Northeast Nebraska Public Health Department Community Health Needs Assessment

2025

This report was prepared by staff of the
Northeast Nebraska Public Health Department
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Executive Summary

Every three years, the Northeast Nebraska Public Health Department (NNPHD), Pender Community Hospital (PCH), and Providence Medical Center (PMC) come together to lead an assessment of their collective community health needs. This Community Health Needs Assessment reflects the primary service area of Cedar, Dixon, Thurston and Wayne counties. These efforts were also aided by local community leaders, business leaders, Wayne State College, Midtown Health Center, and the Winnebago Public Health Department among others.

Board members of the network and the partner health care organizations formed the steering committee for this effort, along with the public health department director and staff. The information collected includes over three hundred surveys from across the health district, and several focus groups in Wayne and Thurston Counties. The surveys and the focus groups aimed to reflect diverse socio-economic backgrounds and mirror the health and wellness experiences of the community. This assessment also relies on secondary data sources including US Census, BRFSS, SDOH among others.

The results of this Community Health Needs Assessment (CHNA) serves as a crucial roadmap for improving health outcomes in Northeast Nebraska area. By identifying the most pressing health issues within the community, such as access to care, concerns related to aging, and economic opportunity, the CHNA allows the Northeast Nebraska Public Health Department and community partners to strategically allocate resources and develop targeted programs to alleviate these concerns. This data-driven approach enables the prioritization of initiatives that directly address the identified needs, leading to more effective public health efforts.

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Introduction

A Community Health Needs Assessment (CHNA) is vital for understanding the specific health challenges and strengths of a community. It provides a comprehensive picture of the population's health statues, including factors like access to care and chronic disease prevalence while also taking into account the unique characteristics of a community that lead to healthy habits and behaviors such as affordable housing, daycare options, and availability of healthy foods.

The Northeast Nebraska Public Health Department and Pender Community Hospital and Providence Medical Center take their responsibility for assessing health in their communities and developing programs and initiatives to help alleviate concerns. This data-driven approach gives these organizations the necessary information to garner partnerships, raise and effectively allocate resources, and tailor programs to address the most pressing needs. A thorough CHNA is an essential part of creating a strategic and informed plan to enhance the well-being of the community.

This Community Health Needs Assessment describes health status of the four counties of Cedar, Dixon, Thurston and Wayne and provides the foundation for an increased understanding of the factors that may be impacting the ability to improve health outcomes in this service area. During the development of this CHNA, the community hospitals worked closely with NNPHD to gather data, analyze the data and set priorities. Input from targeted sectors of the community was also a priority in planning the CHNA; focus groups and written surveys were also obtained that included input from low-income, underserved, and diverse populations representative of the demographics of the service area.

This CHNA provides data from multiple sources and covers topics related to how the community members perceive their health, quality of life, health access concerns, and availability of health and community services. The survey and focus groups also gathered information on how community members assess the changes in their community, crisis prevention or preparedness, and how those issues might impact their long-term health. A thorough review of the data sources reveals the health of the population via trends, prevalent health issues, concerns related to aging and demographic change, behavioral factors, and social determinants of health.

Description of the MAPP 2.0 Planning Process

The Mobilize for Action through Planning and Partnerships (MAPP) framework is was developed to aid in the creation of Community Health Needs Assessments and significantly enhances the effectiveness of the discovery process and resulting report. MAPP 2.0 emphasizes a collaborative approach, bringing together diverse community stakeholders, including residents, public health officials, healthcare providers, and social services agencies. It moves beyond simply collecting data to actively engaging the community in identifying and prioritizing health issues.

The National Association of County and City Health Officials (NACCHO) created the MAPP methodology in 2001 in response to a national charge to shift from traditional program and organizational strategic planning to a community owned, systems approach that considers the complex and evolving challenges faced uniquely by public health and the communities they serve. Over the years, NACCHO, the Centers for Disease Control and Prevention (CDC), and the Health Resources and Services Administration (HRSA) have updated MAPP to align with national health strategies.

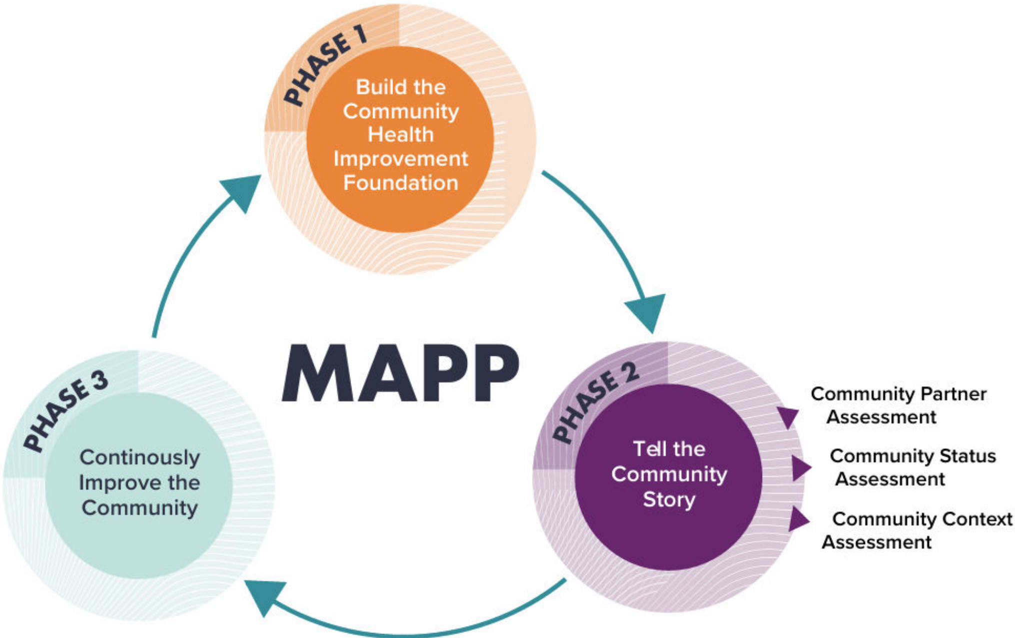


Figure 1 MAPP Methodology for Community Health Assessments

Northeast Nebraska Public Health Department Adoption of MAPP 2.0

- Broad Community Engagement: MAPP's emphasis on partnerships ensures that the CHNA reflects the perspectives and experience of the entire community to help address concerns outside of the tradition health infrastructure. This leads to more comprehensive and accurate assessment.
- Strategic Thinking: MAPP helps translate the CHNA's findings into actionable strategies. It guides communities in developing a strategic plan that addresses the identified priorities, focusing on long-term health improvement.
- Forces of Change Assessment: A key component of Mapp is the "Forces of Change Assessment" which examines the factors that influence community health, such as social, economic, and environmental conditions. This provides a deeper understanding of the root causes of health issues, enabling more targeted interventions, and forecasting future health needs as they evolve.
- Community Themes and Strengths Assessment: MAPP focuses on identifying community assets and strengths, alongside needs. This strengths-based approach helps communities and health leadership build on existing resources and successful programs to empower community members to take ownership of their health.
- Visioning and Action Cycles: MAPP facilitates a visioning process to create a shared vision for a healthy community, followed by action cycles to implement and evaluate strategies. This ensures that the CHNA leads to sustainable improvements in community health.

Data Sources

- American Community Survey – Census Data
- County Health Rankings
- National Institute of Health
- Center for Disease Control
- Centers for Medicare and Medicaid Services

Description of Community Health Assessment Core Team

Northeast Nebraska Public Health Department (NNPHD)

Located in Wayne, Nebraska NNPHD is a vital resource dedicated to protecting and promoting the health and well-being of residents across a multi-county region. They serve Antelope, Burt, Cuming, Dakota, Dixon, Stanton, Thurston and Wayne counties. NNPHD's work encompasses a wide range of public health services, including disease prevention and control, health education, environmental health, emergency preparedness, and community health planning. They strive to improve the health of the population through assessments, policy development, and assurance of access to essential health services, working collaboratively with community partners to address local health priorities and improve the overall quality of life for the people in the communities they serve.

Providence Medical Center (PMC)

PMC is a crucial healthcare provider located in Wayne, Nebraska and serving the local and surrounding communities. As a Critical Access Hospital, it plays a vital role in ensuring access to essential medical services in a rural setting. Providence Medical Center offers a range of services, including acute care, emergency services, skilled nursing, and outpatient services. They strive to provide quality and compassionate healthcare, focusing on the well-being of their patients. The center is dedicated to serving the healthcare needs of people living within a roughly 50-mile radius of Wayne, Nebraska. In addition to the hospital services, they also have connections to other health services such as pharmacy and long-term care, two satellite therapy offices in neighboring communities, provide student health for Wayne State College, and play an important part of the healthcare infrastructure of Northeast Nebraska.

Pender Community Hospital (PCH)

As a critical access hospital located in Pender, Nebraska, PCH serves Thurston County and the surrounding rural areas. As a vital healthcare provider in a sparsely populated region, it offers essential medical services to a diverse patient population. The hospital provides acute care, emergency services, skilled nursing, and a variety of outpatient services, including physical therapy and laboratory testing. They commonly treat conditions such as respiratory infections, injuries,

chronic diseases like diabetes and hypertension, and provide support for patients needing post-surgical care. PCH typically serves a diverse and geographically dispersed population, focusing on providing accessible and high-quality healthcare by meeting patients where they are rather than requiring significant travel. Their patient population includes a significant elderly demographics and members of the local Native American communities. They are an integral part of the healthcare infrastructure in the region, ensuring that essential medical is available close to home for rural residents.

Midtown Health Center (MHC)

As a Federally Qualified Health Center (FQHC) MHC is dedicated to providing comprehensive and affordable healthcare services across Northeast Nebraska. As a non-profit organization, they strive to ensure access to high-quality medical, dental, and behavioral health care for individuals and families who face barriers to traditional healthcare. With clinic locations in Norfolk, Madison, and West Point, they serve a diverse patient population, with a particular focus on those who are uninsured, underinsured, low-income, or Medicaid recipients. Their commitment extends to individuals of all ages, providing both medical and dental care. A crucial aspect of their service is the implementation of a sliding fee scale, which significantly enhances healthcare accessibility for those with limited financial resources. MHC plays a pivotal role in bridging healthcare gaps and ensuring that essential services are readily available to vulnerable populations throughout the region.

Wayne State College (WSC)

Located in Wayne, Nebraska and a prominent institution in the NNPHD service area, Wayne State College is a public liberal arts college that plays a vital role in the educational, cultural, and research infrastructure in Northeast Nebraska. Known for its commitment to student success, the college offers a range of undergraduate and graduate programs, emphasizing personalized attention and supportive learning environment. With a strong focus on teacher education, business, and the sciences, WSC provides students with opportunities for hands-on learning, research, and community engagement. The campus fosters a close-knit atmosphere, promoting extracurricular activities and a sense of belonging, while contributing significantly to the economic and social well-being of the surrounding region.

Overview of Northeast Nebraska Public Health District

Demographics

NNPHD's service area, encompassing the primary service counties of Cedar, Dixon, Thurston, and Wayne counties, presents a diverse demographic profile. The region is characterized by a predominantly rural population, with significant variations in age, race, and economic status. For a full demographics breakdown refer to the demographics tables in the appendix.

Aging Population

According to the most recent Census data, in 2023, 17.7% of the United States' population was aged 65 years or older and is increasing year on year. the area's population is aging, with a higher proportion of residents over the age of 65 compared to state average. In 2023, 21.9% of Cedar counties population was aged 65 or older, alongside 21.2% of Dixon County, 12.5% of Thurston County and 16.3% of Wayne county. This puts Dixon and Cedars County above the national average.

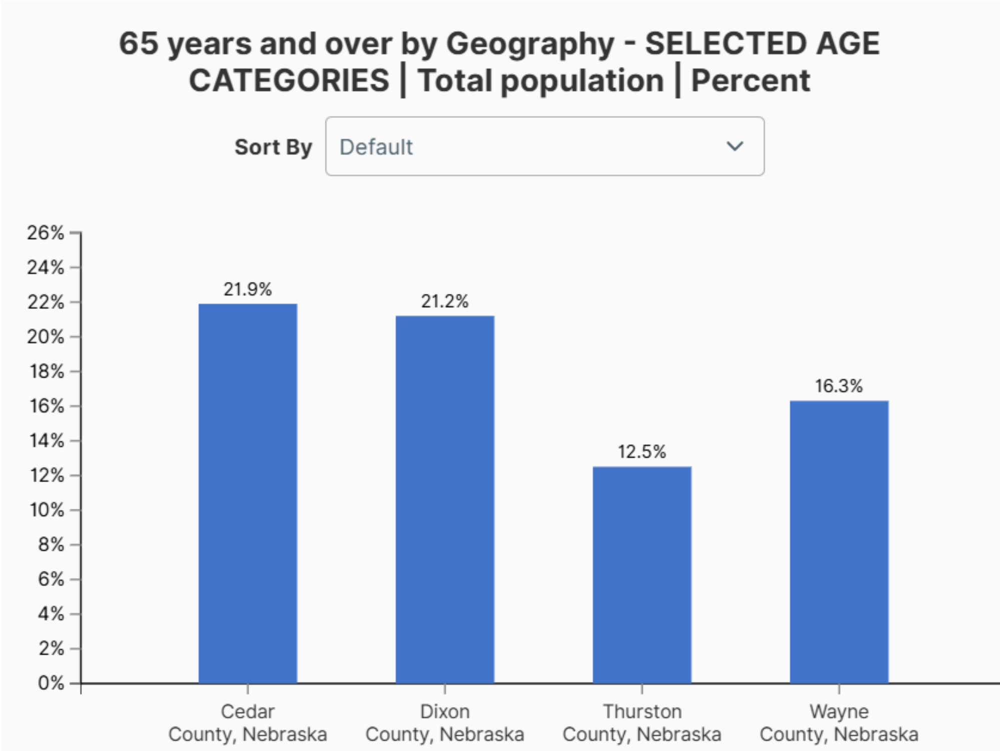


Figure 2 2023 Percent of Population over >65 Years of Age by County

The area's aging population presents unique healthcare needs, including increased demand for geriatric care and long-term care services. Age breakdowns show a trend of a higher median age than the state average and a high proportion of people over the age of 65. This necessitates higher demands for addressing concerns related to aging such as skilled nursing facilities, transportation, and healthcare services related to chronic conditions. Additionally, Aging increases the risk of chronic diseases such as dementia, heart disease, type 2 diabetes, arthritis, and cancer, which are leading drivers of illness, disability, and death.

Race

Race can have a significant influence on healthcare and public health outcomes due to health and historical inequities. Disparities can arise in access to care, quality of treatment, and prevalence of chronic conditions in minority communities. Factors like implicit bias of healthcare professionals, limited access to culturally competent care or translators, and socioeconomic disadvantages contribute to these disparities. Public health initiatives aim to prioritize health equity in the service area, ensuring all individuals, regardless of race, have the means and opportunity to achieve optimal health.

While the majority of the population identifies as White, there are notable minority populations, particularly in Thurston County, which has a significant Native American population associated with the Omaha and Winnebago tribes. 56.1% of Thurston County's population identifies as American Indian. Thurston and Dixon Counties also have a high (relative to the area) Asian population at 0.9% and 1% respectively. Wayne County has the highest Black population at 1.0%.

The second largest group across the service area are those that identify as Hispanic. Wayne and Dixon County both have high populations that identify as Hispanic at 10.1% and 15.1% respectively. Thurston county also has a relatively high Hispanic population at 4.4%, and Cedar County has the lowest at 2.4%.

County	American Indian	Asian	Black	White	Two or More	Hispanic	Non-Hispanic
Wayne	0.2%	0.3%	1.0%	89.7%	5.7%	10.1%	89.9%
Thurston	56.1%	0.9%	0.2%	36.9%	4.8%	4.4%	95.6%
Dixon	0.3%	1.0%	0.3%	83.7%	10.7%	15.1%	84.9%
Cedar	0.3%	0.2%	0.2%	95.9%	2.0%	2.4%	97.6%

Figure 3 Race Breakdown

Finally, it is also worth noting that across the service area there are populations that identify with two or more races. Wayne and Thurston counties have 5.7% and 4.8% of their populations that identify with two or more races. Conversely, Cedar County has the lowest percentage of their population identifying with two or more races at 2%, while Dixon county has the highest with 10.7% of their population identifying with two or more races. For a more complete breakdown of the racial demographics of the NNPHD service are, refer to appendix.

Socio-Economic

The economic landscape varies, with pockets of both affluence and poverty. Wayne County, home to Wayne State College, has a younger population and a more diverse economic base. In contrast, other counties rely heavily on agriculture, which can lead to economic fluctuations and health challenges related to high physical labor. Data indicates that a portion of the population lives below the poverty line, facing challenges related to food insecurity and access to healthcare.

According to data from the US Census, Thurston County has the highest proportion of their population estimated to live below poverty at 19.6%. Wayne County also has a significantly percentage of their population living in poverty at 12.4%. Both Wayne and Thurston Counties are above the US average poverty which was 11.1% in 2023. Finally, Dixon and Cedar counties, while still significant, have the lowest poverty levels at 8.4% and 8.6% respectively.

County	Avg wage per Job	Median Household Income	Poverty Rate	Unemployment Rate
Wayne	$ 43,160.00	$ 68,309.00	12.4%	2.0%
Thurston	$ 56,501.00	$ 57,810.00	19.60%	2.7%
Dixon	$50,206.00	$ 67,521.00	8.40%	2.00%
Cedar	$43,419.00	$ 69,895.00	8.60%	1.80%

Figure 4 County Poverty Rates and Economic Factors

All four counties have low levels of unemployment with the highest being 2.7% in Thurston County and the lowest being 1.8% in Cedar County. Wages are relatively low however with the average wage ranging from $43,160 in Wayne County to $56,501 in Thurston County.

Migration

Migration has also negatively impacted the area with the Cedar, Dixon, Thurston, and Wayne Counties losing population over the last two decades. When an area is losing population, it can risk losing resources needed to maintain health infrastructure that can help address the health issues and concerns of the remaining population. In the focus groups, participants noted the loss of some health infrastructure such as long-term care facilities closing in rural communities, or Emergency Medical Services such as ambulance coverage leaving the area in Pender. This is not unique to the NNPHD service area but is in line with the trends for other rural areas in Nebraska.

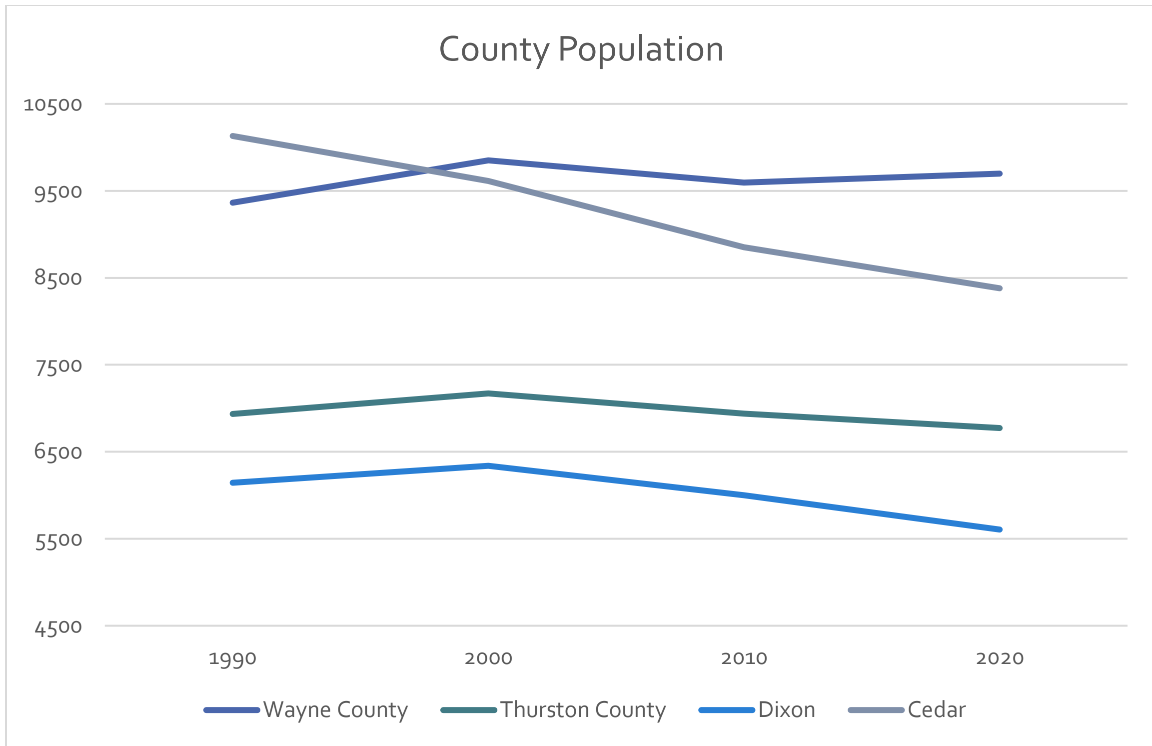


Figure 5 County Population Change 1990-2020

The impacts of migration and an aging demographic without a high enough birth rates or inflows shows the slow growth or even dropping population particularly. According to US census estimates, since the 2020 census, Thurston and Cedar counties are estimated to negative population growth at 3.27% and 1.4% respectively. In contrast, Wayne and Dixon Counties have had slow but positive growth at 1.8% and 2.1% respectively. Since 1990, Cedar County has had the largest decline in population falling from 10131 in 1990 to 8380 in 2020. Wayne County has had the best performing population growth with a slight decline from 2000 to 2010, but an overall increase since 1990 from 9364 to 9697 in 2020.

Another concern shared during the Pender focus group was that without additional support for the aging population people may need to move to better locate themselves around care:

> *"I think there's a niche for, as Pender grows or changes, to have independent living next to Prairie Breeze that has apartments. I know a lot of single women in their homes that they've had a family in and just don't want to deal*

with that anymore, but there's no way they could retire here. I would hate to leave my healthcare here."

General Health

The general health of the NNPHD service area presents a mixed picture, reflecting both the strengths and challenges common to rural areas. Several factors influence the overall health of the population.

Access to Care

While both the surveys and focus groups remarked on the high-quality of the hospitals and clinics in the area, the rural nature of the region can create barriers to accessing specialized care. In the survey, participants listed Dentistry as the top provider or specialty that they had trouble getting care from. as specialties that were difficult to get access to care. Other specialty providers included Pediatrician, OB/GYN, Mental Health. General Practitioners were also high on the list. Finally, the wait was too long, insurance did not cover needed care, share of the cost (deductible/co-pay) was too high, and couldn't get an appointment were the top reasons listed for not being able to access care. Transportation particularly for elderly or low-income residents, can be a significant obstacle. Economic or high healthcare costs were also cited by some as creating concern for seeking medical care.

Chronic Diseases

Like many rural areas, the region experiences a higher prevalence of chronic diseases such as heart disease, diabetes, and respiratory illnesses. Contributing factors include lifestyle choices, limited access to healthy food options, and socioeconomic disparities.

Below is a chart of three of the most common chronic conditions: chronic obstruction pulmonary disease (COPD), diabetes, and heart disease. The data is collected from the CDC. Diabetes is the highest among the three conditions across all three counties with the highest being in Thurston County with over 15% of the population having diabetes. Dixon had the highest prevalence of heart disease at 9.2% of their population. Thurston also had the highest prevalence of COPD with 8.7% followed closely by Dixon County at 8.6%. Wayne had the lowest prevalence of all three conditions (COPD – 6.4%, diabetes 10.6%, heart disease – 7.0%).

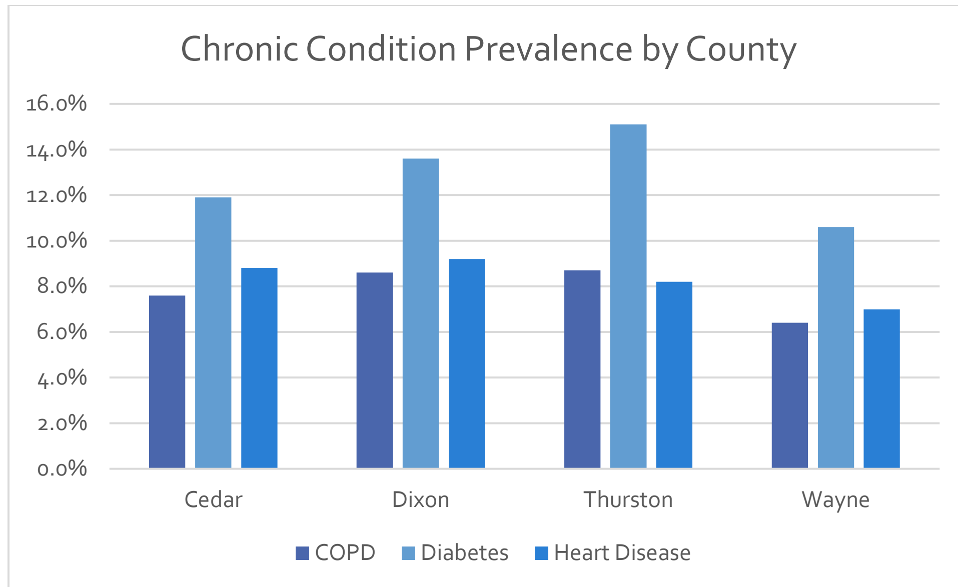


Figure 6 Chronic Condition Prevalence by County

Mental Health: Mental health concerns, including depression and substance abuse, are prevalent. Communities during the focus groups in the service area lauded the successes of recent programs particularly support groups in addressing mental health. These efforts have reduced the stigma surrounding mental illness and encouraged individuals to seek help. However, mental health concerns remain and access to mental health services can be limited. This is discussed in more detail in the behavioral health section alongside community concerns and survey findings.

One participant in the Wayne State College focus group mentioned how programs on campus have helped ease issues with access, providing resources, and de-stigmatizing mental health care saying:

> *"I think mental health is very pertinent, especially on campus, where we have many events and clubs focused on helping students with their mental health. I feel that our coaches and athletic training staff are very accommodating to any mental health needs we have; they make sure to check in with us and get us any resources or time off we may need."*

Health Disparities: Factors such as poverty, historically underserved areas, longer travel distance to care, and past negative experiences have led to some communities suffering notable health disparities. This is particularly true for minority populations like in Thurston and Dixon counties that have high Native

American and Hispanic populations. As will be shown in the statistical findings section, ethnicity and income are both correlated with health access issues based on the survey findings.

Preventative Care: There are ongoing efforts to promote preventative care, such as vaccinations and screenings, but challenges remain in reaching all segments of the population. Preventative care is a larger topic that is also addressed in the health access portion of this assessment.

