Community Health Assessment

2023

WEST CENTRAL DISTRICT HEALTH DEPARTMENT

Lincoln, Logan, McPherson, Thomas, Hooker, & Arthur Counties

www.wcdhd.org

How to Navigate This Report

This report is designed for easy navigation and quick access to information. Here are some directions on how you can best utilize the features incorporated into this report:

Table of Contents: Located at the beginning of the report, the Table of Contents provides a broad overview of the report's sections. Each item in the Table of Contents is a hyperlink that will take you directly to the corresponding section of the report when clicked. Simply click on the section you wish to read.

Page Navigation: For your convenience, a hyperlink has been added to the top right corner of every page that will take you directly back to the Table of Contents. This allows for easy navigation and switching between sections.

Bibliographical References and Data Sources: All bibliographical references and data sources used in the report are hyperlinked. Clicking on these links will direct you to the original source material, providing easy access for further reading or verifying information.

Keyword Search: You can quickly navigate to specific content in the report by using the keyword search function. Press the CTRL and F keys simultaneously to open the search bar. Enter the keyword(s) you are interested in (e.g., "poverty"; "Keith County"; "food insecurity") and press Enter. The function will highlight all instances of the keyword(s) in the report. Click on the arrows in the search bar to move between the highlighted instances.

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Community Health Assessment 2023

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Executive Summary

Assessing the health and well-being of our community is a core function of local health departments. A **Community Health Assessment** is a structured opportunity to engage in a collective review of health data and community perspectives to help us answer the question: **How are we doing right now?**

In collaboration with many partners and community organizations, we are honored to help tell the story of the counties within the West Central District Health Department (WCDHD) area: **Lincoln, Logan, McPherson, Thomas, Hooker and Arthur**.

This report offers a point in time review of health data indicators, community demographics and findings from a community survey that elevates the voices of people in our community.

We express gratitude to those who participated in this process, and to everyone who works to make our community healthier for everyone to live, work and play.

We are eager to share this report in which we've identified several high priority themes: **Mental Health and Substance Use, Health LIteracy and Culturally Competent Care, Chronic Disease and Preventive Care, Oral Health and the Aging Population**. Our resulting Community Health Improvement Plan (CHIP) elevates a few of these priorities, and we look forward to opportunities to leverage shared strengths and collaborate for collective impact. Learn more about our work and how to collaborate at: wcdhd.org

"Public health is the science of protecting and improving the health of people and their communities."
- *CDC Foundation*

"Public health improves our quality of life, helps children thrive, reduces human suffering and saves money."
- *American Public Health Association*

Public Health
Prevent. Promote. Protect.

Letter from the Director

We are pleased to present the Community Health Assessment and Community Health Improvement Plan, produced in partnership with many great community organizations.

As we look to the future, we are eager to continue collaborating and create meaningful progress towards the betterment of community well-being. It is through our collective wisdom that we can affect positive change.

Our mission is rooted in the belief that every individual within our district should have the opportunity to thrive at work, at home and at play. And it is with great enthusiasm and a deep sense of purpose that we affirm our commitment to the overall health and well-being of our communities.

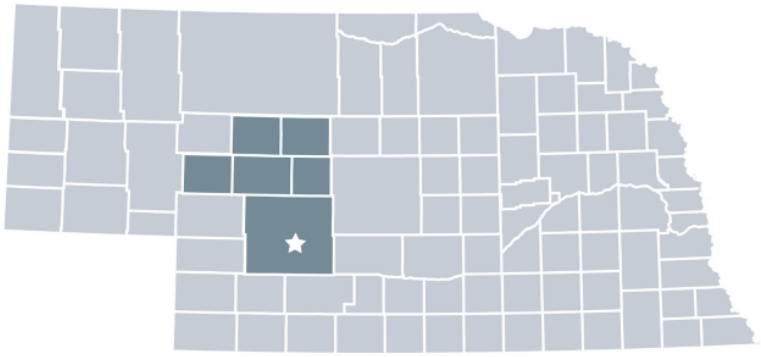
We extend heartfelt thanks to each of you for your partnership, support and dedication to creating a more vibrant future for all. We look forward to the journey together!

Shannon Vanderheiden

Executive Director,
West Central District
Health Department

Introduction

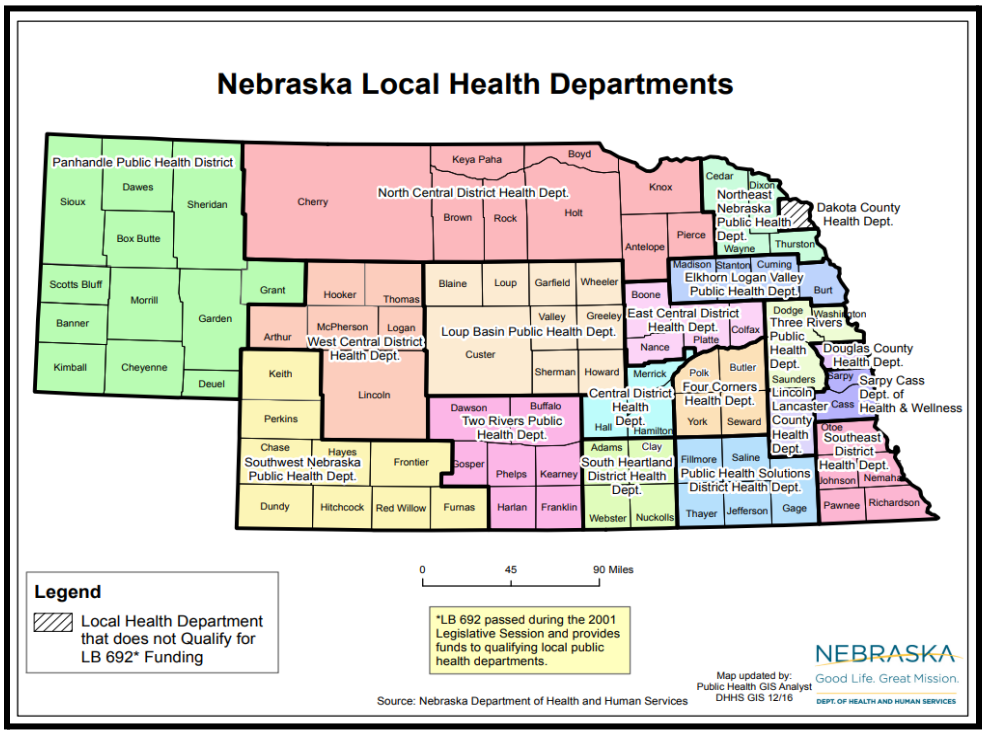
West Central District Health Department (WCDHD) is a local public health department in mid-western Nebraska, serving six counties: Lincoln, Logan, McPherson, Thomas, Hooker and Arthur. This district serves approximately 37,605 people as per the 2020 U.S Census population estimate.

Our Mission	
To educate, promote, and improve the overall health of our communities and each resident; allowing all who live, work, and play within to thrive.	

Our Board of Health includes one county commissioner from each of the six counties of our district as well as several community representatives referred to as spirited persons. The Board also includes at least one physician and one dentist, for a total of twelve (12) members.

Board of Health Member, Role	County
Scott Gaites, Board President, County Commissioner	Logan
Dr. Emily Jones, Board Vice President, Physician	Lincoln
Dr. Dan Woodburn, Dentist	Lincoln
Lana Watson, Secretary, Treasurer, Spirited Person	McPherson
Rusti Mironenko, Spirited Person	Arthur
Chris Bruns, County Commissioner	Lincoln
Ronda Haumann, Spirited Person	Thomas
Marty Vasa, County Commissioner	Arthur
Bryan Crisp, County Commissioner	Hooker
Ty Lucas, Spirited Person	Lincoln
Charles Daly, County Commissioner	Thomas
Jeffery Arensdorf, County Commissioner	McPherson

WCDHD is one of 18 local health departments (LHDs) covering 93 counties of Nebraska formed under the Nebraska Health Care Funding Act (LB 692) passed in 2001 by the Nebraska Legislature. Click HERE to view a condensed summary of Nebraska Revised Statutes related to LHDs.



Nebraska local public health departments are charged with providing the 10 Essential Public Health Services to all communities. Conducting assessments to routinely monitor the health of the public is a foundational responsibility and this Community Health Assessment offers a comprehensive point in time review. As the chief public health strategist for our district, we share a leadership role in implementing public health efforts with several hospitals and community organizations. We are proud to have a multitude of great partners that contribute to the well-being of our communities. Special thanks to the hospitals that contribute to community health assessments and improvement planning practices.

About Community Health Assessments

A **Community Health Assessment (CHA)** is a vital tool for local public health departments and other community serving organizations to better understand the current state of well-being and inform action. State, Tribal and Local health departments routinely conduct health assessments as a formal practice to capture a snapshot of well-being at a point in time. Utilizing data to drive decision making is imperative for those who serve individuals, families and communities.

This process includes the collection of demographics and health data from a variety of primary and secondary sources to accumulate into a comprehensive review.

Additional context may also be captured to better understand the community, identify trends, assess the system of care, elevate strengths, and consider forces that may impact community health and our shared capability to support it.

This effort is most commonly facilitated in collaboration with community partners and organizations invested in supporting and promoting the health and well-being of the community.

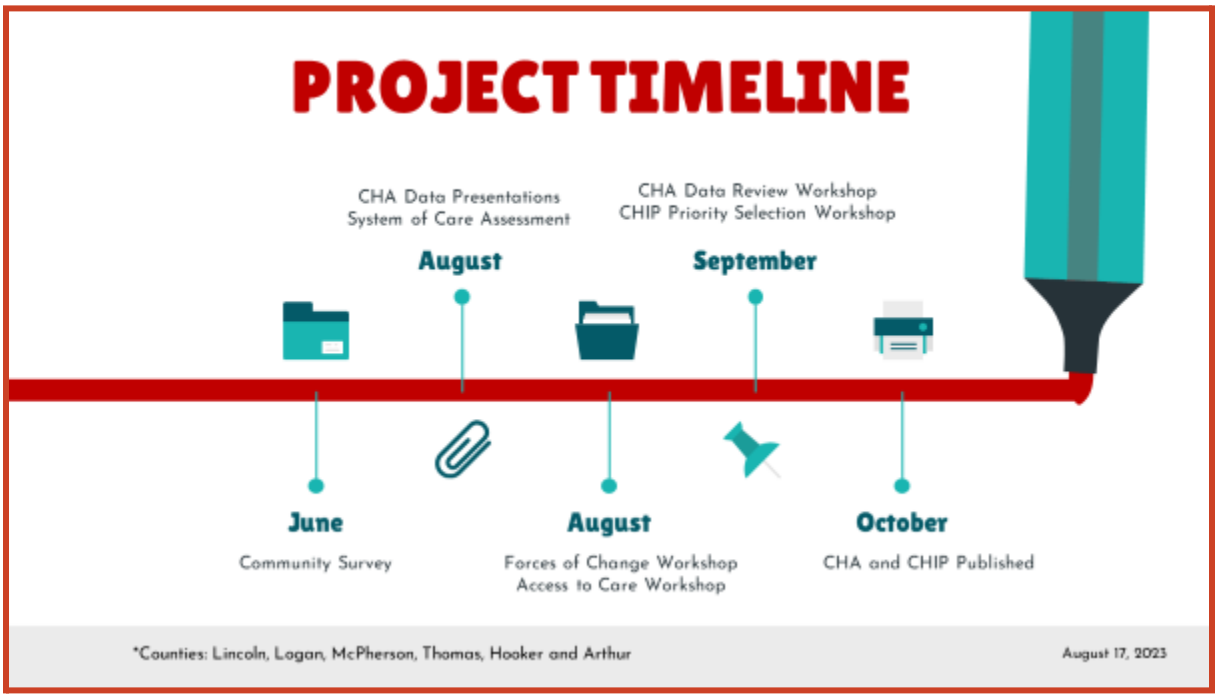
Many local health departments collaborate with local non-profit hospitals who are also charged with conducting health needs assessments as a way to host a shared vision for wellness and identify alignments and improvement opportunities. While several models exist for this work, many health departments adopt the approach outlined by the Mobilizing for Action through Planning and Partnership (MAPP), developed by the National Association of County and City Health Officials (NACCHO). This recently updated model proposes three assessments for a community-wide planning framework to improve public health: Community Context, Community Status and Community Partners. Each assessment can include several processes to highlight areas of focus determined most relevant at the time of implementation, targeted toward identifying root causes of health issues and inequities among populations.

Methodology

Our approach was informed by the MAPP framework and national public health accreditation standards with intentional effort to center disparities and social determinants of health as to elevate equity. In similar fashion to the three phases of the MAPP framework, our methodology included:

Phase 1: Build the Foundation	• Form a Design Team • Invite Community Health Partners • Draft a shared Vision for Well-Being
Phase 2: Tell the Community Story	• Assess Community Context: Forces of Change • Assess Community Context: Assets & Systems of Care • Assess Community Context: Community Survey • Review Community Status: Equity and Access to Care • Review Community Status: Health Data Profile
Phase 3: Continuously Improve the Community (see CHIP)	• Affirm Priorities • Develop a Community Health Improvement Plan

Starting in May 2023, our Design Team (see Appendix G) developed the process and determined what data variables to collect, prioritizing a second community survey to elevate community participation. This team also reviewed the community health needs assessment recently updated by our local hospital partner, Great Plains Health.

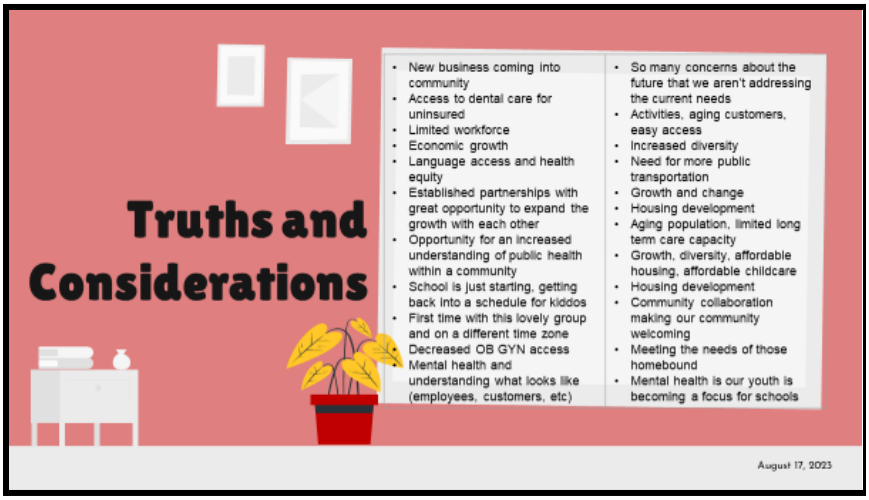


Next, we invited an array of **Community Health Partners** (Appendix A), having distributed invitations to a wide network of community organizations, stakeholders and health and human service partners.

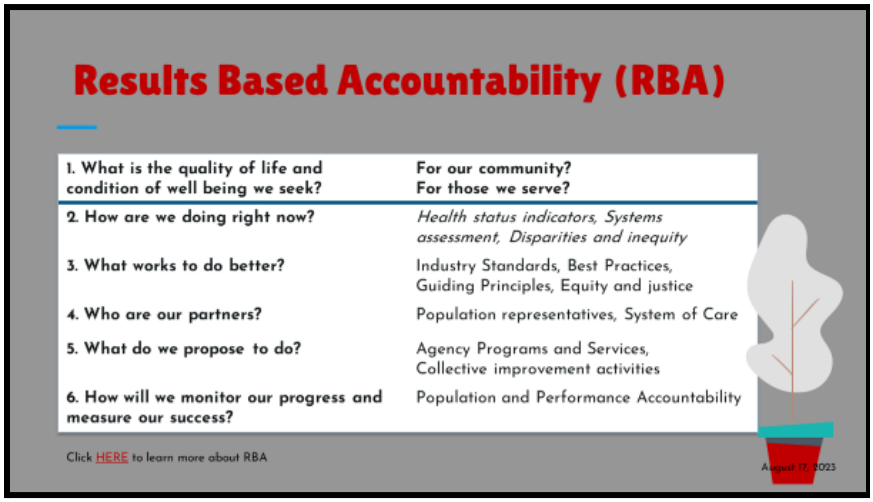
This group met virtually over five total workshops to guide the process from data collection to the identification of key issues (the first three events) and eventually selecting a few priorities for the Community Health Improvement Plan (CHIP) in the last two events. Notes from each of these workshops can be found in the Appendices in the respective report or are available upon request.

Workshop Purpose	Workshop Date	Appendix
Community Context: Forces of Change	August 17, 2023	C
Community Status: Equity and Access to Care Barriers	August 31, 2023	D
Community Health Assessment: Survey & Data Review	September 21, 2023	E
Community Health Improvement Plan: Affirm Priorities	September 28, 2023	(see CHIP)
Community Health Improvement Plan: Propose Goals	October 5, 2023	(see CHIP)

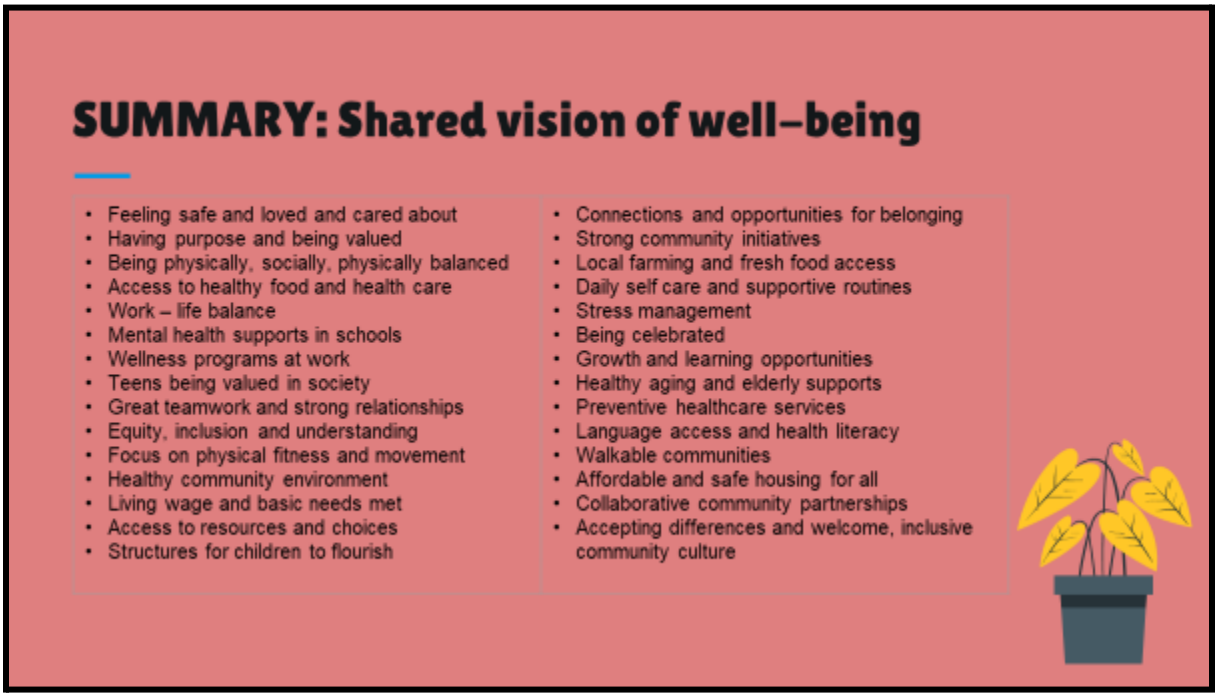
At the **first workshop** (Appendix C), we considered the values and guiding principles of our work, as well as emerging and disappearing trends among the practice of health and human services. This was particularly important, post pandemic, to contemplate our current environment and what shifts have happened that merit our attention. An increased focus on language barriers, improved capacity for virtual care and a rising concern for social isolation was identified.



Community Vision for Well-Being



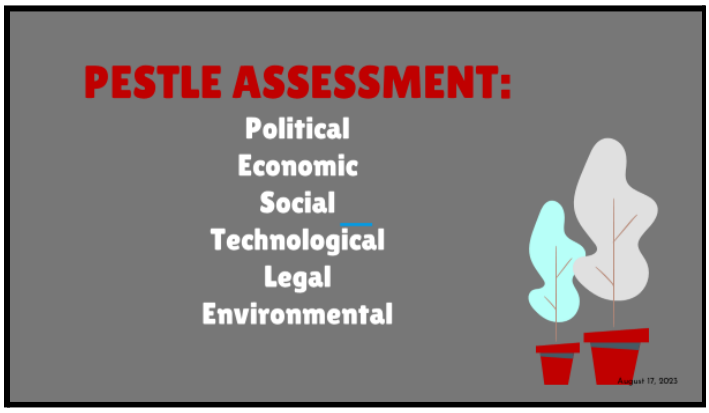
Leveraging practices of Results Based Accountability, we began by considering **"What is the desired condition of well-being for our community?"** Before collecting and analyzing community data, the Community Health Partnership grounded a shared vision of health for individuals, people groups and the greater community. This resulted in a broad vision for community health:



Community Context

At the **first workshop** we also facilitated a **Forces of Change** assessment (Appendix C), employing the PESTLE framework to guide our consideration of threats and opportunities that may impact community well-being, and our capacity to do more good. (PESTLE is an acronym for these categories: Political, Economic, Social, Technological, Legal and Environmental.)

The group first brainstormed examples of forces that impact community well-being and our capacity to address those issues such as: Stigma and bias, racism, lack of support systems, social media and tech overuse, siloed funding, prevalence of loneliness and isolation, economic conditions, access to care, climate change, lack of affordable healthcare and more.



Participants discussed each of the PESTLE categories, assessing trends or factors occurring now and identifying threats and opportunities to consider. This produced a summary carried forward in the planning process and informed potential strategies for implementation.

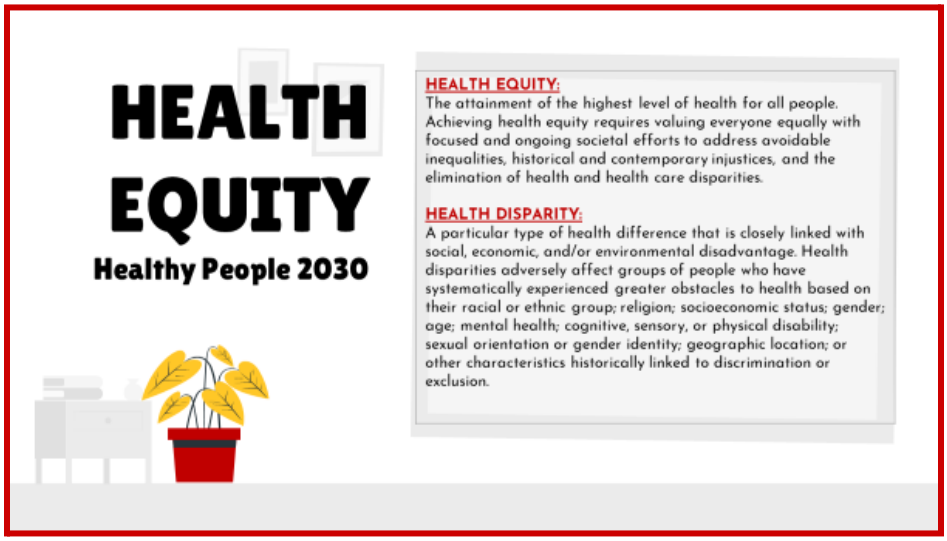
SUMMARY of THREATS	
• Lack of minority representation • Threats to democracy • Cognitive dissonance • Lack of dental providers accepting Medicaid • Growing gap between rich and poor • Not enough language translators • Inflation • Diversity readiness for growing community • Losing human connection • Unregulated AI concerns	• Cyberbullying • Racism and inequities in criminal justice • Diminishing civil rights • Concerns about chemical use in agriculture • Threats to natural ecosystems and climate change • Extreme heat • Lack of education on environmental protection • Misinformation

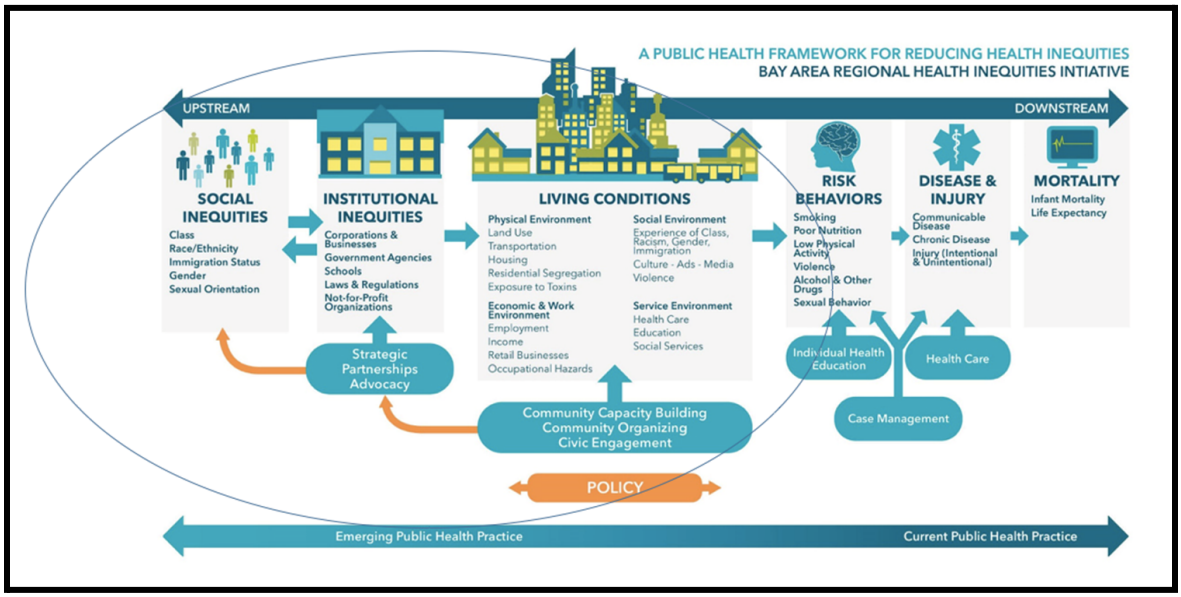
SUMMARY of OPPORTUNITIES	
• Economic growth • Wastewater collection • School partnerships • Cultural competency trainings • Support to employers on well being • Using policy to promote well being • People more readily accessing care • Bringing partners together • Promote health initiatives and information • Learning together and celebrating diversity	• Expansion of broadband internet and telehealth • Young people finding their voice • Community driven initiatives • Having open discussions • Engaging people and families • Embracing cultural diversity • Business growth and job opportunities • Build a welcoming and inclusive community • Health literacy champions • Inviting lived experience into planning

The **first workshop** continued with **Community Context: Assets and System of Care** assessment by elaborating on perceived community strengths and assets that reflect the best of our community.

We also identified what System of Care strengths exist that support collaborative partnerships, and what opportunities might boost our capacity for collective impact. Some **strengths** include: Collaboration, Community organizations pursuing community engagement and input, Willingness to partner, Relationship with schools, Strong partnerships with environmental agencies, and Inclusive communities. Many **opportunities** were identified such as: Continuing to strive for health equity, Pursuing funding for collaborative initiatives, Supporting caregivers, Involving community voices and holding a welcoming lens for diverse populations, and Celebrating our successes.

The **second workshop: Community Context: Equity and Access to Care** (Appendix D) focused on assessing disparities, inequities, social determinants of health as well as perceived barriers to accessing care. Community Health Partnership members explored definitions and models that frame this work from Healthy People 2030 and BARHII.





Social determinants of health are defined by the CDC as “non-medical factors that influence health outcomes. These are conditions in which people are born, grow, work, live and age; as well as the wider set of forces and systems shaping the conditions of daily life.” These can also include practices within our system of care such as partnership and collaboration, infrastructure and capacity, community engagement and evaluation.

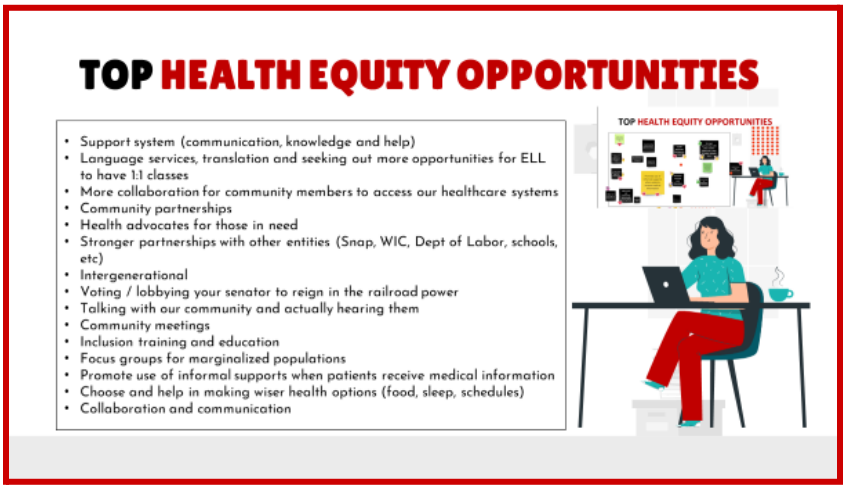
Before reviewing some demographic data and disparities data, Community Health Partners envisioned **“What would our community look like if everyone had health equity?”**

• Hope and peace • Wellness and happiness • Choices, shared decisions • Balance and harmony • Safety, safe spaces • Healthier community	• Universal healthcare • Equal access to healthcare services • Everyone has the same opportunity to be healthy • Stabilized lives	• Safety in schools • Work life balance • A feeling of belonging • Productive life • A better future for our children

This workshop also included a review of some community demographics, social determinants and health data in which significant inequities or disparities were present. Participants then discussed our current environment, what might contribute to inequities and how biases might impact those disparities.

