforcement, education, faith community, and social services agencies.

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 C and a full listing of direct responses provided for the questions that included "Other" as an option are included in Appendix G.

The community member survey was distributed to various residents in the Linton Hospital 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, press releases led to published articles in the Emmons County Record. Additionally, information was published on the Linton Hospital's website and Facebook page. Fliers were also placed in area businesses.

Approximately 50 community member surveys were available for distribution in Emmons County. The surveys were distributed at Linton Hospital, ECPH, and local churches.

To help ensure anonymity, included with each survey was a postage-paid return envelope to CRH. In addition, to help make the survey as widely available as possible, residents also could request a survey by calling Linton Hospital or ECPH. The survey period ran from November 16, 2020 to December 15, 2020. Seven completed

paper surveys were returned.

Area residents were also given the option of completing an online version of the survey, which was publicized in the Emmons County Record, on fliers in area businesses, and on the Linton Hospital website and Facebook page. Forty online surveys were completed. Five of those online respondents used the QR code to complete the survey. In total, counting both paper and online surveys, 47 community member surveys were completed, equating to a 6% response rate. This response rate is very low for this type of unsolicited survey methodology and indicates a less-than-engaged community.

Secondary Data

Secondary data was collected and analyzed to provide descriptions of: (1) population demographics, (2) general health issues (including any population groups with particular health issues), and (3) contributing causes of community health issues. Data was collected from a variety of sources, including the U.S. Census Bureau; the 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); 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 (CDC, https://www.cdc.gov/healthyyouth/data/yrbs/index.htm).

Social Determinants of Health

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

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

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

For Figure 3, data has been derived from the County Health Rankings model (https://www.countyhealthrankings.org/resources/county-health-rankings-model), and it illustrates that healthcare, while vitally important, plays only one small role (approximately 20%) in the overall health of individuals and ultimately of a community. Physical environment, social and economic factors, and health behaviors play a much larger part (80%) in impacting health outcomes. Therefore, as needs or concerns were raised through this Community Health Needs Assessment process, it was imperative to keep in mind how they impact the health of the community and what solutions can be implemented.

Figure 3: Social Determinants of Health

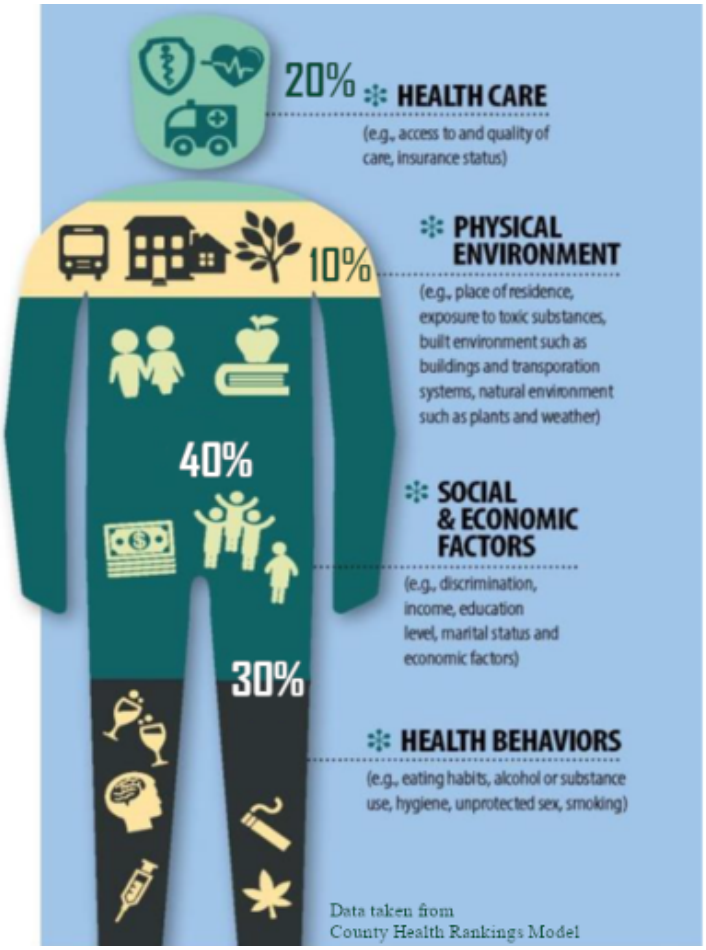


Figure 4 (Henry J. Kaiser Family Foundation, https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/), provides examples of factors that are included in each of the social determinants of health categories that lead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

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

Figure 4: Social Determinants of Health

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

Health Outcomes
Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

KFF
HENRY J KAISER FAMILY FOUNDATION

Demographic Information

Table 1. Census Data

	Emmons County	North Dakota
Population (2019)	3,241	762,062
Population change (2010-2019)	-8.6%	13.3%
People per square mile (2010)	2.4	9.7
Persons 65 years or older (2019)	28.1%	15.7%
Persons younger than 18 years (2019)	19.5%	23.6%
Median age (2018 est.)	52.6	35.5
White persons (2019)	96.4%	86.9%
High school graduates (2018)	87.1%	92.5%
Bachelor's degree or higher (2018)	16.5%	29.5%
Live below poverty line (2019)	13.3%	10.6%
Persons without health insurance, younger than age 65 years (2019)	13.2%	8.1%
Persons without health insurance, under age 65 years (2016)	14.5%	8.1%

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

While the population of North Dakota has grown in recent years, Emmons County has seen a decrease in population since 2010. The U.S. Census Bureau estimates show that the county's population decreased from 3,550 (2010) to 3,241 (2019).

County Health Rankings

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

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

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

Table 2. Summary of County Health Rankings Data

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 Emmons 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 Linton Hospital 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).

Emmons County rankings within the state are included in the summary following. For example, the county ranks 37th out of 48 ranked counties in North Dakota on health outcomes and 42nd on health factors. The measures marked with a bullet point (•) are those where a county is not measuring up to the state rate/percentage; a square (■) indicates that the county is not meeting the U.S. Top 10% rate on that measure. Measures that are not marked with a colored checkmark but are marked with a plus sign (+) indicate that the county is doing better than the U.S. Top 10%.

The data from County Health Rankings shows that Emmons County is doing better than many counties compared to the rest of the state on all of the outcomes, landing at or above rates for other North Dakota counties. However, unlike many North Dakota counties, Emmons is doing fairly well in many areas when it comes to the U.S. Top 10% ratings. The only outcome where Emmons County does not meet the U.S. Top 10% ratings is the percentage of adults reporting poor or fair health.

However, on health factors, Emmons County performs below the North Dakota average for counties in several areas. Outcomes and factors in which Emmons County is performing poorly relative to the rest of the state include:

- Food environment index
- Access to exercise opportunities
- Uninsured population

- Ratio of population to single primary care physician
- Ratio of population to single dentist
- Preventable hospital stays
- Mammography screenings
- Flu vaccinations
- Unemployment
- Children in poverty
- Income inequality
- Social associations
- Injury deaths

Data compiled by County Health Rankings shows Emmons County is performing better than, or on par with, North Dakota in health outcomes and factors for the following indicators:

- Percentage of adults reporting poor or fair health
- Poor physical health days (in past 30 days)
- Poor mental health days (in past 30 days)
- Adult smoking
- Adult obesity
- Physical inactivity
- Excessive drinking
- Alcohol-impaired driving deaths
- Children in single-parent households
- Violent crime
- Air pollution – particulate matter
- 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* 2020 – EMMONS COUNTY

	Emmons County	U.S. Top 10%	North Dakota
Ranking: Outcomes	**15th**		**(of 48)**
Premature death		5,500	6,600
Poor or fair health	15% ■	12%	15%
Poor physical health days (in past 30 days)	3.0 +	3.1	3.3
Poor mental health days (in past 30 days)	3.2 +	3.4	3.5
Low birth weight		6%	6%
Ranking: Factors	**37th**		**(of 48)**
Health Behaviors			
Adult smoking	15% ■	14%	18%
Adult obesity	27% ■	26%	33%
Food environment index (10=best)	8.0 ●■	8.6	9.0
Physical inactivity	24% ■	20%	24%
Access to exercise opportunities	3% ●■	91%	74%
Excessive drinking	19% ■	13%	24%
Alcohol-impaired driving deaths	43% ■	11%	43%
Sexually transmitted infections		161.4	433.9
Teen birth rate		13	21
Clinical Care			
Uninsured	12% ●■	6%	9%
Primary care physicians	3,300:1 ●■	1,030:1	1,300:1
Dentists	3,300:0 ●■	1,240:1	1,540:1
Mental health providers		290:1	530:1
Preventable hospital stays	7,979 ●■	2,761	4,551
Mammography screening (% of Medicare enrollees ages 65-74 receiving screening)	48% ●■	50%	52%
Flu vaccinations (% of fee-for-service Medicare enrollees receiving vaccination)	34% ●■	53%	49%
Social and Economic Factors			
Unemployment	4.8% ●■	2.6%	2.6%
Children in poverty	17% ●■	11%	11%
Income inequality	4.6 ●■	3.7	4.4
Children in single-parent households	20% +	20%	27%
Social associations	9.1 ●■	18.4	16.2
Violent crime	59 +	63	258
Injury deaths	149 ●■	58	70
Physical Environment			
Air pollution – particulate matter	5.0 +	6.1	5.4
Drinking water violations	No		
Severe housing problems	8% +	9%	11%

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

Children's Health

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

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

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

Health Status	North Dakota	National
Children born premature (3 or more weeks early)	9.0%	11.4%
Children 10-17 overweight or obese	31.7%	30.8%
Children 0-5 who were ever breastfed	82.5%	80.9%
Children 6-17 who missed 11 or more days of school	3.5%	4.5%
Healthcare		
Children currently insured	91.8%	93.4%
Children who spent less than 10 minutes with the provider at a preventive medical visit	21.8%	19.8%
Children (1-17 years) who had a preventive dental visit in the past year	75.0%	79.1%
Children (3-17 years) received mental health care	12.9%	9.8%
Children (3-17 years) with problems requiring treatment did not receive mental health care	0.7%	2.2%
Young children (9-35 mos.) receiving standardized screening for developmental problems	42.2%	35.2 %
Family Life		
Children whose families eat meals together four or more times per week	71.7%	73.6%
Children who live in households where someone smokes	15.3%	15.0%
Neighborhood		
Children who live in neighborhoods with parks, recreation centers, sidewalks, and a library	35.1%	38.3%
Children living in neighborhoods with poorly kept or rundown housing	1.3%	3.8%

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

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

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

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

The data show Emmons County is performing more poorly than the North Dakota average on more than half of the examined measures, the exceptions being children enrolled in Healthy Steps, Supplemental Nutrition Assistance Program (SNAP) recipients, and the high school graduation rate. The most marked difference was on the measure of uninsured children (8.1% higher rate in Emmons County).

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

	Emmons County	North Dakota
Uninsured children (% of population age 0-18), 2018	14.4%	6.3%
Children in poverty (% of population age 0-17), 2019	17.7%	10.9%
Medicaid recipient (% of population age 0-20), 2019	29.9%	26.6%
Children enrolled in Healthy Steps (% of population age 0-18), 2019	1.6%	1.6%
Supplemental Nutrition Assistance Program (SNAP) recipients (% of population age 0-18), 2019	10.6%	16.9%
Licensed childcare capacity (% of population age 0-13), 2020	37.9%	39.9%
4-Year High School Cohort Graduation Rate, 2018	95.0%	88.3%

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 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 and compare state health risk behaviors to national health risk behaviors and was intended for use to plan, evaluate, and improve school and community programs. North Dakota began participating in the YRBS survey in 1995. Students in grades 7-8 and 9-12 are surveyed in the spring of odd years. The survey is voluntary and anonymous.

North Dakota has two survey groups, selected and voluntary. The selected school survey population is chosen using a scientific sampling procedure that ensures 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 was collected in 2015, 2017, and 2019. They are further broken down by rural and urban percentages. The trend column shows a "=" for statistically insignificant change (no change), "↑" for an increased trend in the data changes from 2017 to 2019, and "↓" for a decreased trend in the data changes from 2017 to 2019. The final column shows the 2019 national average percentage. For a more complete listing of the YRBS data, see Appendix D.

Youth Behavioral Risk Survey Results

North Dakota High School Survey
Rate Increase ↑, rate decrease ↓, or no statistical change = in rate from 2017-2019.
Sources: https://www.cdc.gov/healthyyouth/data/yrbs/results.htm; https://www.nd.gov/dpi/districtsschools/safety-health/youth-risk-behavior-survey

	ND 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
Injury and Violence							
% of students who rarely or never wore a seat belt (when riding in a car driven by someone else)	8.5	8.1	5.9	=	8.8	5.4	6.5
% of students who rode in a vehicle with a driver who had been drinking alcohol (one or more times during the 30 prior to the survey)	17.7	16.5	14.2	=	17.7	12.7	16.7
% of students who talked on a cell phone while driving (on at least one day during the 30 days before the survey)	NA	56.2	59.6	=	60.7	60.7	NA
% of students who texted or e-mailed while driving a car or other vehicle (on at least one day during the 30 days before the survey)	57.6	52.6	53.0	=	56.5	51.8	39.0
% of students who were in a physical fight on school property (one or more times during the 12 months before the survey)	5.4	7.2	7.1	=	7.4	6.4	8.0
% of students who experienced sexual violence (being forced by anyone to do sexual things [counting such things as kissing, touching, or being physically forced to have sexual intercourse] that they did not want to, one or more times during the 12 months before the survey)	NA	8.7	9.2	=	7.1	8.0	10.8
% of students who were bullied on school property (during the 12 months before the survey)	24.0	24.3	19.9	↓	24.6	19.1	19.5
% of students who were electronically bullied (includes texting, Instagram, Facebook, or other social media ever during the 12 months before the survey)	15.9	18.8	14.7	↓	16.0	15.3	15.7
% of students who made a plan about how they would attempt suicide (during the 12 months before the survey)	13.5	14.5	15.3	=	16.3	16.0	15.7
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 one day during the 30 days before the survey)	22.3	20.6	33.1	↑	32.2	31.9	32.7
% of students who currently used cigarettes, cigars, or smokeless tobacco (on at least one day during the 30 days before the survey)	NA	18.1	12.2	**NA**	15.1	10.9	10.5
% of students who currently were binge drinking (four or more drinks for female students, five or more for male students within a couple of hours on at least one day during the 30 days before the survey)	NA	16.4	15.6	=	17.2	14.0	13.7
% of students who currently used marijuana (one or more times during the 30 days before the survey)	15.2	15.5	12.5	=	11.4	14.1	21.7
% of students who ever took prescription pain medicine without a doctor's prescription or differently than how a doctor told them to use	NA	14.4	14.5	=	12.8	13.3	14.3

