

COMMUNITY HEALTH NEEDS ASSESSMENT



Prepared for NCDHD by
The University of Nebraska
Public Policy Center

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Nebraska Counties:

Antelope, Boyd, Brown, Cherry, Holt, Keya Paha, Knox, Pierce, and Rock

2022

Osmond General Hospital

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Overview of the Comprehensive Community Health Needs Assessment

Introduction

Under the direction of the North Central District Health Department (NCDHD), the 2022-2024 Community Health Needs Assessment (CHNA) provides an overview of population health issues and outcomes facing communities in the NCDHD service area. Along with previous assessments, this 2022-2024 assessment will serve as a reference document for health care providers and community partners to continue working on the Community Health Improvement Plan (CHIP).

The purpose of this assessment is to provide an overview of the health status of residents in the service area, and identify factors affecting health. The data presented in this assessment should be used to educate and mobilize the community and its resources to improve the health of the population. The CHNA process is collaborative, and is intended to serve as a resource for multiple coalitions, organizations, and health care providers in the NCDHD service area. This assessment will be updated and revised every three years, providing communities with up-to-date data to evaluate progress made towards identified health priorities, and for the selection of new ones.

The University of Nebraska Public Policy Center (NUPPC) assembled this data, working with the NCDHD. Much of the public health and community well-being data was collected by the North Central District Health Department, through Mobilizing for Action through Planning and Partnerships (MAPP) process, as well as other sources of behavioral health and health data, and U.S. Census data.

Community Health Needs Assessment Process

Table 1 summarizes the overall timeline of the CHNA for the NCDHD.

Table 1. Community Health Needs Assessment Process Timeline

August 30, 2021	Internal NCDHD meetings to organize, coordinate participants & prepare for process.
September 7, 2021	Internal NCDHD meetings to organize, coordinate participants & prepare for process.
September 7, 2021	Internal NCDHD meetings to organize, coordinate participants & prepare for process.
October 12, 2021	CHA Partner Meeting was held to determine the vision, identify which questions will be included in the Community Health Status Assessment, outline focus group questions.
November 12, 2021	CHA Partner meeting was scheduled, but due to weather was moved to online survey format to gather CHA Partner feedback for the Forces of

November 15, 2021	Change Assessment, Community Themes and Strengths Assessment, and the Local Public Health System Assessment. (Results in Appendix) The Community Health Status Assessment was released to NCDHD partners and residents. (Results in Appendix)
February 2022	The draft CHA document was released to partners and the community for review and make alteration suggestions.
March 15, 2022	CHA partner meeting to share CHA data and select CHIP priorities.

Community Partners Involved in the Community Health Needs Assessment Process

Table 2 presents community partners involved in the CHNA process.

Table 2. *Community Health Needs Assessment Partners*

North Central District Health Department (NCDHD)	Niobrara Valley Hospital
NCDHD Board of Health	Osmond General Hospital
Antelope Memorial Hospital	Rock County Hospital
Avera Creighton Hospital	West Holt Memorial Hospital
Avera St. Anthony’s Hospital	Indian Health Services***
Brown County Hospital	The Evergreen Assisted Living Facility
Cherry County Hospital	Cottonwood Villa Assisted Living Facility
CHI Health Plainview Hospital	Good Samaritan Society – Atkinson Pregnancy Resource Center
Counseling & Enrichment Center	Brown-Rock-Keya Paha County
Building Blocks	O’Neill Public School Board
Region 4 Behavioral Health System	O’Neill Ministerial Association
Central Nebraska Community Action Partnership	West Holt Health Ministries
Northeast Nebraska Community Action Partnership	Northwest Nebraska Community Action Partnership
O’Neill Rotary Club	O’Neill Lions Club
NorthStar Services	Santee Sioux Nation
North Central Community Care Partnership-	Brown-Rock-Keya Paha County
Area Substance Abuse Prevention Coalition	O’Neill Public School Board
O’Neill Chamber of Commerce	O’Neill Ministerial Association
Central Nebraska Economic Development	West Holt Health Ministries
Holt County Economic Development	O’Neill Lions Club
Knox County Economic Development	O’Neill Rotary Club
Neligh Economic Development	Santee Sioux Nation
Pierce County Economic Development	University of Nebraska Lincoln Extension Office

***in the 2019-2021 Community Health Assessment, Native Americans, Hispanics, the elderly, and those living in poverty were identified as populations that are disproportionately affected by health risks or poorer health outcomes. NCDHD ensured these populations were represented in the health assessment efforts.

Notes. *** To be updated after the March 15th meeting.

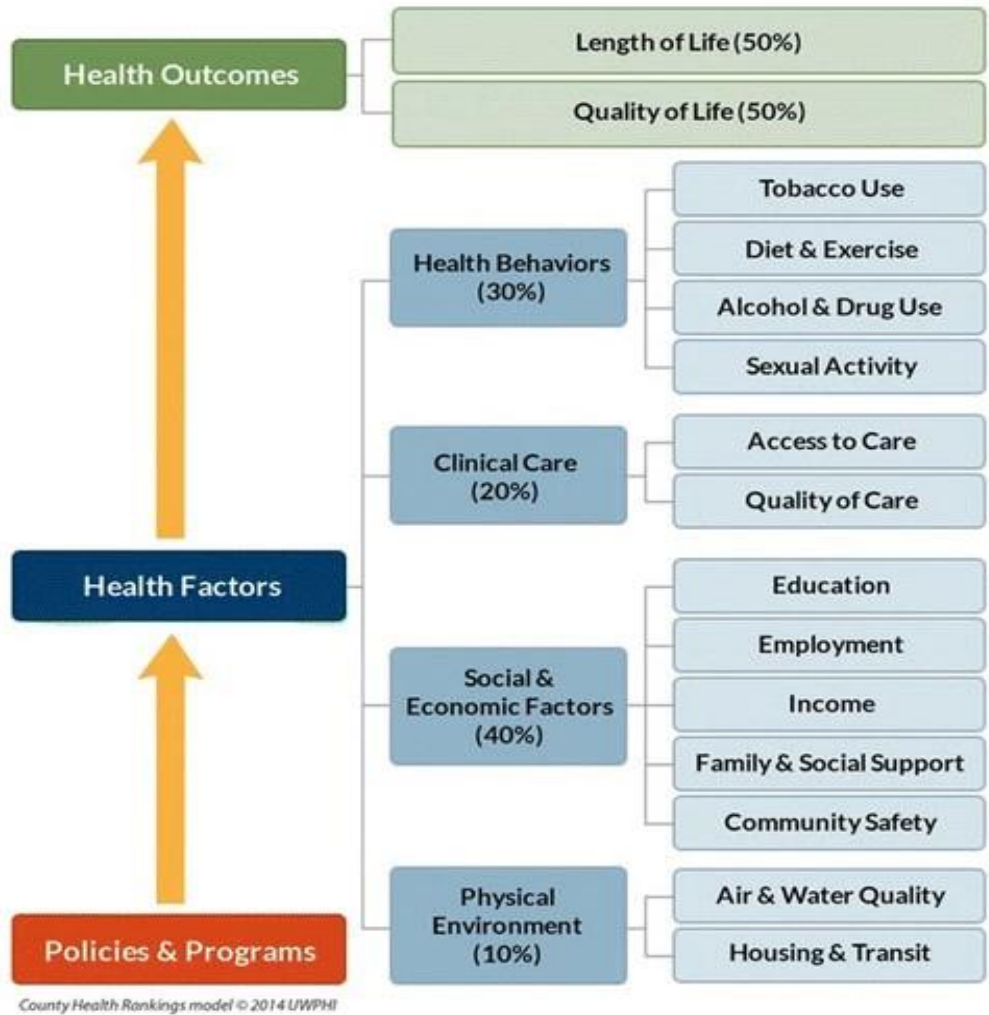
The County Health Rankings Model and Report Outline

This NCDHD CHNA employs the County Health Rankings model (CHR) as a conceptual and organizational structure (<https://www.countyhealthrankings.org/>). The CHR model is produced and supported by the University of Wisconsin Population Health Institute (<https://uwphi.pophealth.wisc.edu/>) in partnership with the Robert Wood Johnson Foundation (<https://www.rwjf.org/>). The CHR has been produced annually since 2010 and contains available county-level data from over 30 national sources (Remington, Catlin & Gennuso, 2015).

The CHR model is composed of three main components: Policies and programs, health factors and health outcomes. Policies and programs will be developed by NCDHD while crafting the CHIP. Health factors are composed of four different sub-components: 1) the physical environment, 2) social and economic factors, 3) clinical care, and 4) health behaviors. Each of these health factor sub-components are further divided into separate categories. Health outcomes are composed of two sub-components: 1) length of life, and 2) quality of life. Also included in the CHR model are policies and programs – those initiatives and interventions that can impact or influence the health factors that drive health outcomes.

The CHR model aligns with a core value of the public health profession – identifying the root causes and structures that impact community health and well-being. By providing an easy-to-understand conceptual structure that identifies and links health factors to resulting outcomes, the CHR model provides public health professionals and community members with data and evidence to enact suitable interventions to improve health. Figure 1. depicts the CHR model and its components.

Figure 1. *The Community Health Rankings Model*



This CHNA report provides an overview of the CHR health factors and health outcomes for the NCDHD – whether available on a county level or health district level. The policies and programs section describes current community health initiatives that the NCDHD and its stakeholders have developed.

There are two sections of this CHNA report that fall outside of the CHR model. First, data related to the COVID-19 pandemic and community perceptions towards COVID-19 vaccines are included for the NCDHD. Secondly, a section featuring relevant data on special populations – racial and ethnic minorities and the elderly – is provided to inform considerations of the health status and needs of these subpopulations. Both these sections are provided near the end of this report.

Select tables and graphics are provided throughout the body of this report to present relevant data. Additional tables and detailed results from data sources are provided in the Appendices to this report. It should be noted that two of the primary data sources used in this report were the Nebraska

Behavioral Risk Factor Surveillance System (NBRFSS) and the Nebraska Risk and Protective Factor Student Survey (NPRFSS). The NBRFSS is managed by the Nebraska Department of Health and Human Services (<https://dhhs.ne.gov/Pages/BRFSS.aspx>) and the University of Nebraska-Lincoln Bureau of Sociological Research (<https://bosr.unl.edu/sharp>). Both of those entities have published health district or county level data reports for the NCDHD. Thus, detailed data from those sources for the NCDHD are not included in the Appendices for this report as they are available at those entities' respective webpages.

Data Sources

Table 3 provides a summary description of data sources used in this CHNA. Data was synthesized across sources where available, but several data limitations are worth noting. The CHA represents the most local, direct source of information about the community members, however, as seen in Table 6, the sample of participants is not necessarily representative of the population of NCDHD. The FoC, CTSA, and LPHSA did not collect demographic information, and the NALHD had missing data for health concerns and demographic items for over half of the participants (65.9%), so the participant demographics were not complete, and therefore not presented in this report. CHR data was only available in aggregate, which prevented detailed statistical analyses, but did allow for basic analyses by county where applicable, as some items were missing information for one or more counties within NCDHD. The NBRFSS data was obtained in aggregate for NCDHD as well and presented in this report as percentages of responses. Additional data limitations are noted where appropriate.

Table 3. *CHNA Data Sources*

Data Source	Description
NCDHD Community Health Needs Assessments and Surveys (CHA)	Community survey conducted by the North Central District Health Department (NCDHD) in 2021 around issues of community well-being and quality of life. Frequency tables for all items and raw responses for open-ended items are presented in Appendix A.
Nebraska Association of Local Health Directors Survey (NALHD)	This short survey was administered during COVID-19 vaccination clinics and focuses on top health concerns among community members. Frequencies tables and raw responses to open-ended items are presented in Appendix B.

Data Source	Description
Forces of Change Assessment (FoC)	This assessment focuses on identifying important community characteristics and factors identified by community members. Traditionally conducted as focus group, the FoC was administered as a survey focusing on open-ended responses due to COVID-19. Frequency tables for all items and raw responses for open-ended items are presented in Appendix C.
Community Themes and Strengths Assessment (CTSA)	Provides a better understanding of health and quality of life issues that community members feel are important in their communities within the district. This assessment was administered in conjunction with the FoC, and all responses are presented in Appendix C.
Local Public Health Systems Assessment survey (LPHSA)	Supplemental community survey that focuses on community health concerns. This assessment was administered in conjunction with the FoC, and all responses are presented in Appendix D.
Community Health Rankings (CHR)	The County Health Rankings provide a snapshot of a community's health and a starting point for investigating and discussing ways to improve health. Information from CHR originates from many sources but are cited from their original source in this report.
Nebraska Behavioral Risk Factor Surveillance System (NBRFSS)	A comprehensive, annual health survey of adults aged 18 and older on risk factors for many areas impacting public health. This survey was most recently conducted in 2020, though some items are not asked every year. Items from previous years are cited with the latest year for which data is available.
Nebraska Department of Education (NDE)	Data contained in Nebraska's annual State of the Schools Report, including graduation and dropout rates, student characteristics, and student achievement scores.
Nebraska Risk and Protective Factor Student Survey (NRPFS)	A survey of Nebraska youth in grades 8, 10, and 12 on risk and protective factors regarding alcohol, tobacco, and drug use, and bullying, most recently published in 2018.
U.S. Census Bureau - American Community Survey (ACS)	U.S. Census Bureau estimates on demographic elements such as population, age, race/ethnicity, household income, poverty, health insurance, and educational attainment. Annual estimates available through the ACS (2015-2019) were used for this report.
U.S. Centers for Disease Control and Prevention Web-based Injury Statistics Query and Reporting System (CDC)	CDC's WISQARS is an interactive, online database that provides fatal and nonfatal injury, violent death, and cost of injury data.

NCDHD Demographics - Overall and CHA Participants

The overall population of NCDHD has decreased by 13.2% over the past twenty years. As seen in Table 4, community members who identify as white have decreased by 8.5% from 2010 to 2020, while the number of community members who identify as any other racial category have increased since 2010. Additionally, community members who identify as Hispanic or Latino have also increased by 86.0% since 2010. Table 5 presents the percentages of race/ethnicity of community members per NCDHD county. These demographic changes in NCDHD indicate a growing need for public health policies and programs to be centered around the specific needs of their communities to promote health equity. Health equity refers to a condition where all members of the community enjoy fair and just opportunities to be as healthy as possible (CDC, 2022). Negative mental health outcomes and health-related behaviors are the strongest and most consistent health outcomes associated with racial and ethnic minority status (Paradies, 2006). Due to limitations of the data gathered for this report, an in-depth analysis of racial health disparities for NCDHD was not possible, however, the Special Populations section provides an overview of racial breakdown of schools within NCDHD in order to better understand the community population.

Table 4. *NCDHD Demographics*

	2000		2010			2020		
	Pop.	%	Pop.	%	% Change ^a	Pop.	%	% Change ^b
NCDHD Total	51,084	100.0%	46,764	100.0%	-8.5%	44,329	100.0%	-5.2%
Gender								
Female	25,894	50.7%	23,660	50.6%	-8.6%	22,150	50.0%	-6.4%
Male	25,190	49.3%	23,104	49.4%	-8.3%	22,178	50.0%	-4.0%
Age								
Under 5 years	2,977	5.8%	2,766	5.9%	-7.1%	2,782	6.3%	0.6%
5 -14 years	7,824	15.3%	6,226	13.3%	-20.4%	5,850	13.2%	-6.0%
15 -24 years	5,916	11.6%	4,876	10.4%	-17.6%	4,802	10.8%	-1.5%
25 -44 years	12,198	23.9%	9,372	20.0%	-23.2%	8,916	20.1%	-4.9%
45 -64 years	11,840	23.2%	13,663	29.2%	15.4%	11,938	26.9%	-12.6%
65 -84 years	8,640	16.9%	8,192	17.5%	-5.2%	8,403	19.0%	2.6%
85 and older	1,689	3.3%	1,677	3.6%	-0.7%	1,636	3.7%	-2.4%
Race/Ethnicity								
White	49,518	96.4%	44,369	94.3%	-10.4%	40,586	91.6%	-8.5%
African American	27	0.1%	120	0.3%	344.4%	128	0.3%	6.7%
Native American	982	1.9%	1,074	2.3%	9.4%	1,377	3.1%	28.2%
Asian/Pacific Islander	98	0.2%	24	0.1%	-75.5%	142	0.3%	491.7%

Other	14	0.0%	309	0.7%	2107.1%	643	1.5%	108.1%
2+ Races	318	0.6%	388	0.8%	22.0%	1,453	3.3%	274.5%
Hispanic/Latino	410	0.8%	788	1.7%	92.2%	1,466	3.3%	86.0%

Note. The counts for racial categories are considered Non-Hispanic, those who identify as Hispanic/Latino are accounted for in the ethnic category of Hispanic/Latino.

^a Change in population from 2000 to 2010

^b Change in population from 2010 to 2020

Table 5. *Race & Ethnicity Percentages per NCDHD County 2020*

	Antelope	Boyd	Brown	Cherry	Holt	Keya Paha	Knox	Pierce	Rock
White	91.1%	93.5%	86.5%	86.2%	88.8%	93.4%	81.8%	93.8%	95.4%
African American	0.3%	0.0%	0.1%	0.2%	0.4%	0.0%	0.2%	0.4%	0.2%
Native American	0.2%	1.0%	0.4%	5.2%	0.5%	0.3%	11.2%	0.3%	0.1%
Asian/Pacific Islander	0.4%	0.0%	0.3%	0.1%	0.5%	0.1%	0.4%	0.2%	0.0%
Other	1.4%	0.7%	3.4%	0.6%	2.2%	0.8%	1.1%	0.7%	0.7%
2+ Races	3.1%	3.0%	3.7%	5.0%	2.6%	2.9%	3.2%	2.7%	2.0%
Hispanic	3.4%	1.8%	5.7%	2.6%	4.9%	2.5%	2.2%	1.9%	1.6%

Note. Percents for racial categories are considered Non-Hispanic, those who identify as Hispanic/Latino are accounted for in the ethnic category of Hispanic/Latino.

The community members of NCDHD who participated in the CHA were overwhelmingly white (95.6%), non-Hispanic (97.5%), 45 years of age or older (65.6%), primarily spoke English (100%), married (80.4%), and resided in Holt County (40.7%). It is recommended that in future years that the CHA utilizes a stratified sampling method of community members in order to capture responses that are more representative of the community.

Table 6. *CHA Participant Demographics*

Demographic Item	<i>n</i>	%
Selected race (n = 204)		
African American/Black	0	0.0
American Indian/Alaskan Native	4	2.0
Asian	0	0.0
Hawaiian/Other	0	0.0
White	195	95.6
2 or more races	4	2.0
Other	1	0.4
Selected ethnicity (n = 204)		
Not Hispanic or Latino	196	97.5

Demographic Item	<i>n</i>	%
Hispanic or Latino	5	2.5
Age group (<i>n</i> = 201)		
Under 18	0.0	0.0
18 to 24	4	2.0
25 to 44	65	32.3
45 to 64	105	52.2
65 & over	27	13.4
Primary Language (<i>n</i> = 204)		
English	204	100.0
Refugee Status (<i>n</i> = 202)		
No	194	96.0
Yes	8	4.0
From Where? (<i>n</i> = 8)		
No Response	8	100.0
Marital Status (<i>n</i> = 204)		
Married	164	80.4
Widowed	10	4.9
Single	15	7.4
Divorced	9	4.4
Separated	1	0.5
Unmarried and live with a partner	5	2.5
County Lived (<i>n</i> = 204)		
Holt	83	40.7
Boyd	12	5.9
Cherry	6	2.9
Rock	4	2.0
Brown	11	5.4
Keya Paha	3	1.5
Knox	44	21.6
Antelope	9	4.4
Pierce	29	14.2
Other (Please specify)*	3	1.5
Cedar	1	0.4
Wheeler	2	0.8

*Responses from participants were included in analyses as they worked or went to school within NCDHD.

NCDHD Comprehensive Health Needs Assessment

Policies and Programs

NCDHD Mobilizing for Action through Planning and Partnerships Initiative

The NCDHD employed the Mobilizing for Action through Planning Partnerships (MAPP) framework to identify priorities and strategies to address community health issues. MAPP is an established framework developed by the National Association of County and City Health Officials and has been used by numerous communities since its inception in 2001. Foundationally, the MAPP approach engages community members, stakeholders, and healthcare professionals in assessing the overall health status of the community, prioritizing health concerns, and identifying strengths and gaps salient to community health (NACCHO, 2020). The MAPP approach used by the NCDHD composed four different but interrelated processes to assess overall health status, systems, and priorities within the community – defined as the coverage area for the NCDHD:

- An NCDHD CHNA: A comprehensive overview of data that provides a snapshot of the community’s health status. The majority of this report serves as the CHNA. As noted above, the conceptual and organizational structure of the NCDHD’s CHNA follows the CHR model and includes multiple data sources used by the CHR. Additionally, the NCDHD created and administered an online CHNA Survey that was made available to residents of the service area to gauge specific items of interest. Detailed data points from the CHNA Survey are provided in Appendix A. To complement the CHNA Survey, a smaller scale survey was also developed by the NCDHD and administered to individuals who attended COVID-19 vaccine clinics. This survey was based on items developed in partnership with the Nebraska Association of Local Health Directors and is referred to as the NCDHD NALHD Survey. Detailed data points from the NCDHD NALHD Survey are provided in Appendix B.
- NCDHD Forces of Change Assessment – a comprehensive assessment of factors within the community that affect health status. The Forces of Change Assessment process evolved from a survey and interviews with community members and stakeholders from the NCDHD service area. Through the survey portion of the Forces of Change Assessment, community members identified A) events, factors and trends within the NCDHD service area relevant to community health; B) threats and opportunities to improve community health; and C) important priorities and strengths within NCDHD communities salient to improving population health. Through a

series of interviews, stakeholders and residents of the NCDHD service area provided more in-depth insight into seeking health information and identifying priorities and barriers for community health. Data and themes from the Forces of Change Assessment results are provided in Appendix C.

- NCDHD Local Public Health System Assessment – an overview of community perceptions and experiences with the local public health system in the NCDHD service area. This assessment was composed largely of survey questions asking respondents to indicate their opinions of how well the Ten Essential Public Health Services are provided. Data points from the Local Public Health System Assessment are provided in Appendix D.

NCDHD Community Health Improvement Plan 2019-2021

PRIORITIES

1. CHRONIC DISEASE DETECTION & MANAGEMENT
2. MENTAL WELLNESS

GOALS

1. Effectively screen and manage chronic disease throughout the district.
2. Mental Health will be promoted throughout the district as an integral part of overall well-being.

SUMMARY

The 2019-2021 Community Health Improvement Plan, goals, and priorities were sidelined by NCDHD and partners due to the COVID-19 pandemic.

Health Factors

The County Health Rankings Model provides a holistic structure that identifies factors impacting public health into four categories: Physical Environment, Social and Economic Factors, Clinical Care, and Health Behaviors (CHR, 2021). Studies have previously examined associations between health outcomes and CHR health factor measures and found strong support for the structure and categorizations used in the CHR (Hood et al., 2016; Krause et al., 2021).

Public health professionals have known for some time that the determinants of health are broad, complex, and interact in multiple ways to increase risk and cause illness. An abundance of research indicates that multiple causal connections impact health outcomes (Braveman & Gottlieb, 2014; LaVeist & Pierre, 2014; Viner et al., 2012; Xanthos et al., 2010). In addition to the measures

employed by the CHR, the NCDHD CHNA Survey queried residents about their subjective perceptions of health concerns (see Table 7; see Tables A1 and A2 for additional health concern data and qualitative responses for ‘Other’ or ‘Something else’). The top concerns identified by respondents ($n = 242$) included cancer (65.2%), heart disease (59.5%), mental health (58.7%), lack of exercise (36.7%), and diabetes (36.4%) – all of which are health outcomes driven by multiple factors.

Table 7. *Top Health Concerns of NCDHD CHA Respondents*

	Count	%
Cancer	158	65.2
Heart disease	144	59.5
Mental health	142	58.7
Getting enough exercise	89	36.7
Diabetes	88	36.4
Alcohol, Drugs and Tobacco use	65	26.8
Challenges getting healthy and affordable food	61	25.3
Chronic lung disease	46	18.9
Getting around town safely (driving, walking and riding)	35	14.5
Asthma	34	14.4
Something else	24	9.9

NCDHD Physical Environment

A community’s physical environment refers to where people live, work, learn, and play. Individuals interact with their physical environment through the dwellings in which they live, their means of transportation, the air they breathe, and the water they drink. The quality of these aspects of people’s lives can affect their ability to live healthy and productive lives. The main areas of concern regarding the physical environment within the NCDHD service area relate to housing problems and long commutes. Additionally, 69.6% ($n = 433$) of NCDHD residents reported having access to safe places to walk in their neighborhood in 2017, down from the 80.4% ($n = 518$) reported in 2015 (NBRFSS, 2020). However, counties within NCDHD have reported overall good air and drinking water quality.

