

DAKOTA COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT 2019



Dakota County Health Department

Authored by: GIS and Human Dimensions, LLC

Summary

MISSION:
“To promote and create a healthier community”

Main findings

Demographics

- The average age of the population in Dakota County has increased over the last seven years, from an average age of 32.7 in 2010 to 33.8 in 2017. Yet, 2018 reported a lower average age of the population, reversing a steady increase observed since 2010.
- The population in Dakota County is growing nearly twice as fast as the population in the State.
- Between 1980 and 2014, life expectancy in Dakota County added 4.5 years, higher when compared to 4.2 years for the whole State of Nebraska.

Social determinants of health

- Social determinants of health, such as Poverty and Unemployment Rates have decreased since 2010, but they are still 2% and 1% higher when compared to overall State rates.
- Native American youth (16 to 24 years of age) are 1.5-2.7 times more likely than any other race/ethnicity in Dakota County, to not be in school or the labor force.
- Overweight and obesity rates in Dakota County are higher when compared to the State.
- Cancer is the leading cause of death in Dakota County, followed by Heart Disease, and then by Diabetes. Cause of death by diabetes in Dakota County is significantly higher than the State.
- Lung disease and Alzheimer’s disease have experienced noticeable declines since 2010, however diabetes mellitus has experienced an increase in the incidence of deaths per 100,000 population in Dakota County.
- The percentage of binge drinking among Dakota County 12th graders is 36.3% higher when compared to the State (52.4% vs. 16.1%, respectively).

Focus Group

- Participants of a focus group discussed barriers to obtaining healthcare. The most common issues identified as barriers were high **costs** and lack of **education**. Similar concerns were identified in the community health surveys from 2014 and 2018.
- In terms of education, participants requested help to fill out paperwork for Medicaid, and understand the basic concepts of health insurance such as “deductibles”. There were also comments regarding development of materials that can easily be understood by everyone, as some community members experience reading and language barriers.
- Health disparities such as diabetes, smoking/heart disease, and obesity were identified as critical aspects to be addressed by the Health Department. Educating youth and young adults and their families on how to prevent these health disparities should be prioritized as they are currently affected by them.

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Overview of the Comprehensive Community Health Needs Assessment

Under the direction of the Dakota County Health Department, the 2019 Community Health Needs Assessment has been devised to monitor health status and understand health issues facing the community in Dakota County, Nebraska. This assessment will serve as a reference document for the health care facilities and community agency partners in Dakota County to assist in strategic planning. It is the purpose of this assessment to inform all interested parties about the health status of the population within Dakota County and to provide community partners with a wide array of data that can be used to educate and mobilize the community and its resources to improve the health of the population.

The Community Health Needs Assessment process is collaborative and is intended to serve as a single data report for multiple coalitions, organizations, and health care facilities in the Health Department. It is the goal of the Community Health Needs Assessment to describe the health status of the population, identify areas for health improvement, determine factors that contribute to health issues, and identify assets and resources that can be mobilized to address public health improvement. This assessment will be updated and revised every three years, thus providing communities with up to date data to evaluate progress made towards identified health priorities, and for the selection of new ones.

GIS and Human Dimensions, LLC., assembled this assessment of public health and community well-being under the provision of the Dakota County Health Department, based largely upon data collected through the process of Mobilizing for Action through Planning and Partnerships (MAPP), behavioral health, and census data.

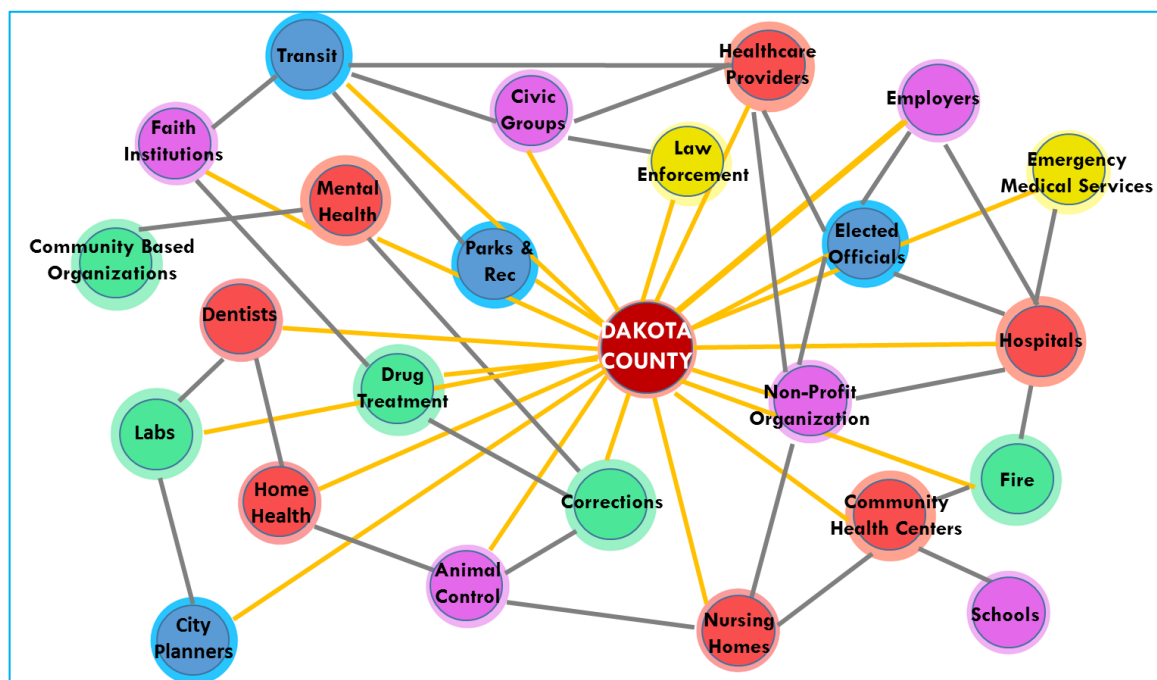
Community Health and the Local Public Health System

Community health includes a broad array of issues addressed by numerous agencies. Topics that fall under community health include such things as access to health care, health

literacy, perceptions of the well-being of the community, utilization of social programs, child welfare, crime, alcohol and tobacco use, drug use, poverty, obesity, diabetes, teen pregnancy, teen sexual activity, healthy children, environmental factors affecting health, cancer, heart disease, and a broad array of other epidemiological topics.

Addressing needs of community health goes far beyond the work of hospitals and the public health department. A broad network of agencies must work in collaboration to meet the diverse health needs of the community. An example of the local public health system network is shown in **Figure 1** below in which over 20 agencies collaborate in various ways in order to form a multi-connected network of public, private, faith based, non-profit, and for-profit agencies that effectively addresses the health needs of the community.

Figure 1: The Local Public Health System



Source: National Public Health Performance Standards. Modified by GIS and Human Dimensions, LLC

Mobilizing for Action through Planning and Partnerships (MAPP)

Mobilizing for Action through Planning and Partnerships (MAPP) is the strategy used by the Dakota County Health Department to gather data, select public health priorities, and foster collaboration among multiple health care providers. MAPP is a community-driven strategic planning tool for improving community health. Facilitated by public health

leaders, this tool helps communities apply strategic thinking to prioritize public health issues and identify resources to address them. MAPP is not an agency-focused assessment tool; rather, it is an interactive process that can improve the efficiency, effectiveness, and ultimately the performance of local public health systems. Figure 2.

Figure 2: The MAPP Conceptual Model



Source: National Association of County and City Health Officials

The Ten Essential Public Health Services

The ten essential services of public health provide a working definition of the public health system and a guiding framework for the responsibilities of local public health partners (Figure 3). These functions and services are specifically referenced in the Neb.Rev.Stat. §71-1628.04. The ten essential services include:

- 1. Monitor health status to identify and solve community health problems.**

2. Diagnose and investigate health problems and health hazards in the community.
3. Inform, educate, and empower people about health issues.
4. Mobilize community partnerships and action to identify and solve health problems.
5. Develop policies and plans that support individual and community health efforts.
6. Enforce laws and regulations that protect health and ensure safety.
7. Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. Assure competent public and personal health care workforce.
9. Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10. Research for new insights and innovative solutions to health problems.

Figure 3: The ten essential public health services



Source: Nebraska DHHS, Division of Public Health (2017)

Data Sources

Primary and Secondary data

Primary data sources consisted of community health assessment surveys (online and paper) conducted by the Dakota County Health Department in 2014 and 2018. In addition, a focus group was conducted in January 2019 to address the main barriers to healthcare faced by community members, and how the Health Department could help to overcome these barriers. Transcripts of the focus group are available in the Appendix.

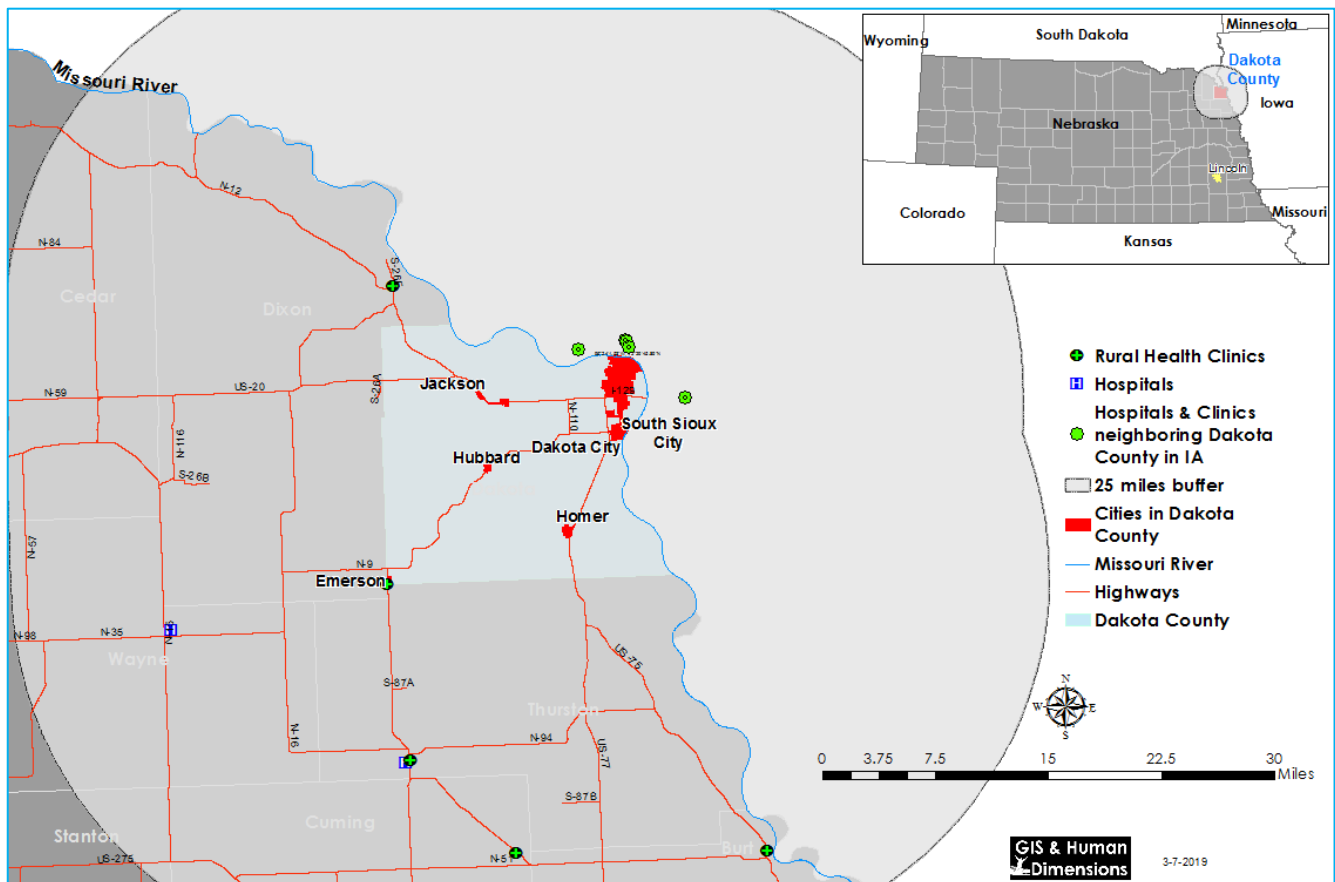
Secondary data sources consisted of federal (DHHS; American Community Survey), state (DHHS: Nebraska Behavioral Risk Factor Surveillance System; Vital Statistics), community health rankings, CDC Community Health Status Indicators, US Census American FactFinder, US Census Small Area Income and Poverty Estimates (SAIPE), USDA (Economic Research Service), Rural Health Information Hub (Rural Data Explorer), Measure of America (Social Science Research Council), and Integrated Public Use Microdata Series – IPUMS-USA (University of Minnesota).

Resource Inventory

A 25-miles radius was drawn from the center of Dakota County to identify health care facilities (hospitals and rural health clinics) available to the population who live in the health district. Within this searchable area, there were two critical access hospitals found, one located in Wayne (Providence Medical Center) and the second in Pender (Pender Community Hospital). Five rural health clinics were found in the following cities: 1) Ponca (Ponca Mercy Medical Services), 2) Emerson (Emerson Medical Clinic), 3) Pender (Pender Medical Clinic), 4) Bancroft (Bancroft Medical Clinic) and 5) Decatur (Burgess Family Clinic Decatur). Figure 4. In addition, there are six hospitals and clinics located within 3 miles from the Nebraska-Iowa border in Sioux City that serve the population of Dakota County. These facilities are listed below:

- Saint Luke's Health System
- Marian Health Center
- UnityPoint Health
- MercyOne Siouxland Medical Center
- Siouxland Community Health Foundation
- Prairie Pediatrics & Adolescent Clinic - Children's Hospital

Figure 4: Location of Critical Access Hospitals, Rural Health Clinics within 25 miles from center of Dakota County



Sources: Nebraska DHHS, 2019 (Office of Rural Health). Facilities in Woodbury County, IA, were located using Google Earth.

Community Focus Areas

As part of the Community Themes and Strengths Assessment of the MAPP process, a semi-structured community focus group was conducted in the Dakota County Health Department with representatives of the community. The focus group identified a fairly wide range of potential community focus areas, including transportation, language barriers, lack of education, insurance expenses, barriers to health, among others. List of attendees to the focus group is available in the Appendix.

Focus Group (transcript)

Date: 1/31/2019	
Barriers to going to your Provider/Doctor?	Transportation, Cost, Language Barrier, Afraid to find out what is wrong, does not want to take off work, only goes if wife makes the appt., Self-medicate-internet-WebMD, Lack of education, Lack of appts available to get in, Not smart enough Doctors, Don't follow-up with Doctor because they feel better, Too many side effects of possible medications, clinic problems with insurance-non-payment
Barriers to getting preventative treatments /procedures?	Don't know where to go; Some offices don't send reminders, Unpleasant procedures, Insurance won't cover some procedures, need a referral from doctors, education on when you should go and for what procedures, expensive, most people think its reactive and not pro-active, "I'm healthy", "I don't need to go"
Pick 2 of the most common themes between the two to Problem Solve:	<u>Cost/Expenses and Education</u>
How can we help? Cost/Expenses:	<ul style="list-style-type: none"> • Help applying for Title 19/Medicaid is so difficult. It is overwhelming. It is hours of work and if there was a language barrier it would be even more difficult. Too much on the computer with no help. People don't know where to go/who to start with for the process. • Education on what is covered by your insurances and what is not? • Educate on the Basics of Insurance: what is a deductible? • Educate that preventative appt is cheaper to do than paying for chronic diseases later
How do we get the assistance we offer out to the public?	<ul style="list-style-type: none"> • Schools- Conferences • People cannot read-language barrier, so flyers may not be helpful for some • Communicate with DHHS local, potential partnership, that we can assist with the application process. • Easy to understand, picture flyers • Post them at the library, utility bill • Encourage current clients to share the services with their friends/community
How can we help? Education:	<ul style="list-style-type: none"> • Make it as simply and short as possible. People do not understand and have no time to sit and listen.

	<ul style="list-style-type: none"> • Small groups or individual settings work well • Importance of prevention
<p>Topics that would be important for future education or coverage by the health department?</p>	<ul style="list-style-type: none"> • Weight Management • Diabetes • Smoking/Heart Disease • Kids have them • Target the kids for all items of prevention/topics • Younger age education for health and health prevention • Target grade schools • Target families-whole family education • Offer an incentive for attendance or the completion of a Medicaid application • Too much paperwork to know what the benefits are • Contact priests or pastors to spread health awareness • Get kids excited about the topics and hopefully they will then get the parents on board. • Share viral health videos • Do classes at an event • Incentive=Free food • Snap Chat, Instagram, If you follow them, they will follow you back

Health Needs Assessment Surveys: 2014-2018

Common concerns found between the 2014 and 2018 Community Health Assessment reports targeting PRIORITY AREAS:

- *Weight management*
- *Emergency Planning and Preparedness*
- *Disease prevention and education*

Health Concerns:

Ongoing concerns among Dakota County residents are cancer, obesity/weight loss issues, heart disease and stroke, drug & alcohol abuse, diabetes, child health and wellness, mental health, and women's health.

Healthy lifestyle:

According to the 2018 community health assessment survey, seven out of ten respondents believe that they need to lose weight. Developing weight loss programs were mentioned as one of the most important issues towards improving the health of the community in the 2014 survey.

Nearly 30% of respondents to the 2018 survey mentioned that they do at least 20-30 minutes of physical activity 4-5 days a week. The 2018 report titled **Physical Guidelines for Americans** (2nd edition) from the U.S. DHHS recommends that *“adults should do at least 150 minutes to 300 minutes a week of moderate-intensity, or 75 minutes to 150 minutes a week of vigorous-intensity aerobic physical activity.”*

Demographics

CHA Year		
	2014	2018
Total number of Surveys	789	512
Total population (Census data)	20,902	20,529

Sources: Community Health Assessments 2014 and 2018. Age and Sex Table S0101. 2010-2014 & 2013-2017 American Community Survey 5-Year Estimates

Gender			
	2014	2018	Census Data
Female	58%	-	51%
Male	42%	-	49%

Sources: Community Health Assessment 2014. Age and Sex Table S0101. 2013-2017 American Community Survey 5-Year Estimates

Race/ethnicity			
	2014	2018	Census Data
White/Caucasian	95%	93%	48.4%
Hispanic/Latino	3%	6%	39.7%
Other minorities	2%	1%	11.9%
Age			
	2014	2018	Census Data
Age 60 years and older	50.4%	45.3%	18.2%

Sources: Community Health Assessments 2014 and 2018. Age and Sex Table S0101. 2013-2017 American Community Survey 5-Year Estimates

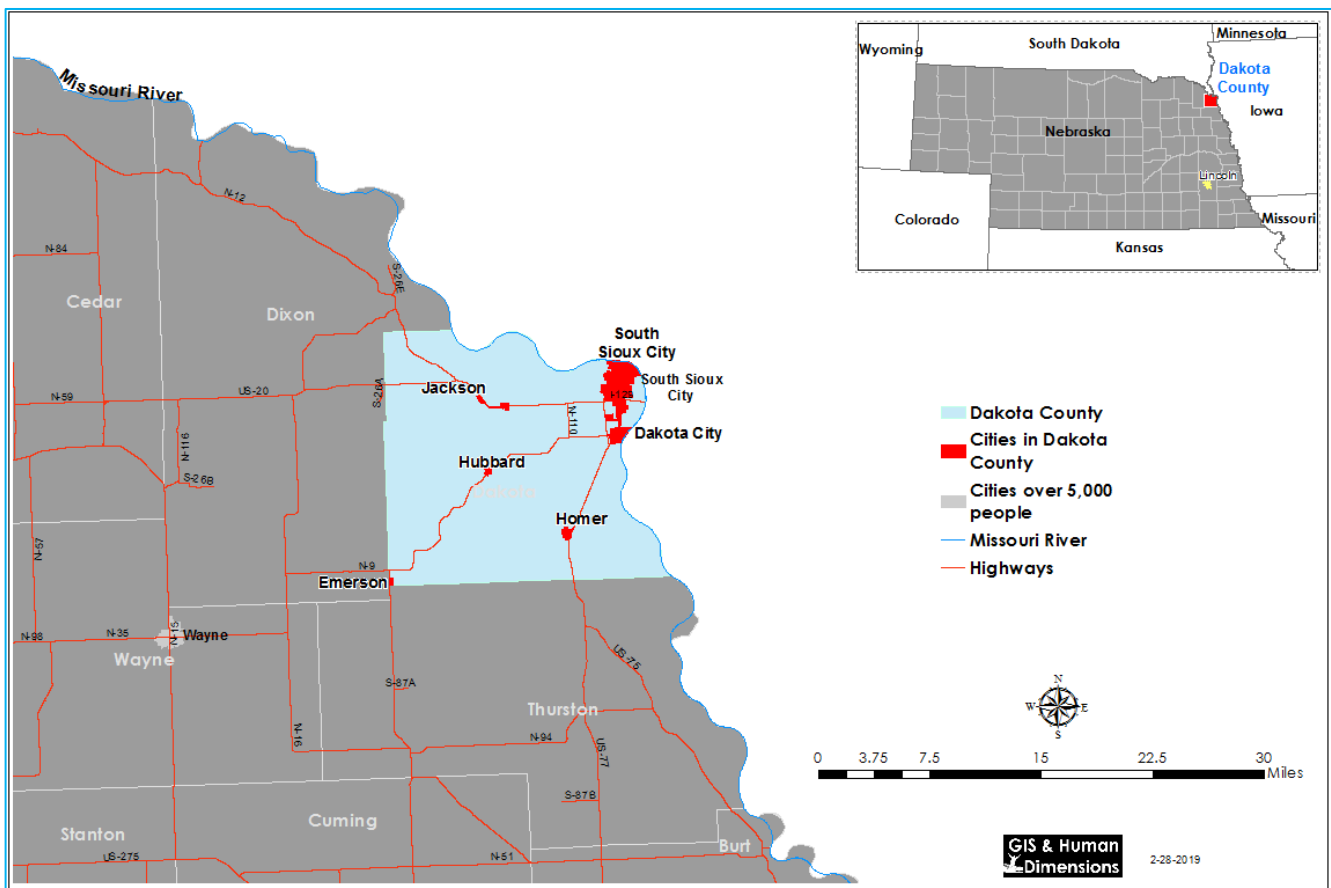
Dakota County Health Department: Demographic and Socioeconomic Characteristics

Overview

Population (2017 estimate)	20,529
Population Change in DCHD (2010-2017)	-2.3%*
2010 Urban population (inside urbanized areas): 16,576	78.9%
2010 Rural population: 4,430	21.1%
Unemployment Rate (December 2018)	3.8%** (Nebraska: 2.8%)
Total Land Area	267 sq. miles

*US Census data (2010 and 2017 estimates)

** Nebraska Department of Labor, Labor Market Information, Local Area Unemployment Statistics (December 2018)



Source: GIS and Human Dimensions, LLC

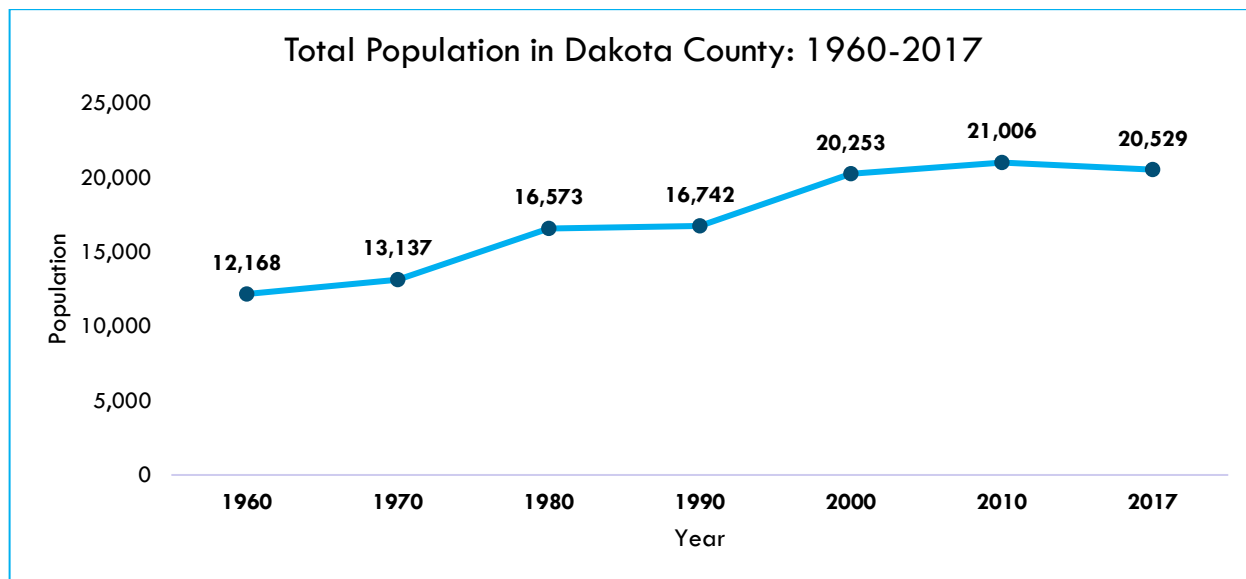
Population Characteristics

Demographics

According to the U.S. Census, there were an estimated 20,529 persons living in Dakota County in 2017¹, a decrease of -2.3% from the population in 2010 (Figure 5. Table 1, page 20). During the same time period, Nebraska's population grew by 5.0%. Figure 1 shows the total population in Dakota County from 1960 to 2017. The total population in Dakota County has been stabilized around 20,000 people since the year 2000.