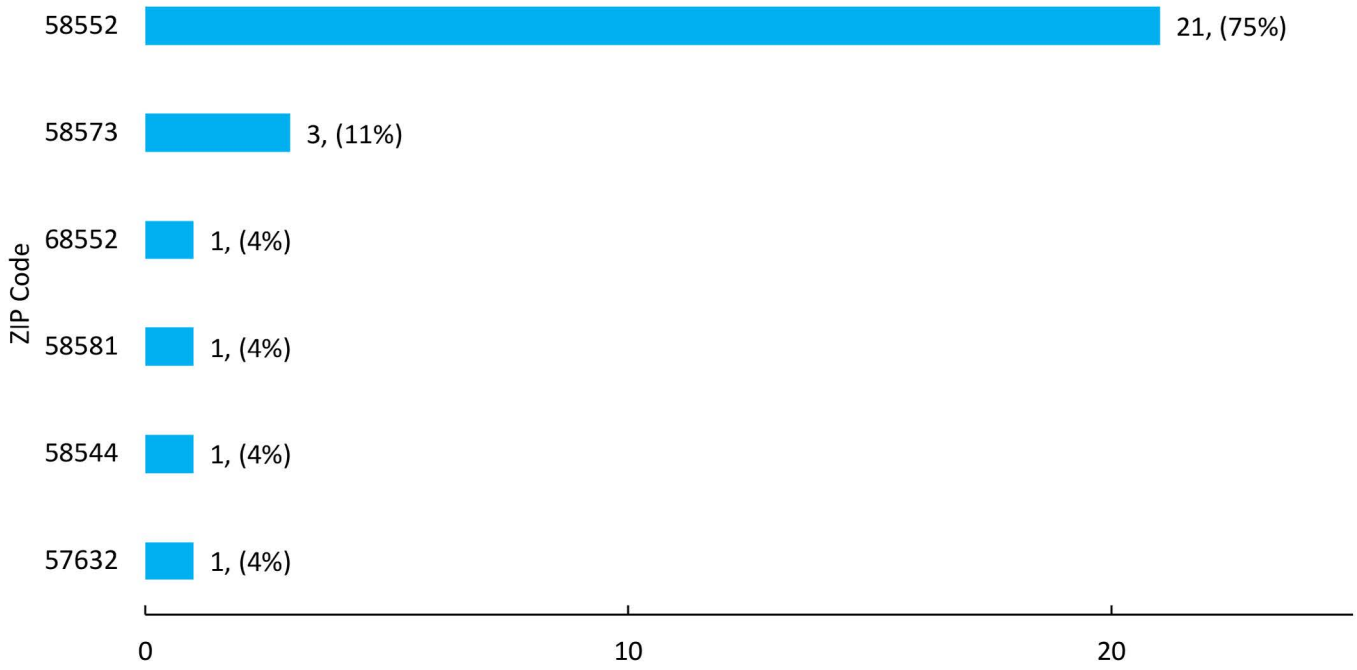
Weight Management, Dietary Behaviors, and Physical Activity							
% of students who were overweight (>= 85th percentile but <95th percentile for body mass index)	14.7	16.1	16.5	=	16.6	15.6	16.1
% of students who had obesity (>= 95th percentile for body mass index)	13.9	14.9	14.0	=	17.4	14.0	15.5
% of students who did not eat fruit or drink 100% fruit juices (during the seven days before the survey)	3.9	4.9	6.1	=	5.8	5.3	6.3
% of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the seven days before the survey)	4.7	5.1	6.6	=	5.3	6.6	7.9
% of students who drank a can, bottle, or glass of soda or pop one or more times per day (not including diet soda or diet pop, during the seven days before the survey)	18.7	16.3	15.9	=	17.4	15.1	15.1
% of students who did not drink milk (during the seven days before the survey)	13.9	14.9	20.5	↑	14.8	20.3	30.6
% of students who did not eat breakfast (during the seven days before the survey)	11.9	13.5	14.4	=	13.3	14.1	16.seven
% of students who most of the time or always went hungry because there was not enough food in their home (during the 30 days before the survey)	NA	2.seven	2.8	=	2.1	2.9	NA
% of students who were physically active at least 60 minutes per day on 5 or more days (doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time during the seven days before the survey)	NA	51.5	49.0	=	55.0	22.6	55.9
% of students who watched television 3 or more hours per day (on an average school day)	18.9	18.8	18.8	=	18.3	18.2	19.8
% of students who played video or computer games or used a computer 3 or more hours per day (for something that was not schoolwork on an average school day)	38.6	43.9	45.3	=	48.3	45.9	46.1
Other							
% of students who ever had sexual intercourse	38.9	36.6	38.3	=	35.4	36.1	38.4
% of students who had eight or more hours of sleep (on an average school night)	NA	31.8	29.5	=	31.8	33.1	NA
% of students who brushed their teeth on seven days (during the seven days before the survey)	NA	69.1	66.8	=	63.0	68.2	NA

Survey Results

As noted previously, 47 community members completed the survey in communities throughout the counties in the Linton Hospital service area. For all questions that contained an "Other" response, all of those direct responses may be found in Appendix E. In some cases, a summary of those comments is additionally included in the report narrative. The "Total respondents" number under each heading indicates the number of people who responded to that particular question and the "Total responses" number under the heading depicts the number of responses selected for that question (some questions allow for selection of more than one response).

The survey requested that respondents list their home zip code. While not all respondents provided a ZIP code, 28 did, revealing that a large majority of respondents (75%, N=21) lived in Linton. These results are shown in Figure 5.

Figure 5: Survey Respondents' Home ZIP Code
Total respondents: 28



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

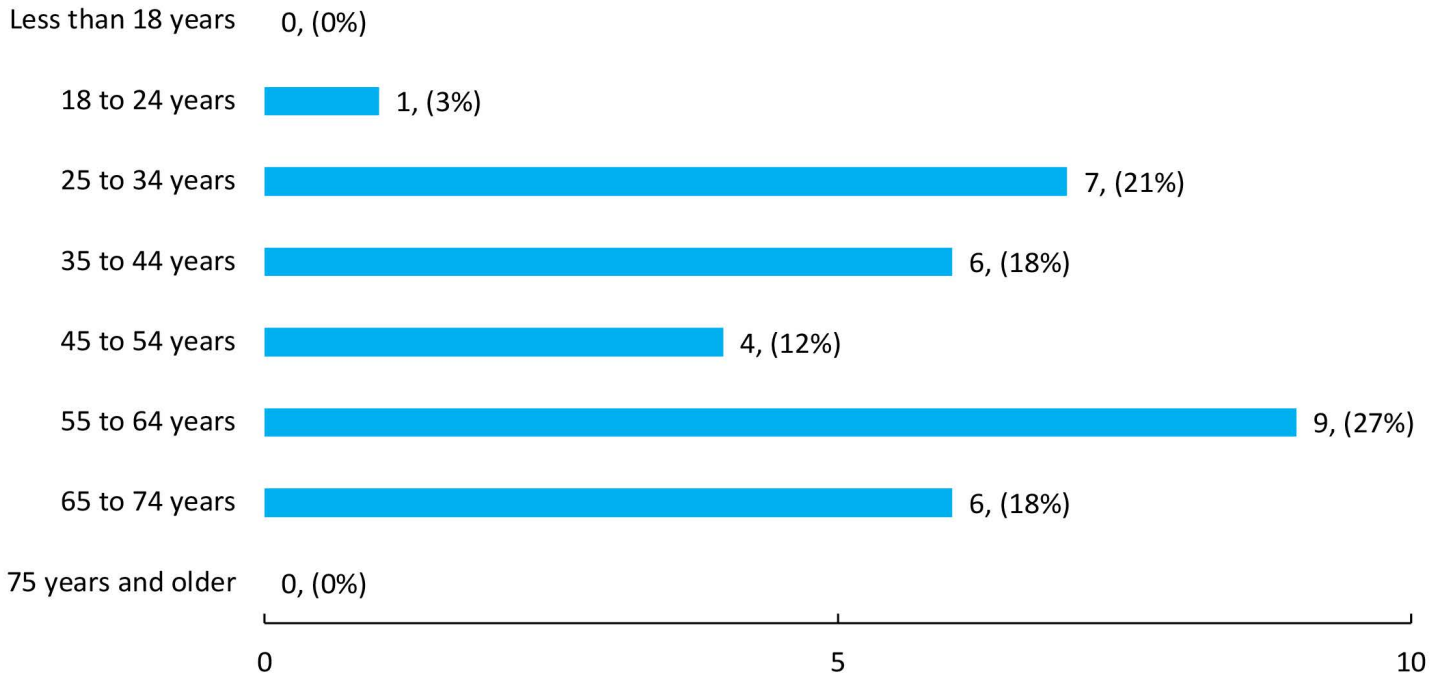
To better understand the perspectives being offered by survey respondents, survey-takers were asked a few demographic questions. Throughout this report, numbers (N) instead of just percentages (%) are reported because percentages can be misleading with smaller numbers. Survey respondents were not required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

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

- 45% (N=15) were age 55 or older.
- The majority (78%, N=26) were female.
- Slightly more than half of the respondents (52%, N=17) had bachelor's degrees or higher.
- The number of those working full time (76%, N=25) was just more than eight times higher than those who were retired (9%, N=3).
- 97% (N=30) of those who reported their ethnicity/race was White/Caucasian.
- 26% of the population (N=8) 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 = 33



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

Figure 7: Gender Demographics of Survey Respondents
Total respondents = 33

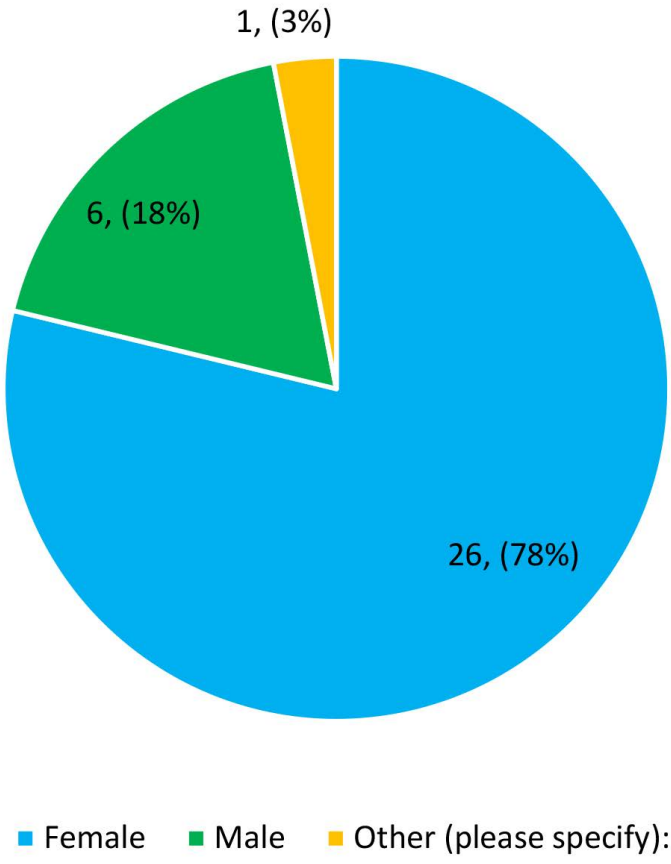


Figure 8: Educational Level Demographics of Survey Respondents
Total respondents = 33

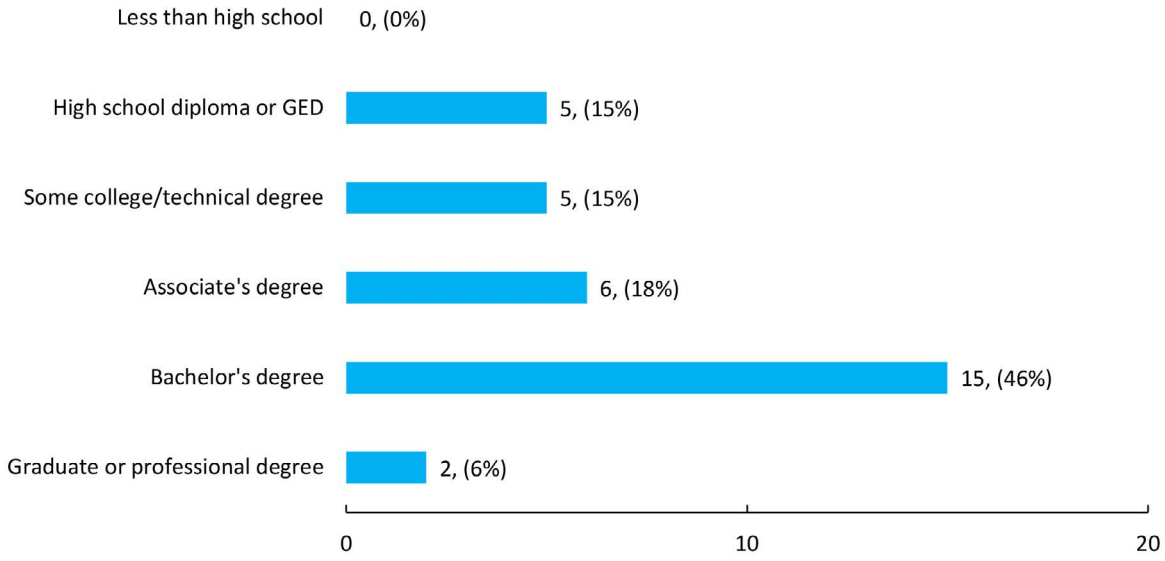
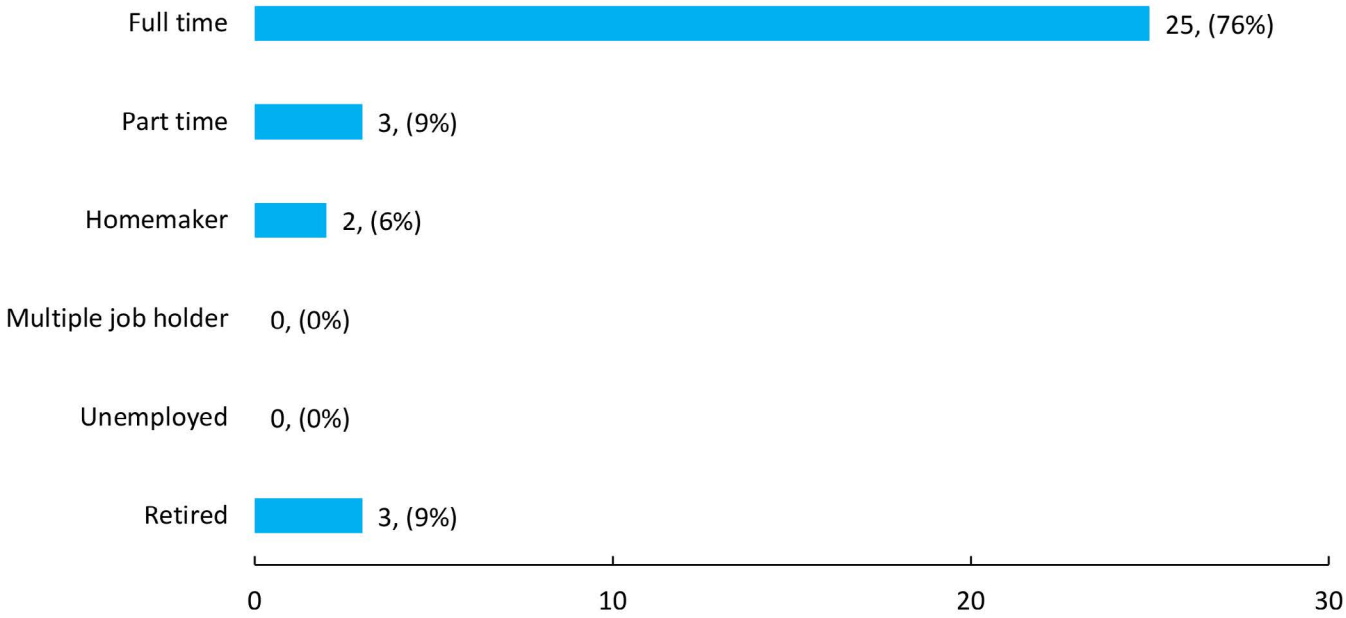
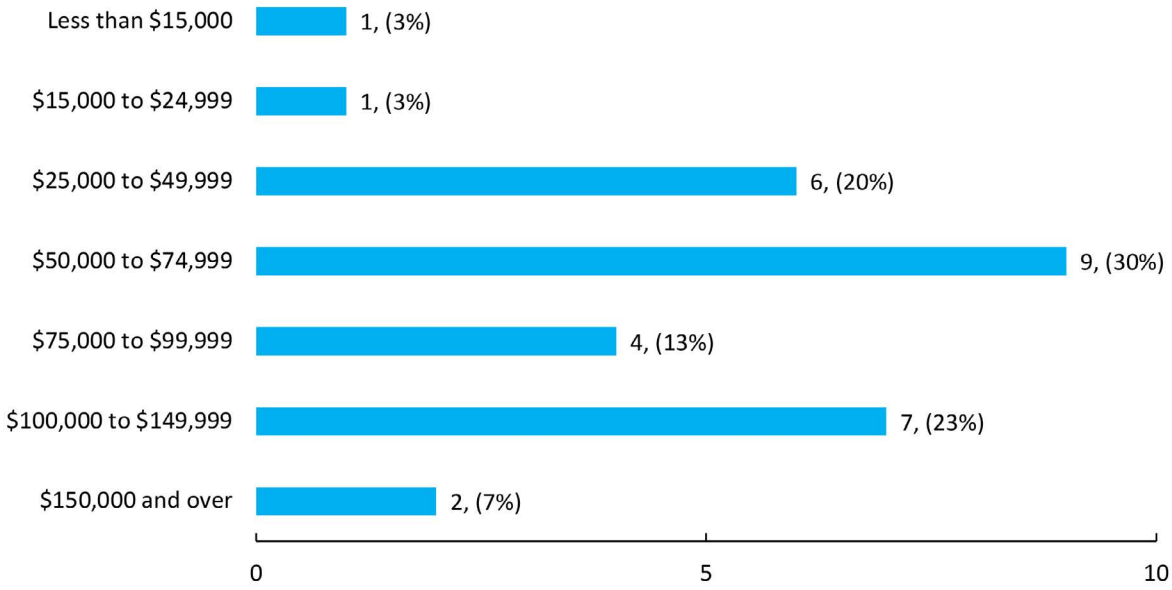


Figure 9: Employment Status Demographics of Survey Respondents
Total respondents = 33



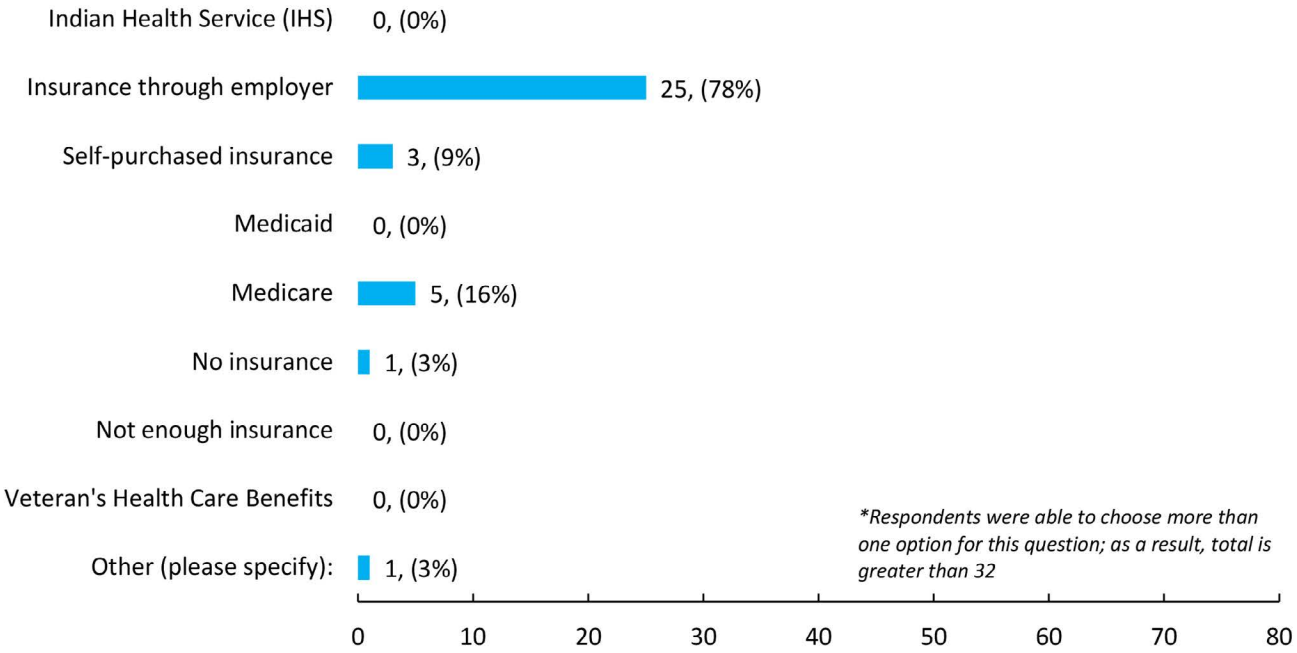
Of those who provided a household income, 6% (N=2) of community members reported a household income of less than $25,000. Thirty percent (N=9) indicated a household income of $100,000 or more. This information is shown in Figure 10.