Physical Environment: NCDHD Housing & Transit

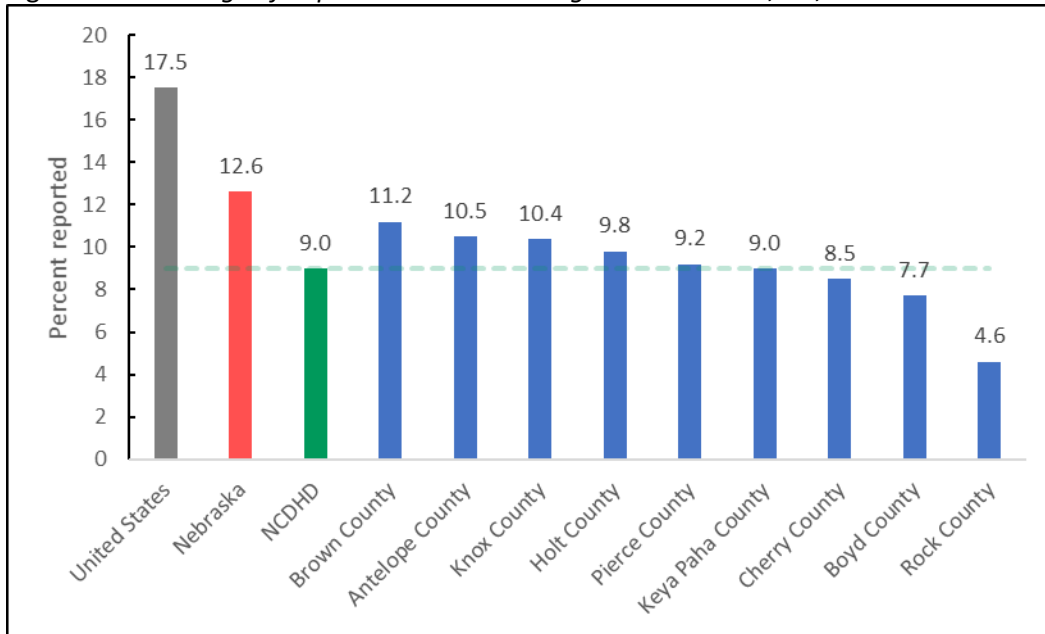
The housing options and transportation systems that shape a community-built environment affect where its residents live and how they get from place to place. Choices made regarding housing and transportation, as well as underlying opportunities that lead to these choices, also impact community health (CHR, 2021).

Physical Environment: Housing

Housing has been associated with health via several pathways: home quality and safety, housing affordability and stability, and community resource availability and accessibility. Adequate housing can contribute to good health by protecting individuals and families from harmful exposures as well as by providing them with a sense of privacy, security, stability, and control. In contrast, poor quality and inadequate housing contributes to health problems such as infectious and chronic diseases, injuries, and poor childhood development. Housing measures can also be considered proxy indicators of more general socioeconomic circumstances (Shaw, 2004). Households experiencing severe cost burdens face difficult trade-offs to meet other basic needs, such as health care costs, healthy food, utility bills, or reliable transportation to work or school (Kushel et al., 2006; Long, 2003; Levy & DeLeire, 2003; Ma et.al, 2008). This can then lead to increased emotional strain and stress levels (Hiscock et al., 2001; Dunn, 2000).

As of July 2019, a total of 24,828 housing units were reported within the NCDHD, 74.3% of which are reported as owner-occupied, with a median value of \$95,900.00, in which occupants paid a median monthly cost of \$1,055.00 (US Census, 2019). Households who reported renting within the NCDHD paid a median gross cost of \$630.00 a month. NCDHD residents reported an average of 2.3 persons per household (US Census, 2019). Among the households within NCDHD, 9.0% have reported having severe housing problems such as high housing costs (7.3%), overcrowding (1.2%), or lacking a complete kitchen or plumbing facilities (1.3%; CHR, 2017; Figure 2). Overall, NCDHD (9.0%) reported lower severe housing problems than the U.S. rate (17.5%; $t(8) = -12.915, p < .05$) and the Nebraska rate (12.6%; $t(8) = -5.476, p < .05$). Brown County (11.2%) reported a significantly higher percentage of severe housing problems than the NCDHD total (9.0%; $t(8) = 3.351, p < .05$), and Rock County (4.6%) reported a significantly lower percentage of severe housing problems than the NCDHD total (9.0%; $t(8) = -6.669, p < .05$), with all other counties reporting statistically similar percentages to the NCDHD average.

Figure 2. Percentage of Reported Severe Housing Problems in US, NE, & NCDHD.



Note. NCDHD average line is calculated at 9.0% using CHAS 2013-2017 data.

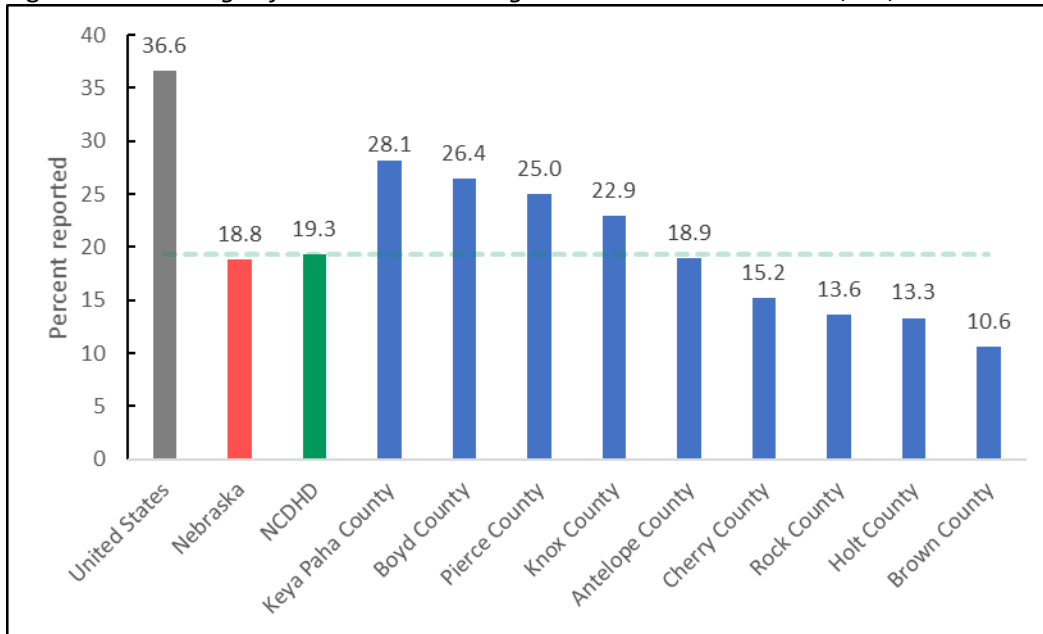
Access to reliable, high-speed broadband internet can improve access to education, employment, and health care opportunities and is associated with increased economic development (Conroy et al., 2021). Within the NCDHD, 84.5% of households reported having access to a computer, and 76.3% reported having access to a broadband internet connection (U.S. Census, 2019; ACS, 2019).

Physical Environment: Public Transit

Public systems such as city buses, sidewalks, bike paths, and highways, as well as cars and bicycles, are included within public transit. However, heavy dependence on individual motorized transit can lead to increased traffic-related accidents and death, air pollution, and physical inactivity and obesity (Robert Wood Johnson Foundation, 2021). Additionally, driving long commutes alone have been associated with poorer mental health outcomes (Künn-Nelen, 2016; Hilbrecht et al., 2014).

According to the American Community Survey (2019), 73.0% of NCDHD residents reported that they drive alone to work, with 19.3% of those residents reporting that their commute is longer than 30 minutes (Figure 3). The average travel time to work in NCDHD is 16.1 minutes (ACS, 2019). The total percentage of NCDHD residents with long commutes is significantly lower than the U.S.'s (36.6%; $t(8) = -8.012, p < .05$) but similar to Nebraska's total percentage (18.8%; $t(8) = 0.247, p > .05$). Three counties reported significantly higher percentages of residents who have long commutes: Keya Paha (28.1%; $t(8) = 4.068, p < .05$), Boyd (26.4%; $t(8) = 3.279, p < .05$), and Pierce (25.0; $t(8) = 2.629, p < .05$).

Figure 3. Percentage of Residents with Long Commutes to Work in U.S., NE, & NCDHD



Note. NCDHD average line is calculated at 19.3% using ACS 2015-2019 data.

Physical Environment: NCDHD Air & Water Quality

Clean air and safe drinking water are essential to community health, as they both support brain health and bodily functions throughout development. The U.S. Environmental Protection Agency (EPA) provides thresholds for six principal pollutants in the National Ambient Air Quality Standards, including particle pollution (PM). Counties within NCDHD appear to enjoy relatively clean air and have had no reported drinking water violations.

Physical Environment: Air Quality

Air quality is an important factor to community health, as ambient air pollution has been correlated with decreased lung function, asthma, chronic bronchitis, and other negative pulmonary effects, and long-term exposure to fine particulate matter specifically is linked with premature death risk among those 65 and older (Di et al., 2017; Pope et al., 1995). Air quality is modeled at a county-level through measurement of fine particulate matter (PM_{2.5}) 2.5 microns or less in width per cubic meter (µg/m³) and number of days with ground-level ozone, as reported by the CDC's National Environmental Public Health Tracking Program from 2016. PM_{2.5} thresholds are reported as a three-year average, in which the primary standard of PM_{2.5} under 12 µg/m³ are considered safe for public health protection, including sensitive populations such as children, the elderly, and people with asthma, while the secondary standard PM_{2.5} under 15 µg/m³ protects against decreased visibility and damage to animals, crops, vegetation, and buildings. Counties within NCDHD reported average levels of PM_{2.5} (5.2) that were

well below the national threshold of 12, significantly below the national average (7.2; $t(8) = -7.747, p < .05$), and similar to the Nebraska average (5.7; $t(8) = -2.032, p > .05$). The standard for ozone pollution, otherwise known as “smog”, is 0.08 parts per million. However, within the NCDHD service area, only Holt County reported exposure to unhealthy ozone levels in 2016.

Physical Environment: Water Quality

Poor drinking water has been associated with illnesses such as nausea; lung and skin irritation; cancer; and kidney, liver, and nervous system damage, as well as birth defects and death (Centers for Disease Control and Prevention, 2019; Craun et al., 2010). Water quality is measured by the reported number of drinking water violations per county to the EPA’s Safe Drinking Water Information System (SDWIS) from 2019, which include maximum contaminant level, maximum residual disinfectant level, and treatment technique violations. While Nebraska as a whole has reported drinking water violations in some counties, no counties within NCDHD had any drinking water violations reported in 2019.

NCDHD Social and Economic Factors

Social and economic factors affect one’s ability to afford housing and medical care, make healthy choices, manage stress, and provide support to others (CHR, 2021) and should be considered when making decisions about how to appropriate resources within communities. These factors include education, employment, income, family and social supports, and community safety. Residents within NCDHD appear to be appropriately educated, be predominately employed, have relatively secure social supports, and enjoy relatively low crime rates. However, household income measures indicate a higher rate of child poverty than the state average, and nearly a third of those surveyed reported making less than a living wage last year (CHA, 2021; Glasmeier, 2020). Additionally, accidental injury rates are higher than national and state averages and self-reported safety behaviors are fairly inconsistent.

NCDHD residents also provided some feedback on several areas that they feel are important to their communities. When asked about what they thought was important to their community, residents touched on community connections, support, and equality; access to high quality physical and mental healthcare; good school systems; agriculture; supporting community businesses; and retaining the youth in their communities. When asked what made them proud of their community, comments centered around pride in community connection and collaboration. See Tables C1 to C28 for detailed data points on these themes.

Social and Economic Factors: Adult Education Levels & Youth Education Levels

Higher levels of education are associated with better employment opportunities, higher incomes, greater sense of control in one’s life, and increased social supports, all of which encourage

opportunities for healthy decision-making (Egarter, Braveman, Sadegh-Nobari, & Grossman-Kahn, 2011). Available measures of community education include survey items asking for self-reported highest completed educational level and student perspectives of their school, as well as school district-level language arts and math proficiencies. Overall, the residents of NCDHD appear to be appropriately educated, as the majority of adults who live in NCDHD have reported completing high school and some college; third graders are slightly ahead of their grade levels in reading and math; and the majority of eighth, 10th, and 12th graders report having good grades (mostly A's and B's). See Table A3 for NCDHD client reported highest degree of education.

Social and Economic Factors: Adult Education Levels

The overall reported percentage of adults (25 years or older) who have graduated high school in NCDHD (94.7%) is significantly higher than the United States (88.0%; $t(8) = 13.519, p < .05$) and Nebraska (91.4%; $t(8) = 6.607, p < .05$) average rates (ACS, 2019). Additionally, the rate of adults (25-44 years old) living in NCDHD who reported having completed some college (75.7%) is significantly higher than the United States (66.0%; $t(8) = 3.458, p < .05$) rates but similar to the overall Nebraska (72.0%; $t(8) = 1.314, p > .05$) rates (ACS, 2019). The reported percentage of adults in NCDHD who report having completed a bachelor's degree or higher (21.6%), however, is significantly lower than the national (32.1%; $t(8) = -12.156, p < .05$) and Nebraska (31.9%; $t(8) = -11.926, p < .05$) average rates (ACS, 2019).

Social and Economic Factors: Youth Education Levels

Student-level data provides another way to assess community education. The average grade level performance for third grade NCDHD students is 3.2 for reading and 3.2 for mathematics (Stanford Education Data Archive, 2018). This indicates that on average, third graders in the NCDHD service area are testing slightly above their grade level in reading and math. The majority of eighth, 10th, and 12th grade students in NCDHD reported receiving mostly A's or B's (79.0%), feeling safe at their school (90.8%), and having an adult at school that listens to them (87.7%; NRPFS, 2018). Graduation rates from school districts within NCDHD (92.3%) are significantly higher than the statewide (88.0%; $t(13) = 4.142, p < .05$) student population (NDE, 2021).

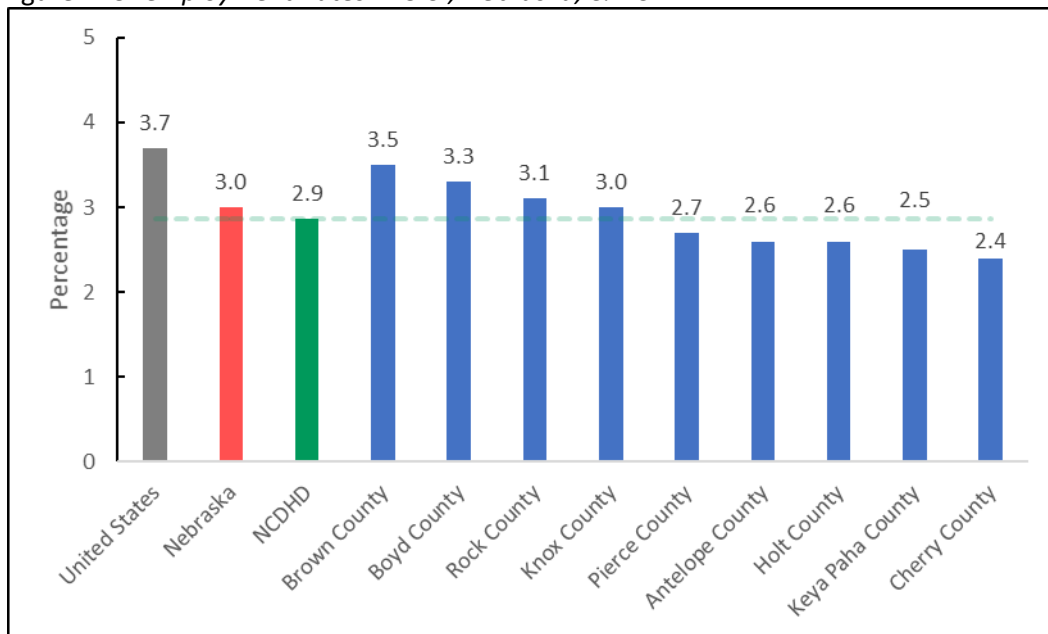
Social and Economic Factors: Employment

Gainful employment can provide income and a sense of purpose and belonging. Employment may often include provision of health care insurance, paid sick leave, and wellness programs that can encourage healthy choices. Employment can have profoundly positive effects on social and emotional well-being and self-efficacy. Unfortunately, those who are unable to find and maintain gainful employment often are more likely to suffer increased stress, high blood pressure, and greater

prevalence of heart disease and depression than those with gainful employment (Braveman, Dekker, et al., 2011; RWJF, 2013).

The unemployment rate in NCDHD (2.9%) is significantly below that of the national average (3.7%; $t(8) = 6.395, p < .05$) but similar to Nebraska's (3.0%; $t(8) = 1.071, p > .05$) overall rate (Figure 4). When comparing individual counties within NCDHD, Brown (3.5; $t(8) = -4.874, p < .05$) and Boyd (3.3; $t(8) = -3.353, p < .05$) counties have higher unemployment rates, while Keya Paha (2.5; $t(8) = 2.733, p < .05$) and Cherry (2.4; $t(8) = 3.493, p < .05$) counties have lower unemployment rates than the average rate for NCDHD (2.9%; Bureau of Labor Statistics, 2019). See Table A4 for additional data on reported employment status.

Figure 4. *Unemployment Rates in U.S., Nebraska, & NCDHD*



Note. NCDHD average line is calculated at 2.9% using BLS 2019 data.

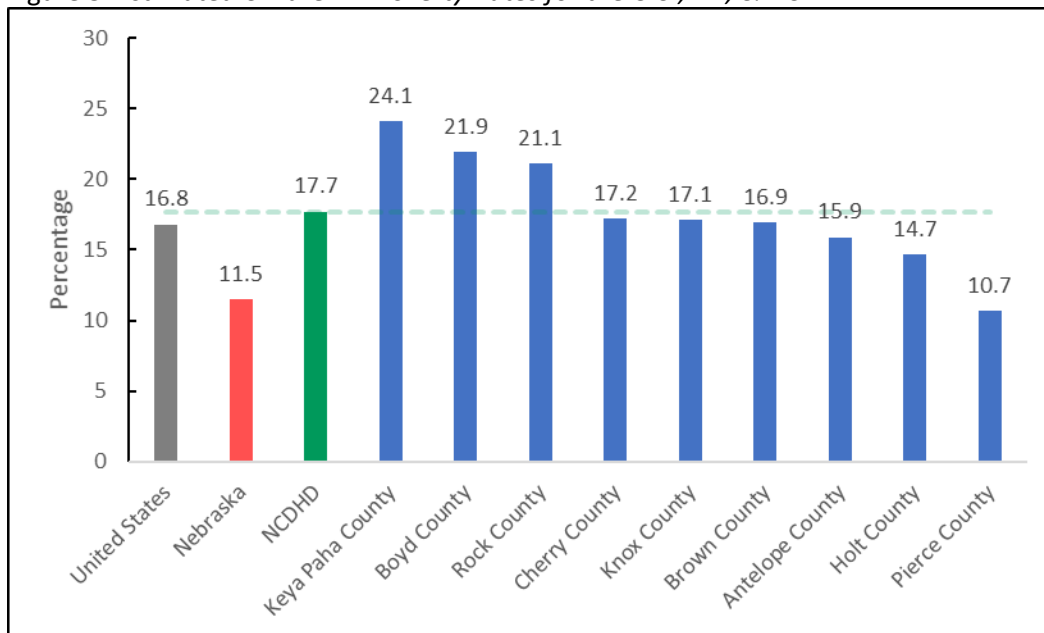
Social and Economic Factors: Income

A household's income level determines what types of health-related choices are available. Those with lower levels of income often have lower access to healthy foods, preventative health care, and educational opportunities and are also associated with poorer physical and mental health outcomes (Braveman, Egerter, & Barclay, 2011). Community income levels can be assessed in terms of percentage of children and households in poverty, income inequality (the ratio of household incomes at the 80th and 20th percentiles) and reported household incomes.

The reported five-year median estimate of NCDHD residents' household income is \$56,250, while their per capita average income is \$30,412 (US Census Bureau, 2019). When surveyed about their household income, 31.9% of NCDHD residents ($n = 185$) reported an annual household income at or below a calculated Nebraska average for a living wage (CHA, 2021; Glasmeier, 2020). See Tables A5 and A6, respectively, for data on reported household income and NCDHD client-reported assistance program participation.

According to the US Census Bureau (2019), 12.1% of NCDHD residents and 17.7% of children are estimated to live in households with poverty-level incomes. As seen in Figure 5, the NCDHD estimated percentage of children living in poverty is similar to the national rate (16.8%; $t(8) = 0.688, p > .05$) but higher than the Nebraska rate (11.5%; $t(8) = 4.593, p < .05$). Estimates of children in poverty for Keya Paha (24.1%; $t(8) = -4.691, p < .05$), Boyd (21.9%; $t(8) = -3.070, p < .05$), and Rock (21.1%; $t(8) = -2.480, p < .05$) counties are significantly higher than the NCDHD average rate, while Pierce County (10.7%; $t(8) = 5.182, p < .05$) is significantly lower. Table A7 provides additional data on reported household size by CHA survey respondents.

Figure 5. Estimated Children in Poverty Rates for the U.S., NE, & NCDHD



Note. NCDHD average line is calculated at 17.7% using US Census Bureau 2019 data.

Children within NCDHD (46.3%) who are eligible for free or reduced lunch rates (National Center for Education Statistics, 2019) are on average similar to national (52.0%; $t(8) = -2.160, p > .05$) and Nebraska (45.0%; $t(8) = 0.595, p > .05$) rates. Boyd (60.0%; $t(8) = 5.309, p < .05$) is the only county that has significantly higher rates of free/reduced lunch eligible students than the NCDHD average.

Social and Economic Factors: Family & Social Support

Strong social support systems made up of family, friends, colleagues, and acquaintances provide protective factors for physical and mental health and help to facilitate healthy choices (Kawachi et al., 1999). Individuals who lack adequate social support can be especially susceptible to stress or depression. Social and emotional wellbeing is also associated with increased cardiovascular issues and behavioral choices such as overeating and smoking (Egerter, Braveman, & Barclay, 2011).

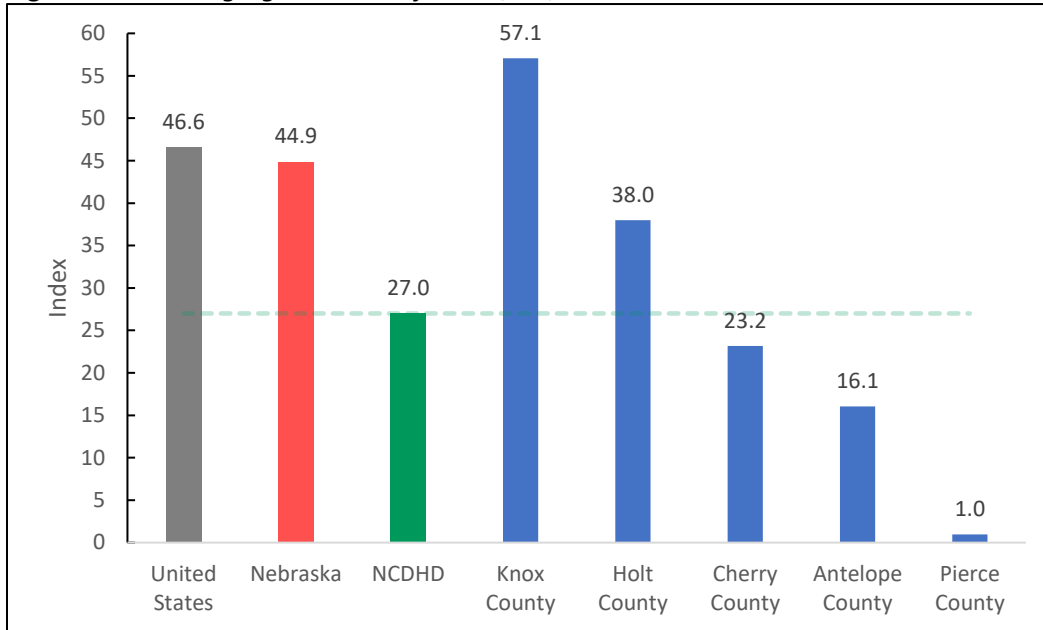
According to the results of the American Community Survey (2019), 15% of children within the NCDHD live in single-parent households, which is associated with adverse mental health outcomes and unhealthy behaviors for children and adults (Balistreri, 2018; Manning, 2015). However, the percentage of children in single-family households in the NCDHD (15.0%) is significantly lower than the US average (25.5%; $t(8) = -5.349, p < .05$) and the Nebraska average (21.0%; $t(8) = -3.111, p < .05$). This result is supported by NCDHD student self-reports, with 14% saying they lived with one parent (NRPFS, 2018). Students living in the NCDHD also largely agreed that they could ask their parents for help with personal problems (85.4%) and that they had an adult who listens to them at home (86.9%).

The rate of community social associations, as measured by a proxy of county businesses self-reporting the number of membership associations per 10,000 population (County Business Patterns, 2018), in the NCDHD (16.7%) is significantly higher than the national rate (9.3%; $t(8) = 2.959, p < .05$) and similar to the Nebraska rate (14.0%; $t(8) = 1.091, p > .05$). Additionally, 75% ($n = 12$) of NCDHD residents responded affirmatively when asked if there were networks of support for individuals and families during times of stress and need (FoC, 2021). In response to that question in the FoC (2021) survey, one respondent commented:

“I believe we could do more to help those that are dealing with behavioral health issues such as depression, grieving, and drug addiction.”