What might be contributing to health inequities in our communities?	
• Feeling unsafe with healthcare providers • Poverty • Transportation barriers • Healthcare literacy • Fear of unknown results • Religious beliefs • Access to preferred language barriers • Healthy food desert and fast food access	• Economic strain • Aging population is increasing • Cultural difference and language barriers • Rural access barriers • Lack of insurance or underinsured • Stress • Lack of support system • Politics

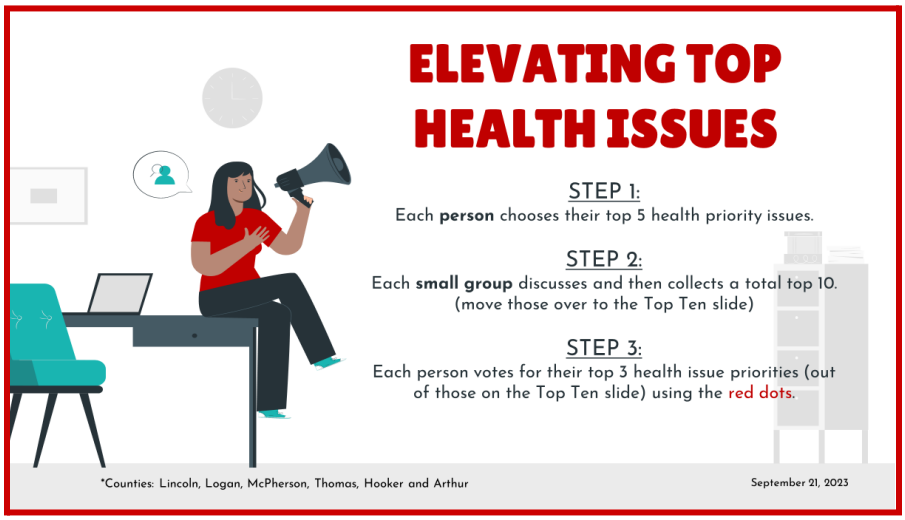
How might racism, sexism, classism and other biases impact those inequities?	
• Tobacco widely marketed to minority populations • Lack of information for immigrants • Ag and industry exposure to poisons • Fear of seeking treatment, being judged • Mental health stigma and bias • Wage inequities for women • Contributors to higher cancer rates	• Rural hub • Income, class, race, language, gender • Inequities high for Black women • Lack of inclusion efforts • Reduced quality of care based on status • Likely underdiagnosis due to access barriers • Lack of access to education • Hearing impaired support systems



While data is a critical tool of community health assessments, nothing replaces the perspective of lived experience. The WCDHD has gathered primary data previously within the Minority Health Initiative, and initiated a community survey to further explore the potential challenges to health and well-being as experienced by people living in our district.

The **third workshop: Community Health Assessment: Survey & Data Review** (Appendix E) was the last of the CHA series before moving on to select CHIP priorities in the last two (of five total) workshops. This event hosted a review of the primary and secondary data from multiple sources.

A presentation of the Community Health Survey findings and summary of health data indicators, provided in full in this report. In small groups, participants discussed what stood out about the data, what 'red flags' they noted, and what bigger story the data points to about community well-being. Next, participants were instructed to review a brief summary from the earlier workshops, and begin to identify what possible priorities are emerging.

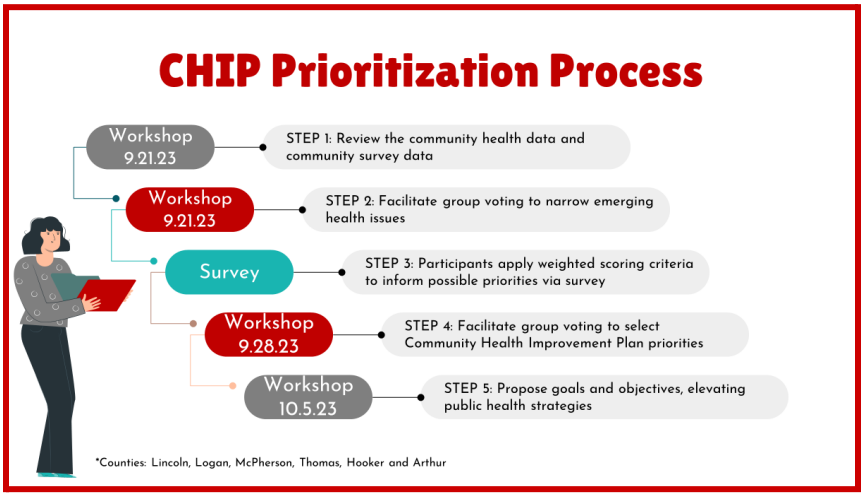


This introduced the CHIP priority selection process, beginning with identifying a 'top ten' health issues that the CHA can elevate and encourage community action.

Individuals were asked to vote for their top five health issues, and then each small group would discuss and roll together to produce a top ten.

Then, all workshop participants emerged from small groups, combining their respective top ten lists. From this larger list, each person voted for their top three health issues to elevate, narrowing the top health issues by consensus. The purpose of this activity was to summarize a collective perspective of key health issues of which the CHA could conclude.

- ➔ **Mental Health**
- ➔ **Substance Use**
- ➔ **Health Literacy**
- ➔ **Culturally Competent Care**
- ➔ **Aging Population**
- ➔ **Oral Health**
- ➔ **Chronic Disease**
- ➔ **Preventive Care**



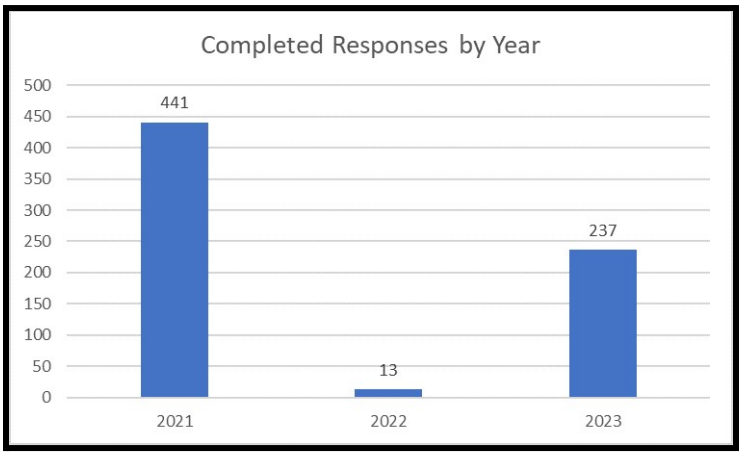
It is also this Top Ten list that would next be utilized in the CHIP priority selection process by facilitating a survey to apply weighted scoring criteria. Those results were reviewed at the remaining workshops and are documented in the CHIP report. Thus, workshops 1-3 were contributing to the CHA, whereas workshops 4-5 concluded the process by affirming a few top health priorities for targeted action via the CHIP. (Find that report at wcdhd.org)

Please find the primary and secondary data reviewed in the next sections of this report.

Community Survey

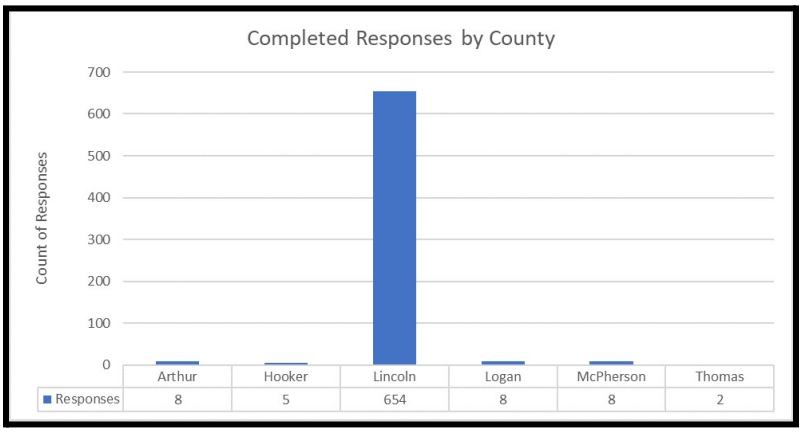
WCDHD launched the **Community Health Survey** (Appendix B) in 2021 and again in 2023 to capture community member's perception of well-being. Participants had to be an adult resident of a county in our district. Questions focused on individual and community health, barriers and access to healthcare and health related resources. There were several open ended questions to elevate the community voice.

The survey was distributed in several ways, including ads in the North Platte Telegraph, North Platte Bulletin ads, North Platte Area Chamber and Development weekly newsletter and press release through the Chamber, ads through other media sources and radio, as well as by email throughout the system of care network. Additionally, WCDHD staff actively recruited participation among the Spanish speaking population during the 2021 survey as a part of our Minority Health Initiative, to ensure representation from these community members. In the first survey 2021 (with a few responses trickling in 2022), the total completed responses was 454; and 237 completed responses in 2023 for a **total of 691 responses**. Note that total responses were slightly higher, but surveys that were incomplete were eliminated from analysis.



Survey participants were asked to report their county of residence, and marketing was amplified in communities with lesser response rates.

Most counties in the WCDHD district have smaller populations, thus the great majority of completed surveys (95% of the total responses) were from Lincoln county residents, which make up 92% of the WCDHD district population.



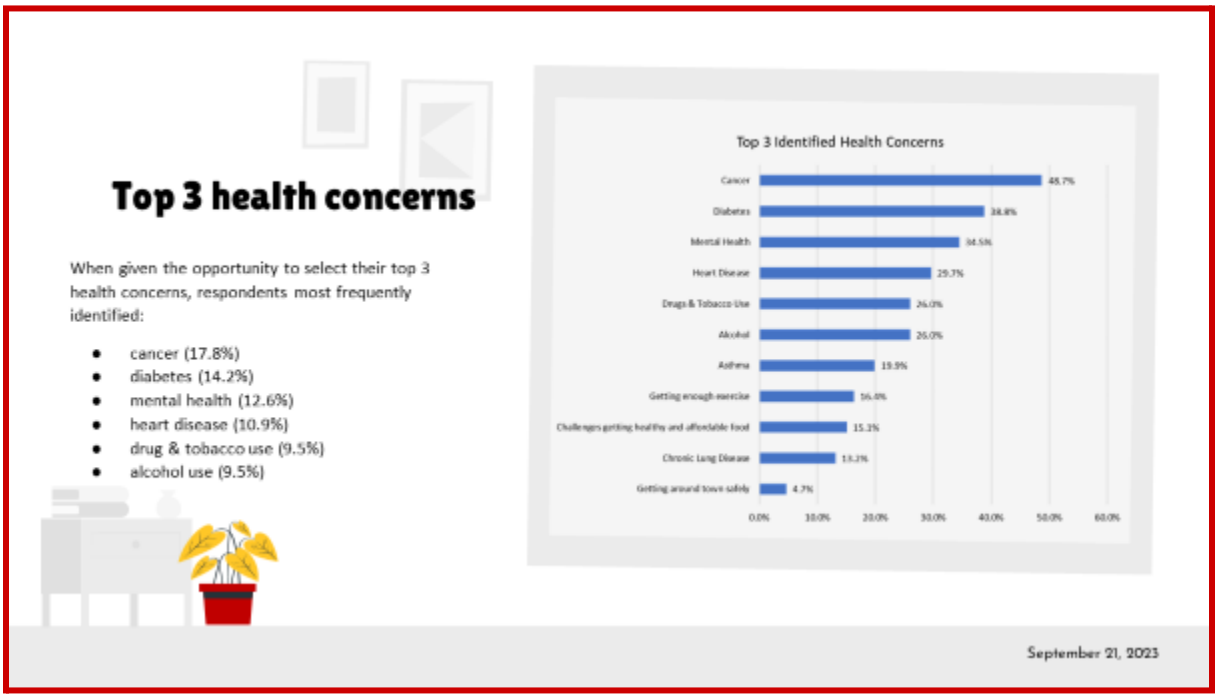
Because the number of completed surveys from the other counties is small, these data can only be aggregated to ensure confidentiality and statistical validity. This data was presented at the **Community Health Assessment Data Review Workshop** (Appendix E), and contributed to the identification of key health concerns and subsequent CHIP priorities.

General Health Concerns

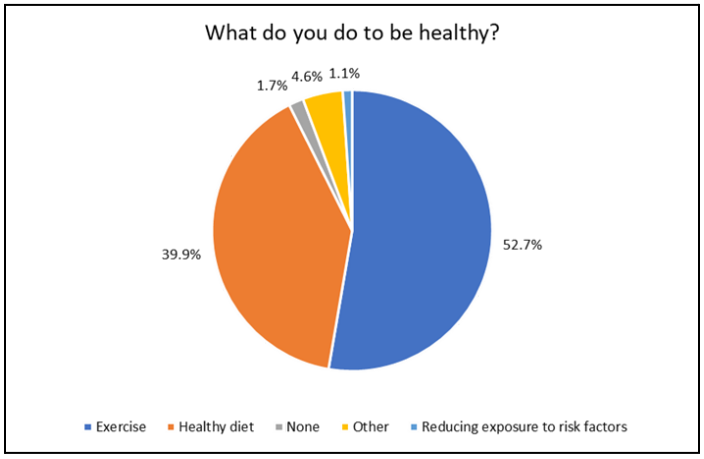
Community members were asked about recent health issues, top health concerns and related health behaviors. The top three most recent health issues reported were related to chronic disease (24.4%), infectious disease (17%) and accidents/injuries (10.9%).

Participants also described what worries them most about their family or their own health. Access to healthcare was the overwhelming majority at 45.2%, followed by chronic disease (15.8%) and infectious disease (7.9%).

When asked to select their top three health concerns, respondents most frequently identified cancer, diabetes and mental health.



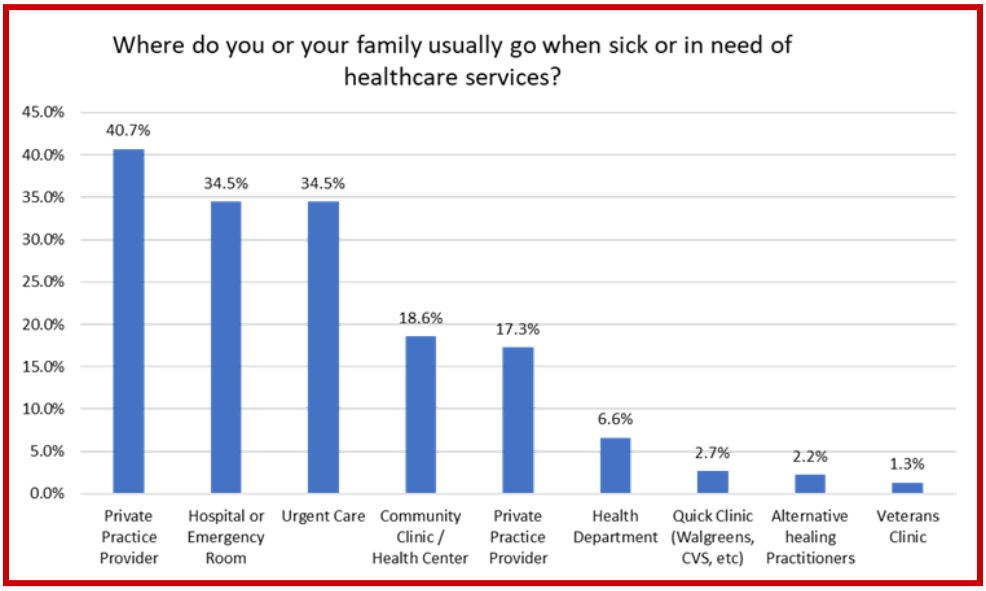
When asked what people do to be healthy, exercise (52.7%) and healthy diet (39.9%) were reported most frequently. When asked what changes people would like to see to improve health, respondents reported improvements to healthcare infrastructure (36.9%) and physical activity infrastructure (32.4%) as the changes they would most like to see in their community. Other desired improvements include affordable food access (6.5%), neighborhood safety (4.1%) and a cleaner environment (4.0%).



Healthcare Access

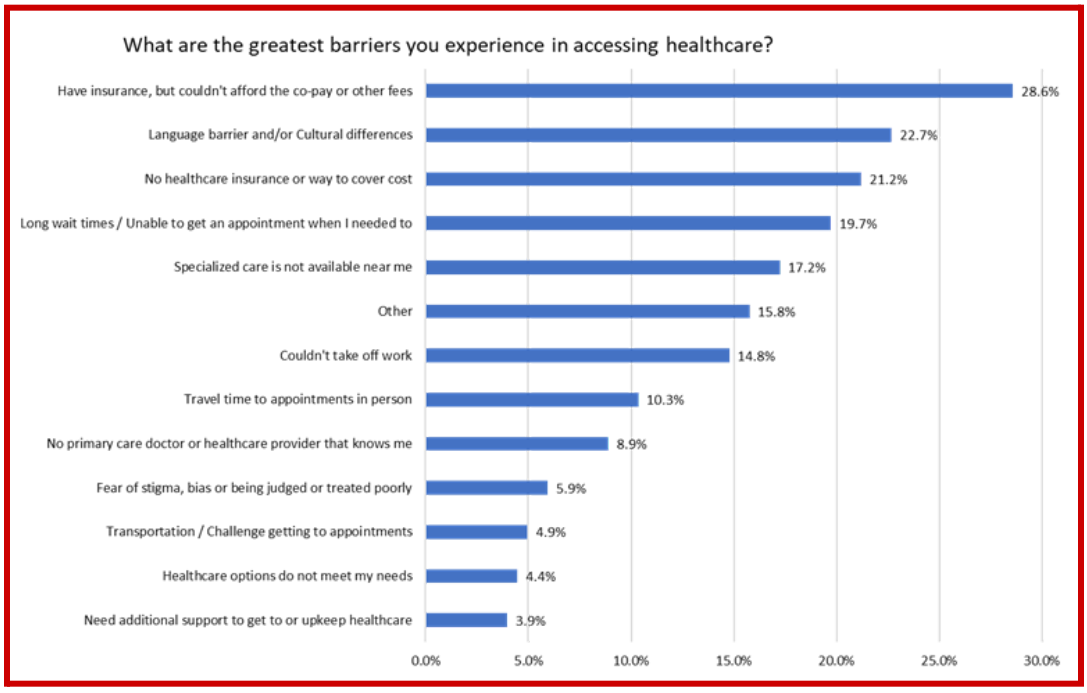
The survey included several questions about accessing healthcare and barriers. Addressing communication, just over a third (35.9) reported no concerns, while another third (31.9%) reported speaking a different language as a barrier. This suggests fairly significant language barriers to accessing care, which may be related to the 33.9% increase in the number of residents identifying as Hispanic whose primary or preferred language may be Spanish. Nearly 7% of survey respondents also reported not understanding what the healthcare provider is communicating, and another 7% reporting not getting all their questions answered from their healthcare provider.

When asked where respondents usually go when sick or in need of healthcare services, the majority (40.7%) reported seeing a private practice provider. However, 34.5% report going to the hospital or emergency room, and 34.5% report going to urgent care centers as their typical source of healthcare. This suggests that barriers exist for people choosing a primary care provider and seeking care in emergency settings instead, perhaps inappropriately using those facilities instead of a doctor's office.

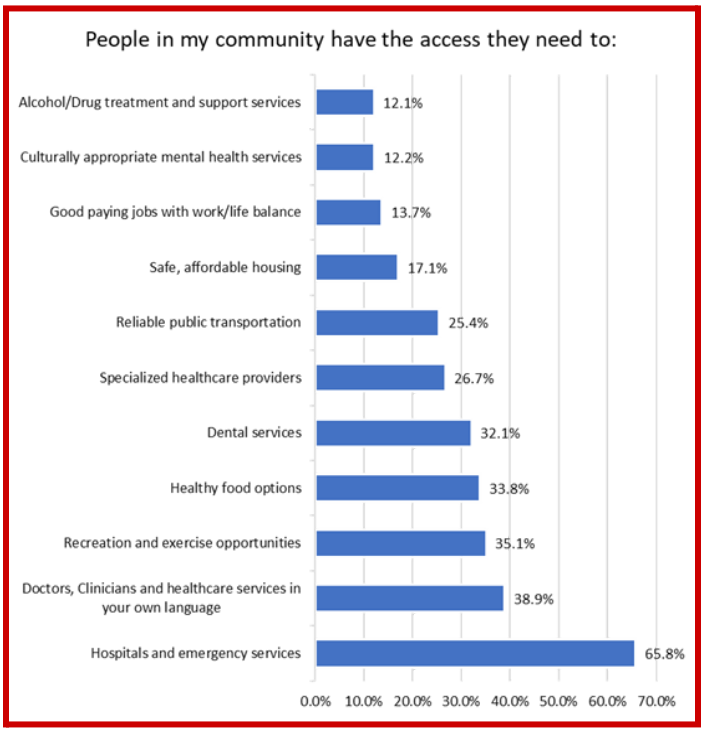


Survey participants were asked what they experienced as the greatest barriers to accessing healthcare, and the top five reported issues were:

- ➔ Co-pays and fees (28.6%)
- ➔ Language barriers and/or cultural differences (22.7%)
- ➔ No healthcare insurance (21.2%)
- ➔ Long wait times /Unable to get appointment (19.7%)
- ➔ No specialized care available (17.2%)



Participants were also asked about their perceptions of community access to health supports. Their responses reflect presumptions about what people in their community need, and if people are able to access related services and supports. In this graph, the lower percentages reflect a perception of lesser access; and the higher the percentage means a presumption of greater access to those opportunities.



Top 5 perceived needs with low access:

- ➔ Alcohol/Drug treatment and supports
- ➔ Culturally appropriate mental health services
- ➔ Good paying jobs with work/life balance
- ➔ Safe, affordable housing
- ➔ Reliable public transportation

Additional data about healthcare access is provided later in this report and was reviewed by the Community Health Partners. It will be important to further explore healthcare access barriers and identify potential strategies to support community access.

About our Community

About our Community

Data for this health status assessment are representative of the WCDHD and are provided by county if available. For a listing of the data sources used, please refer to Appendix F. The WCDHD district includes six counties: Lincoln, Logan, McPherson, Thomas, Hooker and Arthur. The 2020 population distribution for the counties within WCDHD district are as follows: Lincoln County was 35,042, followed by Logan County (896), Hooker County (741), Thomas County (586), Arthur County (439) and McPherson County (420).

Since 2010, the population in multiple counties has declined and the population has declined in WCDHD overall by 2.8%. This was most pronounced in Thomas County (22.5%) and McPherson County (14.1%). If these trends continue, it is expected that the population of the following counties will also decrease by 2024: Thomas (11.6%), McPherson (6.6%) and Lincoln (1.3%).

Overall Population Growth

Geographic Location	2010	2020	2024	2020-2024 Change	2020-2024 % Change	2010-2020 % Change
Arthur	426	439	444	5	1.2%	3.1%
Hooker	690	741	761	20	2.8%	7.4%
Lincoln	36167	35042	34592	-450	-1.3%	-3.1%
Logan	682	896	982	86	9.6%	31.4%
McPherson	489	420	392	-28	-6.6%	-14.1%
Thomas	756	586	518	-68	-11.6%	-22.5%
WCDHD	39210	38124	37690	-434	-1.1%	-2.8%
Nebraska	*1799125*	*1923826*	*1973706*	*49880*	*2.6%*	*6.9%*

Source: DP05 (Total Population ACS 5-Year Estimates)

Race & Ethnicity

As populations statewide become more diverse racially and ethnically, this is also reflected in our community. From 2010 to 2020, there has been a 2.7% population decline in our community; however, there has been a 33.9% increase in the number of residents identifying as Hispanic and a 6.5% decrease in the number of residents identifying as non-Hispanic White. This correlates with a 41.4% increase in the number of residents statewide identifying as Hispanic and a minimal increase in the number of residents statewide identifying as non-Hispanic White of 0.8%.

Race & Ethnicity - WCDHD

Race & Ethnicity	2010	2020	2024	2020-2024 Change	2020-2024 % Change	2010-2020 % Change
White	35793	33483	32559	-924	-2.8%	-6.5%
Black	275	450	520	70	15.6%	63.6%
AIAN	62	197	251	54	27.4%	217.7%
Asian	202	239	254	15	6.2%	18.3%
NHOPI	4	19	25	6	31.6%	375.0%
Other	1	36	50	14	38.9%	3500.0%
Multiracial	404	409	411	2	0.5%	1.2%
Hispanic	2457	3291	3625	334	10.1%	33.9%
Total	**39198**	**38124**	**37694**	**-430**	**-1.1%**	**-2.7%**

Source: DP05 (Total Population ACS 5-Year Estimates)

Age

Distribution

The percentage of people in different age groups (age distribution) of WCDHD has become increasingly older overall, with the share of the population 65+ years increasing by 4.1% from 2010 to 2020, while the share of the population under 18 years (-1.2%), 18-44 years (-1.4%) and 45-64 years (-1.5%) has decreased. This aging of the population has been seen across Nebraska as well with the percentage of the population over 65 years increasing by 2.3%, while the percentage of the population in the other age groups has decreased: <18 years by 0.5%, 18-44 years by 0.4% and 45-64 years by 1.4%. As the share of the population becomes increasingly older, a focus on meeting the needs of the aging population will be critical.

Age - WCDHD						
Age Cohort	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**	**2010-2020 % Change**
<18 years	9764	9047	8760	-287	-3.2%	-7.3%
18-44 years	12519	11621	11262	-359	-3.1%	-7.2%
45-64 years	10816	9948	9601	-347	-3.5%	-8.0%
65+ years	6111	7508	8067	559	7.4%	22.9%
Total	39210	38124	37690	-434	-1.1%	-2.8%
Source: DP05 (Total Population ACS 5-Year Estimates)						

Median Age

The median age throughout WCDHD continued to increase to 44.5 in 2020 from 43.1 in 2010. This is an increase of 3.1% in the median age across all 6 counties. This increasing median age was also seen to a lesser extent in Nebraska, which increased to 36.6 years in 2020 compared to 36.2 years in 2010, a 1.1% increase.

Age Distribution - WCDHD					
Age Cohort	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**
<18 years	24.9%	23.7%	23.2%	-0.5%	-1.2%
18-44 years	31.9%	30.5%	29.9%	-0.6%	-1.4%
45-64 years	27.6%	26.1%	25.5%	-0.6%	-1.5%
65+ years	15.6%	19.7%	21.4%	1.7%	4.1%
Median	43.1	44.5	45.0	1.2%	3.1%
Source: DP05 (Total Population ACS 5-Year Estimates)					

Income

The median household income throughout WCDHD has increased since 2010. This increase was most pronounced in Lincoln County where an increase of 32.8% in the median household income occurred between 2010 ($45,181) and 2020 ($59,995). This increase was seen in all counties, just to different extents. In Nebraska, the median household income increased 27.7% from $49,342 in 2010 to $63,015 in 2020.

Median Household Income						
Geographic Location	2010	2020	2024	2020-2024 Change	2020-2024 % Change	2010-2020 % Change
Arthur	$43,250	$48,500	$50,600	$2,100	4.3%	12.1%
Hooker	$38,750	$48,654	$52,616	$3,962	8.1%	25.6%
Lincoln	$45,181	$59,995	$65,921	$5,926	9.9%	32.8%
Logan	$45,192	$45,990	$46,309	$319	0.7%	1.8%
McPherson	$50,625	$51,932	$52,455	$523	1.0%	2.6%
Thomas	$48,250	$59,000	$63,300	$4,300	7.3%	22.3%
WCDHD	$45,208	$52,345	$55,200	$2,855	5.5%	15.8%
Nebraska	$49,342	$63,015	$68,484	$5,469	8.7%	27.7%
Source: DP03 (Median Household income (dollars) - ACS 5-Year Estimates)						

Education

High School Graduation

The percentage of the population 25 years and over that is a high school graduate or higher is over 90% in each county within WCDHD and higher than Nebraska (91.6%). The 2020 high school graduate rate has increased in Arthur County (2.8%), Lincoln County (1.6%), McPherson County (5.7%) and Thomas County (4.4%) since 2010 but decreased in Hooker County (1.1%) and Logan County (1.9%).

Educational Attainment - High school graduate or higher (25+ years)					
Geographic Location	2010	2020	2024	2020-2024 % Change	2010-2020 % Change
Arthur	93.0%	95.8%	96.9%	1.1%	2.8%
Hooker	94.9%	93.8%	93.4%	-0.4%	-1.1%
Lincoln	92.0%	93.6%	94.2%	0.6%	1.6%
Logan	97.0%	95.1%	94.3%	-0.8%	-1.9%
McPherson	86.7%	92.4%	94.7%	2.3%	5.7%
Thomas	93.3%	97.7%	99.5%	1.8%	4.4%
WCDHD	92.8%	94.7%	95.5%	0.8%	1.9%
Nebraska	90.0%	91.6%	92.2%	0.6%	1.6%
Source: S1501 (High school graduate or higher- ACS 5-Year Estimates)					

Bachelor's Degree or Higher

The percentage of the population 25 years and over obtaining at least a bachelor's degree or greater has increased throughout all counties, except McPherson (11.1% decrease) between 2010 and 2020. This compares well with the state of Nebraska overall (4.8% increase).

Educational Attainment - Bachelor's Degree and higher (25+ years)					
Geographic Location	2010	2020	2024	2020-2024 % Change	2010-2020 % Change
Arthur	17.9%	24.1%	26.6%	2.5%	6.2%
Hooker	22.1%	24.8%	25.9%	1.1%	2.7%
Lincoln	19.0%	21.6%	22.6%	1.0%	2.6%
Logan	18.8%	23.2%	25.0%	1.8%	4.4%
McPherson	34.9%	23.8%	19.4%	-4.4%	-11.1%

Thomas	14.8%	24.6%	28.5%	3.9%	9.8%
WCDHD	21.3%	23.7%	24.7%	1.0%	2.4%
Nebraska	27.7%	32.5%	34.4%	1.9%	4.8%

Source: S1501 (Bachelor's degree or higher- ACS 5-Year Estimates)

Unemployment

The percentage of the population across the counties in WCDHD is low. Each county maintains an unemployment rate below the state (2.3%). This represents a continuing trend statewide of reduced rates of unemployment.

Unemployment (%)						
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	0.0%	0.3%	0.4%	0.1%	40.0%	#DIV/0!
Hooker	1.3%	1.5%	1.6%	0.1%	5.3%	15.4%
Lincoln	3.7%	2.2%	1.6%	-0.6%	-27.3%	-40.5%
Logan	2.0%	0.1%	-0.7%	-0.8%	-760.0%	-95.0%
McPherson	0.3%	0.0%	-0.1%	-0.1%	#DIV/0!	-100.0%
Thomas	0.5%	1.3%	1.6%	0.3%	24.6%	160.0%
WCDHD	1.3%	0.9%	0.7%	-0.2%	-17.8%	-30.8%
Nebraska	3.6%	2.3%	1.8%	-0.5%	-22.6%	-36.1%

Source: DP03 (Unemployed - ACS 5-Year Estimates)

Poverty

The percentage of families below the federal poverty level has decreased from 2010 to 2020 in Lincoln County (1.7%), McPherson County (0.2%) and Thomas County (0.6%), which follows the statewide trend of decreasing poverty (1.3%); however, poverty is still more common for certain populations in the community and over 5% of all families in all counties experience poverty.