Figure 10: Household Income Demographics of Survey Respondents
Total respondents = 30



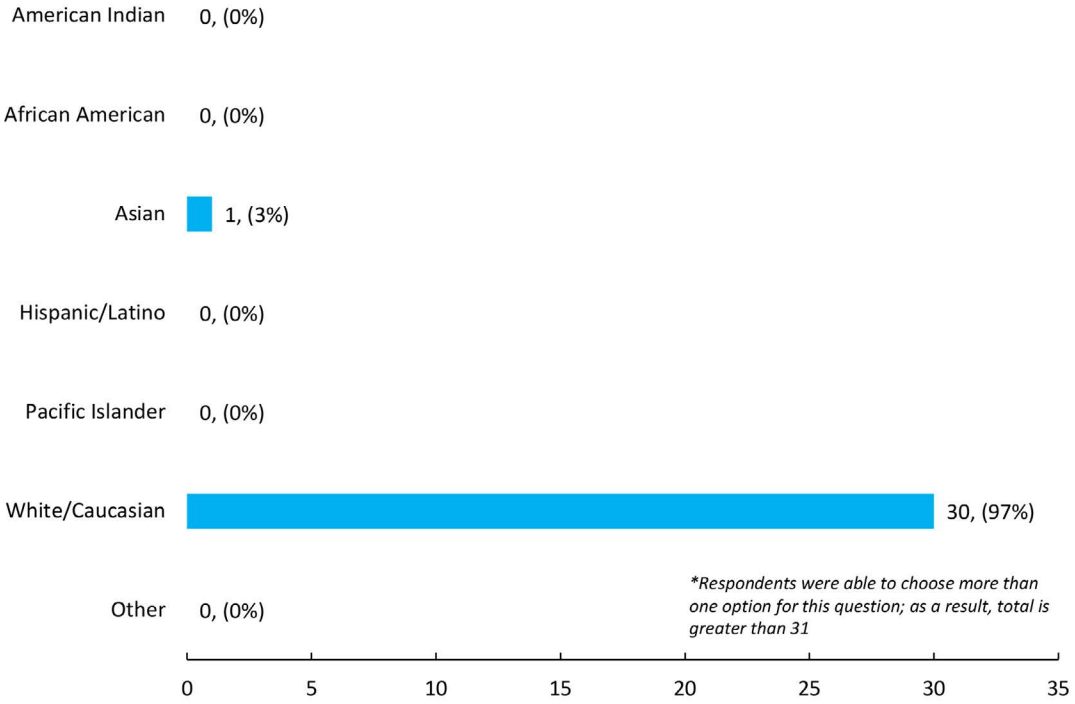
Community members were asked about their health insurance status, which is often associated with whether people have access to healthcare. Three percent (N=1) of the respondents reported having no health insurance or being under-insured. The most common insurance types were insurance through one's employer (N=25), followed by Medicare (N=5) and self-purchased insurance (N=3).

Figure 11: Health Insurance Coverage Status of Survey Respondents
Total respondents = 32*



As shown in Figure 12, nearly all of the respondents were White/Caucasian (97%). This was in-line with the race/ethnicity of the overall population of Emmons County; the U.S. Census indicates that 96.4% of the county population is White.

Figure 12: Race/Ethnicity Demographics of Survey Respondents
Total respondents = 31*



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 25 respondents agreeing) that community assets include:

- Safe place to live, little/no crime (N=41)
- Family-friendly (N=37)
- People are friendly, helpful, supportive (N=34)
- Quality school systems (N=30)
- Healthcare (N=29)
- Active faith community (N=28)
- People who live here are involved in their community (N=28)

Figures 13 to 16 illustrate the results of these questions.

Figure 13: Best Things About the PEOPLE in Your Community
Total responses = 45*

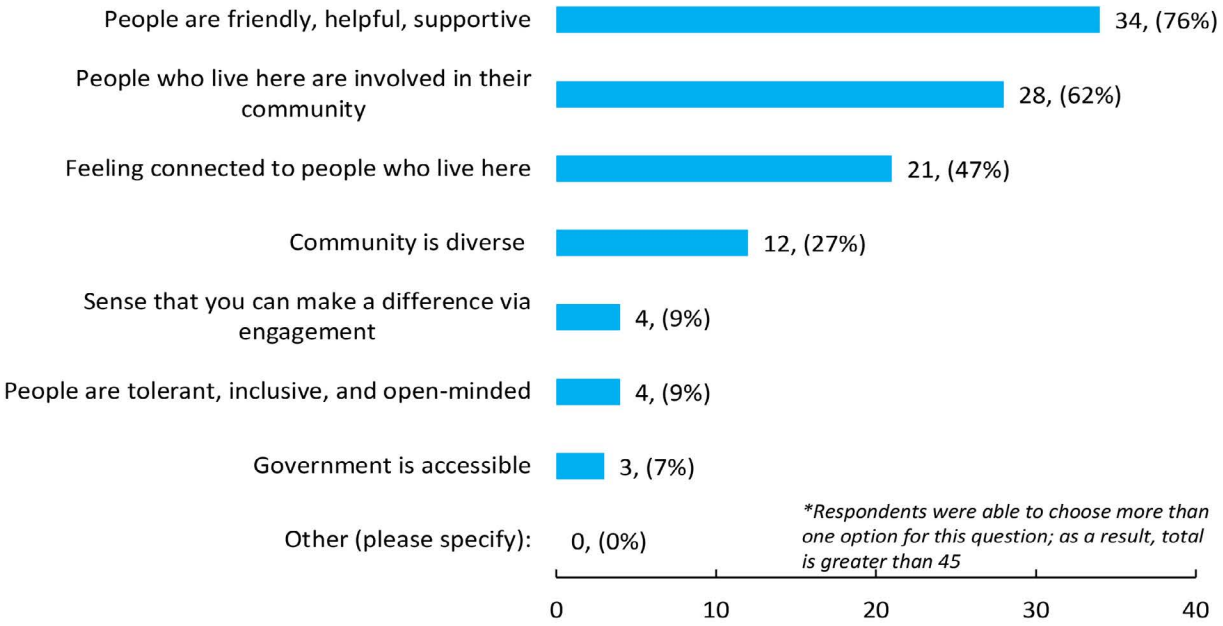


Figure 14: Best Things About the SERVICES AND RESOURCES in Your Community
Total responses = 44*

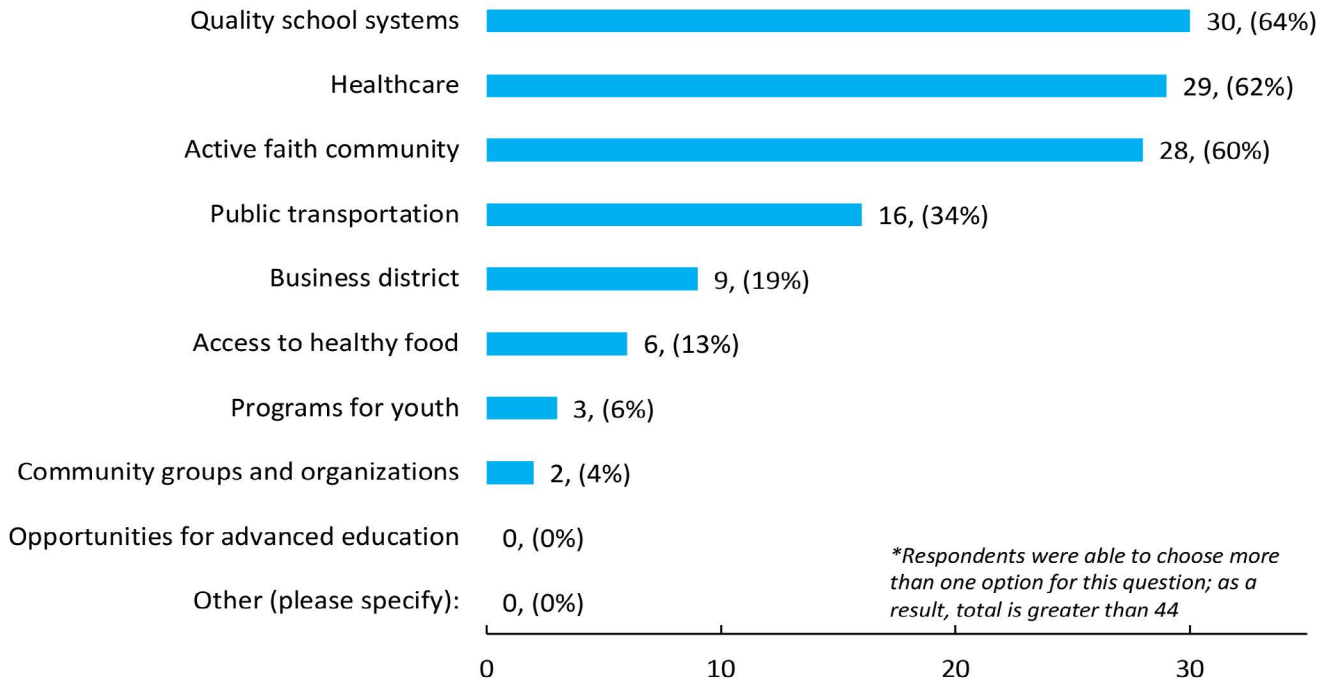


Figure 15: Best Things About the QUALITY OF LIFE in Your Community
Total responses = 47*

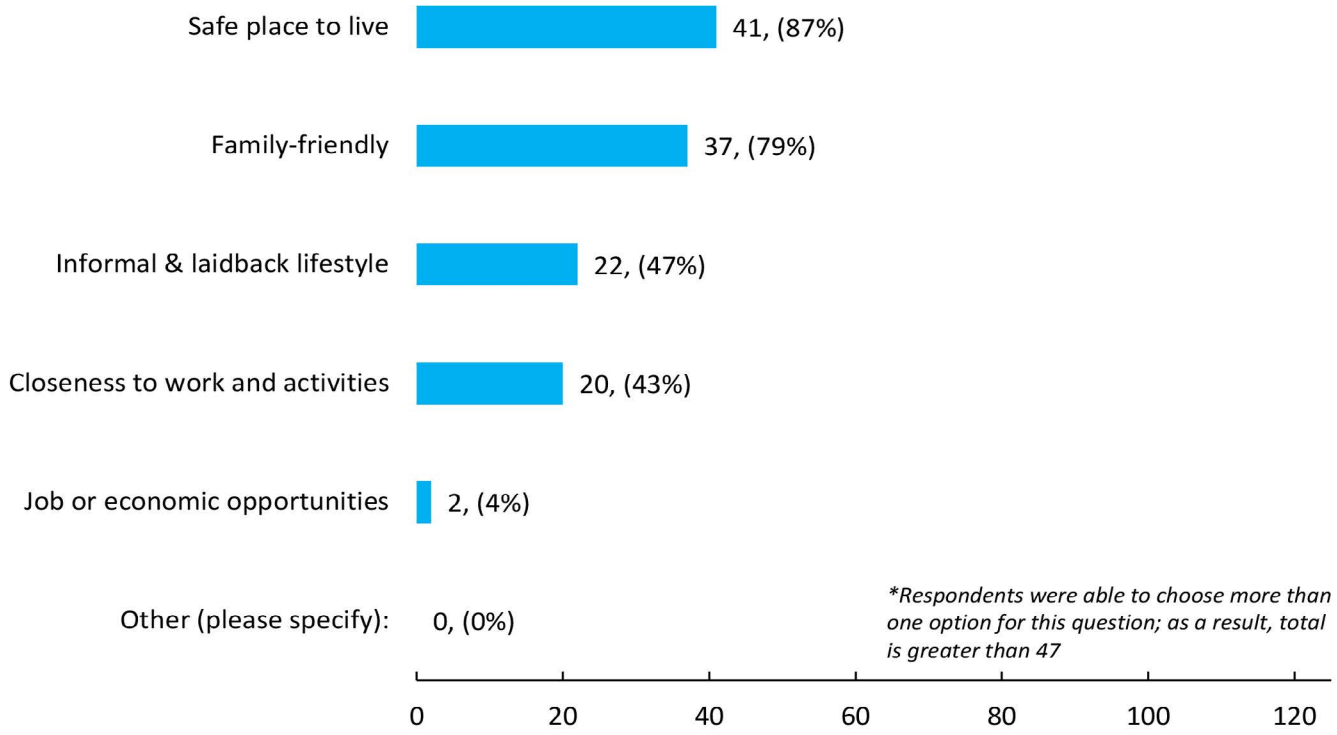
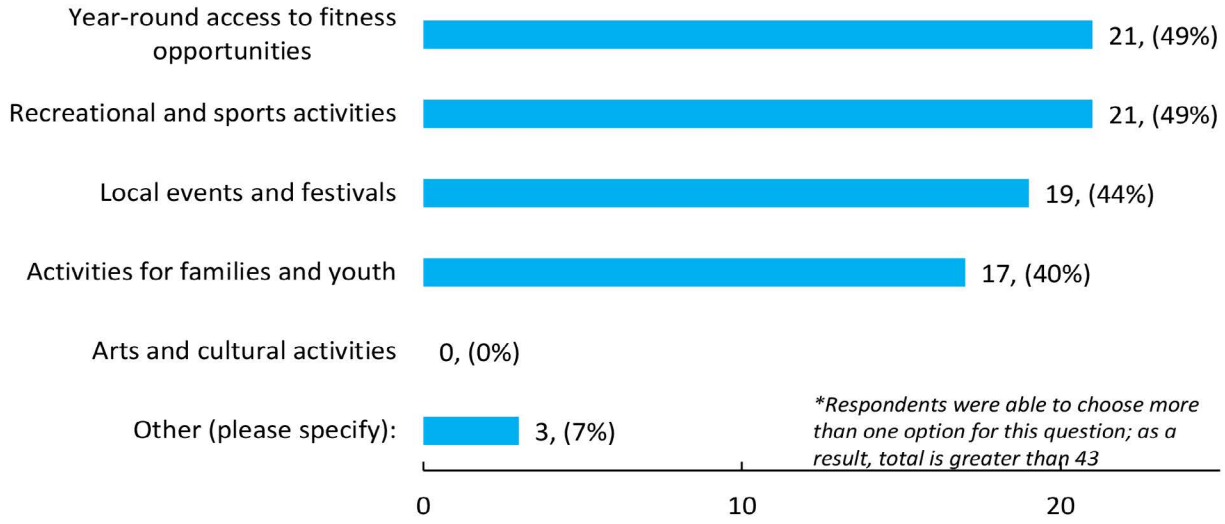


Figure 16: Best Thing About the ACTIVITIES in Your Community
Total responses = 43*



Respondents who selected "Other" specified that the best things about the activities in the community included the pool and school sports.