Nearly 2 out of 10 residents in Dakota County live in rural communities (which equates to 4,430 persons. 2010 U.S. Census).

Figure 5: Dakota County Health Department Population, 1960-2017

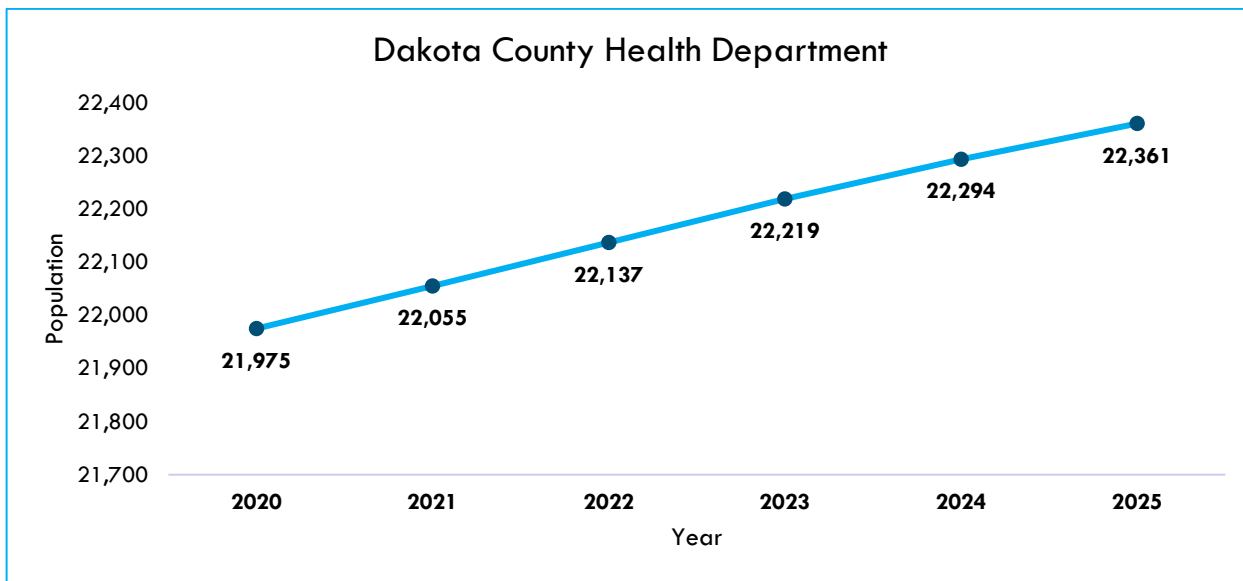


Source: US Census Bureau: Population of Counties by Decennial Census: 1900 to 1990 (Compiled and edited by Richard L. Forstall), and U.S. Census Bureau FactFinder 2000 to 2017.

¹ American Community Survey (ACS) 5-year estimates (60 months of collected data) between 2013 and 2017. Although the 2013-2017 projection estimates (ACS 2013-2017) is the most reliable and precise data projected by the U.S. Census Bureau, there are methodological differences between Census data and ACS estimates, so caution should be taken when comparing demographic results derived from decennial censuses (i.e., 2000 and 2010) and projected estimates derived from the American Community Survey. [This report](#) explains the methodological differences between census data and estimated projections obtained from the American Community Survey.

Figure 6 shows population projections from 2020 to 2025 for Dakota County Health Department using the 2010 Census as a starting point (Center for Public Affairs Research, UNO, 2015). These projections are based on current population structure by birth, death, and net migration rates, and how they change for various age groups. These population projections show that Dakota County will maintain a stable population of around 22,000 people in the next years.

Figure 6: Dakota County Health Department Population Projections, 2020-2025



Source: Center for Public Affairs Research, UNO: Nebraska County Projections, (December 2015).

Population Changes by Age Group

Age group “65-84” has experienced a positive growth in Dakota County between 2010 and 2017, while all age groups under 65 years of age have experienced a negative growth. Similar trends for age groups “65 and older” have been shown at the State level. One-fifth of the rural Nebraska county population (19.6%) was 65 years of age or older in 2010, compared to 15.1 percent in small urban counties and 10.7 percent in large urban counties (Nebraska DHHS, 2016).

Age group “Under 5 years” years experienced the most significant negative change between 2010 and 2017 in Dakota County (-8.3%) followed by age group “5-14” (-5.8%).

When comparing population changes between 2000 and 2010, population slightly increased in Dakota County, totaling an 3.7 percent increase, with age groups over 45

years experiencing a population increase between 18.7 percent to 23.4 percent. In contrast, over the last time period between 2010 and 2017, overall population change experienced a negative growth (-2.3%). All age groups experienced a negative growth between 2010 and 2017 except for age group “65-84 years”. The most significant decrease in population growth during this time period was experienced by age group “Under 5 years” (-8.3%).

Racial and Ethnic Minorities

Based on U.S. Census data, the minority population in Dakota County is growing at a higher rate than the non-Hispanic White population. Since 2010, the number of people who were classified as racial or ethnic minorities increased by 9.6 percent to an estimated population of 10,310 in 2017. In contrast, the non-Hispanic White population in Dakota County decreased by 1.4 percent over the seven-year period.

The total Hispanic population in Dakota County has nearly doubled since 2000, growing from 4,581 individuals to 7,889 by 2017. The African American and Native American populations have also experienced positive population changes between 2010 and 2017 (36.1% and 2.7%, respectively), while “Other” and “Two or more” races have experienced a negative population change between 2010 and 2017 (-11.4% and -12.8%, respectively). Table 1.

Table 1: Dakota County Population Characteristics, 2000, 2010, 2017

	2000		2010		% Change in Population ^a	2017		% Change in Population ^b
	Population	% of Total	Population	% of Total		Population	% of Total	
Dakota County Total	20,253	100%	21,006	100%	3.7%	20,529	100%	-2.3%
Gender								
Female	10,142	50.1%	10,517	50.1%	3.7%	10,455	50.9%	-0.6%
Male	10,111	49.9%	10,489	49.9%	3.7%	10,074	49.1%	-4.0%
Age								
Under 5 years	1,772	8.7%	1,900	9.0%	7.2%	1,743	8.5%	-8.3%
5 -14 years	3,409	16.8%	3,370	16.0%	-1.1%	3,174	15.5%	-5.8%
15 -24 years	3,044	15.0%	3,031	14.4%	-0.4%	3,024	14.7%	-0.2%
25 -44 years	5,952	29.4%	5,302	25.2%	-10.9%	5,099	24.8%	-3.8%
45 -64 years	4,062	20.1%	5,012	23.9%	23.4%	4,818	23.5%	-3.9%
65 -84 years	1,726	8.5%	2,049	9.8%	18.7%	2,330	11.3%	13.7%
85 and older	288	1.4%	342	1.6%	18.8%	341	1.7%	-0.3%
Race/Ethnicity								
White, NH ^c	15,968	78.8%	14,810	70.5%	-7.3%	14,604	71.1%	-1.4%
African American, NH	126	0.6%	660	3.1%	423.8%	898	4.4%	36.1%

Native American, NH	377	1.9%	566	2.7%	50.1%	581	2.8%	2.7%
Asian/Pacific Islander, NH	636	3.1%	675	3.2%	6.1%	647	3.2%	-4.1%
Other, NH	2,615	12.9%	3,812	18.1%	45.8%	3,378	16.5%	-11.4%
2+ Races, NH	531	2.6%	483	2.3%	-9.0%	421	2.1%	-12.8%
Hispanic	4,581	22.6%	7,419	35.3%	62.0%	7,889	38.4%	6.3%
Minority ^d	1,849	29.1%	9,410	44.8%	59.9%	10,310	50.2%	9.6%

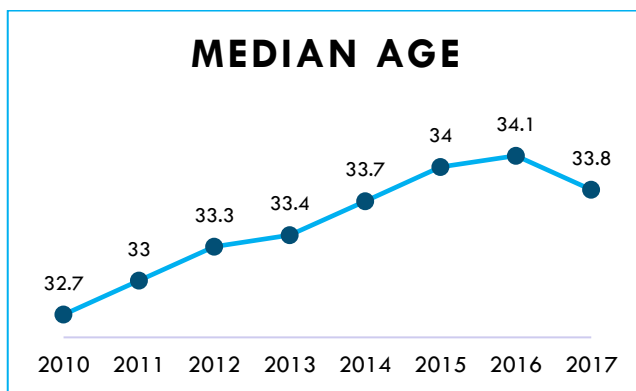
^a Change Population from 2000 to 2010
^b Change in Population from 2010 to 2017
^c NH = Non-Hispanic
^d Reflects those who are not "White, NH"
 Source: US Census Bureau

The following charts show demographic changes in Dakota County using the 2010 Census and 2017 projection estimates from the American Community Survey (ACS, five-year estimates 2013-2017).

Demographic changes over time in Dakota County:

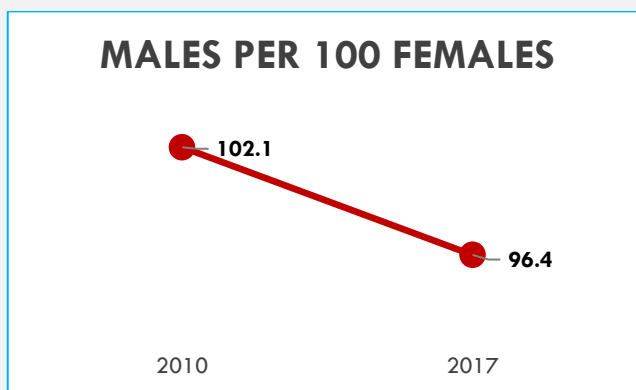
Median Age

steadily increased between 2010 and 2016, with a sharp decline in 2017.



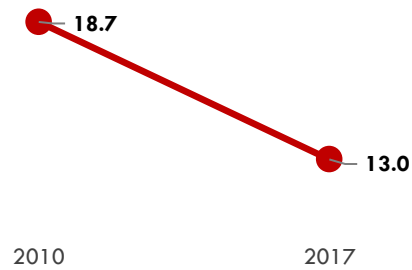
Males per 100

females (sex ratio) has substantially declined in Dakota County in the last seven years.



Population 65 years and older (%) has sharply declined in Dakota County since 2010.

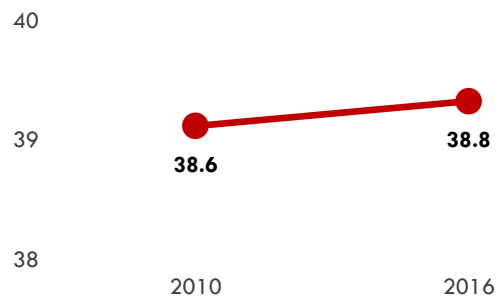
POPULATION 65 YEARS AND OLDER



Changes over time:

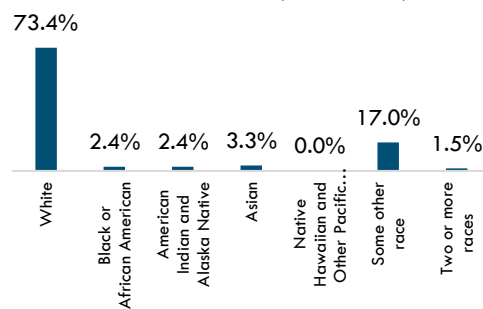
Population under 25 years old has slightly increased in Dakota County since 2010.

POPULATION UNDER 25 YEARS OLD

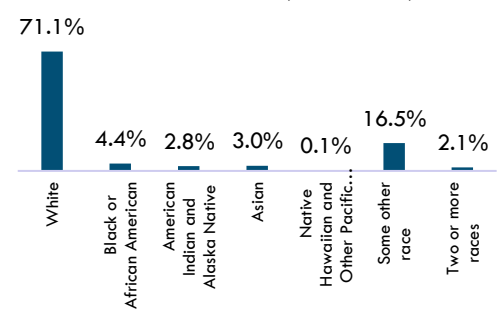


Race (2010 vs. 2017). Among all races, **Black or African American** experienced the largest growth between 2010 and 2017.

2010 RACE (ALONE)

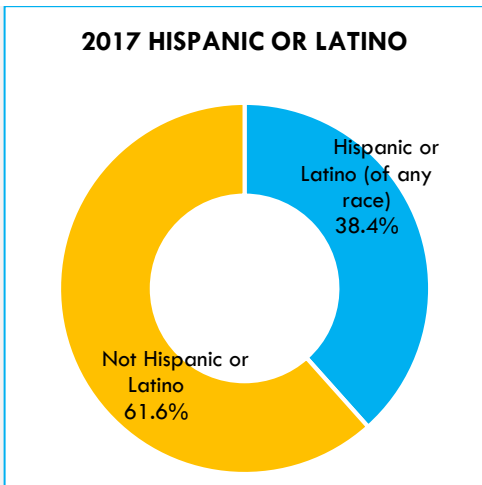
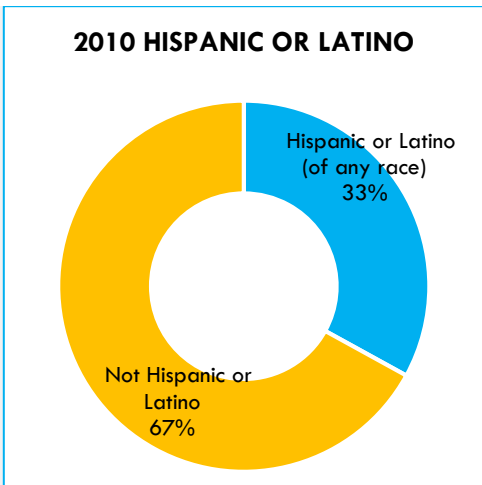


2017 RACE (ALONE)



Ethnicity (2010 vs. 2017).

Hispanic or Latino population experienced a net growth of 1,073 individuals between 2010 and 2017, the largest among all races/ethnicities.



Household/Family Type

In 2010, over one-third (36.2%) of the 7,218 households in Dakota County had one or more children under the age of 18 living at home (which equates to 2,615 households). By comparison, Nebraska had nearly one-third (32.0%) of children under the age of 18 living at home.

Single-parent households continue to increase in Dakota County. The proportion of family households headed by single parents slightly increased from 19.8 percent in 2010 (Census) to 19.9 percent in the 2017 (American Community Survey, 2013-2017. Table S2501).

Educational Level of Dakota County Adults

According to the 2013-2017 American Community Survey (ACS, Table S1501), 12.6 percent of persons aged 25 and older in Dakota County had obtained a bachelor’s degree or higher while 18.9 percent had some college or technical training. Over one-third of adults in this age group (35.0%) had a high school diploma or equivalent and over one-fourth (26.5%) percent had less than a high school education. When comparing to the State of Nebraska level of educational attainment, Dakota County had a lower percentage with some college or technical training than the State, and a lower percentage with bachelor’s degree or higher. A significantly higher number of the population 25 years and over in Dakota County have not completed high school

education, nearly three times higher when compared to the State rates (26.5% vs. 9.1%, respectively). Table 2.

Table 2: Educational Attainment, population 25 years and over, Dakota County vs. State of Nebraska

EDUCATIONAL ATTAINMENT		
Level of education	Dakota County	State of Nebraska
Bachelor's degree or higher	12.6%	30.6%
Some college or technical training	18.9%	23.4%
High school diploma or equivalent	35.0%	26.7%
Less than a high school education	26.5%	9.1%

Source: American Community Survey (2017).

High School Graduation Rates

According to the U.S. Department of Education, the public school 4-year high school graduation rate (defined as the proportion of public high school freshmen who graduate with a regular diploma four years after starting ninth grade) was 88.7 percent in Nebraska during 2018 compared to 86.5 percent in Dakota County (So. Sioux City Community Schools District).

Socioeconomic Status

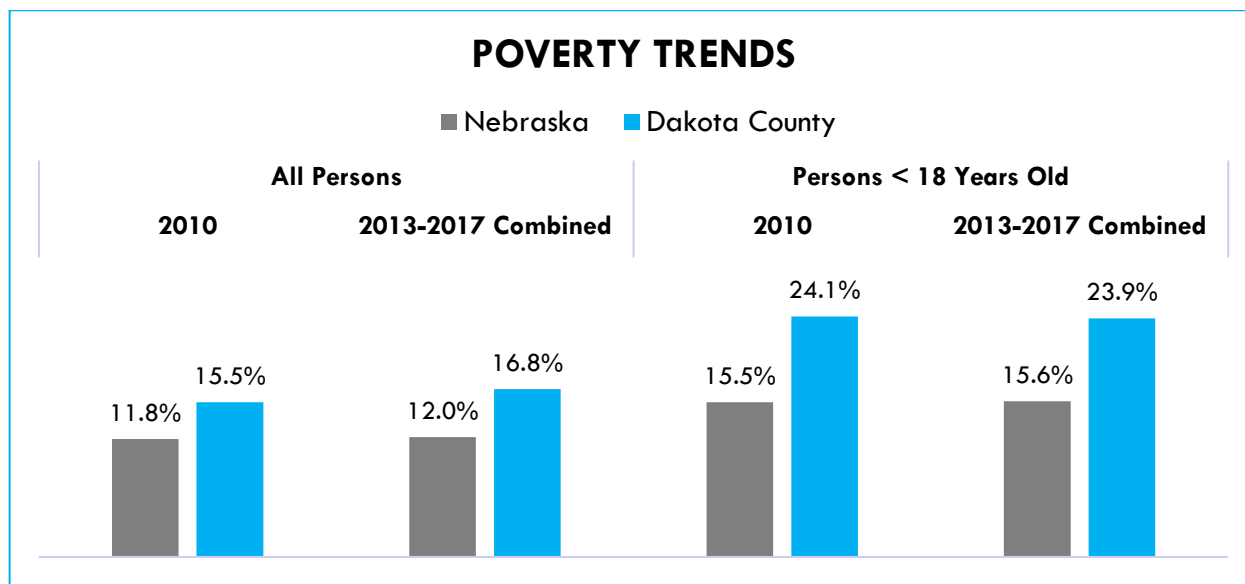
According to the 2013-2017 ACS, the median household income in Dakota County was \$52,401, which was lower than the Nebraska median at \$56,675. The median household income in Dakota County has increased nearly \$8,700 when compared to 2010 (\$43,729).

Poverty

Poverty rate in Dakota County increased from 15.5 percent in 2010 (Census) to 16.8 percent in 2013-2017 (ACS) among all persons and slightly decreased from 24.1 percent to 23.9 percent among persons under 18 years of age (Figure 7). The State rate was higher than the rate for Dakota County for all persons as well as for those under 18.

Based on the 2013-2017 poverty estimates in Dakota County, an estimated 3,449 persons of all ages and 1,424 persons under 18 years of age were living in poverty.

Figure 7: Poverty Trends*, Dakota County vs. Nebraska



*Percentage below 100% of the federal poverty level. Source: 2010 Census; 2013-2017 American Community Survey (ACS)

Food and Housing Insecurity

Food and housing insecurity can affect the physical and mental health of affected individuals and impede their ability to achieve optimal health. The United States Department of Agriculture (USDA) Economic Research Service defines food insecurity as reduced food intake or reduced dietary quality because the household lacked money and other resources for food. The U.S. Department of Health and Human Services defined housing insecurity as high housing costs in proportion to income, poor housing quality, unstable neighborhoods, overcrowding, or homelessness (NE DHHS, 2016).

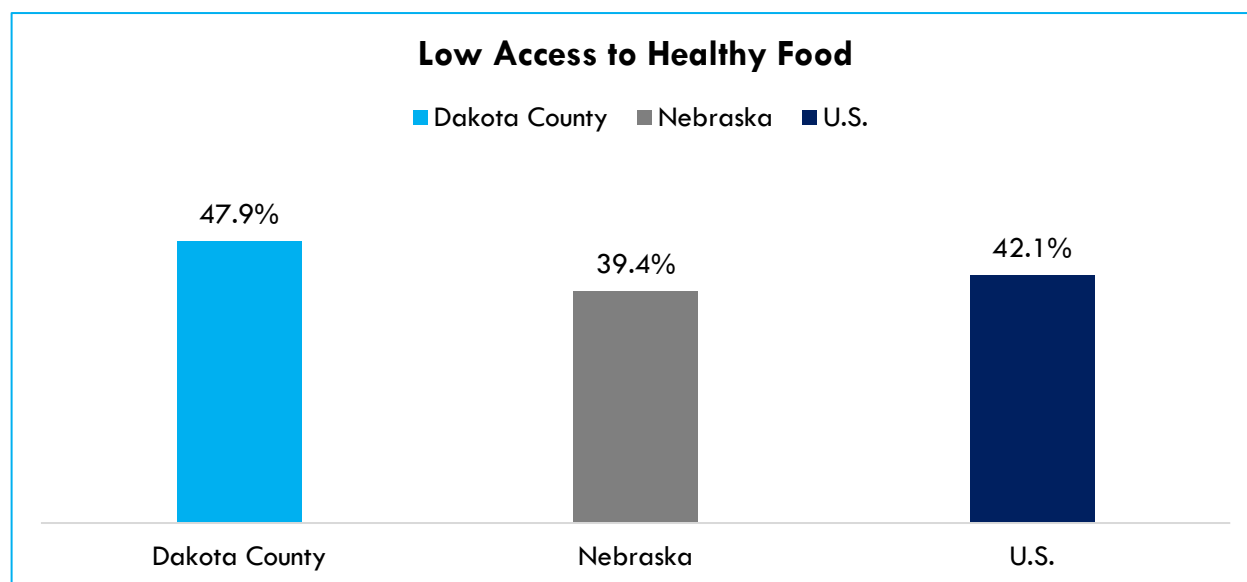
“Research from the Tufts Friedman School suggests that poor eating causes nearly 1,000 deaths each day in the United States from heart disease, stroke or diabetes.”