Poverty - All Families					
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	5.0%	6.9%	7.7%	0.8%	1.9%
Hooker	4.5%	7.1%	8.1%	1.0%	2.6%
Lincoln	7.0%	5.3%	4.6%	-0.7%	-1.7%
Logan	6.8%	8.2%	8.8%	0.6%	1.4%
McPherson	7.8%	7.6%	7.5%	-0.1%	-0.2%
Thomas	6.5%	5.9%	5.7%	-0.2%	-0.6%
WCDHD	6.3%	6.8%	7.1%	0.2%	0.6%
Nebraska	7.9%	6.6%	6.1%	-0.5%	-1.3%

Source: S1702 (Poverty status in the past 12 months - ACS 5-Year Estimates)

Additionally, among families with children, the rate of poverty is higher in all counties.

Poverty - Families with Children <18 years					
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	7.1%	15.7%	19.1%	3.4%	8.6%
Hooker	8.2%	20.3%	25.1%	4.8%	12.1%

Lincoln	12.0%	6.7%	4.6%	-2.1%	-5.3%
Logan	13.1%	8.7%	6.9%	-1.8%	-4.4%
McPherson	12.7%	36.0%	45.3%	9.3%	23.3%
Thomas	0.0%	5.6%	7.8%	2.2%	5.6%
WCDHD	8.9%	15.5%	18.2%	2.7%	6.7%
Nebraska	13.0%	10.6%	9.6%	-1.0%	-2.4%

Source: S1702 (Poverty status in the past 12 months - ACS 5-Year Estimates)

Food Insecurity

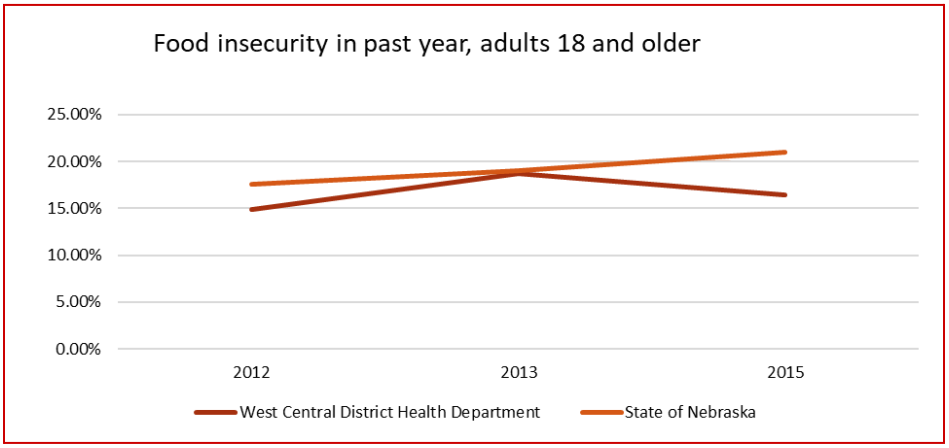
Free or reduced-price lunch

The percentage of children who are eligible for free and reduced lunch in WCDHD… Data from the Nebraska Department of Education shows the largest school district (North Platte Public Schools) has 3,919 students, 255 teachers and 55% free and reduced-price lunch. Throughout the counties served by the WCDHD, school districts vary in size and some data are not available due to limited sample size. Below is a table showing each school district's data.

District	Students	Teachers	Free/Reduced Lunch
Arthur County Schools	124	14	*
Sutherland Public Schools	344	28	31%
Hershey Public Schools	520	38	33%
North Platte Public Schools	3919	255	55%
Maxwell Public Schools	289	24	50%
Stapleton Public Schools	195	21	28%
McPherson County Schools	61	12	*
Mullen Public Schools	167	20	49%
Thedford Public Schools	132	19	60%
Wallace Public School District 65 R	192	23	37%

Food insecurity in the past year

The Behavioral Risk Factor Surveillance System in Nebraska gathered data from 2012-2015 regarding food insecurity, measured as the percentage of adults 18 and older who report that they were always, usually, or sometimes worried or stressed during the past 12 months about having enough money to buy nutritious meals.



From 2012-2015, WCDHD respondents (16.5%, 95% CI 13.1%-20.7%) reported less food insecurity than Nebraska overall (19.2%, 95% CI 18.4%-20.1%). Females (19.9%, 95% CI 15.1%-25.7%) reported more food insecurity than males (13.3%, 95% CI 8.8%-19.6%).

Source: Behavioral Risk Factor Surveillance System, 2012-2015

Housing

Housing in the WCDHD community has been identified as a priority in previous MAPP cycles. This section highlights some of the measures that help to describe the housing situation in our community.

Households

The number of occupied housing units in WCDHD has decreased in most counties, except for a small increase in Arthur County. This is counter to what is occurring statewide as the increase in the number of households in Nebraska was 7.7% between 2010 and 2020.

Households (# of households)						
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	178	192	198	6	2.9%	7.9%
Hooker	320	316	314	-2	-0.5%	-1.3%
Lincoln	15038	14765	14656	-109	-0.7%	-1.8%
Logan	320	319	319	0	-0.1%	-0.3%
McPherson	204	199	197	-2	-1.0%	-2.5%
Thomas	332	276	254	-22	-8.1%	-16.9%
WCDHD	16392	16067	15937	-130	-0.8%	-2.0%
Nebraska	*711711*	*766663*	*788644*	*21981*	*2.9%*	*7.7%*
Source: DP04 (Occupied housing units - ACS 5-Year Estimates)						

The percentage of households that are owner-occupied has remained stable or increased in Arthur, Lincoln, Logan, and McPherson County, but decreased in Hooker and Thomas County. Meanwhile, the percentage of households that are renter-occupied has significantly decreased in Arthur, Logan, and McPherson County, remained stable in Lincoln County and increased in Hooker and Thomas County. Statewide, the percentage of owner-occupied households has decreased, while the percentage of renter-occupied households has increased.

Households (Owner-Occupied)						
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	113	135	144	9	6.5%	19.5%
Hooker	271	189	156	-33	-17.4%	-30.3%
Lincoln	10273	9962	9838	-124	-1.2%	-3.0%
Logan	218	246	257	11	4.6%	12.8%
McPherson	120	157	172	15	9.4%	30.8%
Thomas	256	188	161	-27	-14.5%	-26.6%
WCDHD	1875	1813	1788	-25	-1.4%	-3.3%
Nebraska	*488034*	*507291*	*514994*	*7703*	*1.5%*	*3.9%*
Source: DP04 (Occupied housing units (owner-occupied) - ACS 5-Year Estimates)						
Households (Renter-Occupied)						
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	65	57	54	-3	-5.6%	-12.3%
Hooker	49	127	158	31	24.6%	159.2%
Lincoln	4765	4803	4818	15	0.3%	0.8%
Logan	102	73	61	-12	-15.9%	-28.4%

McPherson	84	42	25	-17	-40.0%	-50.0%
Thomas	76	88	93	5	5.5%	15.8%
WCDHD	857	865	868	3	0.4%	1.0%
Nebraska	223737	259372	273626	14254	5.5%	15.9%

Source: DP04 (Occupied housing units (renter-occupied) - ACS 5-Year Estimates)

The average household size throughout WCD has remained consistent for both owner-occupied and renter-occupied households. This is similar to the statewide trend in Nebraska.

Average household size (Owner-Occupied)						
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	2.47	2.24	2.15	-0.09	-4.1%	-9.3%
Hooker	2.19	2.43	2.53	0.10	4.0%	11.0%
Lincoln	2.50	2.43	2.40	-0.03	-1.2%	-2.8%
Logan	2.10	2.82	3.11	0.29	10.2%	34.3%
McPherson	2.47	1.96	1.76	-0.20	-10.4%	-20.6%
Thomas	2.02	2.21	2.29	0.08	3.4%	9.4%
WCDHD	2.29	2.35	2.37	0.02	1.0%	2.5%
Nebraska	2.58	2.59	2.59	0.00	0.2%	0.4%

Source: DP04 (Average household size (owner-occupied) - ACS 5-Year Estimates)

Average household size (Renter-Occupied)						
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 Change**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	2.26	2.40	2.46	0.06	2.3%	6.2%
Hooker	1.78	1.72	1.70	-0.02	-1.4%	-3.4%
Lincoln	2.08	2.10	2.11	0.01	0.4%	1.0%
Logan	2.20	2.78	3.01	0.23	8.3%	26.4%
McPherson	2.30	2.67	2.82	0.15	5.5%	16.1%
Thomas	3.14	1.93	1.45	-0.48	-25.1%	-38.5%
WCDHD	2.29	2.27	2.26	-0.01	-0.5%	-1.2%
Nebraska	2.18	2.16	2.15	-0.01	-0.4%	-0.9%

Source: DP04 (Average household size housing units (renter-occupied) - ACS 5-Year Estimates)

Cost of Living

The cost of housing in WCDHD has generally increased between 2010 and 2020 for both homeowners with a mortgage, homeowners without a mortgage and renters. The cost of housing as a percentage of household income being greater than 35% generally increased throughout the WCDHD community as well.

Gross Rent as a Percentage of Household Income (GRAPI) >= 35%					
Geographic Location	**2010**	**2020**	**2024**	**2020-2024 % Change**	**2010-2020 % Change**
Arthur	0.0%	53.1%	74.3%	21.2%	53.1%
Hooker	20.0%	5.5%	-0.3%	-5.8%	-14.5%
Lincoln	22.9%	33.6%	37.9%	4.3%	10.7%
Logan	17.5%	38.5%	46.9%	8.4%	21.0%
McPherson	8.0%	0.0%	-3.2%	-3.2%	-8.0%
Thomas	14.6%	28.0%	33.4%	5.4%	13.4%

WCDHD	13.8%	26.5%	31.5%	5.0%	12.6%
Nebraska	34.4%	32.9%	32.3%	-0.6%	-1.5%

Source: DP04 (Gross rent 35% or more of household income - ACS 5-Year Estimates)

Gross Homeowner Costs with mortgage as a Percentage of Household Income (GRAPI) >= 35%

Geographic Location	2010	2020	2024	2020-2024 % Change	2010-2020 % Change
Arthur	13.5%	33.3%	41.2%	7.9%	19.8%
Hooker	26.3%	14.5%	9.8%	-4.7%	-11.8%
Lincoln	9.5%	12.6%	13.8%	1.2%	3.1%
Logan	9.4%	35.6%	46.1%	10.5%	26.2%
McPherson	0.0%	4.4%	6.2%	1.8%	4.4%
Thomas	15.3%	7.0%	3.7%	-3.3%	-8.3%
WCDHD	12.3%	17.9%	20.1%	2.2%	5.6%
Nebraska	18.4%	14.5%	12.9%	-1.6%	-3.9%

Source: DP04 (Gross mortgage homeowner costs 35% or more of household income - ACS 5-Year Estimates)

Source: U.S. Census Bureau, American Community Survey, DP04: Selected Housing Characteristics

Housing Age

The number of units by year built, the number of single-family homes by year built and the condition of those homes is critical to a healthy community.

Household Statistics (Frequencies)

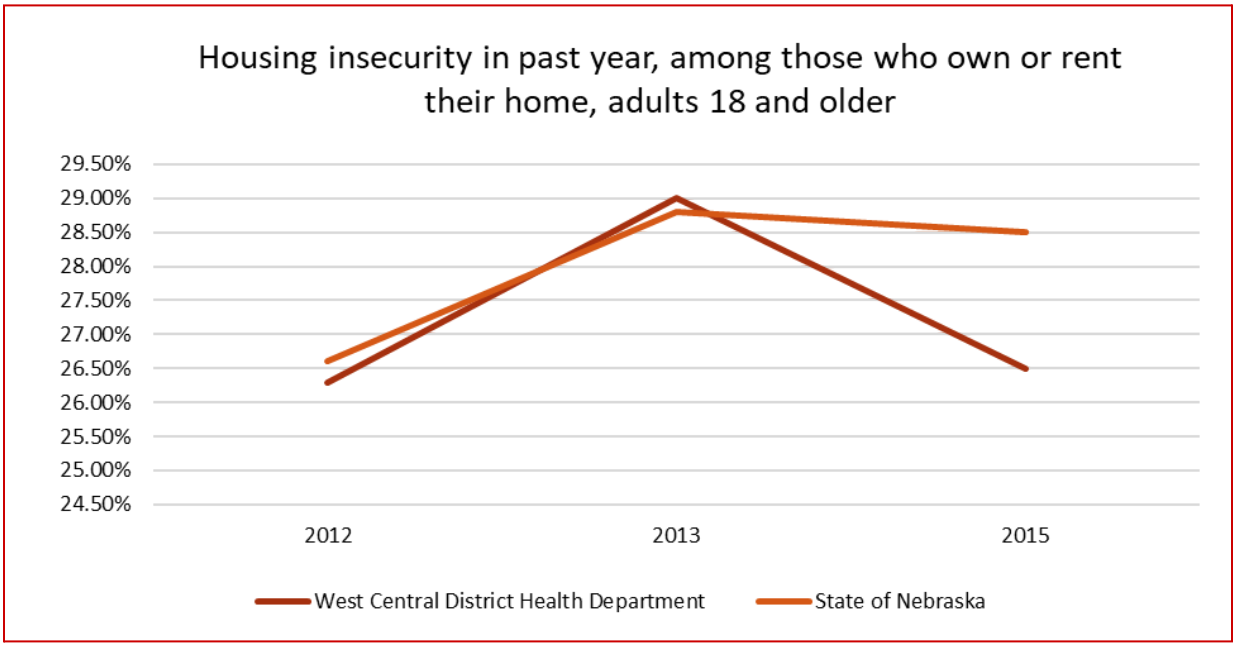
Measure	Nebraska	Arthur	Hooker	Lincoln	Logan	McPherson	Thomas	WCDHD
Total Housing Units	844248	256	448	16857	404	251	386	18602
Occupied Housing Units	766663	192	316	14765	319	199	276	16067
Built 2014 or later	30647	12	4	215	23	4	14	272
Built 2010 to 2013	24500	9	11	380	5	0	0	405
Built 2000 to 2009	93559	28	63	1722	27	36	27	1903
Built 1990 to 1999	98093	16	47	1520	42	6	27	1658
Built 1980 to 1989	79705	23	13	1332	25	2	67	1462
Built 1970 to 1979	133254	32	74	3413	83	34	41	3677
Built 1960 to 1969	93881	15	32	2071	33	24	28	2203
Built 1950 to 1959	80073	20	49	2154	37	46	46	2352
Built 1940 to 1949	40750	32	41	1213	23	41	20	1370
Built 1939 or earlier	169786	69	114	2837	106	58	116	3300
Lacking complete plumbing facilities	2112	0	0	1	0	0	0	1
Lacking complete kitchen facilities	8841	1	0	282	0	0	3	286
No telephone service available	11298	2	0	267	7	2	0	278

Source: DP04 (Multiple metrics - Selected Housing Characteristics) - 2020 ACS 5-Year Estimates)

Housing Insecurity

Housing insecurity was included in the Behavioral Risk Factor Surveillance System for Nebraska from 2012-2015, measured as the percentage of adults 18 and older who report that they own or rent a home and they were always, usually, or sometimes worried or stressed during the past 12 months about having enough money to pay their rent or mortgage. From 2012-2015, WCDHD respondents (27.3%, 95% CI 22.9%-32.1%) reported a similar amount of housing insecurity as Nebraska (28.0%, 95% CI 27.0%-28.9%). Females (31.1%, 95% CI 25.4%-37.4%) reported more housing insecurity than males (23.6%, 95% CI 17.4%-31.0%). Non-Hispanic White respondents (25.1%, 95% CI

20.6%-30.3%) reported less housing insecurity than minority respondents (51.1%, 95% CI 36.7%-65.4%).



County Health Rankings

The County Health Rankings and Roadmaps is a useful tool for comparing a community's health to other communities within their state. The 2022 County Health Rankings only included Lincoln County in their rankings due to sample size limitations for their data sets. For health outcomes, Lincoln County was ranked #45, which is in the lower middle range of counties in Nebraska. For health factors, Lincoln County was ranked #57, which also was in the lower middle range of counties in Nebraska.

OVERALL RANKINGS - COUNTY HEALTH RANKINGS

Rankings	Arthur	Hooker	Lincoln	Logan	McPherson	Thomas
Health Outcomes	NR	NR	45	NR	NR	NR
Length of Life	NR	NR	61	NR	NR	NR
Quality of Life	NR	NR	38	NR	NR	NR
Health Factors	NR	NR	57	NR	NR	NR
Health Behaviors	NR	NR	50	NR	NR	NR
Clinical Care	NR	NR	55	NR	NR	NR
Social & Economic Factors	NR	NR	56	NR	NR	NR
Physical Environment	NR	NR	39	NR	NR	NR

NR=Not Ranked

Below is an overview of the data shared by County Health Rankings at countyhealthrankings.org.

Health Outcomes

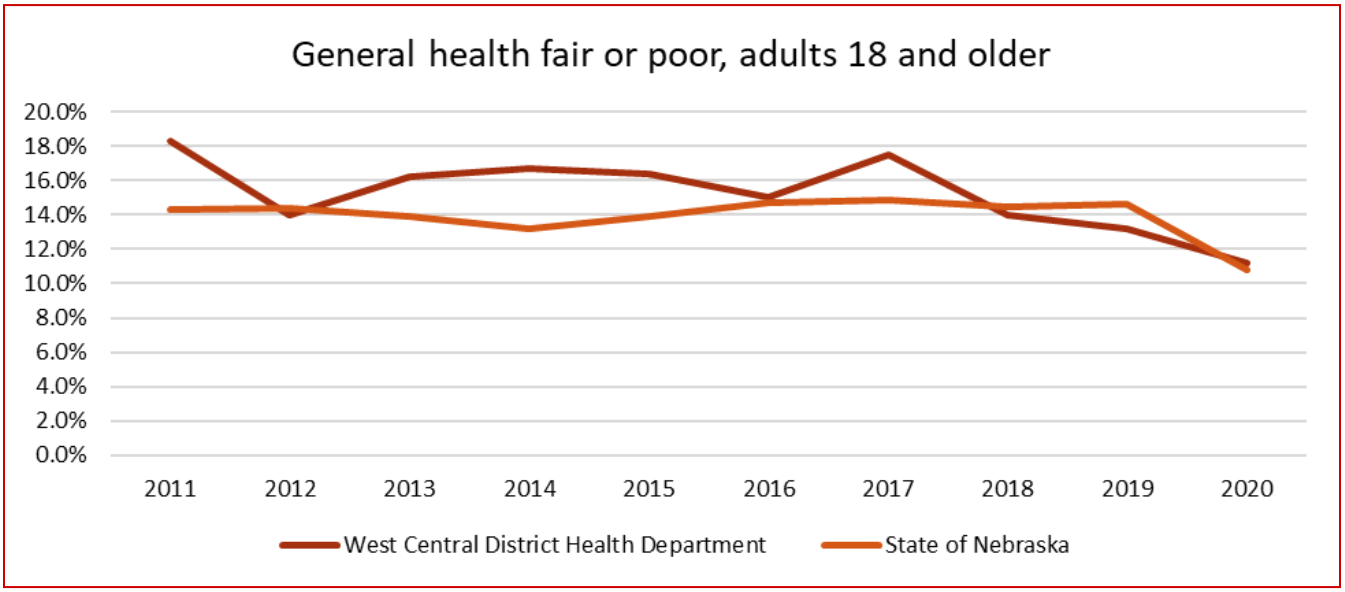
For health outcomes, the metrics included were grouped as length of life and quality of life. Below are the metrics that were included.

HEALTH OUTCOMES - COUNTY HEALTH RANKINGS

Group	Measure	Arthur	Hooker	Lincoln	Logan	McPherson	Thomas	Nebraska
Length of Life	Premature Death	*	*	7400	*	*	*	6400
Quality of Life	Fair or Poor Health	16%	14%	15%	15%	16%	13%	14%
Quality of Life	Poor Physical Health Days	3.7	3.3	3.3	3.5	3.7	3.3	3.3
Quality of Life	Poor Mental Health Days	4.1	3.9	3.8	4	4.2	3.7	3.8
Quality of Life	Low Birthweight	*	*	8%	*	*	*	7%

(*) Missing data due to sample size.

One of the most important measures of a community's health from the BRFSS is what percentage of the population reports fair or poor health. This is also a key quality of life metric in the County Health Rankings. In WCDHD, there were 11.2% (8.8%-14.1%) reporting fair or poor health, which was about the same as Nebraska overall at 10.8% (10.1%-11.5%).



The percentage of the population reporting their physical health was not good on 14 or more of the past 30 days was 12.0% (8.6%-16.5%) in 2020, which was higher than the state overall at 7.9% (7.3%-8.6%). The percentage of the population reporting their mental health was not good on 14 or more of the past 30 days was 11.5% (8.2%-15.9%), which was similar to Nebraska overall at 11.9% (11.1%-12.8%).

Health Factors

For health factors, the metrics included are more numerous. Below are the metrics that were included.

HEALTH FACTORS - COUNTY HEALTH RANKINGS

Group	Measure	Arthur	Hooker	Lincoln	Logan	McPherson	Thomas	Nebraska
Health Behaviors	Adult Smoking	18%	18%	19%	18%	18%	16%	15%
Health Behaviors	Adult Obesity	37%	34%	37%	35%	36%	34%	34%
Health Behaviors	Food Environment Index	4.5	4.5	8.1	8	4.8	5	7.7
Health Behaviors	Physical Inactivity	31%	26%	29%	29%	29%	27%	27%
Health Behaviors	Access to Exercise Opportunities	*	7%	79%	*	*	15%	78%
Health Behaviors	Excessive Drinking	20%	22%	22%	21%	21%	24%	23%
Health Behaviors	Alcohol-Impaired Driving Deaths	*	*	38%	0%	0%	*	33%
Health Behaviors	Sexually Transmitted Infections (Chlamydia)	*	*	363.8	*	*	0	480.3
Health Behaviors	Teen Births	*	*	21	*	*	*	18
Clinical Care	Uninsured	12%	11%	8%	11%	13%	15%	10%
Clinical Care	Primary Care Physicians	460:0	340:1	2050:1	750:0	490:0	720:0	1310:1
Clinical Care	Dentists	470:0	650:1	1320:1	750:0	470:0	740:0	1260:1
Clinical Care	Mental Health Providers	470:0	650:0	360:1	750:0	470:0	740:0	340:1
Clinical Care	Preventable Hospital Stays	*	3033	5378	2390	*	2331	3122
Clinical Care	Mammography Screening	41%	58%	42%	43%	44%	45%	49%
Clinical Care	Flu Vaccinations	47%	62%	52%	38%	53%	42%	51%
Social & Economic Factors	High School Completion	96%	94%	94%	95%	92%	98%	92%
Social & Economic Factors	Some College	77%	63%	72%	80%	68%	84%	72%
Social & Economic Factors	Unemployment	5.2%	2.7%	3.9%	2.5%	2.7%	4.0%	4.2%
Social & Economic Factors	Children in Poverty	17%	8%	12%	10%	23%	22%	10%
Social & Economic Factors	Income Inequality	5.2	2.6	4.1	3.4	3.3	3.5	4.1

Social & Economic Factors	Children in Single-Parent Households	18%	14%	25%	3%	0%	8%	21%
Social & Economic Factors	Social Associations	0	0	16.3	0	0	55.4	13.9
Social & Economic Factors	Violent Crime	0	0	274	*	*	*	286
Social & Economic Factors	Injury Deaths	*	*	70	*	*	*	61
Physical Environment	Air Pollution - PM2.5	5.2	5.2	5.4	5.6	5.4	5.3	6.6
Physical Environment	Drinking Water Violations	No	No	No	No	No	No	N/A
Physical Environment	Severe Housing Problems	12%	13%	12%	10%	10%	7%	12%
Physical Environment	Driving Alone to Work	65%	66%	86%	71%	57%	75%	81%
Physical Environment	Long Commute - Driving Alone	37%	51%	11%	37%	51%	15%	19%

(*) Missing data due to sample size.

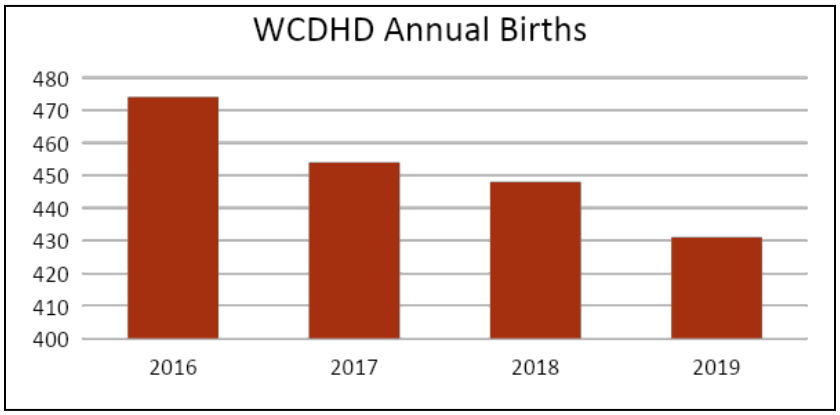
Overall, Lincoln County ranks in the lower 25-50% of counties in health factors and health outcomes. Improving in these areas is essential to improving length and quality of life in the component counties. Where possible, data were linked to overall district data and inferences were drawn about whether those counties not ranked by County Health Rankings were in a similar position.

Maternal & Child Health

Births in the West Central District help determine the growth of the population and measures drawn from birth certificate data provide insights into the health and wellness of pregnant women and their babies. This section highlights some of these key metrics.

The most recent year of data shared from Nebraska DHHS at the time of this report generation (January 2023) was 2019.

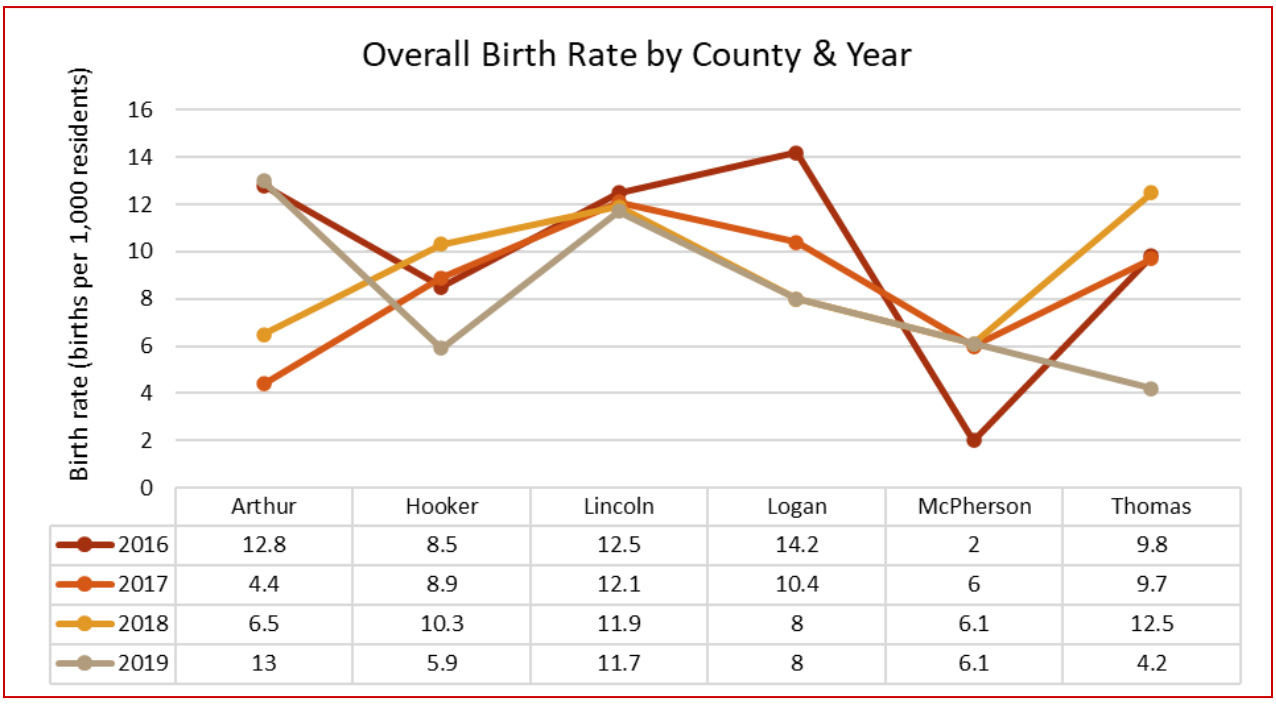
Births have been declining in WCDHD district since 2016.



Data in the following section is included for overall birth rate, premature births, low birth weight, trimester care and infant mortality for WCDHD; however, data for principal source of payment and the Kotelchuck Index, a measure of the adequacy of prenatal care, are not included in reporting from DHHS at this time.

Overall Birth Rate

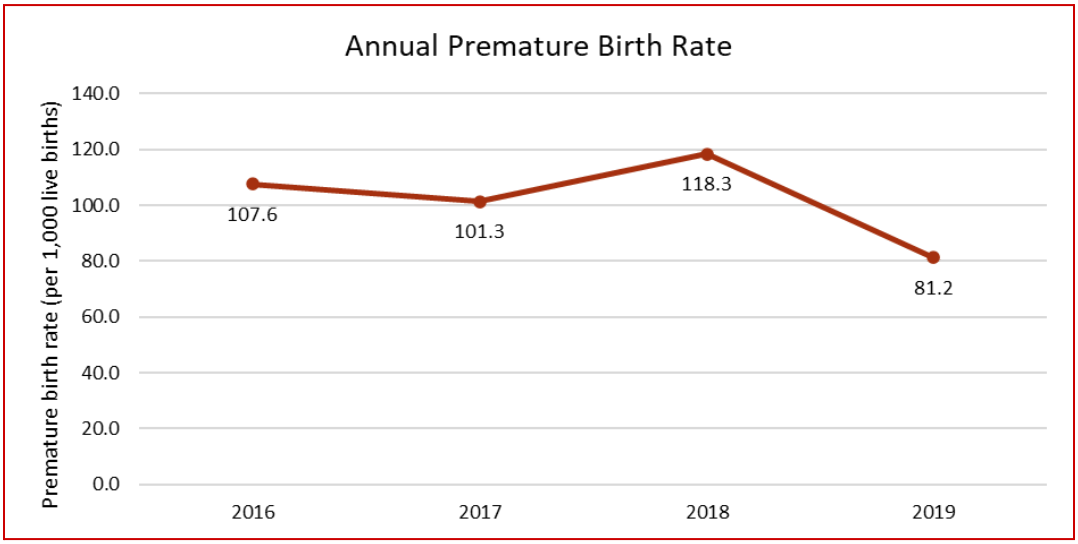
The birth rate is the number of live births occurring per 1,000 women. The chart below shows that there has been a declining birth rate but that it varies significantly year to year for each county. It typically remains between 5-15 births per 1,000 women.