A key component of preventative care is immunizations. According to the CDC's immunization information services Nebraska has a 96.2% rate of at least two immunizations for children under six years old. This is tied for 35th in the country. For adolescents aged 11-17 the rate falls to 85.9% having two or more immunizations ranking 33rd in the country.

Social Determinants of Health: Factors such as poverty, education, and housing play a significant role in shaping health outcomes. Addressing these social determinants is crucial for improving the overall health of the community. Concerns related to housing affordability, access to childcare options, and economic opportunity came up repeatedly both on the CHA survey and the community focus groups.

Centers for Medicare and Medicaid Services (CMS) combines four Social Determinants of Health (SDOH) factors in their calculation: Education, Health Care Access and Quality, Environmental, Social Vulnerability Index. The proxy for education was the portion of the population with less than or only a high school diploma. Health care access and quality is defined as the portion of the population that is current on their preventative care. Environmental is a measurement of particulate matter (PM2.5) in the air. Finally, the social vulnerability index measures how susceptible a community is to negative impacts of hazards, including natural disasters and public health crises, by assessing factors like socioeconomic status, household composition, and race/ethnicity.

County	Education	Health Care Access and Quality	Environment	Social Vulnerability Index
Cedar	37.96%	36.70%	6.07	0.28

Dixon	28.79%	39.60%	6.39	0.48
Thurston	34.01%	30.15%	6.5	0.89
Wayne	31.25%	38.35%	6.39	0.38

Figure 7 Social Determinants of Health Factors by County

Environmental and Behavioral Risk Factors

Environmental and behavioral risk factors significantly impact health outcomes, often contributing to the development of chronic diseases and premature mortality. Environmental factors, such as air and water pollution, exposure to toxins, and unsafe living conditions, can directly compromise physical well-being. Similarly, behavioral risk factors, including tobacco use, unhealthy diet, physical inactivity, and excessive alcohol consumption, play a crucial role in shaping individual health trajectories. Addressing these factors through public health interventions, education, and policy changes is essential for promoting healthier lifestyles and creating environments that support well-being, ultimately leading to improved population health.

Limited access to healthy foods

There is strong evidence that residing in a food desert is correlated with high prevalence of overweight, obesity, diabetes, and premature death. In rural areas, limited access to healthy foods means living more than ten miles from a grocery store while in urban areas it must be further than one mile. Economic status can also impact ability to access healthy foods. In this context, limited access to healthy foods due to low income is defined as having an annual family income less than or equal to 200 percent of the federal poverty threshold for the respective household family size.

The Food Environment Index looks at two variables which are scaled from zero to ten with zero being the worst value in the nation, and ten being the best and averaged to produce the index. The two variables are:

1. Limited access to healthy foods based on the USDA Food Environment Atlas
2. Food insecurity with data from Feeding America which estimates the percentage of the population who did not have access to a reliable source of food.

According to this methodology, in 2024 the U.S. average value for counties was 7.7, and the Nebraska average was 8. Cedar county was indexed at 8.8, Dixon was indexed at 7.8, Thurston was indexed at 7.5, and Wayne was indexed at 8.6. The

results showing that Dixon and Thurston counties were ranked below the Nebraska average and Thurston was below the national average.

Adult and Childhood Obesity

Childhood and adult obesity prevalence has reached alarming levels, posing significant short and long-term health risks. In children, obesity can lead to immediate complications such as type two diabetes, asthma, sleep apnea, and psychosocial issues like low self-esteem and bullying. These early health problems can establish a trajectory for chronic diseases that persist into adulthood. Additionally, obese children are more likely to become obese adults, perpetuating a cycle of health risks. The short-term impact in adults includes increased risk of cardiovascular disease, certain cancers, and musculoskeletal disorders. Long-term, obesity significantly shortens life expectancy and diminishes quality of life, leading to a higher incidence of debilitating conditions.

The cumulative effect of obesity throughout the lifespan creates a substantial burden on both individuals and healthcare systems. Long-term health consequences include significantly increased risks of heart disease, stroke, various cancers (including colon, breast, and kidney), osteoarthritis, and non-alcoholic fatty liver disease. Obesity also contributes to mental health challenges, such as depression and anxiety, further complicating overall well-being. The economic impact is substantial, with increased healthcare costs and reduced productivity. Intervention strategies that address both childhood and adult obesity are crucial to mitigate these long-term health consequences and promote healthier lifestyles.

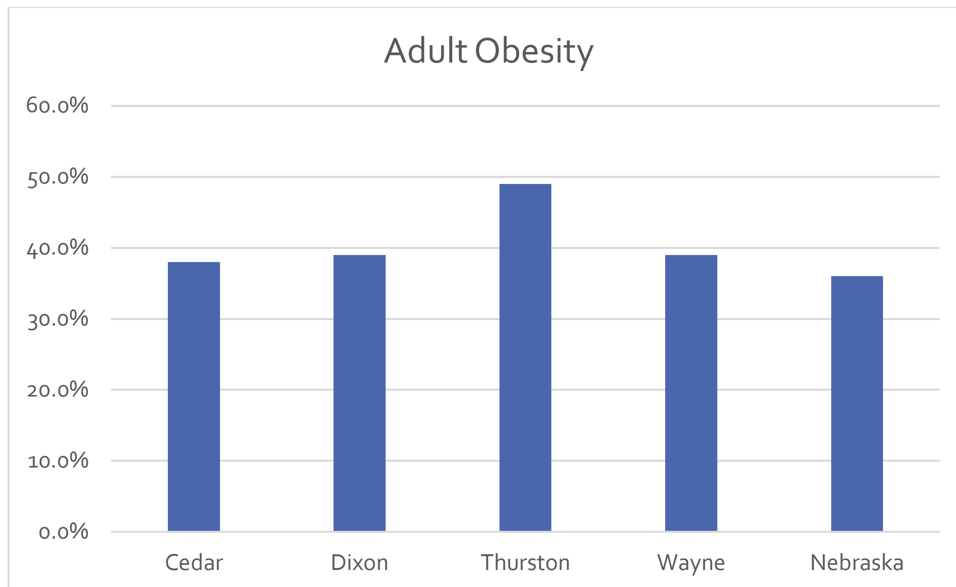


Figure 8 Adult Obesity Percent of the Population by County

Adult obesity rates across the NNPHD service area are higher than the state and national average. In the United States 34% of adults are obese compared to 36% of Nebraska. Unfortunately, the lowest rate is Cedar County at 38% followed closely by Dixon and Wayne counties at 39% of the population qualifying as obese. Finally, Thurston County has the highest proportion of their population fitting the definition of obesity at 49%.

Physical Activity

Regular physical is a cornerstone of good health, offering a multitude of benefits across all ages. It strengthens the cardiovascular system, reducing the risk of heart disease, stroke, and hypertension. Physical activity also aids in weight management, helps prevent type 2 diabetes, and improves bone density, reducing the risk of osteoporosis. Physical activity can alleviate stress, anxiety, and help combat depression, contributing to improved mood and cognitive function.

As one focus group participant stated, “As a college student, I see many people struggle to find the time to stay healthy and exercise.” Unfortunately, this seems to be the case with all four primary counties in the NNPHD service are well below the state on their access to exercise opportunities. Perhaps due to this both Cedar and Wayne counties have a 24% of their population physically inactive while Dixon and Thurston counties perform only a little better at 28% and 31% respectively.

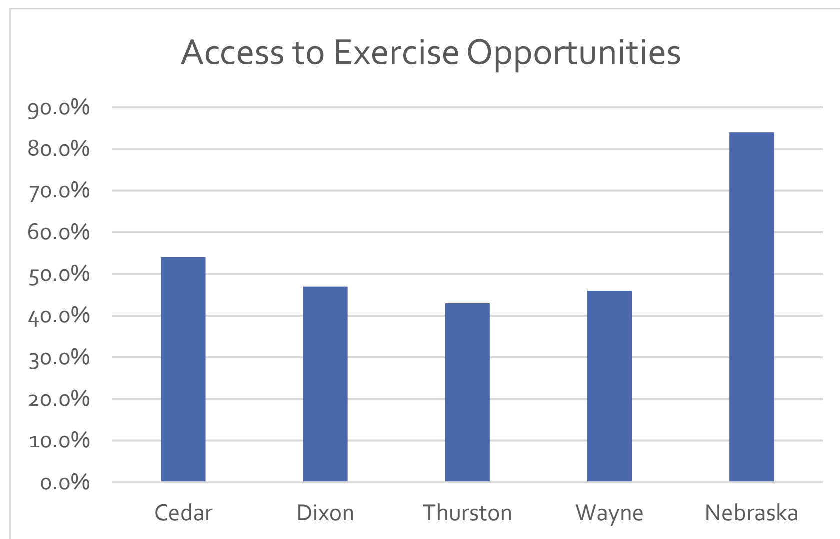


Figure 9 Access to Exercise Opportunities by County

Social Connection and Loneliness

Loneliness and a lack of strong social connections have profound impacts on overall health and well-being. Individuals who feel isolated are more likely to experience burnout, stress, and reduced motivation, ultimately affecting their performance and career progression. Beyond the workplace, social isolation is a significant risk factor for various health problems, including cardiovascular disease, depression, anxiety, and cognitive decline.

On the other hand, strong social connections provide a sense of belonging, support, and purpose, which are essential for mental and physical resilience. They can buffer against stress, promote healthier behaviors, and contribute to a greater sense of well-being. Cultivating meaningful relationship especially for people over 65 years of age, is key to individual health and happiness.

Smoking/Tobacco Use

Smoking and tobacco use in Nebraska, while showing some decline, remain significant public health concerns. The state's smoking rates contribute to a substantial burden of preventable diseases, including lung cancer, heart disease, and respiratory illnesses. These conditions lead to increased healthcare costs, reduced productivity, and premature mortality. Exposure to secondhand smoke likewise poses risks, particularly for children and vulnerable populations. Efforts to reduce tobacco use through public health campaigns, and access to cessation

programs in the NNPHD service have proven crucial for improving the overall health and well-being of community members.

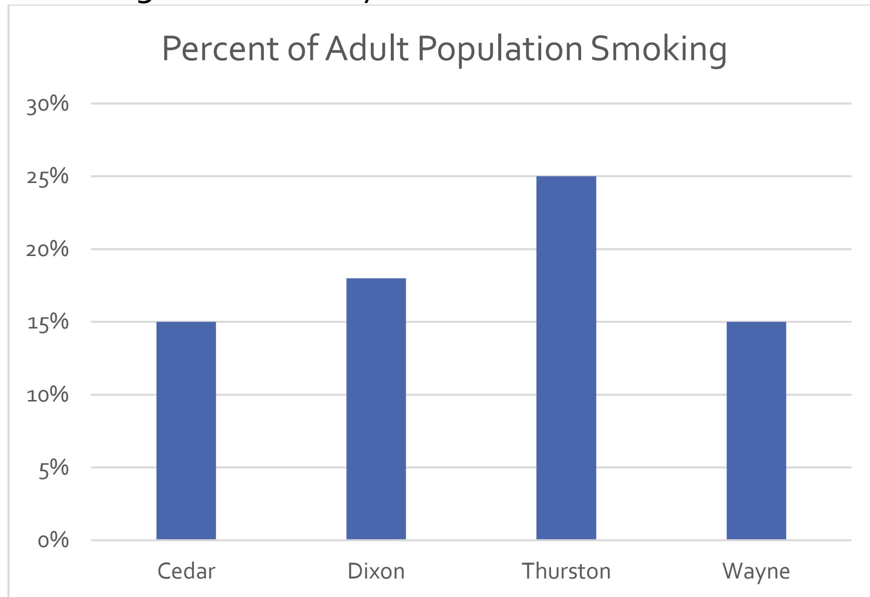


Figure 10 Percent of Adult Population Smoking

According to county health rankings, adult smoking rates in Nebraska are 14% slightly below the 15% that is the national average. Cedar and Wayne counties are aligned with the national average at 15%.

Driving related health risk factors

Distracted driving, including texting or using phones, significantly increases the likelihood of collisions, leading to injuries or fatalities. Additionally, impaired driving due to alcohol or drug use poses a severe risk. In rural areas, sharing roadways with agricultural or other heavy machinery can lead to increased threats to catastrophic incidents. Prolonged sedentary behavior associated with driving contributes to chronic health issues like obesity and cardiovascular disease. Driving-related health risk factors extend beyond the immediate threat of accidents or motor vehicle related deaths.

According to the CDC, in 2021 approximately 13,384 Americans were killed in alcohol-related motor vehicle crashes. Two age groups of young adults, 21-24 year olds and 25-34 year olds, had the highest percentages (27% each) of all-alcohol-impaired deaths and are at particular risk.

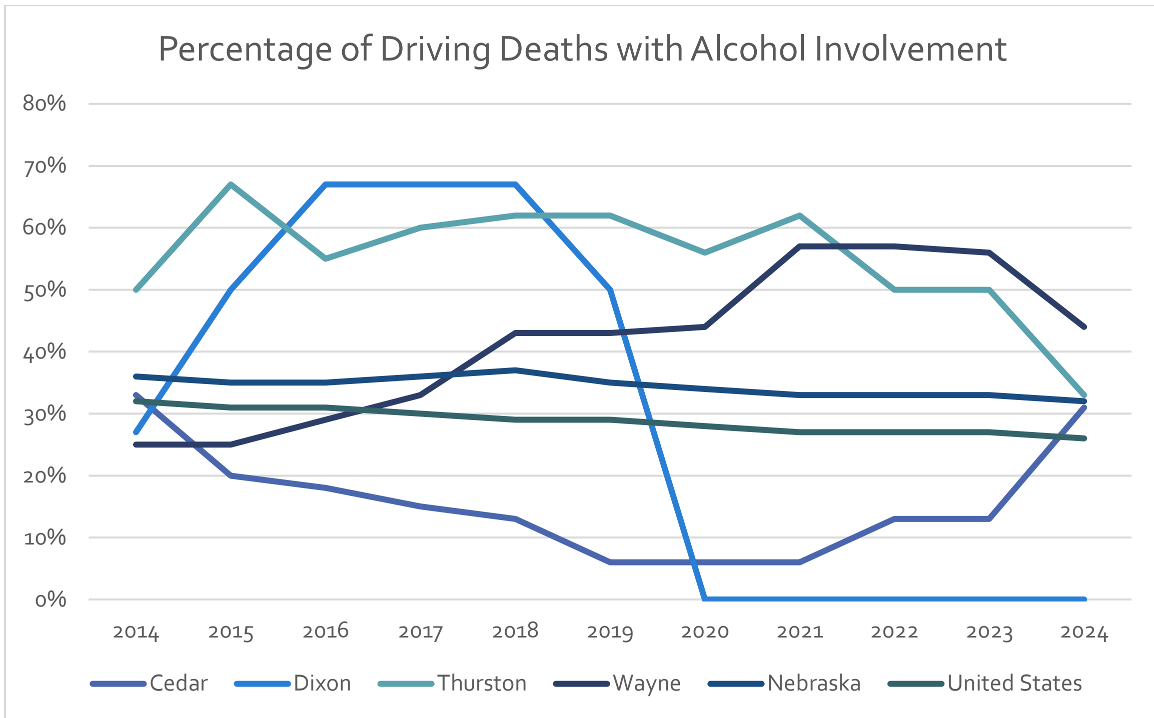


Figure 11 Percentage of Driving Deaths with Alcohol Involvement by County

Nebraska, from 2014 through 2024, has a higher percentage of death related to alcohol involvement that the country average. While, driving related deaths are relatively lower among the counties, a higher percentage comes from alcohol involvement. Cedar county performs the best; however, had a spike in 2024 to 33% of total deaths related to alcohol involvement. Thurston county since 2014 has had higher than 50% of their driving deaths relating to alcohol involvement except for 2024 where alcohol involvement deaths were 33% of driving deaths. Wayne has had relatively smooth increase in percentage of driving deaths related to alcohol involvement from 25% in 2014 to 56% in 2023 and 44% in 2024.

Injury Health Data

Injury deaths are one measure that is used by the CDC in understanding injury health risks in communities. This measure is based on the number of deaths due to injury per 100,000 people. Thurston County has the highest level of injury deaths at 120 per 100,000. Wayne County has the lowest at 34 deaths per 100,000 which is below the state average. Cedar and Dixon Counties are slightly above the state average at 74 and 64 deaths per 100,000 respectively.

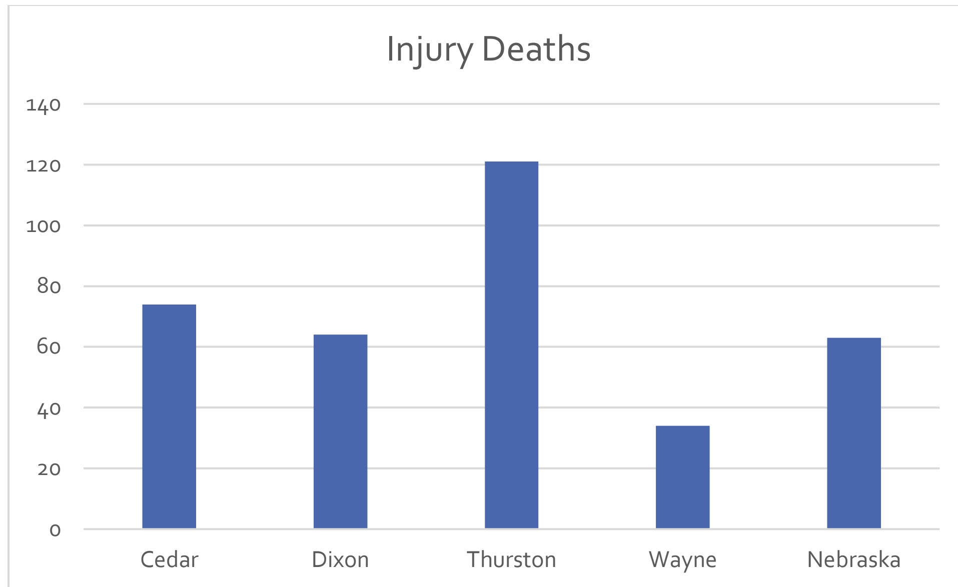


Figure 12 Injury Deaths by County

Particularly in rural communities, injury poses a significant public health risk, often exacerbated by the unique characteristics of these areas. Agricultural work, a mainstay in many rural economies, carrier inherent dangers, leading to a higher incidence of machinery-related accidents and chemical exposures. Long distances to emergency services can delay critical care, worsening outcomes for injury victims. Recreational activities like hunting and off-road vehicle use also contribute to injury rates. Additionally, limited access to healthcare facilities and specialists can hinder rehabilitation and long-term recovery. The dispersed nature of rural populations and importance of agricultural economy makes it challenging to implement widespread injury prevention programs, but attention and resources aid efforts to address this critical public health issue.

Sleep

Adequate sleep is fundamental to overall health and well-being. Chronic sleep deprivation or poor sleep quality can have far-reaching consequences. It weakens the immune system, making individuals more susceptible to infections. Sleep disturbances are also linked to an increased risk of chronic diseases, including cardiovascular problems, diabetes, and obesity. Mental health suffers as well, with sleep deficits contributing to mood disorders like depression and anxiety. Cognitive functions such as memory, concentration, and decision-making are impaired by insufficient sleep impacting injury risk related to operating machinery or while driving.

Health Access

Concerns related to health access was among the most prominent topics to come up both in the community health survey and during the community focus groups. At Pender Community Hospital, "We are very fortunate to have the hospital clinic, and with Prairie Grace, we are very blessed in a small community. I think you do quite well bringing in all these specialists. It's nice not having to travel to the city to have procedures and specialty clinics." However, in the survey responses 20% of respondents (n=300) reported having a problem getting healthcare for either themselves or a family member.

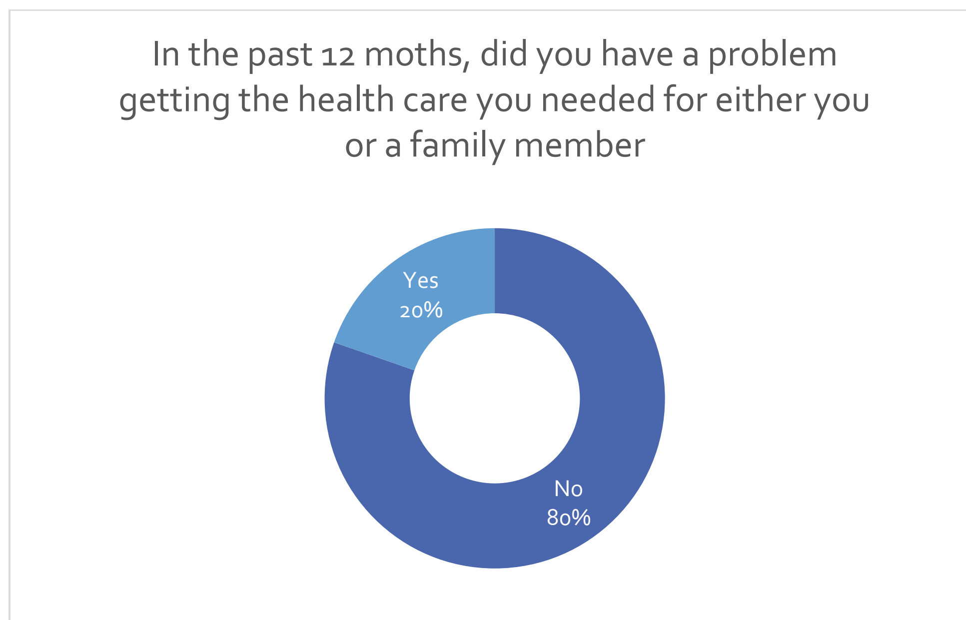


Figure 13 Survey participants who had problems getting health care

Health access in rural communities presents unique and persistent challenges for public health. Geographical distance, limited transportation options, and a shortage of healthcare providers often create significant barriers to care. Rural residents may face long travel times to access primary care, specialized services, or emergency care, leading to delays in diagnosis and treatment. The scarcity of healthcare professionals, including physicians, nurses, specialists, and therapists further exacerbates these issues.

Below is a list of the reasons reported in the community health survey that people who had issues receiving care reported (n=163). From these findings, 30%

felt that the wait to care was too long, 26.7% reported that insurance didn't cover needed care, and 22.2% could not get an appointment when they tried.

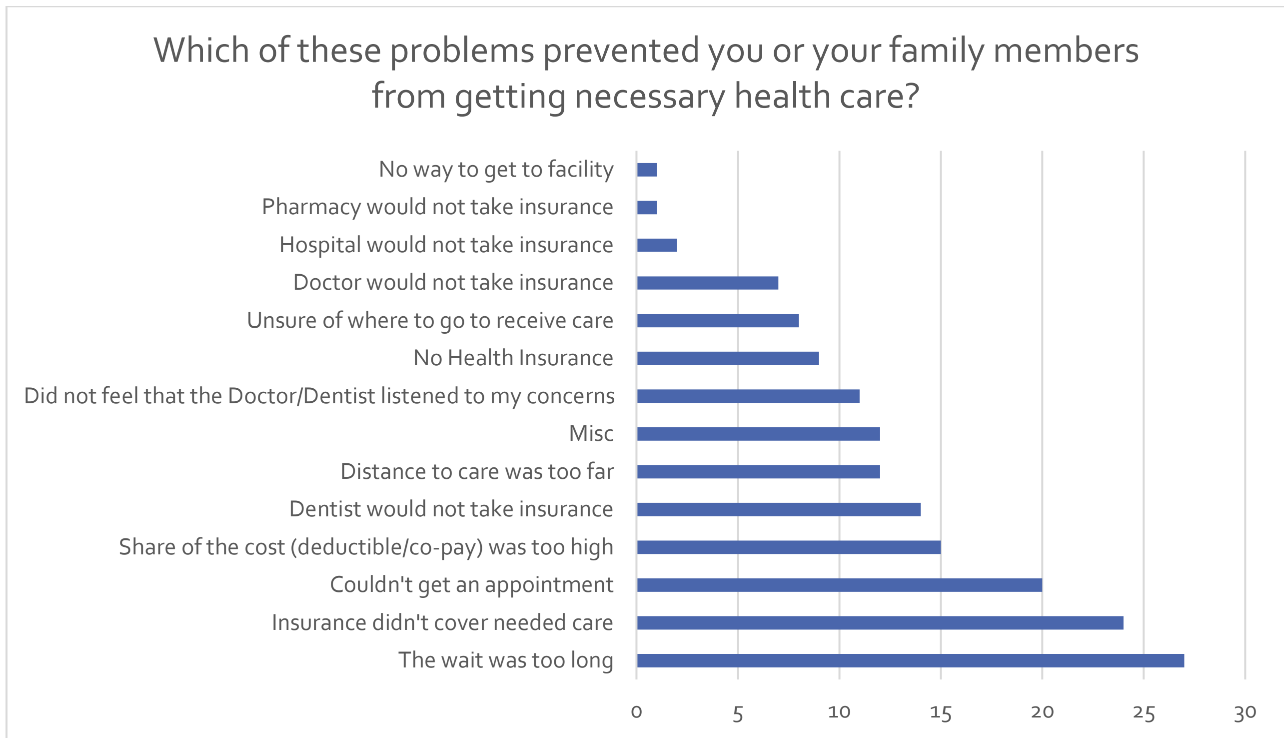


Figure 14 Issues Related to Accessing Care

Additionally, socioeconomic factors such as poverty, lack of insurance, and limited health literacy can compound these challenges, leading to disparities in health outcomes compared to urban populations. In the community health survey, 44% of respondents (n=163) sighted financial reasons related to insurance or high costs to care as impediments to receiving healthcare.

This shows that costs are a component of health access. Furthermore, ensuring equitable access to quality healthcare in rural communities requires targeted interventions, including workforce development, infrastructure improvements, coordination with community and regional partners, and innovative service delivery models.

Uninsured Population

According to the National Health Institute, as of 2022, Nebraska has an uninsured population of 18.6% which is lower than the national rate (20.7%). In the NNPHD service area, Thurston has the lowest uninsured rate at 11.2%, Cedar

and Wayne counties are higher at 16.8% and 16.9% respectively but still below both the Nebraska and national rates, and Dixon County has the highest uninsured population at 27.7%.