Community Concerns

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

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

With regard to responses about community challenges, the most highly voiced concerns (those having at least 15 respondents) were:

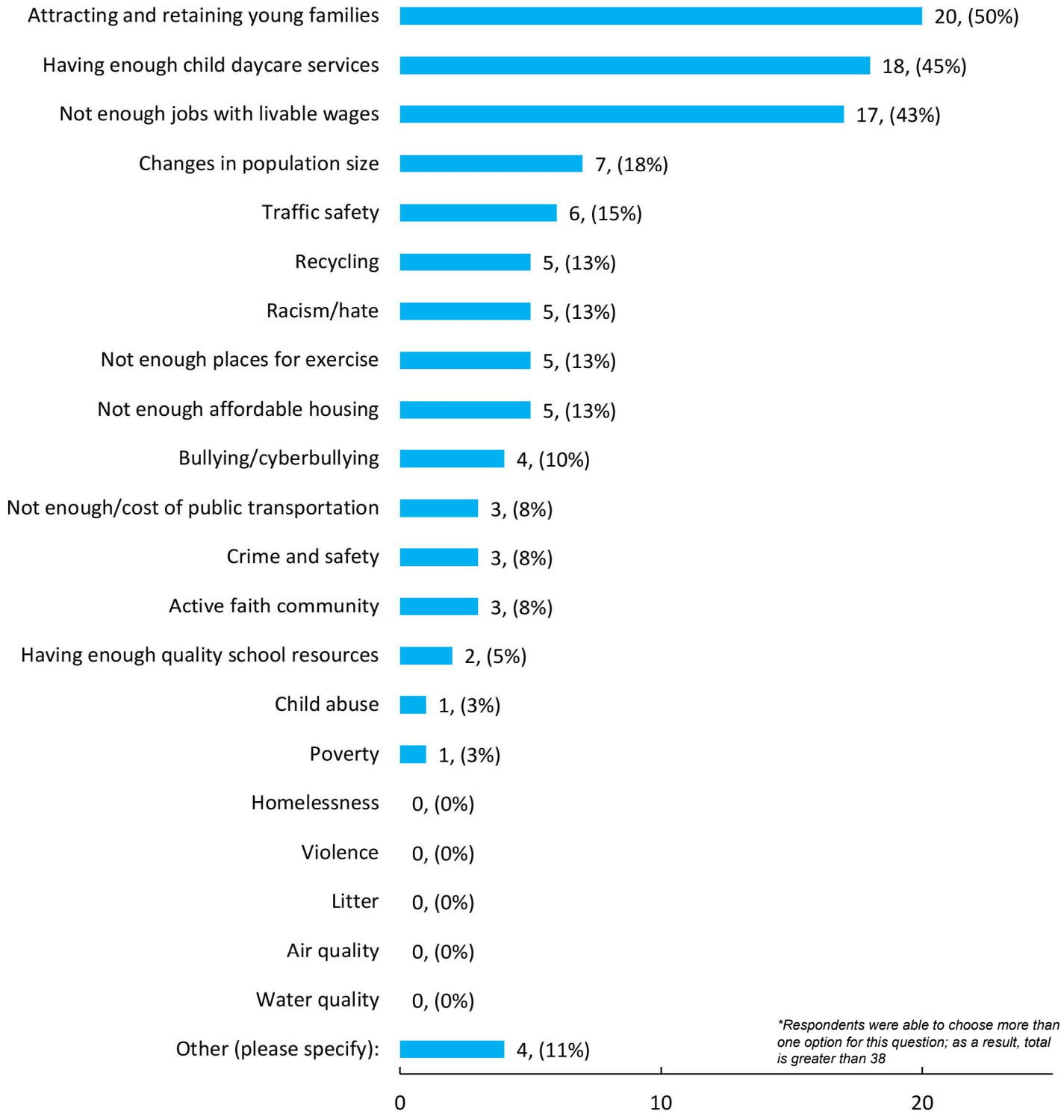
- Bullying/cyberbullying (N=26)
- Attracting and retaining young families (N=20)
- Alcohol use and abuse – Adults (N=19)
- Alcohol use and abuse – Youth (N=18)
- Availability of resources to help the elderly stay in their homes (N=18)
- Having enough child daycare services (N=18)
- Child abuse or neglect (N=17)
- Not enough activities for children and youth (N=17)
- Not enough jobs with livable wages (N=17)
- Smoking and tobacco use, exposure to second-hand smoke, or vaping/juuling – Youth (N=16)
- Depression/anxiety – Adults (N=15)

The other issues that had at least 10 votes included:

- Availability of home health (N=14)
- Availability of mental health services (N=13)
- Cost of long-term/nursing home care (N=13)
- Extra hours for appointments (N=13)
- Depression/anxiety – Youth
- Drug use and abuse – Youth (N=11)

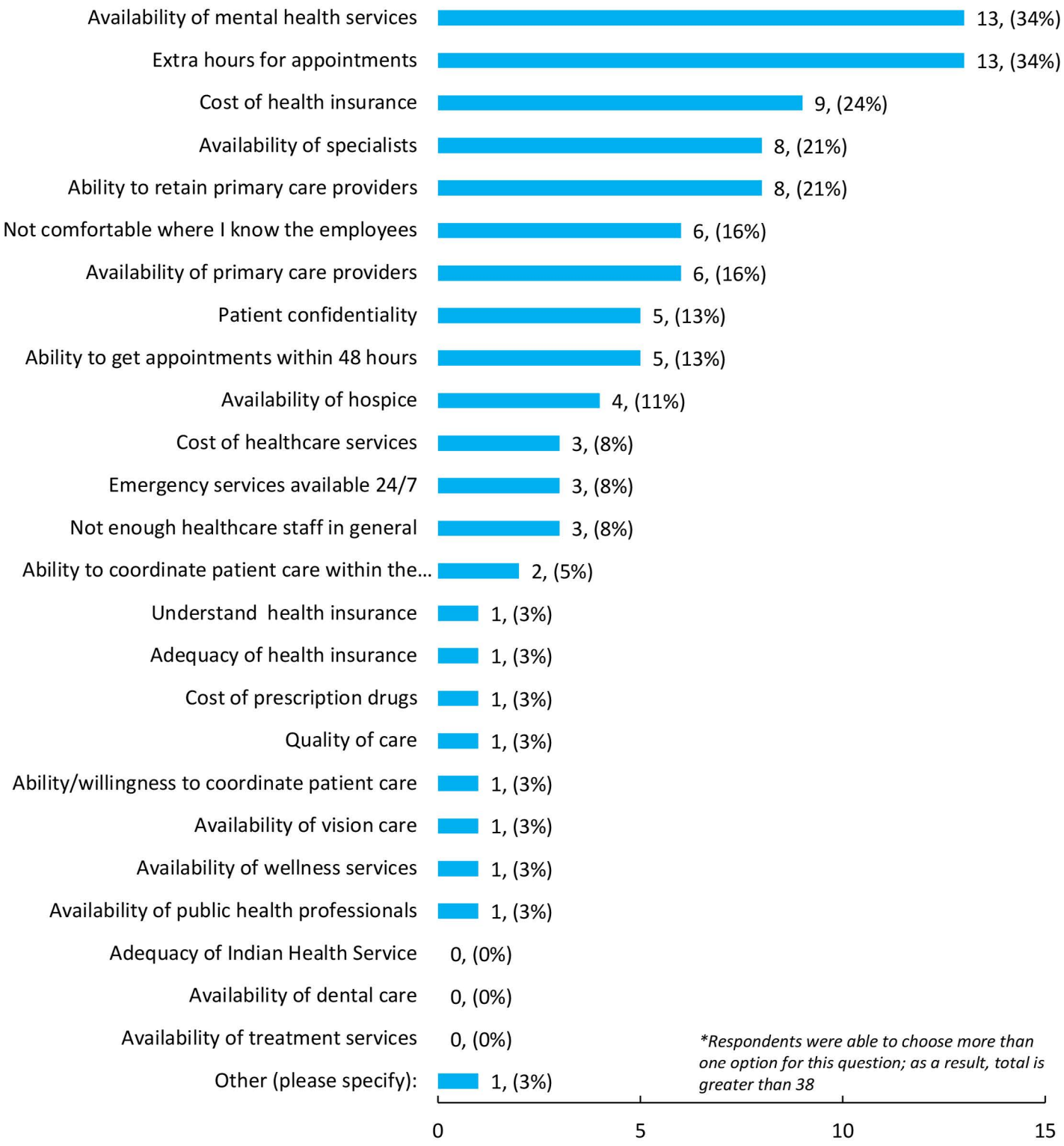
Figures 17 through 22 illustrate these results.

Figure 17: Community/Environmental Health Concerns
Total responses = 40*



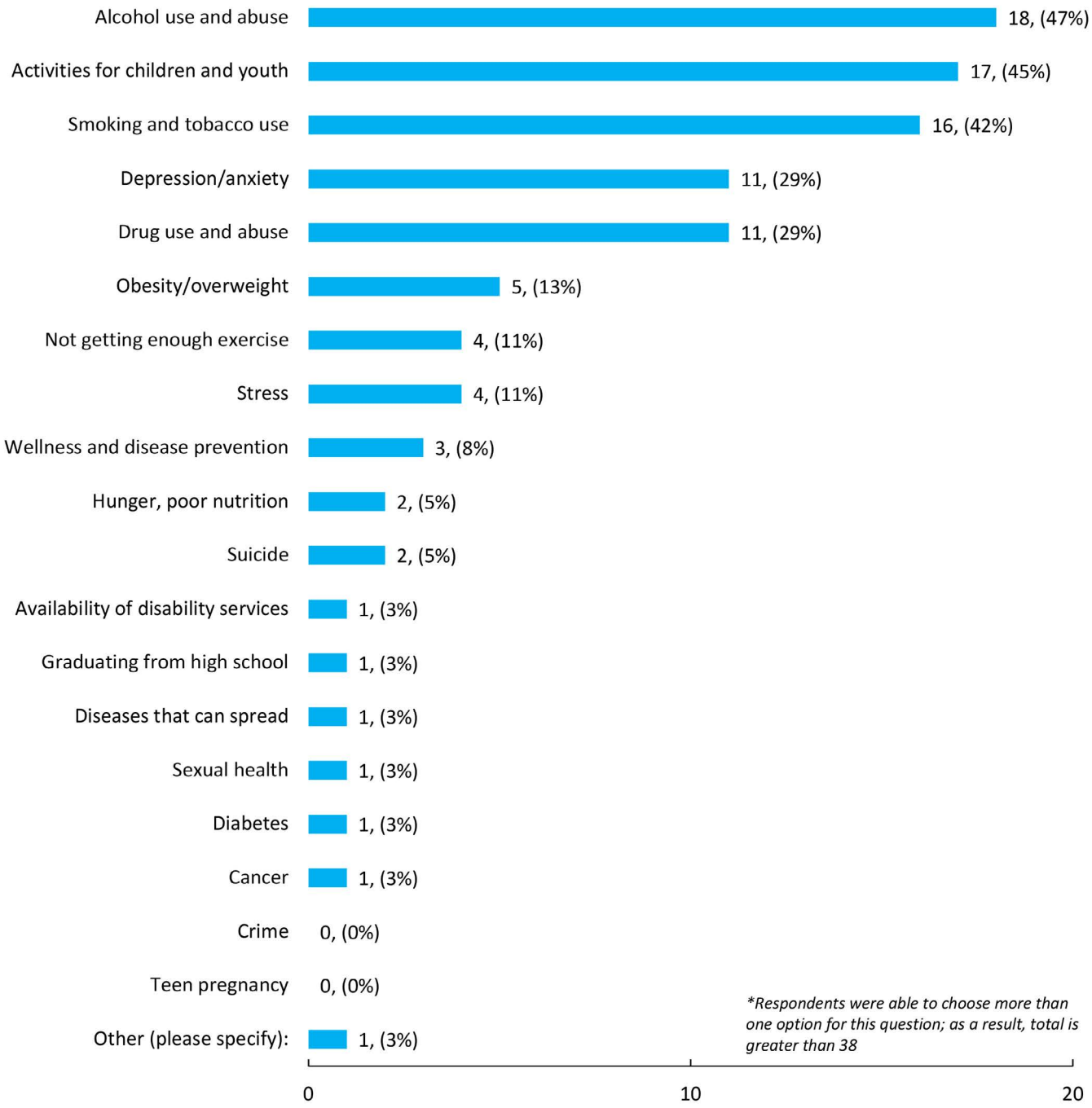
In the "Other" category for community and environmental health concerns, the following were listed: drugs, the number of rentals where the owner does not care about the appearance of house and yard, and daycare/ childcare.

Figure 18: Availability/Delivery of Health Services Concerns
Total responses = 38*



The one "Other" response stated, "Judgment of chronic diagnosis."

Figure 19: Youth Population Health Concerns
Total responses = 38*



Youth summer activities was the only "Other" response for this question.