	Arthur	Hooker	Lincoln	Logan	McPherson	Thomas
2016	12.8	8.5	12.5	14.2	2	9.8
2017	4.4	8.9	12.1	10.4	6	9.7
2018	6.5	10.3	11.9	8	6.1	12.5
2019	13	5.9	11.7	8	6.1	4.2

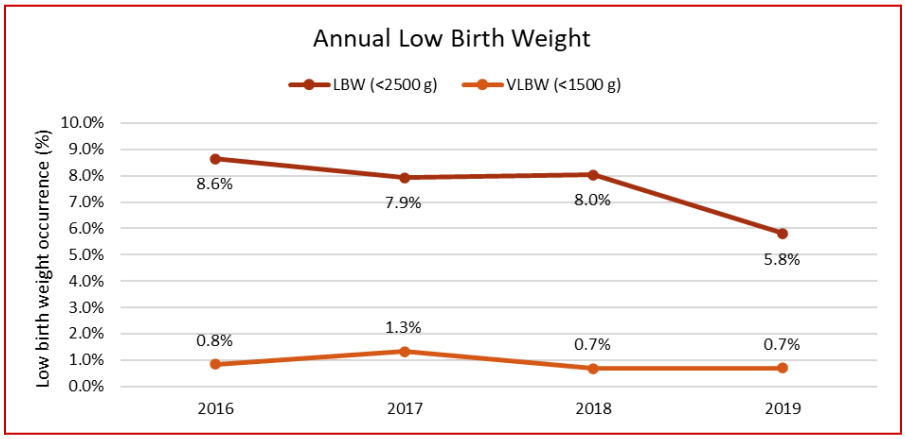
Premature Births

Premature births are births occurring prior to 37 weeks of gestation. Gestational age is approximated using a CDC algorithm when complete data are unavailable. The premature birth rate has remained relatively stable since 2016.



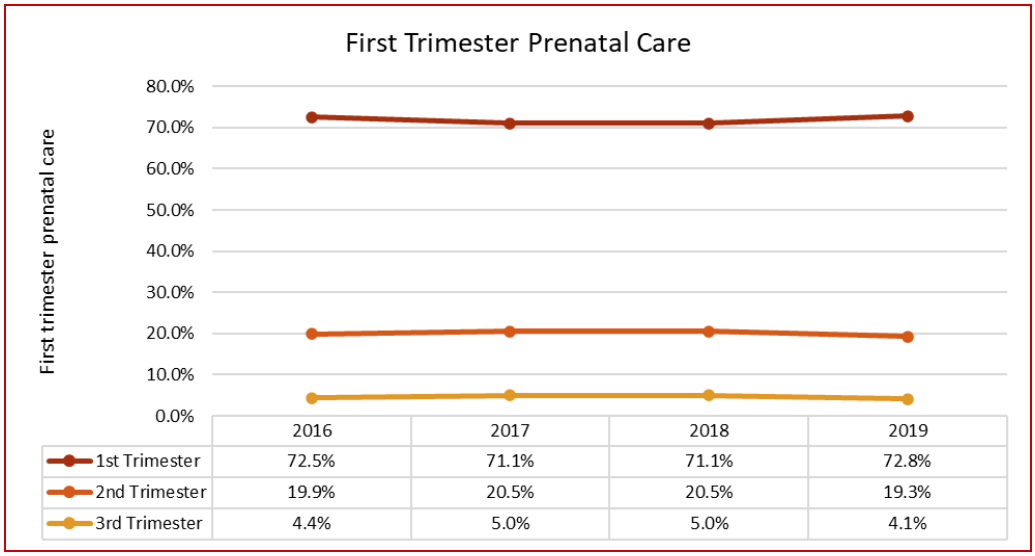
Low Birth Weight

Low birth weight births are those that are less than 2500 grams at birth, while very low birth weight births are those that are less than 1500 grams at birth. While those very low birth weight deliveries have remained low (<1%), the low birth weight births appear to be declining from 2016-2019.



Trimester Care Initiation

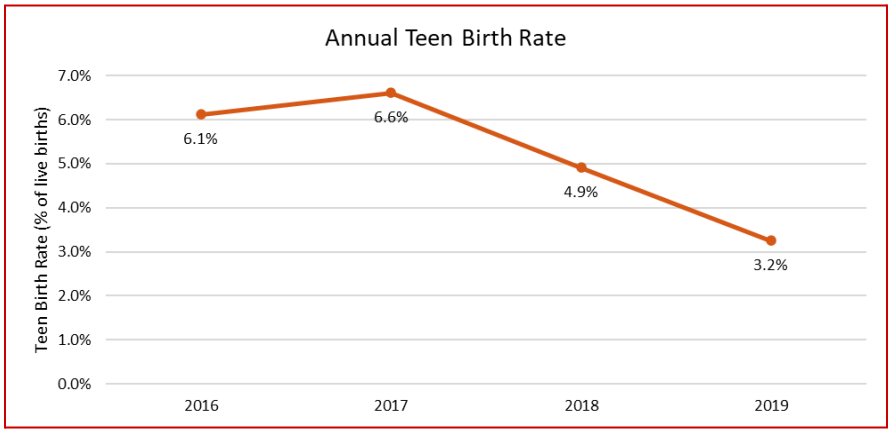
First trimester prenatal care is associated with improved health outcomes for the mother and child. The chart below shows the percentage of births in each trimester of prenatal care initiation (1st, 2nd or 3rd). The rate of prenatal care initiation by trimester has remained relatively unchanged from 2016-2019.



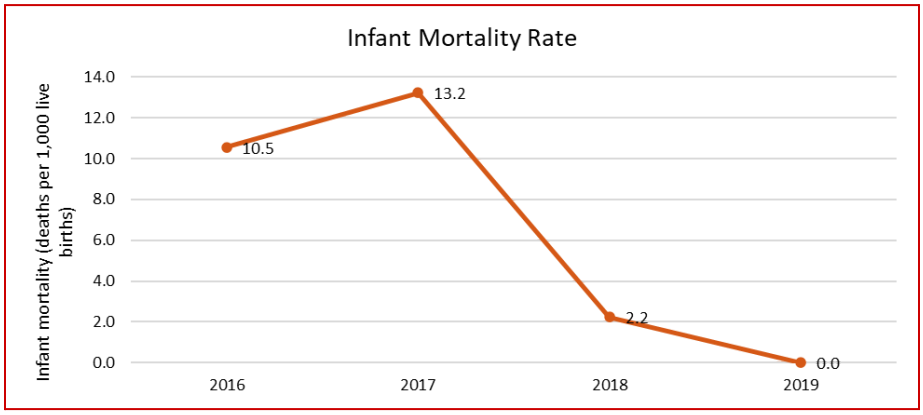
	2016	2017	2018	2019
1st Trimester	72.5%	71.1%	71.1%	72.8%
2nd Trimester	19.9%	20.5%	20.5%	19.3%
3rd Trimester	4.4%	5.0%	5.0%	4.1%

Teen Births

Teen births are births occurring to mothers who are ages 19 and under. Since 2016, births to teenage mothers have declined consistently. This is part of a larger national trend that continues.



Infant Mortality



Infant mortality is a death to a child within the first year after birth. The infant mortality rate, or number of infant deaths per 1,000 live births, has remained at or below about 10 infant deaths per 1,000 live births in the WCDHD jurisdiction from 2016-2019. No infant deaths documented in 2019 resulted in an infant mortality rate of 0.

Communicable Disease

The prevalence of communicable diseases in WCDHD is reported in this section. The primary diseases covered are chlamydia, gonorrhea, and COVID-19. All reportable diseases are summarized in the table below from Nebraska DHHS reporting systems, including 2021 & 2022 totals with 2023 YTD information.

West Central District HD Investigations - Confirmed, Probable, and Suspect Cases
Year to Date (YTD) through Monday, January 16, 2023

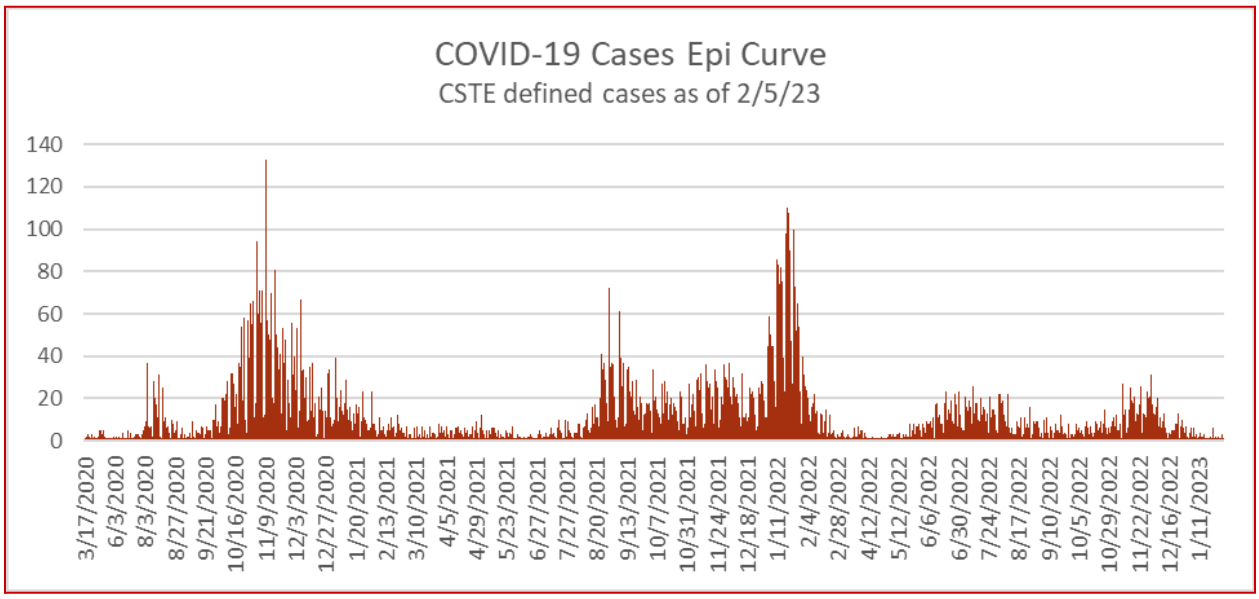
CONDITION	2023 YTD	2022 YTD	2022 Total	2021 Total
AIDS	0	0	0	2
Animal Exposure (bite or nonbite)	0	0	3	2
Campylobacteriosis	1	1	25	17
Chlamydia trachomatis infection	1	2	91	112
Coccidioidomycosis	0	0	0	3
Cryptosporidiosis	0	0	5	5
Cyclosporiasis	0	0	0	1
Enteroaggregative Escherichia coli (EAEC)	2	0	4	2
Enteropathogenic Escherichia coli (EPEC)	1	0	13	39
Enterotoxigenic Escherichia coli (ETEC)	0	0	3	5
Escherichia coli (STEC) gastroenteritis	0	0	6	6
Giardiasis	0	0	2	1
Gonorrhea	0	1	15	39
Group B Streptococcus, invasive	0	0	0	2
HIV	0	0	1	0
Hepatitis B virus infection, chronic	0	0	1	1
Hepatitis C Virus Infection, chronic or resolved	0	2	5	14
Histoplasmosis	0	0	1	0
Lead poisoning	0	0	3	1
Lead poisoning (Child)	0	0	8	1
Legionellosis	0	0	0	1
Monkeypox	1	0	0	0
Mycobacterium Avium	0	0	1	0
Noroviruses	1	0	0	1
Novel Coronavirus (nCoV)	0	689	3,028	3,724
Pertussis	0	0	2	0
Q fever, Acute	0	0	0	1
Salmonellosis (excluding S. typhi/paratyphi)	0	0	13	21
Shigellosis	0	0	0	1
Strep, other, invasive, beta-hem (non-A nonB)	0	0	2	0
Streptococcus pneumoniae, invasive disease (IPD)	1	0	6	0
Syphilis, Unknown Duration or Late	0	0	2	1
Syphilis, secondary	0	0	1	1
Toxoplasmosis	0	0	0	2
Tularemia	0	0	2	0
Vibriosis (non-cholera Vibrio species infections)	0	0	4	5
West Nile virus disease, neuroinvasive	0	0	1	0
West Nile virus disease, nonneuroinvasive	0	0	2	1
Yersiniosis (non-pestis)	0	0	1	0

Sexually Transmitted Infections

Chlamydia and gonorrhea are two of the most common sexually transmitted infections. There were 112 confirmed, probable or suspected cases of chlamydia identified in 2021, compared to 91 in 2022. Gonorrhea was considerably less likely to be identified, with 39 cases in 2021 and 15 cases in 2022.

COVID-19

COVID-19, Coronavirus disease-2019, is caused by the SARS-CoV-2 coronavirus. Since the first case was identified, there have been 13,748 positive tests. By year, there were increasing counts each year until 2023 (2020: 3739, 2021: 4821, 2022: 5095 and 2023 year-to-date of 93). Assuming these trends for cases continue, it is possible that 2023 will have fewer cases than any year of the pandemic to-date; however, hospitalizations and deaths have reduced due to vaccinations and variants that likely result in more mild infections than previous variants, particularly the Delta variant.



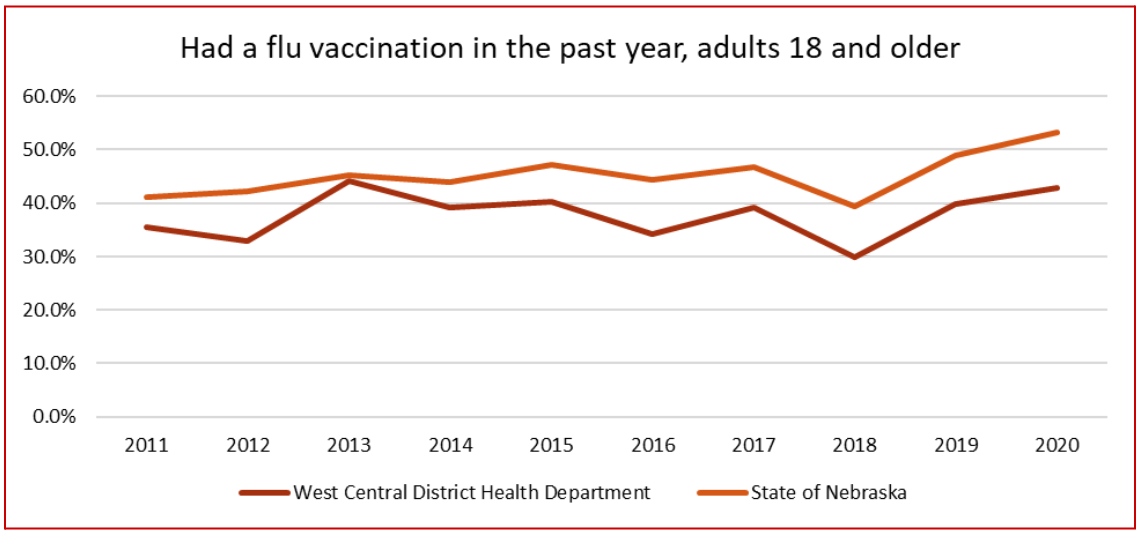
For more information about COVID-19 mortality, please refer to the 'Infectious Disease' subsection within the 'Deaths' section in this document. Information about COVID19 vaccinations is shared in the following 'Vaccinations' section.

Vaccinations

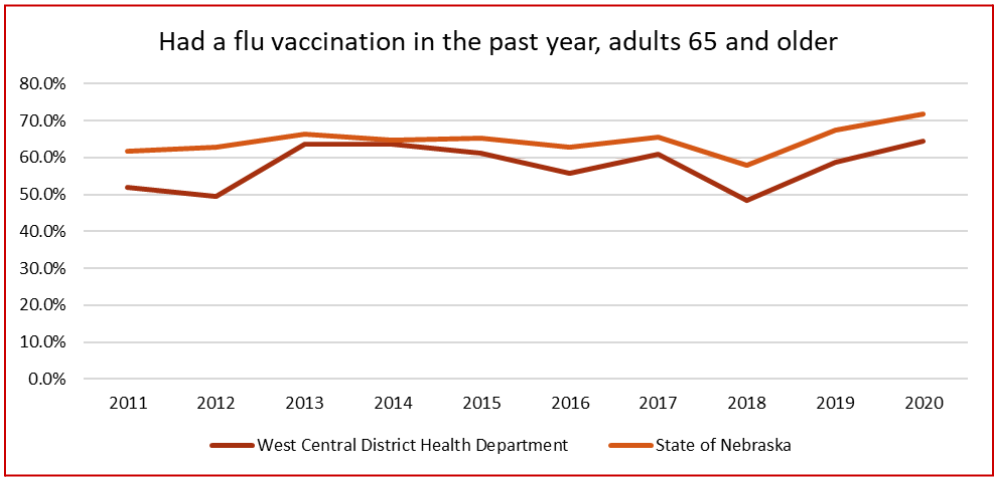
Vaccinations are a powerful tool to prevent communicable disease morbidity & mortality. The Behavioral Risk Factor Surveillance System (BRFSS) helps to provide information about an array of vaccinations, specifically influenza and pneumococcal. COVID-19 vaccination information is also shared and derived from the Nebraska State Immunization Information System (NESIIS).

Influenza

Influenza is a respiratory virus that can cause severe illness and death. One important measure of influenza vaccination is the percentage of adults 18 and older who report they received an influenza vaccination in the past 12 months. From 2016-2020, WCDHD respondents had a flu vaccination in the past year (37.1%, 95% CI 35.1%-39.3%) less frequently than Nebraska overall (46.5%, 95% CI 46.0%-47.1%). Females (40.6%, 95% CI 37.7%-43.6%) had a flu vaccination in the past year more frequently than males (33.5%, 95% CI 30.5%-36.6%). Non-Hispanic White respondents (34.4%, 95% CI 32.1%-36.8%) had a flu vaccination in the past year more frequently than minority respondents (25.2%, 95% CI 19.1%-32.4%).

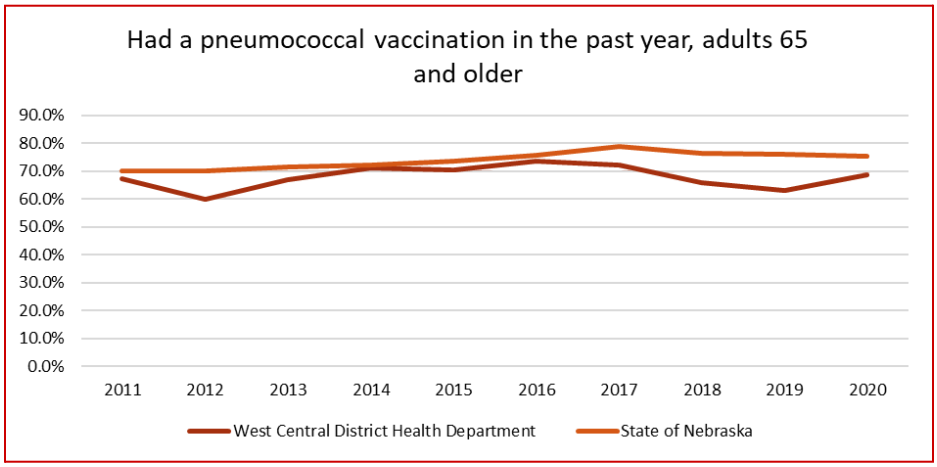


Another important measure of influenza vaccination is the percentage of adults 65 and older who report they had an influenza vaccination in the past year. From 2016-2020, WCDHD respondents 65 and older (57.7%, 95% CI 54.3%-61.0%) had a lower vaccination rate than Nebraska overall (65.1%, 95% CI 64.3%-65.9%). Females (56.1%, 95% CI 51.6%-60.5%) had a lower vaccination rate than males (59.6%, 95% CI 54.3%-64.7%).



Pneumonia

A pneumococcal vaccination is critical for preventing pneumonia in the population 65 years and older. This measure describes the percentage of adults 65 and older who report that they have ever received a pneumonia vaccination. From 2016-2020, WCDHD respondents (68.7%, 95% CI 65.4%-71.8%) reported ever having had a pneumonia vaccination less frequently than Nebraska overall (76.5%, 95% CI 75.8%-77.2%). Females (70.6%, 95% CI 66.5%-74.5%) had a pneumonia vaccination more frequently than males (66.4%, 95% CI 61.1%-71.2%).



COVID-19

The COVID-19 vaccinations have been highly effective at preventing severe disease and death from infection with the SARS-CoV-2 virus. Estimates on the percentage of the population receiving this vaccine are based on data from the Nebraska State Immunization Information System (NESIIS).

COVID-19 vaccinations were initiated among 17,870 residents of the West Central District. Overall, the population is not highly vaccinated against COVID-19. At a population-level, there are 17,870 residents out of 38,124 residents total who have initiated the vaccination. This means that 46.9% of the population has some immune system protection against severe disease due to being vaccinated.

Among those who initiated vaccinations, 16,680 (93.3%) completed the primary series. This means that the overall population has 43.8% who received the protection of the primary series. By race and ethnicity, significant disparities exist here. Among Asian (65.3%) residents, vaccination rates (those who have completed the primary series) are elevated when compared to American Indian or Alaska Native (14.2%), Black (32.7%), Hispanic (37.3%), Native Hawaiian or Pacific Islander (26.3%) and White residents (43.5%).

Among those who completed the primary series, 5,429 (32.5%) received at least 1 booster. At a population level, there are 14.2% of individuals who have received a booster and have that protection.

Chronic Disease

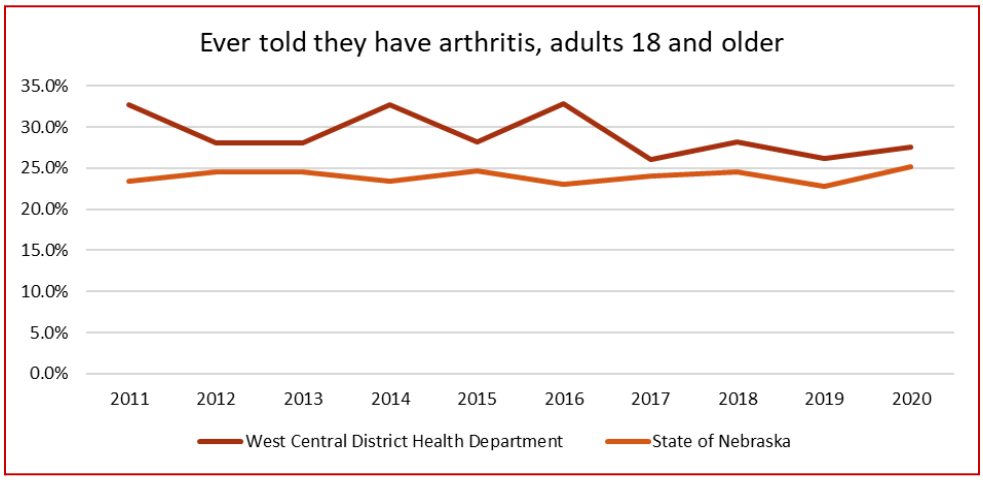
Chronic disease affects a large proportion of the population. This section highlights diagnosed conditions; physical well-being, diet & nutrition; and substance use & abuse metrics information that was drawn from the Behavioral Risk Factor Surveillance System

Diagnosed Conditions

The following health topics are included as chronic disease conditions that are self-reported as diagnosed by a health care professional. This section will show the trend in these metrics.

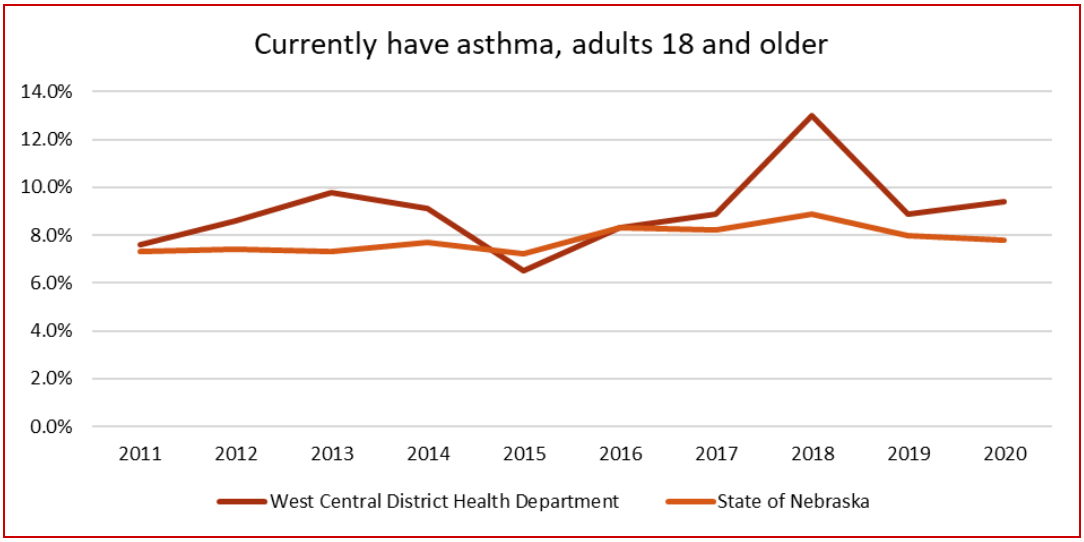
Arthritis

The percentage of arthritis is defined as the percentage of adults 18 and older who report that they have been told by a doctor, nurse, or other health professional that they have some form of arthritis, rheumatoid arthritis, gout, lupus, or fibromyalgia. From 2016-2020, WCDHD residents reported arthritis (28.1%, 95% CI 26.4%-30.0%) more frequently than Nebraska overall (23.9%, 95% CI 23.5%-24.4%). Females reported arthritis (31.6%, 95% CI 29.1%-34.3%) more frequently than males (24.5%, 95% CI 22.1%-27.1%). Non-Hispanic White respondents (24.5%, 95% CI 22.7%-26.3%) reported arthritis more frequently than minority respondents (18.2%, 95% CI 13.5%-24.2%).



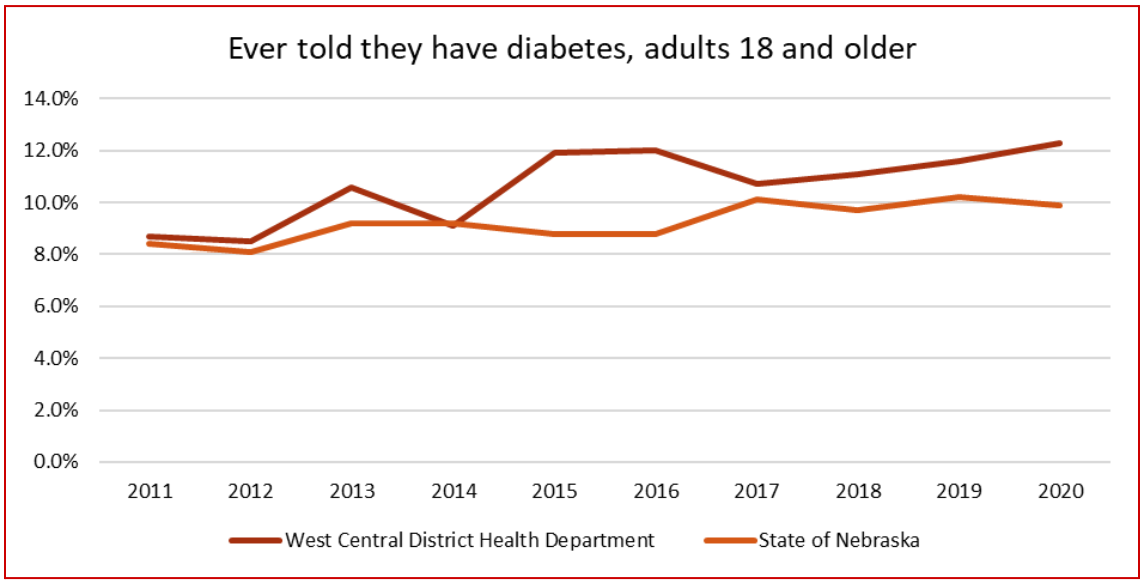
Asthma

The percentage of asthma is defined as the percentage of adults 18 and older who report that they currently have asthma. From 2016-2020, WCDHD residents reported currently having asthma (9.7%, 95% CI 8.4%-11.2%) more frequently than Nebraska overall (8.2%, 95% CI 7.9%-8.5%). Females (11.0%, 95% CI 9.1%-13.4%) reported currently having asthma more often than males (8.3%, 95% CI 6.7%-10.3%). Non-Hispanic White respondents (9.6%, 95% CI 8.2%-11.3%) reported currently having asthma less frequently than minority respondents (15.4%, 95% CI 10.5%-22.0%).