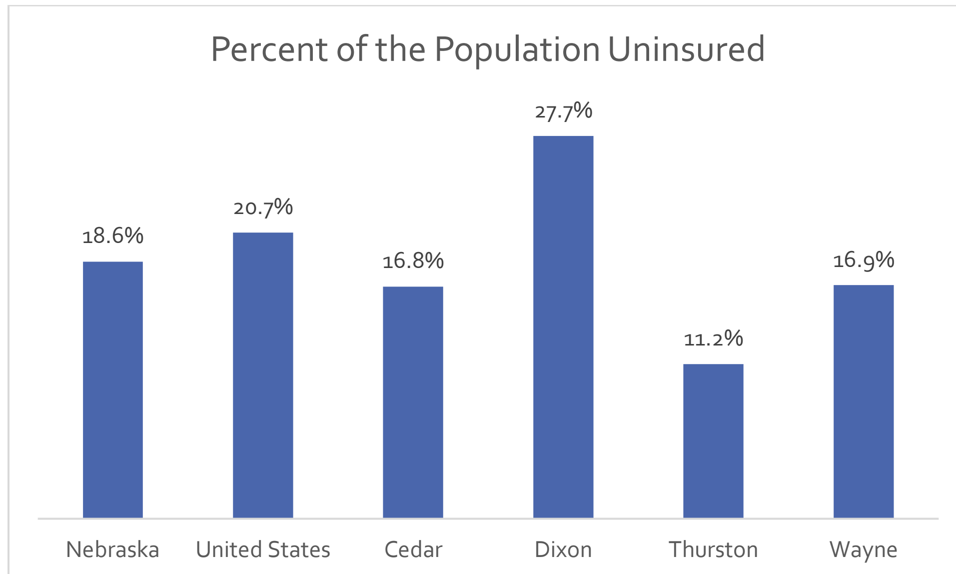


Figure 15 Uninsured as a Percentage of the Population

Uninsured populations face numerous healthcare challenges and can pose unique problems for public health efforts since costs can often lead to delaying or not seeking care which results in higher costs or other issues later. Without insurance, individuals often delay or forgo necessary medical care and preventative care, leading to increased risk of chronic disease. Often, emergency room visits become the primary point of contact, driving up costs and straining healthcare systems.

Most healthcare is provided by employers in the United States. According to the community health survey 75% had private health insurance through their employer or purchased on the exchange (n=300). Below is a chart related to the breakdown of healthcare provided by source. This shows that in the NNPHD service area, health insurance is a component of economic opportunity as well a public health concern.

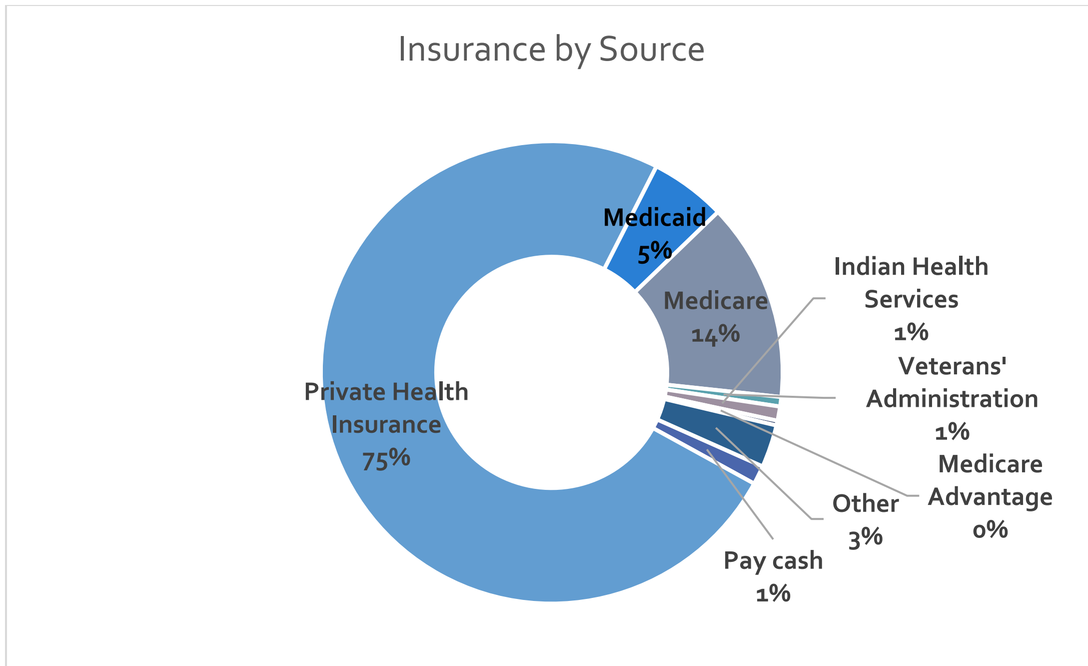


Figure 16 Insurance by Source

The lack of access due to costs contributes to higher rates of preventable illnesses, complications related to management of existing conditions and comorbidities and increases in the risk of premature death. Public health officials aim to reduce these concerns by including uninsured populations in public health initiatives, such as screenings and vaccination campaigns, and provide resources and partner with local healthcare delivery partners to alleviate health disparities within communities.

Finally, uninsured population is only one concern related to insurance and healthcare costs. As was pointed out during a Wayne community focus group that sometimes patients avoid healthcare specifically because of costs regardless of whether they have insurance, and this also reflects a lack of healthcare pricing transparency and education on how costs are calculated and shared between the patient, the provider, and the insurance company. This also aligns with the survey findings were 48 respondents or 29.4 percent of people that reported issues getting the care they needed (n=163) either didn't have sufficient insurance for their care or the provider would not accept their insurance.

> *"In the Hispanic community, they're afraid they're going to end up with a huge bill… They've started searching up for remedies and something, which is*

not good, but I think that's the main thing. Just not knowing exactly how much things cost, and especially when you go to a dentist, you walk in, you don't know like, how much that room [visit] costs."

As part of that conversation, a participant also provided an example of a community health program that referred patients, who are underinsured or not insured, find healthcare options without insurance or help them sign up for insurance.

"We have actually helped a lot of patients with a lot of different aspects… The financial assistance is great. The nice thing is, is they also have, like other colleagues and things that they can kind of refer to and help patients, maybe who are underinsured or not insured, find healthcare, or at least get them in the right direction, give them things to get them until they get to a spot where they have insurance." – Wayne, Focus Group Participant

Telehealth

Telehealth services offer a potential solution, but reliable internet access is not always available in rural areas. The geographic distance that often separate rural residents from healthcare providers, coupled with a shortage of medical professionals, create significant barriers to timely and effective care. Telehealth addresses these issues by enabling remote consultation with both primary care physicians and specialists either at a patient's home or in a clinic or hospital setting.

This virtual approach reduces the burden of long-distance travel and enhances access to vital services like mental health care and chronic disease management. On a scale of 1-10, on telehealth's ability to improve healthcare in their communities, survey respondents gave telehealth a 6.8 (n=341) with the median answer being a 5 (59 respondents, 17.3%).

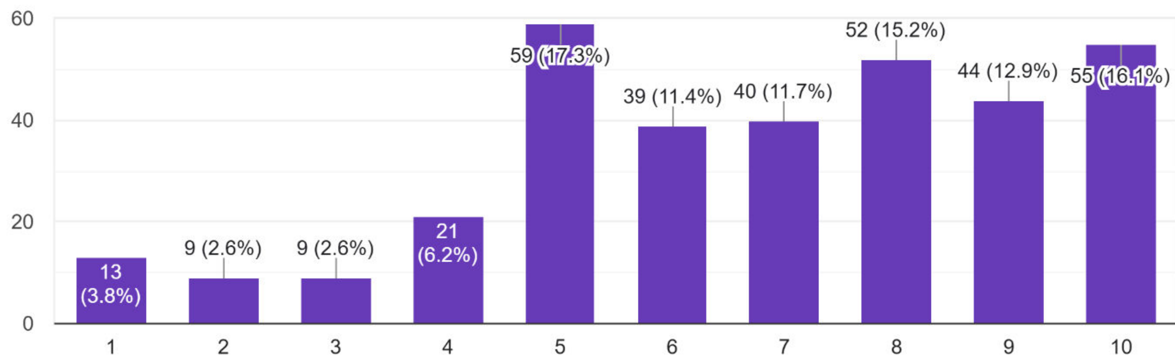


Figure 17 Telehealth as a means of improving healthcare access

Furthermore, remote patient monitoring through telehealth technologies allows for continuous tracking of healthcare data, facilitating proactive care and preventing potential complications. Respondents reacting to the statement: "I would feel more comfortable managing my chronic conditions and/or overall health with access to remote patient monitoring devices" gave a 6.3 out of 10 (n=341) with a median value of 5 (68 respondents, 19.9%).

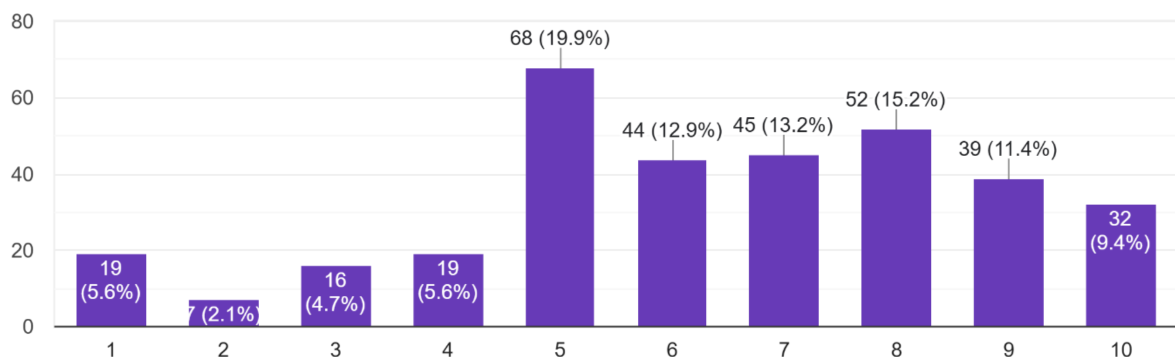


Figure 18 Comfort with Remote Patient Monitoring devices and their ability to improve health

Challenges remain with telehealth adoption namely an uncertain environment around reimbursement and costs associated with using telehealth and remote patient monitoring. Additionally, access and education around the technology is more widely available for younger residents. The survey also found that support for telehealth was greater among younger generations with the lowest support among the 55-64 and the 65+ age groups who gave telehealth a 6.33 and a 6.16 out of 10 compared to younger groups such as 18-24 year olds who gave telehealth a 7.26 on the ability of telehealth to improve healthcare in their community.

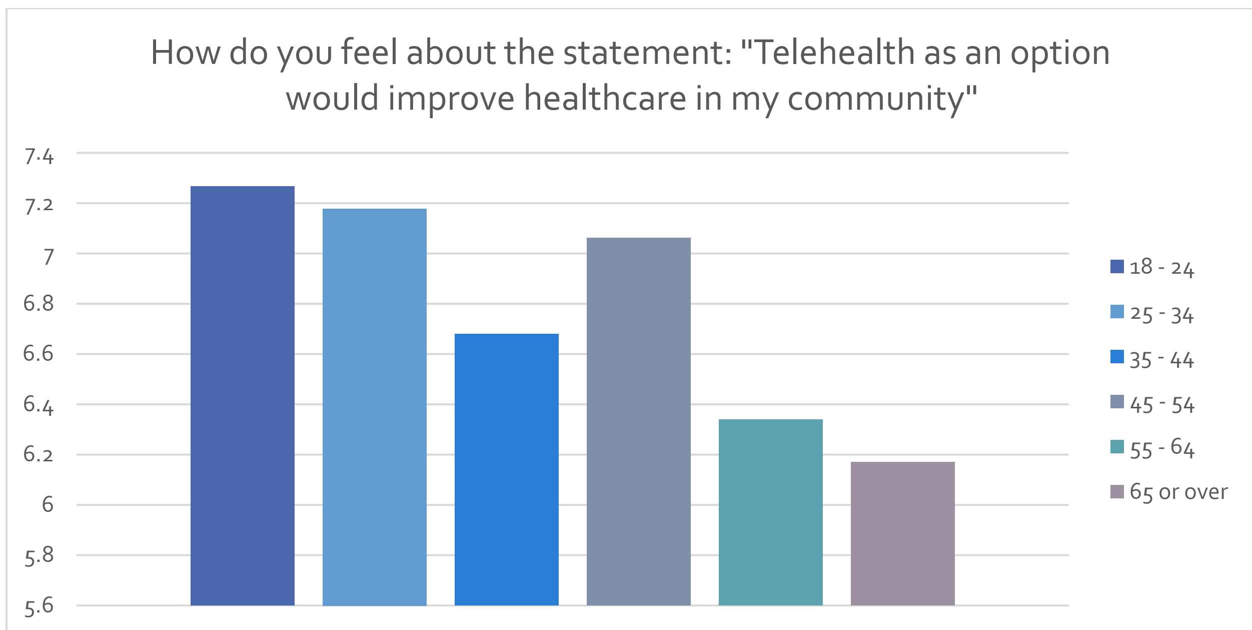


Figure 19 Age and Comfort with Telehealth

Additionally, telehealth comfort varied by county with Dixon County having the highest average score for seeing telehealth as an option that would improve healthcare in their community at 7.1. The lowest county was Cedar County at a rating of 6.42. Thurston and Wayne counties fell within this range at with telehealth comfort ratings at 6.62 and 6.95 respectively.

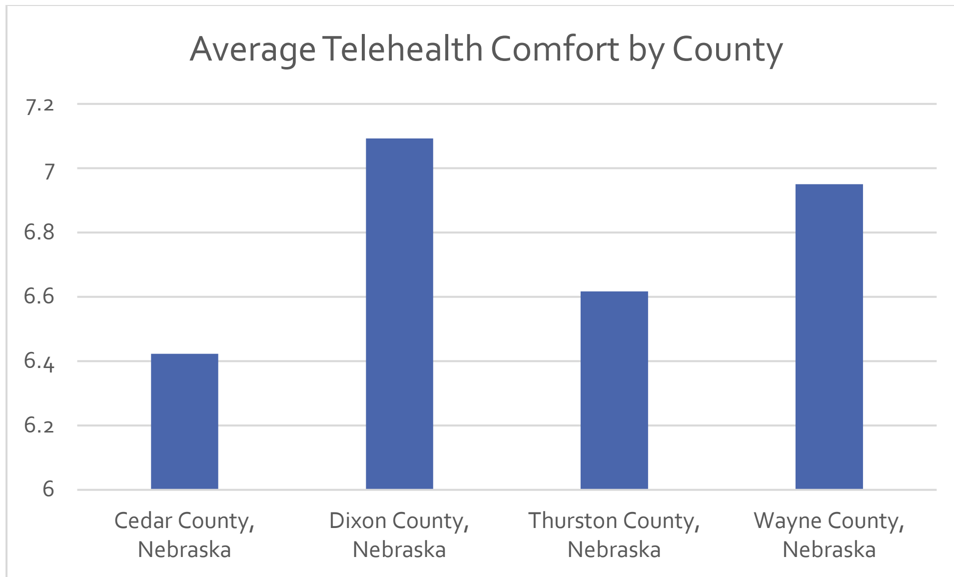


Figure 20 Average Telehealth Comfort by County

Provider Availability

According to the survey data three types of providers were the most likely to prove difficult to access in the NNPHD service area: dentists, specialists, and general practitioners. These three will get special attention here but are also discussed elsewhere in the community survey and statistical findings sections.

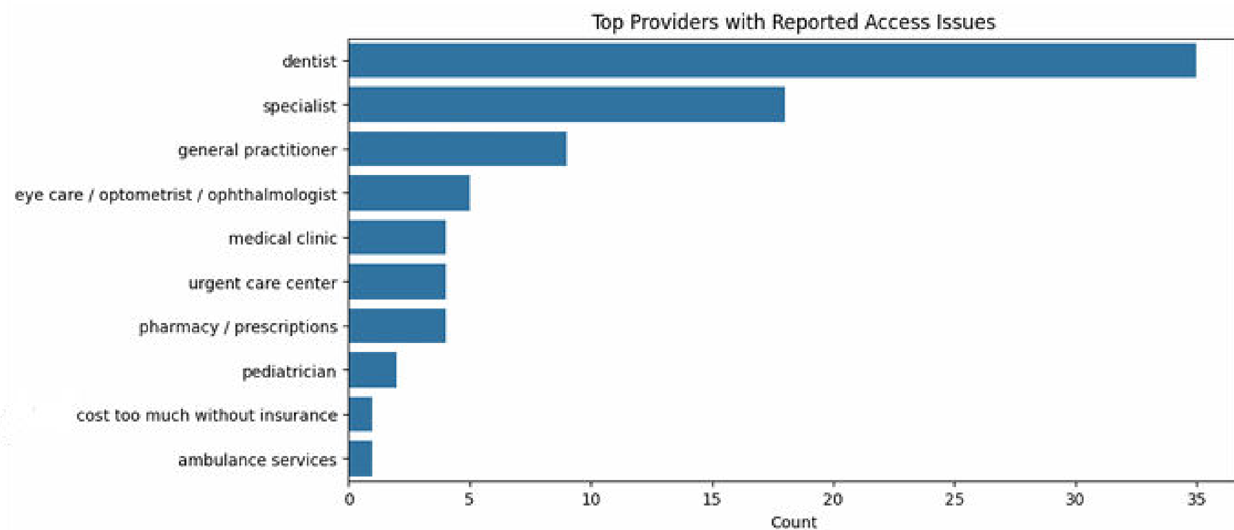


Figure 21 Top Providers with Reported Access Issues

Additionally, the challenges with long wait times and lack of provider availability were a common theme both in the community focus groups and in the survey. Nearly 21% of survey respondents reported having access issues in the last year. Furthermore, "access to health care" was the second most important component

of a healthy community cited by survey participants with 219 or 62.6% of participants listing it in their top three.

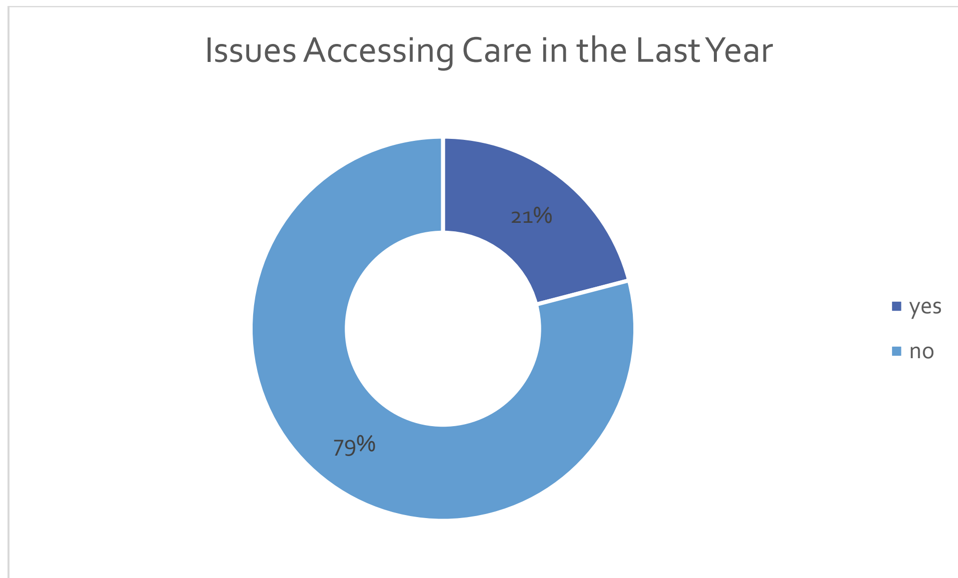


Figure 22 Issues Accessing Care in the Last Year

Respondents noted that one issue with wait times and provider retention was that "providers get overwhelmed. We have very good providers at our clinic, but most of our providers see 16 to 20 patients in a half day, which quite a lot actually." However, one respondent was quite happy with the effort to bring in specialty services via outreach clinics and saw it as a means to bridge the care gaps in their community:

> *"Access to our doctors and staff are phenomenal here... we are very blessed in a small community. I mean, when you bring in all these specialists, I've taken advantage of them, as many of us have, and it's nice not having to travel to the city to have procedures at specialty clinics"*

Healthcare access issues as reported by survey respondents was fairly equally distributed by age. With the highest number of access issues reported by the 35–44-year-old age group. This suggests that all ages were impacted provider or healthcare access issues. Access issues are also discussed in the statistical and the issues related to access in the community health findings section.

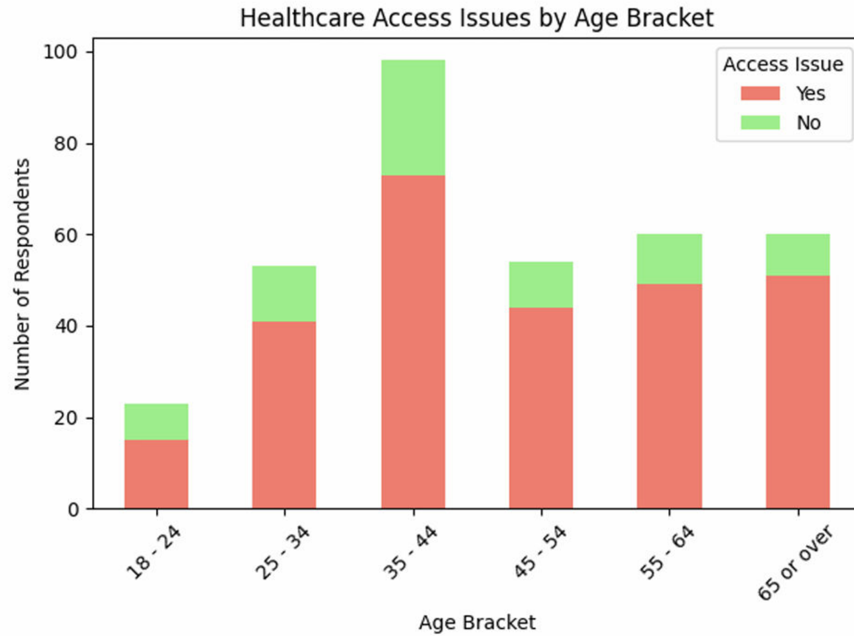


Figure 23 Healthcare Access Issues by Age Bracket

Primary care providers was one of the more common cited specialties needing greater resources. This is not particularly surprising since according to census data Cedar County only has 1 dentist per 8330 people which is over six times the state average. Dixon County is better at 5550 dentists, but this is still just over four times the state average. Thurston is below the state average with 1100 people per dentist.

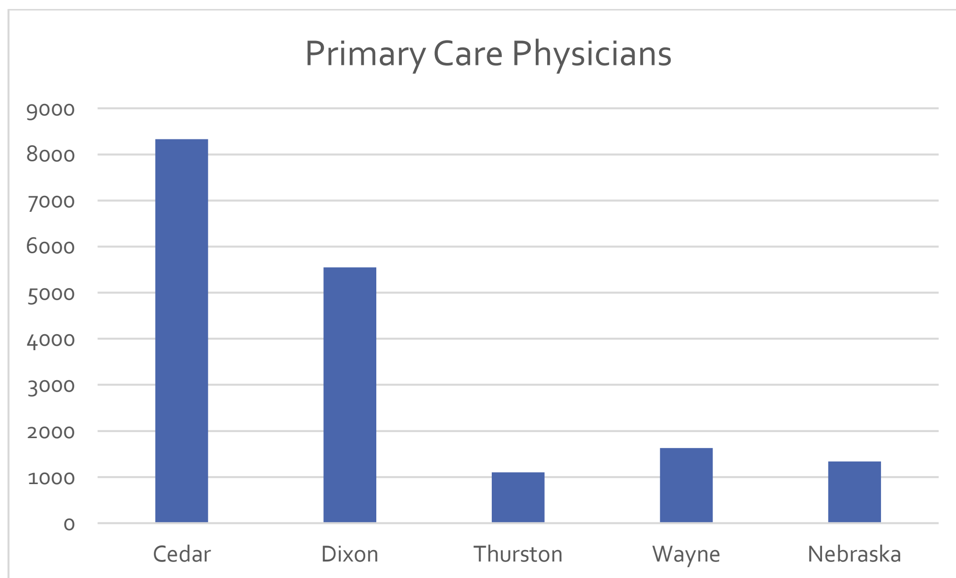


Figure 24 Primary Care Providers by County Patient Population

Likewise, as shown below, dentistry was the most often cited provider type in the community health survey as needing additional services. Dentists are relatively scarce across Nebraska with both Cedar and Dixon in line with the state but still in high need.

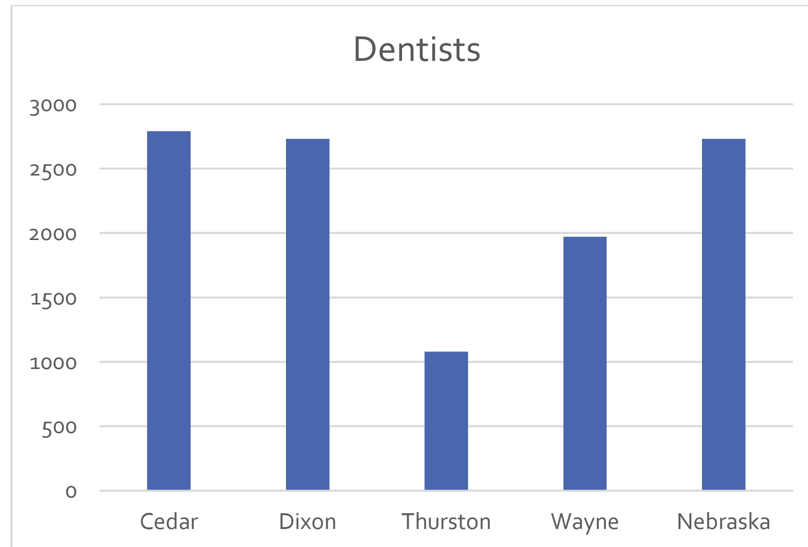


Figure 25 Dentists by County Patient Population

The most commonly referenced issues associated with dentistry in the community survey and focus groups was the uncertainty of costs and the long wait times. One survey participant noted that they called all the dentists in a 30-mile radius without finding one that would take their insurance. In the focus groups members addressed the long-wait times before they could get appointments especially for Medicare and Medicaid patients, but also mentioned the uncertainty of the cost they would pay after receiving dental care as a potential reason for postponing care.

Preventative Care

Preventative care is essential for fostering a healthy community by proactively addressing health risks before they escalate into serious conditions. Regular check-ups, screening, and vaccinations can detect potential issues early, allowing for timely intervention and management. Preventative care also plays a crucial role in mitigating the impact of environmental and behavioral risk factors. For instance, counseling on smoking cessation, healthy eating, and physical activity can counteract the negative effects of unhealthy behaviors.