Figure 20: Adult Population Concerns
Total responses = 39*

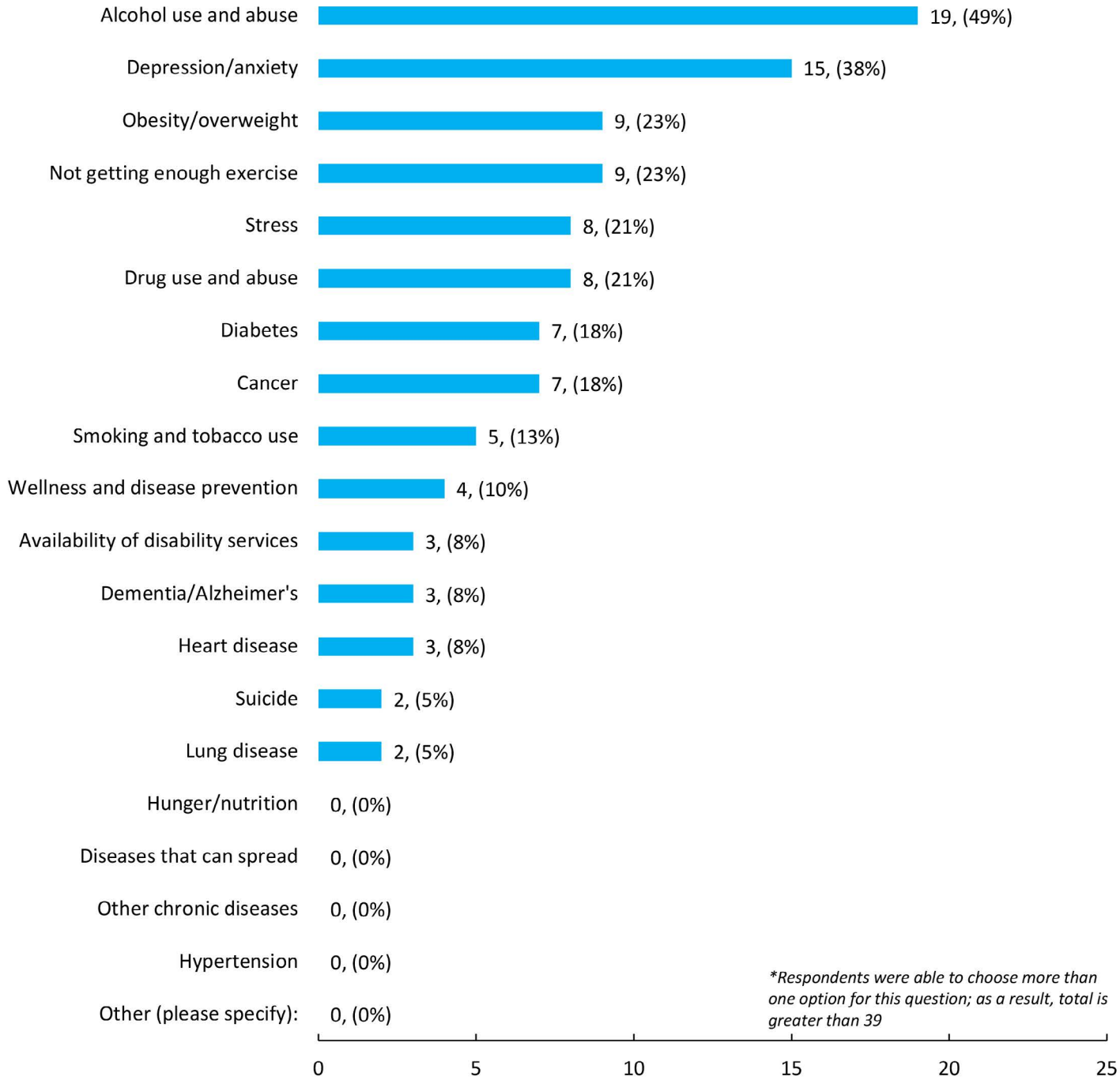


Figure 21: Senior Population Concerns
Total responses = 40*

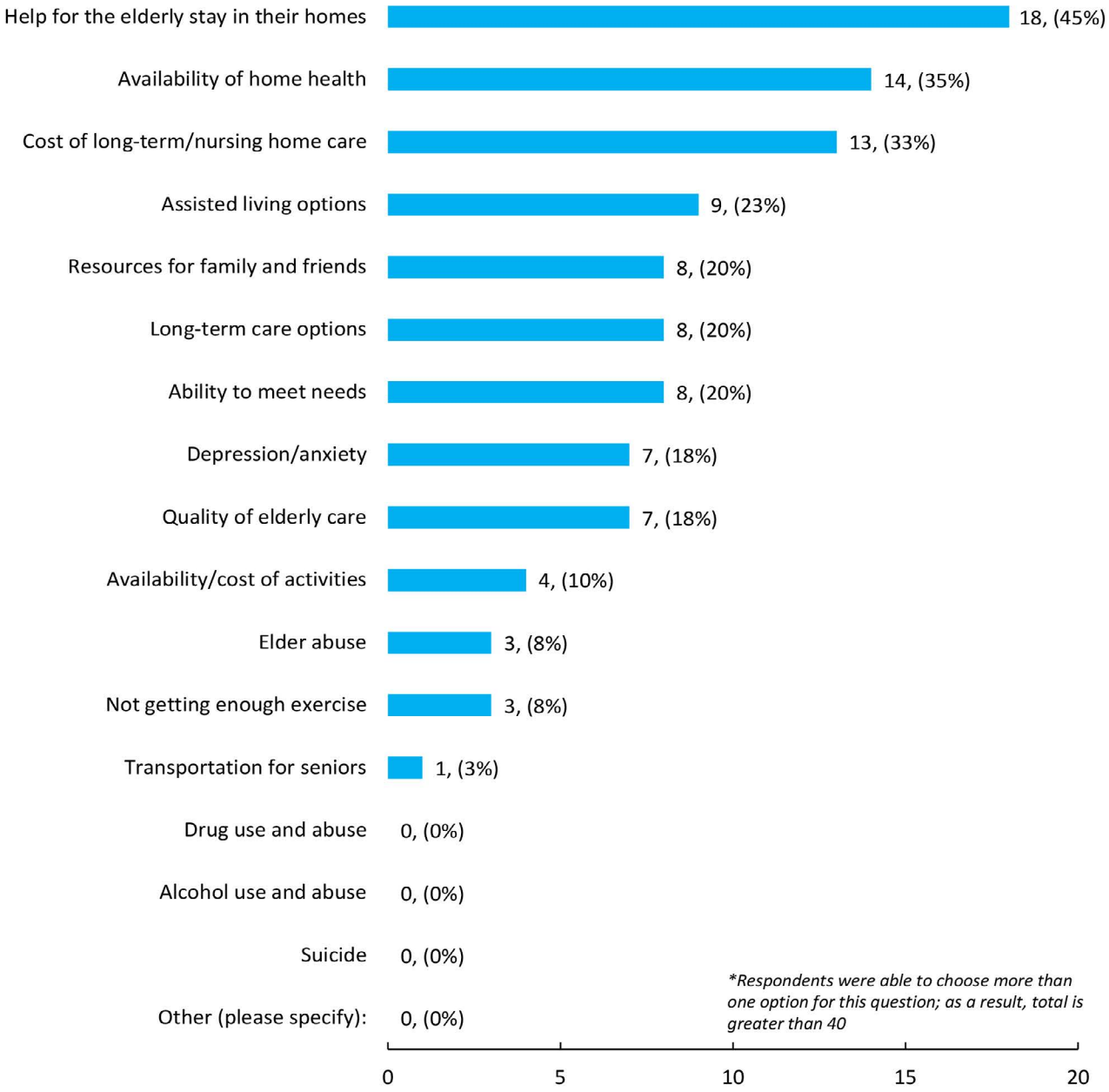
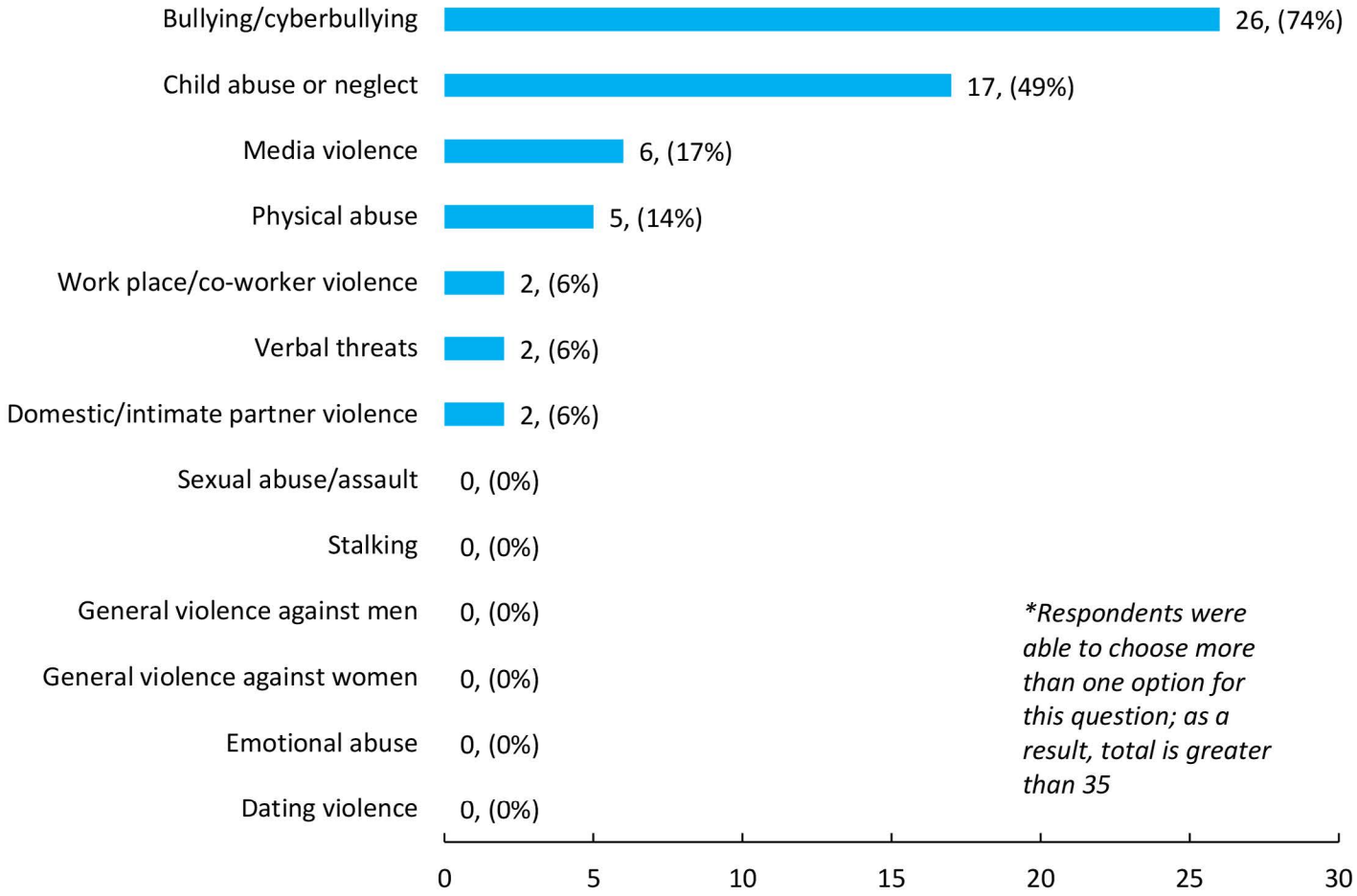


Figure 22: Violence Concerns
Total responses = 35*



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

1. Lack of childcare
2. Lack of businesses
3. Lack of well-paying jobs

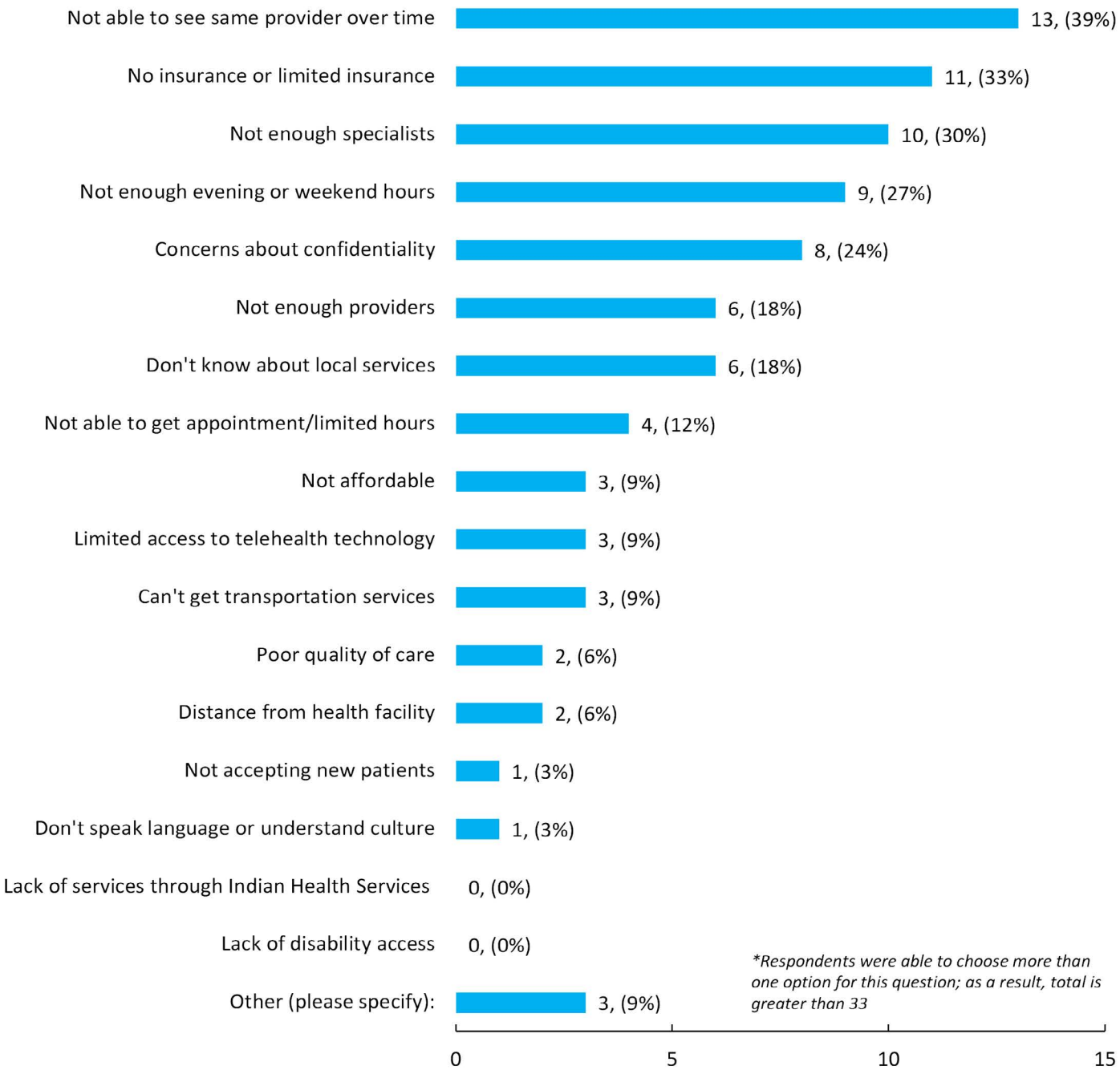
Other biggest challenges that were identified were the declining population, lack of in-home services for the elderly, recruiting/retaining providers and healthcare staff in general, lack of activities for youth, bullying/cyberbullying, and healthcare costs.

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 see the same provider over time (N=13), with the next highest being having no or little insurance (N=11). After these, the next most commonly identified barriers were not having enough specialists (N=10), not enough evening or weekend hours (N=9), and concerns about confidentiality (N=8). The three concerns indicated in the "Other" category were stubbornness, judgement, and a comment praising the healthcare in town.

Figure 23 illustrates these results.

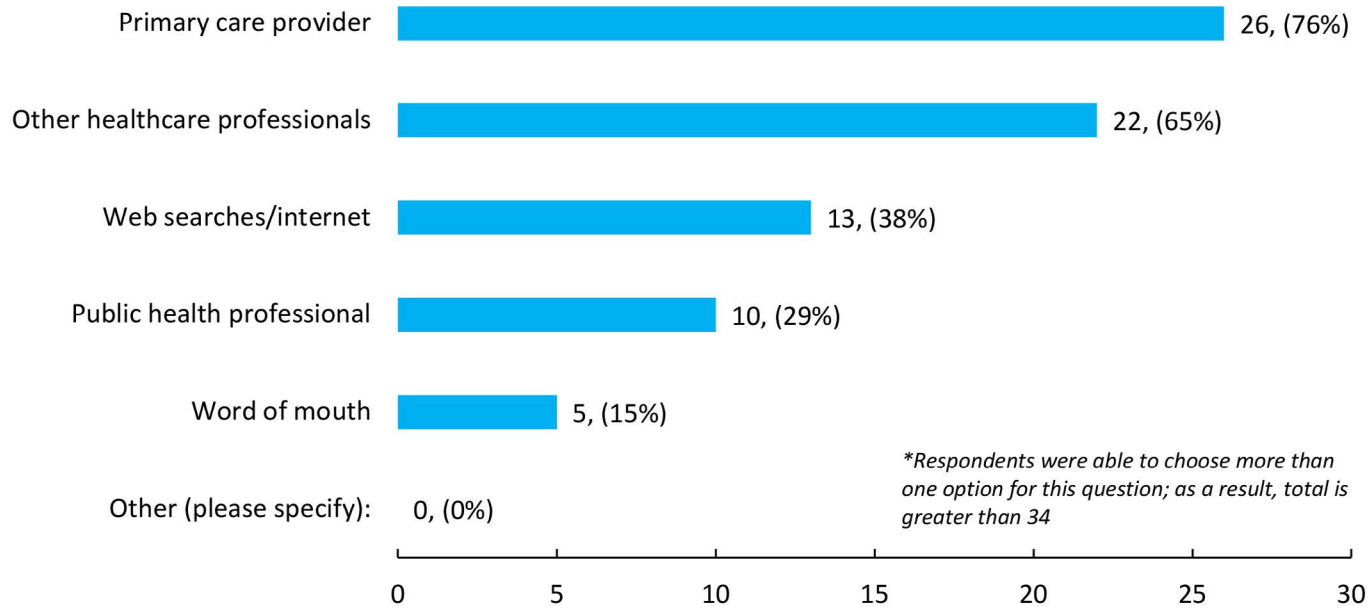
Figure 23: Perceptions About Barriers to Care
Total responses = 33*



Respondents were asked where they go to for trusted health information. Primary care providers (N=26) received the highest response rate, followed by other healthcare professionals (N=22), and then web/internet searches (N=13).

Results are shown in Figure 24.

Figure 24: Sources of Trusted Health Information
Total responses = 34*



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

- Dermatology
- Dialysis
- ENT
- Home health

While not a service, many respondents indicated that they would like physicians added, specifically male physicians. The one other comment that was not a direct service was a request to add more emergency medical services personnel.

Until presented with a list of services, most of the key informants felt that the community was aware of available services. However, upon reviewing the list, several realized that they were unaware of multiple services offered. While many informants were aware of specialists coming into the community, they felt promoting the dates and times of their visits should be a priority. Sleep study services were also brought up as needing extra promotion, while services such as Holter monitoring, radiology, chronic disease management, prenatal care, podiatry, and some surgical services were unknown to the interviewees.

Figures 25 and 26 show the results of asking community members of their awareness and/or usage of services available at Linton Hospital.