Diabetes

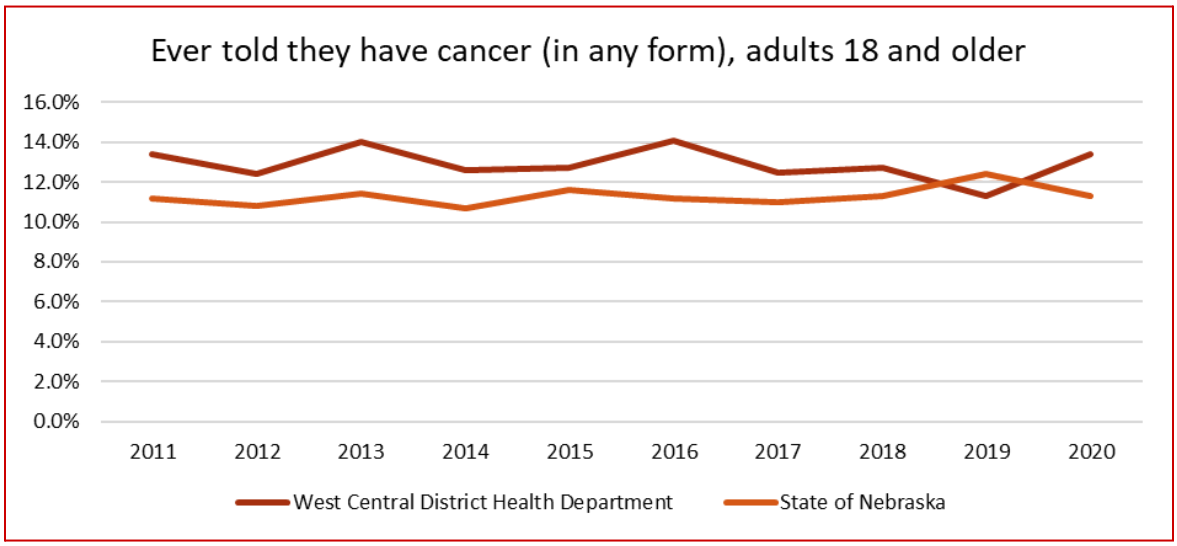
The percentage of diabetes is defined as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have diabetes (excluding pregnancy). From 2016-2020, WCDHD residents reported ever having diabetes (11.5%, 95% CI 10.3%-12.9%) more frequently than Nebraska overall (9.7%, 95% CI 9.5%-10.0%). Females (11.4%, 95% CI 9.8%-13.2%) and males (95% CI 11.7%, 95% CI 10.0%-13.7%) reported similar rates of diabetes. Non-Hispanic White respondents (9.4%, 95% CI 8.2%-10.6%) reported diabetes less frequently than minority respondents (13.1%, 95% CI 9.3%-18.1%).



Cancer (Any)

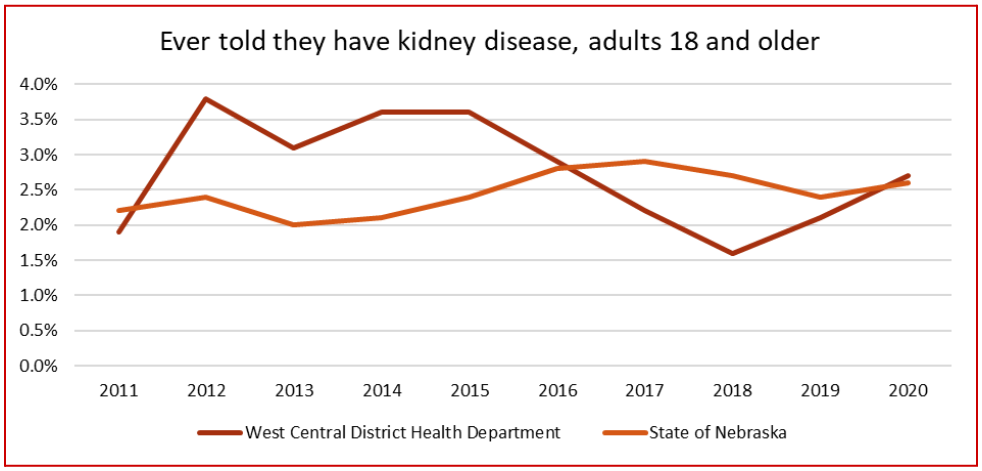
The occurrence of cancer in any form is defined as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health

professional that they have skin cancer or any other type of cancer. From 2016-2020, WCDHD residents reported ever having cancer in any form (12.8%, 95% CI 11.6%-14.1%) more frequently than Nebraska overall (11.5%, 95% CI 11.2%-11.8%). Females reported ever having cancer (13.5%, 95% CI 11.8%-15.4%) more frequently than males (12.1%, 95% CI 10.4%-14.0%). Non-Hispanic White respondents reported ever having cancer (10.3%, 95% CI 9.3%-11.4%) more frequently than minority respondents (9.2%, 95% CI 6.0%-13.9%).



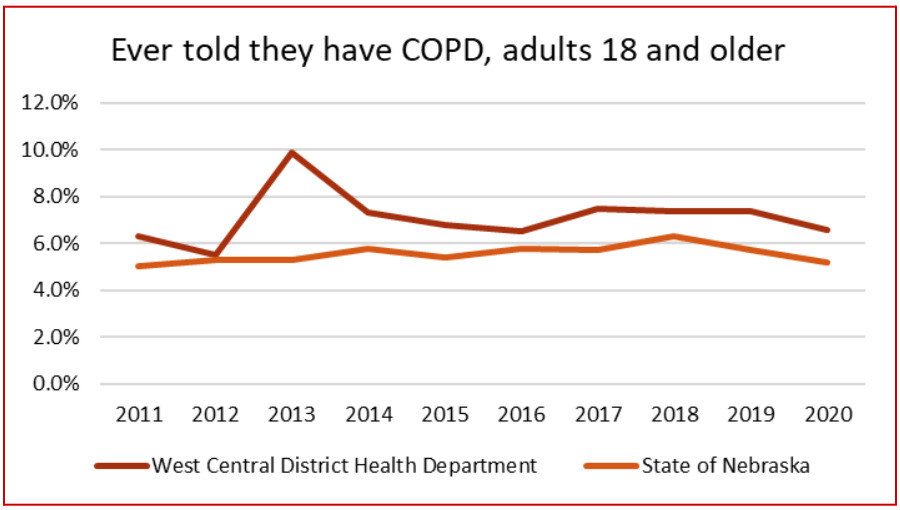
Kidney Disease

The percentage of kidney disease is defined as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have kidney disease (excluding kidney stones, bladder infection, or incontinence). From 2016-2020, WCDHD residents reported kidney disease (2.3%, 95% CI 1.9%-2.9%) less frequently than Nebraska overall (2.7%, 95% CI 2.5%-2.8%). Females (2.8%, 95% CI 2.1%-3.7%) reported kidney disease more frequently than males (1.8%, 95% CI 1.3%-2.6%). Non-Hispanic White respondents (1.8%, 95% CI 1.4%-2.4%) reported kidney disease less frequently than minority respondents (3.4%, 95% CI 1.7%-6.7%).



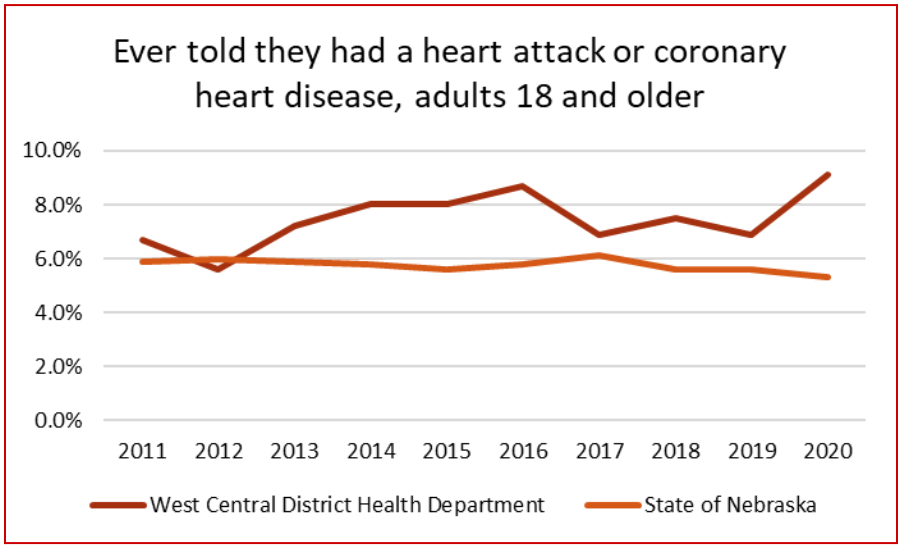
COPD

The percentage of chronic obstructive pulmonary disease (COPD) is defined as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have chronic obstructive pulmonary disease (COPD), emphysema, or chronic bronchitis. From 2016-2020, WCDHD residents reported COPD (7.1%, 95% CI 6.1%-8.1%) more frequently than Nebraska overall (5.7%, 95% CI 5.5%-6.0%). Females (7.6%, 95% CI 6.3%-9.1%) reported COPD more frequently than males (6.5%, 95% CI 5.2%-8.1%). Non-Hispanic White respondents (5.9%, 95% CI 5.0%-6.9%) less frequently than minority respondents (8.6%, 95% CI 5.4%-13.3%).



Heart Disease

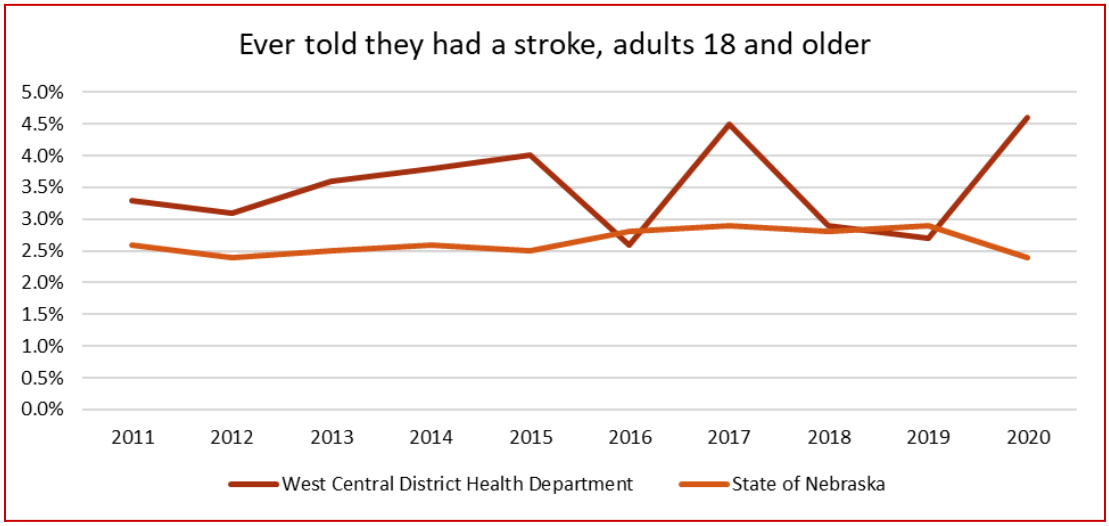
The percentage of heart attack or coronary heart disease reported is defined as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they had a heart attack or myocardial infarction or have angina or coronary heart disease. From 2016-2020, WCDHD residents reported ever having a heart attack or coronary heart disease (7.9%, 95% CI 6.9%-9.0%) more frequently than Nebraska overall (5.7%, 95% CI 5.5%-5.9%). Females reported heart disease (6.1%, 95% CI 4.9%-7.5%) less frequently than males



(9.7%, 95% CI 8.1%-11.5%). Non-Hispanic White respondents (6.2%, 95% CI 5.3%-7.1%) reported heart disease more frequently than minority respondents (4.8%, 95% CI 2.4%-9.1%).

Stroke

The percentage of stroke reported is defined as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they had a stroke. From 2016-2020, WCDHD residents reported ever having a stroke (3.5%, 95% CI 2.8%-4.3%) more frequently than Nebraska overall (2.7%, 95% CI 2.6%-2.9%). Females (3.2%, 95% CI 2.5%-4.2%) reported strokes less frequently than males (3.7%, 95% CI 2.7%-5.1%). Non-Hispanic White respondents (2.6%, 95% CI 2.1%-3.3%) reported strokes less frequently than minority respondents (4.3%, 95% CI 2.3%-8.0%).

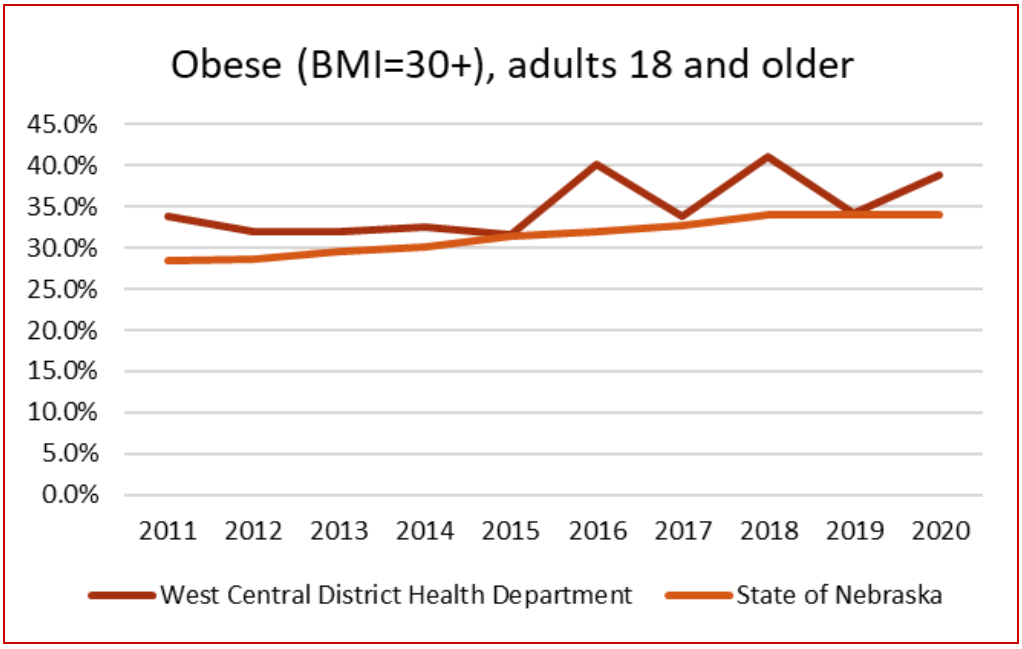


Physical Well-Being, Diet & Nutrition

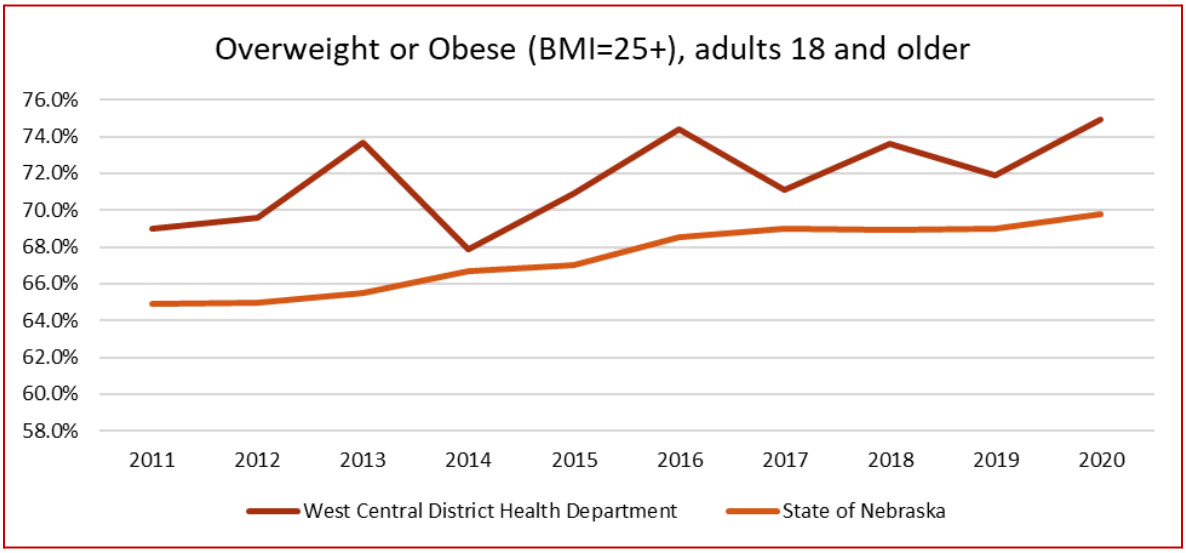
The physical well-being, diet & nutrition of a community is important for preventing some of the chronic diseases mentioned in the previous section. Below is a summary of obesity, physical inactivity, nutrition, high blood pressure or hypertension and high cholesterol.

Obesity

Obesity is measured as the percentage of adults 18 and older with a body mass index (BMI) of 30.0 or greater, based on self-reported height and weight. From 2016-2020, WCDHD respondents (37.7%, 95% CI 35.6%-39.9%) reported obesity more frequently than Nebraska overall (33.4%, 95% CI 32.9%-33.9%). Females (37.3%, 95% CI 34.4%-40.2%) reported a lower rate of obesity than males (38.1%, 95% CI 35.1%-41.2%). Non-Hispanic White respondents (36.9%, 95% CI 34.5%-39.4%) reported a lower rate of obesity than minority respondents (42.9%, 95% CI 35.1%-51.0%).



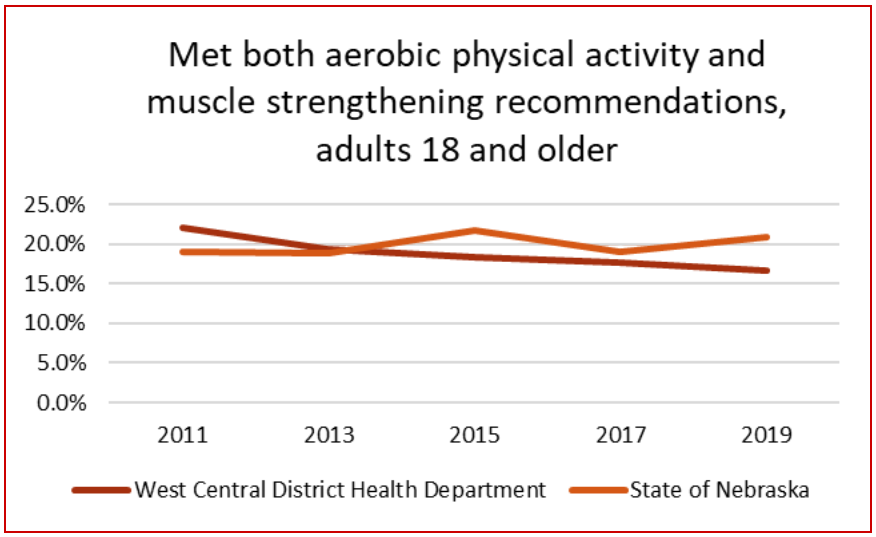
Considering the proportion of the population that is overweight or obese is also important for understanding the physical health of the population. From 2016-2020, WCDHD respondents (73.2%, 95% CI 71.1%-75.1%) reported being overweight or obese, which was higher than Nebraska overall (69.0%, 95% CI 68.5%-69.6%). Females (69.1%, 95% CI 66.1%-71.9%) report lower rates of being overweight or obese than males (77.2%, 95% CI 74.2%-79.9%). Non-Hispanic White respondents (36.9%, 95% CI 34.5%-39.4%) reported lower rates of being overweight or obese than minority respondents (42.9%, 95% CI 35.1%-51.0%).



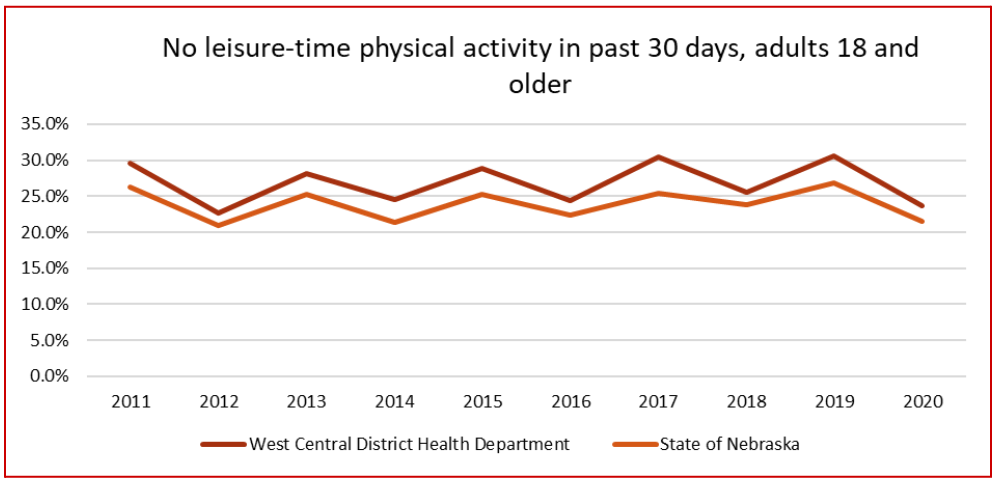
Physical Activity

The physical activity of a community contributes to a healthy weight and overall well-being of the community. Two measures are included in this section regarding physical activity recommendations and leisure-time physical activity in the past 30 days.

One measure of physical activity is the percentage of adults 18 and older who report at least 150 minutes of moderate-intensity physical activity, or at least 75 minutes of vigorous-intensity physical activity, or an equivalent combination of moderate- and vigorous-intensity aerobic activity per week during the past month and that they engaged in physical activities or exercises to strengthen their muscles two or more times per week during the past month. From 2015-2019, WCDHD respondents (17.6%, 95% CI 15.5%-19.9%) reported meeting this recommendation less frequently than Nebraska overall (20.6%, 95% CI 20.0%-21.2%). Females (17.5%, 95% CI 14.7%-20.8%) and males (17.7%, 95% CI 14.7%-21.1%) reported similar proportions meeting this recommendation.



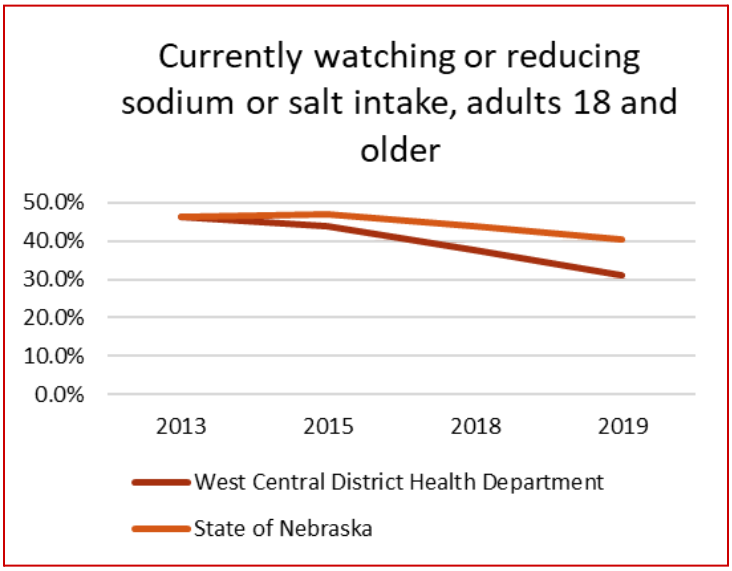
Another measure of physical activity is the percentage of adults 18 and older who report no physical activity or exercise (such as running, calisthenics, golf, gardening, or walking for exercise) other than their regular job during the past month. From 2016-2020, WCDHD respondents (26.8%, 95% CI 24.9%-28.9%) reported no leisure-time physical activity more frequently than Nebraska



overall (24.0%, 95% CI 23.5%-24.4%). Female respondents (27.1%, 95% CI 24.4%-29.9%) reported no leisure-time physical activity more frequently than males (26.6%, 95% CI 23.9%-29.5%). Non-Hispanic White respondents (24.4%, 95% CI 22.3%-26.6%) reported lower rates of leisure time physical activity than minority respondents (35.7%, 95% CI 28.2%-44.0%).

Nutrition

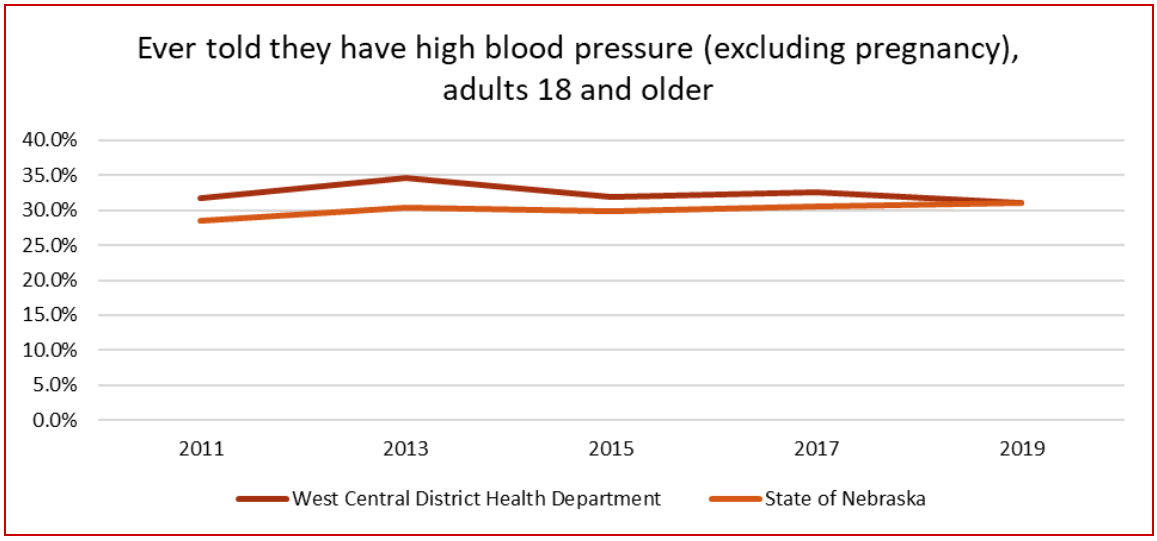
Diet & nutrition data is limited in the community. One measure that is helpful is the percentage of adults 18 and older who report that they are currently watching or reducing their sodium or salt intake. From 2015-2019, WCDHD respondents (37.3%, 95% CI 33.6%-41.2%) reported lower rates of watching or reducing sodium intake than Nebraska overall (43.7%, 95% CI 42.7%-44.7%). Females (38.6%, 95% CI 33.4%-44.0%) reported lower rates than males (36.1%, 95% CI 30.8%-41.7%).



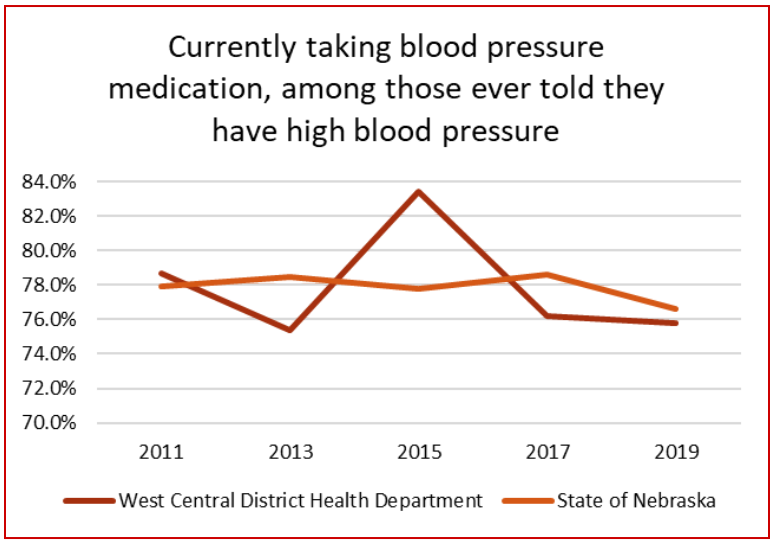
Only one year of data (2013) is available regarding the percentage of adults 18 and older who report drinking regular soda or pop, sugar-sweetened fruit drinks, sweet tea, or sports or energy drinks (excluding 100% fruit juice, diet drinks, or artificially sweetened drinks) an average of one or more times per day during the past 30 days. In that year, WCDHD residents (32.8%, 95% CI 26.2%-40.2%) reported higher rates than Nebraska overall (28.5%, 95% CI 26.8%-30.3%). Females (27.7%, 95% CI 19.4%-38.0%) reported less consumption than males (38.2%, 95% CI 28.5%-48.9%).

High Blood Pressure

The prevalence of high blood pressure, or hypertension, is defined as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have high blood pressure (excluding pregnancy). From 2015-2019, WCDHD respondents reported high blood pressure (31.8%, 95% CI 29.5%-34.3%) more frequently than Nebraska overall (30.5%, 95% CI 29.9%-31.1%). Females (31.2%, 95% CI 28.1%-34.6%) reported high blood pressure less frequently than males (32.4%, 95% CI 29.0%-36.1%). Non-Hispanic White respondents (27.8%, 95% CI 25.3%-30.4%) reported similar hypertension rates as minority respondents (27.7%, 95% CI 20.8%-35.9%).



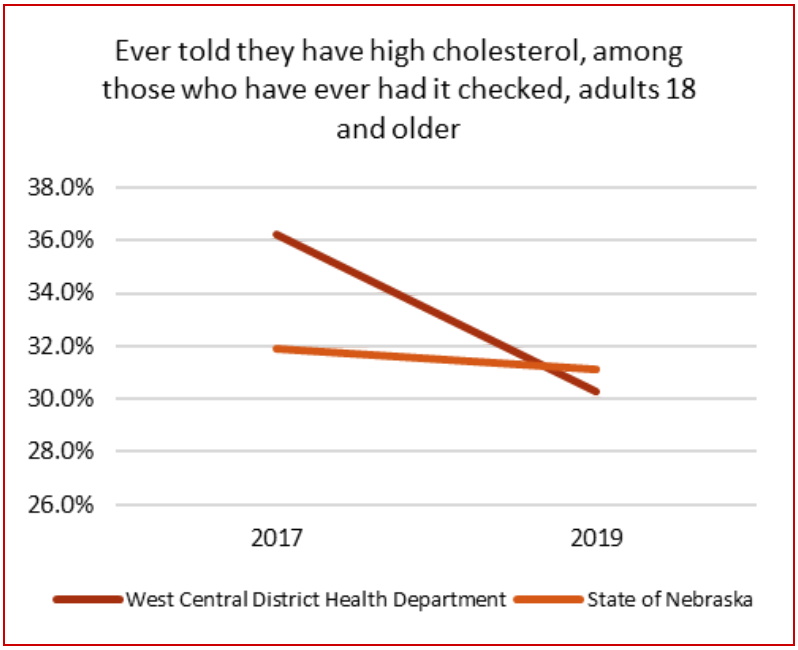
Among those diagnosed with hypertension, adhering to a blood pressure medication is often critical to preventing more severe and acute disease. The indicator of current blood pressure medication is defined as the percentage of adults 18 and older who report that they currently take medication for their high blood pressure and have ever been told by a doctor, nurse, or other health professional that they have high blood pressure. From 2015-2019, WCDHD respondents reported taking blood pressure medication (78.5%, 95% CI 74.3%-82.1%) more frequently than Nebraska overall (77.7%, 95% CI 76.6%-78.7%). Females (80.5%, 95% CI 74.7%-85.2%) reported taking blood pressure medication more frequently than males (76.5%, 95% CI 70.2%-81.8%).