According to the USDA Economic Research Service, about 1 in 7 households in Nebraska (14.8%) were food insecure between 2013 and 2015, an increase from 10.4 percent in

Nebraska between 2001 and 2003. Current food insecurity rates in Nebraska are higher when compared to the national average for the 2013-2015 period (13.7%).

The USDA Economic Research Services also tracks areas of low-access to healthy food based on Census tracts with at least 500 people, or 33 percent of the population, living more than 1 mile (urban areas) or 10 miles (rural areas) from a supermarket. According to these parameters, 47.9 percent of the population in Dakota County is categorized as having low access to healthy food, 8.5 percent points higher when compared to 39.4 percent in the State of Nebraska (metro areas). Figure 8.

Figure 8: Low Access to Healthy Food (metro areas): Dakota County, Nebraska, and the U.S., 2015



Source: USDA Economic Research Service, 2015.

The Nebraska Behavioral Risk Factor Surveillance System (BRFSS) measures food and housing insecurity based on moderate to high stress related to not having enough money to buy nutrition foods and not having enough money to pay the rent or mortgage among those who rent or own their home. In 2015, more than 1 in 5 Dakota County adults (20.7%) reported food insecurity during the past year while nearly 1 in 3 (31.2%) reported housing insecurity. The Dakota County food and housing insecurity rates are similar when compared to the State. Table 3.

Table 3: Food and Housing Insecurity (BRFSS, 2015)

	Food Insecurity	Housing Insecurity
Dakota County	20.7%	31.2%
Nebraska	21.0%	28.5%

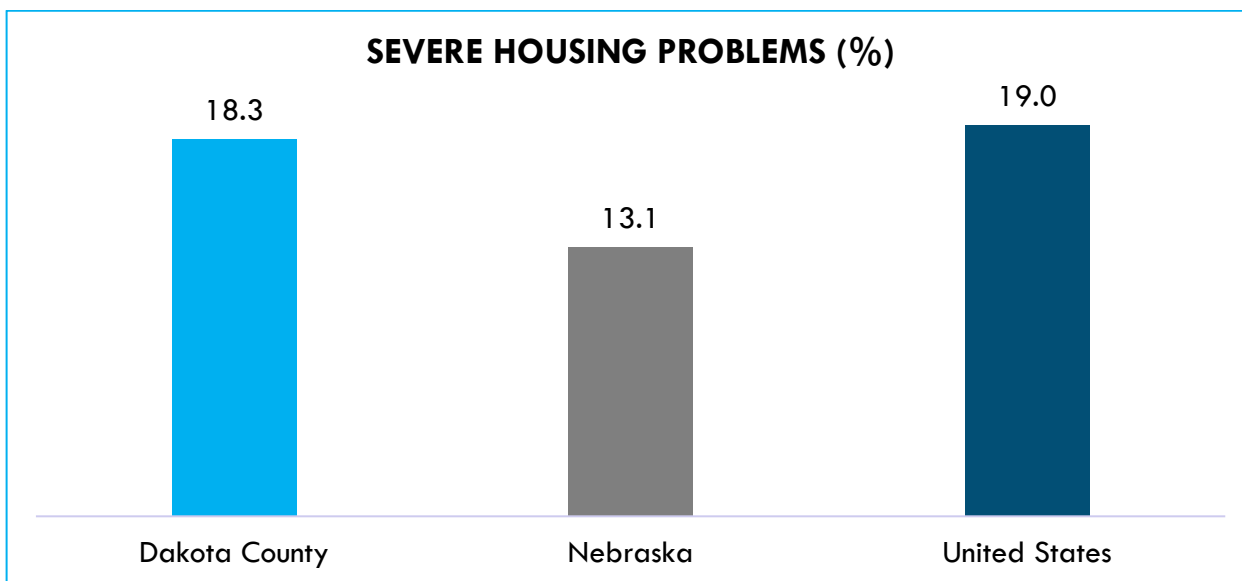
Source: BRFSS 2011-2017 Detailed Tables for LHDs (11-9-18)

Housing Environment: Severe housing problems

Severe housing problems are referred to households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities. It was estimated that 19 percent of households in the United States and 13.1 percent of households in Nebraska were classified as having “severe housing problems” (Comprehensive Housing Affordability Strategy (CHAS) data, 2010-2014).

According to the CHAS data (2010-2014), a total of 1,330 households had severe housing problems in Dakota County, which represents 18.3% of all households in the health district. Severe housing problems in Dakota County are 5.2 percent higher when compared to the State (18.3% vs. 13.1%, respectively). Figure 9.

Figure 9: Percentage of Severe Housing Problems, Dakota County, Nebraska, and the United States: 2010-2014



Source: Comprehensive Housing Affordability Strategy (CHAS) data, 2010-2014

Unemployment

According to the Nebraska Department of Labor, the unemployment rate (as of December 2018) is 1.0 percent higher in Dakota County when compared to the State of Nebraska (3.8% vs. 2.8%). Table 4.

Dakota County has the 4th highest unemployment rate among the 93 counties in the State of Nebraska, after Thomas County (3.9%), Arthur County (4.5%), and Blaine County (5.8%).

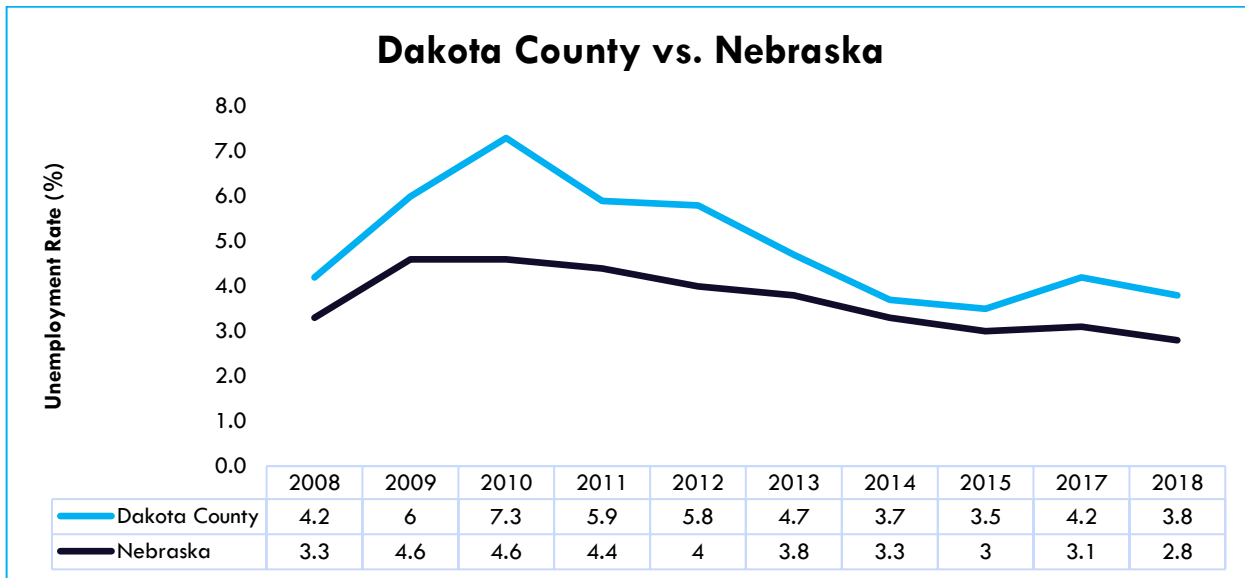
Table 4: Dakota County and State Unemployment Rates (December 2018)

UNEMPLOYMENT RATES			
County	Unemployed	Labor Force	% Unemployed
Dakota County	418	10,889	3.8%
Nebraska	28,472	1,024,189	2.8%

Source: Nebraska Department of Labor, Labor Market Information, Local Area Unemployment Statistics

Unemployment rates have been steadily declining in Dakota County after the great recession of 2008-2009. On average, unemployment rates in Dakota County have been 1.2 percent higher when compared to the State between 2008 and 2018. In 2010, the unemployment rate in Dakota County was 2.7 percent higher than the State. Figure 10.

Figure 10: Dakota County and State of Nebraska Unemployment Rates 2008-2018



Sources: Unemployment rates 2008-2017: 1) Bureau of Labor Statistics, Local Area Unemployment Statistics (LAUS) data. 2) Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program. Unemployment rates (as of December 2018): 3) Nebraska Department of Labor, Labor Market Information, Local Area Unemployment Statistics

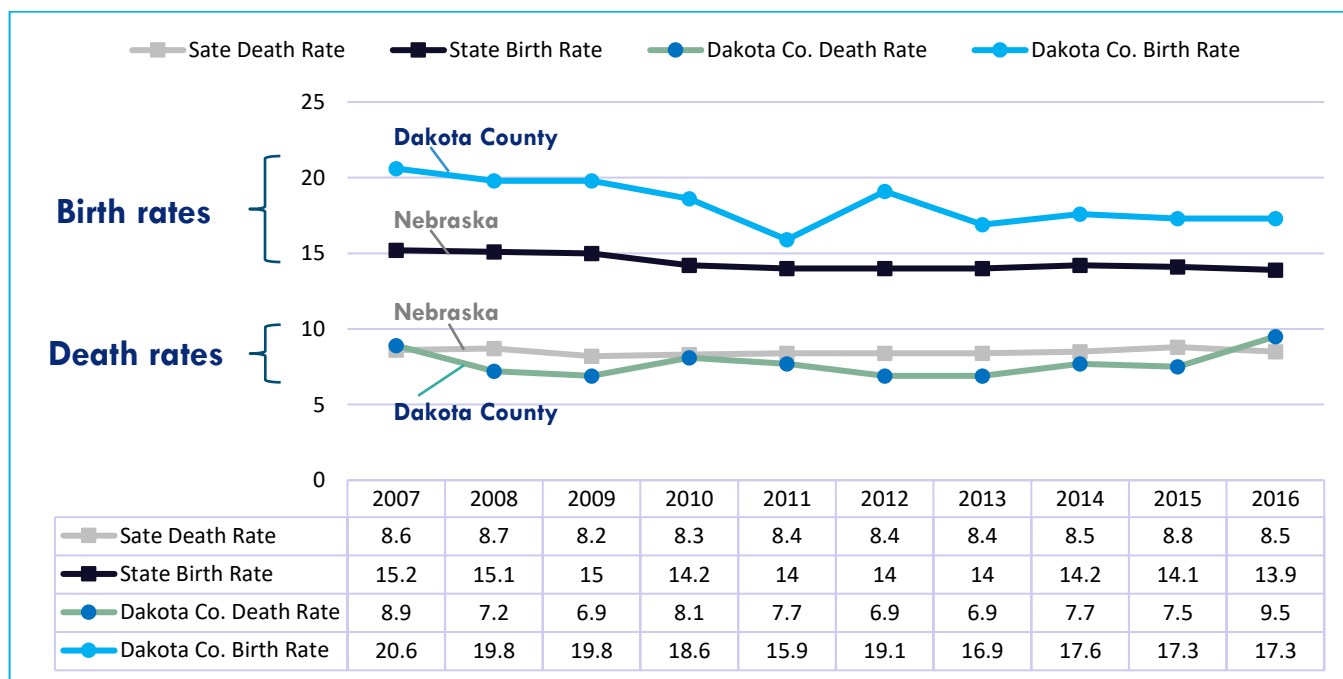
General Health Status

Health Outcomes

Overall Birth and Death Rates

Figure 11 shows overall birth and death rates in Dakota County and in the State of Nebraska, from 2007 to 2016. The populations in Dakota County and in the State are both growing, however the population in Dakota County is growing nearly twice as fast as the population in the State.

Figure 11: Overall Birth and Death Rates, Dakota County, 2007-2016



Source: Nebraska Vital Records, Nebraska Department of Health and Human Services.

Births

Since 2007, the birth rate in Dakota County has decreased, from 20.6 per 1,000 population, to 17.3 per 1,000 population in 2016, a 16.0 percent decrease. Nebraska birth rates have also slightly declined during the same time period, experiencing a 8.5 percent decrease (Figure 11).

Deaths

Since 2007, the overall death rate in Dakota County has been slightly lower when compared to the State, with the exception in 2007 and 2016 when the death rate in Dakota County was 0.3 and 1.0 per 1,000 population higher, respectively, than the State. Figure 11.

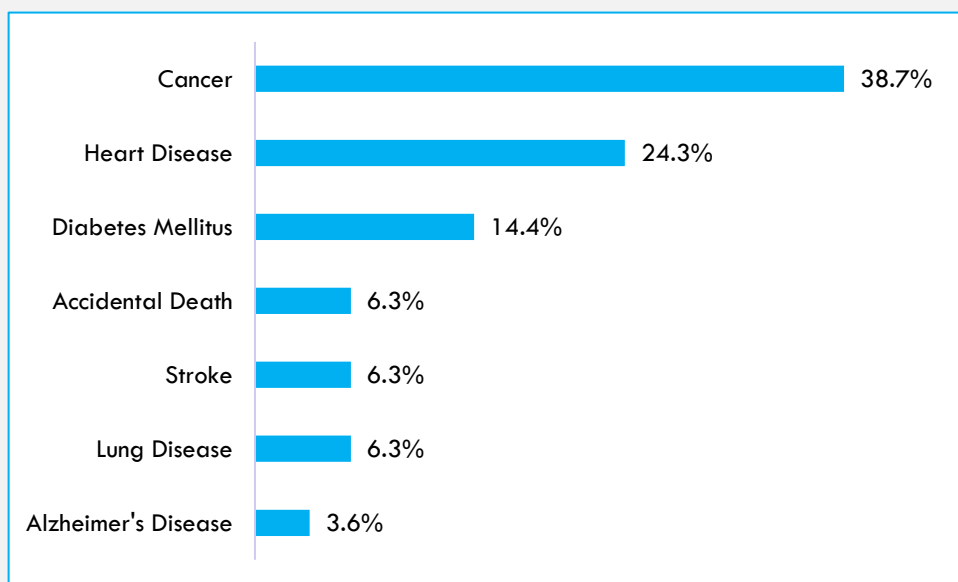
Cause of Death (Top Seven) in Dakota County

Cancer is the leading cause of death in Dakota County, followed by Heart Disease, and then by Diabetes. Both, cancer and diabetes deaths in Dakota County have higher prevalence rates than the State of Nebraska, 1.2 and 3.0 times higher, respectively. Cause of death by diabetes in Dakota County is significantly higher than the State. See Figures 12 and 13. Table 5 summarizes the number of deaths by cause in Dakota County and in Nebraska in 2016, percentages of each cause of death, and the difference in percentage between Dakota County and the State for each cause of death.

Vital Statistics: Deaths by Cause (Top Seven) in Dakota County, 2016

Figure 12: Death by Cause (Top Seven), Dakota County, 2016

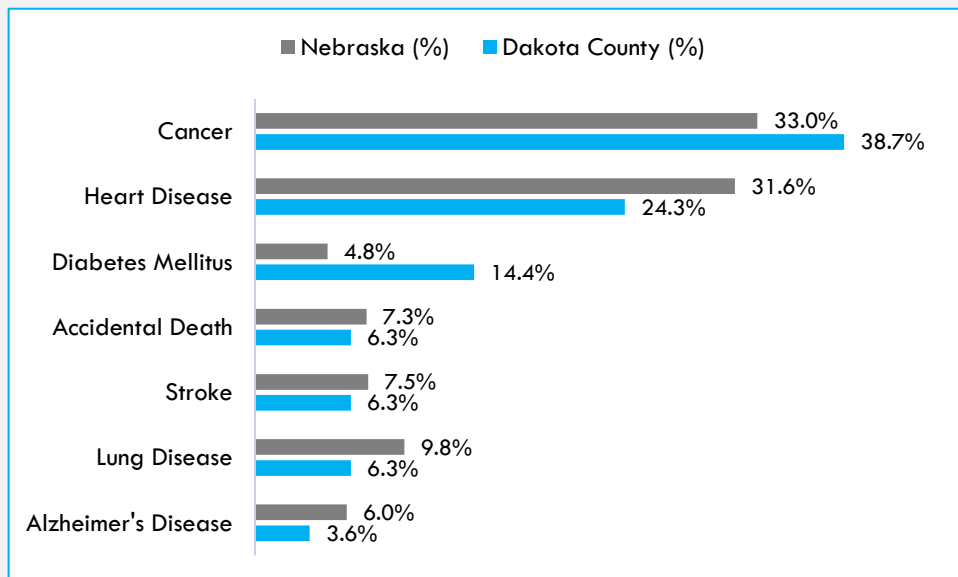
Deaths by cancer are significantly higher when compared to other causes of death.



Source: Nebraska 2016 Vital Statistics Report

Figure 13: Deaths by cause Dakota County vs. Nebraska, 2016

When compared to the State, Dakota County shows higher deaths rates for cancer and diabetes. In fact, cause of death by diabetes is significantly higher compared to the State.



Source: Nebraska 2016 Vital Statistics Report

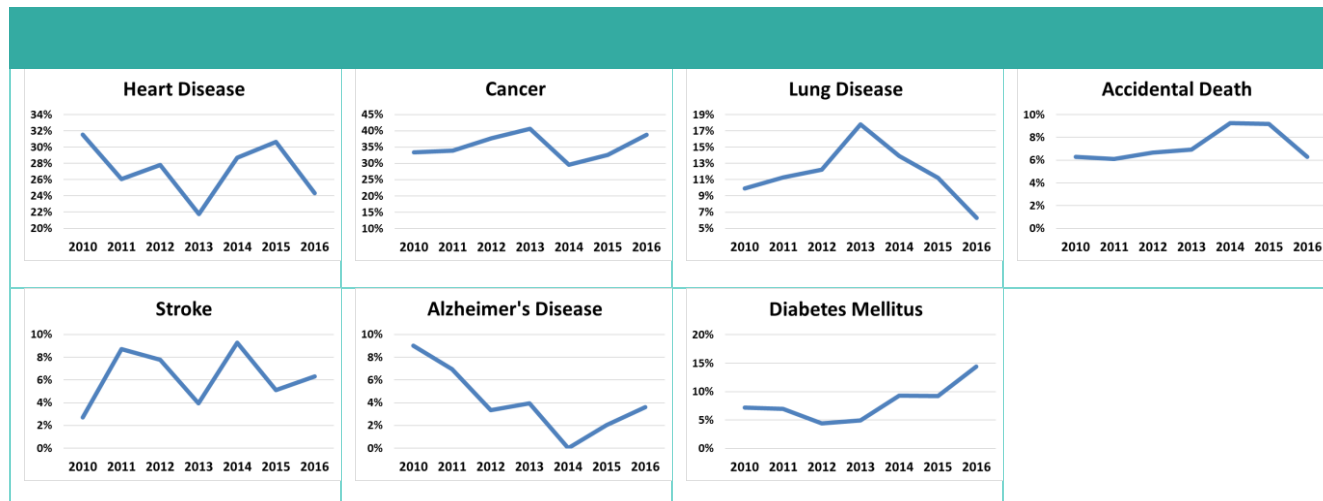
Table 5: Deaths by Cause (Top Seven) in Dakota County, Nebraska, and percentage differences

Deaths by Cause (Top Seven)					
	Dakota County (# deaths)	Dakota County (%)	Nebraska (# deaths)	Nebraska (%)	Difference
Alzheimer's Disease	4	3.6%	634	6.0%	-2.4%
Lung Disease	7	6.3%	1,032	9.8%	-3.5%
Stroke	7	6.3%	784	7.5%	-1.2%
Accidental Death	7	6.3%	771	7.3%	-1.0%
Diabetes Mellitus	16	14.4%	501	4.8%	9.6%
Heart Disease	27	24.3%	3,318	31.6%	-7.2%
Cancer	43	38.7%	3,474	33.0%	5.7%
Total	111	100.0%	10,514	100.0%	

Source: Nebraska 2016 Vital Statistics Report

The following charts (Figure 14) show the top seven causes of death in Dakota County and their trends from 2010 to 2016. Lung disease and Alzheimer’s disease have experienced noticeable declines since 2010, however diabetes mellitus has experienced an increase in the incidence of deaths per 1,000 population since 2012.

Figure 14: Top Seven Causes of Death in Dakota County, 2010-2016*

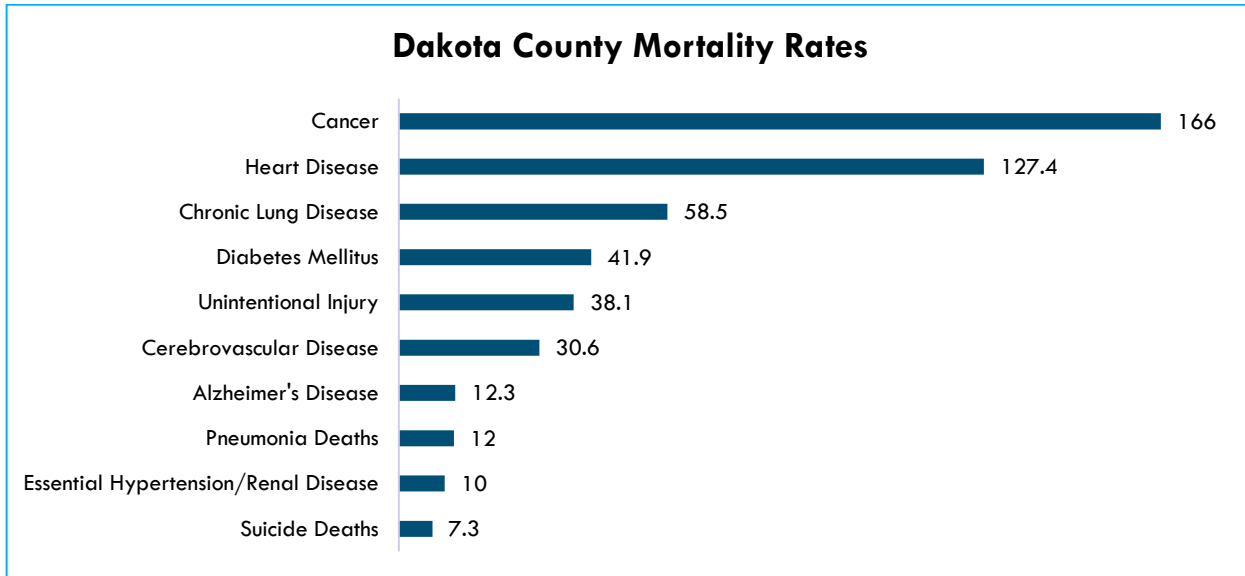


*The number of resident deaths per 1,000 population. Source: Nebraska 2010, 2011, 2011, 2012, 2013, 2014, 2015, and 2016 Vital Statistics Reports

Mortality rates per 100,000 population

For the 2012-2016 combined years, cancer mortality rate was the highest among all causes of death in Dakota County (166 per 100,000 population), followed by Heart Disease (127.4 per 100,000 population), and then by Chronic Lung Disease (58.5 per 100,000 population). Figure 15 shows mortality rates in Dakota County during the 2012-2016 combined years.