Residential segregation is defined as the degree to which two or more groups live separately from one another within a geographic area (ACS, 2019). Residential segregation within a community remains prevalent in many areas within the country and is associated with poor health outcomes in areas such as reproductive health, infectious and chronic disease, and increased rates of mortality (Bailey et al., 2017; Kramer & Hogue, 2009). As seen in Figure 6, the average index of racial segregation in the NCDHD service area (27.0) appears lower than the national (46.6) and Nebraska (44.9) indices, but due to a lack of county-level data from several counties, a valid analysis is not available. It should be noted that the Santee Sioux Reservation of the Santee Sioux is located in Knox county, which would explain why it has a high racial segregation index.

Figure 6. Racial Segregation Index for U.S., NE, and NCDHD.



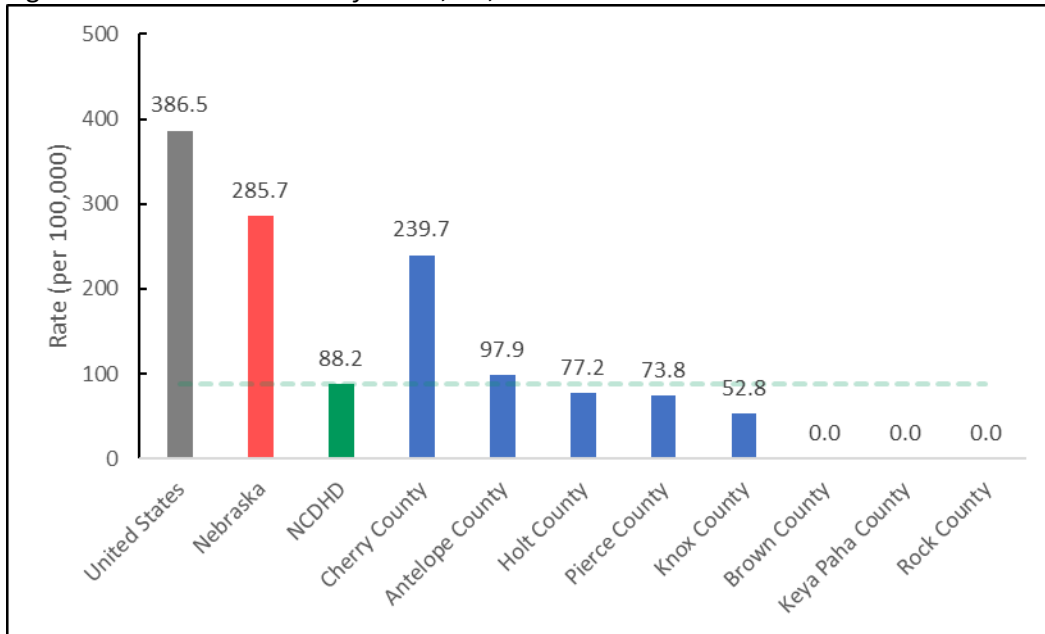
Note. NCDHD average line is calculated at 27.0 using ACS 2019 data. No data was available for Boyd, Brown, Keya Paha, & Rock counties.

Social and Economic Factors: Community Safety

Community safety, which encompasses violent crime, unintentional injuries, and community-level safety behaviors, affects the quality of life for all community members. Community members provided feedback on several key themes for a healthier community. See Tables A8 to A9 for safety-related behaviors among CHA survey respondents, and concerns about overall health.

The violent crime rate within NCDHD, which is measured as the number of violent crimes reported per 100,000 population, is relatively low (88.2) compared to the national (386.5; $t(7) = -11.299$, $p < .05$) and Nebraska (285.7; $t(7) = -7.729$, $p < .05$) rates (Uniform Crime Reporting, 2016). As seen in Figure 7, Cherry County's (239.7) violent crime rate appears higher than NCDHD's rate, although due to the lack of data from all counties, these results should be interpreted with caution. No homicides were reported within the NCDHD service area between 2015 and 2019 (National Center for Health Statistics, 2019).

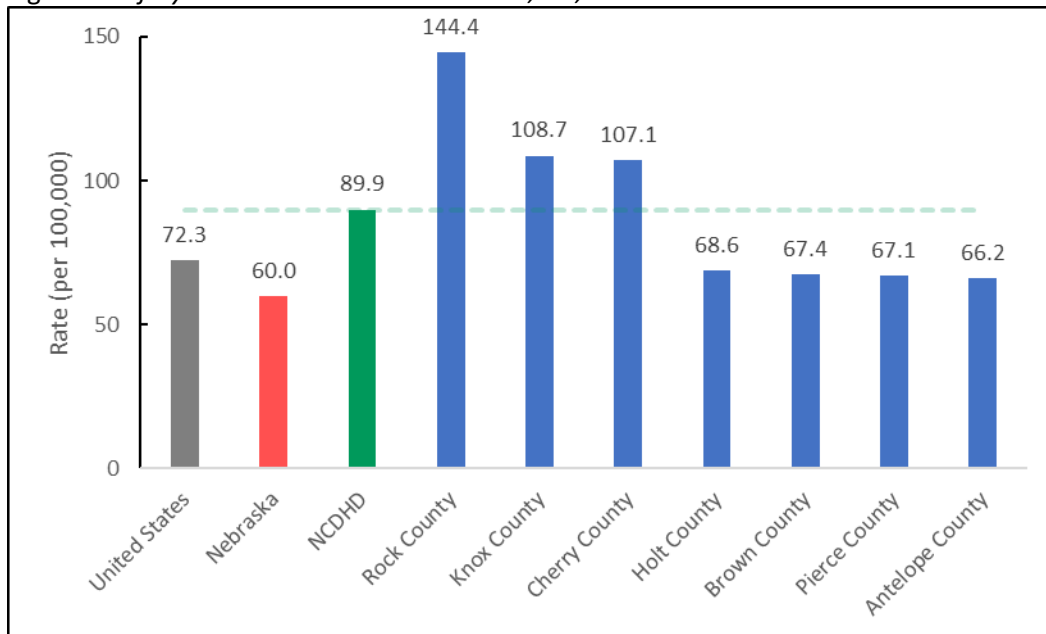
Figure 7. Violent Crime Rates for U.S., NE, and NCDHD



Note. NCDHD rate calculated at 88.2 using FBI 2014 & 2016 data. No data was available for Boyd County.

Unintentional injury-related deaths are the third leading cause of death in the U.S., the fourth leading cause of death in Nebraska, and the sixth leading cause of death in the NCDHD service area (CDC, 2020). As seen in Figure 8, the rate of injury-related deaths in the NCDHD service area is 89.9 per 100,000 residents (NCHS, 2019). No firearm fatalities were reported within the NCDHD service area between 2015 and 2019 (NCHS, 2019). Analyses were not available due to unreported data from Boyd and Keya Paha counties.

Figure 8. Injury-Related Deaths Rates in U.S., NE, and NCDHD



Note. NCDHD rate calculated at 89.9 using NCHS 2019 data. No data was available for Boyd and Keya Paha counties.

Social and Economic Factors: Motor Vehicle Safety

Individual-level safety behaviors also contribute to the overall health and sense of well-being within a community. Vehicular safety plays a large role in preventing accidental injuries, which in turn promotes feelings of safety among residents. The NCDHD service area has a rate of 20.0 motor vehicle crash deaths per 100,000 residents (NCHS, 2019). When asked about vehicle safety, only 52.5% ($n = 727$) of NCDHD residents said they always wear a seatbelt while driving or riding in a car, 63.8% ($n = 379$) reported talking on a cell phone while driving in the past 30 days, and 22.9% ($n = 380$) said they had texted while driving in the past 30 days (NBRFSS, 2020; NBRFSS, 2017). Teenagers also reported talking on their cell phone ($n = 349$; 42.3%) and texting or using an app ($n = 389$; 48.7%) while driving in the past 30 days (NRPFS, 2018).

Social and Economic Factors: Student Safety

NCDHD service area students were asked to self-report on several aspects of safety. The majority of students agreed that they felt safe at their school ($n = 1001$, 90.8%). However, when asked about being bullied, some students reported being bullied physically ($n = 991$; 5.0%), verbally ($n = 990$; 21.9%), socially ($n = 989$; 21.0%), and electronically ($n = 990$; 7.3%) at least once a month in the past year. Additionally, some students also reported being physically hurt on purpose by someone they were dating ($n = 1001$; 5.4%) within the past year.

Social and Economic Factors: Safety Planning

Safety planning at work and home can help increase preparedness for emergencies, reduce injuries during emergencies, and contribute to an increased sense of safety during non-emergencies. NCDHD residents were asked several questions related to safety planning, and 65% ($n = 200$) reported having a family plan for emergencies, 44.1% ($n = 213$) reported maintaining an emergency preparedness kit at home, 92.0% ($n = 176$) reported having a written emergency action plan at work or school, and 6.1% ($n = 49$) reported that employees or students received training for their emergency action plan within the last year (CHA, 2021).

Social and Economic Factors: Community Perspectives

NCDHD community members were asked to provide some insight on topics such as what they thought would make their neighborhoods healthier places for them and their families. A wide range of responses (194) were given that were categorized into several themes: increased access to healthy options, increased health education and prevention, and improvements to community spaces. See Tables A6 and C19 for community insight into these themes.

Increased access to healthy options. Many responses focused on increased access to fresh, healthy food options within their communities. This includes better access to grocery stores with fresh food options and more healthy options in their schools, as well as access to better drinking water. This concern is supported by data indicating that 15.3% of NCDHD residents suffer from food insecurity (NBRFSS, 2015). Additionally, free or low-cost education and training opportunities were discussed as ways to increase the communities' healthy options, including training on healthy food options and cooking classes and general community education on health topics. Additionally, respondents noted some community assistance needs, such as help covering costs of necessary home repairs and affordable health insurance.

Increased health education and prevention. Several responses espoused a need for increased mental health education regarding resources, stigma, prevention efforts, and better access to resources throughout their community, especially in schools. One participant specified:

“Recognition that mental health is an integral part of your overall health and needs checked just like your lipids”

Several other target areas for health education include the negative effects of tobacco, drugs, alcohol use/abuse, and vehicular safety, such as distracted driving, speeding, and traffic sign adherence. Several people commented on the need for increased attention to maintaining healthcare facilities as well as needing more healthcare providers in the area. One respondent also mentioned the need for a

decrease in pesticide use throughout the area. Detailed qualitative responses on these items are featured in Appendix B and Table C19.

Improvement of community spaces. Several types of community area improvements were suggested, including increased spaces for children to play, increased and improved access to sidewalks and general attention to walkability, expansion of walking and biking trails, and better traffic lights. Respondents also mentioned that affordable exercise programs and access to indoor swimming would make their neighborhoods healthier places to live.

NCDHD Clinical Care

Although advances in medicine and science continue to offer great promise, lack of access to clinical care, and disparities in quality of care continue to serve as critical differentiators that affect outcomes across population groups. Numerous studies indicate that clinical care access and experiences align with health outcome disparities, particularly at the level of socio-economic (Lazar & Davenport, 2018; Riley, 2012) and racial/ethnic group (Cook et al., 2017; Mayberry et al., 2000) differences. In addition to these broad social inequities, systems for healthcare payment also drive access to and quality of clinical care for a wide variety of physical and mental health issues (Fry & Sommers, 2018; Loehrer et al., 2018; Zhao et al., 2018). The CHR model bifurcates clinical care measures into two categories - quality of care and access to care.

Clinical Care: Access to Care

Regular access to clinical care is critical for illness or disease prevention, management and treatment. Access to care is essential to achieving health equity, but profound barriers exist for many populations (AHRQ, 2021). The CHR employs several broad indicators for access to care. Lack of health insurance coverage prevents many people from obtaining preventative care and can also be a source of major financial instability. In 2018, an estimated 12% of the NCDHD's population under age 65 was uninsured, compared to an overall average of 9% for Nebraska. When looking specifically at adults aged 18-64 in the NCDHD area, 13.2% reported not having health insurance, compared to the Nebraska average of 11%. For children under 19 in the NCDHD area, 8.8% are estimated to not have health insurance, compared to a statewide average of 5%. This data suggests that both adult and child residents of the NCDHD area have a lower rate of insurance coverage relative to the rest of Nebraska. Tables A10 to A12 present CHA survey responses related to health insurance coverage and barriers to healthcare.

The Community Health Rankings model also contains measures identifying the ratio of health care providers to the overall population. The ratio of the population to number of primary care

physicians averaged across counties in the NCDHD was 1,366 persons per primary care provider, compared to an overall statewide average of 1,310 persons per primary care provider. The NCDHD ratio of the population to dentists was 555 to one dentist, compared to an average of 1,270 persons per dentist in Nebraska. Finally, averaged across NCDHD counties, the ratio of the population to mental health providers was 1,903 persons per mental health provider, compared to an overall average of 360 people per mental health provider statewide. It should be noted that all counties which compose the NCDHD are designated as health professional shortage areas by the State of Nebraska for at least one if not all primary medical professions; as well as dentistry, pharmacy, and allied health professions (Wehbi et al., 2020). Additionally, every NCDHD county is also a HRSA-designated mental health professional shortage area (HRSA, 2021).

The NBRFSS asks several questions centering on access to care. According to the NBRFSS 2020 survey results for the NCDHD area, 10% of adults aged 18-64 reported having no health care coverage, whereas 89.9% did. The overall Nebraska average for these survey items were 15.1% and 79.5%. Similarly, 7.8% of NCDHD adults aged 18-64 years old indicated that they needed to see a doctor but could not due to cost in the past year. The Nebraska average was higher, with 9.3% of adults reporting needing to see a doctor but, not being able to due to costs. In terms of having a primary care doctor, 14.3% of adults 18-64 years old indicated they had no personal doctor or health care provider, but 85.7% did. This compares to an overall Nebraska average of 20.5% not having a personal doctor, and 79.5% having a doctor. Among adults within the NCDHD aged 65 or above, 95% had a personal health care provider, or more than one, which is similar to the statewide average of 95%.

Finally, the NCDHD CHA survey, although not representative of the larger population, provides some insight into barriers to accessing clinical care. When asked what problems prevented people from access health screening or services, 49.6% of respondents said there were no barriers. Among those reporting barriers, the top associated problems to accessing care were high costs (15.4%), followed by not knowing when and what kind of services to obtain (11.4%), and not receiving a recommendation from a provider for any screening services (also 11.4%). A major barrier to accessing clinical care is transportation. When it comes to distance needed to travel for clinical care, CHA respondents indicated that distance varied by type of profession or service (Table 8; See Table A13 for detailed data on travel time to clinical care). Distance traveled was less for more common health professionals. For example, 83.3% and 81.4% of NCDHD CHA respondents indicated they lived within 0-30 miles of a primary care provider or pharmacist, respectively. For specialty providers, distances traveled could be much further. Over 33% of respondents indicated they had to travel 75 or more miles to access an oncologist. The

availability of specialty care providers in the NCDHD thus remains a significant barrier to some residents. Tables A14 to A18 provide information on healthcare utilization and satisfaction with NCDHD providers.

Table 8. *Distance in Miles to meet Health Professionals for NCDHD CHA Respondents*

	<i>n</i>	0-30 miles	31-45 miles	46-75 miles	75+ miles
Primary Care Professional	192	83.3%	10.4%	4.2%	2.1%
Cardiology	118	55.9%	13.6%	11%	19.5%
Orthopedic	111	41.4%	17.1%	11.7%	29.7%
Urology	91	45.1%	16.5%	14.3%	24.2%
Obstetrics/Gynecology	92	39.1%	20.7%	17.4%	22.8%
Pediatrician	74	33.8%	23.0%	14.9%	28.4%
General surgery	93	49.5%	17.2%	15.1%	18.3%
Oncology	80	27.5%	22.5%	16.3%	33.8%
Mental Health	77	50.6%	16.9%	11.7%	20.8%
Dental Health	159	40.5%	19.5%	8.8%	5.7%
Prescriptions/Pharmacy	156	81.4%	11.5%	3.8%	3.2%
Other	38	52.6%	7.9%	5.3%	34.2%

Clinical Care: Quality of Care

Quality of care generally refers to quality screening activities, preventative care, and treatment of acute or chronic conditions to maintain or increase overall wellness and improve health outcomes. Care quality is a broad concept and implicates not only delivery of services to individual consumers, but availability of community health resources and quality and accessibility to health care systems. The CHR model focuses on measures that indicate receipt of timely, preventative services that can decrease health risks and preventable health issues.

The rate of flu vaccinations refers to the percentage of Medicare enrollees that received an annual flu vaccination, based on Medicare reimbursements. Influenza is a common virus that can cause serious illness and death, particularly among medically vulnerable populations. The percentage of fee-for-service Medicare enrollees who received a reimbursed flu vaccine averaged across counties within the NCDHD was 23.1%, significantly lower than the statewide average of 50% (MMD, 2018). This difference speaks to the importance of expanding education about the value and safety of vaccines and identifying opportunities to integrate and provide influenza vaccinations to community members in affordable and accessible ways.

Mammography screenings measure the percentage of female Medicare enrollees that receive an annual mammography. Regular screenings can reduce breast cancer deaths and increase the survival

rate among patients and is particularly recommended for females over the age of 45. The percentage of female fee-for-service Medicare enrollees who received a mammogram averaged across counties within the NCDHD was 43.9%, compared to an overall Nebraska average of 48% (MMD, 2018).

Preventable hospital stays are the rate of hospitalizations per 100,000 Medicare enrollees that are identified as ambulatory-care sensitive conditions (ACSC). These ACSC hospitalizations fall under a wide category of conditions that are generally considered to not require hospitalizations, such as acute diabetes, dehydration, or asthma-related issues (Ansari et al., 2006; Hodgson et al., 2019). Conceptually, researchers have examined and presented elevated rates of preventable hospital stays as an indicator of inadequate access to or low quality or quantity of primary care resources in the community (Freund et al., 2013). In 2018, the number of ACSC hospitalizations per 100,000 Medicare enrollees in the NCDHD was 3242, lower than the overall average rate for Nebraska of 3,475 (MMD, 2018).

The NBRFSS responses provide some insight into how NCDHD residents experience and perceive information about health or medical issues. When asked how difficult it was for people to get needed advice or information about health or medical topics, 68% of respondents ($n = 642$) thought it was very easy. Additionally, 51% and 52%, respectively, thought it was very easy to understand information from medical professionals, and understand written health information. Ideally, increasing the percentage of people who find it very easy to find, consume and understand health information should remain a priority public health strategy for the foreseeable future.

Functional health literacy, or the ability to read, understand, and act on health information is a crucial skill so individuals understand their options and diagnoses, directions for medication, and self-care instructions (Andrus & Roth, 2002). When asked if they had trouble reading and understanding health information, 14.4% of NCDHD residents ($n = 235$) reported sometimes or often having trouble. Health literacy also includes basic knowledge about the health services provided in the area, or by the NCDHD itself. See Table A19 for information on respondent knowledge and awareness of the health services offered by the NCDHD.

NCDHD Health Behaviors

An abundance of research shows that personal health behaviors are strongly linked to chronic disease, mortality, or other outcomes that affect well-being (Berrigan et al., 2003; Hanson & Chen, 2007; Schwarzer, 2008). Cancer, heart disease, diabetes, and other leading causes of death in the United States are strongly associated with unhealthy behaviors that may evolve over a lifetime (Colditz et al., 1992; Keys, 1957; Sasco et al., 2004; Walker et al., 2010). Health professionals play a critical role highlighting behavioral health risks and promoting interventions that encourage communities and

individuals to adopt and maintain healthy behaviors across their lifespans. According to NBRFSS data (2020), 70.5% ($n = 749$) of NCDHD respondents had a routine checkup in the past year with a healthcare provider, 89.7% ($n = 436$) had their blood pressure checked in the past year, 61.5% of female respondents aged 21-65 ($n = 150$) reported up-to-date cervical cancer screenings, and 69.0% of females aged 50-74 ($n = 230$) reported up-to-date breast cancer screenings. Among CHA (2021) survey respondents, 92.7% ($n = 234$) indicated that they had seen a primary care provider once within the previous one to two years, 85.7% ($n = 231$) had seen a dentist, and 83.9% ($n = 229$) had seen an eye doctor. Regularly seeing a healthcare provider and screening for common conditions is an important preventative measure. Tables A20 and A21 provides detailed information on use of preventative health services. Particular areas of interest in behavioral health include data on sexual activity, alcohol and drug use, diet and exercise, and tobacco product use.

Health Behaviors: Tobacco Use

Tobacco use has historically been one of the top preventable causes of morbidity and death in the United States (CDC, 2012; King et al., 2012). Approximately 480,000 deaths a year are caused by cigarette smoking and secondhand exposure (Gallaway et al., 2018). In the United States, cigarette smoking has become less prevalent from what it was previously. In the 1970s, over 35% of college-educated adults smoked cigarettes, whereas in 2010 that number had declined to less than 10% (Drope et al., 2018). Changes in access and price due to tobacco control policies and the popularity of e-cigarette vaping has considerably altered patterns of tobacco use. Increased vaping among adolescents, and particularly those from low-income or disadvantaged populations, has become a major concern (Dai and Leventhal, 2019; Obisesan et al., 2020).

The NBRFSS data for 2020 indicates that 13.5% of adults in the NCDHD currently smoke cigarettes, and 8.7% use smokeless tobacco. Additionally, 2.3% of adults reported current tobacco vaping, and 14.4% reported vaping tobacco in their lifetimes. Youth responses to the NBRFSS (2018) showed tobacco use that was slightly higher than state averages. For example, among 12th grade respondents 19.6% reported current cigarette or smokeless tobacco use (compared to 15.3% statewide), and 38.9% reported vaping once or more in the past 30 days (compared to 37.3% statewide). Because of the discreet nature of vaping, lower cost compared to cigarettes, and perception that vaping is a “safe” form of tobacco consumption, the illegal use of e-cigarettes has become more prevalent with minors. Among 10th graders, 23.7% of NBRFSS respondents in the NCDHD reported vaping once or more in the past 30 days (compared to 24.7% statewide), and with 8th graders, 8.6% reported vaping in the past 30 days (compared to 10.4% statewide). The continuing prevalence of tobacco consumption –

particularly the popularity of vaping products among youth – suggests the need to increase school-based preventive education, tobacco use cessation programming, and other policies to restrict tobacco use and the effects of secondhand smoke. Tables A23 to A25 include further information on tobacco/nicotine use.

Health Behaviors: Diet and Exercise

Maintaining a healthy diet and regular exercise are key predictors of positive health outcomes. An abundance of evidence links obesity with a wide variety of chronic health conditions, including diabetes, heart disease, stroke, hypertension, cancers, and other illnesses (Hu, 2003; Hubbard, 2000; Kelly et al., 2013; Nejat et al., 2010). Obesity and poor exercise habits are major factors causing preventable chronic diseases and deaths among Americans, resulting in substantially increased individual health care costs and social-economic losses. It should be noted that both obesity and lack of exercise are also impacted by environmental conditions (e.g., costs and availability of healthy food) (Cooksey-Stowers et al., 2017; Walker, Keane & Burke, 2010) and workplace or social and community contexts that promote sedentary lifestyles (Bassett et al., 2015; Gaziano, 2010). It is worth highlighting that the prevalence of obesity and its health impacts in the United States is among the highest in the world, and research indicates strong associations between obesity and race, ethnicity, income, and educational status (Kirby et al., 2012; Lee, 2011; Rossen, 2014).

CHA survey results suggest that residents may feel that they are in overall good health (Table A26). However, NBRFSS (2020) data for the NCDHD indicate that 66.1% ($n = 702$) of respondents reported being either overweight (Body Mass Index > 25) or obese, and 32.2% ($n = 702$) indicated they were obese (Body Mass Index > 30). Forty percent ($n = 318$) of NBRFSS respondents eat less than one piece of fruit a day, and 19.4% ($n = 774$) consumed vegetables less than one time a day. Additionally, 29.3% ($n = 757$) of adult respondents indicated that they had no leisure-time activity in the past 30 days. Again, considerations of poverty and barriers to obtaining healthy food are issues of note. The Community Health Rankings data indicate that an average of 11.9% of respondents across the NCDHD reported not having access to a reliable source of food the previous year, and 16.5% of the low-income population does not live close to a grocery store. Opportunities to exercise or engage in physical activities are also important. Tables A 27 to A 30 provide additional information from CHA survey respondents on physical activity and status.

Health Behaviors: Alcohol and Drug Use

Alcohol sale and consumption is a widespread fixture of American life. However, excessive use has been linked to a wide range of preventable chronic conditions and acute issues, including a variety

of cancers, cardiovascular disorders, and gastrointestinal conditions (Room et al., 2005). Excessive alcohol use is also associated with unintentional and intentional injuries (Chikritzhs & Livingston, 2021; Shield et al., 2012), co-morbidities in mental health (Tembo et al., 2017; Weitzman, 2004), and domestic or relationship aggression and violence (Foran & O’Leary, 2008; Leonard, 2005). Similarly, illegal drug use and addiction is linked to a variety of physical and mental health co-morbidities (Fenton et al., 2012; Jones & McCance-Katz, 2019) and drug overdose related deaths (Lim et al., 2021; Lippold et al., 2019). Studies have indicated that patterns of substance use, and associated risk behavior vary by age and geography. For example, alcohol and methamphetamine use is generally higher among rural youth than urban youth (Lambert et al., 2008). Among people aged 12 or older in 2020, marijuana remains the most widely used substance that remains illegal under federal law (49.6 million used in the past year) followed by abuse of prescription drugs (9.3 million used in the past year) (SAMHSA, 2021). SAMHSA estimates that 2.5% of individuals older than 12 years abuse/misuse prescription drugs in Nebraska compared to a national average of 3.7% (SAMHSA, 2020).