Figure 25: Awareness and Utilization of General and Acute Services
Total responses = 28*

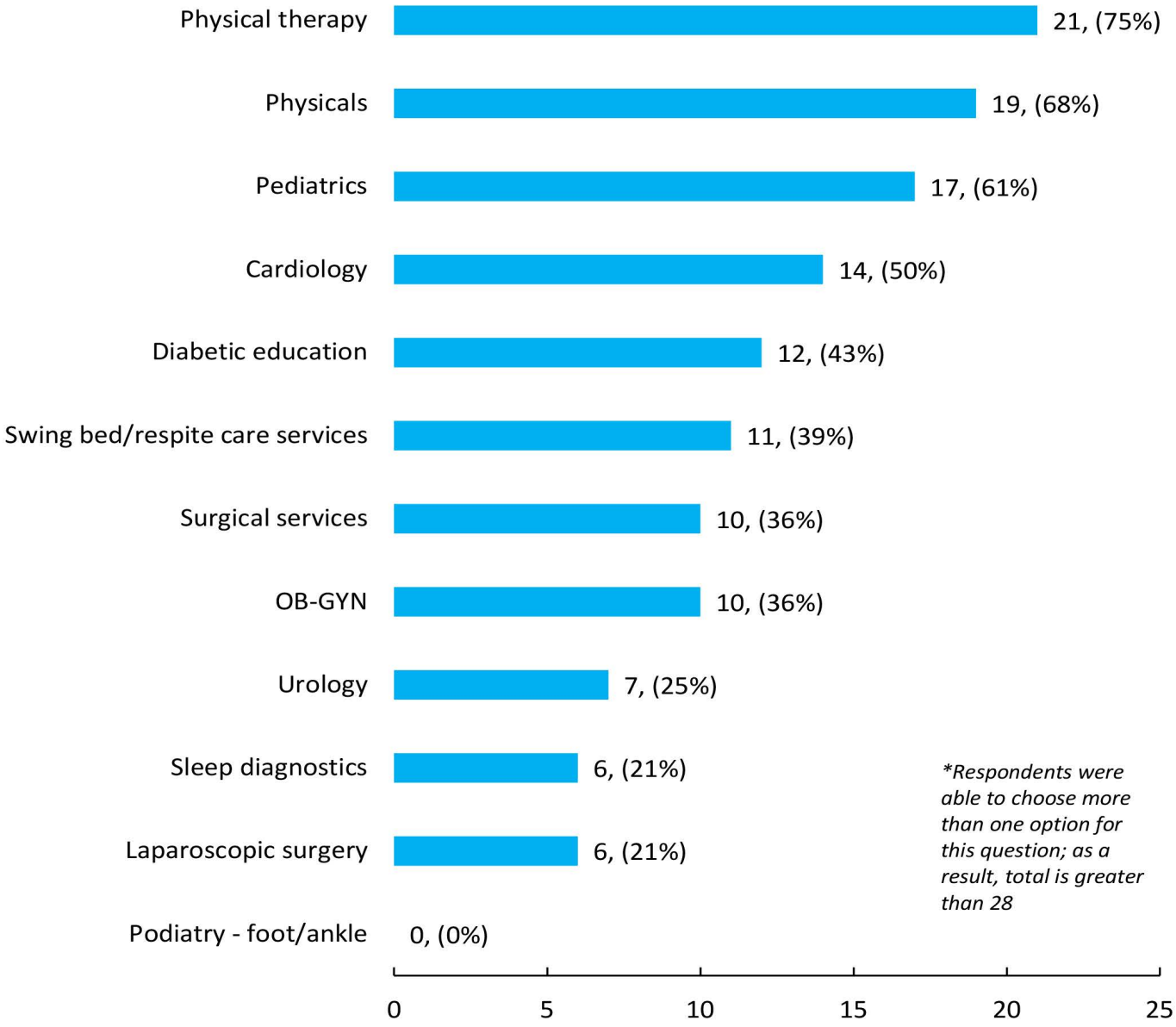
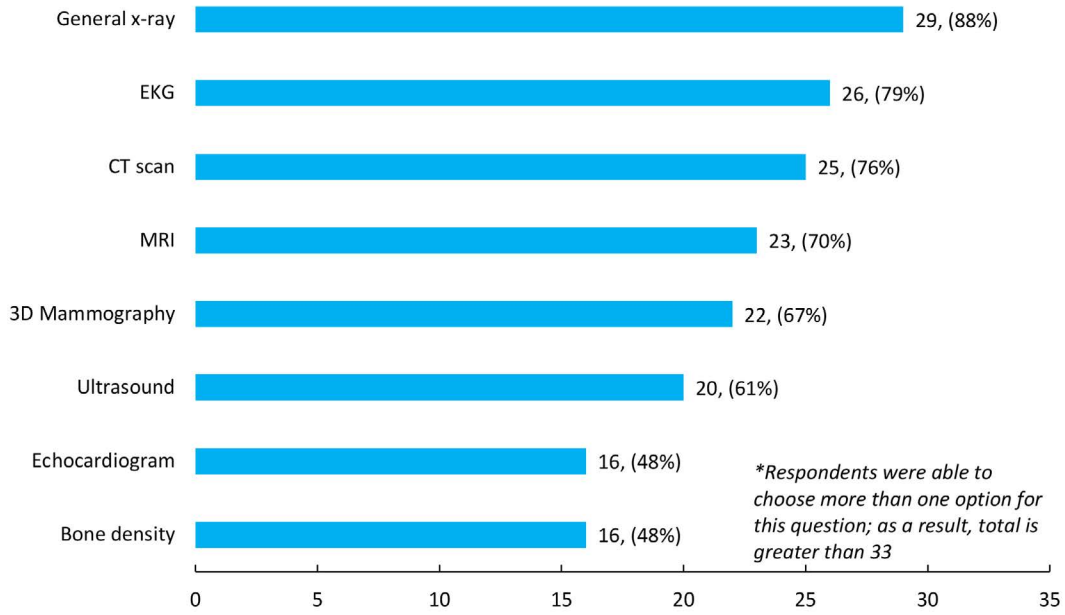
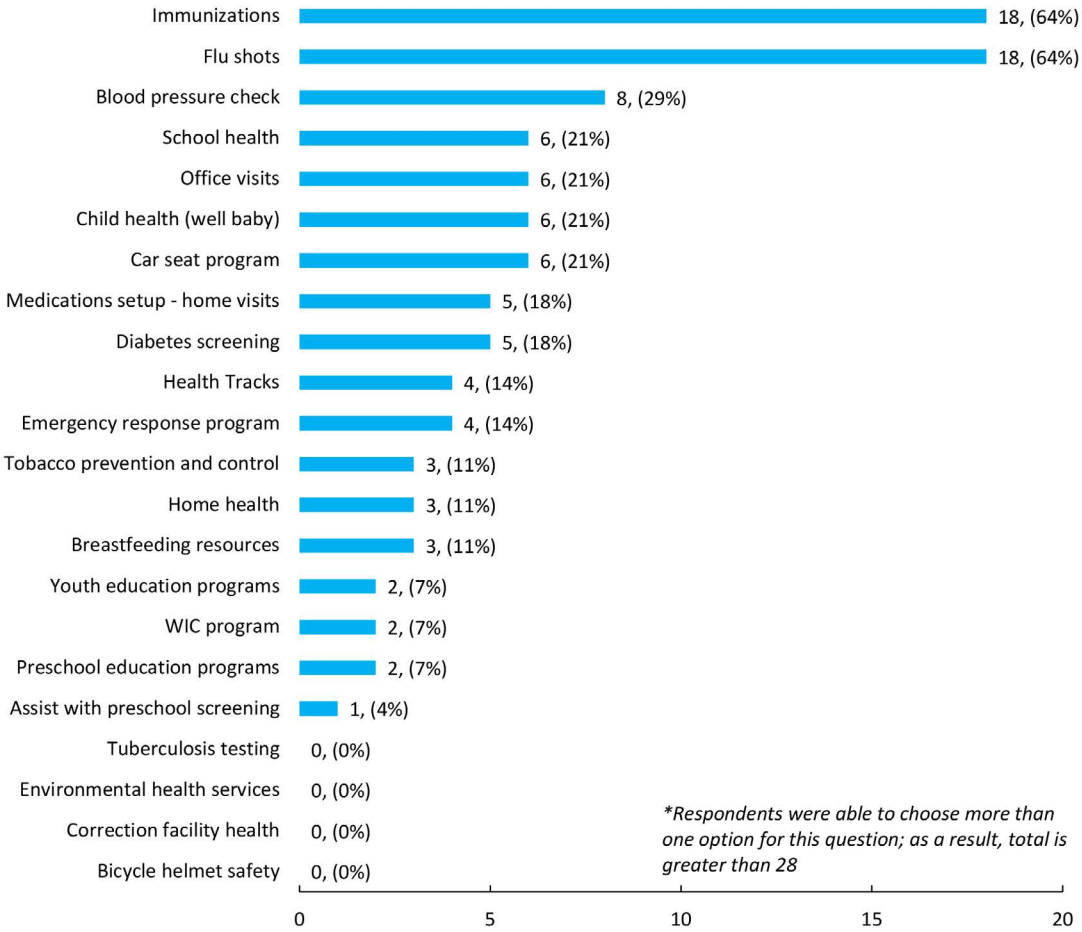


Figure 26: Awareness and Utilization of Radiology Services
Total responses = 33*



Considering a variety of healthcare services offered by ECPH, respondents were asked to indicate if they were aware that the healthcare service is offered though ECPH and to also indicate what, if any, services they or a family member have used at ECPH, at another public health unit, or both (See Figure 27).

Figure 27: Utilization of Public Health Services
Total responses = 28*



Community members were asked to select concerns relating to the school system's dedication to health. The results are shown in Figure 28.

Figure 28: Concerns with School System's Dedication to Health
Total responses = 29*

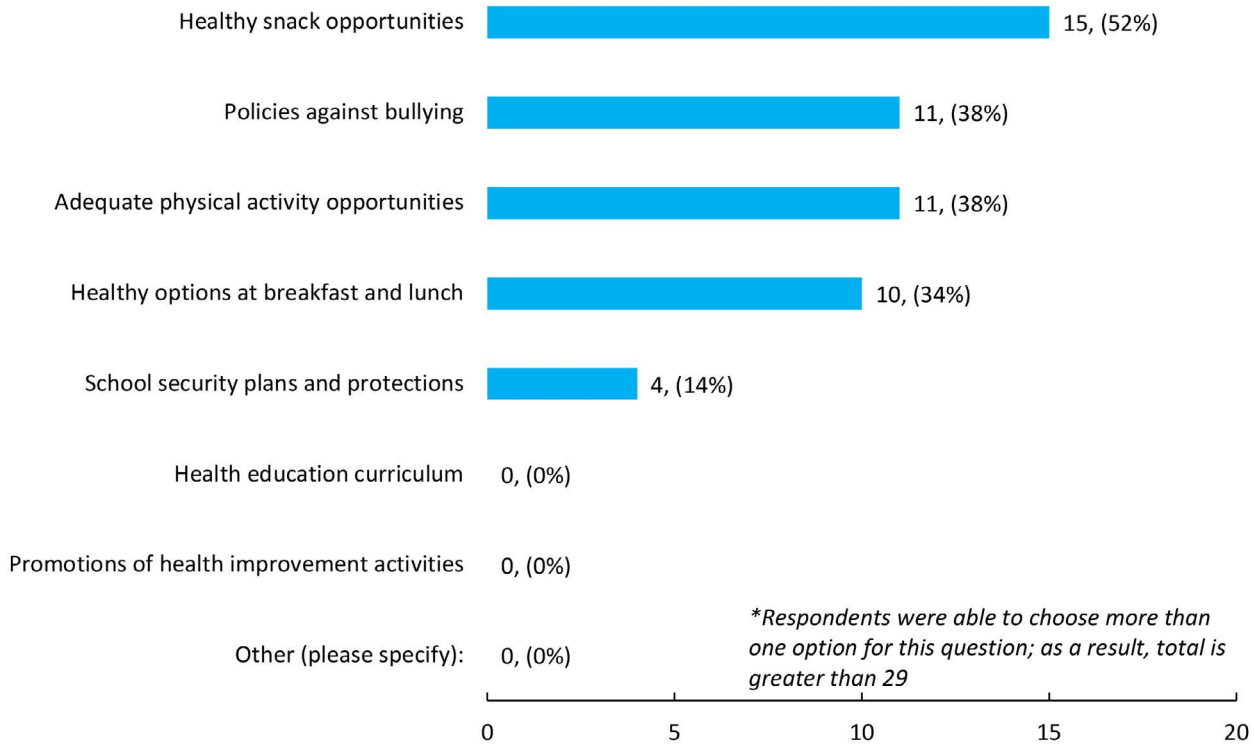
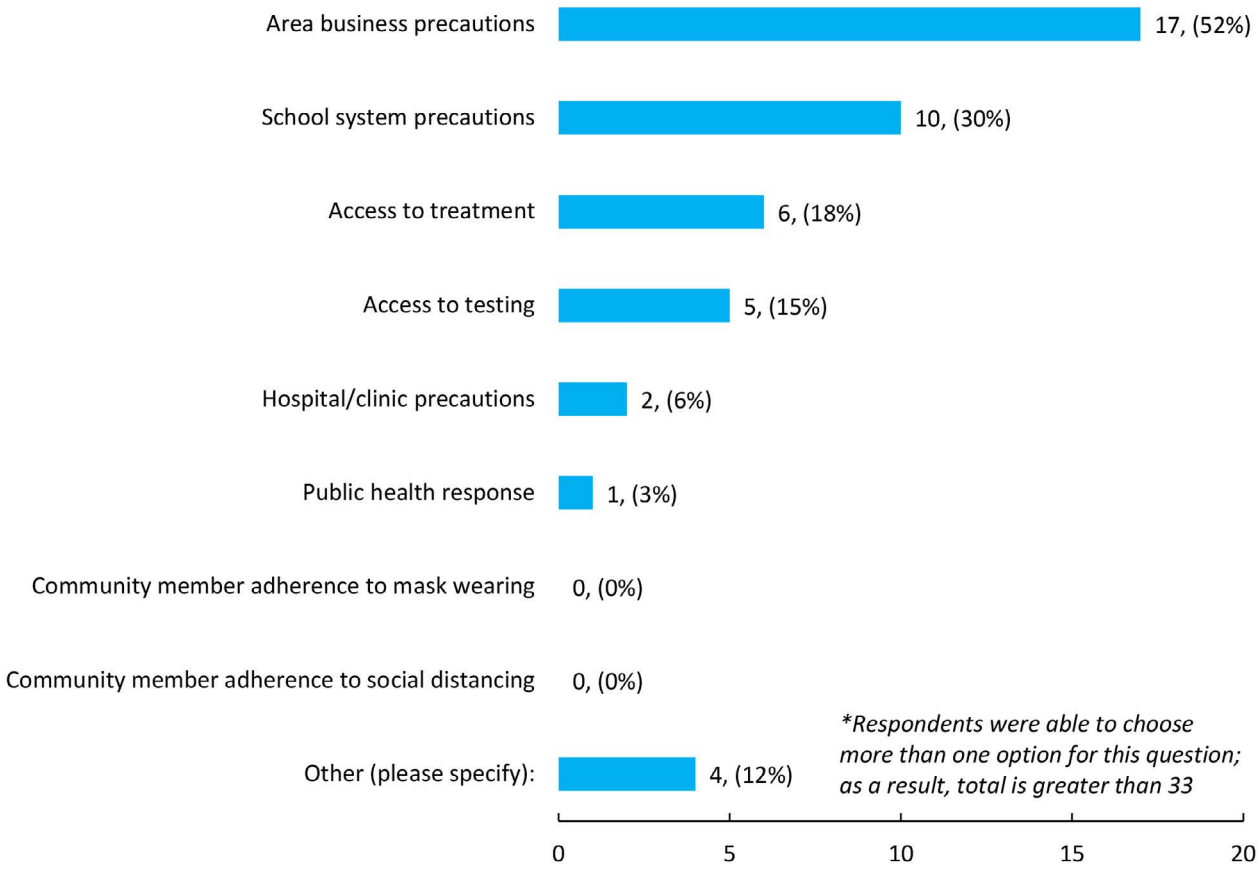


Figure 29: Concerns with COVID-19 Response
Total responses = 33*



Reponses in the "Other" category for concerns with the community's COVID-19 response included misinformation from public health, lack of verifiable information, and coaches telling athletes not to test so the team can play.

The final question on the survey asked respondents to share concerns and suggestions to improve the delivery of local healthcare. The responses were evenly split between the hospital needing better retention of providers and nurses and praising the hospital for the service provided to the area.

Findings from Key Informant Interviews

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

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

- Alcohol use and abuse – all ages
- Attracting and retaining young families
- Availability of mental health services
- Having enough child daycare services
- Not enough jobs with livable wages

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

Alcohol use and abuse – all ages

- A lot of abuse through the job, responding to a lot of incidents that are alcohol based.

Attracting and retaining young families

- Businesses are dying, especially on Main Street, and everything else is dying without jobs, but we need new families to help build things back up.

Availability of mental health services

- This year in particular is a tough time for people, being isolated and anxious, unrest in the country and the virus, uncertainty leading to this, loss of hope.
- We deal with mental health issues so much in the community, and not having resources or tools to help are detrimental to the process.
- When you look at some families in the community with issues, that is usually where the problem comes from.
- High case load with mental health needs, and the drug and tobacco use a lot of times falls under that, and better access to mental healthcare could be worked on; when you have good mental health, you make better choices.

Having enough child daycare services

- We just put in a new daycare, and still don't have enough spots for kids.
- I work with a bunch of young moms, and they are having an extremely difficult time finding daycare, so much so that grandparents are quitting jobs to watch kids.

Not enough jobs with livable wages

- The quality of a rural area tends to be on its population and the age of its population – people aren't able to live the lifestyle they want so they choose to live elsewhere, and you can see businesses leaving; there is no industry outside of agriculture, which has dwindled since a few farmers own a lot of the land.
- There are jobs available, but they might not be paying well enough to find someone since minimum wage is so low.