The Center for Medicare and Medicaid Services estimates the percent of the population that is current on preventative health services. According to their

findings, the NNPHD ranges from 30%-40% of their population caught up on their preventative care. Dixon County has the highest percent of their population current on their preventative services at 30%. Cedar and Wayne Counties are roughly equal at 37 and 38 percent of their populations current on their preventative services respectively. Thurston County has the most room for improvement with only 30% of their population current on their preventative health services.

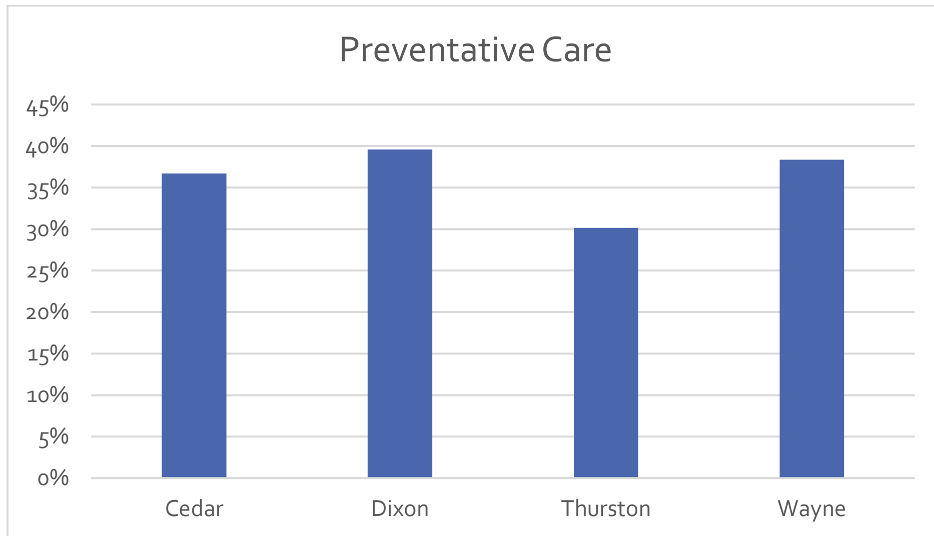


Figure 26 Percent of Population Current on Preventative Health Services

By prioritizing preventative care, communities can reduce healthcare costs, improve overall health outcomes, and enhance the quality of life for all residents, while directly addressing the root causes of many health problems tied to environmental and behavioral factors. This was noted by a few focus group participants one of whom stated: "The cost of healthcare only gets worse if you don't take care of it early. It's important to address health issues proactively rather than waiting until they become serious problems."

Vaccinations

Vaccinations are a cornerstone of public health and one of the major successes of the United States public health infrastructure both in preventing and eliminating the prevalence of diseases such as measles, polio, and diphtheria, and more recently in curbing the death and spread of Covid-19. By stimulating the immune system to develop antibodies, vaccines confer immunity, safeguarding individuals and communities from potentially devastating illnesses. High

vaccination rates contribute to the collective immunity of the community, which protects vulnerable populations, particularly the young or elderly, who cannot be vaccinated, like those with compromised immune systems.

49% of Nebraska are estimated to have received the flu vaccine in 2024. Wayne County was the only county to perform better than the state average with 57% of the population getting the flu vaccine. Cedar and Dixon Counties both under performed with 36% and 45% of their populations getting the flu vaccine. Thurston County has the lowest flu vaccination percentage with only 16% of their population getting vaccinated.

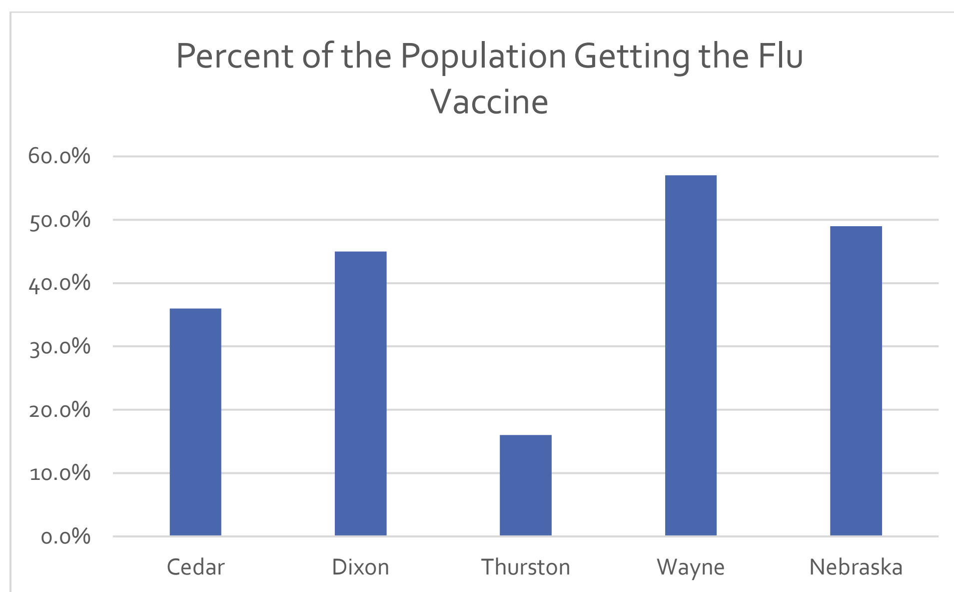


Figure 27 Percent of Population Getting the Flu Vaccine by County

Vaccinations have dramatically reduced the incidence of disease and saved countless lives while improving the overall population health and reducing costs related to prolonged and widespread disease. Prompt vaccination in line with the schedule guidelines and continued adherence to vaccination schedules is vital for maintain these gains and preventing the resurgence of preventable disease.

Lipid Testing

Encouraging Lipid testing, the measuring cholesterol and triglyceride levels in the blood, as a public health initiative can help identify individuals at risk for cardiovascular disease, a leading cause of morbidity and mortality. By detecting abnormal lipid levels, healthcare providers can implement preventative

measures, such as lifestyle modifications, medication, or both, to reduce the risk of heart attacks and strokes.

Widespread lipid testing programs, combined with public health campaigns promoting healthy lifestyles, contribute to a reduction in cardiovascular disease prevalence and related complications. Early identification allows for timely intervention, mitigating the long-term burden on healthcare systems and improving overall population health. Additionally, monitoring lipid levels helps track the effectiveness of public health initiatives aimed at promoting cardiovascular health, providing valuable data for policy development and resource allocation.

Cancer Screenings

Cancer screenings are crucial for early detection, which significantly improves treatment outcomes and survival rates. By identifying cancers at their earliest stages, when they are often most treatable, screenings can prevent the disease from progressing and spreading. Regular screenings allow for timely interventions, which are more effective when the cancer is localized.

Northeast Nebraska Public Health Department service area county level cancer screenings largely out-perform the state average. This is particularly true for cervical cancer with all four counties outperforming the state with the highest being Cedar county at 82.6% of the population participating in cervical cancer screenings, and the lowest being Thurston at 78.7%.

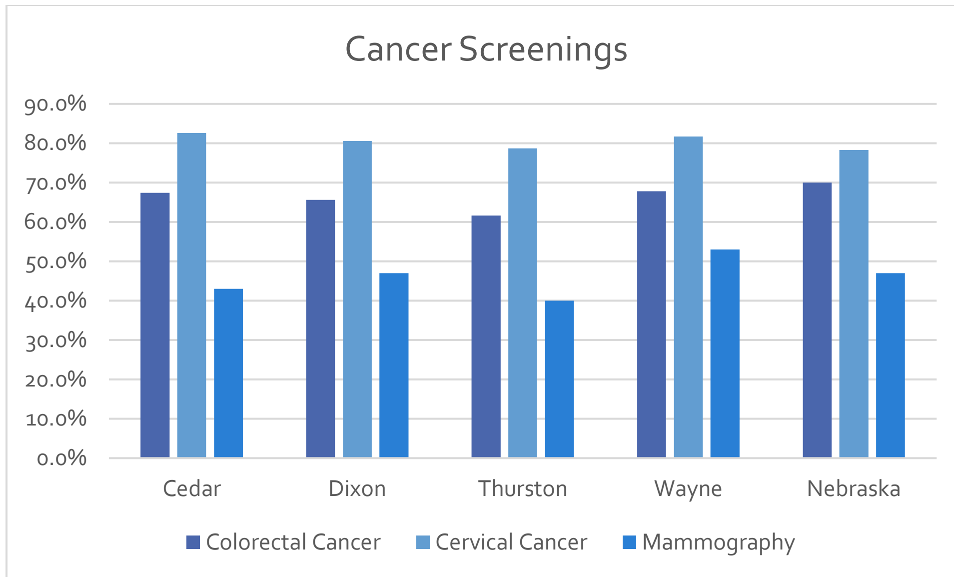


Figure 28 Cancer Screenings by County

The area with the most room for improvement was Colorectal Cancer where all four counties fell below the state average. Cedar and Wayne counties had the highest colorectal cancer screening rates at 67.4% and 67.8% respectively. Dixon was not far behind at 67.8% of the population getting colorectal cancer screenings; however, Thurston has the lowest rates at 61.6%.

Survey Results Summary and Statistical Analysis

The Community Health Assessment survey was drafted with questions based on the MAPP 2.0 recommendations with topics tailored to addressing the unique concerns of the NNPHD service area and the concerns of the core team.

This Section presents a comprehensive statistical analysis of the data collected from the community health survey. The survey, designed to capture the nuanced health needs and perceptions of the NNPHD service area, provides a rich dataset for understanding the prevalence, distribution, and determinants of key health indicators within the population. This section also employs rigorous statistical methods and aims to move beyond descriptive summaries to reveal meaningful patters and relationships that can inform public health interventions.

This approach prioritizes both descriptive and inferential statistics to paint a detailed picture of the communities' health landscape. Descriptive statistics, including text or mention frequencies, means, medians, and standard deviations, will characterize the distribution of variables related to demographics, access to care, perceived health status, and perceptions of telehealth. Inferential statistics, such as chi-square tests, t-tests, regression analyses, and K-means clustering, will be utilized to explore associations between these variables and identify statistically significant and directional inferences across populations subgroups. This analysis aims to empower stakeholders with the insights necessary to discern potential disparities and risk factors and provide a data-driven foundation for strategic planning and resource allocation.

Community Health Themes and Opportunities

The first four questions of the community health survey asked participants to provide insights into their perceptions on health priorities and needs in their communities both positive and negative. This is the foundation of understanding what residents see as essential for a healthy community. They are designed to elicit a comprehensive understanding of the topics, themes, success, and opportunities in their community's health landscape.

Question 1: What do you think are the three most important factors for a "Healthy Community"?

The below bar chart ranks responses based on frequency of response. The top responses are: good place to raise children, access to health care, low crime/safe neighborhoods, good schools, and clean environment. 219 respondents mentioned access to health care as one of the most important factors indicating that people view timely and affordable medical care as the backbone of a healthy community.

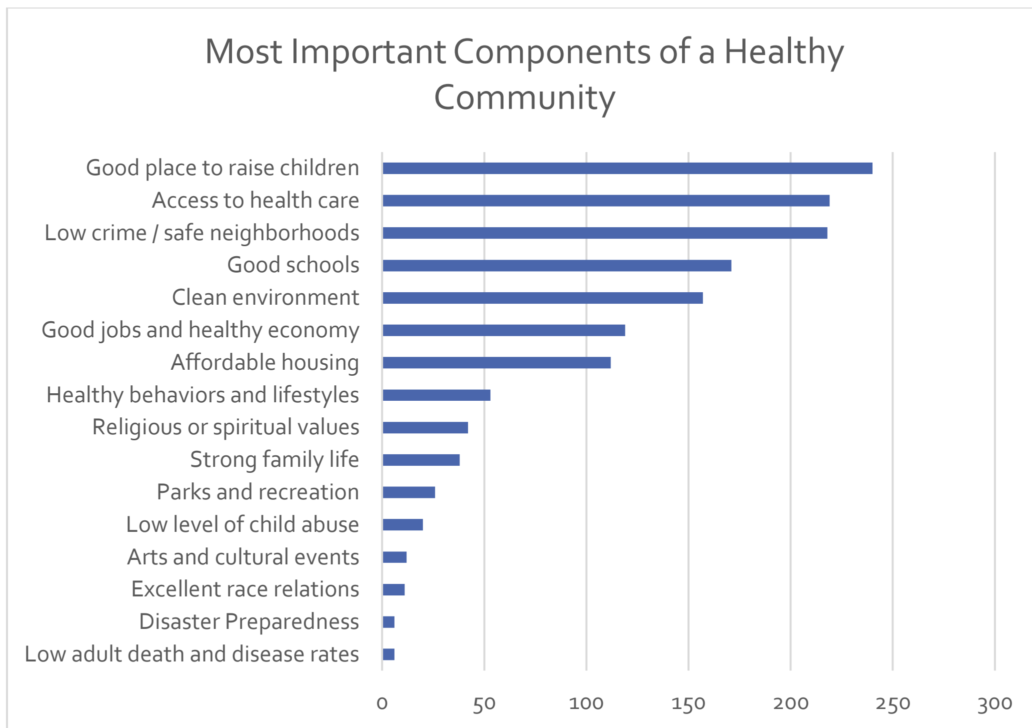
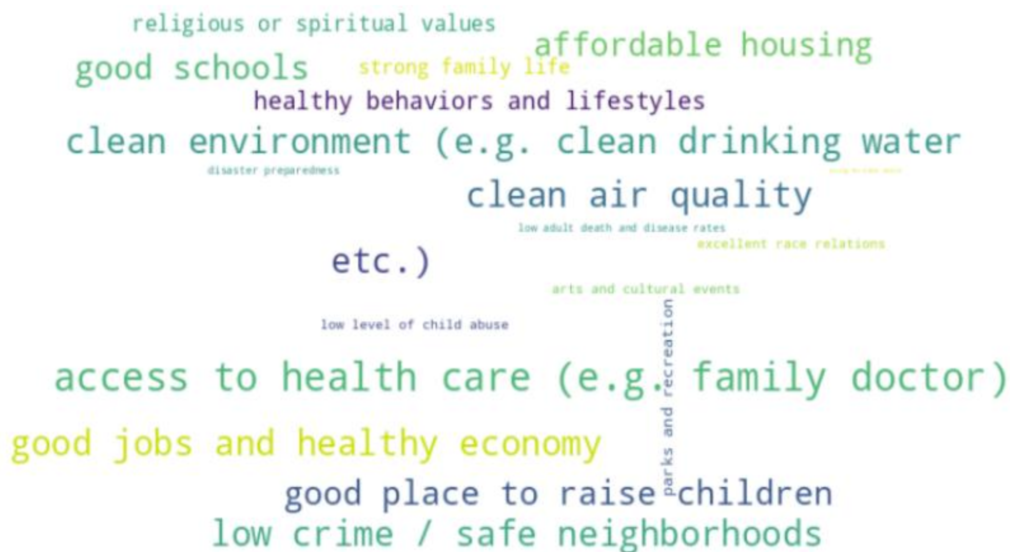


Figure 29 Most Important Components of a Healthy Community

Another method of visualizing the feedback from the surveys is a word cloud which emphasizes the terms based on how frequently they were mentioned. Larger and bolder words had higher frequencies. The largest and most central terms a line with the top chart and also reflect that the other top concerns, reflect the importance of social determinants of health and the importance the population puts on allowing for health and safe living for their families



particularly their children. This suggests a blend of basic health services, environmental quality, and personal safety as core components of a healthy community. Economic stability, education, and housing follow closely, highlighting interconnected social determinants of health.

Question 2: What do you think are the three most important "health problems" in your community?

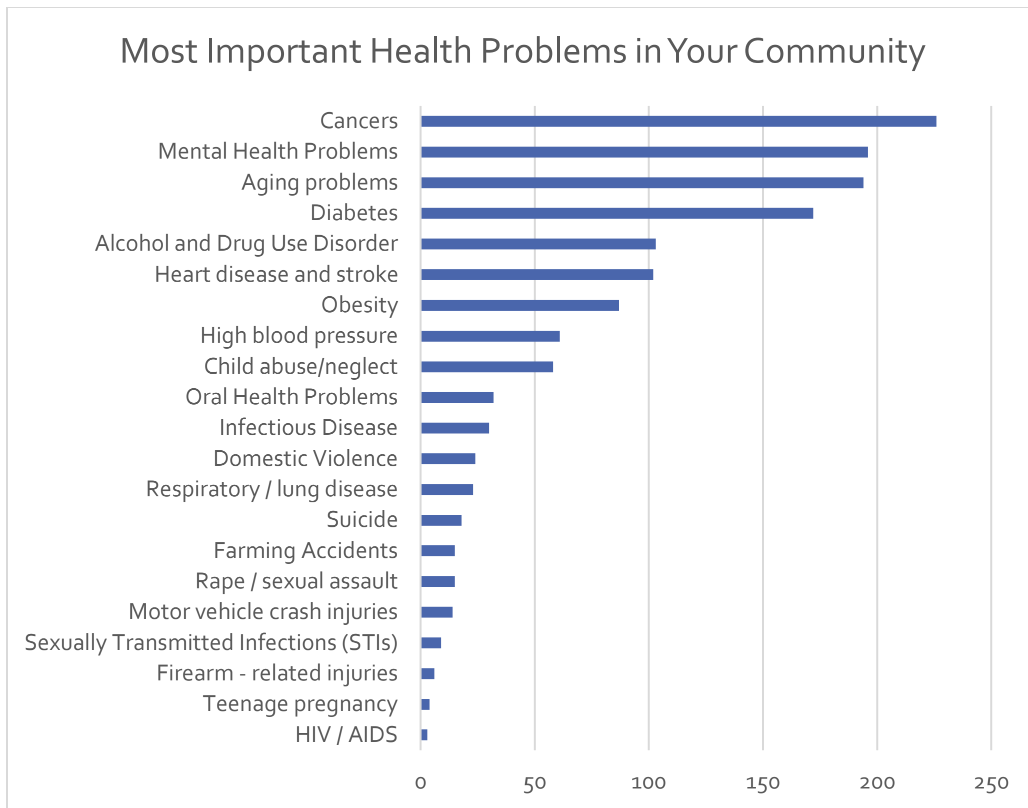


Figure 30 Most Important Health Problems in Community

Respondents were asked to assess the most important health problems facing their community. Cancer was the topmost cited issue (226, n=361) showing persistent concern about high prevalence and fatality of different types of cancer. Second was Mental Health Problems (196, n=361), indicating a strong concern for psychological well-being, stress, anxiety, and related disorders. Concerns related to aging and Diabetes also reflect worries about chronic disease management, lifestyle factors, and long-term health impacts.

Question 3: Which of the following services are the top 3 most needing improvement in your community?

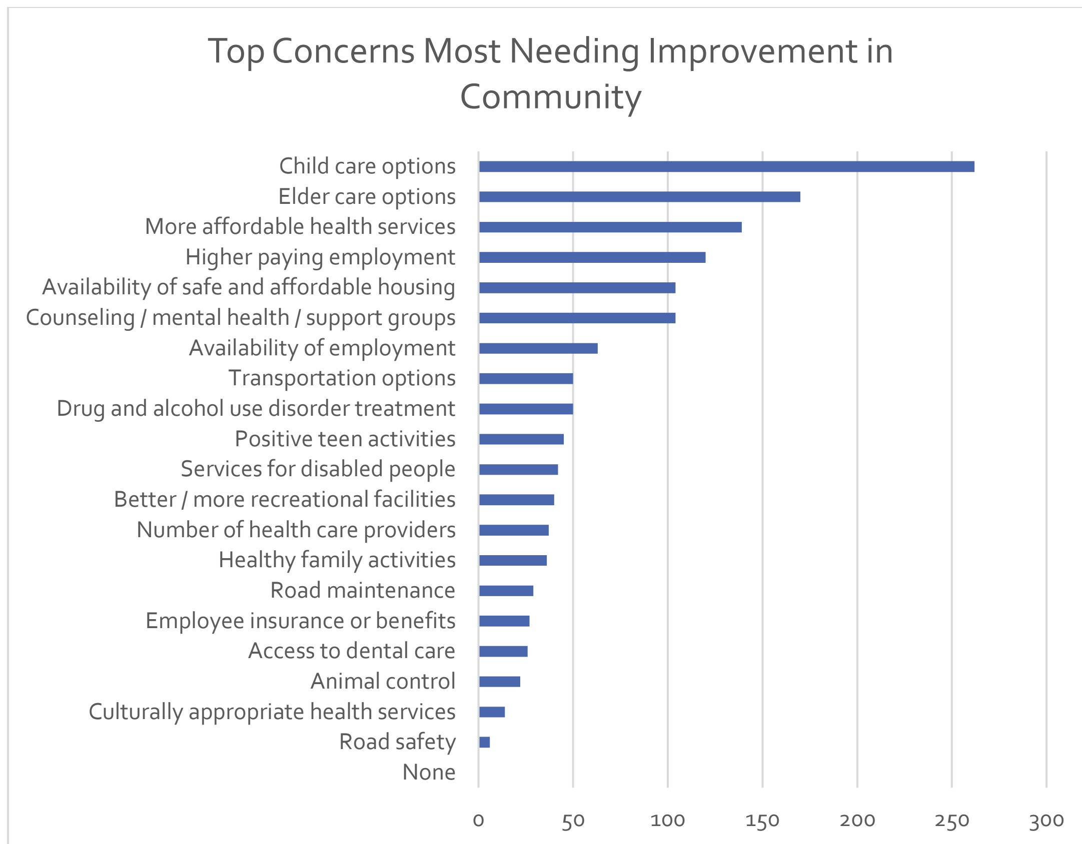
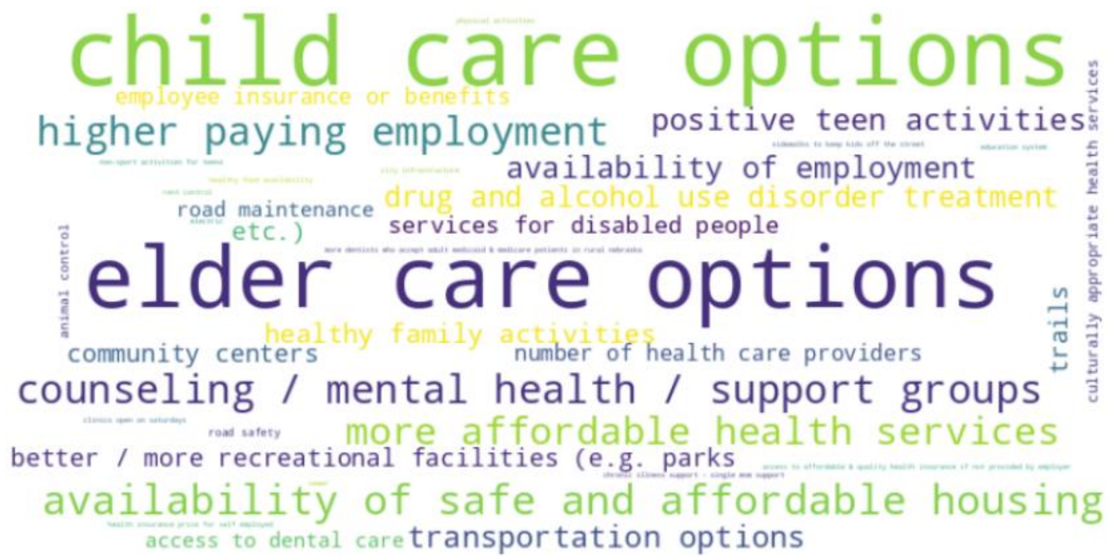


Figure 31 Top Concerns Most Needing Improvement in Community

This question aims to highlight areas where additional services or programs are perceived by the community as necessary to address the health concerns of the area. Care options both for children (262 n=350) and elders (170 n=350) were overwhelming the top responses. This reflects the high costs and long-wait times or lack of availability for long-term care facilities and day cares that are causing issues for people in the community.

Economic concerns both directly related to costs of health care (139, n=350) and the economy more generally such as higher paying employment (120, n=350), availability of safe and affordable housing (104, n=350) came in as the next most important areas needing improvement in the community.



The word cloud for question 3 also reflects the more diverse and well distributed nature of the concerns that are impacting the community. This reflects the geographic and demographically diverse NNPHD areas and also poses challenges in allocating resources and building scalable solutions for the myriad of concerns in the different communities.

Question 4: What are the three most important conditions or health concerns needing to be addressed in your community?

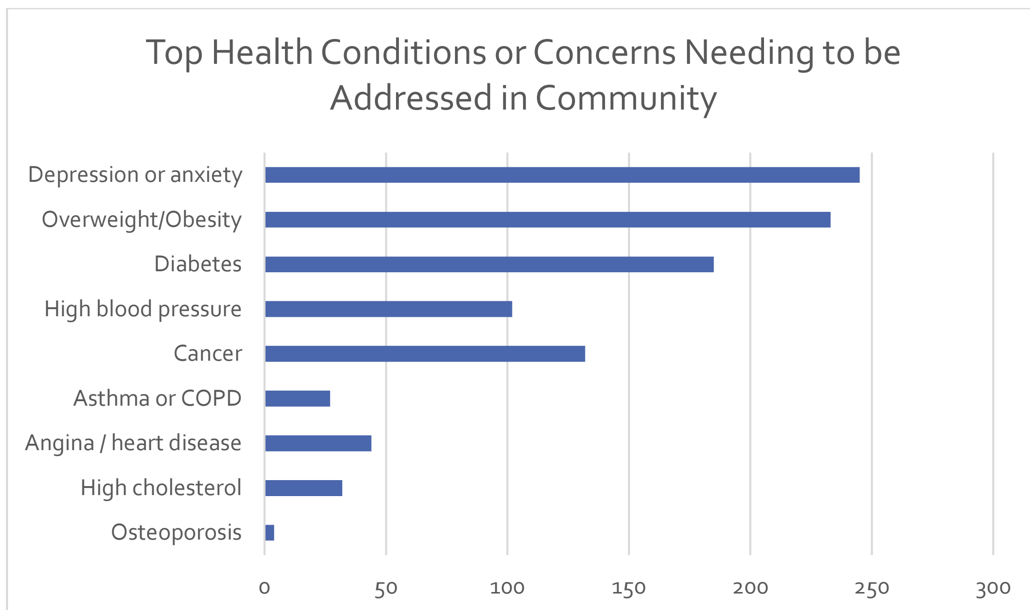


Figure 32 Top Health Conditions or Concerns Needing to be Addressed in Community

Depression and anxiety were the leading concerns with 245 mentions (n=348) underlining the high perceived prevalence of mental health issues and the urgent need for expanded support services, de-stigmatization, and access to care. Overweight and Obesity is a close second, suggesting the widespread awareness of how lifestyle and nutrition are impacting community health. Finally chronic conditions such as Diabetes, COPD and heart disease are also prominently mentioned as concerns that many in the population face.