According to NBRFSS data for 2020, 55.5% of adult respondents reported having consumed alcohol in the past 30 days, 20.8% reported binge drinking (4/5 or more drinks on a single occasion for females/males) within the past 30 days, 6.3% reported heavy drinking (8/15 or more drinks in a week for females/males), and 1.5% reported driving under the influence of alcohol. The NCDHD CHA survey indicated that 13.5% ($n = 193$) of respondents reported consuming alcohol more than three times a week, and 11.2% ($n = 187$) reported binge drinking in the past month.

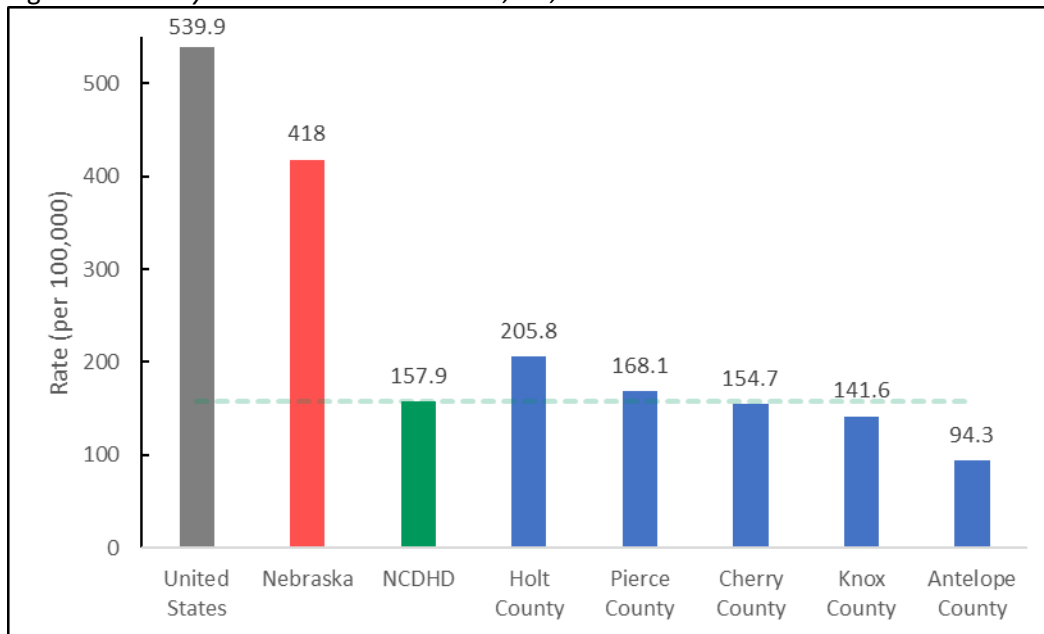
The NRPFS provides a wider range of data about alcohol and substance use among youth by sampling students from participating public and private school in Grades 8, 10, and 12 from across the state. Among NCDHD youth respondents, 7.2% ($n = 996$) indicated they had consumed alcohol three or more times in the previous month (6.1% statewide), and 26.7% ($n = 997$) indicated it was a little or not wrong to drink alcohol frequently (25.3% statewide). Additionally, 12.0% ($n = 998$) of youth respondents reported that half or more of their peers drank alcohol within the past 30 days (30.7% statewide). Indicators regarding marijuana use suggest a significant prevalence of use among youth. Among youth respondents who reported use of marijuana, 24.6% ($n = 114$) of respondents indicated first use at a mode of 15 years of age. Five percent ($n = 997$) indicated a lifetime use of marijuana of 10 or more times, and 2.9% ($n = 993$) reported using marijuana 3 or more times a week. Among respondents in the NCDHD service area, 2.9% ($n = 993$) indicated current use of marijuana within the past 30 days compared to a statewide average of 3.9% (NRPFS, 2018). Additionally, 49.8% ($n = 987$) of youth respondents also indicated that it was easy to obtain alcohol, and 21.1% ($n = 986$) stated it was easy to

obtain marijuana. Among those who reported drinking alcohol in the past 30 days, 45.0% ($n = 211$) indicated they accessed alcohol at a party, 25.9% ($n = 201$) indicated they had someone buy it for them, and 22.3% ($n = 211$) got it from home without permission. The prevalence of alcohol and drug use among both adults and youth suggests several possible community strategies, including community education directed to both youth and adults, continued screening and brief intervention processes, and more robust enforcement of laws pertaining to illegal sale or provision of alcohol to minors, such as increased compliance checks and expanded liability for alcohol providers (CHR, 2021). Additional information on alcohol use among CHA survey respondents is provided in Tables A31 and A32.

Health Behaviors: Sexual Activity

Research studies indicate disproportionately higher rates of Human Immunodeficiency Virus (HIV) and other sexually transmitted diseases among men who have sex with men (Oster et al., 2011; Prejean et al., 2011), younger people (Rangel et al., 2006), and racial minorities (Maulsby et al., 2014; Wohl et al., 2013). Sexually transmitted infections are associated with reproductive health and other acute and chronic conditions (Owusu-Edusei, 2013). Community Health Rankings data derived from the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention, indicate that the number of newly diagnosed chlamydia cases per 100,000 population in the NCDHD averaged across counties is 157.9, which, as seen in Figure 9, appears lower than the national (539.9; $t(5) = -21.313, p < .05$) and state (418.0; $t(5) = -14.600, p < .05$) rates, but due to missing data from several counties, these results should be interpreted with caution (CHR, 2021).

Figure 9. Chlamydia Incidence Rate in U.S., NE, & NCDHD



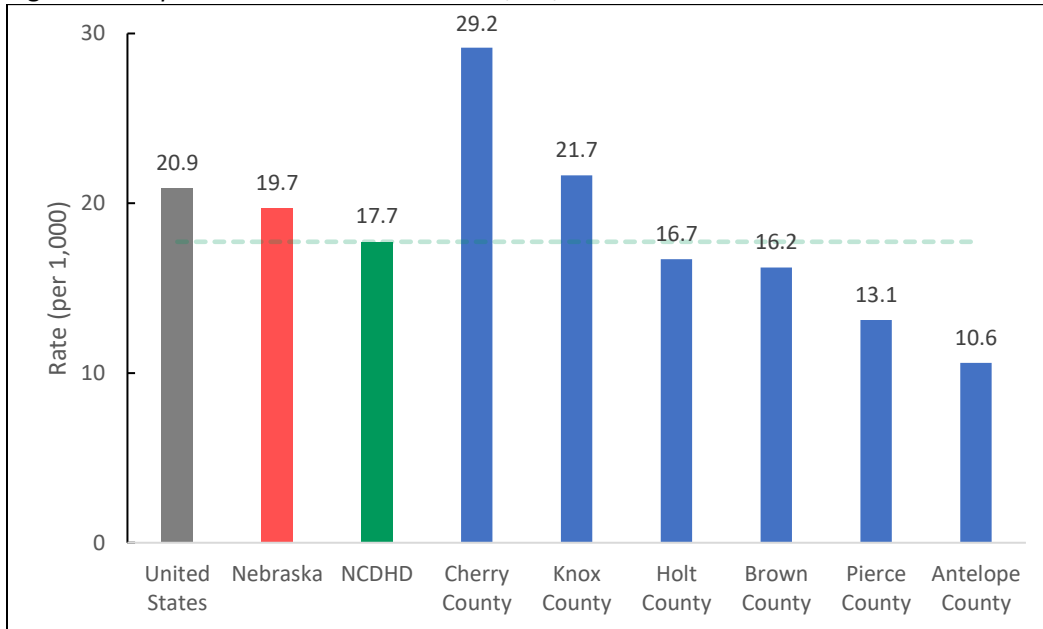
Note. NCDHD rate calculated at 89.9 using National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention 2018 data. No data was available for Boyd and Keya Paha counties. No data was available from Boyd, Brown, Keya Paha, & Rock counties.

Chlamydia incidence is used as a measure of unsafe sexual activity as it is the most common bacterial sexually transmitted infection in the United States (CHR, 2021). Among CHA survey respondents, only 17.1% ($n = 193$) indicated that they had been tested for a Sexually Transmitted Disease (STD) within the previous one to two years, and 61.7% ($n = 193$) indicated that they had never been tested for an STD. Likewise, only 11.4% ($n = 193$) of CHA survey respondents reported receiving an HIV test within the previous one to two years, and 68.9% ($n = 193$) reported never being tested for HIV. The CHA survey responses reflect NBRFSS data, which indicate that only an estimated 21.1% ($n = 396$) of adult residents have ever tested for HIV (NBRFSS 2020). NCDHD client-reported number of sexual partners is provided in Table A33.

Teen pregnancy is often associated with unsafe sexual activity, indicative of increased risk of STIs, and can result in a variety of acute and chronic adverse health conditions (Black et al., 2012; Leve, et al., 2013). Unplanned teen pregnancies can result in significant social costs, with teen mothers being less likely to complete high school and obtain meaningful career training opportunities (Card, 1999; Lavin & Cox, 2012), and contributes to unequal achievement gaps and poverty among young mothers and families later in life (Basch, 2011; Johns, et al., 2000; Tortolero et al., 2010). Teen pregnancy is also associated with underweight or premature births, and a variety of birth defect risks that may impact

well-being much later in life (Bornstein et al., 2021; Gill et al., 2012). As seen in Figure 10, Community Health Rankings data derived from the National Center for Health Statistics (2019) indicate that the average number of births to females aged 15-19 across NCDHD counties is 17.9 per 1,000 females, which appears similar to the national (20.9; $t(5) = -1.093, p > .05$) and state (19.7; $t(5) = -0.662, p > .05$) rates, but due to missing data for several counties, these results should be interpreted with caution.

Figure 10. Reported Teen Births in the U.S., NE, and NCDHD



Note. NCDHD rate calculated at 89.9 using National Center for Health Statistics - Natality files 2019 data. No data was available for Boyd and Keya Paha counties. No data was available from Boyd, Keya Paha, & Rock counties.

Preventing unplanned teen pregnancies implicate a number of potential interventions and strategies, including access to pre- and post-natal health care for teen mothers and their children in communities and schools, case management services for young families with income and education needs, and sexual education and reproductive health services in general (Alford, 2009; Kirby, 2001).

Health Outcomes

Health outcomes represent the overall current health of the community. Health outcomes are driven and influenced by core structural problems related to place, environment, financial insecurity, and social inequality. All structures and influences identified in the CHR model drive the health factors that impact community health outcomes. The CHR model presents health outcomes as measures of the overall physical and mental well-being of people. Health outcomes fall in two categories of data: 1) length of life measures, which indicate how long people are living, as well as the prevalence of

premature deaths; and 2) quality of life measures, which indicate how healthy people are and feel throughout their lives.

Distinctions exist between NCDHD and Nebraska residents when it comes to length of life. There are similarities among top causes of death but differences in rates of death per 100,000 residents among the major causes. As seen in Table 9 and Table 10, the top three causes of death and rates per 100,000 residents for the NCDHD versus Nebraska, respectively, were heart disease (292.6; 182.9), cancer (223.9; 181.7), and respiratory diseases (81.4; 57.2; CDC, 2020). These rates may reflect differences between older (NCDHD) and younger populations (Nebraska overall). For example, Alzheimer’s disease was the fourth leading cause of death among residents of the NCDHD (65.7) but the sixth leading cause of death among Nebraska residents overall and at a much lower rate of death (38.9).

Table 9. *Top Causes of Death in NCDHD 2018-2020*

Top Causes of Death NCDHD (Pop - 133971)	Deaths	Crude Rate
Diseases of heart	392	292.6
Malignant neoplasms	300	223.9
Chronic lower respiratory diseases	109	81.4
Alzheimer disease	88	65.7
Cerebrovascular diseases	77	57.5
Accidents (unintentional injuries)	77	57.5
COVID-19	77	57.5
Diabetes mellitus	66	49.3
Influenza & pneumonia	44	32.8
Nephritis, nephrotic syndrome and nephrosis	29	21.6
Parkinson disease	22	16.4
Intentional self-harm (suicide)	21	15.7
Essential hypertension & hypertensive renal disease	20	14.9
In situ, benign, & neoplasms of uncertain/unknown behavior	13	Unreliable
Chronic liver disease & cirrhosis	13	Unreliable

Note. Crude rate is defined as number of deaths per 100,000 residents.

Table 10. *Top Causes of Death in Nebraska 2018-2020*

UCD - 15 Leading Causes of Death NE (Pop - 5801228)	Deaths	Crude Rate
Diseases of heart	10611	182.9
Malignant neoplasms	10539	181.7
Chronic lower respiratory diseases	3320	57.2
Accidents (unintentional injuries)	2560	44.1
Cerebrovascular diseases	2406	41.5
Alzheimer disease	2259	38.9
COVID-19	2043	35.2

Diabetes mellitus	1760	30.3
Influenza & pneumonia	1047	18
Essential hypertension & hypertensive renal disease	957	16.5
Intentional self-harm (suicide)	863	14.9
Parkinson disease	785	13.5
Chronic liver disease & cirrhosis	764	13.2
In situ, benign, & neoplasms of uncertain/unknown behavior	746	12.9
Septicemia	506	8.7

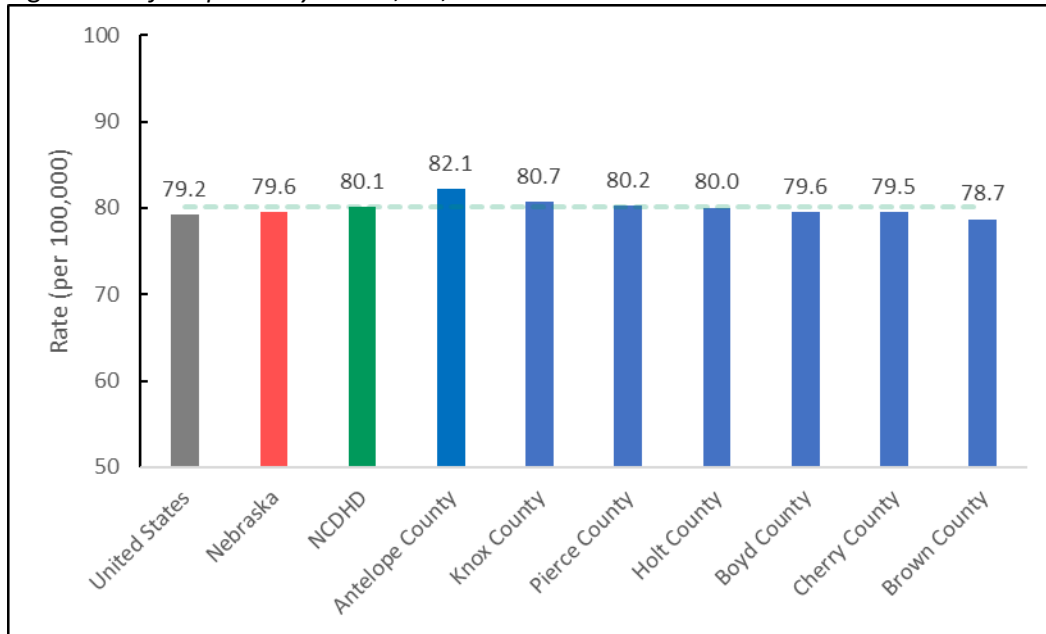
Note. Crude rate is defined as number of deaths per 100,000 residents.

It should be noted that deaths attributed to COVID-19 in both the NCDHD and Nebraska were lower than in the U.S. overall. In 2020, COVID-19 was the third leading cause of death in the United States (85; CDC, 2020), after heart disease and cancer. COVID-19 was the seventh leading cause of death in both the NCDHD (57.5) and Nebraska (35.2).

Health Outcomes: Length of Life

Length of life measures indicate overall length of life among community members relative to others. Length of life can be impacted in a number of ways, and measures employed can identify areas of concern and potential areas for preventative interventions. Premature death refers to Years of Potential Life Lost (YPLL), expressed as the number of years of life lost per 100,000 residents due to deaths before the age of 75 over a three-year period (2017-2019). The statewide YPLL for Nebraska is 6,148.5 years, compared to a slightly higher average of 6768.7 YPLL across the counties composing the NCDHD (excluding Keya Paha County, which did not have reported data). Life expectancy – the average number of years a person is estimated to live – is 79.6 years for Nebraska and 80.1 for the NCDHD (excluding Keya Paha and Rock counties), suggesting approximate parity, $t(7) = 1.267, p > .05$ (Figure 11).

Figure 11. *Life Expectancy in U.S., NE, and NCDHD*



Note. Average line calculated as 80.1 using NCHS 2017-2019 data. No data was available for Keya Paha and Rock counties.

Health Outcomes: Quality of Life

Quality of life is a broad concept that includes overall wellness, subjective experiences and feelings, and day-to-day functioning. The CHR model presents quality of life as select measures that reflect the overall health and well-being of people while alive, providing more depth than length of life indicators. Self-reported health-related quality of life is a well-accepted subjective measure that aligns with overall mortality risk measures (CHR, 2021). Averaged across counties, the percentage of adults reporting ‘fair’ or ‘poor’ health in the NCDHD was 14.2%, similar to the state average (13.8%; $t(8) = 1.054, p > .05$). The averaged county values (age-adjusted) in the NCDHD for the number of physically unhealthy days reported in the past 30 days was 2.8 days, similar to the statewide average (2.8; NBRFSS, 2018). Similarly, averaged county values in the NCDHD for the reported number of mentally unhealthy days in the past 30 days was 2.3 days, while the Nebraska average number of days was 3.6 (NBRFSS, 2018).

Two additional self-reported quality of life measures include frequent physical distress and frequent mental distress, which are more responsive to individuals with chronic or severe physical or mental health conditions. Frequent physical distress is the percentage of adults reporting 14 or more days of poor physical health in the past 30 days, and frequent mental distress is the percentage reporting 14 or more poor mental health days. The averaged values across NCDHD counties was 10.6% for frequent physical distress, and 12.1% for frequent mental distress, compared to overall Nebraska

values of 9.6% and 11.3%, respectively (NBRFSS, 2018). Additionally, the presence of diabetes is another major quality of life indicator. Diabetes is a common condition, and its high prevalence reflects a number of unhealthy factors and behaviors endemic in society. The CDC (2021) estimates that in 2019, 37 million people of all ages had diabetes in the United States. Averaged across counties, the proportion of adults aged 20 or above with diagnosed diabetes was 11.2% in the NCDHD, and 10% overall in Nebraska ($t(8) = 2.258, p > .05$), reflecting relative parity. Additional data on disabilities and experienced health issues are provided in Tables A34 and A35.

COVID-19

COVID-19: Morbidity and Mortality

The COVID-19 pandemic has brought significant disruptions to the nation’s economy and society, including in Nebraska. The Johns Hopkins University of Medicine Coronavirus Resource Center reports a total of 3,815 deaths and 451,074 confirmed cases of COVID-19 for Nebraska since the pandemic began, and an estimated 63% of the population fully vaccinated (JHU, 2021, Feb. 15). It should be noted that deaths attributed to COVID-19 in both the NCDHD, and Nebraska were lower than in the U.S. overall. In 2020, COVID-19 was the third leading cause of death in the United States (85; CDC, 2020), after heart disease and cancer. COVID-19 was the seventh leading cause of death in both the NCDHD (57.5) and Nebraska (35.2).

According to publicly available data compiled by the NCDHD, as of February 2022 there were a total of 9,657 confirmed COVID-19 cases and 122,156 tests across all NCDHD counties (NCDHD, 2022). The highest number of confirmed cases in the NCDHD coverage area occurred in Holt County (2283 cases), and the least in Keya Paha (128 cases). Table 11 shows the number of confirmed cases per county and distribution across the NCDHD coverage area.

Table 11: *NCDHD COVID-19 Mortality by County*

County	<i>n</i>	%
Antelope	1224	12.7
Boyd	447	4.6
Brown	665	6.9
Cherry	986	10.2
Holt	2283	23.6
Keya Paha	128	1.3
Knox	2190	22.7
Pierce	1444	14.9
Rock	290	3.0
Total	9657	100.0

COVID-19: Community Attitudes towards COVID-19 Vaccines

COVID-19 vaccination uptake is a critical means to decrease infection rates and prevent the spread of potential variants, but acceptance remains a major challenge (Dai et al., 2021). Self-reported data from the NCDHD CHNA Survey indicate that 80.6% ($n = 201$) of respondents received a COVID-19 vaccine. However, only 57.5% ($n = 191$) of respondents said they would recommend getting the COVID-19 to others. Open-ended responses to the questions “Why are you likely, or unlikely, to recommend the COVID-19 vaccine?” and “Where do you get your most trusted information regarding COVID-19?” are provided in Table A 35 and Table A 36, respectively.

Special Populations

Special Populations: Racial and Ethnic Minorities

The persistent racial disparities in American health coverage, mental health, chronic health conditions, and mortality are the result of systemic inequalities in housing, economy, and health care, as opposed to individual or group behavior or characteristics (Carralta & Maxwell, 2020). These inequities will require sustainable and deliberate efforts to address societal factors of racial disparities in health. Unfortunately, exploring racial and ethnic disparities in NCDHD is difficult due to lack of identifiable information within the available datasets used for this report. However, available school district data provides information on student and teacher demographics per school district. Racial representation of students can allow teachers of color to act as role models for students of all races and ethnicities by breaking down stereotypes and preparing their students to understand a multiracial society (US Department of Education, 2016). The school districts within NCDHD with available data from NDE (2021) provides a breakdown of student race and ethnicity in relation to their teacher’s race and ethnicity. As seen in Table 12, those who identify as white is the only group with a higher percentage of teachers than percentage of students within the same category. American/Alaskan Indian (6.5%) and Hispanic (6.2%) students are the racial/ethnic groups with the largest disparity between students and teachers. It should be noted that every state has a higher percentage of students of color than teachers of color, so this data should be considered in programming and policy making decisions, rather than as an indictment of the school districts (Boser, 2014).

Table 12. *Race/Ethnicity Counts of 2021 NCDHD Students and Teachers*

	Student Count	Student %	Teacher Count	Teacher %	Percent Difference
American/Alaskan Indian	478	6.5%	5	0.7%	5.8%
Asian	31	0.4%	0	0.0%	0.4%
Black	38	0.5%	2	0.3%	0.2%
Hispanic	453	6.2%	3	0.4%	5.8%
Pacific Islander	5	0.1%	0	0.0%	0.1%
White	6169	84.1%	681	91.4%	-7.3%
Multiracial	162	2.2%	1	0.1%	2.1%

Note. Percent difference is calculated by subtracting the teacher percentage from student percentage in each category.

Special Populations: Elderly Population

Though many older individuals are in relatively good health and lead active and robust lives, aging increases the likelihood of compound clinical conditions; increased use of multiple medications; and a variety of mobility, sensory, and cognitive impairments (National Research Council, 1996). These types of health outcomes are considered community and national drivers of illness, disability, death, and in turn rising health care costs (CDC, 2022).

The percentage of estimated residents who are 65 and older in NCDHD (25.6%) is significantly higher than that the national (16.5%; $t(8) = 6.427, p < .05$) and the Nebraska (16.2%; $t(8) = 6.638, p < .05$) estimates (US Census, 2019). The NCDHD CHA (2021) asked respondents if they were 60 years or older ($n = 216$; 30.6%), with a subset of follow-up questions directed at this group. The majority of NCDHD residents who answered these questions reported being in good or better health (88.9%), eating at least two meals a day (92.2%), and said they had enough money to buy the food they needed (95.3%). Only one-fifth of respondents (20.0%) reported having firm plans for long-term care, however. When asked about public services, most of them reported using or planning to use home health (83.3%), retirement planning (77.4%), and legal assistance (73.7%). Roughly half reported using or planning to use volunteer programs (56.9%) and case management (48.2%), and less than half said telephone services (42.2%) or adult day services (42.1%). Additionally, several other questions were explored from the perspectives of 65 years and older NCDHD residents. Their top three health concerns were heart disease (70.4%), cancer (66.7%), and diabetes (51.9%). Most of them reported doing physical activity at least twice a week (95.0%), eating nutritious and balanced meals (88.9%), and reading (70.4%) to maintain their physical and mental health, and about a third of them reported not feeling lonely or disconnected from others (69.6%).