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:

- Hospital (healthcare system) (4.25)
- Emergency services, including ambulance and fire (4.25)
- Economic development organizations (4.0)
- Schools (3.75)
- Business and industry (3.75)
- Social services (3.75)
- Law enforcement (3.5)
- Long-term care, including nursing homes and assisted living (3.5)
- Other local health providers, such as dentists and chiropractors (3.5)
- Faith-based (3.25)
- Public health (3.0)
- Pharmacy (2.75)
- Human services agencies (2.5)

Priority of Health Needs

A community group that consisted of the key informant interviewees were sent a prerecorded presentation on January 25, 2021. The recording included CRH representatives presenting the group with a summary of this report's findings, including background and explanation about the secondary data, highlights from the survey results (including perceived community assets, concerns, and barriers to care), and findings from the key informant interviews.

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

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

- Alcohol use and abuse – adults (3 votes)
- Having enough child daycare services (3 votes)
- Availability of mental health services (2 votes)

From those top three priorities, each person was emailed a second survey and was instructed to select the one item they felt was the most important. The rankings were:

1. Availability of mental health services (4 votes)
2. Having enough child daycare services (3 votes)
3. Alcohol use and abuse – adults (1 vote)

Following the prioritization process during the second meeting of the community group and key informants, the number one identified need was the availability of mental health services. A summary of this prioritization may be found in Appendix E.

Comparison of Needs Identified Previously

Top Needs Identified 2017/2018 CHNA Process	Top Needs Identified 2021 CHNA Process
• Not enough jobs with livable wages	• Availability of mental health services
• Having enough child daycare services	• Having enough child daycare services
• Cancer	• Adult alcohol use and abuse
• Ability to recruit and retain primary care providers	
• Youth drug use and abuse	

The current process identified one identical common need from 2017-2018. Having enough child daycare services was the second-highest concern in both the 2017-2018 and 2021 CHNA processes.

Hospital and Community Projects and Programs Implemented to Address Needs Identified in 2017-2018

In response to the needs identified in the 2017-2018 CHNA process, the following actions were taken:

Need 1: Not Enough Jobs with Livable Wages – The Linton Hospital continued to offer life-sustaining wages and benefits to staff. Representatives of the hospital attend Linton Industrial Development Corporation (LIDC) and Linton Chamber of Commerce meetings. The Linton Hospital was unsuccessful in achieving representation from the hospital's administration on the board of the LIDC due to board members being

required to live in the community.

Need 2: Having Enough Child Daycare Services – The Linton Hospital had a staff member on the 'core team' for the Rural Childcare Innovation Project to provide daycare services to families in the area. Since the last CHNA process, that hospital representative is now a board member of the Little Lion's Daycare that opened in May 2019.

Need 3: Cancer – Specified in the last CHNA as being the highest ranked physical health concern for the community, the Linton Hospital has continued to educate the community regarding preventative screenings available, send reminder letters to the mammogram eligible population, and continued to partner with public health regarding tobacco prevention. New efforts have included a Wellness Clinic that is held annually during hospital week that provides labs and prostate-specific antigen tests at discounted cost without having to make an appointment. A comprehensive list of preventative and specialty services is provided to patients at the Wellness Clinic. A second surgeon was acquired to double the number of colonoscopies able to be performed.

Need 4: Ability to Recruit and Retain Primary Care Providers – The Linton Hospital has continued to maintain specialty providers for cardiology, urology, OB/GYN, two for general surgery, sleep diagnostics, podiatry, and orthopedics. The pediatrician who attended patients at the Linton Medical Center has recently retired and the facility is currently recruiting a replacement. Since the last CHNA process, there has been turnover in orthopedics and general surgery, but they were able to recruit replacements. Linton Hospital has also been able fill a nurse practitioner position that became available, as well as hire an additional nurse practitioner and a full-time physician. This has allowed the return of the Cardiac Rehab program.

Need 5: Youth Drug Use and Abuse – Linton Hospital has provided education to the community regarding the results of the last CHNA. They have partnered with public health and received free Narcan to give to patients and family members of patients who take opioids as well as received Deterra drug deactivating system bags to give patients to dispose of medications at home that they no longer need and prevent drug diversion. The pharmacy in town also takes back medications.

This implementation plan for Linton Hospital is posted on their website at https://ruralhealth.und.edu/assets/338-1383/2017-2019-implementation-plan-linton.pdf.

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 – Critical Access Hospital Profile

Critical Access Hospital Profile
Spotlight on: Linton, North Dakota

Linton Hospital

Quick Facts

Administrator:
Robert O. Black, MPA, CEO

Chief of Medical Staff:
Sarah Newton, MD

Board Chair: Sandy Meidinger

City Population:
997 (2018 estimate)[1]

County Population:
3,422 (2019 estimate)[1]

County Median Household Income: $51,029 (2018 estimate)[1]

County Median Age:
52.6 (2018 estimate)[1]

Service Area Population:
4500

Owned by: Private Nonprofit

Hospital Beds: 14 acute;
6 observation

Trauma Level: V

Critical Access Hospital Designation: 2004

Economic Impact on the Community*

Jobs:
Primary – 93
Secondary – 46
Total – 139

Financial Impact:
Primary - $4.4 million
Secondary - $1.27 million
Total - $5.68 million

** The impact of jobs and expenditures generated by the hospital within the community was estimated using payroll information and an economic multiplier of 1.5.*

Mission

Our mission is to enhance the health, well-being, and quality of life of the people we serve.

Vision

We will focus on primary healthcare services and the development of our skills to provide the best possible service and to improve the healthcare of the people that we serve.

We will continue to adapt to the ever changing needs of the people we serve, recognizing that public information and education will be an integral part of our services.

County: Emmons
Address: 518 N. Broadway St.
Linton, ND 58552
Phone: 701.254.4511
Fax: 701.254.0112
Web: www.lintonhospital.org

Linton Hospital employs over 100 people. The hospital also has three affiliated clinics, which offer a wide variety of medical services to the residents of Emmons County, North Dakota and Campbell County, South Dakota.

Services

- Nursing Service
- Trauma
- Advanced Cardiac Life Support
- Pediatric Advanced Life Support
- Surgery
- Operating Room
- Emmons County Advanced Life Support Ambulance Service
- Physical Therapy
- Radiology
- Lab
- Administrative Services

Staffing

Physicians: 1
Nurse Practitioners: 3
PAs: 2
RNs: 9
Total Employees: 93

Local Sponsors and Grant Funding Sources

- Center for Rural Health
  - SHIP Grant *(Small Hospital Improvement Program)*
  - Flex Grant *(Medicare Rural Hospital Flexibility Grant Program)*
- Leona M. & Harry B. Helmsley Charitable Trust
- Homeland Security Grant
- North Dakota Trauma Foundation
- Rural Health Network Development (HRSA)

Sources

1 US Census Bureau; American Factfinder, Community Facts

US Census Bureau; 2010 State and County QuickFacts: Emmons County, ND

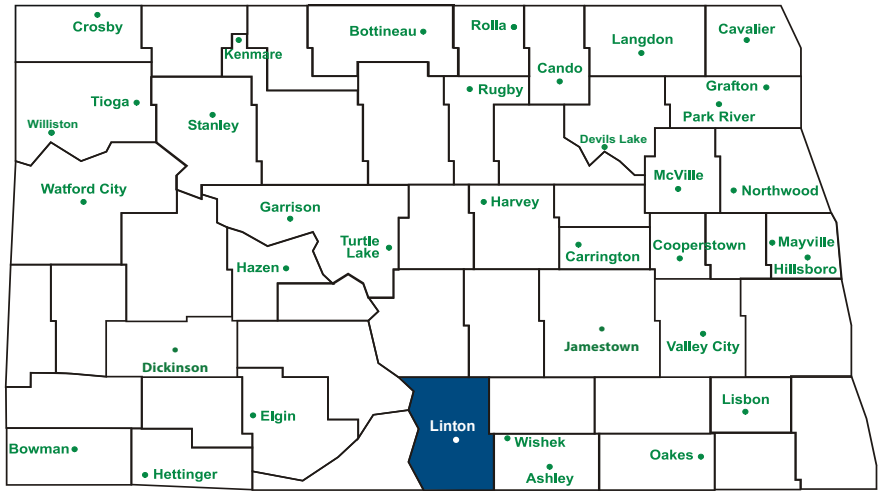
Economic Impact 2020 Center for Rural Health Oklahoma State University and Center for Rural Health University of North Dakota

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

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

ruralhealth.und.edu

North Dakota Critical Access Hospitals



History

Linton Hospital was opened in 1953, by the seven Sisters of St. Francis of Tiffin, Ohio. The sisters managed the hospital until an administrator was hired in 1962. In 1967 the attached clinic was constructed. In 1975 an addition was added and the hospital was remodeled. In 2015 and 2016 the hospital nurse's station and the clinic and hospital waiting rooms were remodeled.

Today the Linton Hospital employs over 90 people. The hospital also has three affiliated clinics, which offer a wide variety of medical services to the residents of Emmons County, North Dakota and Campbell County, South Dakota.

Recreation

Linton is in south central North Dakota. The economy is based on agricultural and related activities. The Linton school system offers K-12 and Pre-K education for students. Fishing, boating, swimming and camping facilities are available on the Missouri River within a short drive of Linton. Other available facilities, a golf course, swimming pool, baseball/softball diamonds, cross country skiing, snowmobiling and hunting.

Updated 03/2021

Appendix B – Economic Impact Analysis

LINTON HOSPITAL

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

Economic Impact

Linton Hospital is composed of a Critical Access Hospital (CAH), three rural health clinics, the county ambulance service, and Prairie Rose Assisted Living and home health.

Linton Hospital directly employs **63.82 FTE employees** with an annual payroll of over **$4.4 million** (including benefits).

- After application of the employment multiplier of 1.41, these employees created an additional **26** jobs.
- The same methodology is applied to derive the income impact. The income multiplier of 1.29 is applied to create just over **$1.27 million** in income as they interact with other sectors of the local economy.
- **Total impacts = 90 jobs and nearly $5.68 million in income**.

Healthcare and Your Local Economy

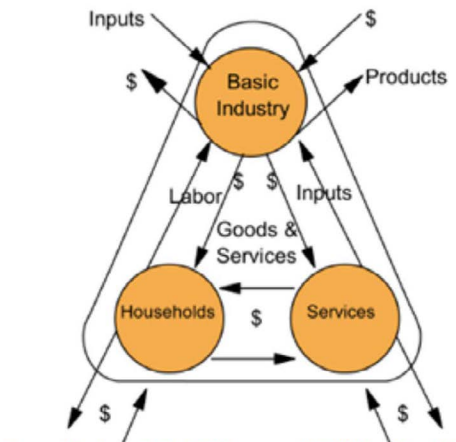
The health sector in a rural community, anchored by a CAH, is responsible for a number of full- and part-time jobs and the resulting wages, salaries, and benefits. Research findings from the National Center for Rural Health Works indicate that rural hospitals typically are one of the top employers in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

Key contributions of the health system include

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

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

Figure 1. *An overview of the community economic system.*



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

Fact Sheet Author: Kylie Nissen, BBA

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

CENTER FOR RURAL HEALTH
OSU Center for Health Sciences

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

Appendix C – CHNA Survey Instrument

Linton Area Health Survey

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

The focus of this effort is to:

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

If you prefer, you may take the survey online at http://tinyurl.com/LintonND20 or by scanning on the QR Code at the right.

Surveys will be tabulated by the Center for Rural Health at the University of North Dakota School of Medicine and Health Sciences. Your responses are anonymous, and you may skip any question you do not want to answer. Your answers will be combined with other responses and reported only in total. If you have questions about the survey, you may contact Kylie Nissen at 701.777.5380.

Surveys will be accepted through November 26, 2020. Your opinion matters – thank you in advance!

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

1. Considering the **PEOPLE** in your community, the best 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 or vaping (juuling)
- ☐ 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
- ☐ Cost of activities for seniors
- ☐ Availability of activities for seniors
- ☐ Availability of resources for family and friends caring for elders
- ☐ Quality of elderly care
- ☐ Cost of long-term/nursing home care
- ☐ Availability of transportation for seniors
- ☐ Availability of home health
- ☐ Not getting enough exercise/physical activity
- ☐ Depression/anxiety
- ☐ Suicide
- ☐ Alcohol use and abuse
- ☐ Drug use and abuse (including prescription drug abuse)
- ☐ Elder abuse
- ☐ Other (please specify): _____

10. Regarding various forms of **VIOLENCE** in your community, concerns are (choose up to THREE):

- ☐ Bullying/cyber-bullying
- ☐ Child abuse or neglect
- ☐ Dating violence
- ☐ Domestic/intimate partner violence
- ☐ Emotional abuse (ex. intimidation, isolation, verbal threats, withholding of funds)
- ☐ General violence against women
- ☐ General violence against men
- ☐ Media violence
- ☐ Physical abuse
- ☐ Stalking
- ☐ Sexual abuse/assault
- ☐ Verbal threats
- ☐ Work place/co-worker violence

_____

_____

Delivery of Healthcare

12. 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): _____

13. 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): _____

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

_____

_____

15. Considering **GENERAL and ACUTE SERVICES** at **Linton Hospital**, which services are you aware of (or have you used in the past year)? (Choose ALL that apply)

- ☐ Cardiology
- ☐ Diabetic Education
- ☐ Laparoscopic surgery
- ☐ OB-GYN (visiting specialist)
- ☐ Orthopedics (visiting specialist)
- ☐ Pediatrics (visiting specialist)
- ☐ Podiatry—foot/ankle (visiting specialist)
- ☐ Physicals (annuals, DOT, sports, and insurance)
- ☐ Physical Therapy
- ☐ Sleep Diagnostics (visiting specialist)
- ☐ Surgical services
- ☐ Swing bed and respite care services
- ☐ Urology (visiting specialist)

16. Considering **RADIOLOGY SERVICES** at **Linton Hospital** which services are you aware of (or have you used in the past year)? (Choose ALL that apply)

- ☐ 3D Mammography (new service 2020)
- ☐ Bone density
- ☐ CT scan
- ☐ Echocardiogram
- ☐ EKG - Electrocardiography
- ☐ General x-ray
- ☐ MRI
- ☐ Ultrasound

17. Which of the following **SERVICES** provided by **Emmons County Public Health** 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
- ☐ Diabetes screening
- ☐ Emergency response & preparedness program
- ☐ Flu shots
- ☐ Environmental health services (water, sewer, health hazard abatement)
- ☐ Health Tracks (child health screening)
- ☐ Home health
- ☐ Immunizations
- ☐ Medications setup—home visits
- ☐ Office visits and consults
- ☐ 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)

18. Considering the **SCHOOL SYSTEM's** dedication to health, concerns are (choose up to THREE):

- ☐ Healthy snack opportunities
- ☐ Compliance with offering healthy options at breakfast and lunch
- ☐ Adequate physical activity opportunities
- ☐ Promotions of health improvement activities (ex. NDSU Extension Services)
- ☐ Health Education Curriculum
- ☐ Policies against bullying
- ☐ School security plans and protections
- ☐ Other (please specify):_____

19. Considering the response to **COVID-19** in your community, concerns are (choose up to THREE):

- ☐ Access to treatment
- ☐ Access to testing
- ☐ Hospital/clinic precautions
- ☐ Area business precautions
- ☐ School system precautions
- ☐ Community member adherence to social distancing
- ☐ Community member adherence to mask wearing
- ☐ Public Health response
- ☐ Other (please specify):_____

Demographic Information: Please tell us about yourself.