Issues Related to Healthcare Access

According to the community health survey, access to healthcare issues were relatively consistent across the primary service area at just below 20% of respondents in Cedar, Wayne and Thurston counties reporting difficulty accessing healthcare in the last year. Dixon was the only outlier with 31.58% of respondents in that county reporting issues accessing care in the last 12 months.

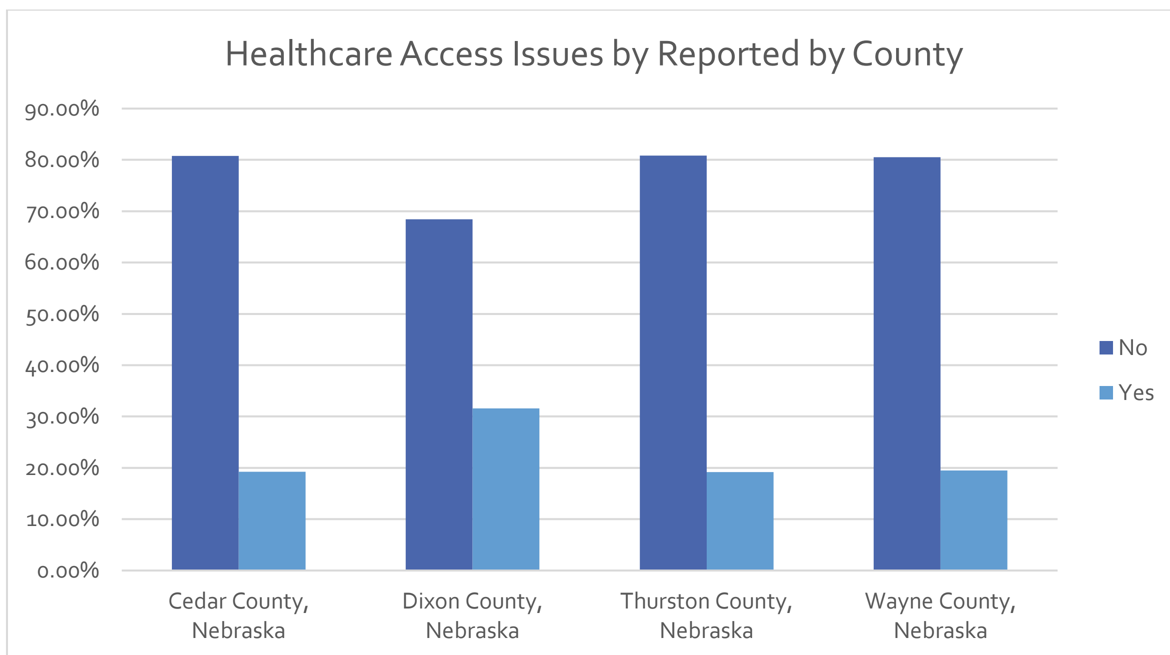


Figure 33 Reported Healthcare Access Issues by County

Furthermore, he below bar chart shows that dentists are the most commonly reported provider type with access issues followed by specialists and general practitioners meaning significant barriers in access both dental and specialized medical care. Fewer respondents reported difficulties with urgent care, clinics or pharmacies, so these services are relatively more accessible. This shows the need

to improve access to routine and specialized healthcare services especially dental care which may be particularly needed for under covered community members.

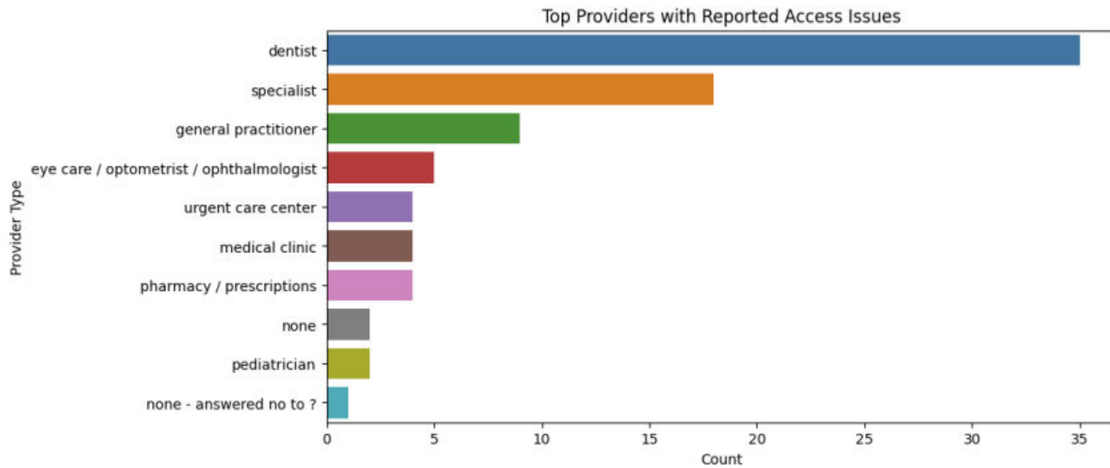


Figure 34 Top Providers with Reported Access Issues

Access issues were quoted numerous times both in the survey and in the community focus groups. This word cloud shows that insurance-related issues are the most common barriers to healthcare access, with terms like "insurance", "cover", "co-pay", deductible", and "share" prominently shown. Long wait times and difficulty getting needed care or appoints are also significant concerns, showing challenges in both affordability and availability. Words like "distance" and "needed" show the logistical hurdles that are particularly prevalent in the rural and sparsely populated communities in the NNPHD service areas.

Figure 35 Word Cloud of Barriers to Healthcare Access

Below is a chart of access issues ranked by ethnicity. With Native American and Hispanic populations reporting a disproportionately high levels of experiencing access issues. It is worth noting that the Native American population surveyed was relatively low and may not be representative of the overall population.

Figure 36 Percentage of Respondents with Access Issues by Ethnicity

Additionally, as discussed previously, Hispanic/Latino population reported higher levels of paying cash for healthcare and concerns over costs related to seeking care. Costs of care are a significant barrier as is explained in the chart below with

40% of respondents making less than $25,000 reporting issues with accessing care. This is a statistically significant finding (p=0.0041) as will be discussed further in the statistical findings sub-section.

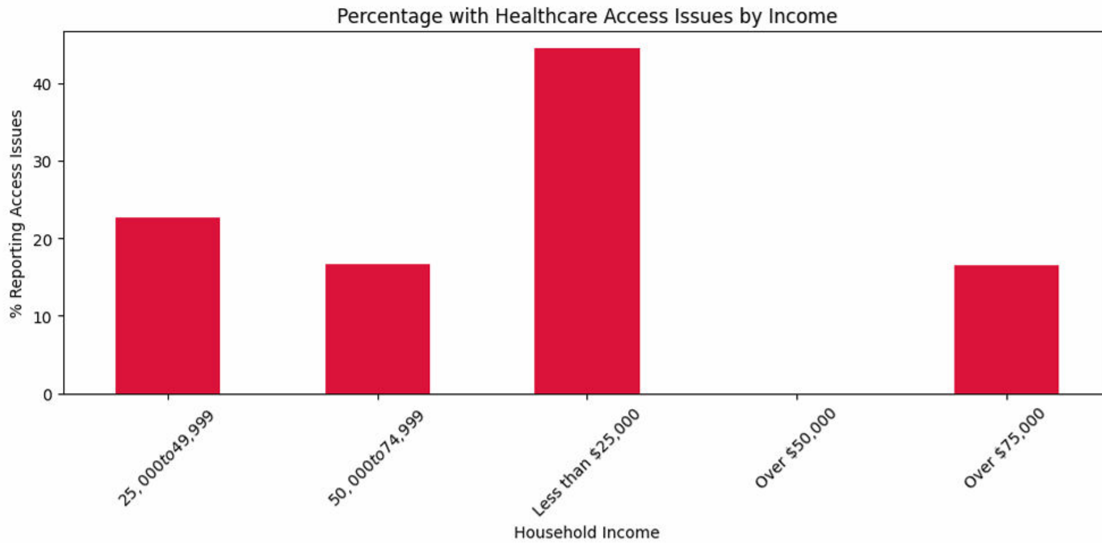


Figure 37 Percentage with Healthcare Access Issues by Income

Community Health Ratings

Question 6: How would you rate your community as a "healthy community"?

As shared above, the respondents do have concerns and are generally engaged in the betterment of the health care and health environment of their communities. However, as the histogram below shows the respondents are moderately happy the with the health outcomes in their community most members rating their overall community health between 6 and 7. The median score was 7 and the average score is 6.49 (n=345). The distribution is approximately normal with a slight skew to the right with a higher positive perception.

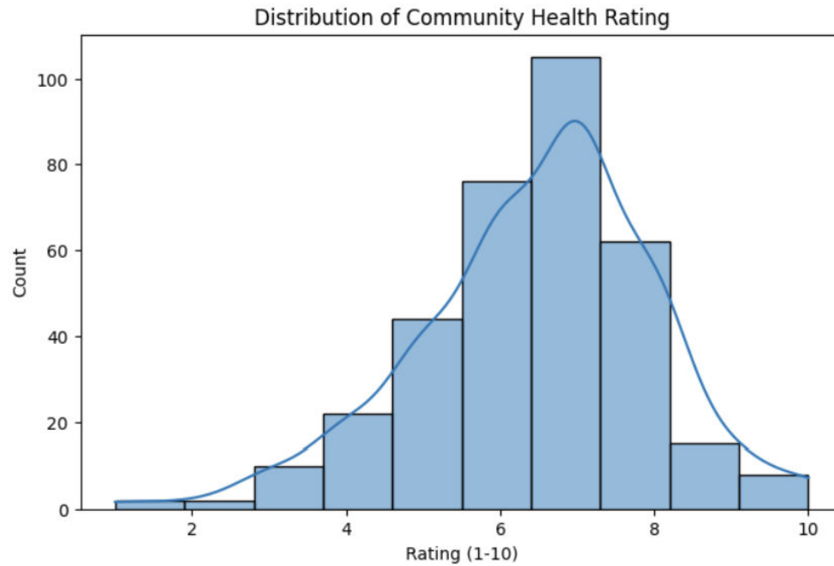


Figure 38 Distribution of Community Health Rating

Below is another view with the average community health rating broken out by ethnicity and income. As is shown below, the largest demographic group, White/Caucasians actually have the lowest perception of community health whereas Hispanic/Latino, the next largest demographic group has a .5-1 point higher rating.

This visualization, titled "Average Community Health Rating by Ethnicity & Income," provides a clear look at how different demographic groups perceive the health of their communities. The data, presented with a color-coded scale from 5.0 (low) to 8.0 (high), shows that perceptions of community health vary significantly across ethnic and racial groups, with no single trend tied to income level. For example, the Hispanic/Latino community consistently reports some of the highest ratings across all income brackets, with scores ranging from 7.1 to 7.5. Similarly, the African American/Black and Asian/Pacific Islander groups also report high ratings in certain income brackets, with the highest score on the chart, 8.0, belonging to the African American/Black group.

In contrast, the White/Caucasian community generally reports lower ratings, typically in the 6.0-6.5 range. The lowest scores on the chart, at 5.0, are reported by the Native American and Native/Caucasian groups. This suggests that while income is a factor, an individual's ethnic or racial background appears to be a stronger indicator of their perceived community health, with some communities consistently reporting a more positive view than others.

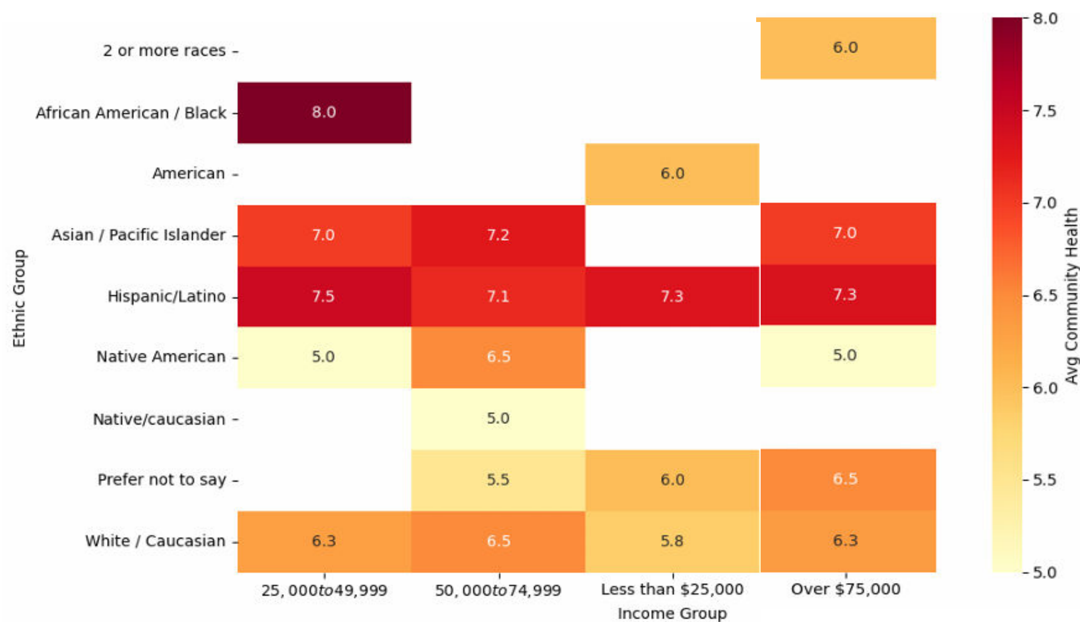


Figure 39 Average Community Health Rating by Ethnicity & Income

Question 7: How would you rate your own personal health?

The majority of respondents rated their personal health between 7 and 8 with a generally positive self-perception of their health. The distribution is slightly right skewed showing fewer people with lower personal health ratings. The median response was 7 with an average score of 7.01. This and the distribution shows that a generally individuals had a more positive view of their personal health than the health of the community as a whole.

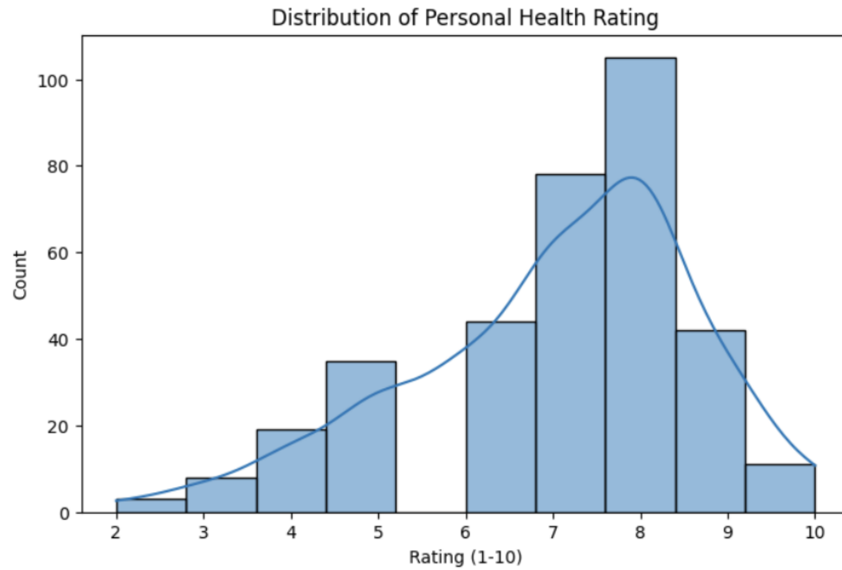
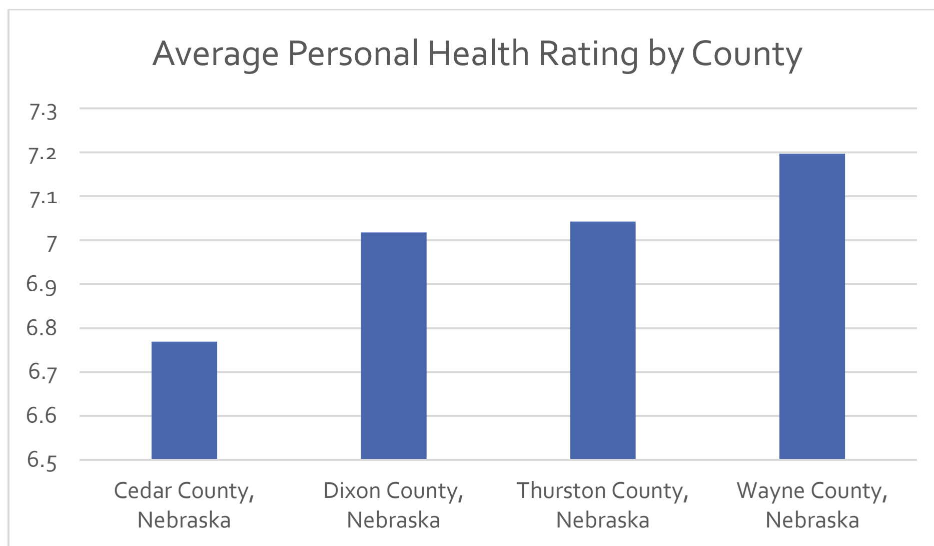


Figure 40 Distribution of Perception of Personal Health

Personal health rating was consistent across the primary service counties with a tight range from Cedar County's rating of 6.77 and Wayne county's rating of 7.2. Dixon and Thurston fell squarely in the middle of the half point difference at 7.02 and 7.04 respectively.



Another view of the confluence between community and personal health is through the lens of the aging population particularly given the prevalence of "concerns related to aging" sited in the community health concerns from questions 1-4 in the survey. When community and personal health is broken down by the respondent reported age brackets, we do not see a general decline in the perception of the community health or even more surprising in their rating

of their personal health. This seems to reflect that while there are specific concerns such as long-term care facilities and specific conditions related to aging, most respondents viewed both their personal and the community health outcomes as generally positive.

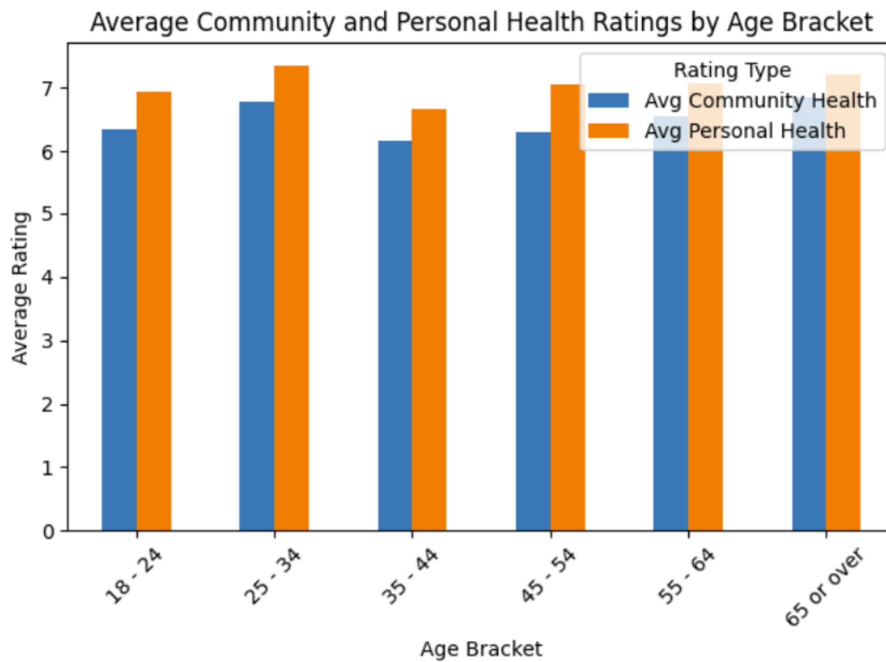


Figure 41 Average Community and Personal Health Ratings by Age Bracket

This is further backed up by the perception of the healthcare provided in the community which is generally positive. The median score from respondents on a scale of 1-10 for how they saw the healthcare in their community was an 8 with an average score of 7.42 (n=346) which was among the highest ratings in the questions subset.

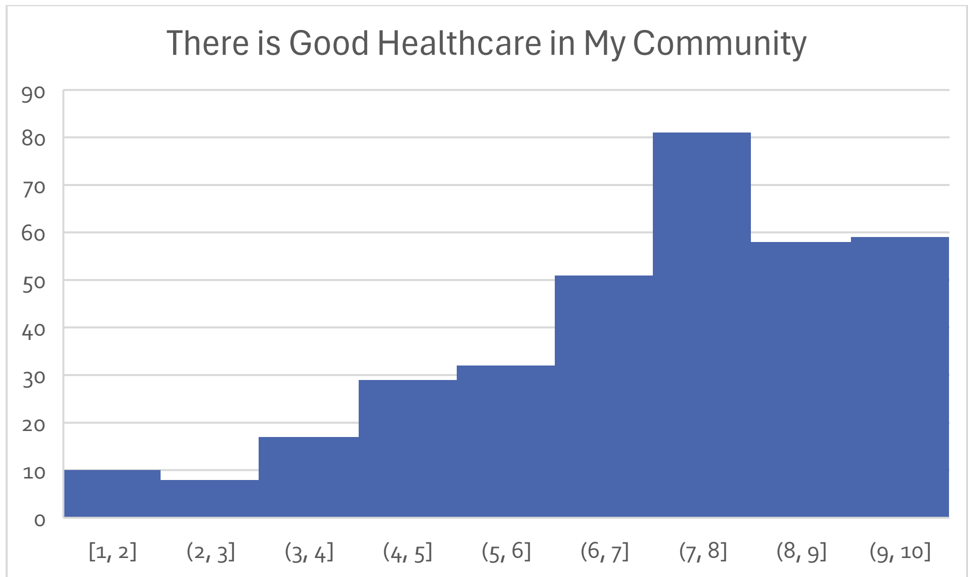


Figure 42 Average Community and Personal Health Ratings by Age Bracket

Across communities the healthcare delivery was generally viewed positively; however, some communities had a higher rating of the healthcare offered in their community than others. Specifically, Thurston County had the highest perception of their healthcare with an average rating of 8.38. Wayne had the second highest perception of their healthcare at 7.56 followed closely by Cedar and Dixon counties at 7.2 and 6.95 respectively.

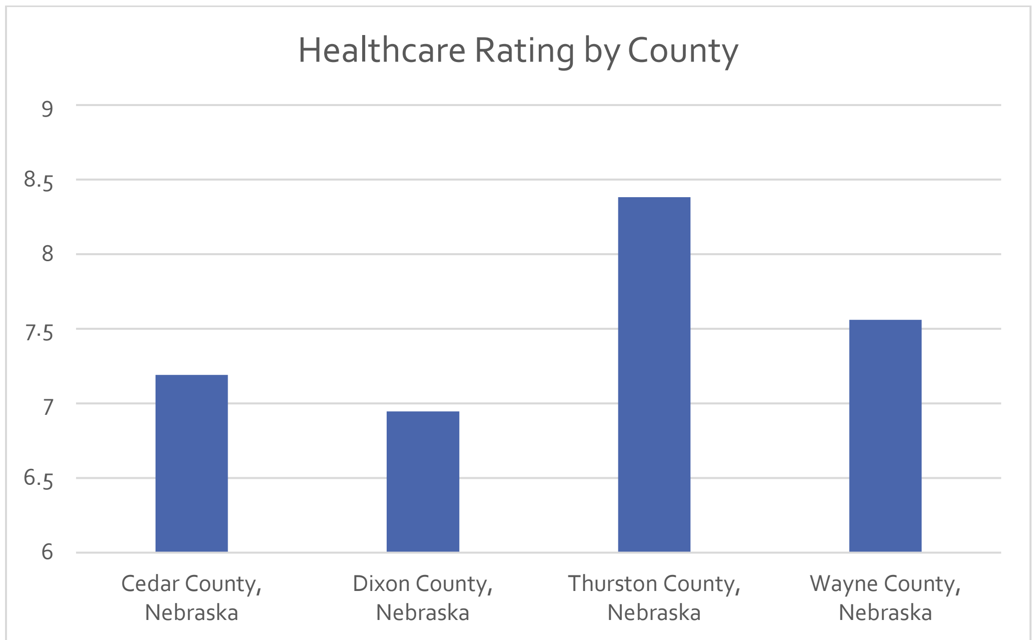


Figure 43 Healthcare Rating by County

Community Safety Rating by Age

Community Safety repeatedly came up in the first four questions laying the foundation of the important aspects of a healthy community as perceived by respondents. This is further backed up by more direct questions related to safety such as question 10 “My community is a good place to grow old” and question 11 “My community is a safe place to live”.

Question 10: How do you feel about this statement: “My community is a good place to grow old”?

The sentiment that one can remain and grow old in their community is deeply intertwined with perceptions of health and community safety. Feelings of security and health stability are fundamental for older adults’ well-being and their ability to age in place comfortably. A community perceived as safe fosters trust and encourages active participation, contributing to a sense of belonging, buy-in and overall quality of life for its senior residents.

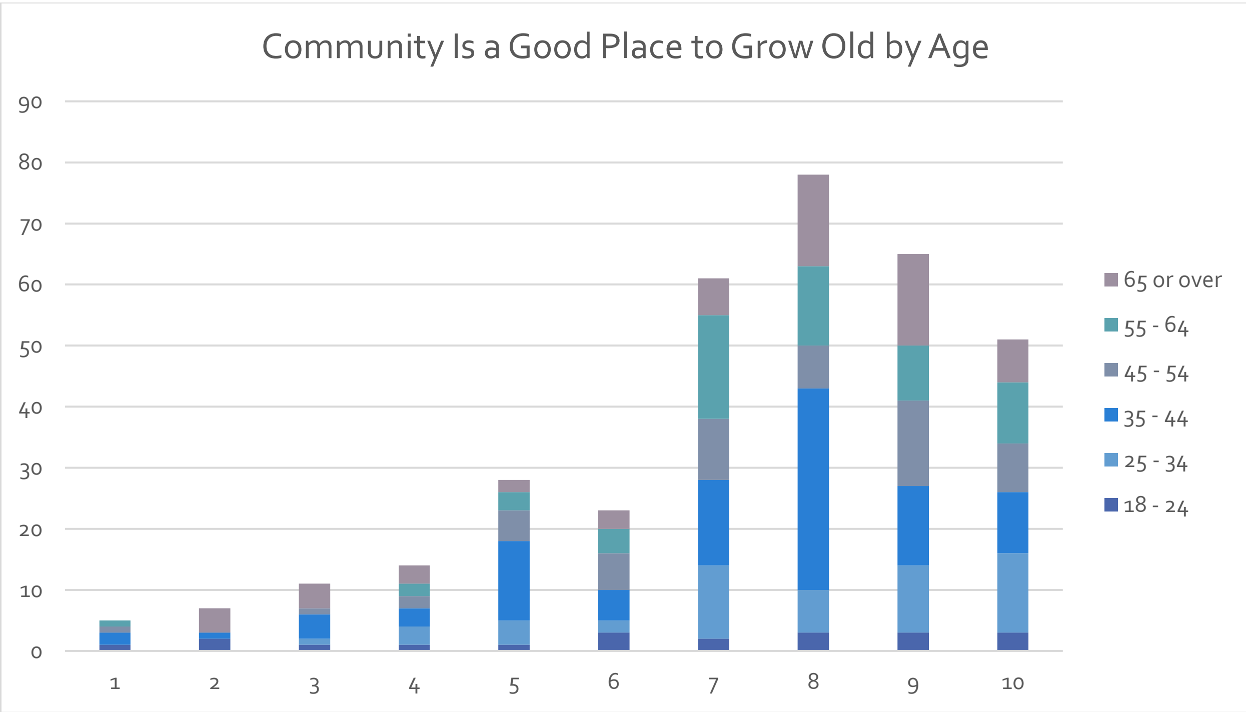


Figure 44 Community Is a Good Place to Grow old by Age

Trends among all age groups are positive in their perception of the community as a good place to grow old with a median rating of 8 and an average rating of 7.39 (n=346). This was also true for older survey participants with ages 55-64 having

an average rating of 7.66 and participants 65 plus having an average rating of 7.23 with both groups having a median score of 8.