References

- Agency for Healthcare Research and Quality (AHRQ). 2019 National Healthcare Quality and Disparities Report. (2021). *Agency for Healthcare Research and Quality*, Rockville, MD.
<https://www.ahrq.gov/research/findings/nhqdr/nhqdr19/index.html>
- Alford, S. (2009). Science and Success: Science-Based Programs that Work to Prevent Teen Pregnancy, HIV & Sexually Transmitted Infections among Hispanics/Latinos. *Advocates for Youth*.
- Andrus, M., & Roth, M. (2002). Health literacy: A review. *Pharmacotherapy*, 22(3), 282-302.
- Ansari, Z., Laditka, J. N., & Laditka, S. B. (2006). Access to health care and hospitalization for ambulatory care sensitive conditions. *Medical Care Research and Review*, 63(6), 719-741.
- Balistreri, S. (2018). Family structure and child food insecurity: Evidence from the current population survey. *Social Indicators Research*, 138(3), 1171-1185.
- Bailey, Z., Krieger, N., Agenor, M., Graves, J., Linos, N., & Bassett, M. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *The Lancet*, 389, 1453-1463.
- Basch, C. E. (2011). Teen pregnancy and the achievement gap among urban minority youth. *Journal of School Health*, 81(10), 614-618.
- Bassett, D. R., John, D., Conger, S. A., Fitzhugh, E. C., & Coe, D. P. (2015). Trends in physical activity and sedentary behaviors of United States youth. *Journal of Physical Activity and Health*, 12(8), 1102-1111.
- Berrigan, D., Dodd, K., Troiano, R. P., Krebs-Smith, S. M., & Barbash, R. B. (2003). Patterns of health behavior in US adults. *Preventive Medicine*, 36(5), 615-623.
- Black, A. Y., Fleming, N. A., & Rome, E. S. (2012). Pregnancy in adolescents. *Adolescent Medicine: State of the Art Reviews*, 23(1), 123-38.
- Bornstein, E., Wasden, S. W., Eliner, Y., Gulersen, M., Lenchner, E., Grunebaum, A., ... & Chervenak, F. (2021). 1026 Teen pregnancy: better definition of the unique sociodemographic and adverse outcomes in this vulnerable population. *American Journal of Obstetrics & Gynecology*, 224(2), S635.
- Boser, U. (2014). *Teacher diversity revisited: A new state-by-state analysis*. Center for American Progress.
- Braveman, P., Dekker, M., Egerter, S., & Grossman-Kahn, R. (2011). Work, workplaces and health. Princeton: Robert Wood Johnson Foundation. *Exploring the Social Determinants of Health Issue Brief No. 4*.

- Braveman, P., Egerter, S., & Barclay, C. (2011). Income, wealth and health. Princeton: Robert Wood Johnson Foundation. *Exploring the Social Determinants of Health Issue Brief No. 4*.
- Braveman, P., Dekker, M., Egerter, S., & Sadegh-Nobari, T. (2011). Housing and health. Princeton: Robert Wood Johnson Foundation. *Exploring the Social Determinants of Health Issue Brief No. 7*.
- Braveman, P., & Gottlieb, L. (2014). The social determinants of health: it's time to consider the causes of the causes. *Public health reports* (Washington, D.C.: 1974), 129 Suppl 2(Suppl 2), 19–31.
<https://doi.org/10.1177/003335491412915206>
- Card, J. J. (1999). Teen pregnancy prevention: do any programs work?. *Annual Review of Public Health*, 20(1), 257-285.
- Carralta, S., & Maxwell, C. (2020). *Health disparities by race and ethnicity* [Fact Sheet]. Center for American Progress. <https://www.americanprogress.org/article/health-disparities-race-ethnicity/>
- Centers for Disease Control and Prevention. (2021, May 19). Disease & SWS impact.
<https://www.cdc.gov/safewater/disease.html>
- Centers for Disease Control and Prevention. (2022). Health equity considerations and racial and ethnic minority groups. <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/race-ethnicity.html>
- Centers for Medicare & Medicaid Services Office of Minority Health's Mapping Medicare Disparities (MMD) (2018). Mapping Medicare Disparities Tool [Data set]. Baltimore, MD.
- Chikritzhs, T., & Livingston, M. (2021). Alcohol and the Risk of Injury. *Nutrients*, 13(8), 2777.
<https://doi.org/10.3390/nu13082777>
- Colditz, G. A., Manson, J. E., Stampfer, M. J., Rosner, B., Willett, W. C., & Speizer, F. E. (1992). Diet and risk of clinical diabetes in women. *The American Journal of Clinical Nutrition*, 55(5), 1018-1023.
- Conroy, T., Delle, r S., Kures, M., Low, S., Glazer, J., Huyke, G., & Stark, C. (2021). Broadband and the Wisconsin Economy. *The Wisconsin Economy Series 7*. University of Wisconsin-Madison, Division of Extension.
- Cook, B. L., Trinh, N. H., Li, Z., Hou, S. S. Y., & Progovac, A. M. (2017). Trends in racial-ethnic disparities in access to mental health care, 2004–2012. *Psychiatric Services*, 68(1), 9-16.
- Cooksey-Stowers, K., Schwartz, M. B., & Brownell, K. D. (2017). Food swamps predict obesity rates better than food deserts in the United States. *International Journal of Environmental Research and Public Health*, 14(11), 1366.

- County Health Rankings. (2021). *County Health Rankings National Data*. (2021) [Data set].
<https://www.countyhealthrankings.org/explore-health-rankings/rankings-data-documentation>
- Craun, G., Brunkard, J., Yoder, J., Roberts, V., Carpenter, J., Wade, T., Calderon, R., Roberts, J., Beach, M., & Roy, S. (2010). Causes of Outbreaks Associated with Drinking Water in the United States from 1971 to 2006. *Clinical Microbiology Reviews*, 23(3), 507-528.
<https://doi.org/10.1128/CMR.00077-09>
- Croft, M., Hayes, S., & Moore, R. (2020). *Supporting the mental health well-being of high school students*. ACT Center for Equity in Learning. <https://www.act.org/content/dam/act/unsecured/documents/R1798-mental-health-2020-01.pdf>
- Dai, H., & Leventhal, A. M. (2019). Prevalence of e-cigarette use among adults in the United States, 2014-2018. *JAMA*, 322(18), 1824-1827.
- Dai, H., Saccardo, S., Han, M. A., et al. Behavioural nudges increase COVID-19 vaccinations. *Nature* 597, 404-409 (2021). <https://doi.org/10.1038/s41586-021-03843-2>
- Di, Q., Wang, Y., Zanobetti, A., Wang, Y., Koutrakis, P., Choirat, C., Dominici, F., & Schwartz, J. (2017). Air pollution and mortality in the Medicare population. *New England Journal of Medicine*, 376, 2513-2522. doi: 10.1056/NEJMoa1702747.
- Drope, J., Liber, A. C., Cahn, Z., Stoklosa, M., Kennedy, R., Douglas, C. E., ... & Drope, J. (2018). Who's still smoking? Disparities in adult cigarette smoking prevalence in the United States. *CA: A Cancer Journal for Clinicians*, 68(2), 106-115.
- Dunn, J. R. (2000). Housing and health inequalities: Review and prospects for research. *Housing Studies*, 15(3), 341-366.
- Egerter, S., Braveman, P., & Barclay, C. (2011). *Exploring the social determinants of health* (Issue Brief No. 3). Princeton: Robert Wood Johnson Foundation.
- Egerter, S., Braveman, P., Sadegh-Nobari, T., & Grossman-Kahn, R. (2011). *Exploring the social determinants of health* (Issue Brief No. 5). Princeton: Robert Wood Johnson Foundation.
- Fenton, M. C., Keyes, K., Geier, T., Greenstein, E., Skodol, A., Krueger, B., ... & Hasin, D. S. (2012). Psychiatric comorbidity and the persistence of drug use disorders in the United States. *Addiction*, 107(3), 599-609.
- Foran, H. M., & O'Leary, K. D. (2008). Alcohol and intimate partner violence: A meta-analytic review. *Clinical Psychology Review*, 28(7), 1222-1234.

- Freund, T., Campbell, S. M., Geissler, S., Kunz, C. U., Mahler, C., Peters-Klimm, F., & Szecsenyi, J. (2013). Strategies for reducing potentially avoidable hospitalizations for ambulatory care-sensitive conditions. *The Annals of Family Medicine*, *11*(4), 363-370.
- Fry, C. E., & Sommers, B. D. (2018). Effect of Medicaid expansion on health insurance coverage and access to care among adults with depression. *Psychiatric Services*, *69*(11), 1146-1152.
- Gallaway, M. S., Henley, S. J., Steele, C. B., Momin, B., Thomas, C. C., Jamal, A., ... & Stewart, S. L. (2018). Surveillance for cancers associated with tobacco use—United States, 2010–2014. *MMWR Surveillance Summaries*, *67*(12), 1.
- Gaziano, J. M. (2010). Fifth phase of the epidemiologic transition: The age of obesity and inactivity. *JAMA*, *303*(3), 275-276.
- Gill, S. K., Broussard, C., Devine, O., Green, R. F., Rasmussen, S. A., Reefhuis, J., & National Birth Defects Prevention Study. (2012). Association between maternal age and birth defects of unknown etiology—United States, 1997–2007. *Birth Defects Research Part A: Clinical and Molecular Teratology*, *94*(12), 1010-1018.
- Glasmeier, A. (2020). Living wage calculator. Living Wage Calculator - Living Wage Calculation for Nebraska. Retrieved March 11, 2022, from <https://livingwage.mit.edu/states/31>
- Hall, H. I., Song, R., Tang, T., An, Q., Prejean, J., Dietz, P., ... & Mermin, J. (2017). HIV trends in the United States: diagnoses and estimated incidence. *JMIR Public Health and Surveillance*, *3*(1), e7051.
- Hanson, M. D., & Chen, E. (2007). Socioeconomic status and health behaviors in adolescence: a review of the literature. *Journal of Behavioral Medicine*, *30*(3), 263-285.
- Health Resources and Services Administration (HRSA). (n.d.). *Find shortage areas, HRSA find*. Retrieved Feb. 18, 2021 from <https://data.hrsa.gov/tools/shortage-area>
- Hilbrecht, M., Smale, B., & Mock, S. E., (2014). Highway to health? Commute times and well-being among Canadian adults. *World Leisure Journal*, *56*(2), 151-163.
<https://doi.org/10.1080/16078055.2014.903723>
- Hiscock, R., Kearns, A., MacIntyre, S., & Ellaway, A. (2001). Ontological security and psycho-social benefits from the home: Qualitative evidence on issues of tenure. *Housing, Theory and Society*, *18*(1-2), 50-66.
- Hood, C. M., Gennuso, K. P., Swain, G. R., & Catlin, B. B. (2016). County health rankings: relationships between determinant factors and health outcomes. *American Journal of Preventive Medicine*, *50*(2), 129-135.

- Hodgson, K., Deeny, S. R., & Steventon, A. (2019). Ambulatory care-sensitive conditions: Their potential uses and limitations. *BMJ Quality & Safety, 28*(6), 429-433.
- Hu, F. B. (2003). Overweight and obesity in women: health risks and consequences. *Journal of Women's Health, 12*(2), 163-172.
- Johns Hopkins University School of Medicine, Coronavirus Resource Center (JHU) (2021). Nebraska. Retrieved Feb. 15, 2022 at <https://coronavirus.jhu.edu/region/us/nebraska>
- Johns, M. J., Moncloa, F., & Gong, E. J. (2000). Teen pregnancy prevention programs: Linking research and practice. *Journal of Extension, 38*(4), 1-9.
- Jones, C. M., & McCance-Katz, E. F. (2019). Co-occurring substance use and mental disorders among adults with opioid use disorder. *Drug and Alcohol Dependence, 197*, 78-82.
- Kawachi, I., Bruce, P., & Glass, R. (1999). Social capital and self-rated health: A contextual analysis. *American Journal of Public Health, 89*, 1187-1193.
- Keys, A. (1957). Diet and the epidemiology of coronary heart disease. *Journal of the American Medical Association, 164*(17), 1912-1919.
- Key, J. D., Gebregziabher, M. G., Marsh, L. D., & O'Rourke, K. M. (2008). Effectiveness of an intensive, school-based intervention for teen mothers. *Journal of Adolescent Health, 42*(4), 394-400.
- Kim, D. D., & Basu, A. (2016). Estimating the medical care costs of obesity in the United States: systematic review, meta-analysis, and empirical analysis. *Value in Health, 19*(5), 602-613.
- King, B. A., Dube, S. R., & Tynan, M. A. (2012). Current tobacco use among adults in the United States: findings from the National Adult Tobacco Survey. *American Journal of Public Health, 102*(11), e93-e100.
- Kirby, D. (2001). Emerging answers: Research findings on programs to reduce teen pregnancy (summary). *American Journal of Health Education, 32*(6), 348-355.
- Koniak-Griffin, D., Lesser, J., Uman, G., & Nyamathi, A. (2003). Teen pregnancy, motherhood, and unprotected sexual activity. *Research in Nursing & Health, 26*(1), 4-19.
- Kramer, M., & Hogue, C. (2009). Is segregation bad for your health? *Epidemiology, 31*, 178-194.
- Krause, T. M., Schaefer, C., & Highfield, L. (2021). The association of social determinants of health with health outcomes. *American Journal of Managed Care, 27*(3), e89-e96.
- Künn-Nelen, A. (2016). Does commuting affect health? *Health Economics, 25*(8), 984-1004. <https://doi.org/10.1002/hec.3199>
- Kushel, M. B., Gupta, R., Gee, L., & Haas, J. S. (2006). Housing instability and food insecurity as barriers to health care among low-income Americans. *Journal of General Internal Medicine, 21*(1), 71-77.

- Lambert, D., Gale, J. A., & Hartley, D. (2008). Substance abuse by youth and young adults in rural America. *Journal of Rural Health, 24*(3):221-8. doi: 10.1111/j.1748-0361.2008.00162.x. PMID: 18643798.
- LaVeist, T. A., & Pierre, G. (2014). Integrating the 3Ds—social determinants, health disparities, and health-care workforce diversity. *Public Health Reports, 129* (1_suppl2), 9-14.
- Lavin, C., & Cox, J. E. (2012). Teen pregnancy prevention: current perspectives. *Current Opinion in Pediatrics, 24*(4), 462-469.
- Lazar, M., & Davenport, L. (2018). Barriers to health care access for low-income families: a review of literature. *Journal of Community Health Nursing, 35*(1), 28-37.
- Leonard, K. E. (2005). Alcohol and intimate partner violence: when can we say that heavy drinking is a contributing cause of violence? *Addiction, 100*, 422-425.
- Lee, H. (2011). Inequality as an explanation for obesity in the United States. *Sociology Compass, 5*(3), 215-232.
- Leve, L. D., Kerr, D. C., & Harold, G. T. (2013). Young adult outcomes associated with teen pregnancy among high-risk girls in a randomized controlled trial of multidimensional treatment foster care. *Journal of Child & Adolescent Substance Abuse, 22*(5), 421-434.
- Levy, H., & DeLeire, T. (2003). What do people buy when they don't buy health insurance and what does that say about why they are uninsured? *National Bureau of Economic Research*.
- Lim, J. K., Earlywine, J. J., Bagley, S. M., Marshall, B. D., & Hadland, S. E. (2021). Polysubstance involvement in opioid overdose deaths in adolescents and young adults, 1999-2018. *JAMA Pediatrics, 175*(2), 194-196.
- Lippold, K. M., Jones, C. M., Olsen, E. O. M., & Giroir, B. P. (2019). Racial/ethnic and age group differences in opioid and synthetic opioid-involved overdose deaths among adults aged ≥ 18 years in metropolitan areas—United States, 2015–2017. *Morbidity and Mortality Weekly Report, 68*(43), 967-973.
- Loehrer, A. P., Chang, D. C., Scott, J. W., Hutter, M. M., Patel, V. I., Lee, J. E., & Sommers, B. D. (2018). Association of the Affordable Care Act Medicaid expansion with access to and quality of care for surgical conditions. *JAMA Surgery, 153*(3), e175568-e175568.
- Long, S. K. (2003). Hardship among the uninsured: choosing among food, housing, and health insurance.
- Ma, C. T., Gee, L., & Kushel, M. B. (2008). Associations between housing instability and food insecurity with health care access in low-income children. *Ambulatory Pediatrics, 8*(1), 50-57.

- Mayberry, R. M., Mili, F., & Ofili, E. (2000). Racial and ethnic differences in access to medical care. *Medical Care Research and Review*, 57(1_suppl), 108-145.
- Manning, W. (2015). Cohabitation and child wellbeing. *The Future of Children*, 25(2).
- Maulsby, C., Millett, G., Lindsey, K., Kelley, R., Johnson, K., Montoya, D., & Holtgrave, D. (2014). HIV among black men who have sex with men (MSM) in the United States: A review of the literature. *AIDS and Behavior*, 18(1), 10-25.
- National Association of County and City Health Officials (NACCHO). (2020). MAPP evolution blueprint executive summary. <https://www.naccho.org/uploads/downloadable-resources/MAPP-Evolution-Blueprint-Executive-Summary-V3-FINAL.pdf>
- National Research Council (US) Committee to Develop an Agenda for Health Outcomes Research for Elderly People. (1996). *Health outcomes for older people: Questions for the coming decade*. Feasley, J. (Ed.), National Academy Press, Washington D.C.
- Nejat, E. J., Polotsky, A. J., & Pal, L. (2010). Predictors of chronic disease at midlife and beyond-the health risks of obesity. *Maturitas*, 65(2), 106-111.
- Obisesan, O. H., Osei, A. D., Uddin, S. I., Dzaye, O., Mirbolouk, M., Stokes, A., & Blaha, M. J. (2020). Trends in e-cigarette use in adults in the United States, 2016-2018. *JAMA Internal Medicine*, 180(10), 1394-1398.
- Oster, A. M., Wiegand, R. E., Sionean, C., Miles, I. J., Thomas, P. E., Melendez-Morales, L., ... & Millett, G. A. (2011). Understanding disparities in HIV infection between black and white MSM in the United States. *AIDS*, 25(8), 1103-1112.
- Owusu-Eduesei, K., Chesson, H. W., Gift, T. L., Tao, G., Mahajan, R., Ocfemia, M. C. B., & Kent, C. K. (2013). The estimated direct medical cost of selected sexually transmitted infections in the United States, 2008. *Sexually Transmitted Diseases*, 40(3), 197-201.
- Paradies, Y. (2006). A systematic review of empirical research on self-reported racism and health. *International Journal of Epidemiology*, 35(4), 888-901.
<https://doi.org/10.1093/ije/dyl056>
- Pope, C., Dockery, D., & Schwartz, J. (1995). Review of epidemiological evidence of health effects of particulate air pollution. *Inhalation Toxicology*, 7(1), 1-18.
<https://doi.org/10.3109/08958379509014267>
- Prejean, J., Song, R., Hernandez, A., Ziebell, R., Green, T., Walker, F., ... & HIV Incidence Surveillance Group. (2011). Estimated HIV incidence in the United States, 2006–2009. *PLoS one*, 6(8), e17502.

- Rangel, M. C., Gavin, L., Reed, C., Fowler, M. G., & Lee, L. M. (2006). Epidemiology of HIV and AIDS among adolescents and young adults in the United States. *Journal of Adolescent Health, 39*(2), 156-163.
- Rehm, J. (2011). The risks associated with alcohol use and alcoholism. *Alcohol Research & Health, 34*(2), 135-143.
- Rehm, J., & Shield, K. D. (2010). Alcohol and mortality. *Global alcohol-attributable deaths from cancer, liver cirrhosis, and injury in, 174-183.*
- Remington, P. L., Catlin, B. B. & Gennuso, K. P. The County Health Rankings: Rationale and methods. *Population Health Metrics, 13*, 11 (2015). <https://doi.org/10.1186/s12963-015-0044-2>
- Riley, W. J. (2012). Health disparities: Gaps in access, quality and affordability of medical care. *Transactions of the American Clinical and Climatological Association, 123*, 167-174.
- Robert Wood Johnson Foundation. (2012). How does transportation impact health? *Health Policy Snapshot Public Health and Prevention Issue Brief.*
- Robert Wood Johnson Foundation. (2013). How does employment – or unemployment – affect health? *Health Policy Snapshot Public Health and Prevention Issue Brief.*
- Room, R., Babor, T., & Rehm, J. (2005). Alcohol and public health. *The Lancet, 365*(9458), 519-530.
- Rossen, L. M. (2014). Neighbourhood economic deprivation explains racial/ethnic disparities in overweight and obesity among children and adolescents in the USA. *Journal of Epidemiology and Community Health, 68*(2), 123-129.
- Sasco, A. J., Secretan, M. B., & Straif, K. (2004). Tobacco smoking and cancer: a brief review of recent epidemiological evidence. *Lung Cancer, 45*, S3-S9.
- Schwarzer, R. (2008). Modeling health behavior change: How to predict and modify the adoption and maintenance of health behaviors. *Applied Psychology, 57*(1), 1-29.
- Shaw M. (2004). Housing and public health. *Annual Review of Public Health, 25*, 397–418. <https://doi.org/10.1146/annurev.publhealth.25.101802.123036>
- Shield, K. D., Gmel, G., Patra, J., & Rehm, J. (2012). Global burden of injuries attributable to alcohol consumption in 2004: a novel way of calculating the burden of injuries attributable to alcohol consumption. *Population Health Metrics, 10*(1), 1-14.
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2021). *Key substance use and mental health indicators in the United States: Results from the 2020 National Survey on Drug Use and Health* (HHS Publication No. PEP21-07-01-003, NSDUH Series H-56). Rockville, MD: Center

- for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration. Retrieved from <https://www.samhsa.gov/data/>
- Substance Abuse and Mental Health Services Administration (SAMHSA). (2020). Behavioral Health Barometer: Nebraska, Volume 6: Indicators as measured through the 2019 National Survey on Drug Use and Health and the National Survey of Substance Abuse Treatment Services. HHS Publication No. SMA–20–Baro–19–NE. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2020.
- Tembo, C., Burns, S., & Kalemba, F. (2017). The association between levels of alcohol consumption and mental health problems and academic performance among young university students. *PLoS One*, *12*(6), e0178142.
- Tortolero, S. R., Hernandez, B. F., Cuccaro, P. M., Peskin, M. F., Markham, C. M., & Shegog, R. (2010). Latino Teen Pregnancy in Texas: Prevalence, Prevention, and Policy. *Journal of Applied Research on Children*, *1*(1), 5.
- U.S. Census Bureau (2019). *QuickFacts for Antelope County, Boyd County, Brown County, Cherry County, Holt County, Keya Paha County, Knox County, Pierce County, & Rock County, Nebraska*. Retrieved from <https://www.census.gov/quickfacts>.
- U.S. Centers for Disease Control and Prevention (CDC). (2012). Current cigarette smoking among adults—United States, 2011. *MMWR. Morbidity and mortality weekly report*, *61*(44), 889-894.
- U.S. Centers for Disease Control (CDC) (2020). Mortality in the United States, 2020: What are the death rates for the 10 leading causes of death? (NCHS Data Brief No. 427, December 2021). https://www.cdc.gov/nchs/products/databriefs/db427.htm#section_4
- U.S. Centers for Disease Control (CDC) (2021). Prevalence of both diagnosed and undiagnosed diabetes. <https://www.cdc.gov/diabetes/data/statistics-report/diagnosed-undiagnosed-diabetes.html>
- U.S. Department of Education. (2016). *The state of racial diversity in the educator workforce*. Office of Planning, Evaluation, and Policy Development. Washington, D.C.
- U.S. Department of Transportation, Federal Highway Administration, (2011). *Summary of Travel Trends: 2009 National Household Travel Survey*.
- Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., & Currie, C. (2012). Adolescence and the social determinants of health. *The Lancet*, *379*(9826), 1641-1652.
- Walker, R. E., Keane, C. R., & Burke, J. G. (2010). Disparities and access to healthy food in the United States: A review of food deserts literature. *Health & Place*, *16*(5), 876-884.

- Walker, K. Z., O’Dea, K., Gomez, M., Girgis, S., & Colagiuri, R. (2010). Diet and exercise in the prevention of diabetes. *Journal of Human Nutrition and Dietetics*, 23(4), 344-352.
- Wehbi, N., Mosalpuria, K., Deras, M., Palm, D., Wilson, F., and Carritt, N. (2020). *The status of the Nebraska healthcare workforce: 2020 update*. Omaha, NE: UNMC Center for Health Policy. https://www.unmc.edu/publichealth/chp/_documents/Workforce_2020.pdf
- Weitzman, E. R. (2004). Poor mental health, depression, and associations with alcohol consumption, harm, and abuse in a national sample of young adults in college. *The Journal of Nervous and Mental Disease*, 192(4), 269-277.
- Wilson, C. M., Wright, P. F., Safrit, J. T., & Rudy, B. (2010). Epidemiology of HIV infection and risk in adolescents and youth. *Journal of Acquired Immune Deficiency Syndromes*, 54(Suppl 1). doi:10.1097/QAI.0b013e3181e243a1
- Windels, K. (2011). What’s in a number? Minority status and implications for creative professionals. *Creative Research Journal*, 23(4), 231-329. doi: 10.1080/10400419.2011.621820
- Wohl, A. R., Galvan, F. H., Carlos, J. A., Myers, H. F., Garland, W., Witt, M. D., ... & George, S. (2013). A comparison of MSM stigma, HIV stigma and depression in HIV-positive Latino and African American men who have sex with men (MSM). *AIDS and Behavior*, 17(4), 1454-1464.
- Xanthos, C., Treadwell, H. M., & Holden, K. B. (2010). Social determinants of health among African American men. *Journal of Men's Health*, 7(1), 11-19.
- Zhao, G., Okoro, C. A., Li, J., & Town, M. (2018). Health insurance status and clinical cancer screenings among US adults. *American Journal of Preventive Medicine*, 54(1), e11-e19.