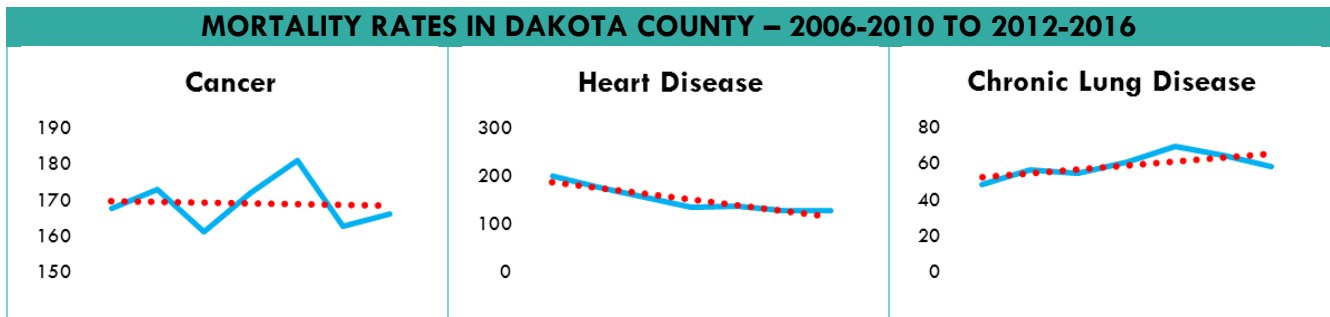
Figure 15: Mortality rates (per 100,000 population) in Dakota County, 2012-2016 combined years



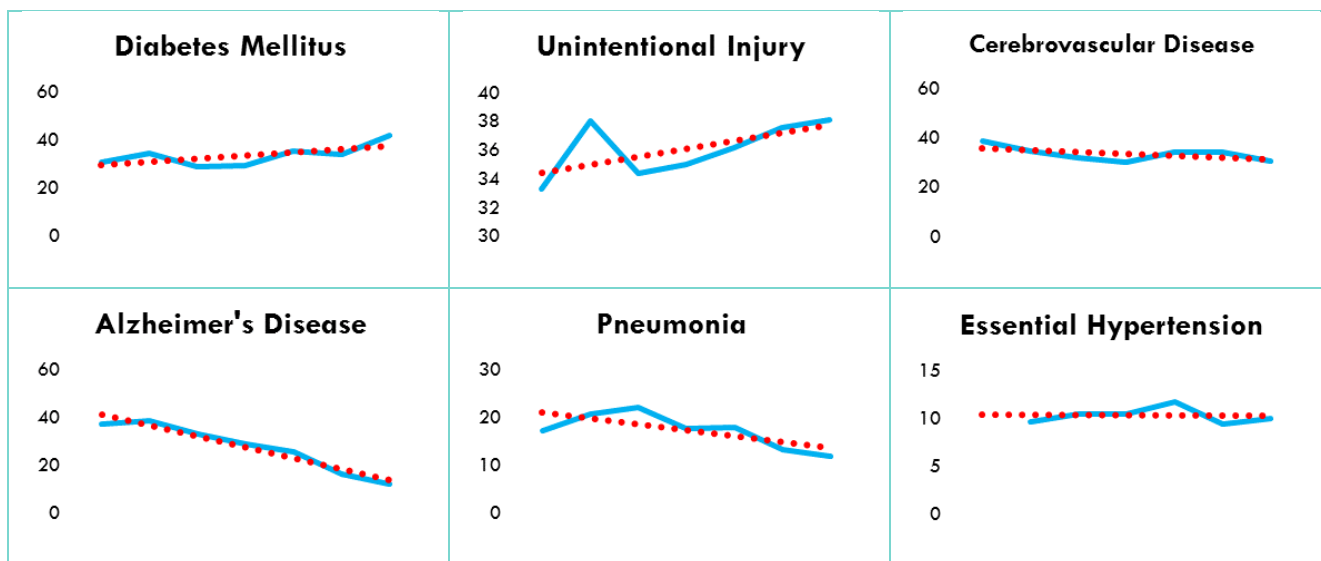
Source: Nebraska Vital Records, Nebraska Department of Health and Human Services, 2018

The following charts (Figure 16) show causes of death in Dakota County and their trends (dotted red line) sorted from highest to lowest mortality rates² for 2006-2010 combined years to 2012-2016 combined years.

Figure 16: Mortality rate (per 100,000 population) trends for selected diseases in Dakota County, 2006-2010 - 2012-2016 combined years



² Mortality rates were sorted according to the 2012-2016 combined years.



Source: Nebraska Vital Records, Nebraska Department of Health and Human Services, 2010, 2011, 2012, 2013, 2014, 2015, and 2016

Table 6 shows death rate percentage change for selected causes of death in Dakota County between 2006-2010 combined years and 2012-2016 combined years. Percentage change highlighted in green represents positive changes, and percentage of change highlighted in red represents negative values. The Diabetes Mellitus death rate increased 34.7 percent between 2006-2010 combined years and 2006-2016 combined years, while the Alzheimer’s disease death rate decreased by 67.0 percent during the same time period.

Table 6: Death rate percentage of change in Dakota County between 2006-2010 and 2012-2016*

Cause of death	% Change 2006-2010 to 2012-2016
Alzheimer's Disease	-67.0%
Heart Disease	-36.3%
Pneumonia	-30.2%
Cerebrovascular Disease	-20.5%
Cancer	-1.0%
Essential Hypertension/Renal Disease	3.1%
Suicide Deaths	4.3%
Unintentional Injury	14.4%
Chronic Lung Disease	19.9%
Diabetes Mellitus	34.7%

*Combined years. Source: Nebraska Vital Records, Nebraska Department of Health and Human Services, 2010, 2011, 2012, 2013, 2014, 2015, and 2016

The following causes of death experienced a mortality rate decrease of over 10% in Dakota County between 2006-2010 combined years and 2012-2016 combined years:

- Alzheimer's Disease (-67.0%)
- Heart Disease (-26.4%)
- Pneumonia (-30.2%)
- Cerebrovascular Disease (-20.5%)

The following causes of death experienced a mortality rate increase of over 10% in Dakota County between 2006-2010 combined years and 2012-2016 combined years:

- Diabetes Mellitus (34.7%)
- Chronic Lung Disease (19.9%)
- Unintentional Injury (14.4%)

Life Expectancy

Life expectancy at birth in Dakota County averaged 78.4 years in 2014, with females (80.2 years) expected to live 3.6 years longer than males (76.6 years). Between 1980 and 2014, life expectancy in Dakota County added 4.5 years, higher when compared to 4.2 years for the whole State of Nebraska, but lower than the nation during the same time period (5.3 years). Table 7. However, life expectancy in Dakota County is the fifth lowest among the 93 counties in Nebraska. Table 8.

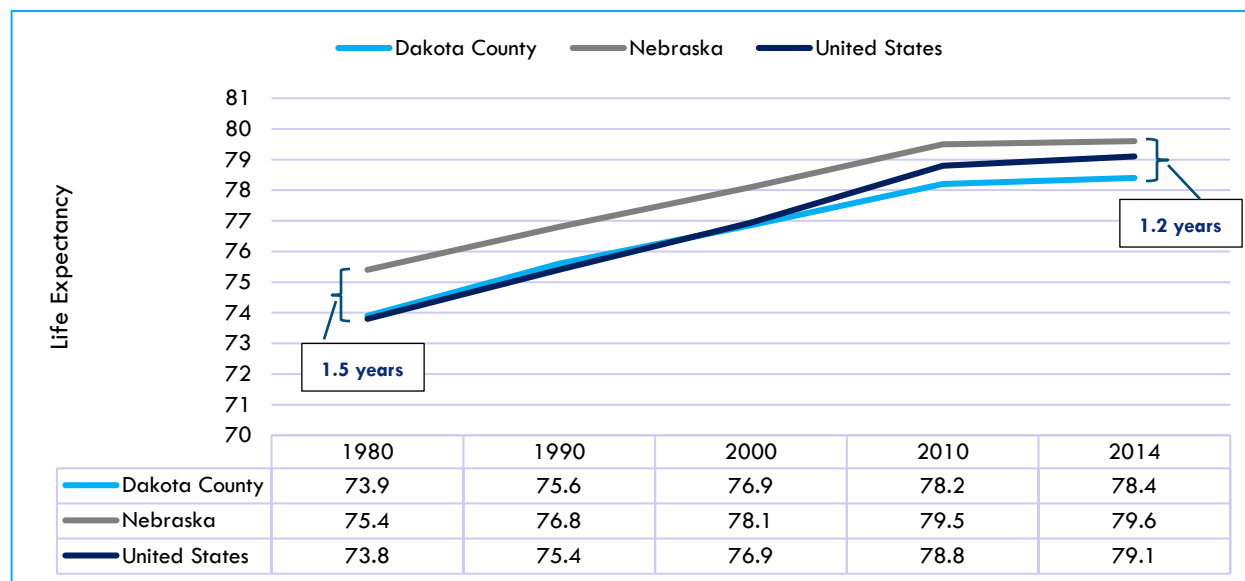
Table 7: Life Expectancy in Dakota County, Nebraska, and the U.S. 1980-2014

Life Expectancy						
	Life Expectancy by Year					Change in Life Expectancy 1980-2014 (years)
	1980	1990	2000	2010	2014	
Dakota County	73.9	75.6	76.9	78.2	78.4	+4.5
Nebraska	75.4	76.8	78.1	79.5	79.6	+4.2
United States	73.8	75.4	76.9	78.8	79.1	+5.3

Source: Institute for Health Metrics and Evaluation (IHME), US County Profile (2014 Life Expectancy)

Overall, life expectancy in Dakota County has been consistently lower when compared to the State, but the difference in life expectancy has decreased from 1.5 years in 1980 to 1.2 years in 2014 (Figure 17).

Figure 17: Life Expectancy in Dakota County, Nebraska, and the U.S., 1980-2014



Source: Institute for Health Metrics and Evaluation (IHME), US County Profile (2014 Life Expectancy). <http://www.healthdata.org> and US Health Map data visualization for life expectancies in the years 1980, 1990, 2000 and 2010: <https://vizhub.healthdata.org/subnational/usa>

“Much of the variation in life expectancy among counties can be explained by a combination of socioeconomic and race/ethnicity factors, behavioral and metabolic risk factors, and health care factors.” (Dwyer-Lindgren et al., 2017)

Table 8 shows the top 10 counties with the lowest life expectancy in 2014.

Table 8: Top 10 counties with the lowest life expectancy in Nebraska

County:	Life Expectancy (years)	Rank
Thurston	73.88	93
Scotts Bluff	78.09	92
Morrill	78.3	91

Richardson	78.34	90
Kimball	78.34	89
Dakota	78.39	88
Garden	78.43	87
Furnas	78.44	86
Nance	78.45	85
Douglas	78.64	84

Source: Institute for Health Metrics and Evaluation (IHME), US County Profile (2014 Life Expectancy)

Shortage Area Designations

Throughout the State of Nebraska, there are geographic areas, populations, and facilities with insufficient primary care, dental and mental health providers and services. Rural areas often have fewer healthcare resources, so people must travel greater distances to reach healthcare providers. Since people tend to have greater need for healthcare as they age, access to healthcare services is likely to become increasingly difficult in rural areas as rural hospitals struggle to stay operational and the proportion of elderly in the population increases. (DHHS, 2016; HRSA, <https://bhw.hrsa.gov/>).

Much of Nebraska has “state shortage area” or “national shortage area” designation for specific physician specialties, for dentists, or for psychiatrists and mental health practitioners. In fact, for psychiatry and mental health practitioners, the entire state (except for Lincoln and Omaha and their immediate surrounding areas) is a state-designated mental health shortage area (DHHS, 2016). The Rural Health Advisory Commission has the responsibility of designating shortage areas for purposes of the Nebraska rural incentive programs for the professions and specialties defined in the Act. Every 3 years a statewide review of all the shortage areas is completed by the office of Rural Health (Nebraska Rural Health Advisory Commission’s, Annual Report, 2018).

The table below summarizes shortages of health care providers by specialty. Table 9.

Table 9: Shortages of Specialty Care in Dakota County

SHORTAGE OF:								
	Internal Medicine	Family Practice	General Pediatrics	OB/GYN	Psychiatry & Mental Health	General Surgery	General Dentistry	Pediatric Dentistry & Oral Surgery
Dakota County	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes

Source: Nebraska Office of Rural Health, 2017 (<http://dhhs.ne.gov/Pages/Rural-Health-Eligible-Disciplines-and-Shortage-Areas.aspx>)

According to studies on the economic impact of rural health care, “One primary care physician in a rural community creates 23 jobs annually. On average, 14 percent of total employment in rural communities is attributed to the health sector”. (Doeksen et al., 2012).

Table 10 shows the Health Professionals Shortage Areas (HPSAs) designated by HRSA (Health Resources and Services Administration) as having shortages of primary care, dental care, or mental health providers and may be geographic (a county or service area), population (e.g., low income or Medicaid eligible) or facilities (e.g., federally qualified health centers, or state or federal prisons) (source: <https://data.hrsa.gov/tools/shortage-area/hpsa-find>). HRSA has identified one discipline in Dakota County with Health Professional Shortage Areas (HPSAs) (mental health).

Table 10: Health Professional Shortage Areas (HPSAs) in Dakota County

Discipline	HPSA Name	Designation Type
Primary Care	N.A.	N.A.
Dental Health	N.A.	N.A.
Mental Health	Catchment Area 4	Geographic HPSA

Source: HRSA Find (<https://data.hrsa.gov/tools/shortage-area/hpsa-find>)

Nursing Workforce

According to the Nebraska Center for Nursing “2018 RN/LPN Biennial report”, there are 30 RNs and 6 LPNs working in Dakota County. The current RN workforce rate per 100,000 population in the State of Nebraska is 1,300.6. The total RN workforce rate for Dakota County is 142.8 per 100,000 population, over 9 times less RNs per 100,000 population when compared to the State of Nebraska.

LPNs also show lower workforce rates in Dakota County when compared to the State (29.7 vs. 260.6 LPNs per 100,000 population, respectively), nearly 9 times less LPNs per 100,000 population when compared to the State of Nebraska. Table 11.

Table 11: RN and LPN workforce in Dakota County

County:	RNs - 2016	LPNs - 2017	RNs per 100,000	LPNs per 100,000
Dakota	30	6	142.8	29.7
Nebraska	23,754	5,004	1,300.6	260.6

Source: Nebraska Center for Nursing, 2018 RN/LPN Biennial Report.

Chronic Disease

Cardiovascular Disease

Cardiovascular disease (CVD) includes all diseases of the heart and blood vessels, including coronary heart disease, stroke, congestive heart failure, hypertension disease, and atherosclerosis. CVD is a chronic disease, with an onset that often extends decades after exposure to one or more risk factors (DHHS, 2016).

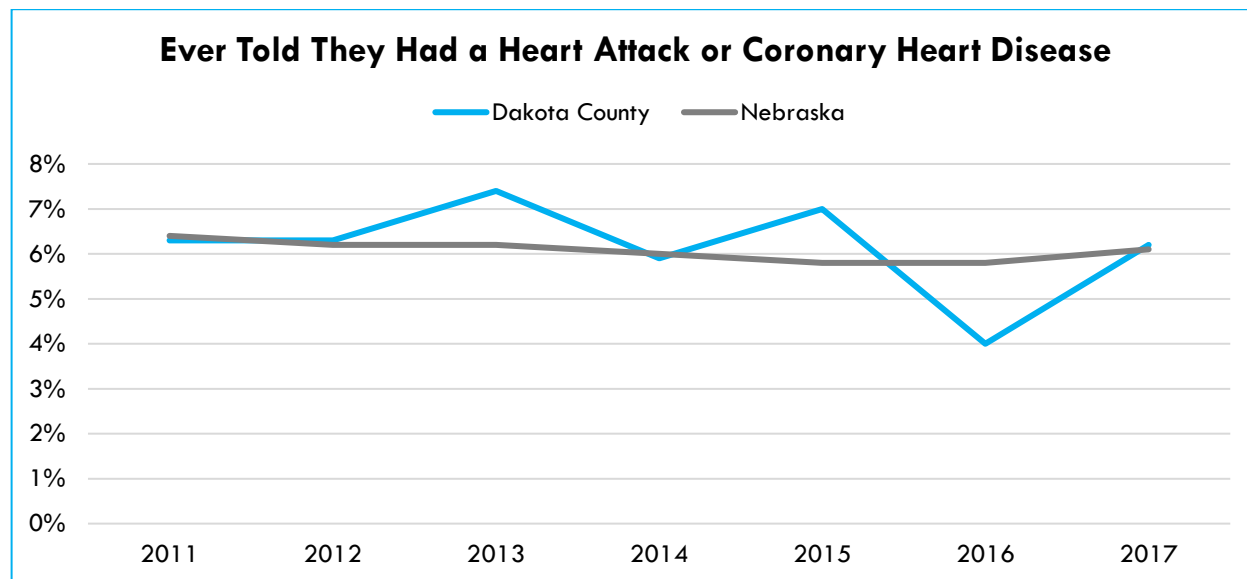
Heart Disease

Coronary heart disease (or coronary artery disease) is a narrowing of the small blood vessels that supply blood and oxygen to the heart (coronary arteries). Coronary heart disease often results from the buildup of fatty material and plaque (atherosclerosis). As the coronary arteries narrow, the flow of blood to the heart can slow or stop. This disease can cause chest pain (stable angina), shortness of breath, heart attack, or other symptoms.

Prevalence

According to the 2017 Nebraska BRFSS, 1 in 16 Dakota County adults (6.2%) reported that they have ever been told they had a heart attack or coronary heart disease. This percentage is similar when compared to the State (6.1%) reporting a heart attack or coronary heart disease. Figure 18.

Figure 18: Ever told they had a heart attack or coronary heart disease, Dakota County vs. Nebraska 2011-2017



Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

According to the **Community Health Assessment Surveys**, “heart disease and stroke” is an ongoing concern among Dakota County residents.

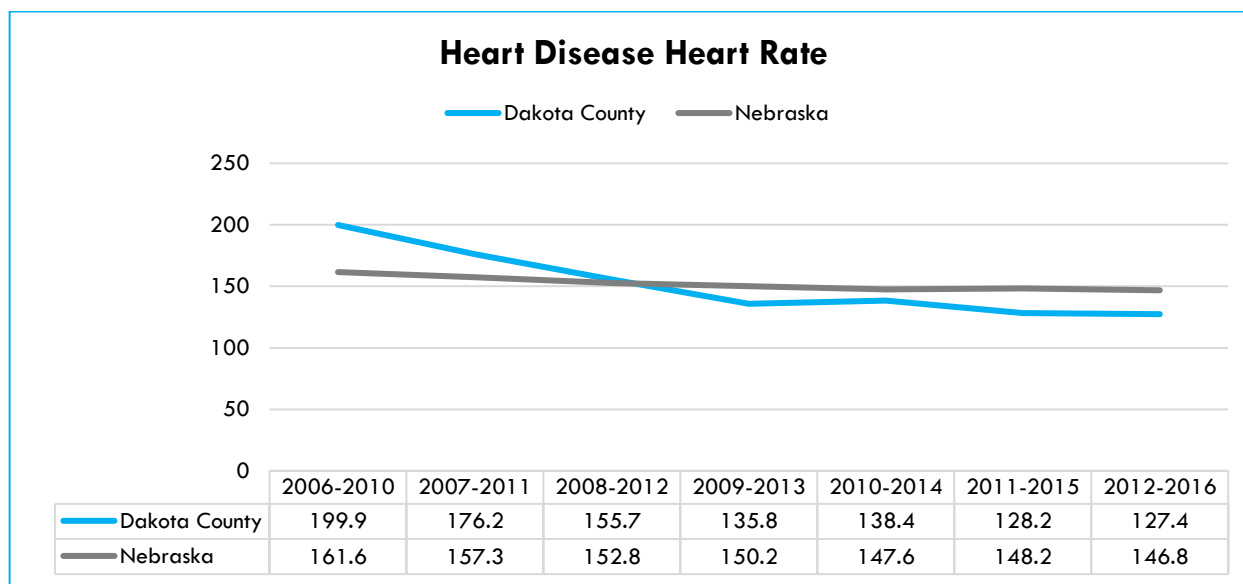
Mortality

There were 27 deaths due to heart disease in Dakota County for years 2012-2016 combined, accounting for 26.1 percent of all deaths among Dakota County residents (ranked as the second leading cause of death among Dakota County residents). In Dakota County and in Nebraska, cancer has been the leading cause of death since 2009.

The age-adjusted rate (AAR) for heart disease death in Dakota County declined 36.3 percent between 2006-2010 years combined and the 2012-2016 years combined.

Between 2006-2010 and 2008-2012 years combined, the heart disease mortality rate in Dakota County was higher than the State, but it has been lower since then when compared to the State. Figure 19.

Figure 19: Heart Disease Death Rate per 100,000 Population (age adjusted), Dakota County vs. Nebraska, 2006-2010 to 2012-2016*



*Five Year Moving Averages 2001-2005 Combined to 2013-2017 Combined. Source: Nebraska Vital Records, Nebraska Department of Health and Human Services

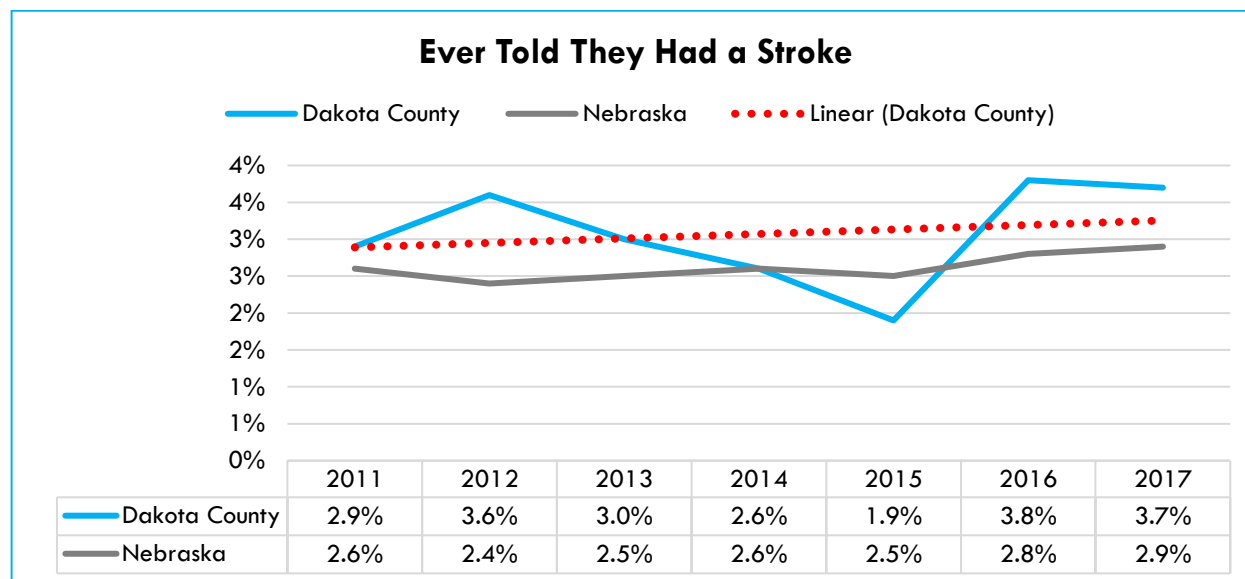
Stroke

A stroke, sometimes called a brain attack, occurs when something blocks blood supply to part of the brain or when a blood vessel in the brain bursts. In either case, parts of the brain become damaged or die. A stroke can cause lasting brain damage, long-term disability, or even death (CDC, 2019).