Question 11: How do you feel about this statement: "My community is a safe place to live"?

The below analysis makes use of a box and whisker plot which is useful for comparing how different groups view the question of safety in their community as you can quickly see which group has numbers that are more spread out or where the typical numbers fall in relation to the average response. The box in the middle shows you where the middle half of the data is located (50 % of respondents are within the colored box). The line inside the box is the median, which is the exact middle number of all the data. The "whiskers" sticking out from the box show the rest of the data, going all the way to the lowest and highest numbers. These "whiskers" therefore show the other 50% of responses with the min and max scores being shown by the outlier lines.

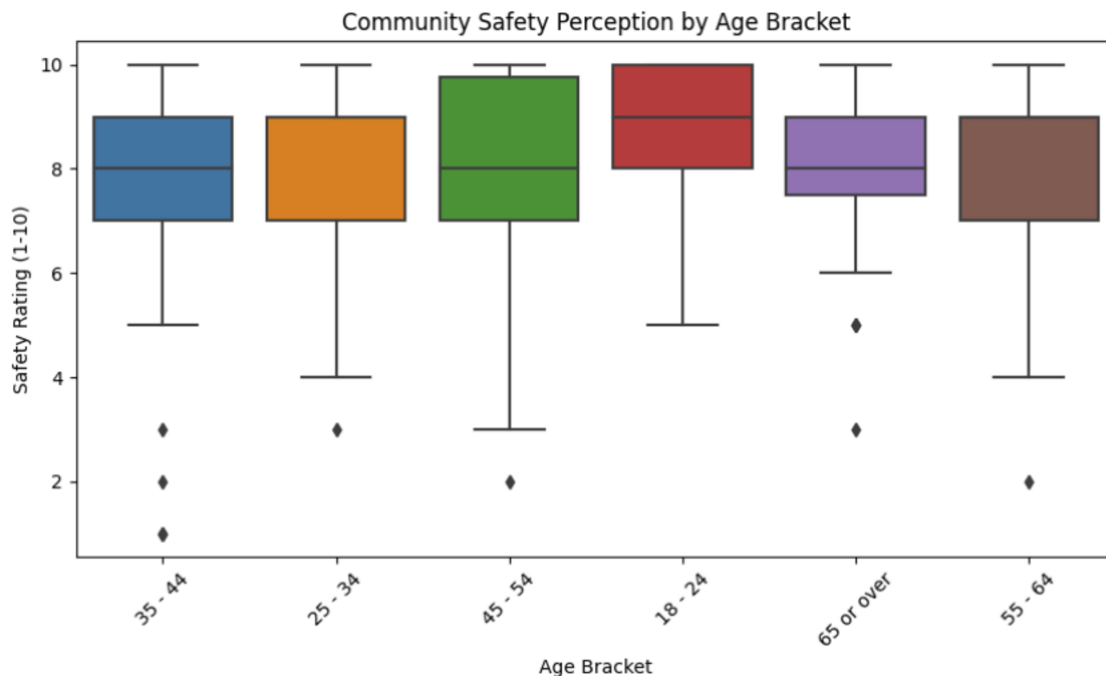


Figure 45 Community Safety Perception by Age Bracket

The above boxplot shows that all age groups generally perceive their community as safe with median safety ratings between 8 and 9. The 18-24 age group has the highest overall ratings and the tightest spread indicating strong and consistent feelings of safety. While other age groups, particularly the older 45-54 and 55-64

age groups, show slightly more variability and outliers although are also generally positive.

The overall trend reflects a positive perception of community safety across all ages and is reflected in the distribution of answers. Community safety had the highest perception of all the ratings tracked with a median score of 8 and an average rating of 7.99 (n=341).

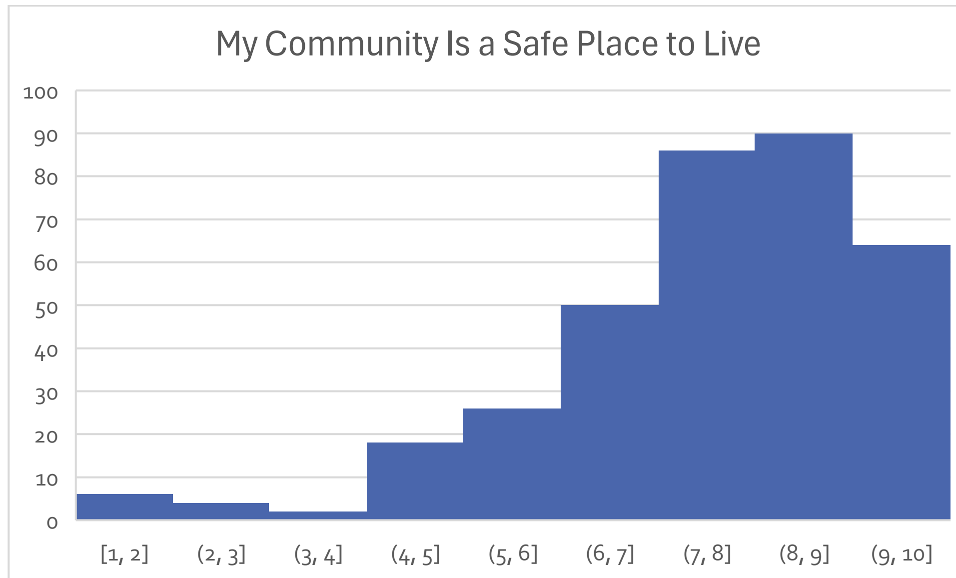


Figure 46 Distribution of Perception of Safety in Community

Perception of Telehealth

As will be discussed in the correlations and statistical findings section. Support and comfort with telehealth and remote patient monitoring was closely tied with the age of the respondent. Below is a box chart that shows the support grouped by age.

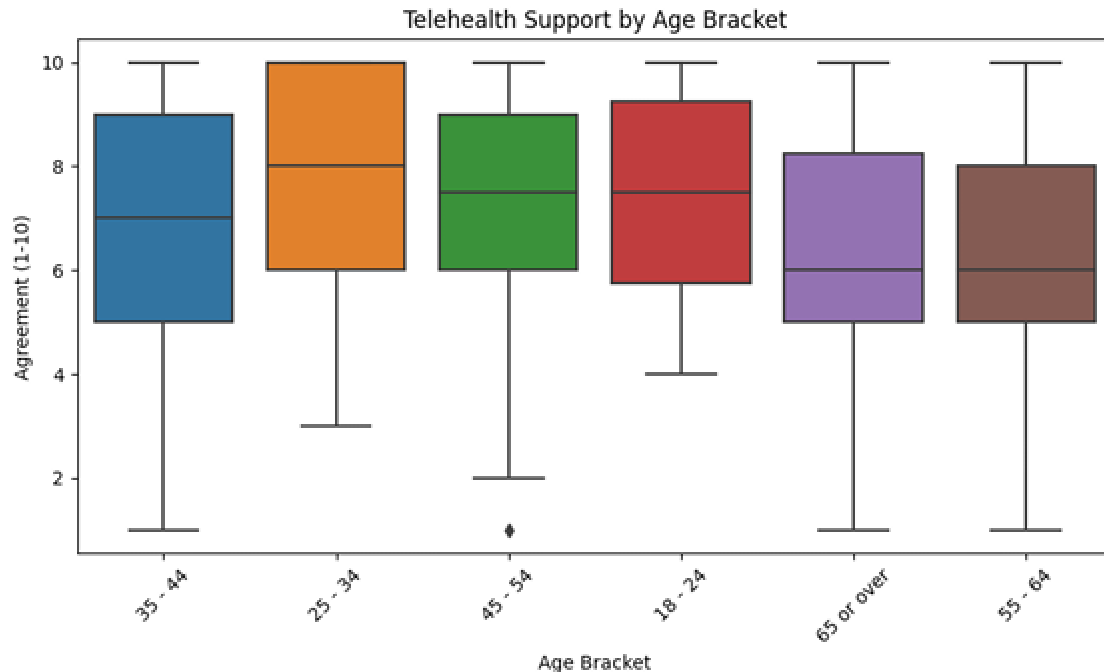


Figure 47 Telehealth Support by Age Bracket

Again, this "box and whisker" plot aims to show the variance in responses among the age groups to the question by highlighting the responses that fall within the 50th percentile (50% of responses are in the colored box); while the whiskers display the min and max showing the distribution of the rest of the responses.

Similarly, the heat map below displays the comfort level with remote patient monitoring across various age and income groups, with a color scale from blue (low comfort) to red (high comfort). The data reveals distinct patterns by age group. The highest comfort ratings (8.4 and 8.0) are concentrated in the younger age brackets (18-34) and are particularly strong among individuals earning $25,000 to $49,999. Interestingly, the highest rating of all, 8.4, is in the 25-34 age group with an income of $25,000 to $49,999. Comfort levels generally decrease with age, with the lowest ratings (4.8 and 4.9) found in the 65 and over age group, particularly for those with incomes below $75,000. Overall, the data suggests that younger individuals and those in middle-income brackets tend to be the most comfortable with remote monitoring, while comfort levels decline with increasing age and among the lowest and highest income groups.

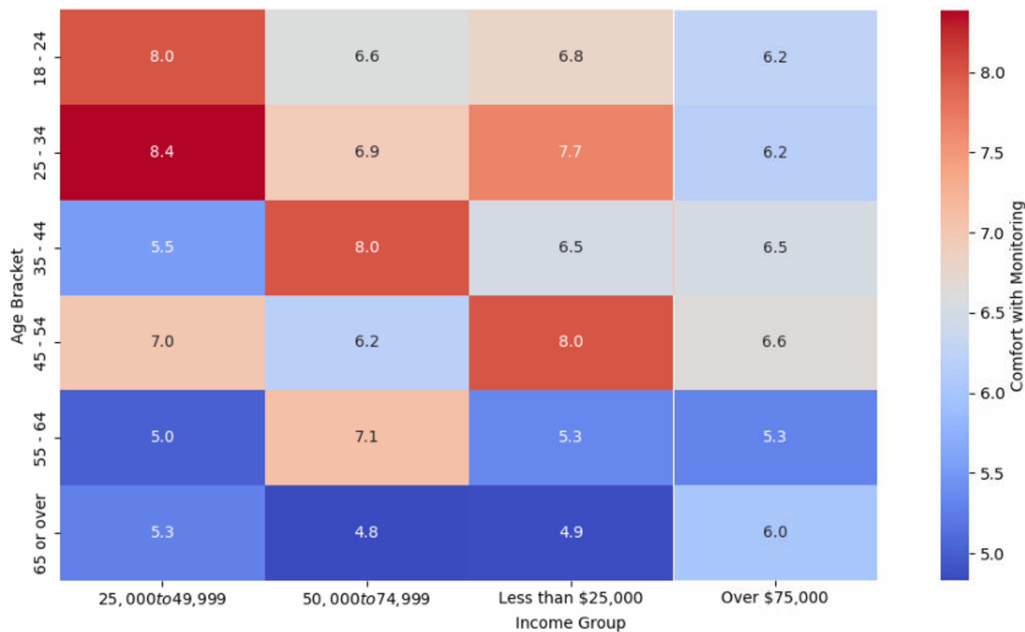


Figure 48 Comfort with Remote Monitoring by Age & Income

Community Health Correlations and Statistical Findings

The below heatmap shows that Community Health Rating has positive correlations with perceptions of safety (0.54), good healthcare (0.52) and whether the community is good to grow old in (0.56), so these factors significantly influence overall community health perceptions. Additional development and movement (or deterioration) in these numbers will directionally impact other subsequent factors. Personal health rating shows relatively weak correlations with all other factors suggesting individual health is seen as more personal and less impacted by community-level perceptions. There is a moderate correlation (0.66) between believing telehealth would improve care and comfort with remote monitoring highlighting openness to digital health solutions among those who support telehealth and greater technology adoption in healthcare delivery.

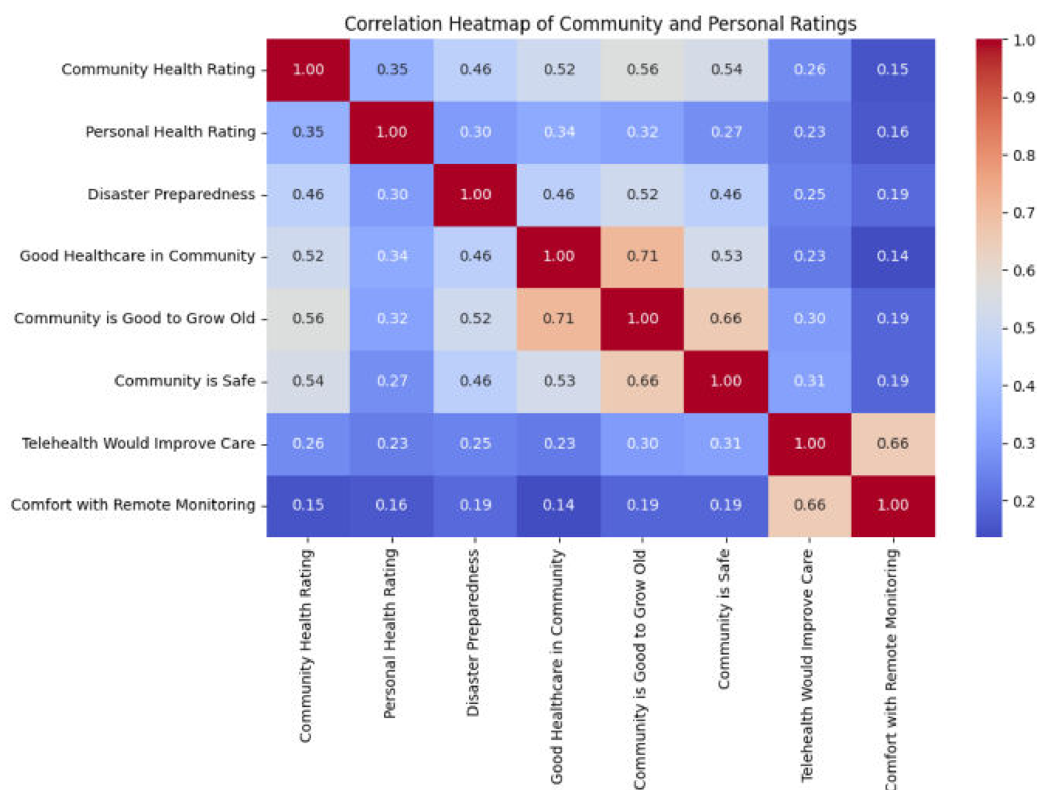


Figure 49 Correlation Heatmap of Community and Personal Ratings

Significant Findings:

- Access to Healthcare vs Income (Chi-square, $p = 0.0004$)
  - Lower income groups report more healthcare access issues compared to higher income groups. The implication of this is that access issues are strongly tied to socioeconomic status in the NNPHD service area.
- Access to Healthcare vs. Ethnicity (Chi-square, $p=0.0057$)
  - Some ethnic groups face more access problems than other groups the implication being that the largest minority group in the NNPHD service area (Hispanics) face additional access issues compared to the majority group (White).
- Personal Health Rating vs. Access Issues (T-Test, $p=0.0007$)
  - Those who experienced access issues rated their personal health as lower. The implication of this finding is that care access issues leads to worse perceived health outcomes.
- Correlation of Community vs Personal Health Rating (Pearson, $p < 0.05$)
  - A positive correlation exists between those who view their community as healthy tend to rate their personal health higher as

well. The implication is that community perception influences or impacts individual health perceptions.

- Good Health Perception and Ethnicity (Kruskal-Wallis): Different ethnic groups rate their community's health differently. It reveals perceived bias and disparities between views of healthiness in their community. It might suggest unequal access to services and feelings of safety. While inclusive of all ethnic groups, the largest and most statistically relevant groups are White and Hispanic/Latinos.
- Telehealth and Remote Patient Monitoring Comfort and Age (Kruskal-Wallis, p=0.0206; p=0.0004)
  - Both Telehealth and remote patient monitoring had statistically significant differences in support across age groups. Younger groups were more likely to view telehealth and remote patient monitoring as favorable. The association was even stronger for remote patient monitoring.

Non-significant Findings:

- Personal Health Rating vs. Age (ANOVA): No significant variation across age groups.
- Disaster Preparedness vs. Income (ANOVA): Could not identify relationship between income levels and perceptions of disaster preparedness meaning levels are largely consistent across incomes. Could be shared value on disaster preparedness after recent fires, flooding, and Covid-19.

Variables	Test	Value	
Access and Income	Chi-square: p-value	.0041	Significant
Access and Ethnicity	Chi-square: p-value	.0058	Significant
Personal Health and Age	ANOVA: p-value	.1791	Not Significant
Disaster Preparedness by Income	ANOVA: p-value	nan	Not Significant
Personal Health with/without Access Issues	T-test: p-value	.0007	Significant

Community Health vs Personal Health	Pearson	0.0001	Significant
Community Health vs Ethnicity	Kruskal-Wallis	0.0006	Significant
Comfort with Telehealth and Age	Kruskal-Wallis	.0206	Significant
Comfort with Remote Monitoring and Age	Kruskal-Wallis	.0004	Significant

Cluster Analysis

In addition to the statistical analysis a cluster model was implemented to ascertain if any common themes or "attitudes" could be grouped across survey respondents. To do this a k-means cluster methodology was used. A k-means cluster groups data points in a dataset that are most similar to each other and labels them based on their similarity. This aims to partition the data into distinct, subgroups where each data point belongs to the cluster with its nearest mean of the data points within that cluster.

Using the k-means cluster methodology three distinct groups were ascertained:

- Health Optimists – Highest scores across all dimensions, especially in community health 7.2; Good healthcare 8.16; Feeling safe in community 8.74; Telehealth and Remote monitoring 8.3. They are highly satisfied, optimistic about services, and open to tech-enabled healthcare.
- Disengaged – Moderate-to-high community satisfaction (questions 6-11 in the 6.5-8.3 range) with significantly lower engagement with digital healthcare 4.45. Their position suggests they value traditional aspects but are cautious or resistant to new tools or programs.
- Cautious Critics – Lowest scores across all categories especially: Community health 4.6; Good healthcare 4.67; Elder care/support 4.39; telehealth 5.3. Group generally has low confidence in community systems and preparedness. Their scoring and clustering reflects a critical stance across surveyed questions.

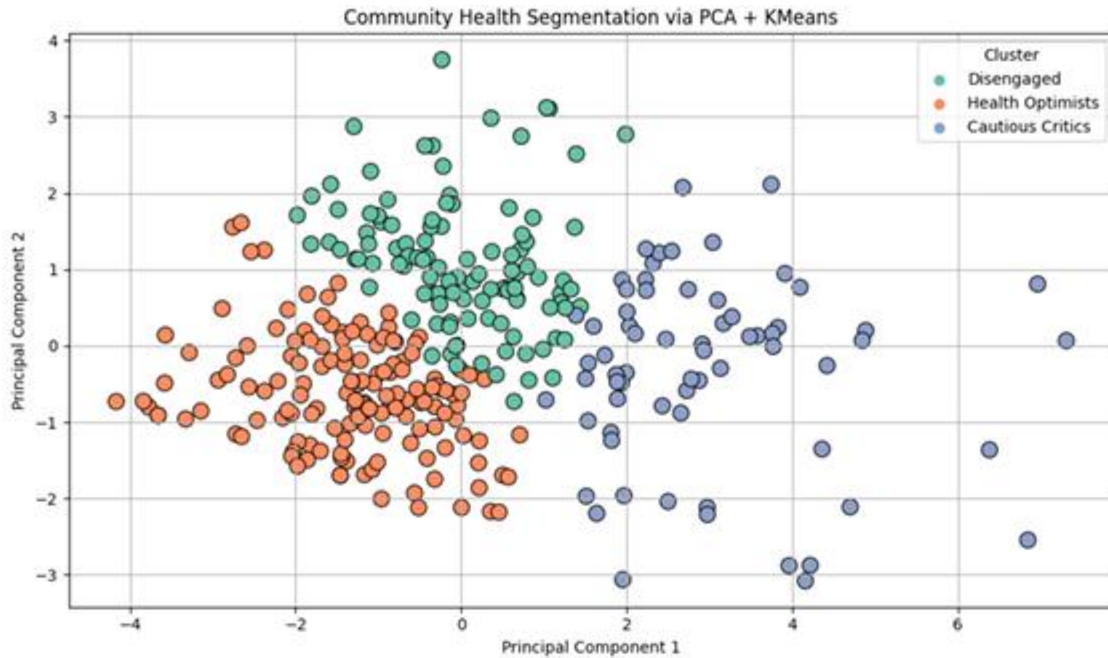


Figure 50 Community Health Clusters

The principal component k-means cluster plot above shows three distinct community health segments: Health optimists (orange) clustered tightly on the left, reflecting consistently high satisfaction and positivity. Disengaged individuals (green) occupy the central-to-upper area with more spread, indicating moderate satisfaction but greater variability. Cautious critics (blue) are well-separated to the right suggesting a consistently critical or dissatisfied group across key health and service dimensions.

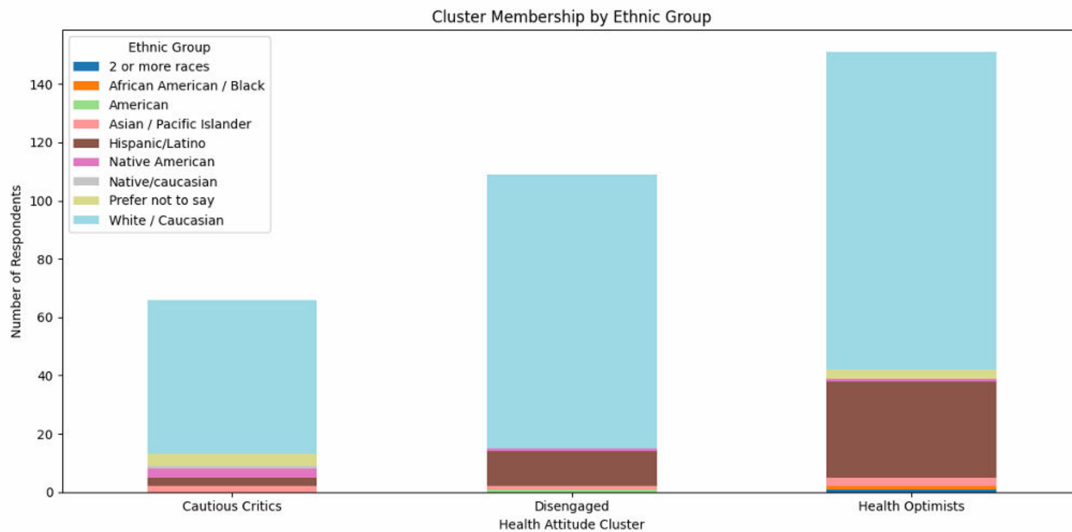


Figure 51 Cluster Membership by Ethnic Group

Above is another view of the demographic makeup of the clusters showing ethnicity. It also shows a count of the number of respondents falling into each cluster with most of the respondents falling into the health optimist's category.

Focus Group Summaries and Themes

Pender Community Hospital Focus Group

The Pender Hospital Focus Groups discussed community health needs and strategies. There were two focus groups with 9 participants both taking place on December 3rd, 2024 with an early and a late group to accommodate participant schedules. Key points included the importance of access to healthcare, clean environments, and child-friendly communities. The hospital's role in addressing childcare and mental health issues was highlighted. Challenges such as transportation for the elderly, insurance barriers, and the need for better education on insurance types were noted. The group emphasized the need for more support groups, telehealth services, and community wellness programs. They also discussed the impact of demographic changes, particularly the growing Hispanic population, and the importance of disaster preparedness and emergency response.

Major Themes Discussed:

1. Healthcare Access and Quality
   - Strong local medical staff and specialists
   - Availability of mental health services
   - Convenient specialist clinics in the community
2. Childcare and Community Support
   - Hospital's leadership in addressing childcare challenges
   - Need for expanded childcare services in small communities
   - Importance of after-school programs
3. Transportation and Elderly Care
   - Limited transportation options for medical appointments
   - Need for improved mobility services for seniors
   - Challenges with existing transit systems
4. Telehealth and Technology
   - Positive experiences with mental health and cancer follow-up telehealth
   - Concerns about internet infrastructure in rural areas
   - Potential for expanding telehealth services
5. Support Groups and Community Programs
   - Interest in creating support groups for Parkinson's, diabetes, and mental health

- Need for caregiver support programs
- Importance of community engagement in health initiatives

6. Preventive Health and Wellness
    - Focus on addressing obesity, diabetes, and chronic conditions
    - Interest in community wellness programs
    - Potential for partnerships with local fitness centers
7. Insurance and Healthcare Costs
    - Challenges understanding insurance options
    - Barriers to care due to cost concerns
    - Need for better insurance education
8. Disaster Preparedness
    - Importance of community-wide emergency planning
    - Need for clear communication and evacuation strategies
    - Coordination between different emergency response entities

Notable Quotes:

- On healthcare access: "Access to our doctors and our staffs are phenomenal here [Pender Community Hospital]. I mean, I can't say you're not good about them, and we're very fortunate."
- On community challenges: "I think workforce in the smaller towns is something that struggles, that we need to look at in the future. In order to grow, we need nurses to do that. Otherwise, we can't grow it."
- On telehealth: "With mental health, it is hard to get patients to commit to going to places if they can't just come here. This one [patient] wouldn't go anywhere but here, and it was nice to be able to do that for them."
- Community support: "The hospital took the lead in this decades-old problem of childcare in Kinder Nebraska. It's been a huge hurdle, and we would never have gotten where we are today without the hospital."