Appendix A. NCDHD Community Health Needs Assessment Survey

Table A 1. Top Community Health Concerns - Other

Accidental injury
Affordable healthcare coverage and affordable doctors/procedure charges.
Ambulances. Not enough EMT available . Transfers from hospital to another facility.
Arthritis
Availability of affordable treatment for health issues.
Covid
Covid
COVID
COVIDs current impact and it future impact
Dementia
Developing Alzheimer's from COVID
GI
Hydrocephalus
Joint replacement
Loss of ambulance services
Migraines
MS
Obesity
Osteoporosis
Preventable deaths
Strokes
Unaffordable health insurance

Table A 2. NCDHD Client Reported 3 Top Health Concerns

In your experience, what are the top 3 health concerns?	Top	Second	Third	Overall
Alcohol, Drugs and Tobacco Use	24	15	26	65
Asthma	7	8	19	34
Cancer	79	48	31	158
Challenges getting healthy and affordable food	27	13	21	61
Chronic Lung Disease (like asthma, COPD)	11	17	18	46
Diabetes	27	30	31	88
Getting around town safely (driving, walking and riding)	8	8	19	35
Getting enough exercise	22	33	34	89
Heart Disease (for example: high blood pressure and stroke, etc.)	58	55	31	144
Mental Health (for example: Depression, anxiety, post-traumatic stress, suicide, etc.)	55	44	43	142
Something else (please write in your answer)	10	6	8	24
Something else (please write in your answer) - Text				
Accidental Injury				
Affordable healthcare coverage and affordable doctors/procedure charges.				

Ambulances. Not enough EMT available . Transfers from hospital to another facility.

Arthritis

Availability of affordable treatment for health issues.

Cccx [sic]

Covid

Covid

COVID

COVIDs current impact and it future impact

Dementia

Developing Alzheimer's from COVID

GI

Hydrocephalus

Joint replacement

Loss of ambulance services

Migraines

MS

Na

Obesity

Osteoporosis

Preventable deaths

Strokes

Unaffordable health insurance

Table A 3. *NCDHD Client Reported highest degree of education.*

Your highest level of education is...?	<i>n</i>	%
Less than a High School diploma	1	0.5
High Schools diploma or GED	26	12.7
Some College	42	20.6
College Degree	102	50.0
Graduate or Professional Degree	33	16.2
Total	204	100.0

Table A 4. *NCDHD Client Reported Employment Status.*

Which of the following best describes your employment status?	<i>n</i>	%
Employed/self-employed	176	89.3
I do not work outside of the home	1	0.5
Retired	20	10.2
Total	197	100.0

Table A 5. *NCDHD Client Reported Household Income last year from all sources.*

What is your household income last year from all sources?	<i>n</i>	%
Less than \$10,000	1	0.5
\$10,000 - \$14,999	1	0.5
\$15,000 - \$24,999	5	2.7
\$25,000 - \$34,999	13	7.0
\$35,000 - \$49,999	25	13.5
\$50,000 - \$74,999	45	24.3
\$75,000 - \$99,999	41	22.2
\$100,000 - \$149,999	38	20.5
\$150,000 or more	16	8.6
Total	185	100.0

Table A 6. *NCDHD Client Reported Assistance Program Participation*

Are you participating in, or receiving, the following assistance?	<i>n</i>	%
SNAP (Supplemental Nutritional Assistance Program)	2	0.9
Cash assistance from community agencies	0	0.0
Disability payments	1	0.4
Help with paying rent	0	0.0
Unemployment	0	0.0
Medicaid/Kids Connection	9	3.9
Medication assistance	2	0.9
Every Woman Matters Program	1	0.4
Respite Care	1	0.4
Heating and electric bills	0	0.0
WIC (Women, Infants and Children)	1	0.4
Commodity Supplemental Food Program (CSFP)	0	0.0
Food pantry	5	1.9
Home Delivered Meals	1	0.4
Senior Center Meals	3	1.3
Child Care Assistance	0	0.0
Free and reduced school meal program	12	5.2
Backpack Meals	0	0.0
Other	1	0.4
None	205	88.7
No Response	28	10.8

Note. Participants were asked to select all responses that applied; therefore percentages may add to greater than 100%.

Table A 7. NCDHD Client Reported Total Number of Individuals Living in their Home.

What is the total number of individuals living in your home?	Count	Valid Percent
1	23	11.5
2	87	43.5
3	28	14
4	23	11.5
5	22	11
6 or more	17	8.5
Total	200	100

Table A 8. NCDHD Client Reported

	Response	n	%
	Yes	111	49.3
	No	114	50.7
Do you transport children in your vehicles?	Total	225	100.0
	No	30	63.8
If you have a child under the age of 3, have you had a certified technician check the car seat in the past year?	Yes	17	36.2
	Total	47	100.0
When riding in a vehicle, my infants/toddlers use an infant carrier or convertible car seat in the rear-facing position until they reached the highest weight or height allowed by the car seat's manufacturer?	Sometimes	2	4.9
	Often	1	2.4
	Always	38	92.7
	Total	41	100.0
When riding in a vehicle, do your preschool-aged children (age 3 and up that have outgrown the rear-facing weight and height limit for a convertible car seat) use a car seat with a harness in the forward-facing position for as long as possible up to the highest weight or height allowed by the car seat manufacturer?	Sometimes	4	7.8
	Often	4	7.8
	Always	43	84.3
	Total	51	100.0
	Rarely or never	8	15.7
	Sometimes	7	13.7
	Often	7	13.7
When riding in a vehicle, do your school-aged children use a booster seat until reaching a height of 4 ft. 9 in.?	Always	29	56.9
	Total	51	100
	Sometimes	8	11.4
	Often	11	15.7
When riding in a vehicle, how often do your child/ren ages 13 and above use a seat belt?	Always	51	72.9
	Total	70	100.0
	No	206	93.6
	Yes	14	6.4
Do you have a fire extinguisher in your vehicle?	Total	220	100.0
	No	189	85.9
Do you use a helmet?	Yes	31	14.1

	Total	220	100.0
	No	60	57.7
	Yes	44	42.3
Do you supervise riders that are under 16 years of age?	Total	104	100.0
	No	53	93.0
	Yes	4	7.0
Have drivers under the age of 16 completed an ATV Safety class?	Total	57	100.0
	No	105	47.7
	Yes	115	52.3
Have you ever taken a safe driving class?	Total	220	100.0
	No	70	35.0
Does your family have a plan on how to communicate and what actions to take during an emergency?	Yes	130	65.0
	Total	200	100.0
Do you maintain an emergency preparedness kit at home that includes items such as: non-perishable foods, batteries, bottle water, and flashlights?	No	119	55.9
	Yes	94	44.1
	Total	213	100.0
	No	14	8
Does your place of work (or school) have a written emergency action plan?	Yes	162	92
	Total	176	100.0
	No	21	87.5
Do employees (or students) receive training at least yearly on the emergency action plan?	Yes	3	12.5
	Total	24	100.0

Table A 9. NCDHD Client Reported Worries Most Their Health or Health of Family

What worries you about your health or the health of your family?
1) Our bedrooms are in the basement of our Inn, so I wonder if my family of five is at risk of lung cancer caused by RADON. I've tested multiple times through the years, and we have concerning radon #s. However, we've never been able to afford mitigation for radon. 2) Another heart attack (husband) 3) I am in excellent health
80 years old parents
A serious accident or medical condition
Access and cost of meds
Access to care
Access to care in rural communities especially specializations
Access to mental health services
Access to quality healthcare
Access to specialist care.
Access to specialized care.
Accessibility of quality healthcare.
Accessible primary care and preventive health resources
Accessing care

What worries you about your health or the health of your family?

Accidental injuries
Adequate local care
Adequate medical staffing.
Affordable health care
Affordable Health Care
AFFORDABLE HEALTH CARE
Affording dental care and medications
Affording our insurance
Age related illnesses
Age; COVID
Aging
Aging
Aging and ability
Alcoholism
Another cardiac event.
As our age gets older, I am concerned about our heart health and diabetes issues getting worse.
Availability
Availability of quality health care
Being able to access health care when needed
Being able to afford our \$30k health insurance
Being the cause of a community or extended family members illness or suffering
Broken bones, cancer, dementia, covid
Cancer
Cancer
Cancer or heart attack runs in the family
Cancer statistics
Cancer.
Care for Medicare age patients
Chronic conditions of family members
Cost
Cost
Cost of care
Cost of health care
Cost of healthcare
Cost of healthcare, if insurance will cover, if we can afford the max out-of-pocket costs. We have no dental or vision insurance.
Cost of medications
Cost of treatment
Covid
Covid
COVID
COVID 19 PANDEMIC

What worries you about your health or the health of your family?

Covid and cancers

COVID and the rural clinics and hospitals capability to handle a surge

Covid vaccine mandate

Covid-19 and Influenza

Covid.

Death

Diabetes

Difficulty losing weight

Distance from hospitals

Distances to health care centers

Dying

Environmental concerns

Eventual lack of funds for Medicare/Social Security in future due to mismanagement by government

Finding someone knowledgeable to treat them when needed

Forced vaccine for a proteins that are 2 years old and demonstrates lack of immunity against the current delta virus.

Future cost

genetics

GET ILL

Getting covid

Getting the proper treatment in time

Getting the right medical treatment when needed and/or being referred for treatment.

Handling stress

hart disease

Have had cancer in my extended family history, that is always a concern for my family!

Having money to pay for it

Having to travel to go to routine appointments

HAVING TO WORK AND NOT BEING HOME TO TAKE CARE OF HIM

Health and aging

healthcare workers will be fired for not getting the covid shot and thus a shortage of workers

Heart and lung issues

Heart disease

Heart Disease

Heart/cancer

History of diabetes in family

History of diabetics in the family. I had asthma as a kid and lungs collapsed....worry that it might come back at some point or maybe daughter will develop it.

I am worried most that my family does not appropriately take care of themselves. They do not have a balanced diet, exercise routine, or mental health practices.

I have genetic heart disease with two stents.

I wish we put the same effort into curing cancer or obesity that we do toward COVID

I'd hate to give something to my elderly parents or in-laws; or for my kids to get them sick.

What worries you about your health or the health of your family?

If we get sick, are we going to be cared for

Immediately help needed

Insurance

Insurance after retiring

Insurance cost/having care close to home/for COVID to go away

Insurance coverage

Just trying to control weight issues

Lack of empathy from the tribe

Lack of exercise

Lack of healthcare transportation and availability.

Lack of medical services in our area for the large issue and the outrageous costs for health care

Lack of sufficient communication around vaccinations and covid 19

Longevity and maintaining independence without taking a bunch of pills

Losing my grandma

Losing my job

Maintaining a healthy diet and being active

Mandated vaccines

Medical Care Costs and getting timely specialized health care when needed.

Mental health

Mental health care and telemedicine are not readily available.

Mental health issues such as depression and anxiety

Mental health, heart disease, drug/alcohol abuse

Mobility

My autoimmune disease

My grandmother catching something and not being able to recover from it.

My husband's weight and blood pressure.

My knees and back

My son having access to be flown out quickly if needed

N/A

Na

Na

Nitrates in water & cancer

none

None

NONE

Not being able to beat an illness.

Not consuming enough fruits and veggies and eating a lot of processed food.

Not eating correctly or exercising enough

Not having access to any health care providers till 8 am and only till 430pm Monday thru Friday

Not having available beds in hospitals when needed for level of care

Not having the freedom to make one's own health choices.

Nothing

What worries you about your health or the health of your family?

Nothing

Nothing at this time

Nothing right now

Nothing we are healthy

NOTHING, LIVE EVERY DAY TO THE FULLEST

Now it's my husband getting the virus beings he does have health issues

Old age

Old age

One person in the household in diabetic

Ongoing variation in the covid virus. Continued need for increasing vaccinations

Osteoporosis, COPD, asthma, Covid.

Others unwillingness to get vaccinated.

Partners health. Taking the necessary steps to prevent health emergencies.

Paying for the care.

Paying for the health care and getting the health care locally(not having to drive to Omaha)

People not being vaccinated to help protect the ones that can't be vaccinated! Example-too young to get certain vaccines.

Possible death of a child

Possible unavailability of rooms to be transferred to a facility that can better meet needs

Preventative care and paying for unexpected medical costs.

Price of medical insurance and pre-existing conditions

Promptness of care

Public schools need more funding and education- stop feeding kids processed foods get kids who need help the help they need. This would decrease health and mental health issues.

Recruiting and retaining MD's and APP's in our community

Safety concerns with my husband farming

Salt usage on foods

Shortages and supply chain issues.

Skin cancer treatment

Something goes untreated because a provider fails to care for patients

Something happening to one of them resulting in death

Something incurable

Spreading covid 19

Staying healthy for grandkids

Stress; diet and exercise

That I have something wrong I don't know about

That I will be able to handle the complications that usually go with a health issue.

That we can access excellent services for our care.

That we have the capability to receive care in our community.

The ability to pay since we have a high deductible

The bills

The cost

What worries you about your health or the health of your family?

The cost of healthcare.
The expense of actual care.
The future and the ability for enough staff to be able to run the health care facilities
The health of myself and my family; being there for my family
The lack of specialty providers that I am allowed to see near where I live due to medical insurance covered under my plan.
The possibility of cancer, heart or lung issues.
The price of health care that keeps rising and rising.
The spread of infections that could land us in the hospital.
The unknown
The unknowns about the disease and vaccinations
To make sure I'm not a burden on my spouse or family
Tobacco use Alcohol use
Too much work, not enough time to care for self
Unvaccinated people
Viruses and pollutants
We don't catch Covid severe like.
Weight
Well, we're getting older. Not much we can do about that!
What worries me most is family that lives a distance and not being able to be with them since I have the power of medical decisions.
What's available in our community
Which one of my family members will need stitches or a cast next

Table A 10. *NCDHD Client Report*

	Response	<i>n</i>	%
Is transportation a barrier to receiving health screenings or other health care services? Barriers would include: no car, can't afford gas, no driver's license, no public transportation, no one available to take me, etc.	No	222	94.9
	Yes	12	5.1
	Total	234	100.0
Are you limited in any way in any activities because of physical, mental or emotional problems and/or disability?	No	205	87.6
	Yes	29	12.4
	Total	234	100.0
At your current place of employment, is there a wellness program to encourage you to be healthy?	No	63	31.7
	Yes	136	68.3
	Total	199	100.0
Are members of your household covered by health insurance?	None have insurance	1	0.5
	Some have insurance	10	4.7

	All have insurance	204	94.9
	Total	215	100.0
In the past two years, did you sign up for health insurance coverage, find that you were unable to afford the premiums, and let your coverage lapse?	No	171	92.4
	Yes	14	7.6
	Total	185	100.0
Do you have dental insurance?	No	41	19.1
	Yes	174	80.9
	Total	215	100.0

Table A 11. *NCDHD Client Reported problems which have stopped them from getting a health screening or other health care services, including prescription drugs*

Which of the following problems have stopped you from getting a health screening or other health care services, including prescription drugs? (Please check all that apply)	<i>n</i>	%
I don't know what kind of screening I need or when to get a screening	26	11.4
I don't know where to go for a health screening/service	10	4.4
I don't have time to get health screenings/ services	25	11.0
My doctor hasn't recommended I get a health screening	26	11.4
I can't pay for health screenings/services	19	8.3
My health insurance doesn't cover health screenings/services	19	8.3
My deductible or co-payment is too high	35	15.4
Hospitals or Doctor won't take my insurance or medical assistance	1	0.4
I couldn't get an appointment	3	1.3
Health care provider has limited office hours	8	3.5
Health care services aren't close to where I live	6	2.6
Language/ interpretive services not provided	0	0.0
Other Reason	11	4.8
None	113	49.6

Table A 12. *NCDHD Client Reported health plans are utilized in their household*

Which of the following health plans are utilized in your household? (Please check all that apply)	<i>n</i>	%
Employer Provided	166	77.2
Medicaid/ Medical Assistance	17	7.9
Long Term Care Insurance	12	5.6
Private Plan	34	15.8
Indian Health Services	6	2.8
VA Insurance	5	2.3

Medicare	39	18.1
Medicare Part D (Prescription drug plan)	28	13.0

Table A 13. *NCDHD Client Reported miles they travel for health professionals/services.*

About how far in miles, one way, do you travel for the following health professionals/services?		<i>n</i>	%
Primary Care Health Professional	0-30 miles	160	83.3
	31-45 miles	20	10.4
	46-75 miles	8	4.2
	over 75 miles	4	2.1
	Total	192	100.0
Cardiology/Heart	0-30 miles	66	55.9
	31-45 miles	16	13.6
	46-75 miles	13	11.0
	over 75 miles	23	19.5
	Total	118	100.0
Orthopedics/Orthopedic surgeon	0-30 miles	46	41.4
	31-45 miles	19	17.1
	46-75 miles	13	11.7
	over 75 miles	33	29.7
	Total	111	100.0
Urology	0-30 miles	41	45.1
	31-45 miles	15	16.5
	46-75 miles	13	14.3
	over 75 miles	22	24.2
	Total	91	100.0
Obstetrics/Gynecology	0-30 miles	36	39.1
	31-45 miles	19	20.7
	46-75 miles	16	17.4
	over 75 miles	21	22.8
	Total	92	100.0
Pediatrician	0-30 miles	25	33.8
	31-45 miles	17	23.0
	46-75 miles	11	14.9
	over 75 miles	21	28.4
	Total	74	100.0
General Surgery	0-30 miles	46	49.5
	31-45 miles	16	17.2
	46-75 miles	14	15.1
	over 75 miles	17	18.3

	Total	93	100.0
	0-30 miles	22	27.5
	31-45 miles	18	22.5
	46-75 miles	13	16.3
	over 75 miles	27	33.8
Oncology/Cancer	Total	80	100.0
	0-30 miles	39	50.6
	31-45 miles	13	16.9
Mental Health	46-75 miles	9	11.7
	over 75 miles	16	20.8
	Total	77	100.0
	0-30 miles	105	66.0
	31-45 miles	31	19.5
Dental Health	46-75 miles	14	8.8
	over 75 miles	9	5.7
	Total	159	100.0
	0-30 miles	127	81.4
	31-45 miles	18	11.5
Prescriptions/Pharmacy	46-75 miles	6	3.8
	over 75 miles	5	3.2
	Total	156	100.0
	0-30 miles	20	52.6
	31-45 miles	3	7.9
Other	46-75 miles	2	5.3
	over 75 miles	13	34.2
	Total	38	100.0

Table A 14. *NCDHD Client Reported who they get most of their medical care from.*

Who do you get most of your medical care from?	<i>n</i>	%
Primary care provider (medical doctor)	152	64.7
Other Medical doctor (OB/GYN, Pulmonologist, Cardiologist, Internal Medicine, etc.)	14	6.0
Non-medical doctor (Chiropractor)	8	3.4
Other medical practitioner (physician assistant (P.A.), nurse practitioner)	57	24.3
I do not seek medical care	4	1.7
Total	235	100.0

Table A 15. *NCDHD Client Reported where they get most of their medical care from.*

Where do you get most of your medical care? (Please select one option)	<i>n</i>	%
Hospital/Emergency room	2	0.9
Urgent Care	1	0.4
Medical Clinic	220	95.7
Sliding-fee or reduced fee-based clinic	2	0.9
Tribal Health Clinic	3	1.3
I do not seek medical care	2	0.9
Total	230	100.0

Table A 16. *NCDHD Client Reported Desired Hospital Services*

Are there any services that are not currently offered at your hospital that you would like to see added?	<i>n</i>
Dermatology	14
Mental Health	6
Endocrinology	5
None	5
Pediatrics	4
Rheumatology	4
Urology	4
Lifestyle/nutrition	3
Neurology	3
OB/GYN	2
Weight loss	2
Allergy	1
Audiology	1
Breast Surgeon	1
Cardiology	1
Counseling	1
Diabetic doctor	1
Gastroenterology	1
Gastroenterologist	1
Health Education	1
Massage therapy	1
Nursery	1
Orthopedics	1

Permeant MRI	1
Podiatrist	1
Pulmonology	1
Thyroid specialist, ultrasound guided biopsy	1
Transitional care assistance	1
Urgent care facility rather than er	1
Vision 45miles	1

Table A 17. NCDHD Client Reported ER Services

Have you, or someone in your household, used the emergency room, been admitted to, or used outpatient services at a hospital in the past 24 months?	<i>n</i>	%
No	86	41.7
Yes	120	58.3
Total	206	100.0

Table A 18. NCDHD Client Reported health how satisfied they were with the services they received.

How satisfied were you (or someone in your household) with the services you received	<i>n</i>	Min	Max	Mean	SD
Avera St. Anthony's Hospital	83	1	4	3.60	0.60
Antelope Memorial Hospital	7	3	4	3.57	0.54
West Holt Memorial Hospital	15	3	4	3.80	0.414
H- Rock County Hospital	3	3	4	3.67	0.58
Cherry County Hospital	6	3	4	3.67	0.52
Avera Creighton Hospital	21	2	4	3.67	0.58
Niobrara Valley Hospital	6	3	4	3.83	0.41
CHI Plainview Hospital	16	3	4	3.69	0.48
Osmond General Hospital	10	3	4	3.80	0.42
Brown County Hospital	12	2	4	3.42	0.67
Other	29	2	4	3.52	0.57
Was the staff helpful?	110	0	1	0.97	0.16
I was happy with my overall experience.	112	0	1	0.95	0.23
My questions were answered.	113	0	1	0.97	0.16
I am likely to return to the Health Department for services.	101	0	1	0.92	0.27
I am likely to recommend the Health Department to family and friends.	106	0	1	0.91	0.29
Do you find the information on our webpage to be helpful? (www.ncdhd.ne.gov)	118	0	1	0.93	0.25
Do you find the information on our social media pages to be helpful? (Facebook, Twitter, Instagram)	109	0	1	0.91	0.29

Do you find our press releases and other printed materials to be helpful?	118	0	1	0.95	0.22
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Table A 19. NCDHD Client Reported Experiences with Local Public Health Department

		<i>n</i>	%
Have you ever used a program, service or activity sponsored by your local Health Department?	No	65	41.9
	Yes	90	58.1
	Total	155	100.0
Do you know what your local public health department does?	No	25	15.1
	Yes	141	84.9
	Total	166	100.0
Were interpreter services available?	No	4	19.0
	Yes	17	81.0
	Total	21	100.0
Our main office hours are Monday- Friday, 8:00 A.M. to 4:30 P.M. Do these hours meet your needs?	No	28	20.0
	Yes	112	80.0
	Total	140	100.0
Did you utilize the Health Department services (information/ vaccines/ testing/ etc.) during the COVID-19 pandemic?	No	31	19.5
	Yes	128	80.5
	Total	159	100.0

Table A 20. NCDHD Client Reported Healthcare Frequency

How often do you have a regular visit at the...?		<i>n</i>	%
Primary care provider	Never	1	0.4
	5 or more years ago	8	3.4
	Within past 2- 5 years	8	3.4
	Within past 1- 2 years	29	12.4
	Within past year (anytime less than 12 months ago)	188	80.3
	Total	234	100
Eye Doctor	Never	5	2.2
	5 or more years ago	12	5.2
	Within past 2- 5 years	20	8.7
	Within past 1- 2 years	48	21.0
	Within past year (anytime less than 12 months ago)	144	62.9
	Total	229	100.0
Dentist	Never	4	1.7

	5 or more years ago	15	6.5
	Within past 2- 5 years	14	6.1
	Within past 1- 2 years	33	14.3
	Within past year (anytime less than 12 months ago)	165	71.4
	Total	231	100.0
Chronic Disease Educator	Never	177	84.7
	5 or more years ago	7	3.3
	Within past 2- 5 years	2	1.0
	Within past 1- 2 years	7	3.3
	Within past year (anytime less than 12 months ago)	16	7.7
	Total	209	100.0

Table A 21. NCDHD Client Reported Personal Health Responses

		<i>n</i>	%
When was your most recent cholesterol screening?	Never	17	7.7
	More than 6 years ago	6	2.7
	Within past 4-6 years	197	89.5
	Total	220	100.0
How many times in the past 3 months has an adult in your household been injured and required medical care as the result of a fall?	0 times	211	92.5
	1 time	16	7.0
	2 times	1	0.4
	Total	228	100.0
During your most recent time dialing 911, how long did it take for emergency personnel to respond?	Within 10 minutes	8	42.1
	11 to 20 minutes	7	36.8
	21 to 30 minutes	4	21.1
	Total	19	100.0
How often do you use a tanning bed?	Seasonal	11	57.9
	Just before vacation	7	36.8
	Weekly	1	5.3
	Total	19	100.0
How many hours per day do you spend looking at your cell phone, tablet, computer, television, video games or other electronic devices outside of school and/or work?	1- 2 Hours	83	36.9
	3 - 4 Hours	83	36.9
	5 or more hours	46	20.4
	Total	225	100.0
Do you use a seat belt?	Rarely or never	6	2.7
	Sometimes	24	10.6
	Often or always	196	86.7
	Total	226	100.0