Prevalence

According to the 2013-2017 combined years, 1 in 27 Dakota County adults (3.7%) reported that they have ever been told they had a stroke. This percentage has been increasing since 2011 (see trend line in Figure 20), and has been higher compared the State, with the exception in 2015.

Figure 20: Ever told they had a stroke, Dakota County vs. Nebraska 2011-2017



Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

According to the **Community Health Assessment Surveys**, “stroke” is an ongoing concern among Dakota County residents.

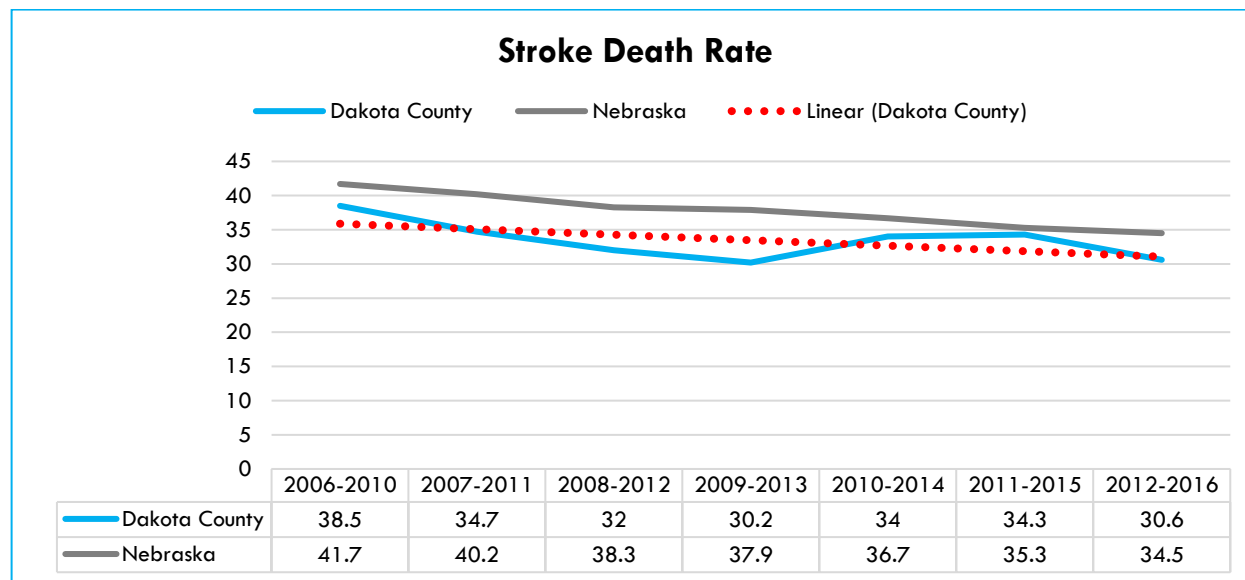
Mortality

Stroke was the cause of 7 deaths in Dakota County during 2012-2016 combined years, accounting for 6.3 percent of all Dakota County deaths during that time period.

The age-adjusted death rate due to stroke in Dakota County has decreased from 38.5 deaths per 100,000 population for 2006-2010 combined years to 30.6 deaths per 100,000 population for 2012-2016 combined years, a 20.5 percent overall decrease (Figure 21). As a result, stroke dropped from the fourth to the sixth leading cause of death in Dakota County beginning in 2011-2015 combined years.

Nebraska death rates due to stroke have experienced a similar decrease between 2006-2010 combined years and 2012-2016 combined years, decreasing 17.3 percent from 40.2 to 34.5 deaths per 100,000 population, respectively. Figure 21.

Figure 21: Stroke Death Rate per 100,000 Population (age adjusted), Dakota County vs. Nebraska, 2006-2010 to 2012-2016*



*Five Year Moving Averages 2001-2005 Combined to 2013-2017 Combined. Source: Nebraska Vital Records, Nebraska Department of Health and Human Services

Clinical Risk Factors for Cardiovascular Disease

High Blood Pressure

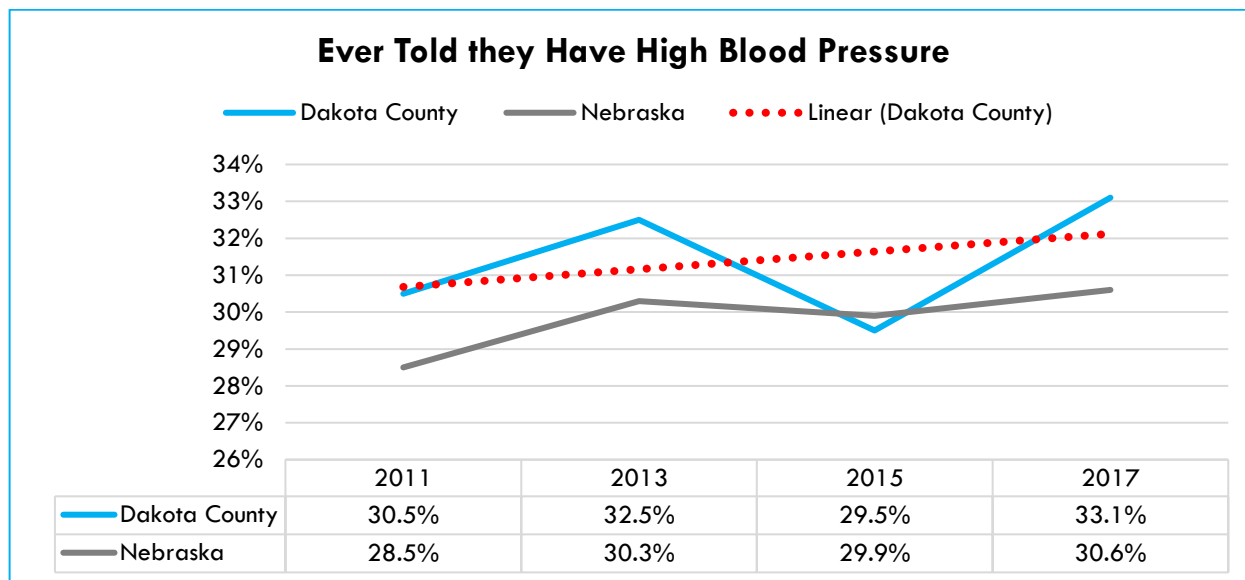
High blood pressure (also referred to as hypertension) occurs when an individual has a systolic blood pressure of 140 mg/dL or higher or a diastolic blood pressure of 90 mg/dL or higher. High blood pressure often goes undetected or is not properly managed. About 1 in 3 U.S. adults -or about 75 million people- have high blood pressure. Only about half (54%) of these people have their high blood pressure under control. Many youth are also being diagnosed with high blood pressure. This common condition increases the risk for heart disease and stroke, two of the leading causes of death for Americans (Merai et al. 2016; Jackson et al. 2018).

Prevalence in Dakota County

In Dakota County, Nebraska, and nationwide, prevalence of high blood pressure has increased in recent years. In Dakota County, the proportion of adults reporting that they have been told they have high blood pressure increased from 30.5% in 2011 to 33.1% in 2017. Since 2011, Dakota County adults reported having been diagnosed with high

blood pressure in a higher proportion when compared to the State, except in 2015.
Figure 22.

Figure 22: Ever Told they Have High Blood Pressure among Adults, Dakota County and Nebraska, 2011, 2017



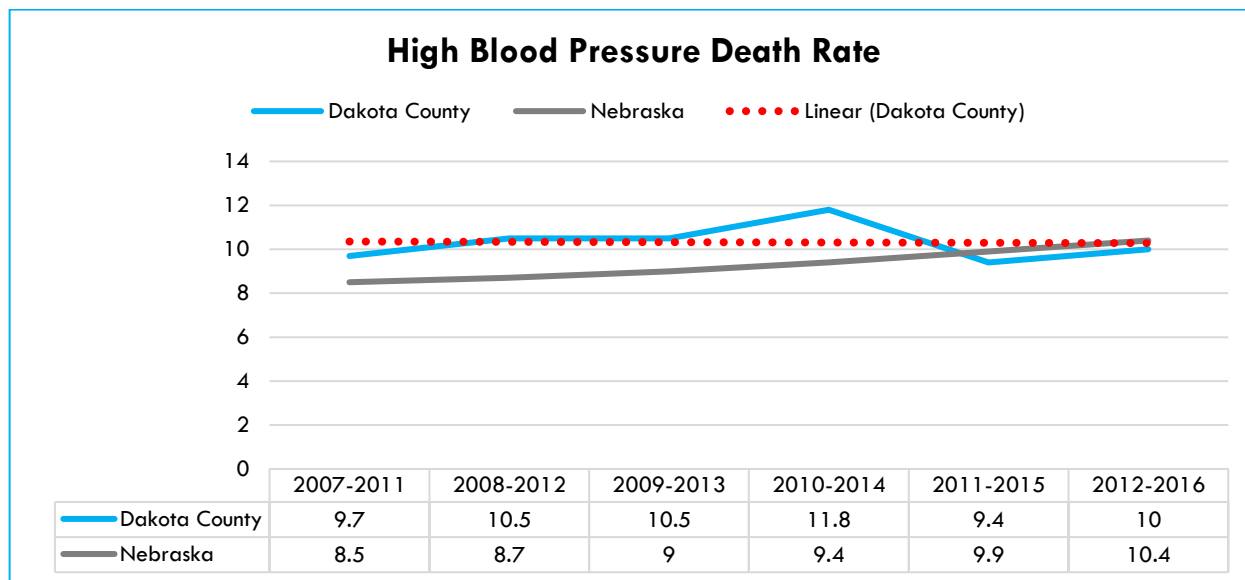
Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

The majority of adults who have been diagnosed with high blood pressure (80.4% in Dakota County and 78.6% in Nebraska in 2017) reported currently taking medication to control their hypertension. This percentage declined in Dakota County between 2011 (83.6%) and 2017 (80.4%).

Mortality

High blood pressure was the cause of 4 deaths in Dakota County for 2012-2016 combined years, making it the 9th leading cause of death in Dakota County. The age-adjusted death rate due to high blood pressure in Dakota County has been stable from 9.7 deaths per 100,000 population in the 2007-2011 combined years to 10.0 deaths in the 2012-2016 combined years (Figure 23).

Figure 23: High Blood Pressure Death Rate per 100,000 population (age-adjusted), Dakota County and Nebraska, 2007-2011 combined to 2012-2016 combined*



*Five Year Moving Averages 2007-2011 Combined to 2012-2016 Combined. Source: Nebraska Vital Records, Nebraska Department of Health and Human Services

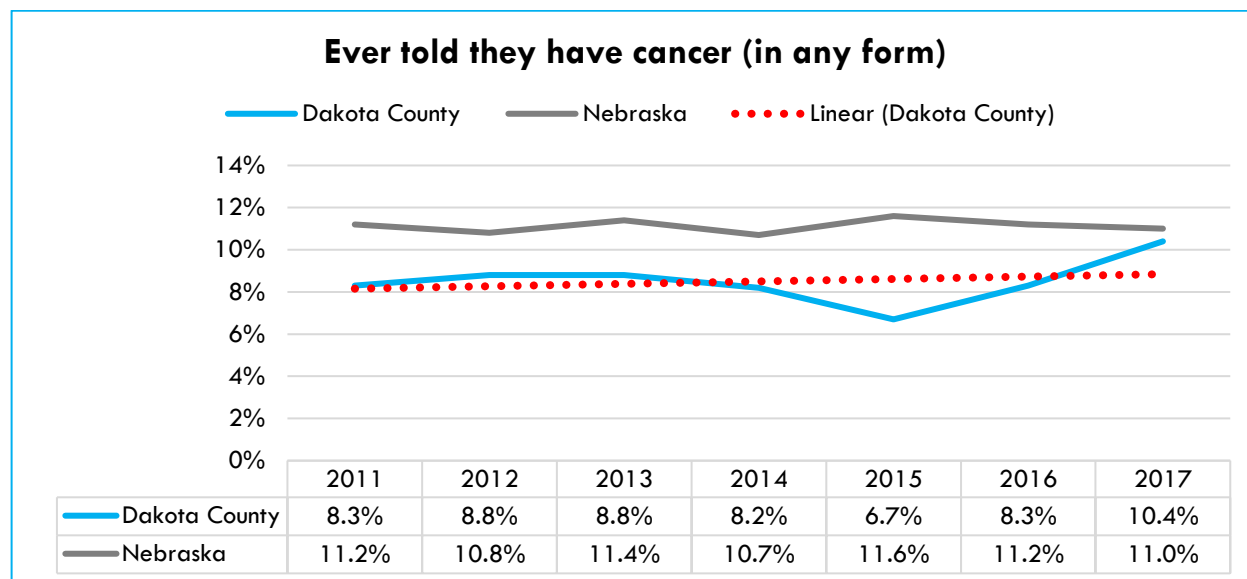
Cancer

Cancer is a group of diseases characterized by uncontrolled growth and spread of abnormal cells. If the spread is not controlled, it can result in death. Cancer is caused by both external factors (e.g., tobacco, infectious organisms, chemicals, and radiation) and internal factors (e.g., inherited mutations, hormones, immune conditions, and mutations that occur from metabolism). These causal factors may act together or in sequence to initiate and promote carcinogenesis. Ten or more years often pass between exposures to external factors and detectable cancer (Nebraska DHHS, 2016).

Cancer Prevalence

According to results from the 2017 Nebraska BRFSS, about 1 in 10 Dakota County adults (10.4%) reported that they have ever been told they have cancer. Figure 24. In 2011, 8.5 percent of Dakota County adults reported ever being told they have some other form of cancer, compared to 10.4 percent in 2017. Overall, these percentages have been stable since 2011, and they have been lower when compared to the State.

Figure 24: Ever been told they have cancer, 2011-2017

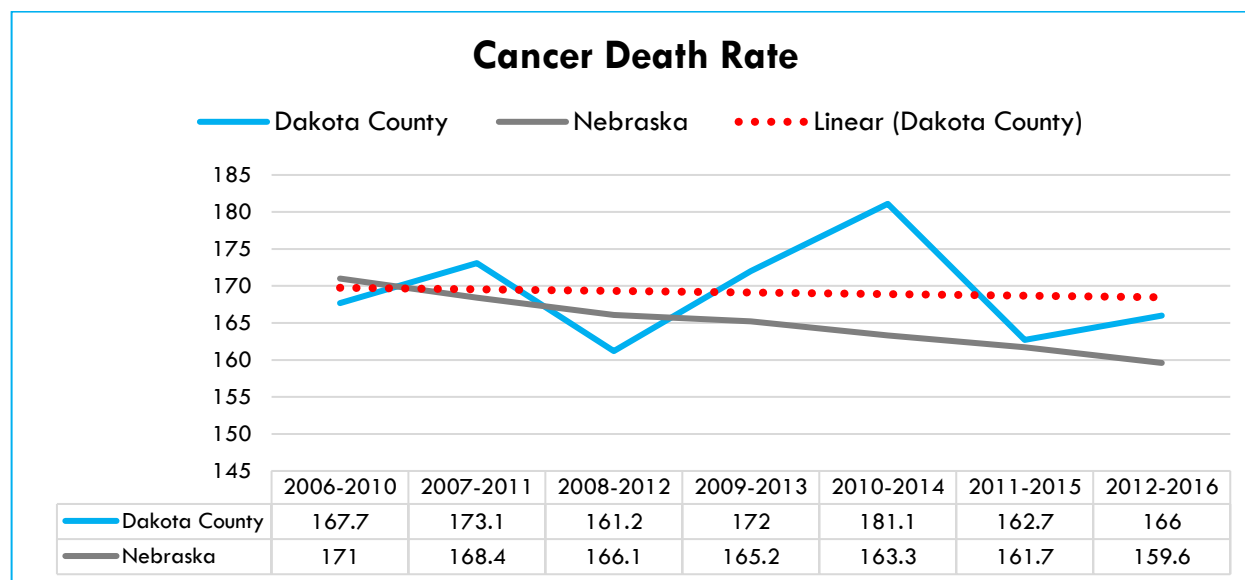


Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS), 2017

Cancer Mortality

The Dakota County’s age-adjusted cancer death rate per 100,000 population decreased 1.0 percent between 2006-2010 combined years and 2012-2016 combined years, from 166.7 to 166.0 per 100,000 population, respectively. The cancer rate for the State during the same time period decreased 6.7 percent (from 171.0 to 159.6 per 100,000 population). On average, cancer mortality rates in Dakota County have been 4.1 points per 100,000 population higher than the State between 2005-2010 combined years and 2012-2016 combined years (169.1 vs. 165.0, respectively). (Figure 25).

Figure 25: Cancer Death Rate per 100,000 population (age adjusted), Dakota County and Nebraska, 2006-2010 and 2012-2016 combined years*



*Five Year Moving Averages 20016-2010 to 2012-2016 Combined. Source: Nebraska Vital Records, Nebraska Department of Health and Human Services.

Diabetes

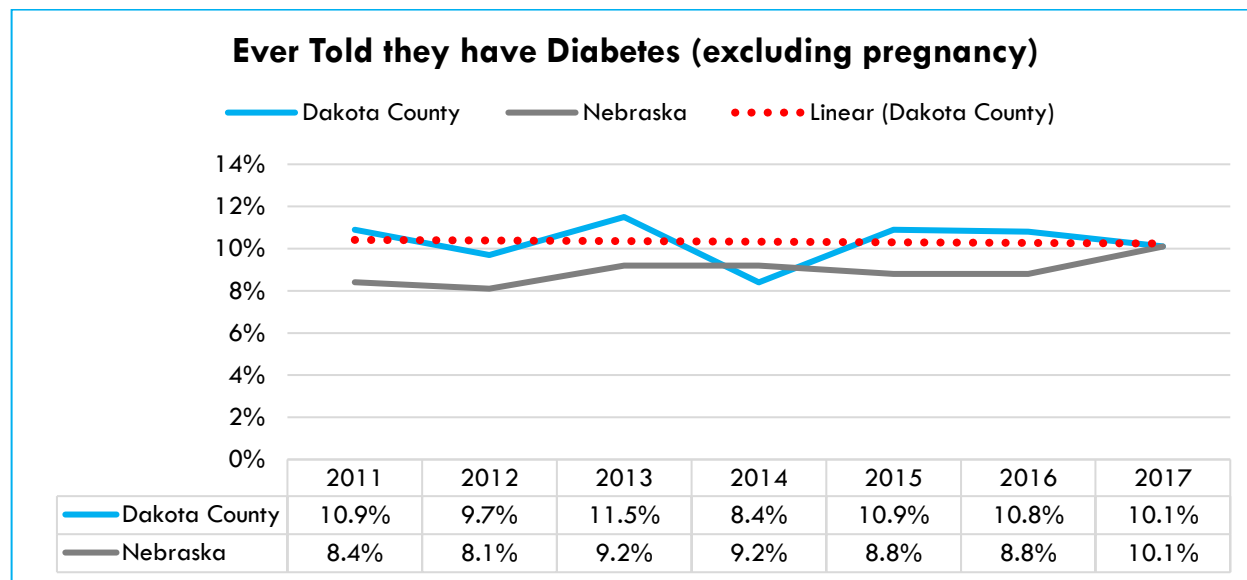
Diabetes is a chronic (long-lasting) health condition that affects how the body turns food into energy. Diabetes is characterized by elevated blood sugar levels caused by the body not producing or properly using insulin. Insulin helps glucose (sugar) leave the blood and enter the body’s cells. Type 1 diabetes occurs when the body does not produce insulin, affecting about 5-10 percent of people with diabetes. Type 2 diabetes develops when the body does not make enough insulin or does not efficiently use insulin, affecting about 90-95 percent of people with diabetes. (Nebraska DHHS, 2016; CDC, 2019).

Diabetes Prevalence

The self-reported prevalence of diagnosed diabetes among adults in Dakota County has remained stable and slightly higher when compared to the State between 2011 and 2017 (Figure 26). In 2011, 10.9 percent of Dakota County adults reported having ever been told that they have diabetes, which decreased to 10.1 percent in 2017).

According to the **Community Health Assessment Surveys**, diabetes is an ongoing concern among Dakota County residents.

Figure 26: Ever Told they have Diabetes (excluding pregnancy) among Adults*, Dakota County and Nebraska, 2011-2017

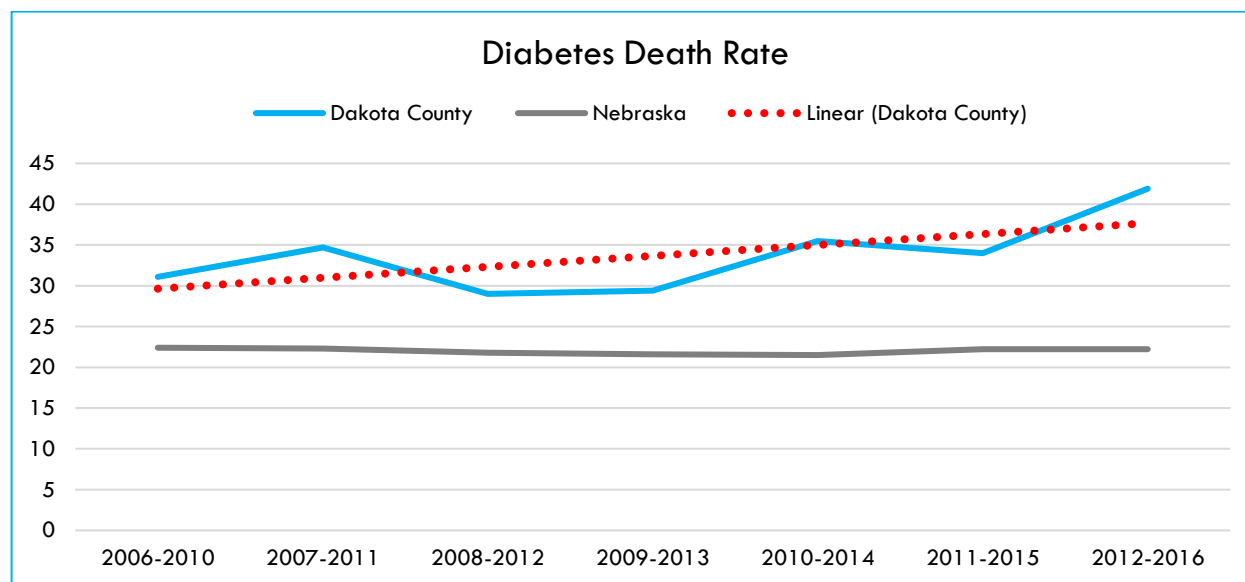


*Percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have diabetes (excluding pregnancy. Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

Diabetes Mortality

Diabetes was the primary cause of 16 deaths in Dakota County in 2012-2016 combined years, making it the 3rd leading cause of death in the health district. Age-adjusted diabetes death rates in Dakota County have increased since the 2006-2010 combined years (see linear trend line in Figure 27). Between 2006-2010 and 2012-2016 combined years, diabetes death rates in Dakota County have been significantly higher when compared to the State.