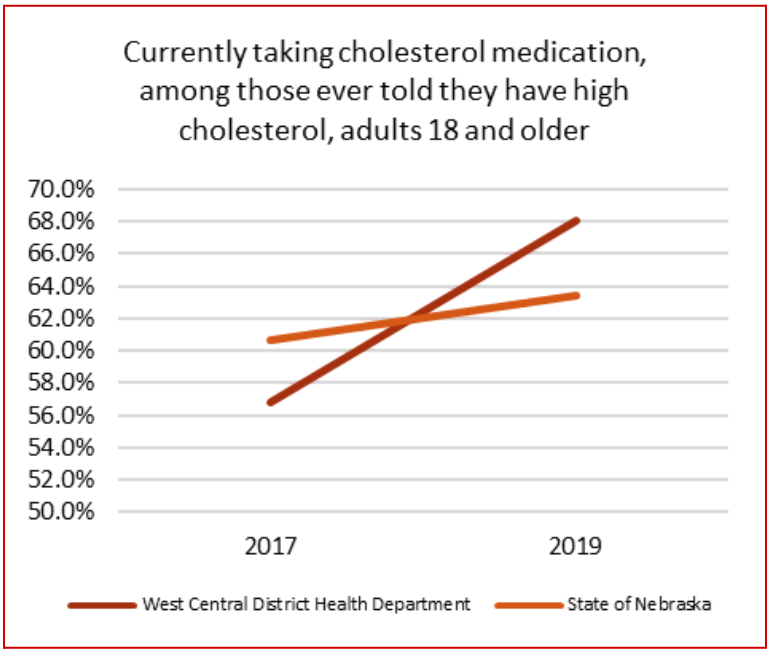


High Cholesterol

The prevalence of high cholesterol is reported as a percentage of adults 18 and older who report that they have ever had their blood cholesterol checked and they were told by a doctor, nurse, or other health professional that their blood cholesterol is high. From 2017-2019, WCDHD respondents reported high cholesterol (33.3%, 95% CI 30.2%-36.5%) more frequently than Nebraska overall (31.5%, 95% CI 30.7%-32.3%).

Females (35.0%, 95% CI 30.7%-39.6%) reported high cholesterol more frequently than males (31.4%, 95% CI 27.1%-36.1%). Non-Hispanic White respondents (26.3%, 95% CI 23.3%-29.5%) reported high cholesterol more frequently than minority respondents (19.7%, 95% CI 12.6%-29.3%).





Among adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that their blood cholesterol is high, the percentage who report that they currently take medication prescribed by a doctor or other health professional for their blood cholesterol is an important measure of treatment for high cholesterol. From 2017-2019, WCDHD respondents reported taking medication for high cholesterol (61.9%, 95% CI 56.3%-67.1%) at similar rates as the rest of Nebraska (62.0%, 95% CI 60.5%-63.5%). Females (53.0%, 95% CI 45.6%-60.3%) reported taking medication for high cholesterol less frequently than males (72.5%, 95% CI 64.5%-79.3%).

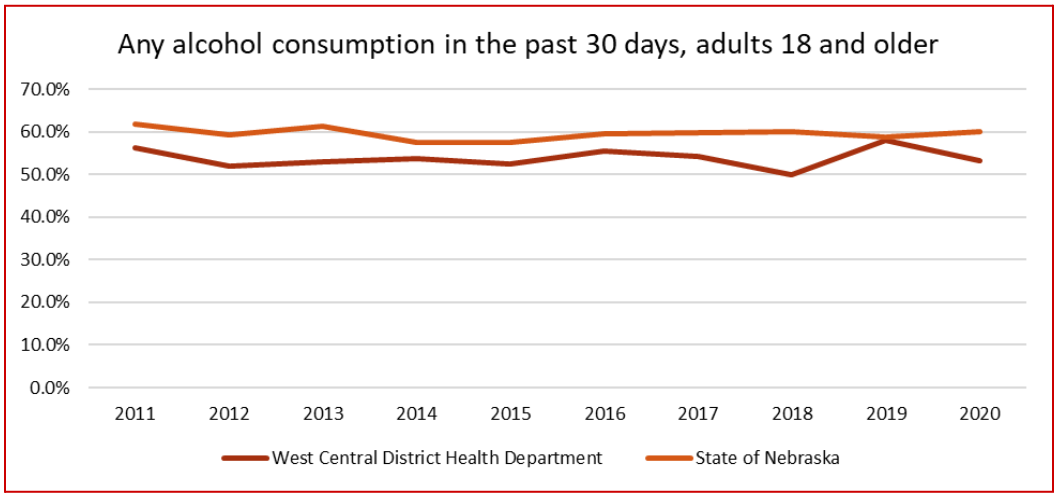
Substance Use & Abuse

The Behavioral Risk Factor Surveillance System provides data on substance use and abuse within the West Central District. Below is a review of alcohol and tobacco use.

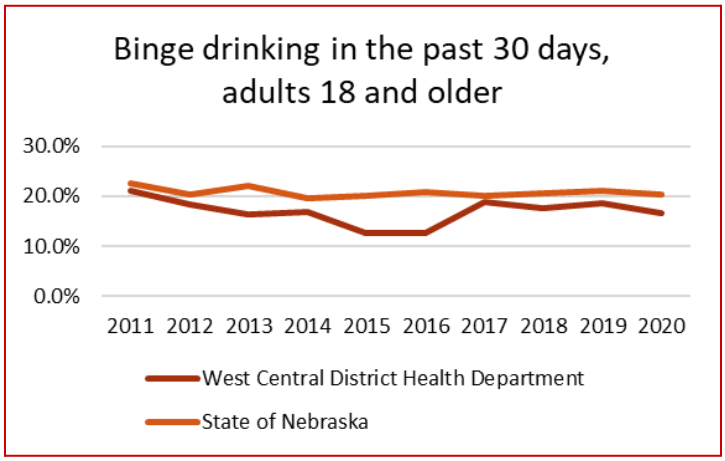
Alcohol

Alcohol use is described using three measures: any alcohol consumption in the past 30 days, binge drinking the past 30 days and impaired driving in the past 30 days.

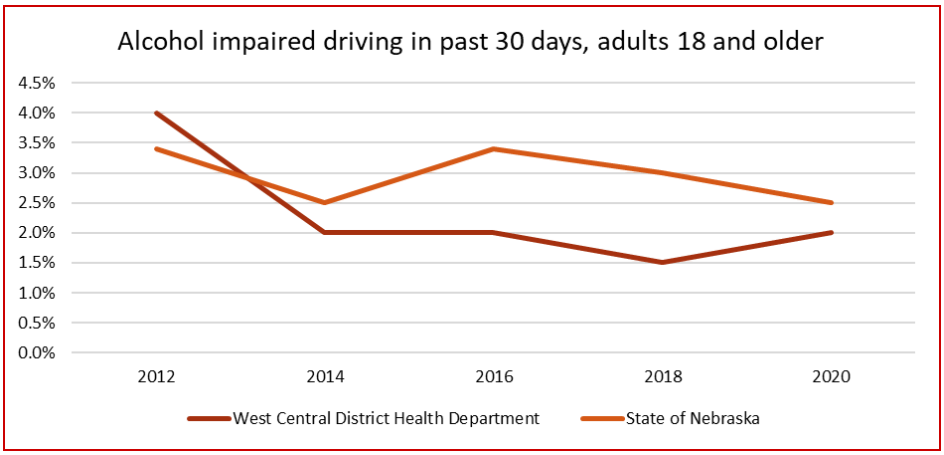
Any alcohol consumption in the past 30 days is defined as the percentage of adults 18 and older who report having at least one alcohol beverage during the past 30 days. From 2016-2020, 54.2% (52.0%-56.4%) of WCDHD residents had at least one alcohol beverage during the past 30 days, which was significantly lower than Nebraska overall at 59.6% (59.1%-60.2%). Females (47.4%, 95% CI 44.4%-50.5%) were less likely than males to consume alcohol (61.3%, 95% CI 58.0%-64.5%). The non-Hispanic White population more commonly reported alcohol consumption (57.8%, 95% CI 55.3%-60.4%) than the minority population (45.2%, 95% CI 37.7%-52.9%).



Binge drinking in the past 30 days is defined as the percentage of adults 18 and older who report having 5 or more alcohol drinks for men or 4 or more alcoholic drinks for women on at least one occasion in the past 30 days. From 2016-2020, a lower percentage of WCDC residents reported binge drinking (16.8%, 95% CI 15.2%-18.6%) than Nebraska overall (20.6%, 95% CI 20.2%-21.1%).



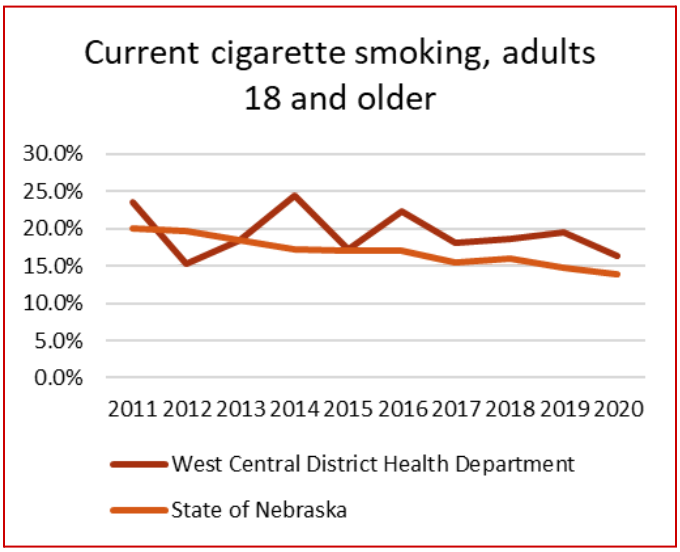
Females (11.1%, 95% CI 9.2%-13.2%) were less likely to binge drink than males (22.9%, 95% CI 20.2%-25.8%). The non-Hispanic White population (19.8%, 95% CI 17.7%-22.0%) more commonly reported binge drinking than the minority population (14.3%, 95% CI 9.9%-20.2%).



Impaired driving in the past 30 days is defined as the percentage of adults 18 and older who report driving after having had perhaps too much to drink during the past 30 days. For the even years from 2016-2020, a lower percentage of WCDHD residents reported impaired driving (1.8%, 95% CI 1.2%-2.8%) than Nebraska overall (2.9%, 95% CI 2.7%-3.2%). Females (0.9%, 95% CI 0.4%-1.8%) less frequently reported impaired driving than males (2.9%, 95% CI 1.7%-4.7%).

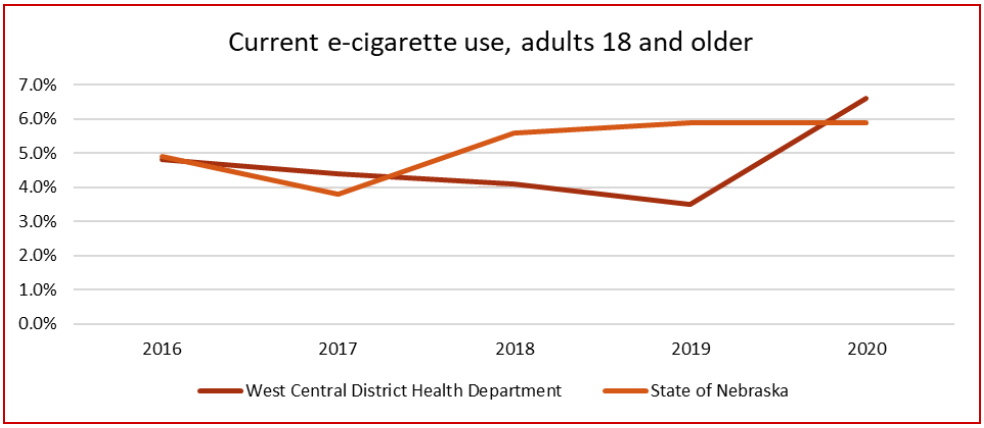
Tobacco

Tobacco as a topic is described using the Behavioral Risk Factor Surveillance System. The two areas described below are current cigarette smoking and current e-cigarette use.



Current cigarette smoking is defined as the percentage of adults 18 and older who report that they currently smoke cigarettes either every day or on some days. For 2016-2020, the percentage of WCDHD residents who currently smoke (19.0%, 95% CI 17.2%-20.9%) is higher than Nebraska overall (15.4%, 95% CI 15.0%-15.8%). Females (18.2%, 95% CI 15.9%-20.8%) reported current smoking rates similar to males (19.8%, 95% CI 17.2%-22.7%). Non-Hispanic White respondents (20.5%, 95% CI 18.4%-22.7%) reported lower rates of current smoking than minority respondents (26.0%, 95% CI 19.2%-34.1%).

Current e-cigarette use is defined as the percentage of adults 18 and older who report that they currently use e-cigarettes or other electronic “vaping” products either every day or on some days. From 2016-2020, WCDHD residents reported current e-cigarette use (4.7%, 95% CI 3.6%-6.0%) at a similar rate as Nebraska (5.2%, 95% CI 5.0%-5.5%).

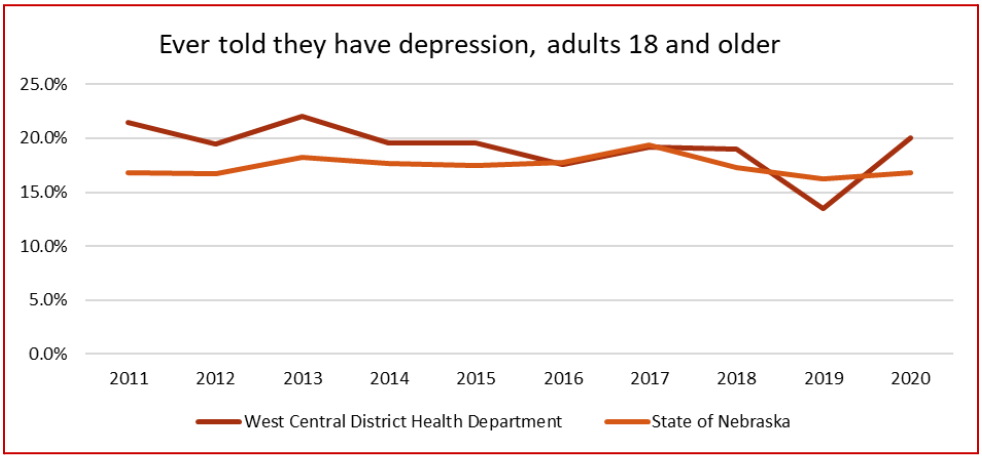


Females (4.4%, 9% CI 3.0%-6.5%) reported e-cigarette use at similar rates as males (4.9%, 95% CI 3.6%-6.8%). Non-Hispanic White respondents (5.1%, 95% CI 4.0%-6.6%) reported e-cigarette use less frequently than minority respondents (7.4%, 95% CI 3.9%-13.5%).

Mental Health

Conditions affecting the mental and behavioral health of WCDHD are poorly understood due to a lack of data. This section highlights a few metrics where data is available.

Depression



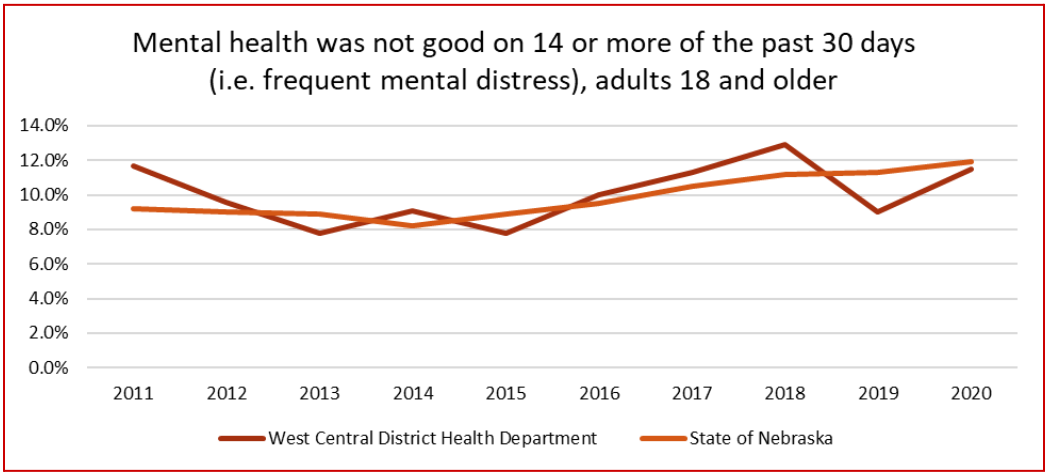
Depression is measured as the percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have a depressive disorder (depression, major depression, dysthymia, or minor depression).

From 2016-2020, WCDHD respondents (17.8%, 95% CI 16.2%-19.6%) and Nebraska (17.5%, 95% CI 17.1%-17.9%) reported similar depression rates. Females (23.6%, 95% CI 21.1%-23.8%) reported depression more frequently than males (11.8%, 95% CI

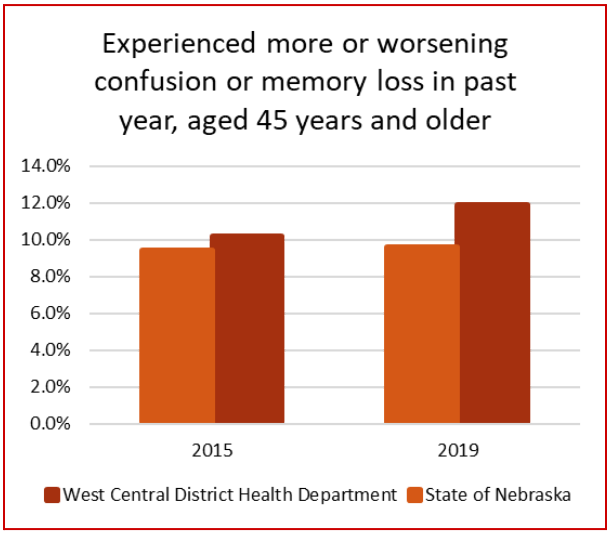
9.9%-14.1%). Non-Hispanic White respondents (19.1%, 95% 17.1%-21.2%) reported more depression than minority respondents (16.4%, 95% CI 11.2%-23.6%).

Frequent Mental Distress

Frequent mental distress is measured as the percentage of adults 18 and older who report that their mental health (including stress, depression, and problems with emotions) was not good on 14 or more of the previous 30 days. For 2016-2020, WCDHD respondents (10.9%, 95% CI 9.6%-12.4%) and Nebraska (10.9%, 95% CI 10.5%-11.3%) reported the same proportion of frequent mental distress. Females (14.3%, 95% CI 12.1%-16.8%) reported higher levels of frequent mental distress than males (7.4%, 95% CI 5.9%-9.3%). Non-Hispanic White respondents (10.9%, 95% CI 9.4%-12.6%) reported lower levels of frequent mental distress than minority respondents (14.2%, 95% CI 9.2%-21.3%).



Cognitive Decline



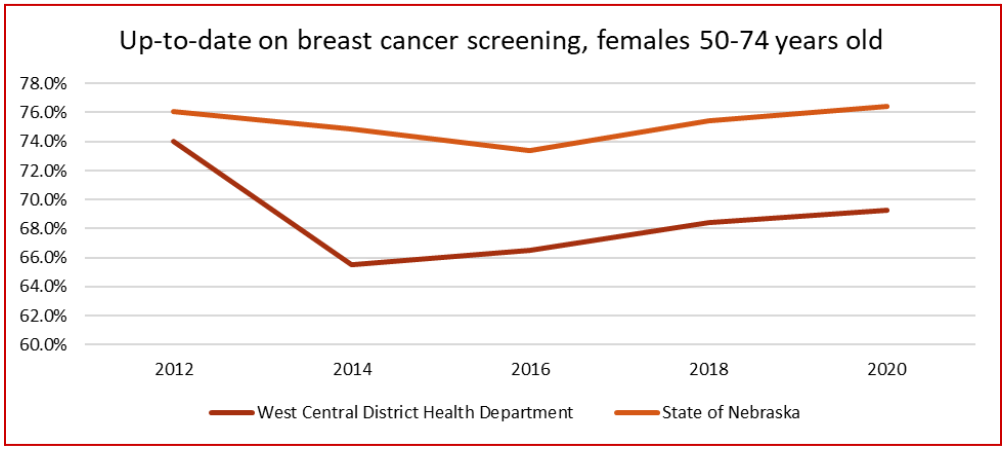
Cognitive decline is measured as the percentage of adults 45 and older who report that they have experienced significant confusion or memory loss (such as forgetting how to do things they always do or forgetting things they would normally do) that is happening more often or is getting worse during the past 12 months. From 2015-2019, WCDHD respondents (11.1%, 95% CI 8.3%-14.7%) reported more cognitive decline than Nebraska (9.5%, 95% CI 8.7%-10.3%). Females (10.6%, 95% CI 7.1%-15.6%) reported less cognitive decline than males (11.7%, 95% CI 7.6%-17.5%).

Cancer Screening

The use of cancer screening is critical for reducing the risk of late-stage cancers that are more difficult to treat and have a poor prognosis. The following measures are screens for breast, cervical and colon cancer.

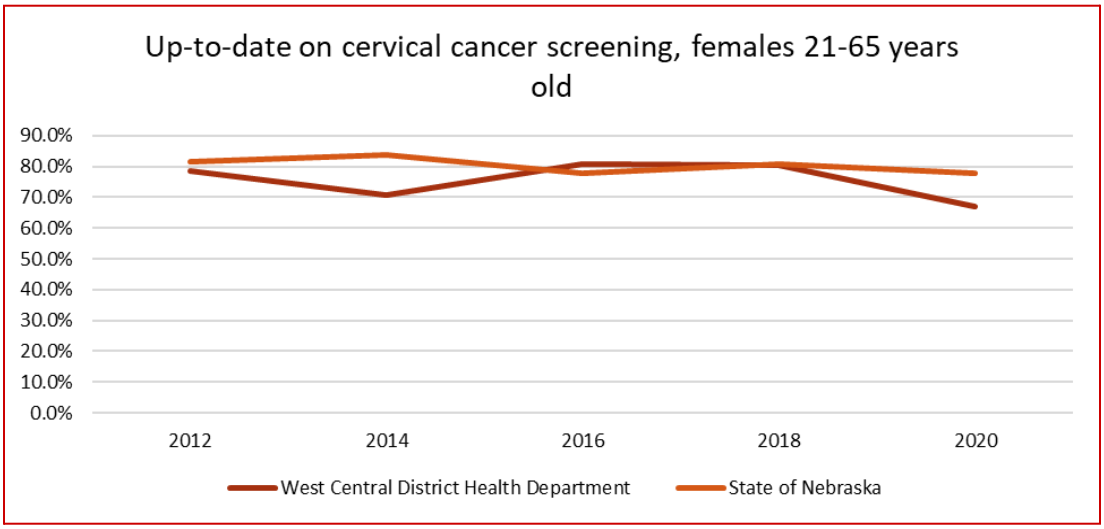
Breast Cancer

Up-to-date breast cancer screening is measured as the percentage of females 50-74 years old who report having a mammogram during the past 2 years. From 2016-2020, WCDHD females 50-74 years old (68.1%, 95% CI 63.3%-72.5%) reported a lower rate of screening than Nebraska overall (75.1%, 95% CI 73.9%-76.2%).



Cervical Cancer

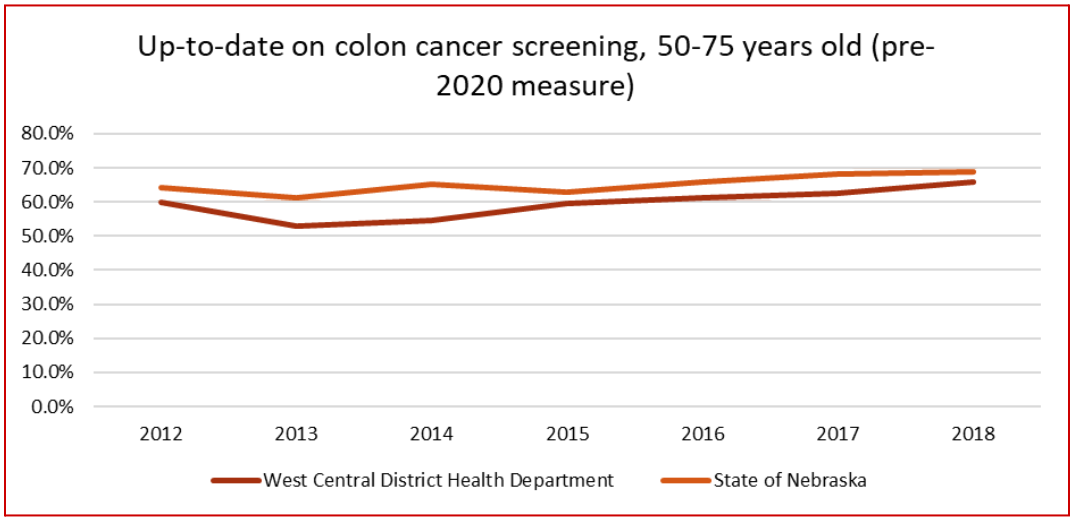
Up-to-date cervical cancer screening is measured as the percentage of females 21-65 years old without a hysterectomy who report having had a Pap test during the past 3 years. From 2016-2020, WCDHD females 21-65 years old without a hysterectomy reported being up to date on their Pap test (76.3%, 95% CI 71.1%-80.7%) less frequently than Nebraska overall (78.8%, 95% CI 77.6%-79.9%).



Colon Cancer

Due to changes in federal recommendations, the definition of up-to-date on colon cancer screening has been revised. The current definition is the percentage of adults 50-75 years old who report having had a blood stool test during the past year, or a stool DNA test during the past 3 years, or a sigmoidoscopy during the past 5 years, or a sigmoidoscopy during the past 10 years and a blood stool test during the past year, or a virtual colonoscopy during the past 5 years, or a colonoscopy during the past 10 years. In 2020, the percentage of WCDHD residents up-to-date on their colon cancer screening was 68.4% (95% CI 61.6%-74.4%), which was lower than Nebraska overall (72.5%, 95% CI 70.9%-74.1%).

Prior to 2020, the definition of up-to-date on colon cancer screening was the percentage of adults 50-75 years old who report having had a fecal occult blood test (FOBT) during the past year, or a sigmoidoscopy during the past 5 years and an FOBT during the past 3 years, or a colonoscopy during the past 10 years. Under this definition, 2014-2018 WCDHD respondents (60.8%, 95% CI 58.0%-63.4%) were less likely than Nebraska overall (66.5%, 95% CI 65.8%-67.2%) to be up-to-date. Non-Hispanic White respondents (61.2%, 95% CI 58.4%-63.9%) were more likely to be up-to-date than minority respondents (50.8%, 95% CI 39.4%-62.1%).



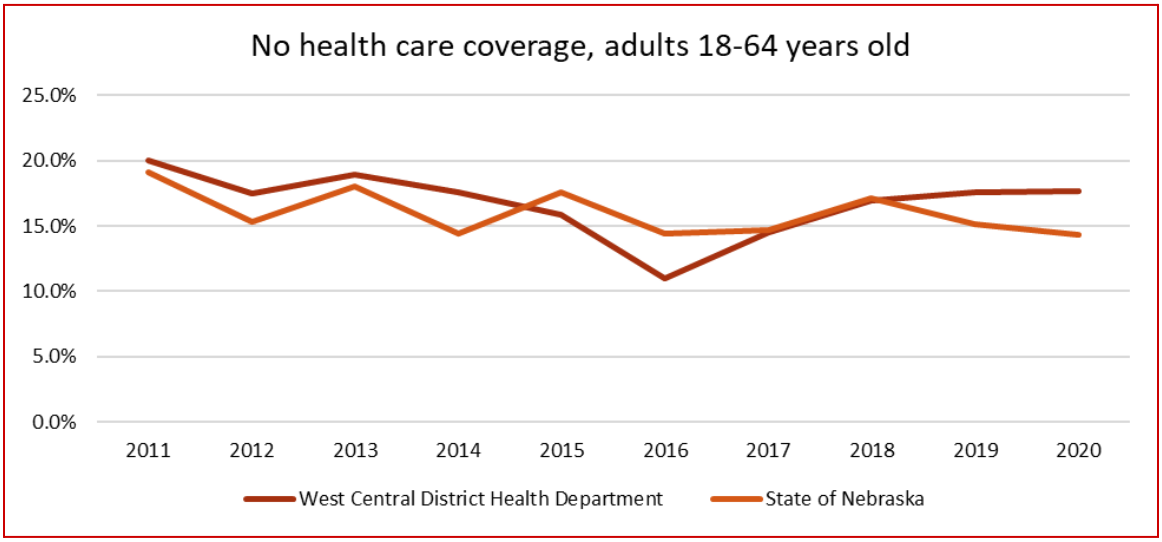
Healthcare Access

Access to health insurance, routine checkups and oral health care are all critical factors in preventing disease in the WCDHD community. These metrics focus on healthcare access.