Table A 22. *NCDHD Client Reported Health Testing*

When were you most recently tested for any of the following?		<i>n</i>	%
Blood pressure	Never Tested	5	2.2
	Over 2 years ago	4	1.7
	Within past 1- 2 years	6	2.6
	Within past year (anytime less than 12 months ago)	217	93.5
	Total	232	100.0
Diseases of the eye	Never Tested	12	5.5
	Over 2 years ago	22	10
	Within past 1- 2 years	37	16.8
	Within past year (anytime less than 12 months ago)	149	67.7
	Total	220	100.0
Osteoporosis	Never Tested	107	55.7
	Over 2 years ago	28	14.6
	Within past 1- 2 years	16	8.3
	Within past year (anytime less than 12 months ago)	41	21.4
	Total	192	100.0
Diabetes	Never Tested	34	16.4
	Over 2 years ago	17	8.2
	Within past 1- 2 years	18	8.7
	Within past year (anytime less than 12 months ago)	138	66.7
	Total	207	100.0
HIV / AIDS	Never Tested	133	68.9
	Over 2 years ago	38	19.7
	Within past 1- 2 years	6	3.1
	Within past year (anytime less than 12 months ago)	16	8.3
	Total	193	100.0
Sexually transmitted diseases/ infections	Never Tested	119	61.7
	Over 2 years ago	41	21.2
	Within past 1- 2 years	12	6.2
	Within past year (anytime less than 12 months ago)	21	10.9
	Total	193	100.0

Table A 23. *NCDHD Client Reported Tobacco Use Type*

What type of tobacco/nicotine products do you currently use? (check all that apply)	<i>n</i>	%
Cigarettes	14	6.1
Chewing Tobacco	2	0.9
E-Cigarettes/ Vapors	1	0.4
None	214	92.6
Total	231	100

Table A 24. *NCDHD Client Reported Age of First Tobacco Use*

How old were you when you started using tobacco/nicotine products routinely?	<i>n</i>	%
13	1	0.4
14	3	1.1
16	1	0.4
17	1	0.4
18	6	2.3
19	1	0.4
20	1	0.4
23	1	0.4
27	1	0.4
30	1	0.4

Table A 25. *NCDHD Client Tobacco Use & Habits*

		<i>n</i>	%
Would you like to quit using tobacco/nicotine products?	No	6	35.3
	Yes	11	64.7
	Total	17	100
During the past 12 months, have you or someone in your home stopped using tobacco/nicotine products for one day or longer because you/they were trying to quit using these products?	No	203	91.9
	Yes	18	8.1
	Total	221	100.0
Which statement best describes the rules about smoking inside your home?	Smoking is not allowed anywhere inside my home	213	94.2
	Smoking is allowed in some places or at sometimes	4	1.8

	Smoking is allowed anywhere inside the home	9	4.0
	Total	226	100.0
Which statement best describes the rules about smoking inside your vehicles?	Smoking is not allowed anywhere inside my vehicle	200	88.9
	Smoking is allowed in sometimes or in some vehicles	19	8.4
	Smoking is allowed inside the vehicle	6	2.7
	Total	225	100.0
At your place of employment, are outside areas tobacco/smoke free?	No	35	19.2
	Yes	147	80.8
	Total	182	100.0
If you live in an apartment, is your apartment building smoke free?	No	0	0.0
	Yes	3	100.0
	Total	3	100.0

Table A 26. *NCDHD Client Reported General Health*

Would you say that in general, your health is...?	<i>n</i>	%
Poor	2	0.9
Fair	23	9.8
Good	101	43.0
Very Good	93	39.6
Excellent	16	6.8
Total	235	100.0

Table A 27. *NCDHD Client Reported Healthy Activities*

What is something you do to be healthy?	<i>n</i>	%
Exercise	153	65.9
Eat nutritious and balanced meal	163	70.3
Yoga/ Stretch	36	15.5

Table A 28. *NCDHD Client Reported Days of Physical Activity*

How many days a week do you do at least 20-30 minutes of physical activity without stopping, in which you breathe heavier and your heart beats faster?	<i>n</i>	%
Never	5	3.4

1 day a week	18	12.1
2-3 days a week	62	41.6
4-5 days a week	47	31.5
6-7 days a week	17	11.4
Total	149	100

Table A 29. *NCDHD Client Reported Weight*

Please enter your weight in pounds	<i>n</i>	%
99	1	0.4
105	1	0.4
106	1	0.4
112	1	0.4
115	2	0.9
120	2	0.9
125	5	2.2
127	1	0.4
129	1	0.4
130	4	1.8
132	1	0.4
134	1	0.4
135	5	2.2
137	1	0.4
138	2	0.9
140	6	2.7
142	1	0.4
144	1	0.4
146	1	0.4
149	1	0.4
150	8	3.6
152	1	0.4
153	2	0.9
155	3	1.3
155.2	1	0.4
157	3	1.3
158	2	0.9
160	11	4.9
163	1	0.4
164	1	0.4
165	7	3.1
170	13	5.8
174	2	0.9

Please enter your weight in pounds	<i>n</i>	%
175	9	4.0
177	1	0.4
178	1	0.4
180	7	3.1
182	1	0.4
185	4	1.8
186	1	0.4
188	2	0.9
190	10	4.5
192	2	0.9
193	1	0.4
194	1	0.4
195	6	2.7
196	1	0.4
197	2	0.9
198	3	1.3
200	6	2.7
201	1	0.4
202	2	0.9
205	3	1.3
206	1	0.4
207	1	0.4
208	1	0.4
209	1	0.4
210	5	2.2
213	1	0.4
215	3	1.3
217	1	0.4
220	5	2.2
221	1	0.4
225	4	1.8
228	1	0.4
230	2	0.9
233	1	0.4
235	5	2.2
236	1	0.4
239	1	0.4
240	6	2.7
250	4	1.8
254	1	0.4
257	2	0.9

Please enter your weight in pounds	<i>n</i>	%
260	3	1.3
265	1	0.4
270	1	0.4
275	1	0.4
278	1	0.4
280	2	0.9
285	1	0.4
290	1	0.4
295	1	0.4
325	1	0.4
345	1	0.4
350	1	0.4
400	2	0.9
Total	223	100.0

Table A 30. *NCDHD Client Reported height in feet and inches.*

Please enter your height in feet and inches	<i>n</i>	%
4'11	1	0.4
5'0	3	1.3
5'1	9	3.9
5'10	12	5.2
5'11	5	2.2
5'2	12	5.2
5'3	23	9.9
5'4	34	14.7
5'5	22	9.5
5'6	41	17.7
5'7	28	12.1
5'8	14	6.0
5'9	10	4.3
6'0	8	3.4
6'1	2	0.9
6'2	4	1.7
6'3	1	0.4
6'5	1	0.4
6'6	2	0.9
Total	232	100.0

Table A 31. *NCDHD Client Reported Days Consumed Alcohol*

During an average week, how many days do you consume any drink containing alcohol such as beer, wine, a malt beverage, or liquor?	<i>n</i>	%
0 Days	71	36.8
1 Days	56	29.0
2 Days	27	14.0
3 Days	13	6.7
4 Days	5	2.6
5 Days	13	6.7
6 Days	4	2.1
7 Days	4	2.1
Total	193	100.0

Table A 32. *NCDHD Client Reported Frequency of Binge Drinking*

Considering all types of alcohol beverages, how many times during the past month did you have five drinks (men) or four drinks (women) or more during less than a five-hour time frame?	<i>n</i>	%
0 Days	123	65.8
1 Days	27	14.4
2 Days	16	8.6
3 Days	6	3.2
4 Days	6	3.2
5 Days	9	4.8
Total	187	100.0

Table A 33. *NCDHD Client Reported sex partners.*

In the past year, how many sex partners have you had?	<i>n</i>	%
1	205	99.0
3	2	1.0
Total	207	100.0

Table A 34. *NCDHD Client Reported Type of Disability*

What type of disability do you have?	<i>n</i>	%
Emotional	6	2.3
Physical	13	5.0
Mobility	9	3.5

Table A 35. *NCDHD Client Reported Last Major Health Issue*

What was the last major health issue you or your family experienced?

? Kidney stone

2 adult children in their 20s were diagnosed with serious health issues

2 children under 3 had RSV

2019 flood

2020

3 months ago

A broken ankle with subsequent surgery to repair with internal fixation.

A lot of my family struggles with diabetes so that is always an issue at all times.

Accident injury

ACL/Meniscus tear.

Acute kidney

Adenectomy

Afib

Afib

afib/copd

Allergies

An ovarian cyst

Anaphylaxis

Anxiety

Appendicitis

ARDS

Asthma

Atrial fibrillation

Back injury

Back pain

Back surgery

Back surgery

Bat Bite

Birth

Birth of premature grandchild

Brain tumor diagnosis

Breast cancer

Broken ankle that needed surgical repair

Bronchitis

C-section

Cancer

Cancer

CANCER

What was the last major health issue you or your family experienced?

Cancer and heart valve replacement

Cancer diagnosis

Car accident of my son.

Cardiac

Cardiac Arrest.

Child needing a surgery

Childbirth

Circulatory issues in my leg

Cold

Colon Cancer

Covid

Covid

COVID

Covid 19

COVID 19 Infection

Covid 19 our 11-year-old had it in August of 2021.

Covid infection-husband

Covid positive

Covid-19

Covid-19

COVID-19

COVID-19 in the family

Covid, High Blood Pressure

Dad had prostate cancer and underwent experimental surgery

Death of a loved one. Hospitalization of sibling.

Death of a sister

Death of my mother from COPD

Decision for knee replacement.

Dental care needs/ diagnosis leukemia

Depression and anxiety

Dermatologist appointment, sick kid appointment

Diabetes

Diagnosis of my husband's ventricular tachycardia.

Did not have one.

Domestic partner being diagnosed with High blood pressure, high cholesterol, sleep apnea, and high risk of a heart attack.

End stage congestive heart failure and covid 19

ER visit Referred on to Cardiologist and lung issues.

Family members with Covid-19

Farm accident

Father became ill with Covid and eventually passed.

Flu

What was the last major health issue you or your family experienced?

fractured leg

Gallbladder removal

Gestational Diabetes

Have been healthy and no health issues.

Having 2 stents placed in my heart

Having a child

Having a cold

Heart

Heart attack

Heart attack

Heart Attack

Heart Attack 2019. Heller myotomy with toupee fundoplication 2020. Two trips to the ER for possible heart attacks 2021.

Heart cath

Heart disease

Heart Disease

Husband had covid last year and is now having issues with chest pains, stomach pains.

Husband's illness

HUSBANDS ALZHEIMERS ISSUES

I had sinus surgery.

I was diagnosed with cancer.

Impetigo

Infant born with heart defects

Interstitial lung disease

Kid with broken foot

Kidney infection/lump on kidney

Kidney stone

Kidney stones

knee replacement

Knee surgery

Knee surgery

Knee Surgery, Prostate surgery

Luckily my immediate family hasn't had major health issues, a grandparent had lung cancer, he passed from that.

Major health diagnosis on a young adult child

Members of the family encountered rotavirus last spring.

Mental health

Mental health issue identified

Migraines

My Father had to have a pacemaker installed.

My husband had prostate cancer

What was the last major health issue you or your family experienced?

My husband has sepsis pneumonia.

My husband was in a pretty bad car accident in 2019, and my daughters father-in-law just died from cancer.

My husband's recent hospitalization in Norfolk and here at Avera St. Anthony.

My son had Guillan Barre'

N/A

NONE

Na

NA

Neuroinvasive West Nile Virus

No major health issues

NO MAJOR ISSUE

None

None

None in the last year

None really

Nothing major.

Nothing

Orthopedic injury

Osteoporosis minus 7.

Pancreatic Cancer

Parents ill

Pertussis

Pneumonia

Pneumonia

Post-Partum Hemorrhage, PPd

Pregnancy

premature grandchild

Psoriatic Arthritis

RSV

RSV

Serious side effects to a medication that caused a hospitalization

Shunt revision

Sinus surgery

skin cancer

Some members have had covid

Sore knee

Stent

Stomach bleeding from being on low dose aspirin

stroke

Stroke

Stroke, blood clot

What was the last major health issue you or your family experienced?

Suicide, Diabetes, cancer

Surgery

Surgery

Therapy

Thyroid H81 Ashimoto disease

Torn Ligament in Foot.

Trauma due to fall

Wife has Minears disease which is connected to Migraines and some hearing loss.

Table A 36. *NCDHD Client Reported Attitudes Towards COVID-19 vaccines.*

Why are you likely, or unlikely, to recommend the COVID-19 vaccine?

We need to develop herd immunity to control the pandemic

Affects from covid likely to be worse than affects from vaccine

All the things Dr. Fauci says and then contradicts himself. Also, how fast it was approved.

Because even with the vaccine I got extremely sick, I think my outcome would have been much worse!

Because I believe in it

Because I got the vaccine

Because I think it works.

Because it works

because it's their choice, not mine

becoming less ill

Both my parents died of covid 19

community health

Concern for others

Covid spreads easily and people just aren't careful

Doesn't seem to keep working

Don't want to see anyone sick

Due to the job I am in.

Each person choice

Everyone should act according to their own conscience

Feel all should vaccinate.

Freedom of choice

Good

Help decrease the spread and get closer to normalcy

I am not convinced it is safe for all people.

I believe immunization prevents diseases.

I believe in it

I believe in the science that it works and is the right thing to do as a responsible member of society.

I believe in the vaccine and how it can help prevent serious illness.

I believe in the vaccine and its ability to stem the pandemic and return life to normal

I believe in vaccines!!

Why are you likely, or unlikely, to recommend the COVID-19 vaccine?

I believe it is the correct decision to stay healthy

I believe the science

I believe we all should

I do not generally promote people causing self-harm.

I don't believe in it

I feel if you want to stop the spread, you have to get the vaccine. But I will not ever push it on anyone.

I feel it helped my case of covid to be mild

I feel it is a personal decision

I feel it is a personal decision.

I feel it's everyone's own choice

I feel it's a personal decision

I feel that the vaccine is needed to protect myself and others.

I feel this is still experimental and as such, should be checking people for their antibodies and Igg levels.

They should also be monitoring people for every symptom they have post vaccine. I really believe this has not been researched properly for a long enough period of time.

I firmly believe it can be dangerous and it contains parts of aborted babies.

I joined the Meridian Research study.

I see the car end of the spectrum of covid routinely

I think as many people as possible need to get the vaccine to improve herd immunity and to lessen the pandemic as quickly as possible.

I think everyone should get the vaccine so we can move on with our lives.

I think it is a personal choice

I think it is only beneficial for health care workers and the elderly and immune compromised

I think it should be a CHOICE by the individual

I think it should be peoples own decision not someone making you get the shot

I think it's one of the best ways to protect people from becoming deathly ill right now.

I THINK IT'S ONE OF THE IMPORTANT STEPS OF STOPPING THIS PANDEMIC

I think it's worth it

I think that is how we are going to get the infection rate to nil.

I understand how infectious diseases and vaccinations work

I was sick for days after the vaccination and still got COVID.

I would recommend the vaccine to someone who is at a high risk of severe symptoms related to COVID 19, like someone who is elderly or has underlying health conditions.

I would recommend to overweight people or people with breathing diseases. I would recommend healthy individuals to stay away from the poison.

I'm a health care professional who understands the importance.

It is a choice

It is a personal choice- I encourage education and personal decision to take or not take.

It is personal choice

It is safe and effective

It is the best way to get back to normal

It is the only way to end, or at least control, this disease.

Why are you likely, or unlikely, to recommend the COVID-19 vaccine?

It is the right thing to do for yourself, your family, community and its members

It just makes sense to

It keeps us all safe

It made me extremely sick, and I missed over 2 weeks (combined) work because of it.

It prevents serious illness and lung damage

It seems to be working

It's their choice

It's every person's decision and I'm tired of people being judged for it.

It's still too new and not studied enough to push it in people. I don't feel comfortable recommending it.

I have known people with serious side effects from the vaccine.

It's their personal choice. Not mine to push on them

Its everyone choice

Likely

LIVING A HEALTHY LIFESTYLE CAN MAKE A BIGGER DIFFERANCE THEN A SHOT.

Most responsible thing to do not for yourself but those you love

Need more testing done.

Need them to avoid covid

Not enough long-term research. Long term side effects are unknown.

Not going to promote a vaccine with Dr Fauci and Bill Gates involved

Not sure about it

Not sure; so many unknowns and different answers out there

Not tested long enough

Personal choice

Personal choice not mine

Personal choice, if young and healthy

Personal Choices

Personal choice

PREVENTION

Proven to lessen the effects of the disease.

Reduced chance of contracting COVID, reduced severity of disease if contracted.

Religious beliefs

Right thing to do

Safety

Safety of others

Save a life!

Science has proven time and time again it works

Self-choice

Sick of masks

Side effects, mandates

So others don't get sick

So we can begin returning to a normal routine and protect our schools and communities

Son now has heart issues after receiving Moderna vaccine

Why are you likely, or unlikely, to recommend the COVID-19 vaccine?

Stop having the government shove a treatment down our throats that only make politicians rich.

The more vaccinated the community is, the healthier the community is

Think it is important

Though the vaccine will not keep them from contracted covid, it may keep them from serious illness due to infection.

To help prevent the spread or becoming severely sick with the virus

To keep me safe and from spreading to others

To prevent the spread of covid 19

To protect myself, my family, and those around me

To protect others

To stay alive

Unknowns

Vaccine has not been available long, do not know the long-term side effects

Vaccines WORK! That's why we don't get Tetanus or Polio anymore.

We are vaccinating for a proteins that is two years old. The vaccine has ill side effects. It is recommended to treat the symptoms, stay healthy, stay home when you are sick, early treatment if you do get diagnosed with Covid. Nothing is changing as it is "strongly recommended to isolate yourself and wear masks even if you vaccinated" therefore you have given a false sense of security to the people in our communities.

We know the disease/virus is real and we are going to have to fight it off. We've taken how many other vaccines in our lifetime not knowing what's in them, and we've remained healthy. To me, this is no different.

We owe it to humanity.

We should not be forced to take it

Why not give your body a weapon to fight off the virus.

Why not?

Why risk the chance of getting COVID and if it helps lesson the symptoms if you do get it, Why not.

You don't know all the facts yet

Table A 37. *NCDHD Client Reported Attitudes Towards Information About COVID-19.*

Where do you get your most trusted information regarding COVID-19?

All sources of news outlets

Anywhere but the health department

Articles from Drs. etc. that I trust.

At place of employment

At this point, I'll go with the health department/local hospitals and area doctors. I know they've been handed down information, but I trust them and their beliefs over anything through the media anymore.

Avera St. Anthony's

Can't say I trust any of it

CDC

CDC

Where do you get your most trusted information regarding COVID-19?

CDC and Health Dept
CDC or health department
CDC,
CDC, NIH, NE DHHS, NCDHD
CDC, workplace
CDC; NCDHD; Workplace
CDC. Hospital emails.
CDC. NOT media.
Church
Clinic
Department of health
DHHS
Do my own research
Doctor
Doctors, news, friends and family
Dr
DR
Dr,
Dr., CDC
E mail sent from my employer
employer
EMPLOYER/COMPANY INFORMATION
Family
Family doctor and health care websites.
From health care provider
From my family physician.
Gf
Health department
Health Department
Health Department and CDC
Health department and internet
Health department and physician
Health Department Facebook page and evening news outlets
Health Department, State of Nebraska
Health dept and primary care.
Health dept, CDC
Health Dept, no -partisan sources if possible/if can be found
Health dept. & CDC website
Health dept/ Avera
Health dept/ CDC
Health officials
Hospital

Where do you get your most trusted information regarding COVID-19?

Hospital where I work

I did not get trusted information

I don't feel like I get trusted information anywhere!

Internet

Internet

IP nurse at CHI Health Plainview

Local health department

Local Health Dept

MAYO CLINIC Dr

Mayo clinic website

Mayo, Cleveland, Harvard, John Hopkins sites

Medical data bases

Medical profession

Medical professionals

Medical providers, the news

Medical research

Multiple sources

My doctor, CDC, Health Dept.

My employer's infection control staff members

My own knowledge and research

My physician

My primary care provider

My workplace

NCDHD

NCDHD and WHMH

NCDHD website or Facebook page

NCDHD, CDC, DHHS

NCDHD, CDC, WHO

NCDHD, UNMC

NE Med Center, Dr Rainer's you tube videos, NCDHD

News

Newspaper

Nowhere

Nowhere.

North Central Health District

NOT mainstream media or the CDC

Not the media

One for the provider's that I work with.

Online

Online - cdc.gov

Pharmacist

Pharmacy

Where do you get your most trusted information regarding COVID-19?

- Physician
 - Physician and hospital.
 - Place of employment
 - Primary care doctor
 - Primary care physician
 - Primary Provider
 - Quit paying attention to much politics involved
 - Reading
 - Reputable sources or my physician
 - Research
 - Science and trusted non-biased resources
 - Talking to family
-

Appendix B. NCDHD NALHD Survey

Table B 1. *Reported Last Major Health Issue*

What was the last major health issue you or your family experienced?
ACL (knee) Surgery
Aortic aneurysm surgery
Back Surgery - Late husband had ALS
Bleeding from hiatal hernia (cameron lesions)
broken leg
Broken leg
Cancer
Cancer, Covid
cataracts and full thickness macular hole surgeries
Covid
Covid over thanksgiving last year
Covid-19
Covid-19 in November 2020
Covid, diabetes
Diabetes and heart issues
Father moving in a town 48 miles away instead of his/our hometown
Heart
heart bypass
Hernia repair surgery
Husband was diagnosed with bladder cancer
I gave my sister a kidney in 1999. She died of liver infection 12 years later.
I had a back surgery 6/9/21
I had issues with one of my legs. Upon consult with a vascular surgeon and was able to determine no valve issue or no surgery was needed
Internal bleeding- my wife
Kidney stones
Mother's decline due to age+ severe R.A and related issues, living alone, medicine, move to assisted living
My daughter had septea and two kidney stones
My husband's back surgery last Dec 2020
No major issues
none
None
Nothing major except Covid in November 2020
pneumonia several years ago
Skin cancer on face, my husband donating a kidney to his sister in 1999
Super 'cold' virus 2 weeks ago
Surgeries to remove ovarian cysts

Table B 2. Reported Worries about Health.

<u>What worries you the most about your health or the health of your family?</u>
Being somewhat overweight
cancer
Cancer
Cancer and heart diseases
Cancer/ heart issues
cardiac issues
Complications
Covid
Covid-19 and respiratory problems
dealing with age related illnesses or health declines
getting older
Having to travel for care
Healthcare costs
Hospital closure due to vaccine mandate
I have to drive 4-5 hours away for surgeries
infertility and its impacts on relationships and mental health
Insurance coverage/Medicare
Just staying healthy such as having a long-term effect from getting sick
Just that we are both getting old - nothing you can do about that
Longevity and maintaining independence without prescribe any medication
no concerns at this time
None
Nothing, God takes care
old age
Past cardiac issues
Small children in the house and also currently pregnant
smoking - going to try to quit 12/1/21
Someone getting hospitalized for covid and dying alone
staying well and mobile
That they will inherit some of the medical issues of their ancestors
The age factor and inability to resist viruses
The services available in a rural community
water quality and the effects of high nitrate and other pesticides and fertilizer on the drinking water

Table B 3. Reported Top 3 Health Concerns.

In your experience, what are the top 3 health concerns?	<i>n</i>
Alcohol, Drugs, and Tobacco Use	6
Asthma	1
Cancer	11
Challenges getting health and affordable food	2
Chronic Lung Disease (like asthma, COPD)	2
Diabetes	6
Getting around town safely (driving, walking, and riding)	1
Getting enough exercise	2
Heart Disease (for example: high blood pressure and stroke, etc.)	9
Mental Health (for example: Depression, anxiety, post-traumatic stress, suicide, etc.)	3
Something else? care for the elderly (rest home needed)	1

Table B 4. Reported Healthy Activities

What is something you do to be healthy?
cutting out sugary foods, cooking at home instead of eating out
Diet, Vitamins
Drink milk, exercise, own a pet
exercise, eating nutritious(try)
I still farm
Regular check ups
retired - but work, volunteer, church, family, walk, keep my mind active
run
Try to eat healthy
walk
We have a recumbent and treadmill in house. I use the recumbent
Yoga, walk, watch what I eat

Table B 5. Reported reasons for a healthier Neighborhood.