Figure 27: Diabetes Death Rate per 100,000 population (age adjusted), Dakota County and Nebraska, 2006-2010 and 2012-2016 combined years*



*Five Year Moving Averages 2006-2010 and 2012-2016 Combined. Source: Nebraska Vital Records, Nebraska Department of Health and Human Services

RISK AND PROTECTIVE FACTORS FOR CHRONIC DISEASE

Tobacco Use

Cigarette smoking remains the leading cause of preventable death and disability in the United States, despite a significant decline in the number of people who smoke. Over 16 million Americans have at least one disease caused by smoking. This amounts to \$170 billion in direct medical costs that could be saved every year if we could prevent youth from starting to smoke and help every person who smokes to quit.

There is no safe level of exposure to secondhand smoke. It causes stroke, lung cancer, and coronary heart disease in adults. Nebraska has a comprehensive smoke-free law that prohibits smoking in all indoor areas of workplaces, restaurants, and bars that has been in effect since 2009. Since that law was adopted, Nebraska has continued to expand areas where residents are protected from exposure to secondhand smoke.

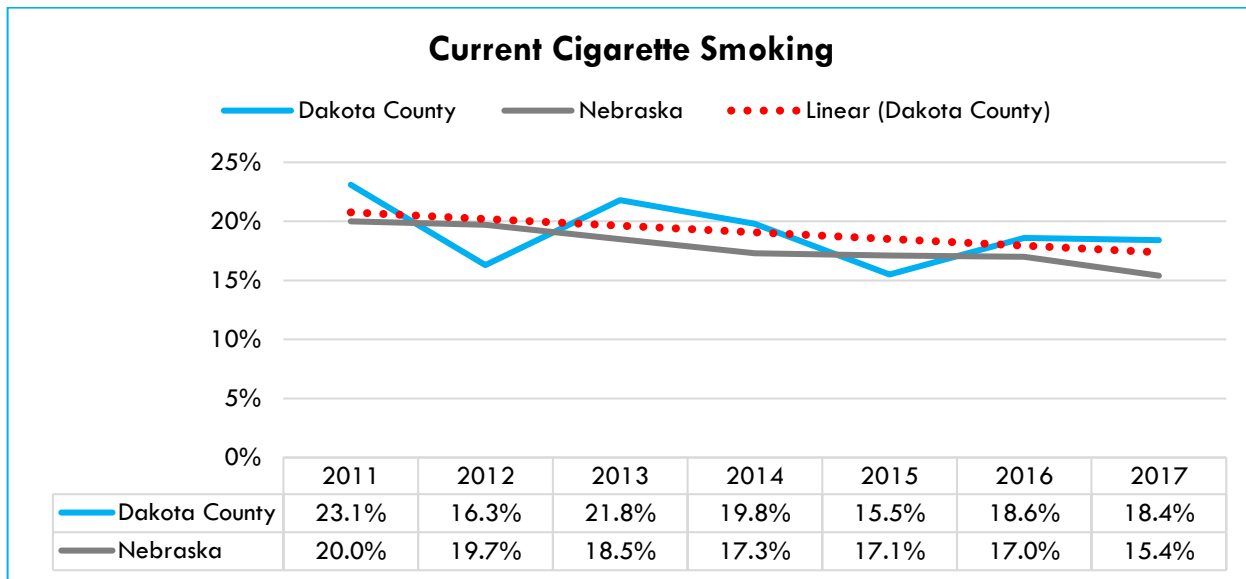
Smoking-related costs due to medical care were estimated at \$795 million annually in Nebraska, while the annual cost of smoking-related lost productivity in the state was estimated at an additional \$532 million. (CDC, 2019³).

Tobacco Use among Adults

Cigarette Smoking among Adults

In 2017, about 1 in 5 Dakota County adults aged 18 and older (18.4%) reported that they currently smoke cigarettes. Cigarette smoking among Dakota County adults has remained stable since 2011, although with a negative linear trend, while cigarette smoking among Nebraska adults has steadily decreased from 20.0 percent in 2011 to 15.4 percent in 2017 (Figure 28). Overall, cigarette smoking among Dakota County adults has remained higher when compared to the State since 2011.

Figure 28: Current Cigarette Smoking among Adults*, Dakota County and Nebraska, 2011-2017



*Percentage of adults 18 and older who report that they currently smoke cigarettes either every day or on some days. Source: Behavioral Risk Factor Surveillance System (BRFSS, 2011-2017)

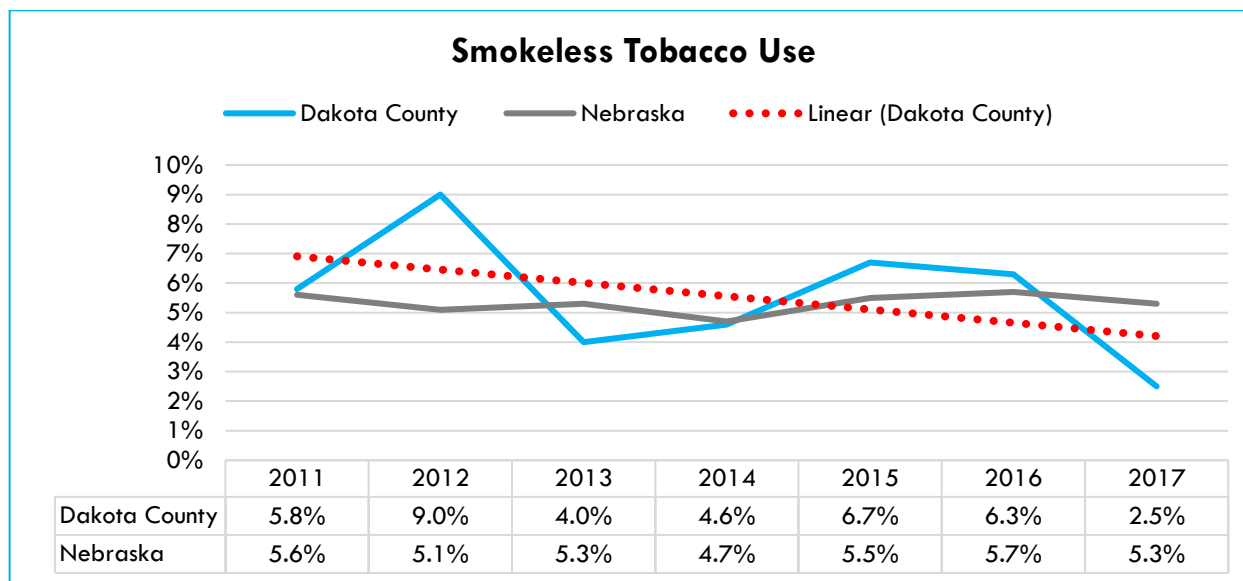
Smokeless Tobacco Use among Adults

In 2017, about 1 in 40 Dakota County adults (2.5%) reported that they currently use smokeless tobacco. Smokeless tobacco use among Dakota County adults has decreased

³ <https://www.cdc.gov/tobacco/about/osh/state-fact-sheets/nebraska/>

between 2011 and 2017. Figure 29. The percentage of smokeless tobacco users among Dakota County adults decreased from 5.8 percent in 2011 to 2.5 percent in 2017.

Figure 29: Current Smokeless Tobacco Use among Adults*, Dakota County and Nebraska, 2011-2017



*Percentage of adults 18 and older who report that they currently use smokeless tobacco products (chewing tobacco, snuff, or snus) either every day on some days. Source: Behavioral Risk Factor Surveillance System (BRFSS, 2011-2017)

Tobacco Use among Youth

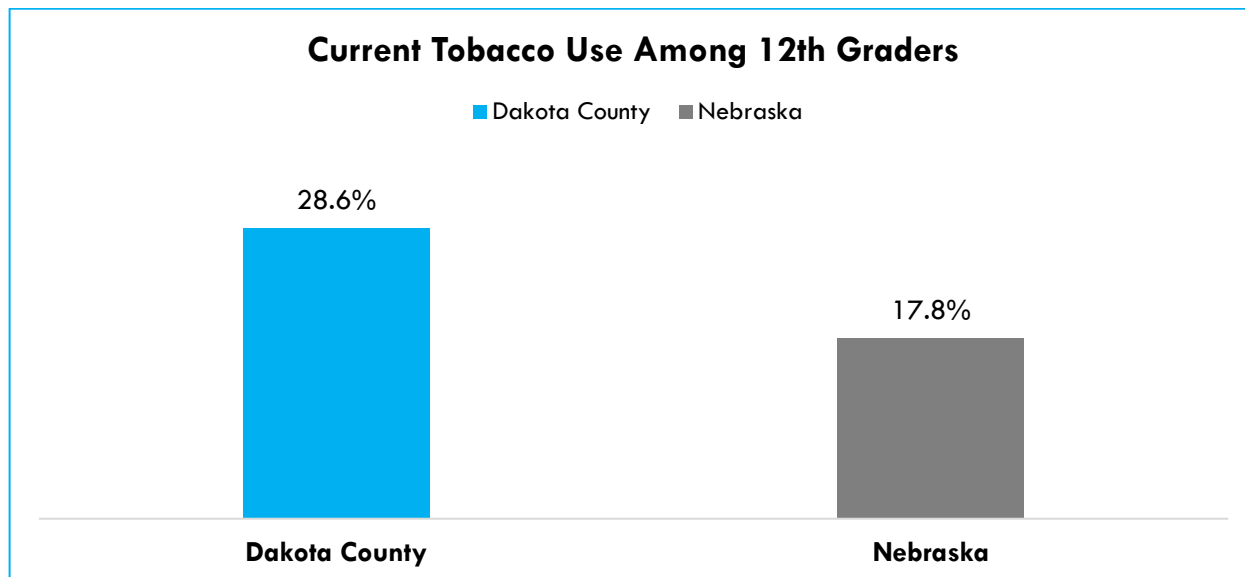
Cigarette Smoking among Youth

In 2017, about 1 in 13 Nebraska high school students (7.4%) reported smoking cigarettes on one or more of the past 30 days. Between 2003 and 2017 the percentage of Nebraska high school students who reported cigarette smoking declined dramatically from 24.1 percent to 7.4 percent, respectively.

High school students in Nebraska compared to their counterparts nationally were less likely to report cigarette smoking in 2017 (7.4% and 8.8%, respectively).

In 2016, about 1 in 4 12th grade students (28.6%) in Dakota County reported using tobacco, which is higher when compared to 12th graders using tobacco in the State (17.8%). Figure 30.

Figure 30: Current Tobacco Use among 12th Graders, Dakota County and Nebraska, 2016



Source: Nebraska Risk and Protective Factor Student Survey (2016).

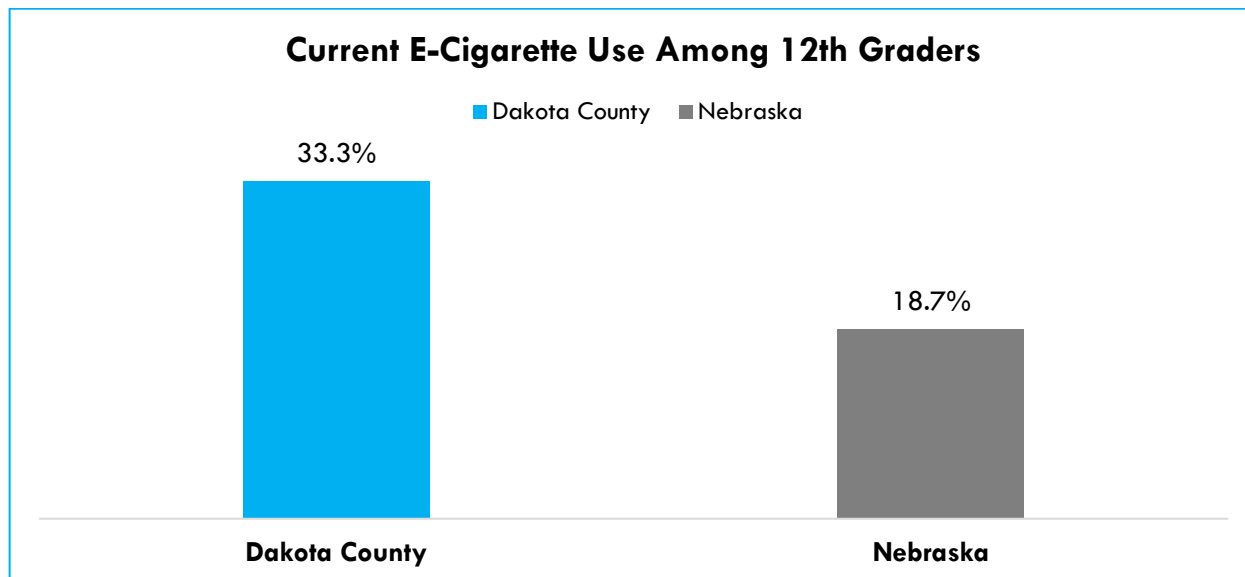
E-Cigarette Use among Youth

In 2017, more than 1 in 3 high school students (36.1%) in Nebraska reported that they had ever used electronic vapor products such as e-cigarettes, e-cigars, e-pipes, vape pipe, vaping pens, e-hookahs, and hookah pens (i.e., e-cigarettes) (2017 YRBS).

The proportion of high school students that reported using an electronic vapor product during the past 30 days decreased between 2015 (22.3%) and 2017 (9.4%) (2017 YRBS). Few differences were seen by gender for lifetime and past 30 day use of electronic vapor products. As grade level increased, the percentage of students that reported lifetime and past 30-day electronic vapor use increased.

In 2016, 33.3% of 12th graders in Dakota County reported that they had used an e-cigarette in the last 30 days, which is higher when compared to the State (18.7%). Figure 31.

Figure 31: Current Electronic Vapor Use among 12th Graders, Dakota County and Nebraska, 2016



Source: Nebraska Risk and Protective Factor Student Survey (2016).

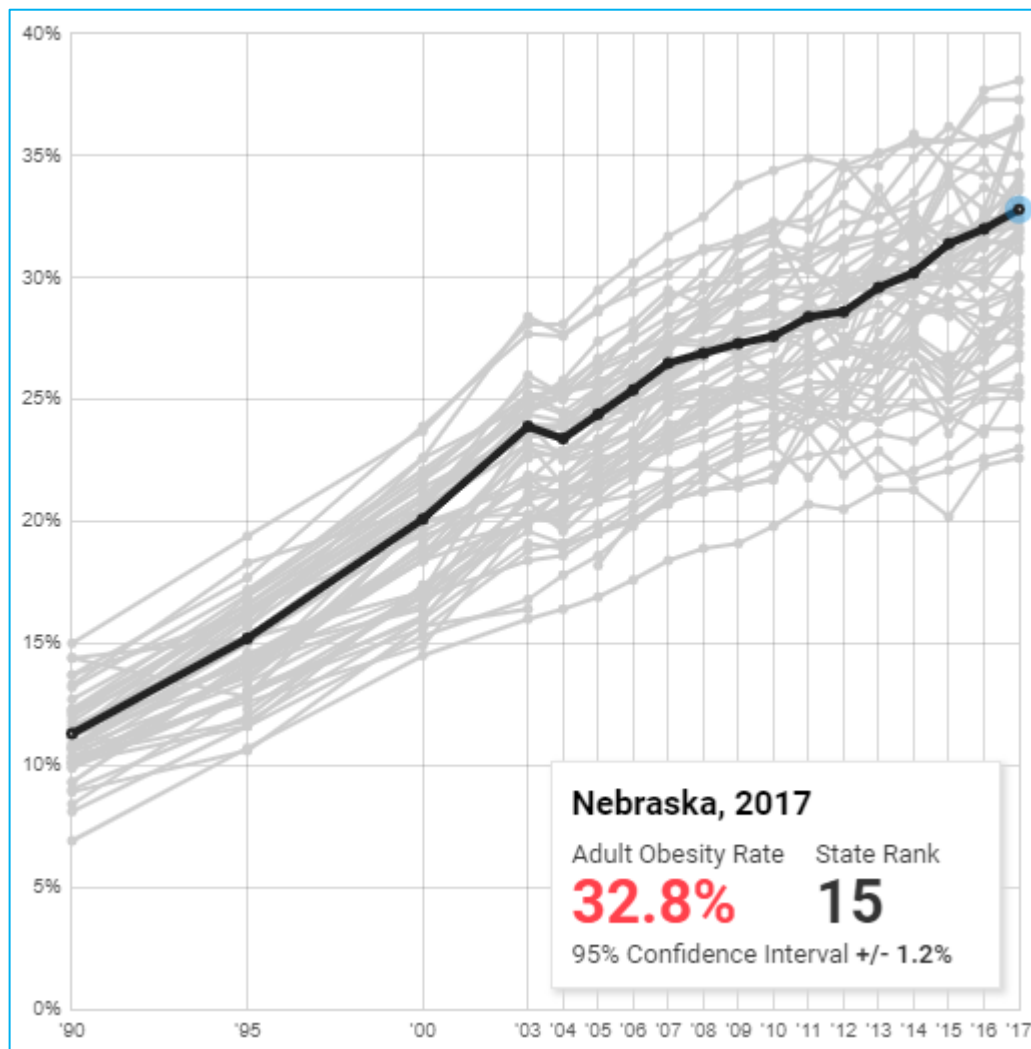
Obesity

Overweight and obesity are measured by an individual's body mass index (BMI) which is calculated as weight in kilograms divided by height in meters squared. Overweight (BMI=25.0-29.9) and obese (BMI=30.0+) individuals are at increased risk for many health conditions, including hypertension, type 2 diabetes, coronary heart disease, stroke, and some cancers. However, even modest weight loss (e.g., 5-7% of total body weight) is likely to produce health benefits (Nebraska DHHS, 2016).

Obesity among Adults

The proportion of adults who are at risk due to obesity has increased considerably over the past 25 years in Nebraska, increasing from 11.6 percent in 1990 to 32.8 percent in 2017. Currently, Nebraska is ranked 15th for obesity rate among all States in the U.S. Figure 32.

Figure 32: Nebraska Adult Obesity Rate, 1990-2017

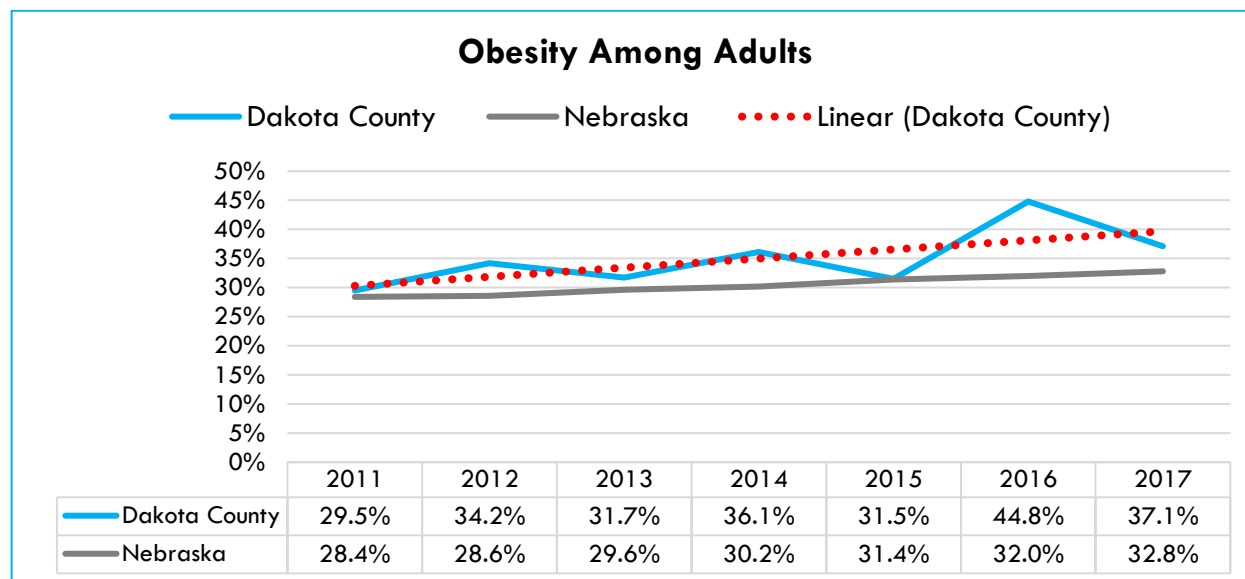


Source: BRFSS (2018). <https://www.stateofobesity.org/adult-obesity/>

During the past five years, obesity among Nebraska adults increased from 29.6 percent in 2013 to 32.8 percent in 2017. (Figure 33).

The prevalence of obesity among adults in Dakota County has been higher when compared to the State. In 2016, the difference between Dakota County adults who reported being obese was statistically significantly higher when compared to Nebraska adults who reported being obese (44.8% vs. 32.0%, respectively). Figure 33.

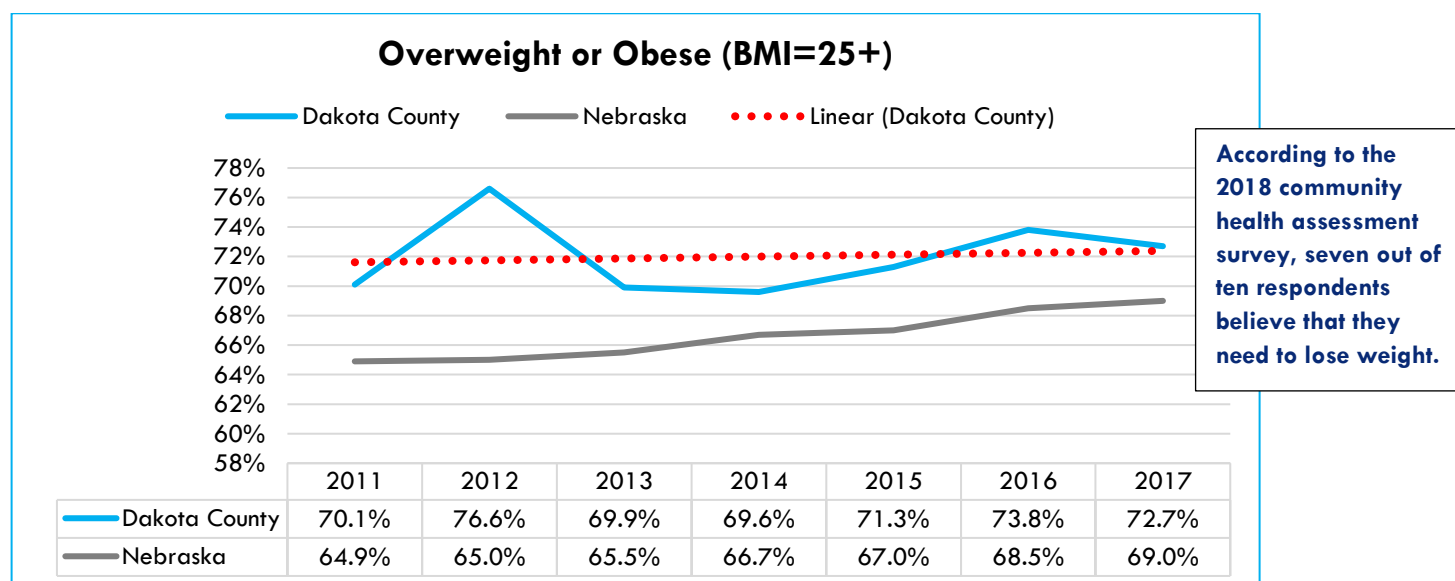
Figure 33: Obesity among Adults, Dakota County and Nebraska, 2011-2017



Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

Dakota County adults report being overweight or obese at a higher percentage when compared to Nebraska adults. On average, Dakota County adults have reported being overweight or obese by 5.3 percent points higher when compared to all adults in the State between 2011 and 2017. Seven out of ten Dakota County adults (72.7%) reported heights and weights that classified them as overweight or obese in 2017. Figure 34.