Key Insights:

- Effective community health strategies will require collaborative health strategies and partnerships between hospitals, local businesses, schools and community organizations.
- The hospital is a critical lifeline for rural healthcare, providing specialized services and addressing community needs beyond traditional medical care.
- Transportation and access barriers remain significant challenges for healthcare delivery, especially for elderly and rural residents.

- Telehealth offers promising solutions for expanding healthcare access, but technological infrastructure and digital literacy remain potential obstacles.
- Preventative health programs and support groups are increasingly important for addressing chronic conditions like diabetes, obesity and mental health.
- Demographic shifts, particularly the growing Hispanic population, are creating urgent needs for bilingual services and culturally responsive healthcare approaches.

Wayne State College Focus Groups

A focus group was held on March 5th, 2025 at Wayne State College with six participants of diverse backgrounds. Participants expressed mixed experiences with healthcare in their communities. This focus group highlighted significant concerns regarding healthcare access, affordability, and disparities. While some community resources were praised, barriers such as high costs, insurance confusion, racial biases, and mental health service shortages remain pressing issues.

Participants stressed the need for systemic changes, better education, and improved communication between providers and patients to foster trust and accessibility in the healthcare system. Disparities in treatment based on race and socioeconomic status were a recurring theme. Some participants felt dismissed by healthcare providers because of their Hispanic background, which discouraged them from seeking medical attention. Concerns about political developments and their potential impact on healthcare were also noted.

For example, one participant was from Europe, and Europe's universal healthcare system was acknowledged, there were concerns about the effectiveness of medical professionals and difficulties in obtaining appointments. Another participant, an EMT, noted that student healthcare access was good on campus, particularly with a hospital nearby. However, ER visits posed financial challenges, especially in cases involving alcohol and drugs. While EMT services were free, hidden fees created confusion. Additionally, referrals from student health services often led to further complexity.

Key Healthcare Issues in the Community:

- Mental Health Resources: While campus resources were praised, there was a lack of available counselors.
- Vaccination Concerns: Participants noted issues such as decreasing vaccination rates, particularly in Texas with recent measles outbreak, and the impact of misinformation and siloed communities causing echo chambers.
- Healthcare Access in Different Settings: Urban and suburban areas had more
- support, while rural communities faced more isolation in terms of healthcare access.

Access to Healthcare:

- Appointment Availability: Scheduling difficulties were a common frustration, with many appointments fully booked.
- Facility Availability: Participants noted a lack of urgent care clinics, which placed additional strain on emergency rooms in rural areas.
- Cost Barriers: High hospital costs and insurance issues prevented many from seeking necessary care. Some believed the system needed a complete overhaul. Younger participants were less likely to see cost as a barrier since they were still on their parents' insurance. However, this led to uncertainty about the healthcare system and how to properly utilize services.
- Transportation Challenges: While not explicitly discussed, it was implied that location played a role in healthcare accessibility.
- Mental healthcare was perceived as less available compared to physical healthcare. Challenges included long wait times, limited counselors, and stigma in some communities. Health Insurance
- Affordability: Health insurance costs, particularly for students and young adults, were a major concern.
- Confusion Over Plans: Navigating different insurance options (e.g., student plans, Medicaid, family insurance) was difficult.

Health Education and Resources:

- Many felt undereducated about available healthcare services.
- Participants noted the need for improved awareness about reproductive health, acute care clinics, and mental health services.

- Community education on healthcare options and insurance plans was suggested.

Social Determinants of Health:
- Participants believed that income, housing, and family circumstances significantly affected healthcare experiences.
- Providers were encouraged to listen more actively, reduce biases, and treat patients equitably to gain patient trust.

Community Health Trends and Future Concerns:
- Participants suggested that more inclusive and unbiased healthcare practices could improve trust in the system.
- Addressing systemic issues like cost, access, and appointment availability was seen as crucial.
- More accessible health resources and community programs would benefit young people, particularly students.
- Over the past five years, participants noted both improvements and worsening aspects of healthcare.
- Major future threats included political influences, pandemic responses, misinformation in the media, and shifts in public trust toward healthcare institutions.

Wayne Community Diabetes Coalition

The Diabetes Coalition focus group based out of Wayne and serving Wayne and surrounding communities took place on Friday January 24, 2025. There were 11 participants, and the conversation topics started with the successes and positives related to healthcare in the community. Participants also discuss current challenges and proposed programs to addresses issues and health inequities in their community. Finally, the participants also provided feedback on demographic, and healthcare trends that they see as emerging and necessary to address proactively.

Major Themes Discussed:
1. Community Health Strengths
    - Strong public health department resources
    - Collaborative partnerships between healthcare providers

    - Successful diabetes prevention and education programs
2. Mental Health Challenges
    - Limited counseling resources
    - Long wait times for mental health services
    - Challenges in accessing affordable mental health care
3. Healthcare Access Barriers
    - Insurance coverage issues
    - Transportation limitations
    - Cost of healthcare
    - Specific challenges for underinsured and immigrant populations

Notable Quotes:

- "Health equity is one of my real passions" - Public health professor
- "We have actually helped a lot of patients with a lot of different aspects" - Healthcare provider
- "Sometimes they aren't, you know, when someone's in like, an almost immediate crisis... all they need to do is find a counselor and talk to them" - Healthcare worker discussing mental health access

Key Insights:

- Community values comprehensive health approach
- Significant gaps exist in mental health and insurance coverage
- Strong desire for more preventative and accessible healthcare services
- Need for targeted support for vulnerable populations

Community Health Concerns

Behavioral Health

Behavioral health was the overwhelming most important topic covered in both the focus groups and the community health survey. Participants of the focus groups felt that not only are there high needs in the community, but there is a lack of providers and those providers that are present are too busy to address concerns fully. As one participant from the Wayne community focus group points out, inaccessibility or delays in care often lead people to need emergency or crisis care from the emergency department.

"We do have places here in town, but sometimes they're so booked out, or... when someone's in like, an almost immediate crisis, you know, the only option is to go, like, maybe to the ER, just to (get care). All they need to do is find a

counselor and talk to them, and not wait three months to get into a person to talk to."

This follows the census data that reflects the availability of mental health providers in the NNPHD service area. The only county that has below state and national levels of mental health providers is Thurston County with 210 people per mental health provider compared to the national average of 320 per provider and 310 per provider in Nebraska. Cedar county has the highest level of need for Mental health providers with 8,370 people per mental health provider. This is 27 times the Nebraska level. Dixon County is also a high demand mental health area with 5460 people per mental health provider which is 17.6 times above the state average.

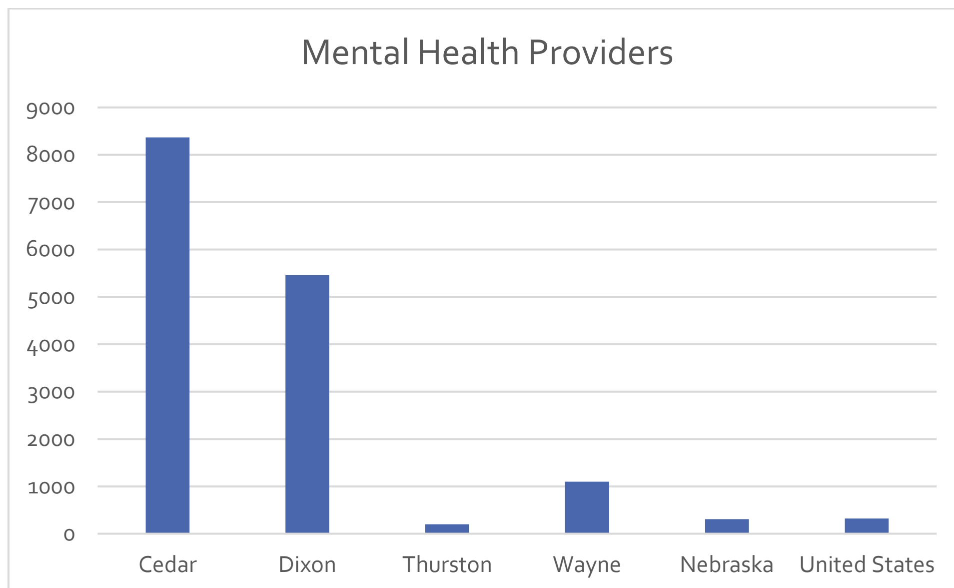


Figure 52 Mental Health Provider Availability

This is also in line with the community health survey where 55% of participants said that mental health problems was one of the three most important health problems in your community (n=289). Alcohol and Drug Use was also prominently answered with 29.4% of respondents stating that it was one of the most important health problems in the community (n=289).

Participants from the Pender focus group mentioned the commitment of additional resources to address behavioral health prevention, early intervention, and improved care access. Participants listed the success of focus groups,

increased number of providers, and the inclusion of behavioral health via telehealth.

"Speaking from mental health, we utilize it a lot. I actually just did my first drug and alcohol evaluation via telehealth with Bryan (Healthcare), and it went very good. The patient didn't want to drive to Lincoln or to Sioux City. Some things with mental health, it is hard to get them to commit to go to places if they can't just come here. So, this one wouldn't go anywhere."

Diabetes

Diabetes presents a multifaceted public health crisis, characterized by its escalating prevalence and the debilitating complications it engenders. The alarming surge in diabetes cases, particularly type 2, is closely linked to lifestyle factors like sedentary habits and unhealthy dietary patterns, placing an strain on healthcare systems. Diabetes also induces severe complications, including cardiovascular disease, renal failure, vision impairment, and nerve damage, not only diminishes quality of life but also drives up healthcare expenditures.

Significant health disparities exist, with racial and ethnic minorities disproportionately affected due to socioeconomic factors and limited access to care. Public health initiatives must prioritize prevention through promoting healthy lifestyles and ensuring early detection, while also emphasizing effective management through education, medication, and regular monitoring to mitigate complications.

The economic burden of diabetes, encompassing treatment costs and lost productivity, is substantial, further compounded by the high number of undiagnosed cases. Furthermore, the high amount of people with prediabetes is a serious concern, since without intervention a large percentage of those cases will develop into type 2 diabetes adding to the growing public health problem.

According to the CDC and data from 2022, Diabetes prevalence is highest in Thurston County at 15.1% followed by Dixon County at 13.6% and Cedar County at 11.9%. Wayne County has the lowest diabetes prevalence at 10.6% of their population.

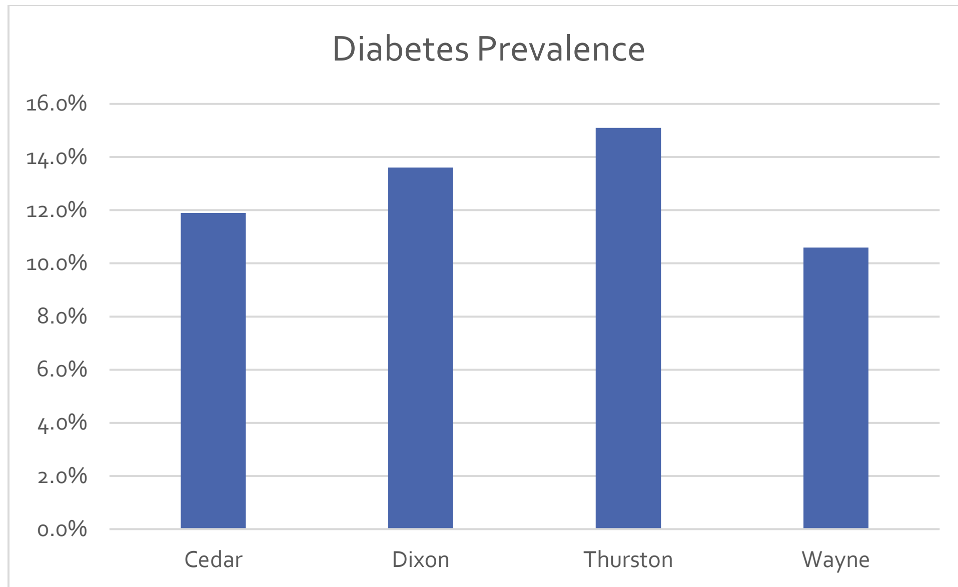


Figure 53 Diabetes Prevalence by County

In the community health survey, diabetes was one of the top three health concerns with 29.8% of respondents (n=289) saying it was in among the top three health problems in their community. More concerning, 49.5% (n=289) felt that diabetes was one of the top three concerns that needed to be addressed in the community showing that they felt that more should be done.

In the focus groups, participants were able to list successful programs such as diabetes education programs, diabetes support groups, early screening options etc. that were successful. For example, one participant noted: "We have a diabetes support group called Sweet Talk. Last year we covered different topics, and we had a counselor, who helped us out. She volunteered her time." Awareness and garnering attention and participation in these programs can sometimes be a challenge, but participation and community engagement are growing particularly when working with other community partners. For example, one participant shared:

> *"We do a lot of stuff with diabetes and prevention and over a bit of education, and we kind of work closely with our Family Medicine clinic, just to get people going there and getting the help they need."*

Concerns Related to Aging

Concerns related to aging include arthritis, falls, chronic conditions, memory loss, sensory loss such as hearing and vision impairment, among others. In the community health survey 28.7% of respondents (n=289) felt that concerns related to aging was one of the top three problems related to health in their community. Unsurprisingly this is particularly true for older community members.

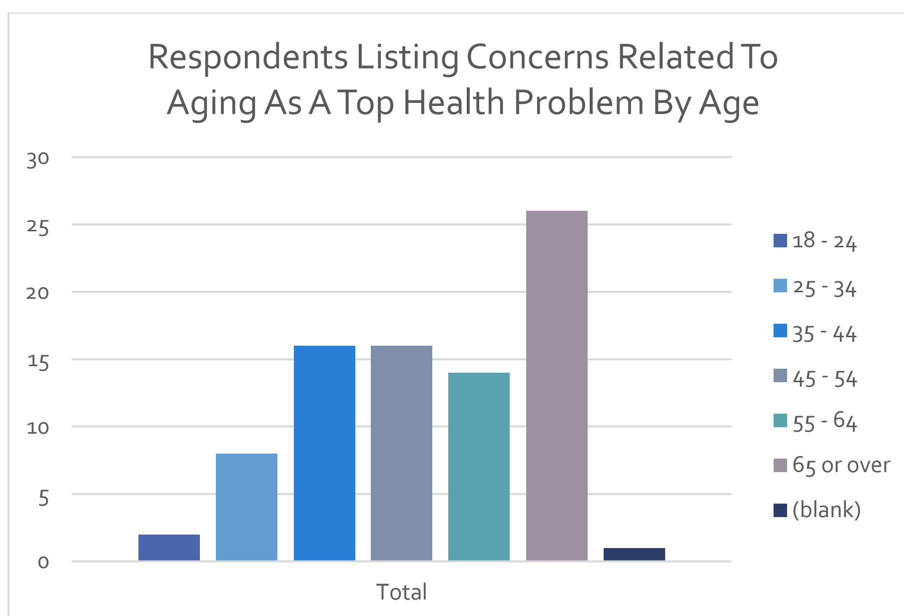


Figure 54 Respondents that listed concerns related to aging as a top health problem

This is particularly troubling as discussed earlier (see demographics) the NNPHD service area population is aging particularly in Cedar and Dixon counties at 21.9% and 21.2% of their populations being over 65 years of age.

Older populations face unique challenges related to health and well-being. 33% respondents to the community health survey stated that their community was in need of elder care options, and it was a major healthcare concern for them (n= 291). Increased longevity is often accompanied by a rise in chronic diseases like heart disease, diabetes, and dementia. This results in a corresponding burden on healthcare systems, requiring increased resources for treatment and long-term care. Furthermore, cognitive decline and mobility limitations can lead to social isolation, depression, and a reduced quality of life, impacting mental and emotional well-being. Public health initiatives focus on promoting healthy aging through preventative care, transportation services for those that can no longer

drive, and community programs that support social engagement and light physical activity and mobility.

Two main concerns that came up repeatedly during the focus groups related to aging included the closure of nursing and assisted living facilities in the area, and concerns related to transportation for those that could not drive.

> *"It's horrible. Nursing homes are closing down all the time. We just had one in Laurel, I think, that is really being jeopardized right now. The reimbursement rate for Medicaid or Medicare is not covering even half of their cost. So that's their only revenue, really, which is private pay, which the majority of people don't have."*

This was echoed as well at the Pender focus group as well stating: "Nursing homes are less and less and less. They're closing. And how do you help? We want them to stay around, because we need a place for people to go." The conversation also turned to the frequent occurrence of older citizens moving in with younger family members or to move to another community closer to their healthcare or with an available nursing home or assisted living facility.

Another leading concern was related to transportation options for older citizens who could no longer drive themselves. 15.8% of respondents felt that transportation as a major concern needing addressed in the community (n=291). One Pender participant put the concern well in addressing post-surgery follow-ups for elderly patients saying:

> *"Transportation is a big one that hinders people from care. I mean, physical therapy after surgeries, we've transported patients that really can't get here. I had a gal that just didn't have a ride in. The clinic called, can you guys please give her a hand? [Patient] really needs to be seen. So, we transported her a few times."*

Addressing concerns related to aging is a critical measure to ensuring a healthy and fulfilling life for older adults while mitigating the strain on healthcare infrastructure and public resources.

Cardiovascular Disease

Heart disease and stroke was among the top concerns for people in the community health survey with 25.3% of respondents saying that it is one of the three most important health problems in their community. High blood pressure was also high on the list with 16.3% of respondents citing it as one of the top health problems (n=289).

Cardiovascular disease, encompassing conditions like heart attacks and stroke, is a leading cause of death and a source of lifelong disability making it a critical public health concern. Its high prevalence is driven by factors like unhealthy diets, sedentary lifestyles, and tobacco use. Public health initiatives focus on prevention through promoting heart-healthy lifestyles, early detection of risk factors, and effective management of existing conditions.

In the community focus groups focused on prevention and what the community can do to improve the lifestyle habits of community members. For example, one participant cited stroke as an important and heartbreaking condition that can be best addressed through prevention:

> *"You may have a relative who has lost a life to diabetes, or if you had a stroke or something like that, and I'm sure that was heartbreaking. How do we prevent that from happening to more people that you love?"*

Cancer

Cancer is among the most devastating and costly disease, and was among the most concerning conditions in the community health survey. 40.5% of respondents listed Cancer among their topmost important "health problems" in their community (n=289). This was the second most category behind Mental Health problems. Additionally, 37.4% felt that Cancer was one of the top three conditions that needed to be addressed in your community, likely reflecting the need for oncology specialists. Given cancer's prevalence and complexity in treatment it often requires patients living in rural areas to travel great distances to receive care.

Cancer screenings are also an important component of cancer care which can increase survival rates and drastically reduce costs of treatment. For more

information on the NNPHD service areas screening rates see the Cancer Screening section of preventative care.

Asthma/COPD

The prevalence of Chronic Obstructive Pulmonary Disease (COPD) and asthma presents significant health challenges, particularly within rural areas where agriculture is a dominant industry. These regions often experience unique environmental exposures that exacerbate respiratory conditions. Agricultural practices can expose individuals to a range of irritants, including:

- Organic dusts: Grain dust, mold spores, and animal dander are common airborne particles in farming environments, triggering inflammation and airway constriction.
- Chemicals: Pesticides, herbicides, and fertilizers can release harmful fumes and particles, causing respiratory irritation and long-term lung damage.
- Environmental factors: Rural areas may also have higher concentrations of other pollutants, such as those from wood burning stoves, and other combustion sources.

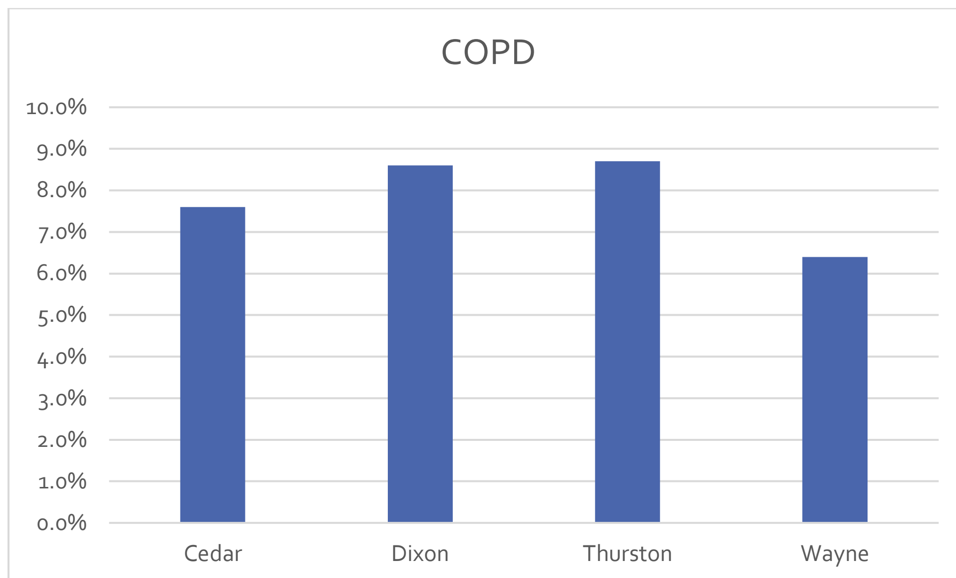


Figure 55 COPD rates by County

These exposures, combined with factors like limited access to healthcare, higher rates of smoking, and socioeconomic disparities, contribute to the disproportionately high rates of COPD and asthma in rural populations. Furthermore, the distance to medical facilities and the scarcity of respiratory specialists can delay diagnosis and treatment, leading to more severe disease

progression. Potential reticence toward preventative care, such as smoking cessation programs, can also plays a role in the increased burden of these respiratory illnesses.

Oral Health

Concerns related to dentistry and oral health were among the most prominent of the community health survey. Data from the Center for Disease Control and Prevention shows the basis for that concern. According to the CDC with data from 2022, the percent of the population above 65 years of age that has lost all of their teeth is 17.6% in Dixon County and 16.9% in Thurston County. Cedar and Wayne Counties fair somewhat better at 9.6% and 8.6% of their 65 and over population having lost all of their teeth; however, inside the city of Wayne the percent is higher at 18.4%.

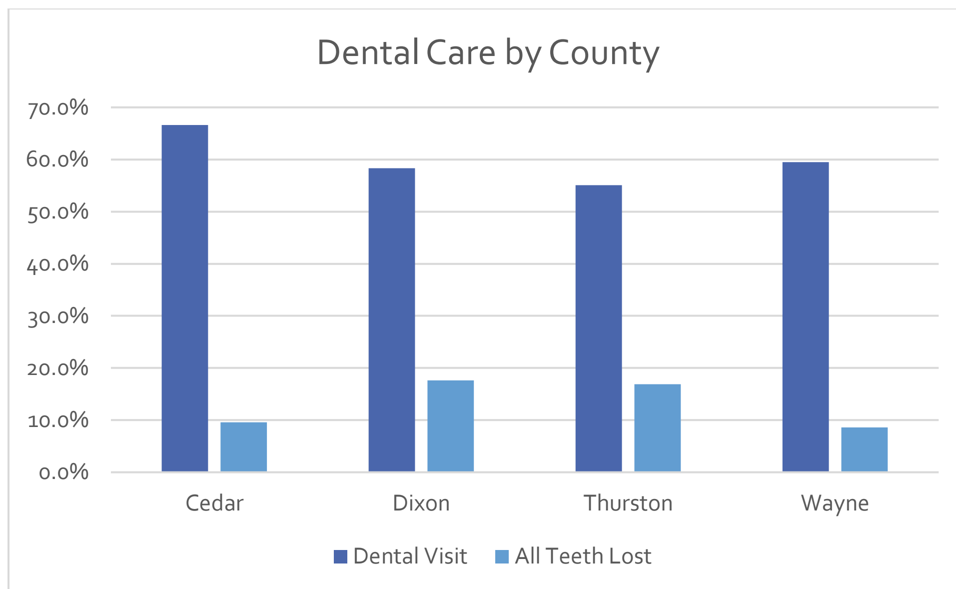


Figure 56 Percent of Population with a Dental Visit in the Last Year and All Teeth Lost by County

Another measure, also from the CDC and 2022 is the percent of the population that had a dental visit in the last year. Cedar County has the highest percent of their population seeking dental care at 66.6%. Dixon and Wayne Counties have a similar percentage at 58.3% and 59.5% respectively. Thurston County has the greatest need for dental care at just 55.1% of their population receiving dental care in the last year.

Survey Participants where particularly concerned by the availability of dentists

and the costs of receiving dental care. 14.4% of respondents when asked which facility or provider they had trouble getting care from sited dental care (n=90). That was the highest response among the options given. Dentists are among the highest needed provider groups across Nebraska with the state, but Cedar and Dixon counties are particularly vulnerable with 2790 people per dentist in Cedar County and 2730 people per dentist in Dixon county. Thurston has the best rate at 1100 people per dentist.

Disaster Preparedness

Ensuring they can effectively respond to and mitigate the impact of natural disasters, pandemics, and other communities is a major role of public health departments and their partners. Preparedness involves developing comprehensive plans for resource allocation, communication and coordination, enabling rapid deployment of medical supplies, personnel, and public health interventions. It also includes educating the public on safety measures, establishing robust surveillance systems to detect disease outbreaks, and ensuring continuity of essential services like water and sanitation. Effective disaster preparedness minimizes morbidity and morality, protects vulnerable populations, and facilitates a swift return to normalcy. Thurston county has the highest social vulnerability index score from CMS based on how susceptible a community is to the negative impacts of hazards including natural disasters and public health crises.