What would make your neighborhood a healthier place for you or your family?
Alcohol and drugs problems
caregivers in the community that could check on elderly, light housekeeping duties, help with shopping, paying bills, etc.
Indoor swimming
Keeping environment clean and clear
less traffic
Nothing
putting in sidewalks so it would be safer to walk
safe sidewalks
walking and bike paths
we are in a good location
Wish they didn't charge to use the weight room at the high school

Table B 6. *Reported Zip Code.*

What is your zip code?	Frequency
Knox	9
Holt	1
Knox	2
Cherry	1

Table B 7. *Reported Gender.*

What is your gender?	Frequency	Percent
Male	4	28.6
Female	10	71.4
Total	14	100

Table B 8. *Reported Race/Ethnicity.*

What is your race/Ethnicity - Selected Choice	<i>n</i>
White	33
Hispanic or Latino origin	3

Table B 9. *Reported Birth Year.*

What year were you born?	<i>n</i>
1935	1
1936	1
1937	1
1939	1
1940	1
1944	1
1947	1
1949	2
1950	3
1952	1
1953	1
1954	2
1955	2
1956	4
1957	1
1958	1
1959	3
1971	2
1974	2
1977	1
1980	1
1981	1

What year were you born?	<i>n</i>
1983	1
1990	1
1991	1

Appendix C. NCDHD Forces of Change Assessment

Thirty-six individuals across the NCDHD service area were initially invited to a one-hour Forces of Change Assessment (FoC) focus group meeting at the O'Neill County Services Building on November 12, 2021. However, the meeting was cancelled due to weather conditions and done in an online manner through Qualtrics. This survey was sent to 223 NCDHD contacts. An analysis of responses by the NCDHD resulted in: 1) identified events, factors, and trends that are relevant to community health in several different domains (see Tables C 1 to C 6); 2) perceived threats to community health, and potential opportunities or interventions to improve community health (see Tables C 7 to C 9); and 3) identified priorities, important themes, and community strengths salient to community health and quality of life (see Tables C 10 to C 19).

Additionally, in partnership with Avera St. Anthony's Hospital (ASAH) in O'Neill, the NCDHD convened a series of interviews with 17 community health stakeholders and consumers in their coverage area. The interviews were intended to provide more in-depth responses about community health priorities and concerns. Themes identified from those interviews are outlined in Tables C 20 to C 28.

Table C 1. Forces of Change Assessment – Events, Factors, and Trends - Social Domain.

Events	Factors	Trends
Town/Community Celebrations	Better contact with elderly	Increased seclusion
County Fairs	More community involvement in clubs and committees	Decrease in time and desire to volunteer
Street dances/parades	More volunteerism	Decrease in time and desire to volunteer
Health fairs	More daycare options	Decreased population (age 18-35) moving elsewhere
Job Fairs	More community food drives	Increasing minority populations Aging population

Table C 2. Forces of Change Assessment – Events, Factors, and Trends - Economic Domain.

Events	Factors	Trends
Higher wages	Better jobs and pay needed especially for benefits	Economic issues residual from COVID-19
Need increase in scholarships	More engagement with youth	Fewer young people wanting to stay in rural areas
Medicare/Medicaid education	More people knowledgeable in the approval process of Medicaid/Medicare	Support services are more in need to get approval

Mental health funding	More people accepting that mental health is crucial to physical health	Mental health issues residual from COVID-19
Outside funding (for healthcare funding too)	More resources spent on basic humanism	Financial capital is harder to obtain

Table C 3. Forces of Change Assessment – Events, Factors, and Trends - Political Domain.

Events	Factors	Trends
Local Policy/Advocacy	More local response & management to disasters/pandemics	COVID-19 still large and impacting everyone around us.
Access to local policy makers	Increase visibility and distract those who don't want policy to work with the public	
Appearance of transparent and fair elections		

Table C 4. Forces of Change Assessment – Events, Factors, and Trends - Built Environment Domain.

Events	Factors	Trends
Improve streets/sidewalks	More money and labor to fix infrastructure	What happens when internet and electric resources go down?
Better connectivity/speed for wireless	More help for the homeless or those that need immediate shelter	
Built demands		
Community wellness centers		
Update and clean parks		
Update businesses		
Mental Health clinic		

Table C 5. Forces of Change Assessment – Events, Factors, and Trends - Natural Environment Domain.

Events	Factors	Trends
Elimination of chemicals/waste	We have already a large water supply	Focus on water quality
Safe water supply		
More recycling		

Table C 6. Forces of Change Assessment – Events, Factors, and Trends - Cultural Domain.

Events	Factors	Trends
Support services for all minorities	Focus on how to plan for all stages of life in every community	Decreased church attendance, spiritual, support systems
Literacy	Increase of minority clients	

Table C 7. *Forces of Change Assessment – Threats and Opportunities – Events.*

Forces of Change	Threats Posed	Opportunities Created
Health fairs	Decreased population (age 18-35) moving elsewhere	More health awareness and literacy for the public Creation of grants and contracts to get more people knowledgeable in the approval process of Medicaid/Medicare
Medicare/Medicaid education	Too complex of a process to apply and many are denied	
Mental health funding	Mental health issues residual from COVID-19	More clients getting the health they deserve
Local Policy/Advocacy	“Still large event and impacting everyone around us”	More local response & management to disasters/pandemics COVID-19 More help for the homeless or those that need immediate shelter
Mental health clinic	Stigma	
Improved streets/sidewalks	Disruption in flow of normal traffic	More money and labor to fix infrastructure

Table C 8. *Forces of Change Assessment – Threats and Opportunities – Factors.*

Forces of Change	Threats Posed	Opportunities Created
Acceptance of mental health issues	Decrease in getting mental health first aid especially with pandemic	Seeing that the mind and body are not separate
More help for the homeless or those that need immediate shelter	Using financial resources in a different way	Ignoring stigma related to poverty and mental illness/substance abuse

Table C 9. *Forces of Change Assessment – Threats and Opportunities – Trends.*

Increase of minority clients & services	Institutionalized racism and bias	They are willing to do the work that others won't
Fewer young people wanting to stay in rural areas	Less people to stimulate local economy and take care of elderly	N/A

Table C 10. *FoC – Community Themes and Strengths – What is important to our community?*

What is important to our community?	Elder care
	Families
	Access to medical care

	Good school system
	Agriculture
	Mental Health Care
	Crops and farming
	Shopping local
	Local jobs
	Low Crime
	Retaining youth and youth families
	Creating more housing options

Table C 11. FoC – Community Themes and Strengths – Characteristics of a healthy community

What do you believe are the most important characteristics of a healthy community?	Faith
	Prescience of Walmart
	Adequate housing
	Patience
	Caring
	Equal access to all for health care
	Education
	Safe place to live
	Compassion
	Strong workforce Support
	Concern
	Personal Health care
	Quality childcare opportunities
	Quality educational opportunities
	Exercise
Healthy water supply	

Table C 12. FoC – Community Themes and Strengths – What makes you most proud of our community?

What makes you most proud of our community?	Strong faith
	Most people giving a helping hand
	Collaboration among different groups and business
	Great place to live, the people
	How they help each other
	Health care continuum from primary care to hospital to long term care
	Everyone bands together in their small towns
	Loyalty of donors

Table C 13. FoC – Community Themes and Strengths – Examples of people working together

What are some specific examples of people or groups working together	Local group meeting yearly to set community goals
	Economic Development
	Chamber of Commerce

to improve the health and quality of life in our community?	scouts FFA at high school
	North Central Community Care partnership
	City council

Table C 14. *FoC – Community Themes and Strengths – Important health issues*

What do you believe are the most important issues that must be addressed to improve the health and quality of life in our community?	Needs of exercise
	Reliable internet
	water
	Volunteerism
	Housing
	Rental housing options
	Capital campaign for renovations of area hospitals
Education	

Table C 15. *FoC – Community Themes and Strengths – Barriers to improving health*

What do you believe is keeping our community from doing what needs to be done to improve the health and quality of life?	Finances and volunteers/time
	Not wanting to change the processes, the idea that “we always have done this way” doesn’t always for as time and technology changes
	Old Age
	Time- many of the movers and shakers are the ones who do “everything” in the community already
	Money
	Changing the mindset to help students and parents realize a technical degree or certification is a great career move.
	Stigma of small town gossip

Table C 16. *FoC – Community Themes and Strengths – Barriers to improving health*

What actions, policy, or funding priorities would you support to build a healthier community?	donation of items/funds for a community fitness center that offered yoga/meditation type services as well
	More financial help to rural communities with limited tax basis
	Funds from LB640, capital campaign to renovate the hospital
	Support groups

Table C 17. *FoC – Community Themes and Strengths – Motivations to improve your community*

What would excite you enough to become involved (or more involved) in improving our community?	Most parents work full time and have little extra time to offer- unless their kids are old enough to either help or stay home etc. Offer child watch while volunteering ha! Anything that involves instilling kindness and learning in children- supporting elderly and disabled.
	Having the physical/psychological energy in which to do so
	Just being asked
	The pandemic has taken all my time since I work in health care. I am excited to help but can't lead a project at this time.

	I'm already there! Serving on 6 different boards and affiliated with multiple regional, state, and national programs.
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Table C 18. *Forces of Change Assessment – Perceptions of Quality of Life*

Are you satisfied with the quality of life in our community?	No- But I know it could be better!
	No
Are you satisfied with the health care system in the community?	No
	No full time Dr
	Yes, we have an incredible local hospital, and multiple clinics covering a large need of the community
Is there a broad variety of health services in the community? Are there enough health and social services in the community?	Believe more mental health options would be incredibly valuable for the community.
	Acceptable
	Costs can be high due to lack out specialty clinics not associated with hospitals.
	Very Good
Is this community a good place to raise children?	No (2 responses)
	Yes (10 responses)
Are there networks of support for individuals and families during times of stress and need?	No
	Unsure of that
	I believe we could do more to help those that are dealing with behavioral health issues such as depression, grieving and drug addiction.
Do all individuals and groups have the opportunity to contribute to and participate in the community's quality of life?	Low-income folks don't have an option for a food pantry here
	Don't know if they have any
	Mostly yes, those with young families not so much as most parents work full time these days. Farmer's market is always on a weekday, late enough in the morning that most cannot attend due to work hours.
	No
Is there an active sense of civic responsibility and engagement, and of civic pride in shared accomplishments?	Need more people volunteering to serve on boards and local government. Too many of the "older" generation are the only ones serving on the boards. There is a need to bring on more younger community members with different visions and not always doing things the way they have always been done. We have to make changes to grow.
	Unsure
	There is some but no one wants to step up and lead because there are many vocal people who speak negatively about any attempt to improve anything.

Table C 19. *Forces of Change Assessment – Community Assets to Improve Health*

<p>Physical/Environmental Streets are clean/paved Jazzercise Good Water (x2) Clean Park and recreation areas Nursing home Community Center Nice parks (x2) Swimming pool (x2) Roads Hospital 5 school gyms</p>	<p>Community Resources/ Infrastructure Libraries Gas station School system Volunteerism Community Foundation Rotary Daycare Ministerial Nursing homes</p>
<p>Institutions/Businesses School Banks Valley Hope Healthcare Mental Health School Hospital Great Pharmacy Churches Bomgaars Golf Course Dollar General Facebook pages Newspaper Mailings Several cell towers KBRX Radio/ local radio stations across district</p>	<p>People Small community Dollar Store City council Cultural acceptance of all races Support More young families again Need more diversity Help each other out Churches Increase population of 22–40-year-old residents</p>

Table C 20. *Forces of Change Assessment Interviews – Health Status of Family Members*

<p>How do you describe your current health status or that of your immediate family members?</p>	<p><i>n</i></p>
<p>Good</p>	<p>16</p>
<p>Fair</p>	<p>1</p>
<p>Poor</p>	<p>0</p>

Table C 21. *Forces of Change Assessment Interviews – Health Information – How do you access health information and services in your community?*

Google.
Refrigerator Magnet.
Phone #s.
AMGO.
Computer.
Phone.
Peers.
Social Media.
Internet.
Family/Co-workers.
Online.
Radio.
Local nurse.
Clinic/Hospital.

Table C 22. *Forces of Change Assessment Interviews – Health Information – What is missing?*

Pamphlets.
Ads.
Navigation of info.
User-Friendly Websites.
Broader internet services.
Education “Local clinics don’t have the time to educate Moms”.
Diabetic Education and F/U.
English translation.
limited rural internet connectivity.
Access to patient chart portals.
Community Bulletin Board/Chat Room.
Pamphlets.
Ads.

Table C 23. *Forces of Change Assessment Interviews – Health Information – What is desired?*

More radio and FB announcements.
Ease and quickness.
Better Internet coverage.
Improved resources for Diabetes.
increased presence of Spanish language reading material.
better rural internet access with different sites.
Affordable internet access.
Public access to computer at local Community Center

Table C 24. *Forces of Change Assessment Interviews – How does your community support your physical and mental health?*

Support groups, “providing parks and recreation and encouraging healthy lifestyle”.
Fitness Center membership x 4, Recycling, Some classes offered.
“Hospital has done a really good job with all of the resources that are available”.
Small town ownership of self.
Local restaurant takes meals to shut ins.
Physical is well supported.
Church groups provide support.
Has good economic development network.
Avera provides good support.
Avera or next nearest hospital in adjacent county.

Table C 25. *Forces of Change Assessment Interviews – How does your community “miss the mark” in supporting your physical and mental health?*

Anonymity, “Hard to get privacy in a small town”.
“Needs to be more intentional – make individual contact with check-ins. A wellness check with mental health”.
“Narrow-minded” citizens, Housing, Recruitment of young families.
Mental Health support.
Service awareness - Many do not know what is out there.
Not enough support of vulnerable elderly as services are not there.
In-home daily care for retired, elderly citizens in small town.
Mental Health is not well supported – not enough mental health providers, stigma of seeing a local provider in small town is not ideal.
Community Center not built to accommodate a wellness opportunity such as an indoor walking track.
Lack of involvement due to COVID.
Veterans seem to have a “disconnect” with any local support.
Educational pamphlets for farmers/ranchers at convenience stores/coffee shops.
Anonymity, “Hard to get privacy in a small town”.
“Needs to be more intentional – make individual contact with check-ins. A wellness check with mental health”.

Table C 26. *Forces of Change Assessment Interviews – Any experiences of any barriers to you/your family when accessing medical services?*

None. Out of network coverage of services.
Elderly rely on local clinic vs travelling to O’Neill.
Elderly parents needing enhanced services/education.
Slower mail delivery for those dependent on medication access through USPS.
Language barrier.
Getting the right person on the phone.

Table C 27. Forces of Change Assessment Interviews – How do you stay healthy and prevent injuries?

Exercise, Eat Healthy, Stay home. Knowing safe boundaries, Quiet time.
Farm Chores, Walk/Bike, Staying Educated.
Eating healthy.
See personal provider, exercise.
Stick to a routine schedule.

Table C 27. Forces of Change Assessment Interviews – How do you stay healthy and prevent injuries?

“24/7 support team”. Continue to strive for excellence.
Shot clinics. Improve outreach with ambulance service, vaccination clinics.
Coordinate Educational opportunities. More Health Fairs.
Accessibility of info – many don’t feel comfortable, but many don’t try to access.
Encourage the opportunities for people to “seize” the info.
Heightened awareness of what is offered through NCDHD – they do great on immunizations.
Too many struggle with Mental Health.
More online opportunities with general health education – video sessions.
More marketing.
Tabletop educational pamphlets.

Appendix D. NCDHD Local Public Health System Assessment

As part of the local public health system assessment, NCDHD queried community members about perceptions of how well components of the Ten Essential Public Health Services were being implemented, on a range from 1 (Very poor) to 5 (Very well). Tables D 1 to D 10.

ESSENTIAL PUBLIC HEALTH SERVICE #1: Assess and monitor population health status, factors that influence health, and community needs and assets. Question: How well does the public health system provide the above essential service #1 in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 1. *Essential Public Health Service #1*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	0	2	3	3.6
2	0	0	0	2	3	3.6
3	0	0	0	2	3	3.6
4	0	0	0	2	3	3.6
5	0	0	0	2	3	3.6
6	0	0	0	2	3	3.6
7	0	0	1	2	2	3.2
8	0	0	1	2	2	3.2

1. Maintaining an ongoing understanding of health in the jurisdiction by collecting, monitoring, and analyzing data on health and factors that influence health to identify threats, patterns, and emerging issues, with a particular emphasis on disproportionately affected populations.
2. Using data and information to determine the root causes of health disparities and inequities.
3. Working with the community to understand health status, needs, assets, key influences, and narrative.
4. Collaborating and facilitating data sharing with partners, including multisector partners.
5. Using innovative technologies, data collection methods, and data sets.
6. Utilizing various methods and technology to interpret and communicate data to diverse audiences.
7. Analyzing and using disaggregated data (e.g., by race) to track issues and inform equitable action.
8. Engaging community members as experts and key partners.

ESSENTIAL PUBLIC HEALTH SERVICE #2 Investigate, diagnose, and address health problems and hazards affecting the population. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 2. *Essential Public Health Service #2*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	2	2	1	3.8
2	0	0	2	3	0	3.6
3	0	0	0	2	3	3.6
4	0	0	0	2	3	3.6
5	0	0	0	3	2	3.6
6	0	0	0	2	3	3.4
7	0	0	0	2	3	3.6

1. Anticipating, preventing, and mitigating emerging health threats through epidemiologic identification
2. Monitoring real-time health status and identifying patterns to develop strategies to address chronic diseases and injuries
3. Using real-time data to identify and respond to acute outbreaks, emergencies, and other health hazards
4. Using public health laboratory capabilities and modern technology to conduct rapid screening and high-volume testing
5. Analyzing and utilizing inputs from multiple sectors and sources to consider social, economic, and environmental root causes of health status
6. Identifying, analyzing, and distributing information from new, big, and real-time data sources

ESSENTIAL PUBLIC HEALTH SERVICE #3 Communicate effectively to inform and educate people about health, factors that influence it, and how to improve it. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 3. *Essential Public Health Service #3*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	3	2	0	3.4
2	0	0	3	2	0	3.4
3	0	0	5	0	0	3.0

4	0	0	0	2	3	3.4
5	0	0	3	2	0	3.4
6	0	0	3	2	0	3.4
7	0	0	0	3	2	3.2
8	0	0	0	3	2	3.2

1. Developing and disseminating accessible health information and resources, including through collaboration with multi-sector partners
2. Communicating with accuracy and necessary speed
3. Developing and deploying culturally and linguistically appropriate and relevant communications and educational resources, which includes working with stakeholders and influencers in the community to create effective and culturally resonant materials
4. Employing the principles of risk communication, health literacy, and health education to inform the public, when appropriate
5. Actively engaging in two-way communication to build trust with populations served and ensure accuracy and effectiveness of prevention and health promotion strategies
6. Ensuring public health communications and education efforts are asset based when appropriate and do not reinforce narratives that are damaging to disproportionately affected populations

ESSENTIAL PUBLIC HEALTH SERVICE #4 Strengthen, support, and mobilize communities and partnerships to improve health. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 4. *Essential Public Health Service #4*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	4	1	0	3.6
2	0	0	0	2	3	3.6
3	0	0	0	2	3	3.6
4	0	0	0	2	3	3.6
5	0	0	0	2	3	3.6
6	0	0	0	2	3	3.6
7	0	0	1	2	2	3.2

8	0	0	1	2	2	3.2
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1. Convening and facilitating multisector partnerships and coalitions that include sectors that influence health (e.g., planning, transportation, housing, education, etc.)
2. Fostering and building genuine, strengths-based relationships with a diverse group of partners that reflect the community and the population
3. Authentically engaging with community members and organizations to develop public health solutions
4. Learning from, and supporting, existing community partnerships and contributing public health expertise

ESSENTIAL PUBLIC HEALTH SERVICE #5 Create, champion, and implement policies, plans, and laws that impact health How well does the public health system provide the above essential service in **Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?** Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 5. *Essential Public Health Service #5*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	3	2	0	3.4
2	0	0	3	2	0	3.4
3	0	0	4	1	0	3.2
4	0	0	5	0	0	3.0
5	0	0	4	1	0	3.2
6	0	0	4	1	0	3.2
7	0	0	0	0	0	0
8	0	0	0	0	0	0

1. Developing and championing policies, plans, and laws that guide the practice of public health
2. Examining and improving existing policies, plans, and laws to correct historical injustices
3. Ensuring that policies, plans, and laws provide a fair and just opportunity for all to achieve optimal health

4. Providing input into policies, plans, and laws to ensure that health impact is considered
5. Continuously monitoring and developing policies, plans, and laws that improve public health and preparedness and strengthen community resilience
6. Collaborating with all partners, including multi-sector partners, to develop and support policies, plans, and laws
7. Working across partners and with the community to systematically and continuously develop and implement health improvement strategies and plans, and evaluate and improve those plans

ESSENTIAL PUBLIC HEALTH SERVICE #6 Utilize legal and regulatory actions designed to improve and protect the public’s health. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 6. *Essential Public Health Service #6*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	0	3	2	3.0
2	0	0	0	3	2	3.0
3	0	0	0	4	1	3.0
4	0	0	0	5	0	3.0
5	0	0	0	4	1	3.2
6	0	0	0	4	1	3.0
7	0	0	0	0	0	0
8	0	0	0	0	0	0

1. Ensuring that applicable laws are equitably applied to protect the public’s health
2. Conducting enforcement activities that may include, but are not limited to sanitary codes, especially in the food industry; full protection of drinking water supplies; and timely follow-up on hazards, preventable injuries, and exposure related diseases identified in occupational and community settings
3. Licensing and monitoring the quality of healthcare services (e.g., laboratory, nursing homes, and home healthcare)
4. Reviewing new drug, biologic, and medical device applications
5. Licensing and credentialing the healthcare workforce
6. Including health considerations in laws from other sectors (e.g., zoning)

ESSENTIAL PUBLIC HEALTH SERVICE #7 Assure an effective system that enables equitable access to the individual services and care needed to be healthy. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 7. *Essential Public Health Service #7*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	1	3	1	0	3.0
2	0	1	3	1	3	3.1
3	0	1	3	1	0	3.2
4	0	1	3	1	0	3.2
5	0	0	0	2	3	3.0
6	0	0	0	4	1	2.8
7	0	0	1	3	1	3.2
8	0	0	0	0	0	0

1. Connecting the population to needed health and social services that support the whole person, including preventive services
2. Ensuring access to high-quality and cost-effective healthcare and social services, including behavioral and mental health services, that are culturally and linguistically appropriate
3. Engaging health delivery systems to assess and address gaps and barriers in accessing needed health services, including behavioral and mental health
4. Addressing and removing barriers to care
5. Building relationships with payers and healthcare providers, including the sharing of data across partners to foster health and well-being
6. Contributing to the development of a competent healthcare workforce

ESSENTIAL PUBLIC HEALTH SERVICE #8 Build and support a diverse and skilled public health workforce. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 8. *Essential Public Health Service #8*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	4	1	0	3.6

2	0	0	0	2	3	3.6
3	0	0	0	2	3	3.6
4	0	0	0	2	3	3.6
5	0	0	0	2	3	3.6
6	0	0	0	2	3	3.6
7	0	0	1	2	2	3.2
8	0	0	1	2	2	3.2

1. Providing education and training that encompasses a spectrum of public health competencies, including technical, strategic, and leadership skills
2. Ensuring that the public health workforce is the appropriate size to meet the public’s needs
3. Building a culturally competent public health workforce and leadership that reflects the community and practices cultural humility
4. Incorporating public health principles in non-public health curricula
5. Cultivating and building active partnerships with academia and other professional training programs and schools to assure community-relevant learning experiences for all learners
6. Promoting a culture of lifelong learning in public health
7. Building a pipeline of future public health practitioners
8. Fostering leadership skills at all levels

ESSENTIAL PUBLIC HEALTH SERVICE #9 Improve and innovate public health functions through ongoing evaluation, research, and continuous quality improvement. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 9. *Essential Public Health Service #9*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	1	3	1	3.0
2	0	0	0	4	1	3.4
3	0	0	0	4	1	3.4
4	0	0	0	4	1	3.4

5	0	0	0	4	1	3.2
6	0	0	1	3	1	3.2
7	0	0	2	2	1	3.4

1. Building and fostering a culture of quality in public health organizations and activities
2. Linking public health research with public health practice
3. Using research, evidence, practice-based insights, and other forms of information to inform decision-making
4. Contributing to the evidence base of effective public health practice
5. Evaluating services, policies, plans, and laws continuously to ensure they are contributing to health and not creating undue harm
6. Establishing and using engagement and decision-making structures to work with the community in all stages of research
7. Valuing and using qualitative, quantitative, and lived experience as data and information to inform decision making

ESSENTIAL PUBLIC HEALTH SERVICE #10 Build and maintain a strong organizational infrastructure for public health. Question: How well does the public health system provide the above essential service in Antelope, Cherry, Boyd, Brown, Holt, Keya Paha, Knox, Pierce, and Rock Counties?

Table D 10. *Essential Public Health Service #10*

Question Number:	Very Poor (1)	Poor (2)	Acceptable (3)	Good (4)	Very Well (5)	Average
1	0	0	0	4	1	3.6
2	0	0	0	4	1	3.6
3	0	0	0	5	0	3.6
4	0	0	0	3	2	3.6
5	0	0	0	3	2	3.6
6	0	0	0	3	2	3.6
7	0	0	0	3	2	3.2
8	0	0	0	3	2	3.2

1. Developing an understanding of the broader organizational infrastructures and roles that support the entire public health system in a jurisdiction (e.g., government agencies, elected officials, and non-governmental organizations)

2. Ensuring that appropriate, needed resources are allocated equitably for the public's health

3. Exhibiting effective and ethical leadership, decision-making, and governance

4. Managing financial and human resources effectively

5. Employing communications and strategic planning capacities and skills

6. Having robust information technology services that are current and meet privacy and security standards

7. Being accountable, transparent, and inclusive with all partners and the community in all aspects of practice