Figure 34: Overweight or Obese among Adults, Dakota County and Nebraska, 2011-2017



According to the National Survey of Children's Health, about 1 in 6 Nebraska children 10-17 were obese (15.5%) in 2016/17, an increase from 2011/12 (13.8%).

According to the 2017 YRBS, slightly more than half of all Nebraska high school students (53.1%) reported that they were about the right weight while about 3 in 10 (29.4%) felt that they were slightly or very overweight.

Male students were more likely than female students to report being slightly or very underweight (23.8% and 10.7%, respectively) while female students were more likely than male students to report being slightly or very overweight (33.8% and 25.3%, respectively).

Nutrition

The Dietary Guidelines for Americans (USDA and HHS, 2011) provide U.S. consumers with information and guidance on how to follow a healthy eating pattern, emphasizing nutrient density over energy density, as well as physical activity to help achieve and maintain a healthy weight, promote health, and prevent disease.

The guidelines encourage Americans to balance calories with physical activity to manage weight. They also encourage increased consumption of fruits, vegetables, whole grains, fat-free and low-fat dairy products, and seafood. In contrast, they encourage decreased consumption of foods that are high in salt, saturated and trans fats, cholesterol, added sugars, and refined grains. (Nebraska DHHS, 2016).

Fruit and Vegetable Consumption

Fruit and Vegetable Consumption among Adults

In 2017, 35.3 percent of Dakota County adults reported that they consumed fruits an average of less than one time per day during the past month. The 2017 percentage was lower when compared to the State (36.9%).

The 2017 percentage of Nebraska adults reporting that they consumed vegetables an average of less than one time per day during the past month (15.0%) was considerably lower than fruit consumption, suggesting that adults consume at least some vegetables more often than fruits.

Fruit and Vegetable Consumption among Youth

The percentage of Nebraska high school students who reported consuming fruits or vegetables five or more times per day during the past seven days has remained relatively stable between 2003 and 2017 (data is not available at the health district or county level). During 2017, about 1 in 7 high school students (14.7%) reported consuming fruits and vegetables five or more times per day during the past seven days (YRBS, 2017).

Beverage Consumption

Beverage Consumption among Adults

Over one-third of Dakota County adults (36.2%) in 2013 reported consuming sugar-sweetened beverages an average of one or more times per day during the past month, 7.7 percent points higher when compared to the State (28.5%).

Beverage Consumption among Youth

Youth in Nebraska continue to consume large amounts of sugar-sweetened beverages, including regular (non-diet) soda or pop, full calorie sports drinks, and other sugar-sweetened beverages (such as sweet tea or coffee, flavored milk and juice drinks, or energy drinks).

In 2017, nearly 1 in 3 Nebraska high school students (30.6%) reported drinking any sugar sweetened beverage on average of one or more times per day during the past seven days.

Male students were almost two times more likely than female students to report drinking any type of sugar sweetened beverage (39.7% and 21.1%, respectively). Males were significantly more likely to report drinking soda than females (24.2% and 11.9%, respectively). The same was reported for sports drinks (16.9% and 6.7%, respectively).

Recent research shows that “sugar-sweetened beverage intake associates with all-cause mortality independently of other dietary and lifestyle factors and obesity.” (Anderson et al., 2019).

Salt Consumption among Adults

Over half (52.9%) of Dakota County adults in 2015 reported that they were watching or reducing their salt intake, percentage higher when compared to the State (46.8%). A larger proportion of males are watching or reducing their salt intake compared to females in Dakota County (58.5% vs. 48.7%, respectively).

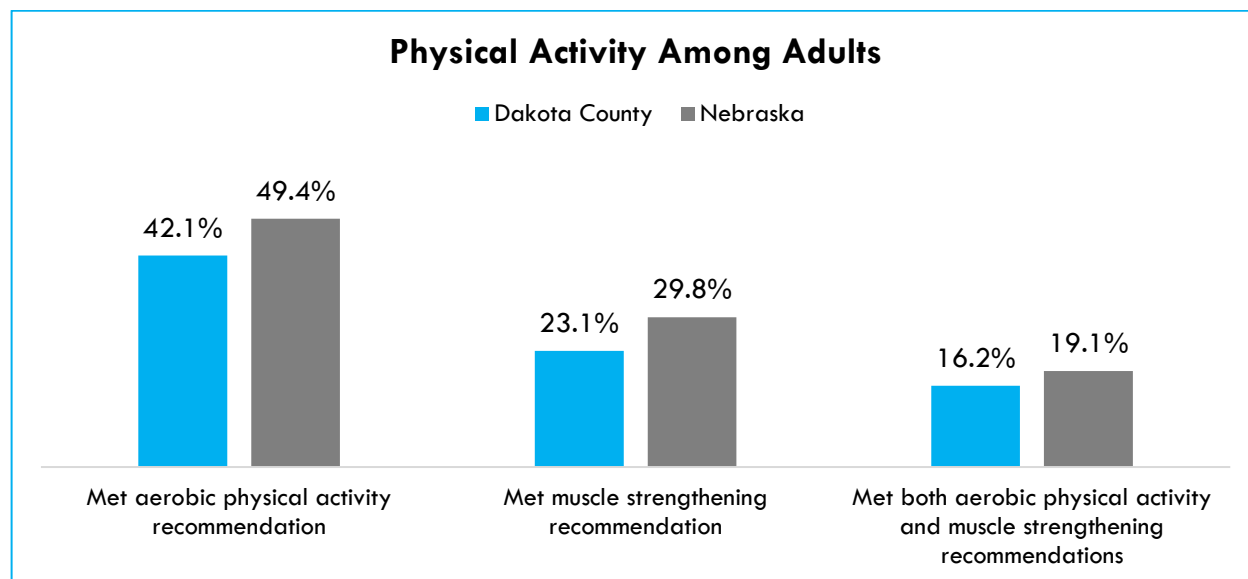
Physical Activity

Regular physical activity can help control body weight and reduce the risk of cardiovascular disease, type 2 diabetes and some cancers. The 2018 report titled Physical Guidelines for Americans (2nd edition) from the U.S. DHHS recommends that “adults should do at least 150 minutes to 300 minutes a week of moderate-intensity, or 75 minutes to 150 minutes a week of vigorous-intensity aerobic physical activity.” In addition, they should engage in muscle-strengthening activities that work all major muscle groups two or more days per week. Children and adolescents should engage in at least 60 minutes of physical activity each day.

Physical Activity among Adults

42.1 percent of Dakota County adults in 2017 reported that they engage in the recommended amount of aerobic physical activity each week, while only 23.1 percent reported engaging in the recommended amount of muscle strengthening activity each week.

Overall, 16.2% met the current physical activity recommendation (i.e., both aerobic and muscle strengthening recommendations) in 2017. Adults in Dakota County, compared to those statewide, were slightly less likely to engage in the recommended amount of muscle strengthening activity in 2017 (23.1% and 29.8%, respectively) and overall recommended activity (16.2% and 19.1%, respectively) (Figure 35).

Figure 35: Physical Activity among Adults, Dakota County and Nebraska, 2017

Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

Physical Activity among Youth

According to the 2008 Physical Activity Guidelines for Americans, students should be physically active for 60 minutes or more per day, which should include most of the minutes in aerobic activity and the inclusion of both muscle- and bone-strengthening activities at least three days per week.

In 2017, over half of Nebraska high school students reported being physically active for 60 or more minutes on five or more of the past seven days, they also reported doing exercises to strengthen or tone their muscles on three or more of the past seven days.

Nebraska high school students spend a lot of time engaged in sedentary activities. In 2017, 1 in 5 (19.2%) reported spending three or more hours per day during an average school day watching television while 2 in 5 (38.3%) reported three or more hours playing video games or using a computer for non-school work. Collectively, nearly six out of ten students (57.5%) reported spending three or more hours watching television, playing video games, or using a computer for non-school work during an average school day.

INJURY

Injuries are a major public health concern in Nebraska and the United States, resulting in significant numbers of deaths, hospitalizations, and emergency department (ED) visits each year. For Nebraskans ages 1-44 years, unintentional injuries were the leading cause of death. (Nebraska DHHS, 2016).

Deaths due to injury usually occur at a much younger age than deaths due to cancer or heart disease (the first and second leading causes of death in Nebraska for all ages). As a result, the number of years of potential life lost (YPLL) due to injury is disproportionately large.

Injuries, in addition to causing death, also result in a wide variety of adverse health and lifestyle outcomes. In many cases, injury leads to disability, chronic pain, large medical costs, and profound changes in one's daily life. Furthermore, injury affects more than just the injured. Injury impacts families, employers, and communities due to its negative social and economic outcomes. The cost of injuries in the United States is more than \$671 billion annually, including medical expenses and productivity losses, according to estimates made by the Centers for Disease Control and Prevention⁴.

Nearly \$130 billion of the fatal injury costs in the U.S. were attributable to unintentional injuries, followed by suicide (\$50.8 billion) and homicide (\$26.4 billion).

Medical costs and work loss cost attributable to unintentional injuries in Nebraska and in Dakota County

In Nebraska, the estimated average annual medical costs attributable to unintentional injuries were nearly \$9 million, and work loss costs were \$383 million (2008-2014).

In Dakota County, the estimated average annual medical costs attributable to unintentional injuries were nearly \$53,861, and work loss costs were \$6,7 million (2008-

⁴ https://www.cdc.gov/injury/wisqars/overview/cost_of_injury.html

2014). Source: CDC (WISQARS)

<https://wisqars.cdc.gov:8443/cdcMapFramework/mapModuleInterface.jsp>

Unintentional Injury

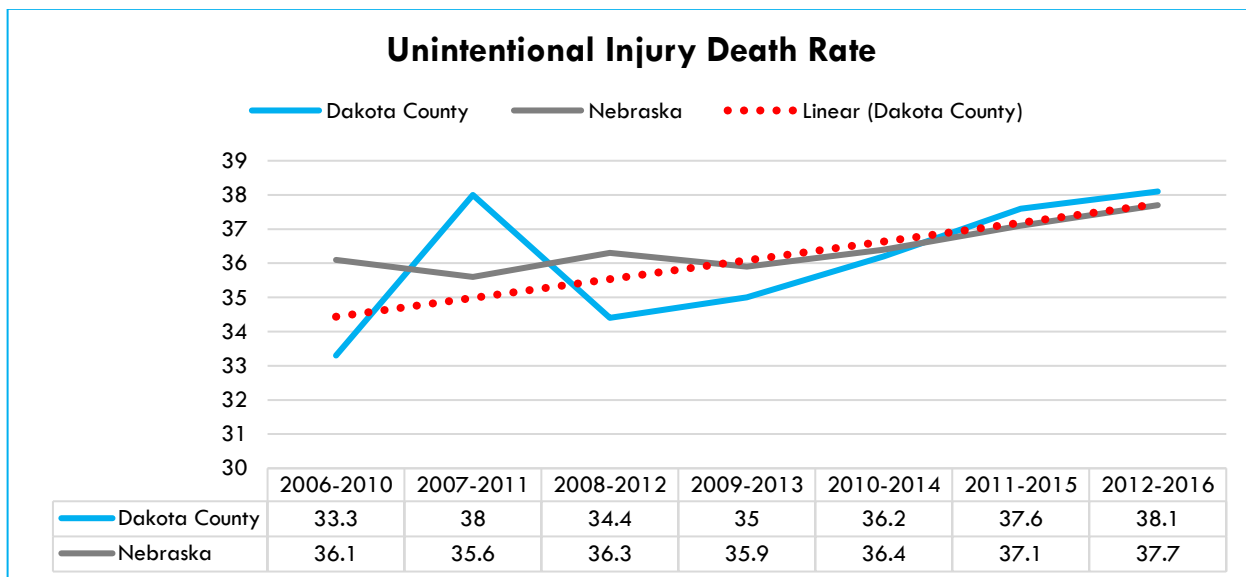
Unintentional Injury Deaths

In Dakota County, unintentional injury accounted for 7 deaths in 2012-2016 combined years). The mortality rate for unintentional injuries in Dakota County is 38.1 per 100,000 people (2012-2016 combined years), making it the 5th leading cause of death in the health district.

The age-adjusted death rate due to unintentional injury in Dakota County has increased for the 2006-2010 to 2012-2016 combined years, from 33.3 per 100,000 population in the 2006-2010 combined years to 38.1 per 100,000 population in the 2012-2016 combined years.

Dakota County has experienced similar unintentional injury death rates over the years when compared to the State, as the linear trend (Dakota County) shows in Figure 36.

Figure 36: Unintentional Injury Death Rate per 100,000 population (age-adjusted), Dakota County and Nebraska, 2006-2010 to 2012-2016



Source: Nebraska Vital Records, Nebraska Department of Health and Human Services

Falls

In 2016, three out of ten (30.7%) Dakota County adults aged 45 and older reported that they had a fall (to the ground or another lower level) during the past year. About 1 in 7 (13.8%) Dakota County adults aged 45 years and older, in 2016, reported that they were injured due to a fall in the past year that caused them to limit their regular activities for at least a day, or to go see a doctor.

Intentional Injuries

Intentional injuries include those resulting from violent and abusive behaviors (such as suicides, homicides, assaults, child abuse and neglect, and domestic violence).

MENTAL HEALTH AND SUICIDE

Mental health illnesses are very common in the United States, with an estimated 50% of all Americans diagnosed with a mental illness or disorder at some point in their lifetime. Mental illnesses, such as depression, are the third most common cause of hospitalization in the United States for those aged 18-44 years old, and adults living with serious mental illness die on average 25 years earlier than others (CDC, 2019).

According to the **Community Health Assessment Surveys**, “mental health” is an ongoing concern among Dakota County residents.

Mental Illness

Depressive illness (including major depression, bipolar disorder, and dysthymia) is the most common mental illness, affecting roughly 21 million Americans each year.

According to the National Health and Nutrition Examination Survey, during 2013–2016, 8.1% of American adults aged 20 and over had depression in a given 2-week period. Women (10.4%) were almost twice as likely as were men (5.5%) to have had depression.

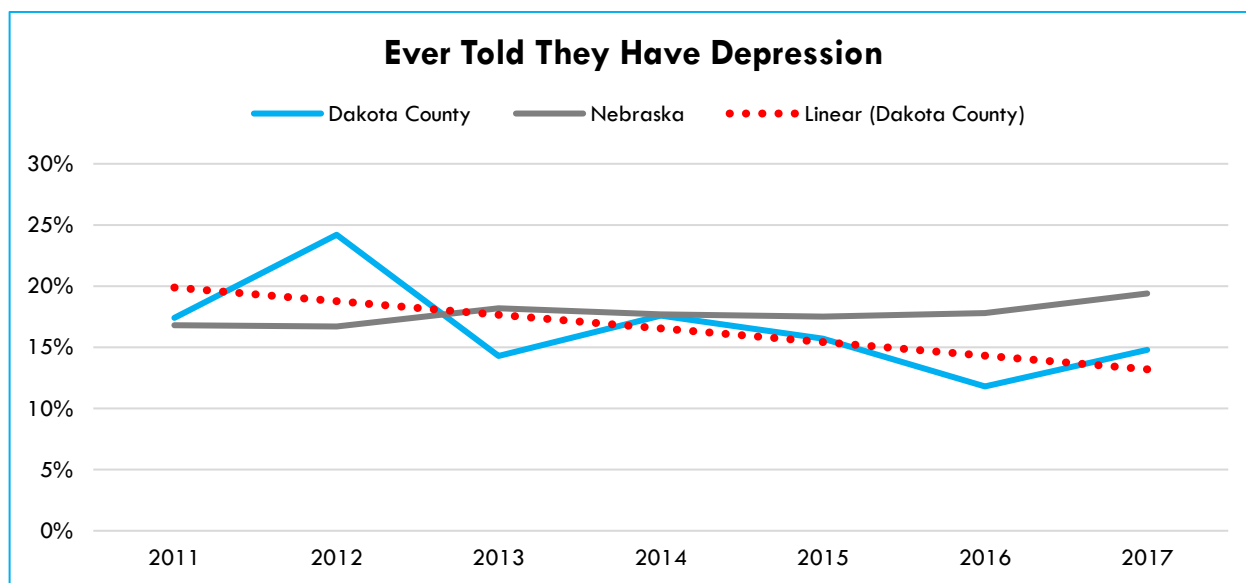
Mental illness is associated with increased morbidity from a number of chronic diseases, including cardiovascular disease, diabetes, cancer, asthma, and obesity. Unhealthy behaviors such as tobacco and alcohol use as well as rates of injury are also higher in persons with mental illness (Nebraska DHHS, 2016).

Mental Illness among Adults

In 2017, about 1 in 7 Dakota County adults (14.8%) reported having ever been told by a doctor, nurse, or other health professional that they have a depressive disorder, including depression, major depression, dysthymia, or minor depression (i.e., diagnosed depression).

Between 2011 and 2017 the prevalence of diagnosed depression among Dakota County adults has decreased. Overall, the prevalence of depression among Dakota County adults has been lower than the State since 2013. In 2017, the Dakota County prevalence of depression among adults was 4.6 percent points lower than the State (14.8% vs. 19.4%, respectively). (Figure 37).

Figure 37: Ever Told they have Depression among Adults*, Dakota County and Nebraska, 2011-2017

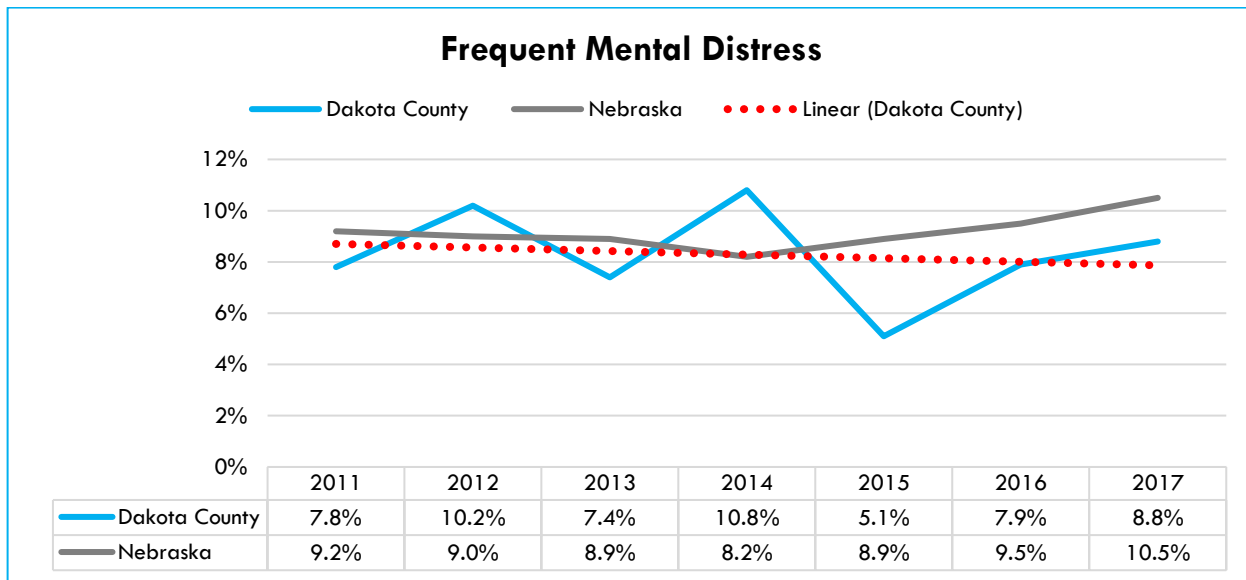


*Percentage of adults 18 and older who report that they have ever been told by a doctor, nurse, or other health professional that they have a depressive disorder (depression, major depression, dysthymia, or minor depression). Source: Behavioral Risk Factor Surveillance System (BRFSS).

Roughly 1 in 11 Dakota County adults (8.8%) in 2017 reported that their mental health (including stress, depression, and problems with emotions) was not good on 14 or more of the past 30 days (i.e., frequent mental distress).

Frequent mental distress declined between 2011 and 2017 and was consistently lower than the State percentage during this period (Figure 38).

Figure 38: Frequent Mental Distress in Past 30 Days among Adults*, Dakota County and Nebraska, 2011-2017



*Percentage of adults 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. Source: Behavioral Risk Factor Surveillance System (BRFSS).

Suicide⁵

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), more than 90 percent of those who die from suicide have a diagnosable mental disorder. Suicide victims are frequently experiencing undiagnosed, undertreated, or untreated depression. (Nebraska DHHS, 2016).

Everyone has a role to play in preventing suicide. For instance, faith communities can work to prevent suicide simply by fostering cultures and norms that are life-preserving, providing perspective and social support to community members, and helping people navigate the struggles of life to find a sustainable sense of hope, meaning, and purpose.

Although prior suicide attempts is one of the strongest risk factors for suicide, the vast majority of people who attempt suicide—9 in 10—do not ultimately die by suicide. Losing a loved one to suicide can be profoundly painful for family members and friends. (SAMHSA, <https://www.samhsa.gov/find-help/suicide-prevention>).

Death due to Suicide

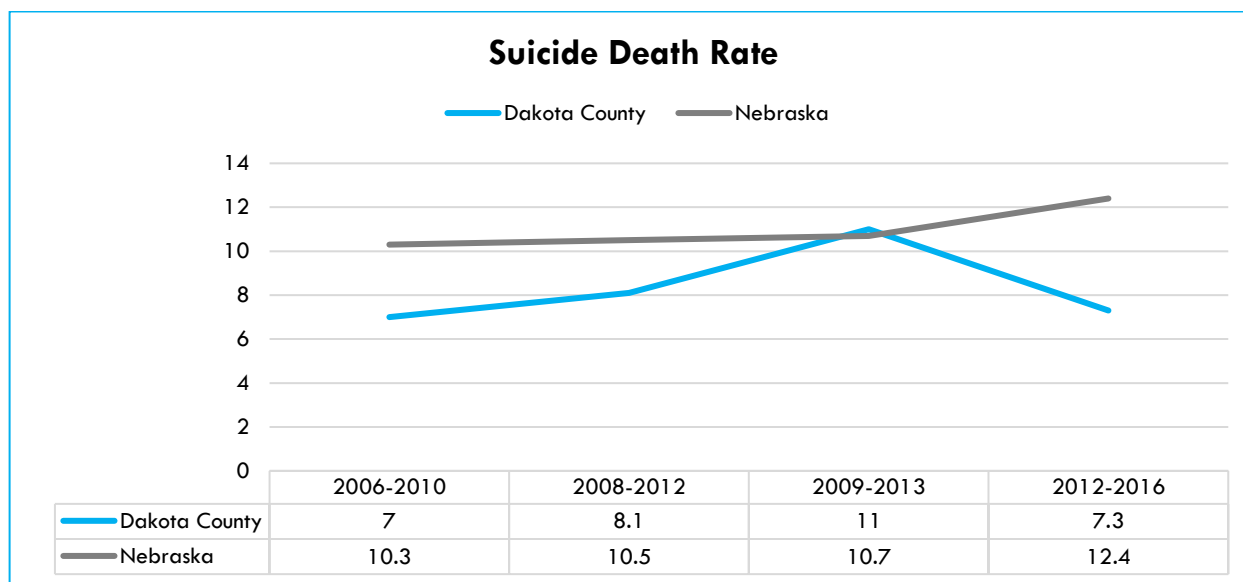
The suicide death rate in Dakota County increased during the 2006-2010 combined years and 2009-2013 combined years. The highest suicide death rate in Dakota County was observed in the 2008-2012 combined years (11 per 100,000 population), and the lowest suicide death rate was observed in the 2006-2010 combined years (7 per 100,000 population).