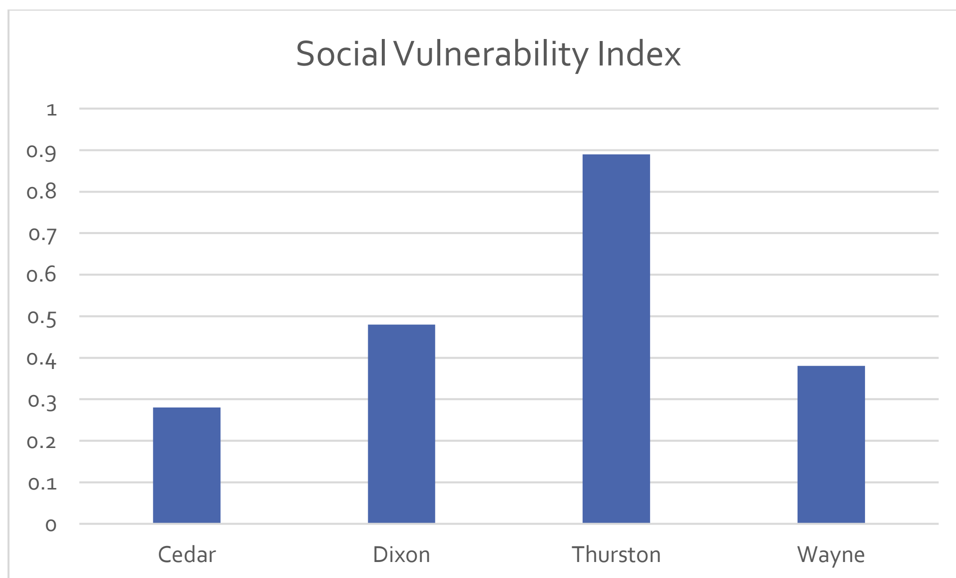


Figure 57 Social Vulnerability Index by County

In the community health survey, respondents generally had a favorable view of disaster preparedness efforts with 55% of respondents (n=296) giving a score of greater than 7 and an average rating of 6.4.

Feelings of preparedness for natural disasters was fairly consistent for three of the primary service area counties with Wayne being the highest with a rating of 6.96 and Cedar and Dixon counties close behind with ratings of 6.54 and 6.35 respectively. However, Thurston felt relatively unprepared for disaster with a score of 5.6.

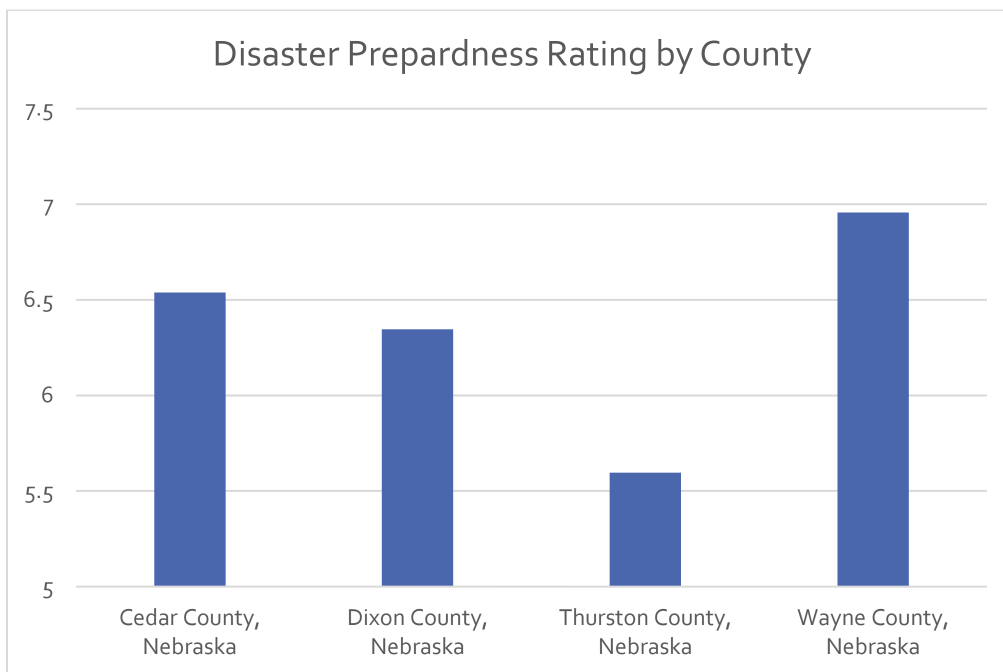


Figure 58 Disaster Prepardness Rating by County

The Federal Emergency Management Agency (FEMA) produces a national risk index map with scores for the most common natural disasters. Below are the results from the NNPHD service area. The most pressing concerns are related to risks related to winter weather in Cedar County, Hail and Drought risks in Dixon County and Thurston Counties, and Hail in Wayne County.

	Cold Wave	Drought	Hail	Riverine Flooding	Strong Wind	Tornado	Wildfire	Winter Weather
Cedar	48.6	84.6	91.4	22.2	35.1	44.9	54.1	87

Dixon	43.4	79.3	87.6	29.2	74.2	44.3	46.3	52.4
Thurston	50.7	83	93.5	47.8	49.5	56.2	55	57.2
Wayne	49	75.6	89.6	16.5	27.7	51.6	35.6	54.2

Feedback in the focus groups was also positive with respondents praising Covid-19 response, alongside fire and flood prevention. Here is one example:

> *"I think we are pretty good (on disaster preparedness). We've had, first of all, Covid, and it seems to me that the powers that be were on top of that. And second, we have this dike setup down on Main Street, if the water level gets too high, they have these gates they can close."*

Furthermore, steps are being put in place to further improve disaster preparedness. Pender is planning a summer preparedness drill, and is stepping up efforts for fire prevention and preparedness with recent dry weather.

Hispanic and Latino Population Specific Concerns

As the most significant minority population, the community health survey results highlight specific concerns shared by the Hispanic and Latino populations within the NNPHD service area. Some of the concerns that seemed to particularly resonate with this subset of the population was health insurance and healthcare costs. 36% of Hispanic or Latino community health survey respondents reported paying out-of-pocket in cash for medical care with another 13% being on Medicare and Medicaid services. Only 1% of respondents who identified as being White reported paying for medical care in cash with 21% on Medicare or Medicaid services. This suggests that medical coverage is lagging in the Hispanic and Latino populations which could benefit from greater enrollment in private, and government healthcare programs.

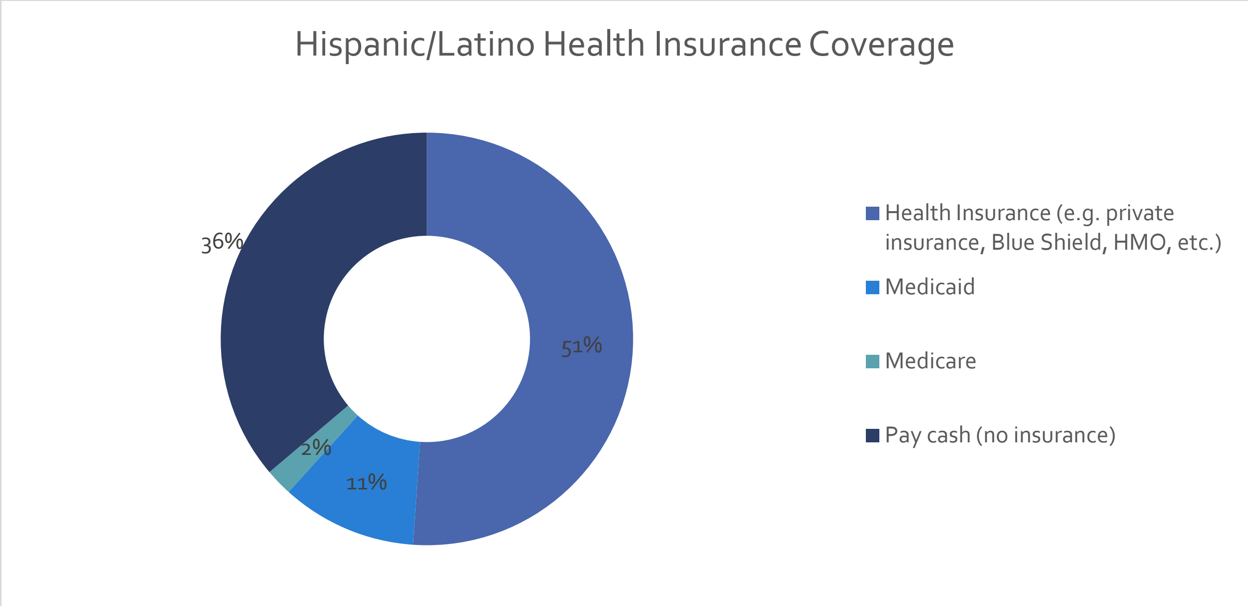


Figure 59 Health Insurance Coverage for Hispanic/Latino Survey Respondents

Another concern relevant particularly for the Spanish speaking population is the need for translation services and culturally appropriate care. The Hispanic and Latino population was more likely to site culturally appropriate health services as an important aspect of addressing health concerns in their community.

Hispanic survey participants were also more likely than their white counterparts to note that they had issues accessing care in the last 12 months with almost 39% of respondents reporting access issues compared to 20% in the overall group. High costs and access issues are likely linked with respondents noting that they did not know where to go to receive care, their share of costs were too high, and the provider would not take their insurance. Below is also a breakdown of how Hispanic participants felt about their community as a place to grow old by age.

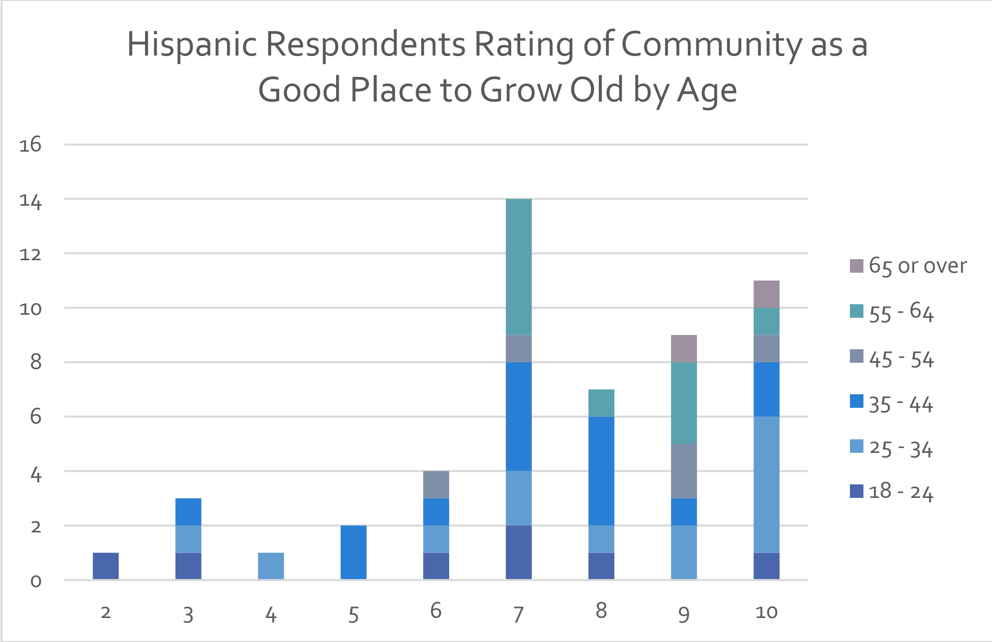


Figure 60 Hispanic Respondents Rating of Community as a Good Place to Grow Old

Appendix

Survey Data

Question 1: What do you think are the three most important factors for a "Healthy Community"? *(350 responses)*

- Good place to raise children – 120 (34.3%)
- Low crime / safe neighborhood – 131 (37.4%)
- Low level of child abuse – 15 (4.3%)
- Good schools 121 (34.6%)
- Access to health care – 175 (50%)
- Parks and recreation – 25 (7.1%)
- Clean environment – 136 (38.9%)
- Affordable housing – 111 (31.7%)
- Arts and cultural events – 14 (4%)
- Excellent race relations – 13 (3.7%)
- Good jobs and healthy economy – 126 (36%)
- Strong family life – 42 (12%)
- Healthy behaviors and lifestyles – 60 (17.1%)
- Low adult death and disease rates – 9 (2.6%)
- Religious or spiritual values – 49 (14%)
- Disaster Preparedness – 9 (2.6%)
- Caring for older adults – 1 (0.3%)
- None – 1 (0.3%)

Question 2: What do you think are the three most important "health problems" in your community? *(346 responses)*

- Aging problems – 98 (28.3%)
- Cancers – 133 (38.4%)
- Child abuse/neglect – 35 (10.1%)
- Oral health problems – 20 (5.8%)
- Diabetes – 123 (35.5%)
- Domestic Violence – 18 (5.2%)
- Firearm related injuries – 5 (1.4%)
- Heart disease and stroke – 87 (25.1%)
- High blood pressure – 55 (15.9%)
- HIV/AIDS – 3 (0.9%)

- Homicide – 1 (0.3%)
- Infant death – 2 (0.6%)
- Infectious Disease – 24 (6.9%)
- Mental health problems – 170 (49.1%)
- Motor vehicle crash injuries – 14 (4%)
- Rape/sexual assault – 15 (4.3%)
- Respiratory/lung disease – 22 (6.4%)
- Sexually Transmitted Infection – 9 (2.6%)
- Suicide – 18 (5.2%)
- Teenage pregnancy – 4 (1.4%)
- Alcohol and Drug Use Disorders – 103 (29.8%)
- Farming Accidents – 15 (4.3%)
- Obesity – 87 (25.1%)
- MS/Parkinson's and other neurological disorders – 1 (0.3%)
- Nutrition / Food Insecurity – 1 (0.3%)
- Civil support – 1 (0.3%)
- Substance use and abuse – 1 (0.3%)
- Poor water quality – 1 (0.3%)
- Transportation in the country – 1 (0.3%)
- Alzheimer's – 1 (0.3%)

Question 3: Which of the following services are the top 3 most needing improvement in your community? *(349 responses)*

- Animal control – 11 (3.2%)
- Child care options – 132 (37.8%)
- Elder care options – 110 (31.5%)
- Services for disabled people – 31 (8.9%)
- More affordable health services – 85 (24.4%)
- Availability of employment – 48 (13.8%)
- Higher paying employment – 94 (26.9%)
- Number of health care providers – 29 (8.3%)
- Culturally appropriate health services – 13 (3.7%)
- Drug and alcohol use disorder treatment – 35 (12%)
- Counseling / mental health support groups – 96 (27.5%)
- Better / more recreational facilities – 35 (10%)
- Healthy family activities – 35 (10%)

- Positive teen activities – 46 (13.2%)
- Transportation options – 50 (14.3%)
- Road maintenance – 27 (7.7%)
- Road safety – 6 (1.7%)
- Availability of safe and affordable housing – 105 (30.1%)
- Employee insurance – 29 (8.3%)
- Access to dental care – 27 (7.7%)
- Chronic illness support – 1 (0.3%)
- Education system – 1 (0.3%)
- City infrastructure, electric, sewer – 1 (0.3%)
- Clinics open on Saturday – 1 (0.3%)
- Non-sport activities for teens – 1 (0.3%)
- Health insurance price for self-employed – 1 (0.3%)
- Sidewalks to keep kids off the street – 1 (0.3%)
- Access to affordable & quality health insurance if not provided by employer – 1 (0.3%)
- Healthy food availability– 1 (0.3%)
- More dentists who accept adult Medicaid and Medicare patients in rural Nebraska – 1 (0.3%)
- Rent control – 1 (0.3%)

Question 4: What are the three most important conditions or health concerns needing to be addressed in your community? *(347 responses)*

- Asthma or COPD – 27 (7.8%)
- Depression or anxiety – 245 (70.6%)
- High blood pressure – 102 (29.4%)
- High cholesterol – 32 (9.2%)
- Diabetes – 185 (53.3%)
- Osteoporosis – 4 (1.2%)
- Overweight/Obesity – 233 (67.1%)
- Angina/heart disease – 44 (12.7%)
- Cancer – 132 (38%)
- Adult disabilities and fatigue disorders – 1 (0.3%)
- STI's – 1 (0.3%)
- Parkinson's Disease – 1 (0.3%)

- The syphilis epidemic as we are seeing very high rates of congenital syphilis – 1 (0.3%)
- Women's health – 1 (0.3%)
- Substance abuse – 1 (0.3%)

Question 5: In the past 12 months, did you have a problem getting the health care you needed for either you or a family member? *(358 responses)*

- Yes – 283 (79.1%)
- No – 75 (20.9%)

Question 6: (if yes to question 5): What type of provider or facility did you, or your family member have trouble getting healthcare from?

- Dentist – 35
- Specialist – 18
- General Practitioner – 9
- Eye care / optometrist / ophthalmologist – 5
- Pharmacy / prescriptions – 4
- Urgent care center – 4
- Medical clinic – 4
- Pediatrician – 2
- None – 9
- OB/GYN – 1
- Health department – 1
- Hospital – 1
- Mental health – 2
- Medical care as a whole. Price of doctor visits, prescription costs and all of that cost too much without insurance – 1
- Dentist that accepts Nebraska Medicaid – 1
- Dietitian – 1
- Multiple above – 1
- Dental cost – 1
- Speech language pathologist for our toddler – 1
- Insurance – 1
- Pediatric neurology – 1
- Ambulance services – 1

Question 7: Which of these problems prevented you or your family members from getting necessary health care? *(105 responses)*

- No health insurance – 18 (17.1%)
- Insurance didn't cover needed care – 27 (25.7%)
- Share of the cost (deductible/co-pay) was too high – 21 (20%)
- Doctor would not take insurance – 10 (9.5%)
- Hospital would not take insurance – 2 (1.9%)
- Pharmacy would not take insurance – 1 (1.1%)
- Dentist would not take insurance – 16 (15.2%)
- No way to get to facility – 2 (1.9%)
- Unsure of where to go to get care – 9 (8.6%)
- Couldn't get an appointment – 21 (20%)
- The wait was too long – 27 (25.7%)
- Distance to care was too far – 13 (12.4%)
- Did not feel that the Doctor/Dentist listened to my concerns – 12 (11.4%)
- None/Prefer not to say –7 (7.8%)
- No follow through or medical abuse – 1 (1.1%)
- Not satisfied with quality of service – 1 (1.1%)
- Insurance took too long to determine appropriateness of care – 1 (1.1%)
- Had to be sent to another hospital because surgery was not available – 1 (1.1%)
- Not available locally – 1 (1.1%)
- Dental clinics refused to take insurance – 1 (1.1%)

Question 8: Which specialty did you have issues seeing? *(15 responses)*

- Cardiology – 2 (13.3%)
- Dentist – 1 (6.7%)
- Ear Nose and Throat – 2 (13.3%)
- Electrophysiology – 1 (6.7%)
- Endocrinology – 1 (6.7%)
- Hematology – 1 (6.7%)
- Neurologist – 1 (6.7%)
- Oncology – 1 (6.7%)
- Pain Management – 1 (6.7%)
- Vascular – 1 (6.7%)

- Genetic testing – 1 (6.7%)
- Orthopedics – 1 (6.7%)
- Rheumatology – 1 (6.7%)

Question 9: How would you rate your community as a "healthy community"? 1 is lowest, 10 is highest (346 responses)

- 1 – 2 (0.6%)
- 2 – 2 (0.6%)
- 3 – 10 (2.9%)
- 4 – 22 (6.4%)
- 5 – 44 (12.7%)
- 6 – 76 (22%)
- 7 – 105 (30.3%)
- 8 – 62 (17.9%)
- 9 – 15 (4.3%)
- 10 – 8 (2.3%)

Question 10: How would you rate your own personal health? *(345 responses)*

- 1 – 0 (0%)
- 2 – 3 (0.9%)
- 3 – 8 (2.3%)
- 4 – 19 (5.5%)
- 5 – 35 (10.1%)
- 6 – 44 (12.8%)
- 7 – 78 (22.6%)
- 8 – 105 (30.4%)
- 9 – 42 (12.2%)
- 10 – 11 (3.2%)

Question 11: How would you rate your community's disaster preparedness? Disasters can include natural disasters, fires, or disease outbreak, etc. *(340 responses)*

- 1 – 12 (3.5%)
- 2 – 6 (1.8%)
- 3 – 15 (4.4%)
- 4 – 20 (5.9%)

- 5 – 50 (14.7%)
- 6 – 45 (13.2%)
- 7 – 66 (19.4%)
- 8 – 74 (21.8%)
- 9 – 36 (10.6%)
- 10 – 16 (4.7%)

Question 12: How do you feel about this statement: “There is good healthcare in my community”? *(345 responses)*

- 1 – 6 (1.7%)
- 2 – 4 (1.2%)
- 3 – 8 (2.3%)
- 4 – 17 (4.9%)
- 5 – 29 (8.4%)
- 6 – 32 (9.3%)
- 7 – 51 (14.8%)
- 8 – 81 (23.5%)
- 9 – 58 (16.8%)
- 10 – 59 (17.1%)

Question 13: How do you feel about this statement: “My community is a good place to grow old”? *(346 responses)*

- 1 – 5 (1.4%)
- 2 – 7 (2%)
- 3 – 11 (3.2%)
- 4 – 14 (4%)
- 5 – 28 (8.1%)
- 6 – 23 (6.6%)
- 7 – 61 (17.6%)
- 8 – 81 (23.4%)
- 9 – 65 (18.8%)
- 10 – 51 (14.7%)

Question 14: How do you feel about this statement: “My community is a safe place to live”? *(346 responses)*

- 1 – 3 (0.9%)
- 2 – 3 (0.9%)

- 3 – 4 (1.2%)
- 4 – 2 (0.6%)
- 5 – 18 (5.2%)
- 6 – 26 (7.5%)
- 7 – 450 (14.5%)
- 8 – 86 (24.9%)
- 9 – 90 (26%)
- 10 – 64 (18.5%)

Question 15: How do you feel about this statement: "Telehealth as an option would improve healthcare in my community"? *(297 responses)*

- 1 – 13 (3.8%)
- 2 – 9 (2.6%)
- 3 – 9 (2.6%)
- 4 – 21 (6.2%)
- 5 – 59 (17.3%)
- 6 – 39 (11.4%)
- 7 – 40 (11.7%)
- 8 – 52 (15.2%)
- 9 – 44 (12.9%)
- 10 – 55 (16.1%)

Question 16: How do you feel about this statement: "I would feel more comfortable managing my chronic conditions and/or overall health with access to remote patient monitoring devices"? *(298 responses)*

- 1 – 19 (5.6%)
- 2 – 2 (2.1%)
- 3 – 16 (4.7%)
- 4 – 19 (5.6%)
- 5 – 68 (19.9%)
- 6 – 44 (12.9%)
- 7 – 45 (13.2%)
- 8 – 52 (15.2%)
- 9 – 39 (11.4%)
- 10 – 32 (9.4%)

Question 17: What is your zip code? *(361 responses)*

- 69787 – 146
- 68047 – 39
- 68701 – 31
- 68784 – 42
- 68745 – 12
- 68710 – 9
- 68733 – 7
- 68723 – 5
- 68727 – 6
- 68071 – 4
- 68771 – 4
- 68740 – 3
- 68768 – 2
- 68791 – 1
- 68062 – 2
- 68776 – 2
- 68788 – 2
- 68004 – 2
- 68741 – 2
- 68038 – 2
- 68728 – 2
- 68790 – 2
- 68770 – 2
- 68767 – 2
- 51106 – 2
- 68715 – 2
- 68717 – 2
- 68739 – 2
- 68702 – 1
- 68030 – 1
- 68785 – 1
- 68731 – 1
- 69745 – 1
- 68779 – 1
- 68130 – 1
- 68757 – 1
- 68856 – 1
- 68636 – 1
- 69787 – 1
- 68765 – 1
- 67787 – 1
- 68067 – 1
- 51108 – 1
- 68079 – 1
- Prefer not to say - 3

Question 18: What is your age bracket? *(349 responses)*

- 18 – 24: 23 (6.6%)
- 25 – 34: 53 (15.2%)
- 35 – 44: 99 (28.4%)
- 45 – 54: 49 (15.5%)
- 55 – 64: 60 (17.2%)
- 65 or over: 60 (17.2%)

Question 19: What is the ethic group you most identify with? *(351 responses)*

- African American/Black – 1 (0.3%)
- Asian/Pacific Islander – 6 (1.7%)

- Hispanic/Latino – 57 (16.2%)
- Native American – 7 (2%)
- Prefer not to say – 7 (2%)
- White/Caucasian – 271 (77.2%)
- Native/Caucasian – 1 (0.3%)
- 2 or more races – 1 (0.3%)
- American – 1 (0.3%)

Question 20: What is your household income? *(340 responses)*

- Less than $25,000 – 36 (10.6%)
- $25,000 - $49,999 – 66 (19.4%)
- $50,000 - $74,999 – 78 (22.9%)
- Over $75,000 – 159 (46.8%)

Question 21: How do you pay for your healthcare? (341 responses)

- Health Insurance (private insurance) – 242
- Medicare – 45
- Medicaid – 19
- Pay cash (no insurance) – 21
- Indian Health Services – 3
- Prefer not to say – 2
- Parents insurance – 3
- Medicare Advantage – 1
- Marketplace insurance – 2
- Anymore insurance includes a lot of OOP cash – 2
- Secondary insurance – 1
- ACA – 1
- Tricare Military Insurance – 1

Demographics Tables

Ages

County	0 to 4	5 to 17	18 to 24	25 to 44	45 to 64	65 plus
Wayne	484	1494	2347	1970	1894	1595
Thurston	613	1679	680	1537	1322	835

Dixon	347	1044	439	1137	1415	1179
Cedar	528	1611	626	1639	2111	1829

County	0 to 4	5 to 17	18 to 24	25 to 44	45 to 64	65 plus
Wayne	4.95%	15.27%	23.99%	20.13%	19.36%	16.30%
Thurston	9.20%	25.19%	10.20%	23.06%	19.83%	12.53%
Dixon	6.24%	18.77%	7.89%	20.45%	25.45%	21.20%
Cedar	6.33%	19.31%	7.50%	19.64%	25.30%	21.92%

Race

County	American Indian	Asian	Black	White	Two or More	Hispanic	Non-Hispanic
Wayne	0.2%	0.3%	1.0%	89.7%	5.7%	10.1%	89.9%
Thurston	56.1%	0.9%	0.2%	36.9%	4.8%	4.4%	95.6%
Dixon	0.3%	1.0%	0.3%	83.7%	10.7%	15.1%	84.9%
Cedar	0.3%	0.2%	0.2%	95.9%	2.0%	2.4%	97.6%

Social Determinants of Health

County	Education	Health Care Access and Quality	Environment	Social Vulnerability Index
Cedar	37.96%	36.70%	6.07	0.28
Dixon	28.79%	39.60%	6.39	0.48
Thurston	34.01%	30.15%	6.5	0.89
Wayne	31.25%	38.35%	6.39	0.38

Socio-economic

County	Avg wage per Job	Median Household Income	Poverty Rate	Unemployment Rate
Wayne	$ 43,160.00	$ 68,309.00	12.4%	2.0%
Thurston	$ 56,501.00	$ 57,810.00	19.60%	2.7%
Dixon	$50,206.00	$ 67,521.00	8.40%	2.00%
Cedar	$43,419.00	$ 69,895.00	8.60%	1.80%