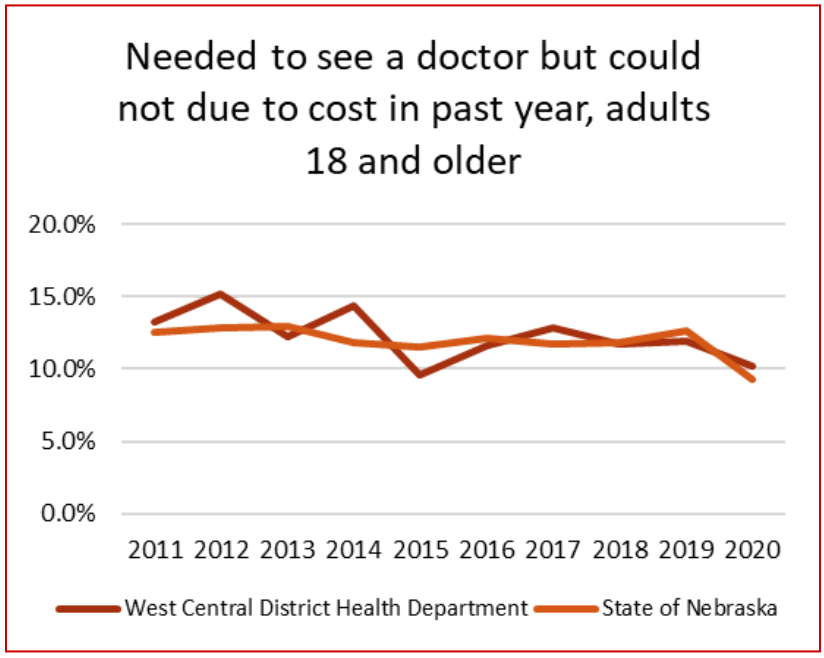
Insurance & Medical Home

The metrics in this section focus on health care coverage and the medical home. The first measure is health care coverage, defined as the percentage of adults 18-64 years old who report that they do not have any kind of health care coverage. From 2016-2020, WCDHD respondents (15.5%, 95% CI 13.6%-17.6%) had higher rates of no health care

coverage than Nebraska overall (15.1%, 95% CI 14.6%-15.6%). Females (15.0%, 95% CI 12.5%-18.0%) report lower rates of no health care coverage than males (15.9%, 95% CI 13.2%-19.0%). Non-Hispanic White respondents (13.6%, 95% CI 11.7%-15.9%) report lower rates of no health care coverage than minority respondents (30.5%, 95% CI 23.2%-39.0%).



Another measure is the percentage of adults 18 and older who report that they needed to see a doctor but could not because of cost during the past 12 months. From 2016-2020, WCDHD respondents (11.6%, 10.1%-13.3%) and Nebraska (11.5%, 95% CI 11.1%-11.9%) reported not seeing a doctor due to cost at similar rates. Females (12.6%, 95% CI 10.5%-15.1%) report not seeing a doctor due to cost more frequently than males (10.6%, 95% CI 8.6%-13.0%).



Non-Hispanic White respondents (12.1%, 95% CI 10.4%-14.0%) report not seeing a doctor due to cost less frequently than minority respondents (18.6%, 95% CI 12.7%-26.4%).

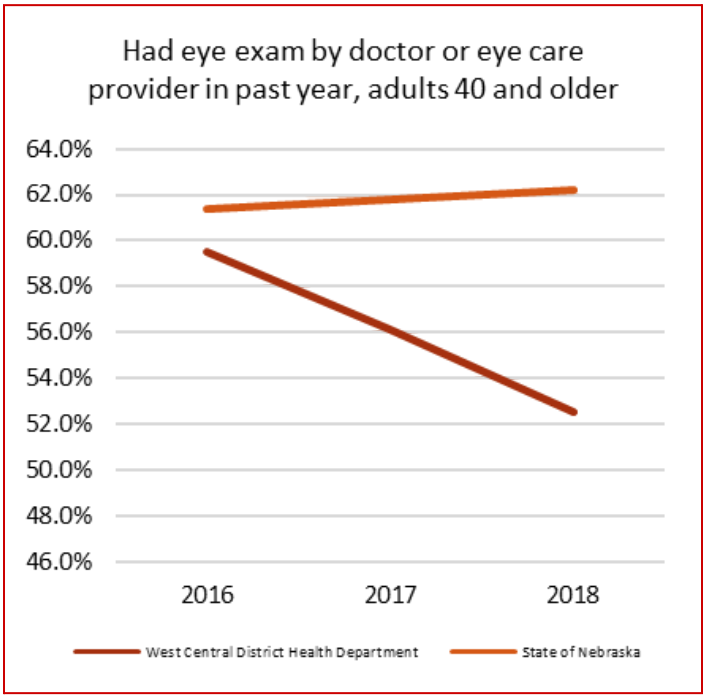
The medical home, measured as the percentage of adults 18 and over who report that they do not have a personal doctor or health care provider, is important to establishing consistent care for the community. From 2016-2020, WCDHD respondents (18.0%, 95% CI 16.2%-20.0%) reported no medical home less frequently than Nebraska overall (20.4%, 95% CI 20.0%-20.9%). Females (13.2%, 95% CI 11.0%-15.7%) are less likely to lack a medical home than males (23.0%, 95% CI 20.3%-26.1%). Non-Hispanic White respondents (18.5%, 95% CI 16.5%-20.8%) are less likely to lack a medical home than minority respondents (33.8%, 95% CI 27.2%-41.2%).

Routine Checkups

The completion of a routine checkup in the past year, measured as the percentage of adults 18 and older who report that they visited a doctor for a routine checkup during the past 12 months, is a critical measure of regular health care. From 2016-2020, WCDHD respondents (67.1%, 95% CI 65.0%-69.1%) reported lower rates of routine checkups in the past year than Nebraska overall (70.1%, 95% CI 69.5%-70.6%). Females (69.8%, 95% CI 66.9%-72.6%) reported lower rates than males (64.3%, 95% CI 61.1%-67.3%). Non-Hispanic White respondents (64.6%, 95% CI 62.1%-67.1%) reported higher rates of routine checkups than minority respondents (60.7%, 95% CI 52.7%-68.2%).

Eye Health

Visual exams are important to detecting an array of diseases. The first metric in eye health care access is the percentage of adults 40 and older who report that they do not have any kind of health insurance coverage for eye care; excludes individuals who are blind.



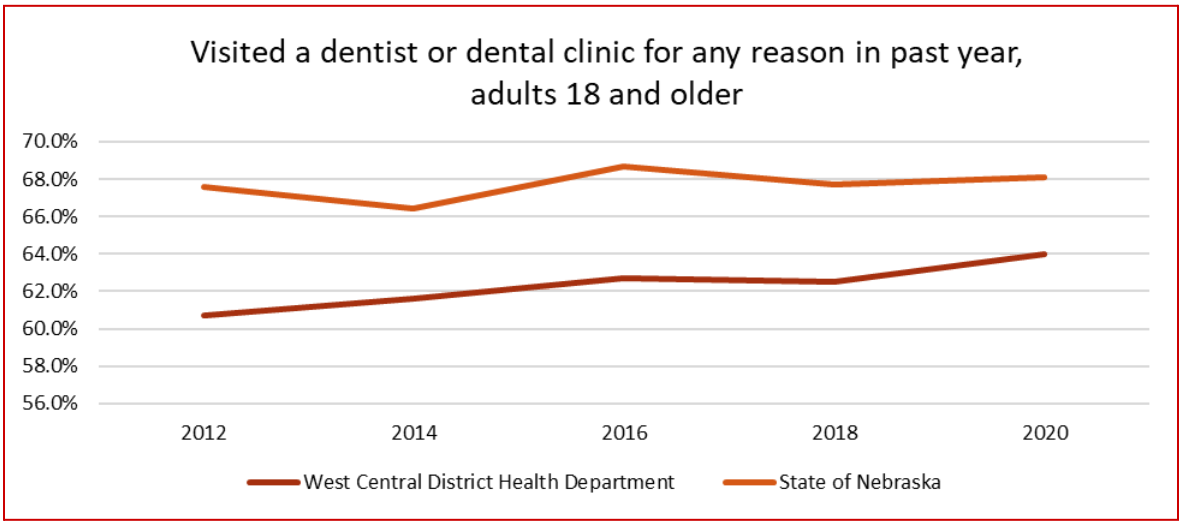
From 2016-2018, WCDHD respondents (48.7%, 95% CI 44.9%-52.5%) reported no health insurance for eye care more frequently than Nebraska overall (43.5%, 95% CI 42.5%-44.5%). Females (49.9%, 95% CI 44.7%-55.1%) reported higher rates of no health insurance coverage for eye care as males (47.5%, 95% CI 42.0%-53.1%). Adults 65 years and higher (67.6%, 95% CI 62.4%-72.4%) report significantly higher rates of no health care coverage for eye care than adults 40-64 years (37.8%, 95% CI 33.1%-42.8%). Non-Hispanic White

respondents (45.2%, 95% CI 41.2%-49.3%) were less likely to report no health coverage for eye care than minority respondents (57.4%, 95% CI 43.0%-70.6%).

The percentage of adults 40 and older who report that they had their eyes examined by any doctor or eye care provider during the past 12 months, excluding individuals who are blind, is important for determining how many people are assessing their vision. From 2016-2018, WCDHD respondents (55.3%, 95% CI 51.5%-59.1%) reported an eye care visit in the past year less frequently than Nebraska (61.9%, 95% CI 60.9%-62.9%). Females (58.1%, 95% CI 52.7%-63.3%) were more likely to report an eye care visit in the past year than males (52.5%, 95% CI 47.0%-58.0%). Non-Hispanic White respondents (54.2%, 95% CI 49.9%-58.5%) were less likely to report an eye exam in the past year than minority respondents (62.5%, 95% CI 46.6%-76.1%).

Oral Health

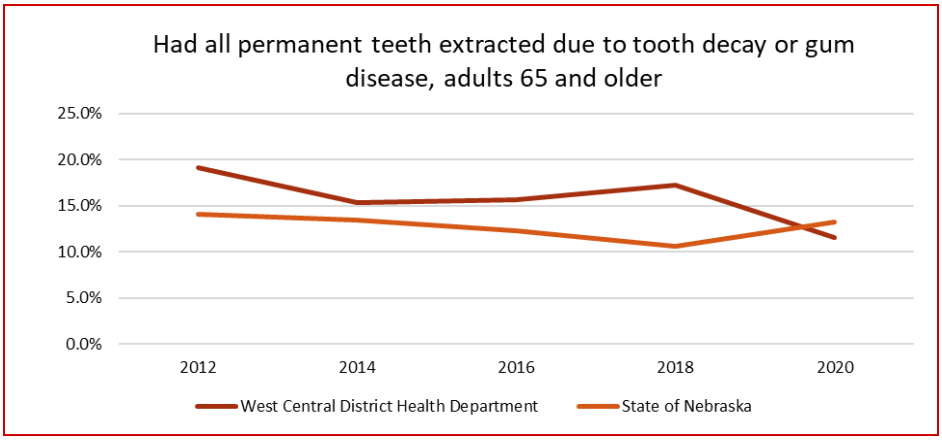
Oral health is described in this section by three measures listed below. The percentage of adults 18 and older who report that they visited a dentist or dental clinic for any reason in the past year is an important measure of accessibility. From 2016-2020, WCDHD respondents (63.1%, 95% CI 60.3%-65.8%) reported a dental care visit less frequently than Nebraska overall (68.2%, 95% CI 67.5%-68.9%).



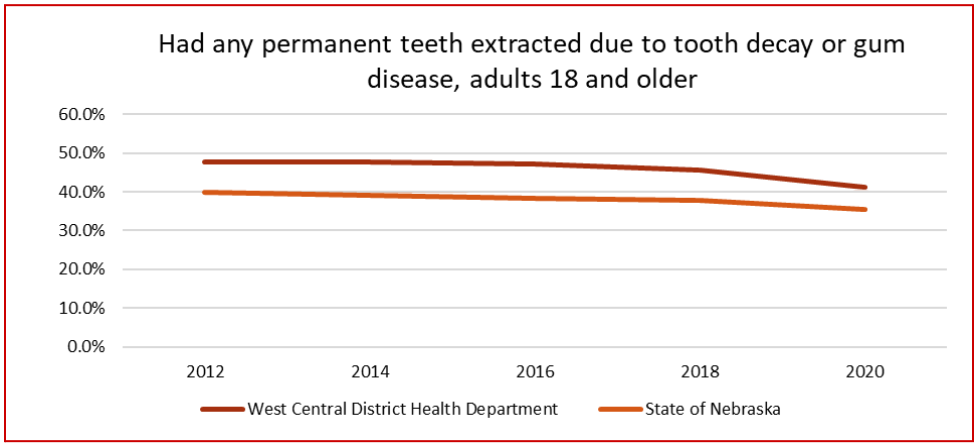
Females (68.2%, 95% CI 64.6%-71.6%) reported a dental care visit more frequently than males (57.8%, 95% CI 53.6%-62.0%). Non-Hispanic White respondents (64.3%, 95% CI 61.1%-67.3%) reported a dental care visit more frequently than minority respondents (49.6%, 95% CI 39.9%-59.4%).

Tooth decay and gum disease resulting in all permanent teeth being extracted is measured as the percentage of adults 65 and older who report that they have had all of their permanent teeth extracted because of tooth decay or gum disease, including teeth lost to infection, but not those lost for other reasons, such as injury or orthodontics.

From 2016-2020, WCDHD respondents (14.7%, 95% CI 11.6%-18.6%) reported all permanent teeth being extracted more frequently than Nebraska overall (12.0%, 95% CI 11.3%-12.7%). Females (17.8%, 95% CI 13.3%-23.5%) reported all permanent teeth being extracted more often than males (10.8%, 95% CI 7.1%-15.9%).



Tooth decay and gum disease in younger adults is also measured as the percentage of adults 18 and older who report that they have had any of their permanent teeth extracted because of tooth decay or gum disease, including teeth lost to infection, but not those lost for other reasons, such as injury or orthodontics.



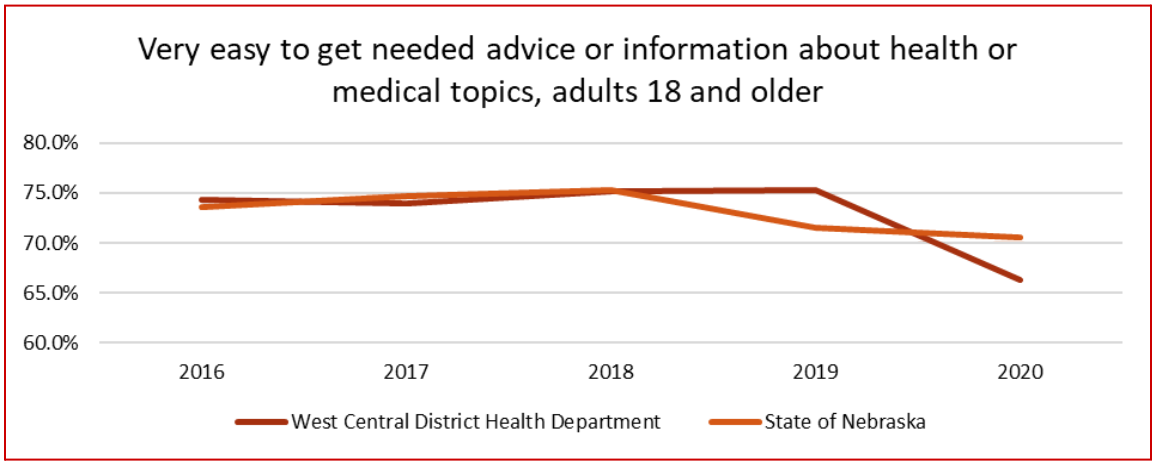
From 2016-2020, WCDHD respondents (44.6%, 95% CI 41.8%-47.4%) report having any of their permanent teeth extracted more frequently than Nebraska overall (37.2%, 95% CI 36.5%-37.8%). Females (44.5%, 95% CI 40.7%-48.4%) and males (44.6%, 95% CI 40.5%-48.8%) reported similar rates. Non-Hispanic White respondents (39.8%, 95% CI 37.0%-42.7%) reported lower rates than minority respondents (47.5%, 95% CI 38.1%-57.1%).

Health Literacy

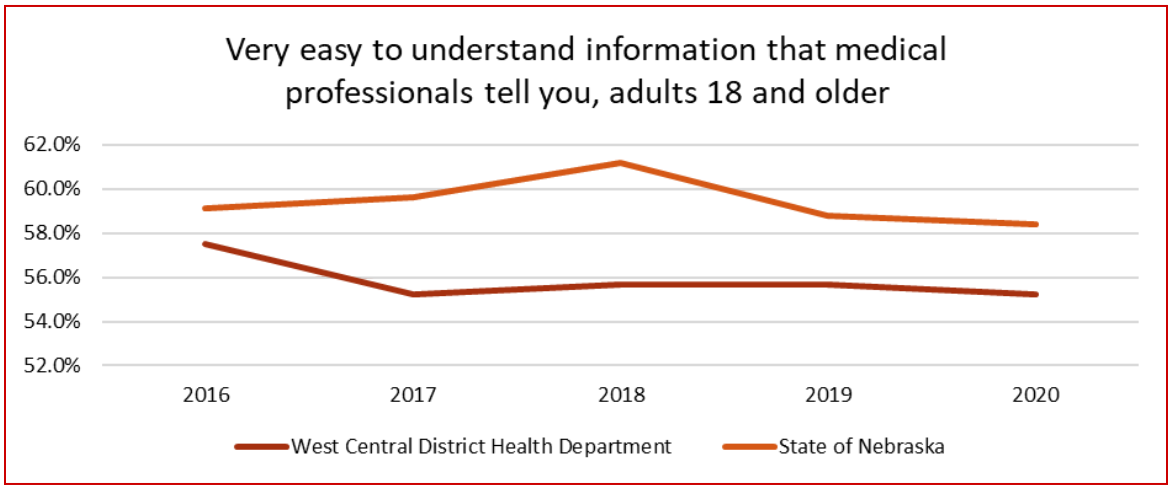
Health literacy is reported using three different metrics below.

One measure is the percentage of adults 18 and older who report that it is very easy for them to get advice or information about health or medical topics if they need it, excluding those who report that they don't look for health information. From 2016-2020, WCDHD respondents (72.9%, 95% CI 70.7%-75.0%) reported similar rates as

Nebraska overall (73.1%, 95% CI 72.6%-73.6%). Females (73.9%, 95% CI 70.8%-76.7%) reported higher rates than males (71.9%, 95% CI 68.6%-75.0%). Non-Hispanic White respondents (73.8%, 95% CI 71.3%-76.2%) reported higher rates than minority respondents (65.2%, 95% CI 55.8%-73.5%).

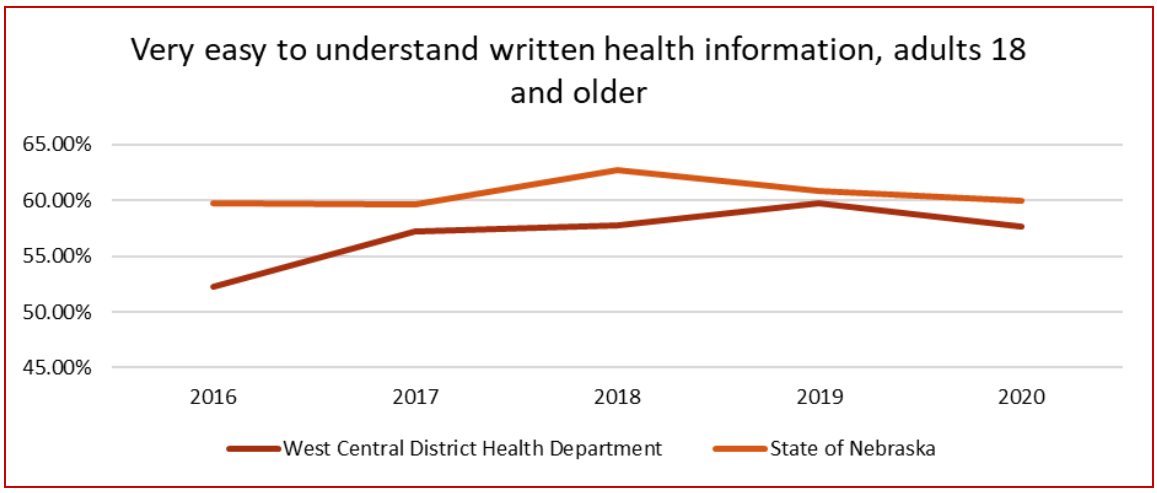


Another measure is the percentage of adults 18 and older who report that it is very easy for them to understand (verbal) information that doctors, nurses, and other health professionals tell them. From 2016-2020, WCDHD respondents (55.9%, 95% CI 53.6%-58.1%) reported lower rates than Nebraska overall (59.4%, 95% CI 58.8%-60.0%). Females (58.6%, 95% CI 55.4%-61.7%) reported higher rates than males (53.0%, 49.6%-56.3%). Non-Hispanic White respondents (56.9%, 95% CI 54.2%-59.6%) report higher rates than minority respondents (50.5%, 95% CI 42.1%-58.9%).



The last measure is the percentage of adults 18 and older who report that it is very easy for them to understand written health information, such as written information about health on the internet, in newspapers and magazines, and in brochures in the doctor's

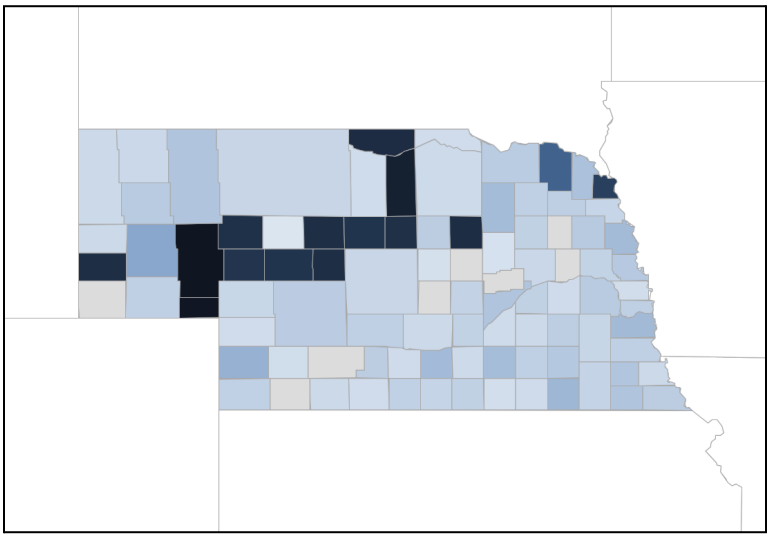
office and clinic, excluding those who report that they don't pay attention to written health information.



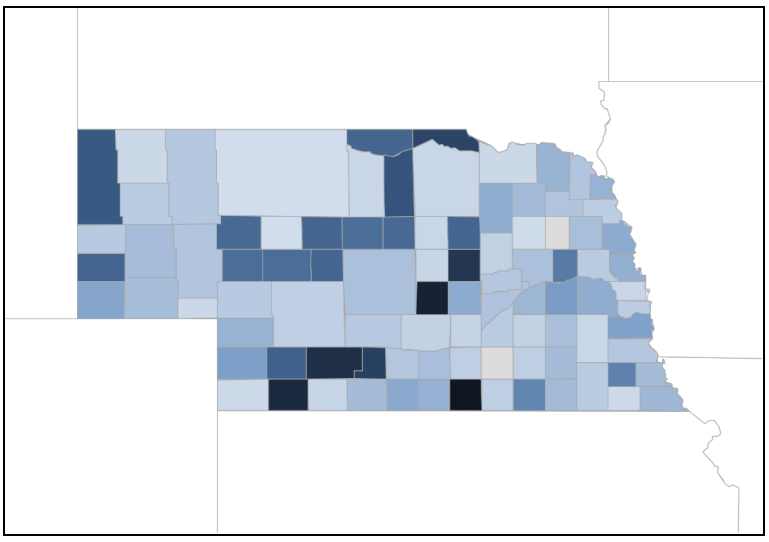
From 2016-2020, WCDHD respondents (56.8%, 95% CI 54.4%-59.2%) report lower rates than Nebraska overall (60.6%, 95% CI 60.0%-61.2%). Females (60.7%, 95% CI 57.4%-63.9%) report higher rates than males (52.5%, 95% CI 48.9%-56.1%). Non-Hispanic White respondents (58.5%, 95% CI 55.7%-61.3%) reported higher rates than minority respondents (54.2%, 95% CI 45.2%-62.9%).

State Designated Shortage Areas

The Health Professional Shortage Area (HPSA) designations include Logan County as a primary care health professional shortage area and Arthur, Lincoln, Logan, McPherson and Thomas counties as mental health care health professional shortage areas. This supplements data from County Health Rankings shown below highlighting the performance of these counties in the ratio of population to care providers.

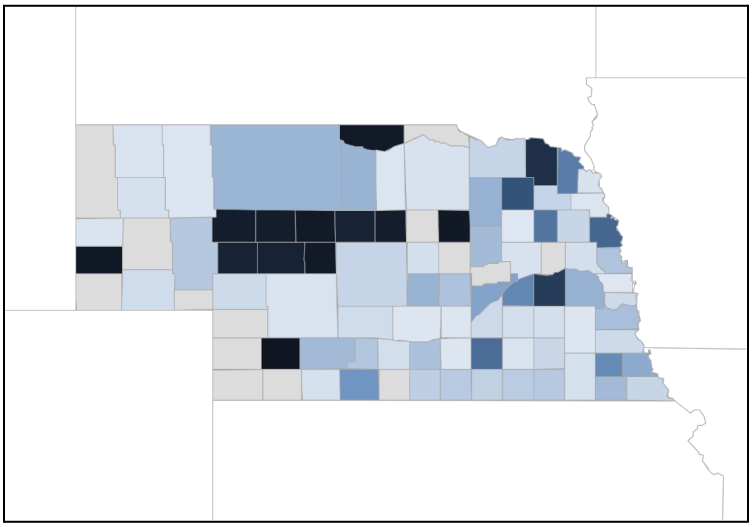


This map (see website here) shows that Arthur (460:0), Logan (750:0), McPherson (490:0) and Thomas (720:0) counties have a high population to primary care physician ratio. This means that fewer doctors are caring for more patients in these communities. For comparison, Lincoln (2050:1) and Hooker (340:1) have ratios that are significantly better, while the statewide ratio is 1310:1.



This map (see website here) shows that those same counties shown to have a high population to primary care physician ratio also have a high population to dentist ratio: Arthur (470:0), Logan (750:0), McPherson (470:0), Thomas (740:0). The ratio in Lincoln (1320:1) and Hooker (650:1) are better than the other counties. The statewide ratio is 1260:1.

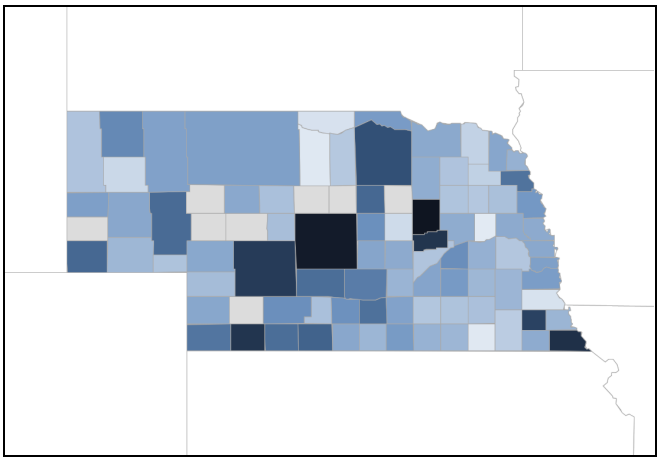
The ratio of population to mental health providers is extremely high in all counties, except for Lincoln County (360:1): Arthur (470:0), Hooker (650:0), Logan (750:0), McPherson (470:0), Thomas (740:0). This can be seen in the map below (click here for website).



All these maps and designations as a Health Professional Shortage Area suggest that obtaining medical, dental or mental health care is quite difficult outside of Lincoln County. Data about Health Professional Shortage Areas can be obtained from https://data.hrsa.gov/tools/shortage-area/hpsa-find.

Hospitalizations

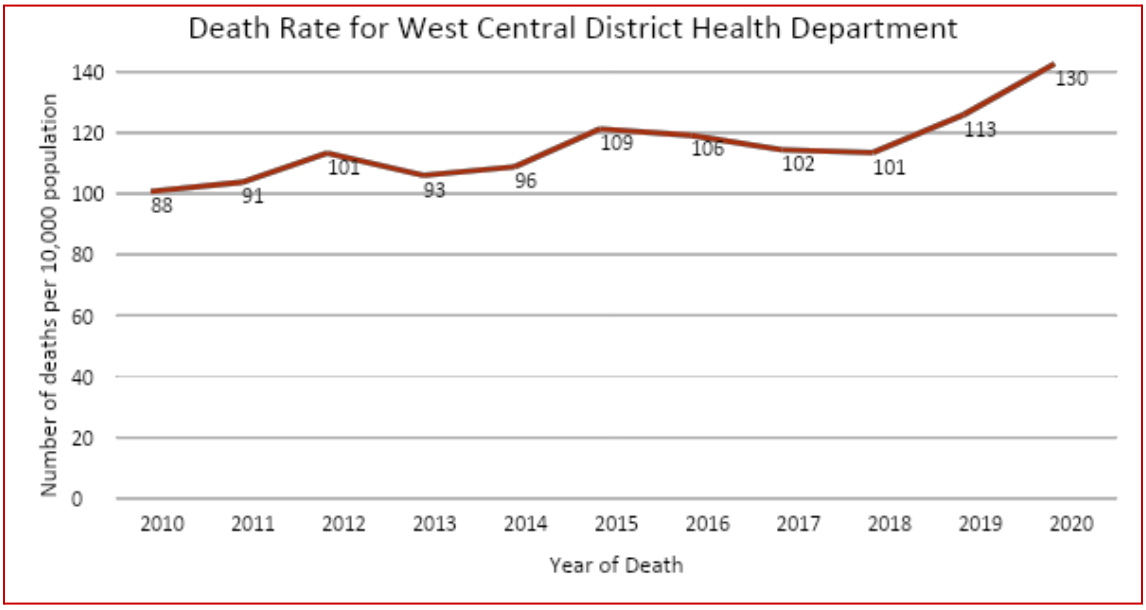
Preventable hospital stays are a metric reported within the County Health Rankings here; however, the data is not available for all the counties within the West Central District, nor is it available for West Central District Health Department overall. The map below highlights some of the data that is available and helps provide perspective into the rate of hospital stays for ambulatory-sensitive conditions per 100,00 Medicare enrollees.



Lincoln County has the highest in the WCDHD at 5378, followed by Hooker (3033), Logan (2390) and Thomas (2331). This metric shows that these conditions, normally treatable in outpatient settings, may not have quality outpatient care easily accessible in this area. This is supported by the previous section showing health professional shortage areas.