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

- ☐ Yes
- ☐ No

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

- ☐ Hospital or public health website
- ☐ Hospital or public health social media page
- ☐ Hospital or public health employee
- ☐ Hospital or public health facility
- ☐ Economic development website or social media
- ☐ Other website or social media page (please specify): _____
- ☐ Newspaper advertisement
- ☐ Newsletter (if so, what one):_____
- ☐ Church bulletin
- ☐ Flyer sent home from school
- ☐ Flyer at local business
- ☐ Flyer in the mail
- ☐ Word of Mouth
- ☐ Direct email (if so, from what organization):_____
- ☐ Other (please specify): _____

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

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

23. Age:

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

24. Highest level of education:

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

25. Sex:

- ☐ Female
- ☐ Other (please specify): _____
- ☐ Male
- ☐ Non-binary

26. Employment status:

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

27. Your zip code: _____

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

- ☐ American Indian
- ☐ African American
- ☐ Asian
- ☐ Hispanic/Latino
- ☐ Pacific Islander
- ☐ White/Caucasian
- ☐ Other: _____

Appendix D – County Health Rankings Explained

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

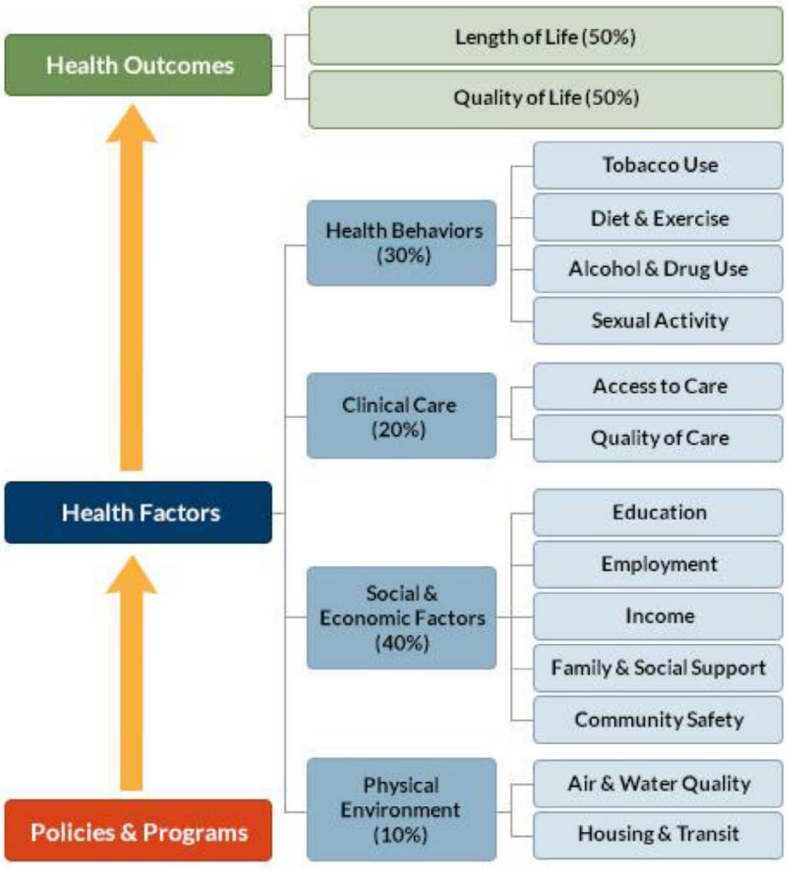
Methods

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

What is Ranked

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

Ranking System



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

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

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

Data Sources and Measures

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

Data Quality

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

Calculating Scores and Ranks

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

Health Outcomes and Factors

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

Health Outcomes

Premature Death (YPLL)

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

Reason for Ranking

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

Poor or Fair Health

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

Reason for Ranking

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

Poor Physical Health Days

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

Reason for Ranking

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

Poor Mental Health Days

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

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

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

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

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

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

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

Health Factors

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

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

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

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

Food Environment Index

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

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

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

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

Reason for Ranking

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

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

Physical Inactivity

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

Reason for Ranking

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

Access to Exercise Opportunities

Change in measure calculation in 2018: Access to exercise opportunities measures the percentage of individuals in a county who live reasonably close to a location for physical activity. Locations for physical activity are defined as parks or recreational facilities. Parks include local, state, and national parks. Recreational facilities include YMCAs as well as businesses identified by the following Standard Industry Classification (SIC) codes and include a wide variety of facilities including gyms, community centers, dance studios and pools: 799101, 799102, 799103, 799106, 799107, 799108, 799109, 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 E – 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 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
Injury and Violence							
Percentage of students who rarely or never wore a seat belt (when riding in a car driven by someone else)	8.5	8.1	5.9	=	8.8	5.4	6.5
Percentage of students who rode in a vehicle with a driver who had been drinking alcohol (one or more times during the 30 prior to the survey)	17.7	16.5	14.2	=	17.7	12.7	16.7
Percentage of students who talked on a cell phone while driving (on at least 1 day during the 30 days before the survey, among students who drove a car or other vehicle)	NA	56.2	59.6	=	60.7	60.7	NA
Percentage of students who texted or e-mailed while driving a car or other vehicle (on at least 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)	57.6	52.6	53.0	=	56.5	51.8	39.0
Percentage of students who never or rarely wore a helmet (during the 12 months before the survey, among students who rode a motorcycle)	NA	20.6	NA	NA	NA	NA	NA
Percentage of students who carried a weapon on school property (such as a gun, knife, or club on at least 1 day during the 30 days before the survey)	5.2	5.9	4.9	=	6.2	4.2	2.8
Percentage of students who were in a physical fight on school property (one or more times during the 12 months before the survey)	5.4	7.2	7.1	=	7.4	6.4	8.0
Percentage of students who experienced sexual violence (being forced by anyone to do sexual things [counting such things as kissing, touching, or being physically forced to have sexual intercourse] that they did not want to, one or more times during the 12 months before the survey)	NA	8.7	9.2	=	7.1	8.0	10.8
Percentage of students who experienced physical dating violence (one or more times during the 12 months before the survey, including being hit, slammed into something, or injured with an object or weapon on purpose by someone they were dating or going out with among students who dated or went out with someone during the 12 months before the survey)	7.6	NA	NA	NA	NA	NA	8.2
Percentage of students who have been the victim of teasing or name calling because someone thought they were gay, lesbian, or bisexual (during the 12 months before the survey)	NA	11.4	11.6	=	12.6	11.4	NA
Percentage of students who were bullied on school property (during the 12 months before the survey)	24.0	24.3	19.9	↓	24.6	19.1	19.5
Percentage of students who were electronically bullied (including being bullied through texting, Instagram, Facebook, or other social media ever during the 12 months before the survey)	15.9	18.8	14.7	↓	16.0	15.3	15.7
Percentage of students who felt sad or hopeless (almost every day for 2 or more weeks in a row so that they stopped doing some usual activities during the 12 months before the survey)	27.2	28.9	30.5	=	31.8	33.1	36.7
Percentage of students who seriously considered attempting suicide (during the 12 months before the survey)	16.2	16.7	18.8	=	18.6	19.7	18.8
	ND 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
Percentage of students who made a plan about how they would attempt suicide (during the 12 months before the survey)	13.5	14.5	15.3	=	16.3	16.0	15.7
Percentage of students who attempted suicide (one or more times during the 12 months before the survey)	9.4	13.5	13.0	=	12.5	11.7	8.9

Tobacco Use							
Percentage of students who ever tried cigarette smoking (even one or two puffs)	35.1	30.5	29.3	=	32.4	23.8	24.1
Percentage of students who smoked a whole cigarette before age 13 years (even one or two puffs)	NA	11.2	NA	**NA**	NA	NA	NA
Percentage of students who currently smoked cigarettes (on at least one day during the 30 days before the survey)	11.7	12.6	8.3	↓	10.9	7.3	6.0
Percentage of students who currently frequently smoked cigarettes (on 20 or more days during the 30 days before the survey)	4.3	3.8	2.1	↓	2.3	1.7	1.3
Percentage of students who currently smoked cigarettes daily (on all 30 days during the 30 days before the survey)	3.2	3.0	1.4	↓	1.6	1.2	1.1
Percentage of students who usually obtained their own cigarettes by buying them in a store or gas station (during the 30 days before the survey among students who currently smoked cigarettes and who were aged <18 years)	NA	7.5	13.2	=	9.4	10.1	8.1
Percentage of students who tried to quit smoking cigarettes (among students who currently smoked cigarettes during the 12 months before the survey)	NA	50.3	54.0	=	52.8	51.4	NA
Percentage of students who currently use an electronic vapor product (e-cigarettes, vape e-cigars, e-pipes, vape pipes, vaping pens, e-hookahs, and hookah pens at least one day during the 30 days before the survey)	22.3	20.6	33.1	↑	32.2	31.9	32.7
Percentage of students who currently used smokeless tobacco (chewing tobacco, snuff, or dip on at least one day during the 30 days before the survey)	NA	8.0	4.5	↓	5.7	3.8	3.8
Percentage of students who currently smoked cigars (cigars, cigarillos, or little cigars on at least one day during the 30 days before the survey)	9.2	8.2	5.2	↓	6.3	4.3	5.7
Percentage of students who currently used cigarettes, cigars, or smokeless tobacco (on at least 1 day during the 30 days before the survey)	NA	18.1	12.2	NA	15.1	10.9	10.5
Alcohol and Other Drug Use							
Percentage of students who ever drank alcohol (at least one drink of alcohol on at least one day during their life)	62.1	59.2	56.6	=	60.6	54.0	NA
Percentage of students who drank alcohol before age 13 years (for the first time other than a few sips)	12.4	14.5	12.9	=	16.4	13.2	15.0
Percentage of students who currently drank alcohol (at least one drink of alcohol on at least one day during the 30 days before the survey)	30.8	29.1	27.6	=	29.4	25.4	29.2
Percentage of students who currently were binge drinking (four or more drinks of alcohol in a row for female students, five or more for male students within a couple of hours on at least one day during the 30 days before the survey)	NA	16.4	15.6	=	17.2	14.0	13.7
Percentage of students who usually obtained the alcohol they drank by someone giving it to them (among students who currently drank alcohol)	41.3	37.7	NA	**NA**	NA	NA	40.5
Percentage of students who tried marijuana before age 13 years (for the first time)	5.3	5.6	5.0	=	5.5	5.1	5.6
Percentage of students who currently used marijuana (one or more times during the 30 days before the survey)	15.2	15.5	12.5	=	11.4	14.1	21.7
	ND 2013	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
Percentage of students who ever took prescription pain medicine without a doctor's prescription or differently than how a doctor told them to use it (counting drugs such as codeine, Vicodin, OxyContin, Hydrocodone, and Percocet, one or more times during their life)	NA	14.4	14.5	=	12.8	13.3	14.3
Percentage of students who were offered, sold, or given an illegal drug on school property (during the 12 months before the survey)	18.2	12.1	NA	NA	NA	NA	21.8

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

Percentage of students who attended school under the influence of alcohol or other drugs (on at least one day during the 30 days before the survey)	NA	NA	NA	NA	NA	NA	NA
Sexual Behaviors							
Percentage of students who ever had sexual intercourse	38.9	36.6	38.3	=	35.4	36.1	38.4
Percentage of students who had sexual intercourse before age 13 years (for the first time)	2.6	2.8	NA	NA	NA	NA	3.0
Weight 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)	14.7	16.1	16.5	=	16.6	15.6	16.1
Percentage of students who had obesity (>= 95th percentile for body mass index, based on sex- and age-specific reference data from the 2000 CDC growth chart)	13.9	14.9	14.0	=	17.4	14.0	15.5
Percentage of students who described themselves as slightly or very overweight	32.2	31.4	32.6	=	35.7	33.0	32.4
Percentage of students who were trying to lose weight	NA	44.5	44.7	=	46.8	45.5	NA
Percentage of students who did not eat fruit or drink 100% fruit juices (during the seven days before the survey)	3.9	4.9	6.1	=	5.8	5.3	6.3
Percentage of students who ate fruit or drank 100% fruit juices one or more times per day (during the seven days before the survey)	NA	61.2	54.1	↓	54.1	57.2	NA
Percentage of students who did not eat vegetables (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the seven days before the survey)	4.7	5.1	6.6	=	5.3	6.6	7.9
Percentage of students who ate vegetables one or more times per day (green salad, potatoes [excluding French fries, fried potatoes, or potato chips], carrots, or other vegetables, during the seven days before the survey)	NA	60.9	57.1	↓	58.2	59.1	NA
Percentage of students who did not drink a can, bottle, or glass of soda or pop (such as Coke, Pepsi, or Sprite, not including diet soda or diet pop, during the seven days before the survey)	NA	28.8	28.1	=	26.4	30.5	NA
Percentage of students who drank a can, bottle, or glass of soda or pop one or more times per day (not including diet soda or diet pop, during the seven days before the survey)	18.7	16.3	15.9	=	17.4	15.1	15.1
Percentage of students who did not drink milk (during the seven days before the survey)	13.9	14.9	20.5	↑	14.8	20.3	30.6
Percentage of students who drank two or more glasses per day of milk (during the seven days before the survey)	NA	33.9	NA	NA	NA	NA	NA
Percentage of students who did not eat breakfast (during the 7 days before the survey)	11.9	13.5	14.4	=	13.3	14.1	16.7
Percentage of students who most of the time or always went hungry because there was not enough food in their home (during the 30 days before the survey)	NA	2.7	2.8	=	2.1	2.9	NA
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)	NA	51.5	49.0	=	55.0	22.6	55.9
	ND 2015	ND 2017	ND 2019	ND Trend ↑, ↓, =	Rural ND Town Average	Urban ND Town Average	National Average 2019
Percentage of students who watched television 3 or more hours per day (on an average school day)	18.9	18.8	18.8	=	18.3	18.2	19.8
Percentage of students who played video or computer games or used a computer 3 or more hours per day (counting time spent on things such as Xbox, PlayStation, an iPad or other tablet, a smartphone, texting,	38.6	43.9	45.3	=	48.3	45.9	46.1
Other							
Percentage of students who had eight or more hours of sleep (on an average school night)	NA	31.8	29.5	=	31.8	33.1	NA
Percentage of students who brushed their teeth on seven days (during the 7 days before the survey)	NA	69.1	66.8	=	63.0	68.2	NA
Percentage of students who most of the time or always wear sunscreen (with an SPF of 15 or higher when they are outside for more than one hour on a sunny day)	NA	12.8	NA	NA	NA	NA	NA

Appendix F – Prioritization of Community's Health Needs

Community Health Needs Assessment
Linton, North Dakota
Ranking of Concerns

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

	Priorities	Most Important
COMMUNITY/ENVIRONMENTAL HEALTH CONCERNS		
Attracting & retaining young families		
Having enough child daycare services	3	3
Not enough jobs with livable wages	1	
Changes in population size		
AVAILABILITY/DELIVERY OF HEALTH SERVICES CONCERNS		
Availability of mental health services	2	4
Extra hours for appointments		
Cost of healthcare	1	
Ability to retain primary care providers (MD, DO, NP, PA) and nurses	1	
Availability of specialists		
YOUTH POPULATION HEALTH CONCERNS		
Alcohol use and abuse	1	
Activities for children and youth		
Smoking & tobacco use, exposure to second-hand smoke, or vaping/juuling	1	
Depression/anxiety	1	
ADULT POPULATION HEALTH CONCERNS		
Alcohol use and abuse	3	1
Depression/anxiety	1	
Obesity/overweight		
Not getting enough exercise		
SENIOR POPULATION HEALTH CONCERNS		
Availability of resources to help elderly stay in their homes		
Availability of home health		
Cost of long-term/nursing home care	1	
Assisted living options		
VIOLENCE CONCERNS		
Bullying/cyber-bullying		
Child abuse or neglect		
Media violence		
Physical abuse		

Appendix G – Survey "Other" Responses

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

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

4. Considering the ACTIVITIES in your community, the best things are: "Other" responses:
   - pool
   - school sports

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

5. Considering the COMMUNITY /ENVIRONMENTAL HEALTH in your community, concerns are: "Other" responses:
   - Drugs
   - The number of rental where the owner does not care about appearance of house and yard
   - Daycare
   - Childcare
6. Considering the AVAILABILITY/DELIVERY OF HEALTH SERVICES in your community, concerns are: "Other" responses:
   - Judgement of chronic diagnosis
8. Considering the YOUTH POPULATION in your community, concerns are: "Other" responses:
   - Youth summer activities
11. What single issue do you feel is the biggest challenge facing your community?
   - Healthcare cost
   - Dying businesses. As businesses close opportunities for employment go down and financial concerns go us; businesses are needed to attract younger families
   - (2) Lack of business
   - Lack of childcare services
   - No options of daycare or childcare services; youth activities
   - Declining population
   - Childcare
   - The younger generation is moving back but struggling to find childcare or any daycare options; the daycare providers that are currently open are older and will be soon retiring; the center is a great option but the waiting list is long and limited staff
   - Daycare is not available
   - Lack of community involvement; nobody really wants to be involved in anything in Linton
   - Nursing home adequacy
   - Not having in-home services, especially for the elderly to be able to stay in their homes longer
   - Lack of employees
   - Healthcare needs
   - Trust in the local hospital
   - Job growth; not enough here to keep our young people around, good paying jobs

- Lack of well-paying jobs
- Lack of jobs
- Lack of oncology care
- Retaining quality providers
- Lack of physician recruitment
- Lack of patient understanding
- Drugs
- Lack of timing

16. What PREVENTS community residents from receiving healthcare? "Other" responses:
    - Stubbornness
    - Judgement
    - We have great healthcare in this town
16. What specific healthcare services, if any, do you think should be added locally?
    - (2) Mental health
    - Home health
    - Dialysis
    - More EMS personnel
    - Male physician
    - ENT
    - Dermatology
12. Considering the response to COVID-19 in your community, concerns are: "Other" responses:
    - Misinformation from public health
    - None
    - Lack of verifiable information
    - Coaches telling athletes not to test so the team can play

Demographic Information

13. Health insurance coverage status ("Other" responses):
    - Tricare for life
17. Overall, please share concerns and suggestions to improve the delivery of local healthcare.
    - Overall I think that our hospital does a good job delivering healthcare to the community; the only thing I see is a need for better retention of doctors, NP, PAs, and nurses
    - Thank you for our county healthcare; people have access to great providers
    - Enough providers (physician providers)