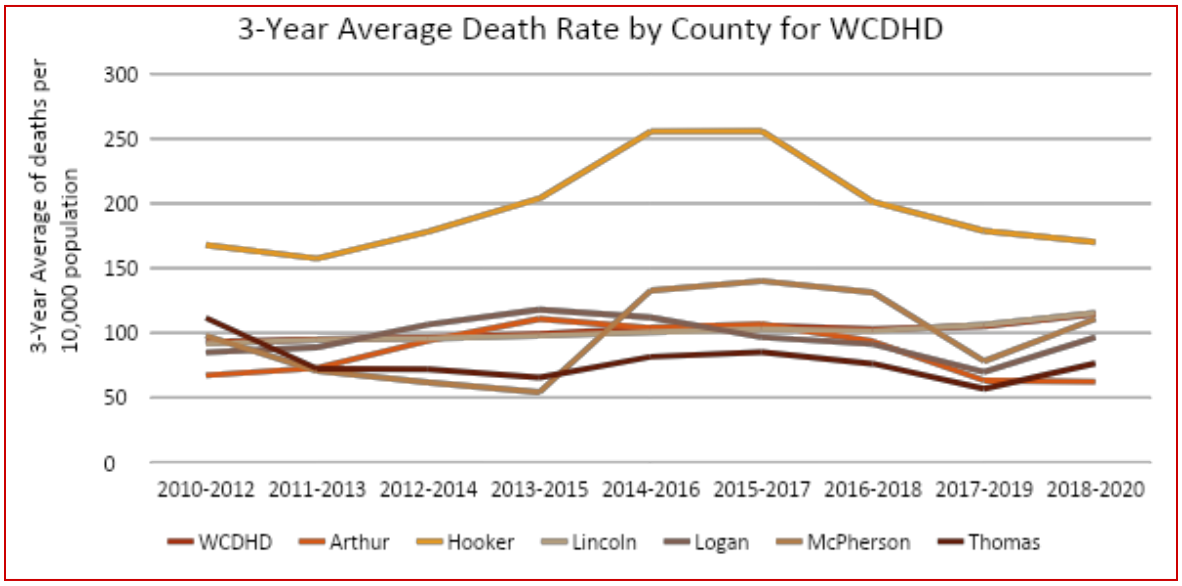
Deaths

In the WCDHD district, the average annual mortality rate is 103 deaths per 10,000 residents between 2010 and 2020. Population estimates are not yet available for 2021, which prevents the death rate from that year being provided. The chart below shows a steady increase in the mortality rate in the WCDHD district, measured as the number of deaths per 10,000 population.

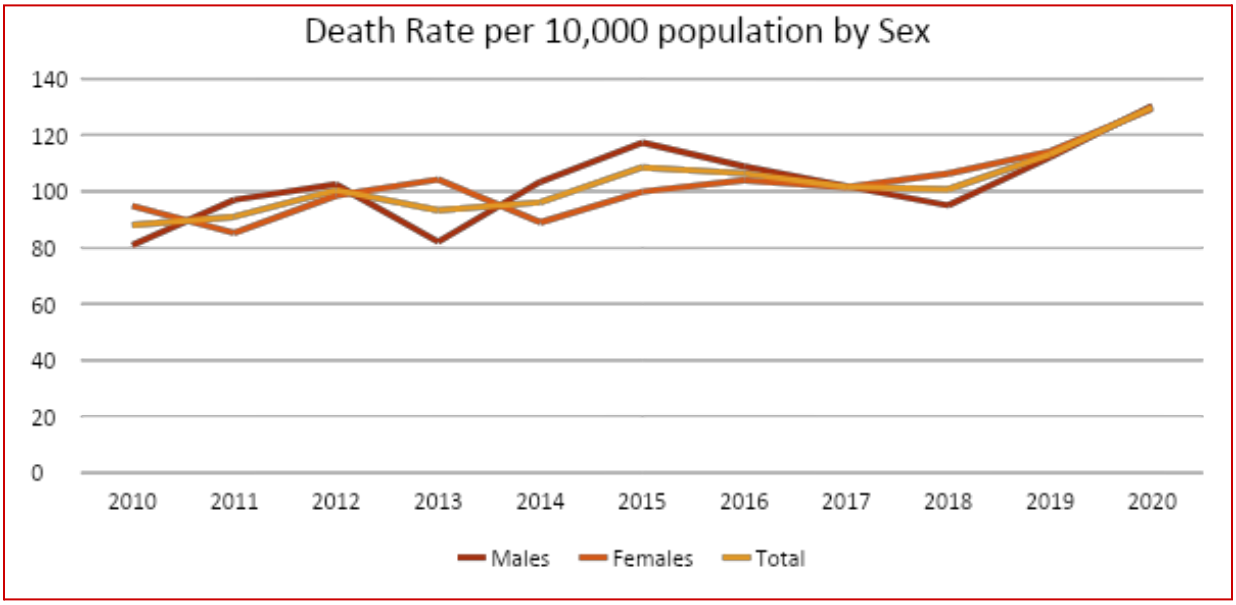


The 3-year average number of deaths per 10,000 population is shown by county below. This chart shows that Hooker County has a consistently higher crude mortality rate than any other county. It's likely that this variation is because of differences in age distribution and those age groups' risk of death. For example, in 2020 the percent of the population over 65 years in Hooker County was 25.4% compared to 19.2% in Lincoln County.

Other counties have aging populations as well however, yet don't have as high of a crude 3-year average death rate.

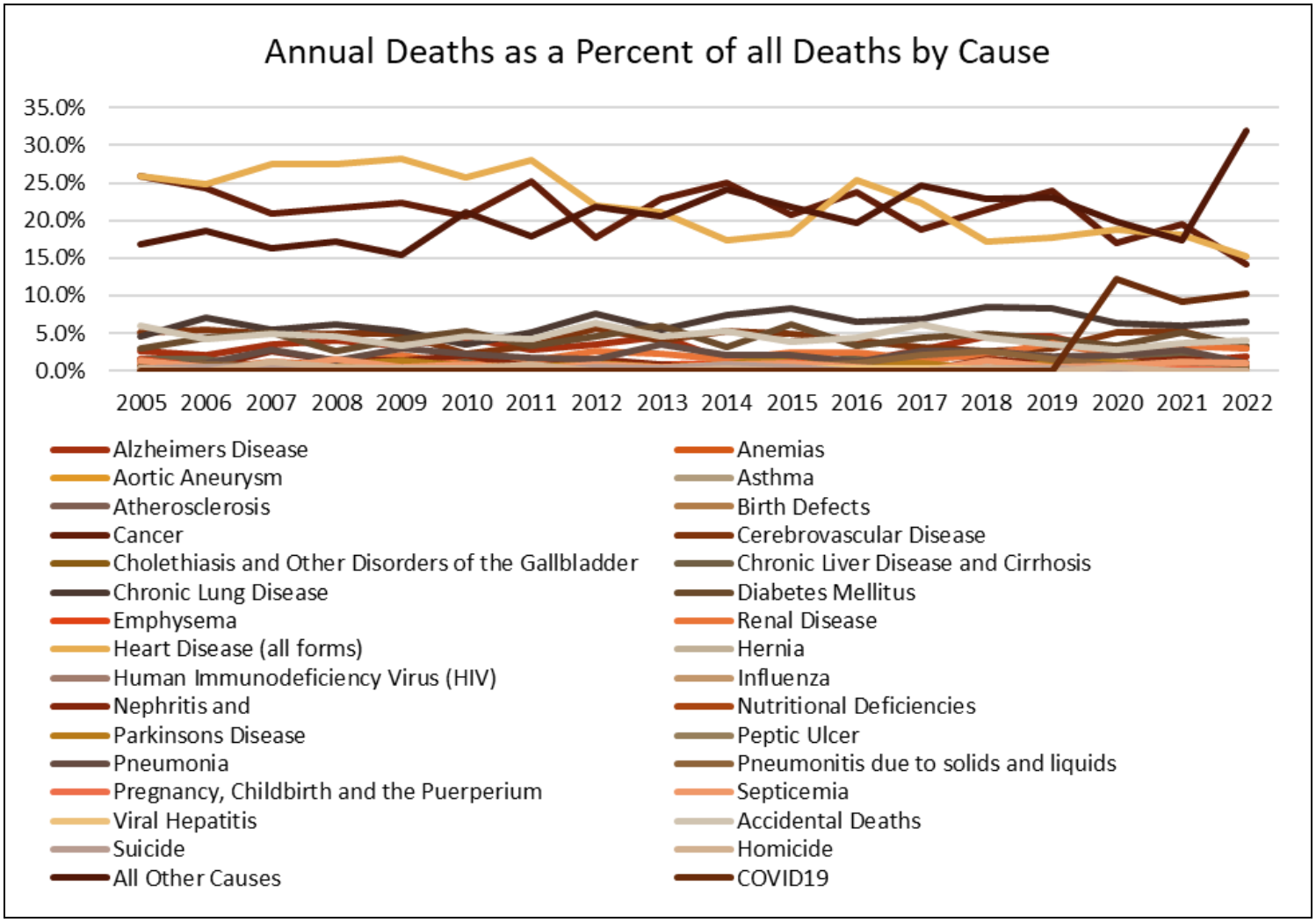


Deaths by gender have also been increasing since 2010. The death rate from 2010-2014 was a low of 88 deaths per 10,000 population in 2010 to a high of 100 deaths per 10,000 population, while the death rate from 2015-2020 had a low of 101 deaths per 10,000 population in 2018 and a high of 130 deaths per 10,000 population in 2020. The death rate between males and females was very similar.



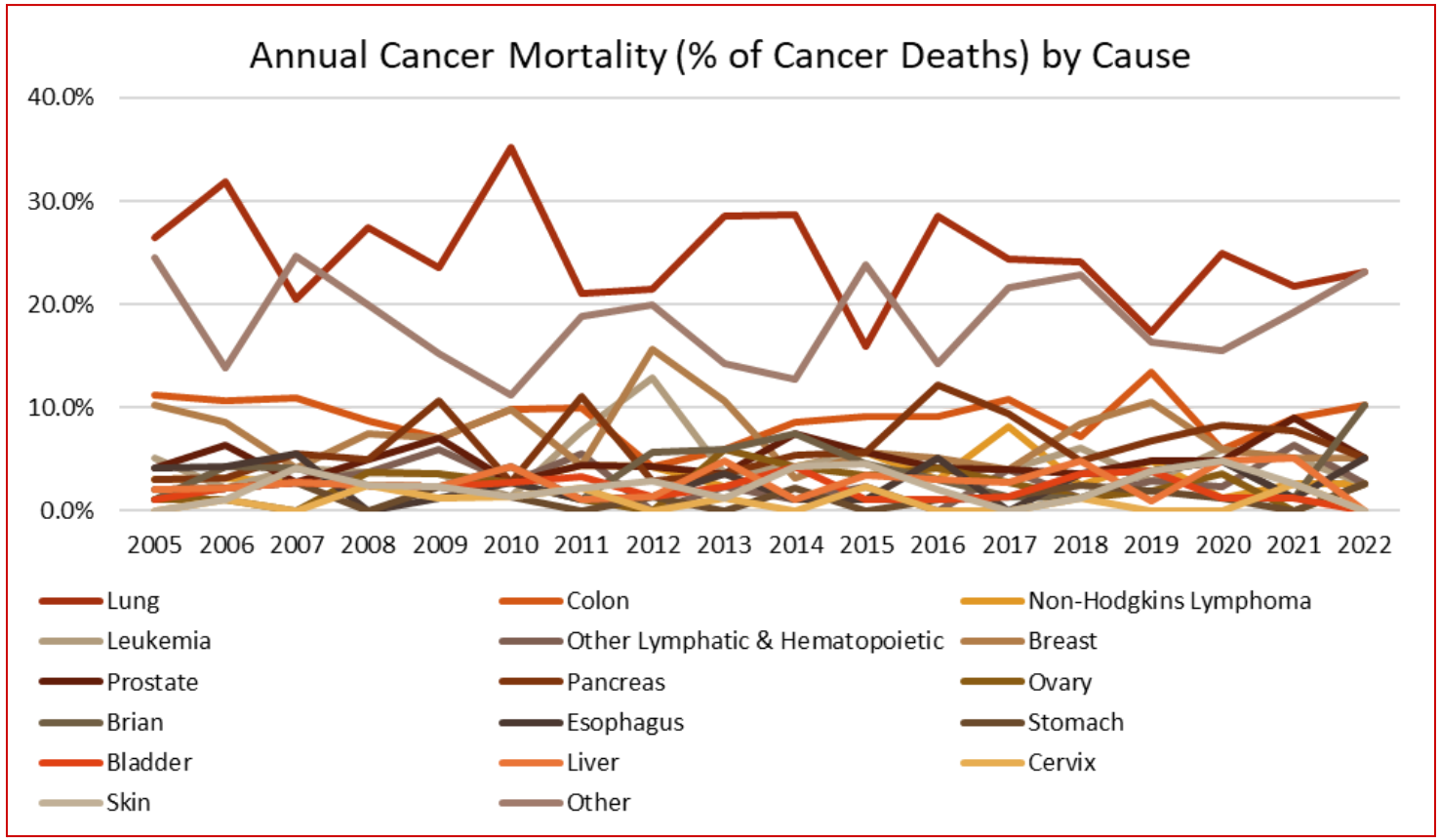
Leading Causes of Death

The leading causes of death in the West Central District for 2021 were cancer (19.5%), heart disease (18.0%) and COVID-19 (9.3%). A large percentage of deaths are due to occurrences not listed in the chart below. In 2021, 17.3% of all deaths were due to causes not listed.

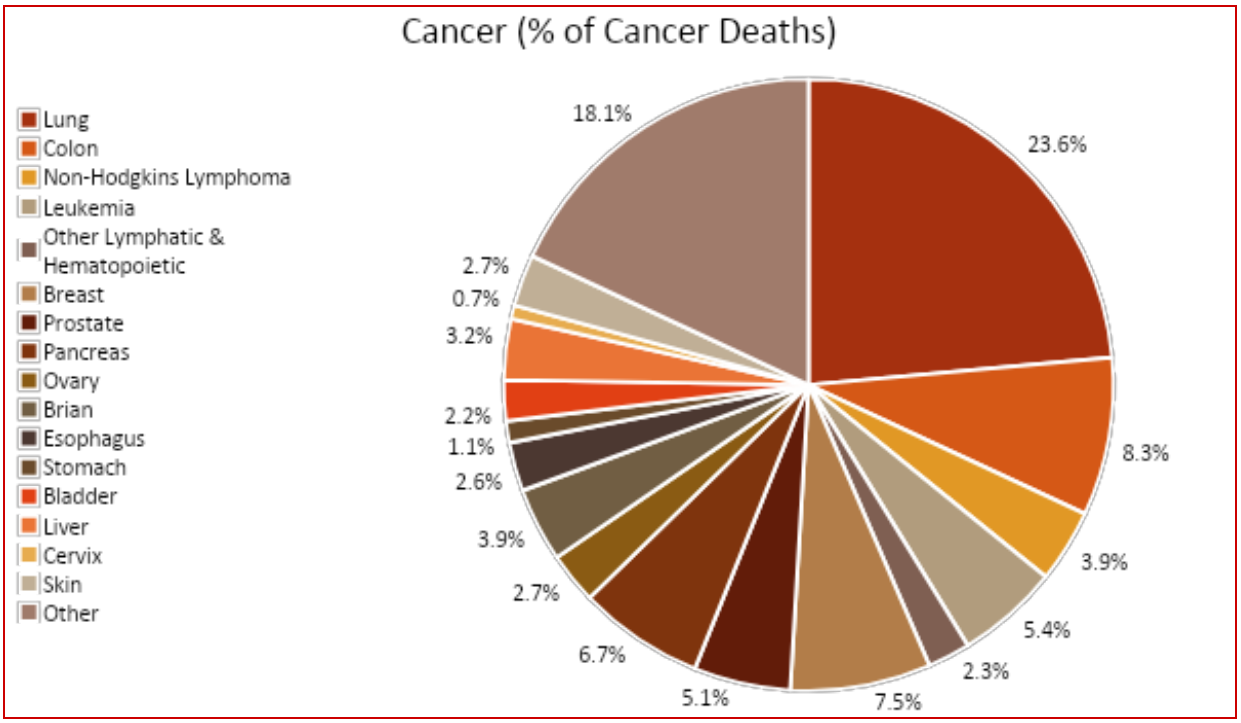


Cancer

The leading cause was consistently lung cancer. The chart below shows the percentage of cancer deaths due to specific causes. Many lung cancer deaths are designated as 'Other' in this group due to not falling into one of the groups included. This represents roughly 15-25% of all cancer deaths annually.



The chart below shows the percentage of all cancer cases from 2012-2021. This indicates that the leading cause of cancer mortality was lung cancer. This was followed by cancers of the colon (8.3%), breast (7.5%), pancreas (6.7%), leukemia (5.4%) and non-Hodgkin's Lymphoma (3.9%).



Heart Disease

Heart disease was the 2nd leading cause of death at 18.0% of all deaths in 2021 and 17.5% of all deaths from 2019-2022 in the West Central District. From 2010-2020, mortality due to heart disease occurred primarily among those 50-64 years (123/925, 13.3%) and 65+ years (771/925, 83.4%). The remaining 3.3% of deaths occurred among those under 50 years, with the majority of those 3.3% occurring in adults 35-49 years.

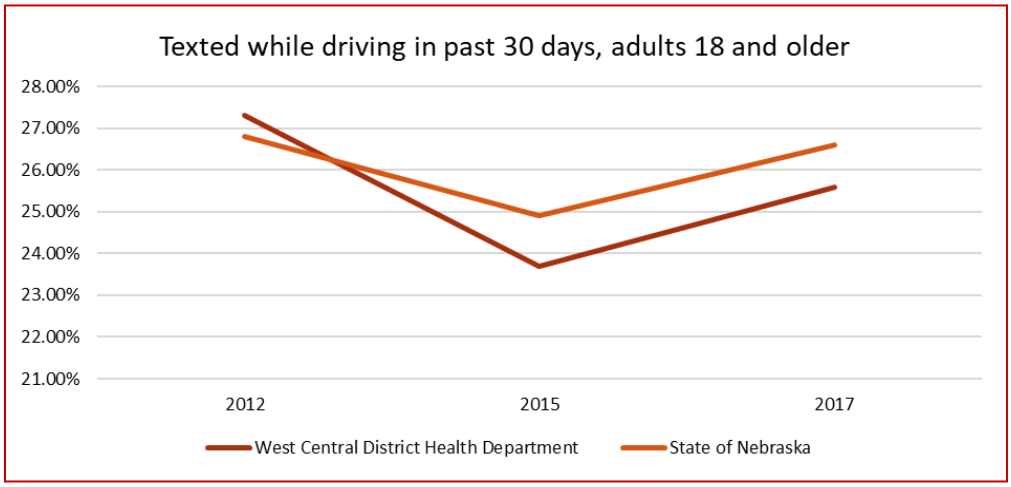
For more information about behaviors, such as diet, exercise, maintaining a healthy weight, blood pressure and cholesterol, please refer to the 'Physical Well-Being, Diet & Nutrition' section linked to by clicking here. This section provides information that is relevant to underlying factors that increase mortality risk due to heart disease.

Accidental/Unintentional Injury

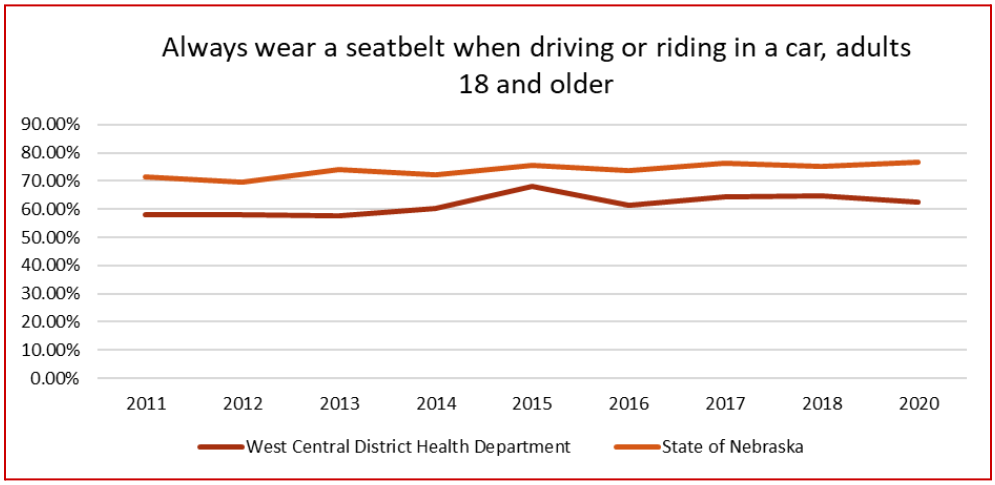
Accidental deaths, or death due to unintentional injuries, was the 4th leading cause of death in the West Central District and accounted for 4.43% of all deaths from 2010-2021. This was tied with diabetes as the 4th leading cause of death. While the annual occurrence of deaths is typically in the single digits for the health district, deaths resulting from an accident accounted for approximately 20% of deaths in those under 18 years and 40% of deaths in those 18-34 years. This is clearly the leading cause of death in people under the age of 35 years in the West Central District.

Injuries occurred during transportation among 43% of accidental deaths. Among injuries involving a vehicle, 68% of these deaths were the driver/operator of a vehicle, while 24% were passengers. Approximately 8% of deaths involving a vehicle were

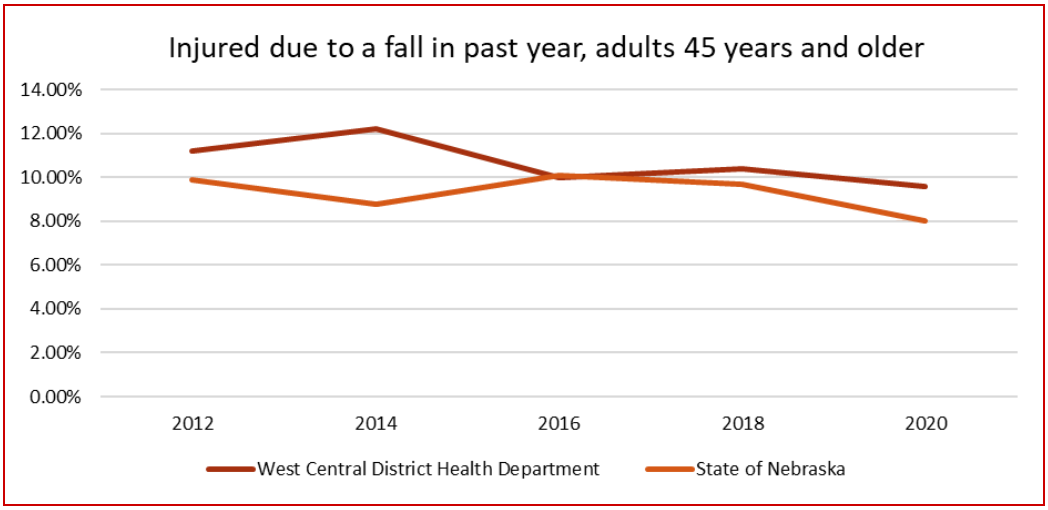
pedestrians. One of the risk factors for a motor vehicle collision is distracted driving, such as texting while driving or using their cell phone while operating the vehicle. The chart below shows the percentage of adults 18 years and older who reported texting while driving. This shows a significant percentage of adults engaging in this risky behavior.



Another factor in preventing accidental deaths involving a motor vehicle is wearing a seatbelt. In 2020, the percentage of respondents reporting always wearing a seatbelt was lower in West Central District (62.6%) compared to the State of Nebraska (76.7%). See the chart below for these results since 2011.



Injuries caused by falls are common causes of death, particularly among those in higher age groups. In 2020, 9.6% of West Central District adults 45 years and older reported being injured due to a fall in the past year. This was comparable to Nebraska overall at 8.0%. The chart below shows this comparison since 2012.



Infectious Disease

Infectious disease was not a leading cause of death until the COVID-19 pandemic. COVID19 deaths first began in 2020. In 2020 & 2021, COVID19 was the 3rd leading cause of death behind only cancer and heart disease. Heart disease (18.5%) and cancer (18.1%) accounted for more deaths, with COVID19 accounting for 10.9% of all deaths in West Central District in 2020 and 2021.

COVID-19 has disproportionately impacted many groups. Since the beginning of 2020, 125 individuals have died because of COVID-19. Approximately 60% of deaths occurred among males and 88% of deaths occurred among individuals 65+ years and 10% occurred among individuals 50-64 years. Nursing homes and long-term care facilities were disproportionately impacted as well, with 28% of deaths occurring in a nursing home or long-term care facility.

While the COVID-19 pandemic situation appears to be improving, there were still 28 deaths in 2022 at the time of this report, compared to 37 in 2021 and 60 in 2020.

COVID-19 Recovery

Many areas have been adversely affected due to the COVID-19 pandemic, directly and indirectly. These include reductions in regular healthcare screenings and routine childhood vaccinations, but also include potential concerns regarding education and mental health. A loss of trust in public health also occurred that will need to be rebuilt.

Cancer screening has been affected by the COVID-19 pandemic, including through screening facilities closing temporarily, while others faced severe staffing shortages. Delayed screening for cancers, such as breast and colon, may lead to cancers being diagnosed at a later stage and a higher likelihood of death due to those cancers.

Fewer routine healthcare visits may also lead to higher rates of undiagnosed high blood pressure and high cholesterol, which likely leads to a higher rate of untreated cardiovascular disease and death.

Fewer routine childhood healthcare visits have led to lower rates of childhood vaccinations. Increasing stigma associated with vaccinations among some communities may also lead to reduced vaccination rates for diseases that previously maintained high levels of vaccination.

Some closures in schools and a reduction in in-person learning, either related to increased risk of transmission or identified outbreaks, may have led to delayed educational attainment, higher levels of food insecurity among youth and higher rates of depression and social isolation among children. The loss of family and friends due to COVID-19 further worsens mental health concerns and trauma associated with the pandemic, among both children and adults.

As the virus becomes endemic, it will be important to complete the annual vaccination series for COVID-19 and other respiratory pathogens to protect those who are most vulnerable.

In general, rebuilding trust in public health will be crucial at a time when divisions occurred related to the COVID-19 pandemic. To begin to catch up with routine healthcare screenings and care, including vaccinations, public health must continue to work to build productive relationships with the community they serve. Providing education, support, and resources to the public to help address the wide array of areas impacted by the COVID-19 pandemic will be critical to recovery.

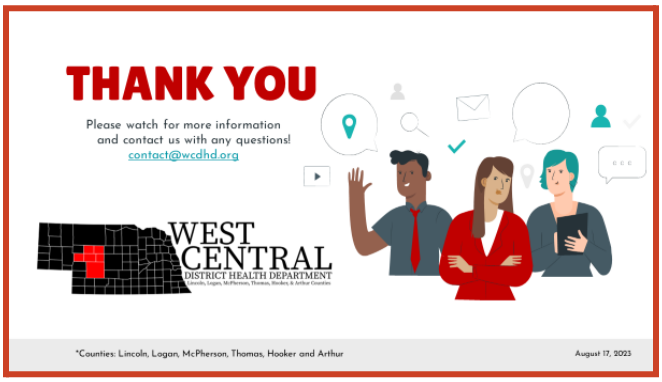
Closing Summary

This **2023 Community Health Assessment** marks a point in time review of how our community is doing right now. While this data is not exhaustive, it does offer a picture of well-being and opportunities that organizations and collective groups might take to improve health outcomes for our communities. Our ultimate intent for this process was to identify 'red flag' issues based upon these criteria: Size of the problem, Comparing counties / state; Inequities / Disparities, and Historical Trends.

After reviewing all primary and secondary data collected, the Community Health Partners narrowed the focus to elevate several key health issues. It is our hope to encourage community action toward these key findings.

- ➔ **Mental Health**
- ➔ **Substance Use**
- ➔ **Health Literacy**
- ➔ **Culturally Competent Care**
- ➔ **Aging Population**
- ➔ **Oral Health**
- ➔ **Chronic Disease**
- ➔ **Preventive Care**

For the WCDHD, this process informed the development of the **2024-2028 Community Health Improvement Plan** by selecting the top few priorities and informing strategies to improve the health of individuals, families and neighborhoods in our district. We welcome partnerships for collective impact as we stretch to do more good.



We express gratitude for all who participated and contributed to this process, including our hospital and healthcare partners, behavioral health agencies, community organizations and most specifically - all the members of our communities that elevated their voice via the community survey. Thank you!

Data Sources

The data sources presented in this report are presented in the table below.

BRFSS	Behavioral Risk Factor Surveillance System estimates were obtained from Nebraska Public Health Atlas. This survey is a telephone-based survey of all residents in the United States. Data from this report are typically presented as percentages of respondents responding to the answers and generalizing those responses to the overall population. https://atlas-dhhs.ne.gov/Atlas/BRFSS
CENSUS	Population count estimates and other population data were obtained from US Census Bureau data. Most of these results are based on the U.S. Census conducted once every 10 years with the addition of the American Community Survey conducted on an ongoing basis to generate annual (1-year and 5-year) estimates. https://data.census.gov
COVID19	COVID19 data were obtained from the Nebraska Department of Health & Human Services, including vaccination data from NESIIS. Case data are based on lab results provided to the West Central District Health Department. https://dhhs.ne.gov/Pages/Coronavirus.aspx
NESIIS	Immunization data were obtained from the Nebraska State Immunization Information System (NESIIS). Immunization data in this registry is representative of all vaccinations administered in Nebraska to residents of the counties within the West Central District Health Department jurisdiction. https://dhhs.ne.gov/Pages/Nebraska-Immunization-Information-System.aspx
VITAL STATISTICS	Birth and death certificate data were obtained from the Nebraska Department of Health & Human Services. These data estimates are typically generated by DHHS and provided to the WCDHD jurisdiction for public health functions of the LHD. https://dhhs.ne.gov/Pages/vital-Statistics.aspx

Design Team Consultant Information

Our Design Team for the Community Health Assessment and Community Health Improvement Plan process included collaboration with a Nebraska based consultant and facilitation support from an Oregon consultant.

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APPENDIX

(Available upon request)