⁵ If you believe someone may be thinking about suicide:

- Call 911, if danger for self-harm seems imminent.
 - Ask them if they are thinking about killing themselves. (This will not put the idea into their head or make it more likely that they will attempt suicide.)
 - Listen without judging and show you care.
 - Stay with the person (or make sure the person is in a private, secure place with another caring person) until you can get further help.
 - Remove any objects that could be used in a suicide attempt.
 - Call SAMHSA's [National Suicide Prevention Lifeline](https://www.samhsa.gov/find-help/national-suicide-prevention-lifeline) at 1-800-273-TALK (8255) and follow their guidance.
-

Overall, the suicide death rate in Dakota County has remained lower than the State suicide rate between 2006-2010 combined years and 2012-2016 combined years. (Figure 39).

Figure 39: Suicide Death Rate per 100,000 population (age-adjusted), Dakota County and Nebraska, 2006-2010 to 2012-2016*



Suicide death rates were not available for Dakota County for the following combined years: 2007-2011, 2010-2014, and 2011-2015. Source: Nebraska Vital Records, Nebraska Department of Health and Human Services

SUBSTANCE ABUSE

Substance abuse generally refers to the use of psychoactive substances, which affect mood, perception, and cognition by altering brain function. Alcohol and drug use fit into this category and are covered within this section.

Alcohol Misuse

Alcohol is the most frequently used and misused substance in the United States, and it can have devastating consequences. Alcohol misuse is especially problematic among youth and college-aged populations. People who drink to excess, including binge and heavy drinkers, are at even greater risk. (SAMHSA, 2019⁶).

⁶ <https://www.samhsa.gov/data/taxonomy/term/6529>

Alcohol misuse is associated with injuries and deaths due to motor vehicle crashes, falls, fires, and drowning. Alcohol misuse is also a factor in a substantial proportion of homicides, suicides, domestic violence, and child abuse and neglect cases. Long-term heavy drinking can lead to heart disease, cancer, alcohol-related liver disease, and pancreatitis. Alcohol use during pregnancy is known to cause fetal alcohol syndrome, a leading cause of mental retardation. Excessive alcohol use is currently the third leading lifestyle-related cause of death for people in the United States each year. (Nebraska DHHS, 2016).

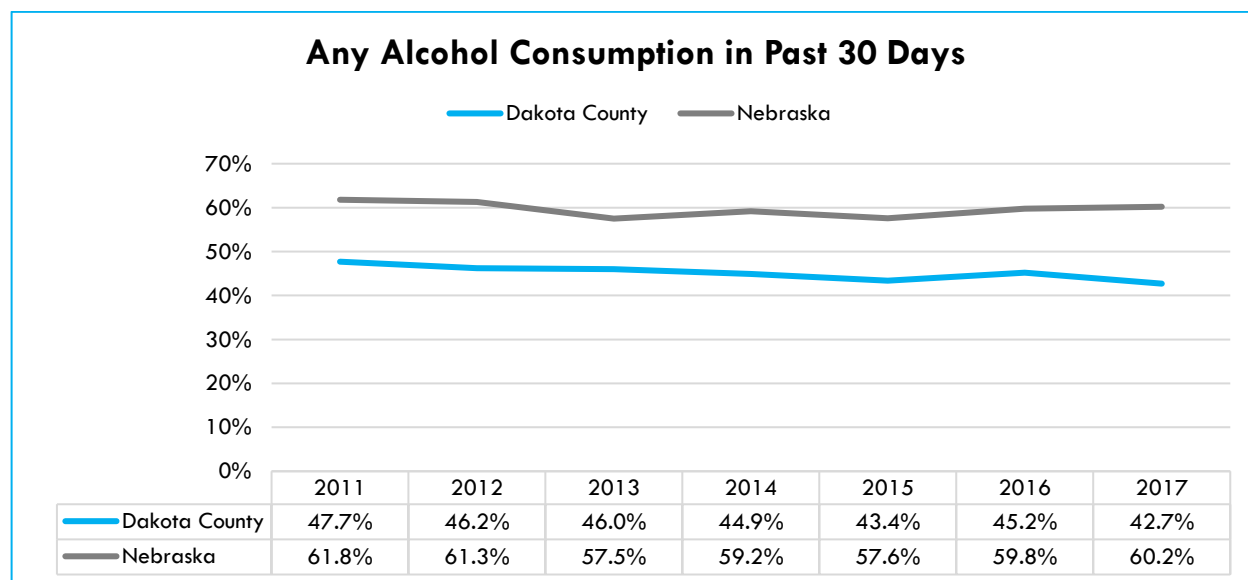
According to the **Community Health Assessment Surveys**, “alcohol abuse” is an ongoing concern among Dakota County residents.

Alcohol Use among Adults

Any Alcohol Use among Adults

In 2017, 42.7 percent of Dakota County adults reported consuming at least one drink of an alcoholic beverage (such as beer, wine, wine coolers, liquor, or cocktails) during the past month. This percentage has remained stable, and is lower when compared to the State since 2011. Figure 40.

Figure 40: Any Alcohol Consumption in Past 30 Days among Adults, Dakota County and Nebraska, 2011-2017



Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

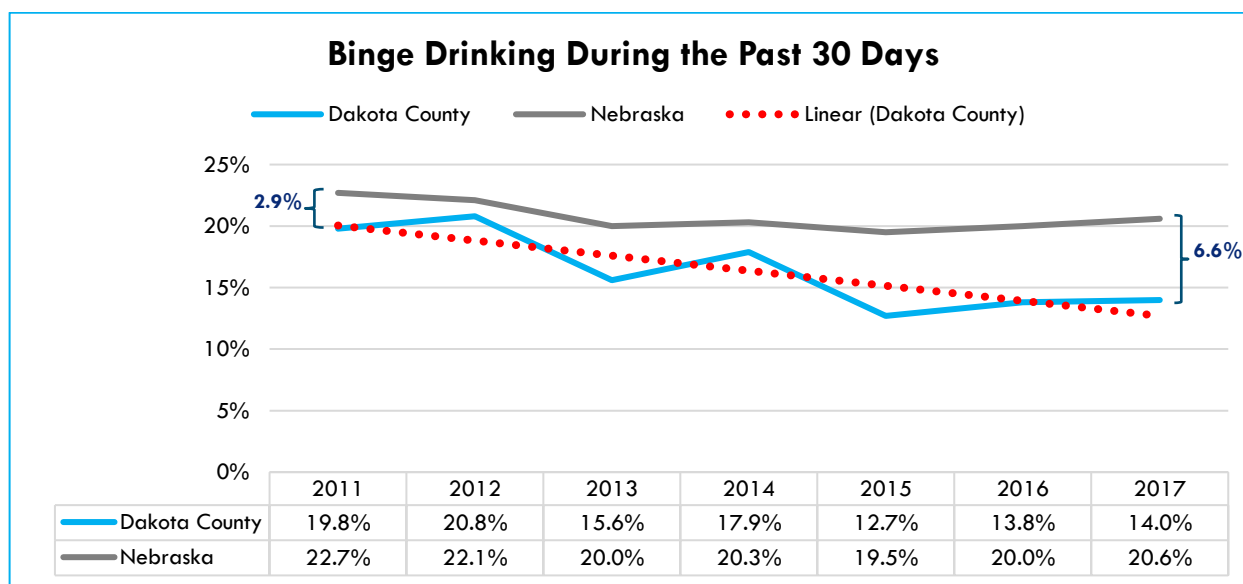
Binge Drinking

Binge Drinking among Adults

Binge drinking is defined as five or more drinks for men or four or more drinks for women (beer, wine, wine coolers, cocktails, or liquor) during one drinking occasion. In 2017, 1 in 7 Dakota County adults (14.0%) reported binge drinking at least once during the past month. Binge drinking prevalence has decreased 5.8% in Dakota County in the last seven years, from 19.8% in 2011 to 14.0% in 2017. (Figure 41).

Dakota County adults, compared to adults statewide have consistently reported lower percentages for binge drinking, and that difference has widened from 2.9% in 2011 to 6.6% in 2017.

Figure 41: Binge Drank during the Past 30 Days among Adults*, Dakota County and Nebraska, 2011-2017

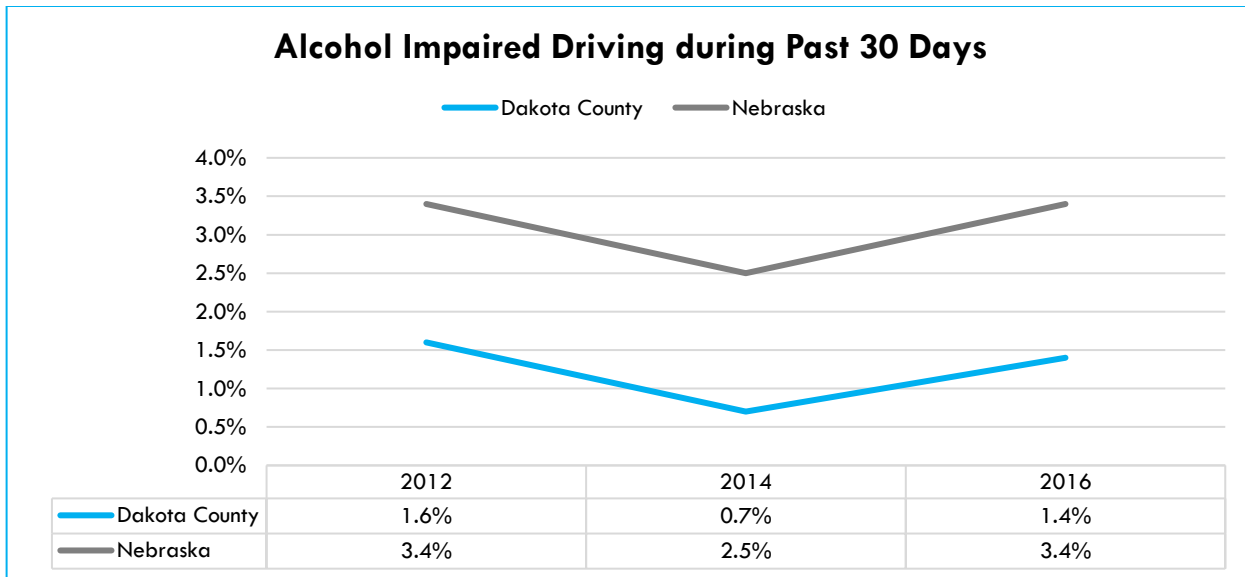


*Percentage of adults who report having five or more alcoholic drinks for men/four or more alcohol beverages for women on at least one occasion during the past 30 days. Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

Alcohol Impaired Driving among Adults

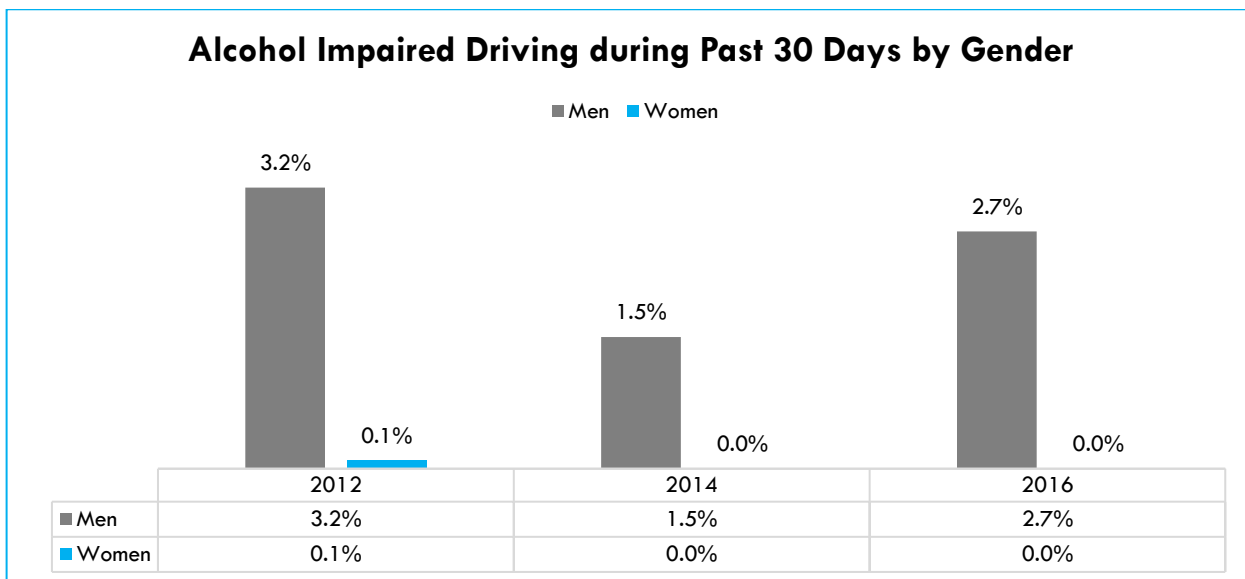
In 2016, 1.4 percent of Dakota County adults (1 in 70) reported that they drove a motor vehicle after drinking too much alcohol during the past 30 days. This was considerably lower than the percentage who reported binge drinking and has remained lower when compared to the state percentage over the past few years (Figure 42).

Figure 42: Alcohol Impaired Driving during Past 30 Days among Adults*, Dakota County and Nebraska, 2012-2016



Men in Dakota County were statistically significantly more likely to drive under the influence of alcohol when compared to women in 2012, 2014, and 2016. Figure 43.

Figure 43: Alcohol Impaired Driving during Past 30 Days by Gender, Dakota County and Nebraska, 2012-2016



Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

YOUTH

In 2017, the Youth Risk Behavior Survey (2016/2017 YRBS State-Level Data) reported 10.5 percent of statewide students engaged in binge drinking over the past 30 days⁷. Nebraska students report 3 percent less binge drinking when compared to students in the United States, (10.5% vs. 13.5%, respectively).

In 2016, the Nebraska Risk and Protective Factor Survey (NRPFS) reported 52.4% of 12th graders in Dakota County had engaged in binge drinking in the past 30 days⁸. The percentage of binge drinking among Dakota County 12th graders is 36.3% higher when compared to the State (52.4% vs. 16.1%, respectively).

The perception of risk associated with having 5+ drinks of alcohol 1 or 2 times per week decreases by age, as 5 out of 10 8th graders perceive it as a “great risk”, but that perception of risk decreases to 3 out of 10 12th graders (56.8% vs. 30.0%, respectively).

In 2016 NRPFS, 23.8 percent of 12th graders said they had driven a car when they had been drinking and 28.6 percent reported riding with someone who had been drinking alcohol (12.7% for 8th graders). 85.7 percent of 12th graders said it was wrong to drive after drinking, which was lower when compared to 8th graders (98.8%).

Marijuana Use

The proportion of Nebraska students that reported lifetime marijuana use and marijuana use during the past 30 days increased between 1991 and 2003 before declining between 2003 and 2017.

The 2017 percentages for lifetime and past 30-day marijuana use (25.4% and 13.4%, respectively) have remained fairly consistent when compared to recent years. However, they show a significant decrease from the levels reported in 2003 (34.6% and 18.3%, respectively). (YRBS, 2017).

⁷ The definition of binge drinking was changed to 5 or more drinks for males and 4 or more drinks for females on the 2017 YRBS. Due to this change, trend data for binge drinking are not comparable to 2017.

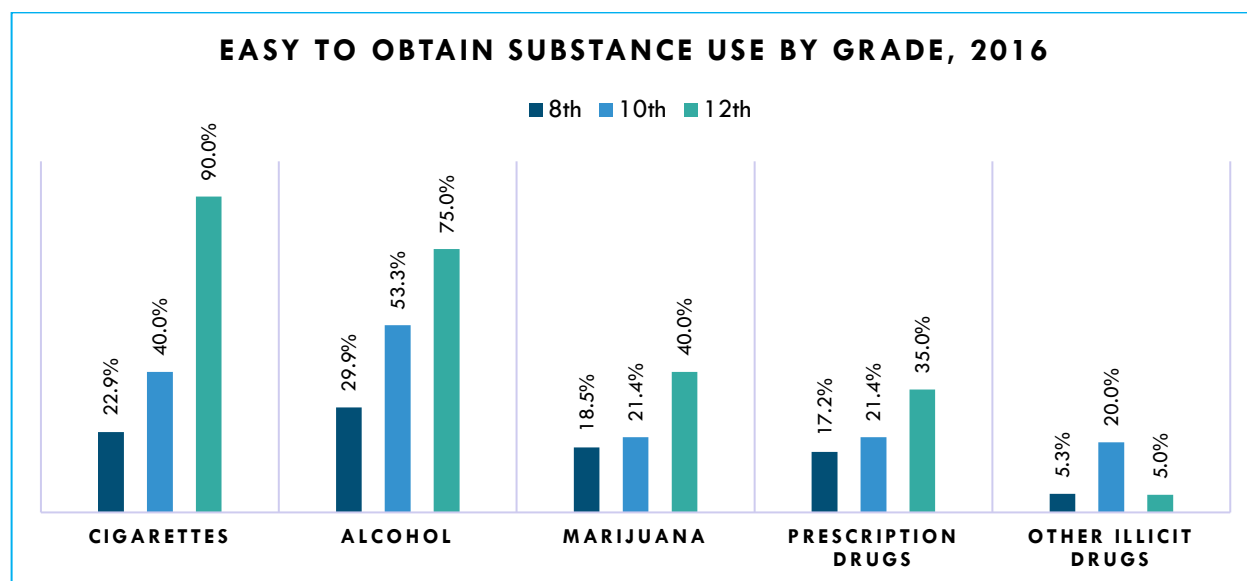
⁸ Percentage who reported having five or more drinks of alcohol in a row, within a couple of hours

For 12th grade students in Dakota County, lifetime marijuana use has increased from 15% in 2007 to 22.5% in 2016. (NRPFSS, 2017).

- Current use of marijuana for 12th graders in Dakota County is 14.3% (NRPFSS, 2017).

Cigarettes are mentioned as the easiest substance to obtain among all students in Dakota County in 2016, followed by alcohol, marijuana, and then by other illicit drugs. Figure 44.

Figure 44: Easy to Obtain Substance Use in Dakota County: Cigarettes, Alcohol, Marijuana, Prescription Drugs and Other Illicit Drugs, 2016



Source: Nebraska Risk and Protective Factor Student Survey (NRPFSS, 2016). Dakota County Health Department.

Prescription Drug Use

In 2016, 0.0 percent of Dakota County 12th graders reported lifetime non-medical prescription drug use (such as OxyContin, Percocet, Vicodin, codeine, Adderall, Ritalin, Xanax). This percentage was significantly lower when compared to 12th graders at the State level (9.1%).

Current prescription drug misuse was also reported lower by Dakota County 12th graders when compared to 12th graders at the State level in 2016 (0.0% vs. 3.4%).

Lifetime and current prescription drug misuse by 12th graders at the State level were lower when compared to the United States.

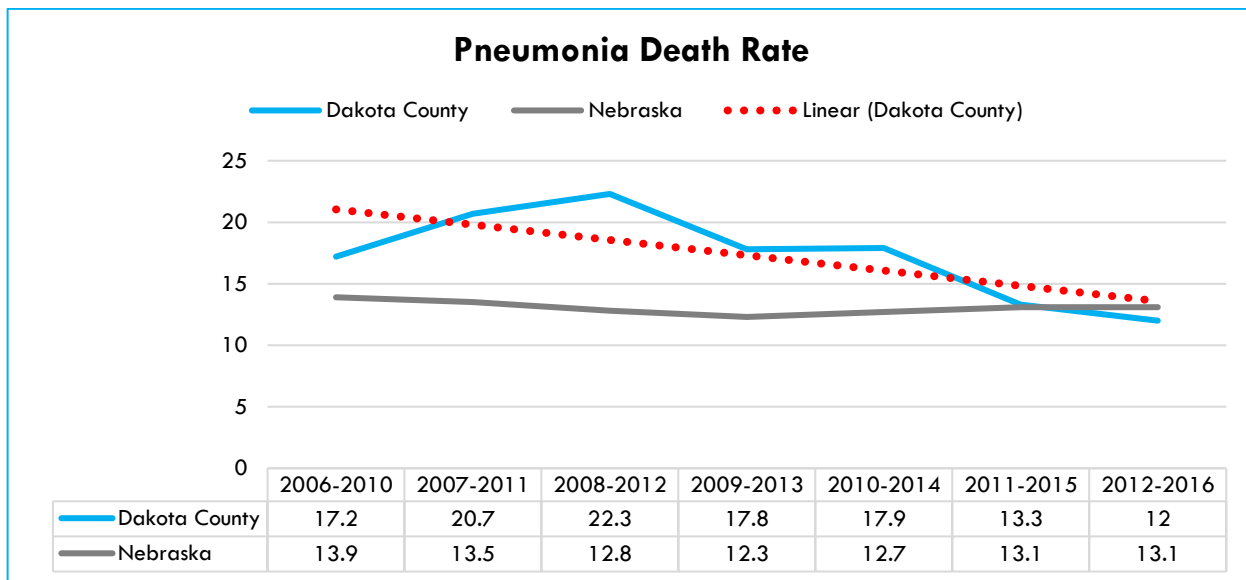
PNEUMONIA

Mortality

Pneumonia was the 8th leading cause of death in Dakota County for 2012-2016 combined years.

The death rate for pneumonia has decreased 30.2 percent in Dakota County between 2006-2010 combined years and 2012-2016 combined years, while in the State has decreased 5.8 percent (Figure 45).

Figure 45: Pneumonia Death Rate per 100,000 population (age-adjusted), Dakota County and Nebraska, 2006-2010 to 2012-2016



Source: Nebraska Vital Records, Nebraska Department of Health and Human Services

ORAL HEALTH

Oral health is essential to overall health yet unfortunately, millions of Americans experience dental cavities and periodontal disease, and many have lost all their teeth. Early tooth loss caused by dental decay in children can result in failure to thrive, impaired speech development, absence from or an inability to perform well in school, and reduced self-esteem.

Untreated dental decay in older persons can lead to pain, abscesses, and loss of teeth. Periodontal disease is the leading cause of bleeding, pain, infection, and tooth loss. It is

also a chronic inflammatory disease linked to other serious health risks, such as diabetes, cardiovascular disease, and preterm/low-weight births.

Dental disease is one of the most preventable health problems. Proper dental hygiene and good eating habits, along with regular professional dental care, decrease the risk of developing cavities and periodontal disease. Water fluoridation has helped improve oral health over the past 50 years in America. (Nebraska DHHS, 2016).

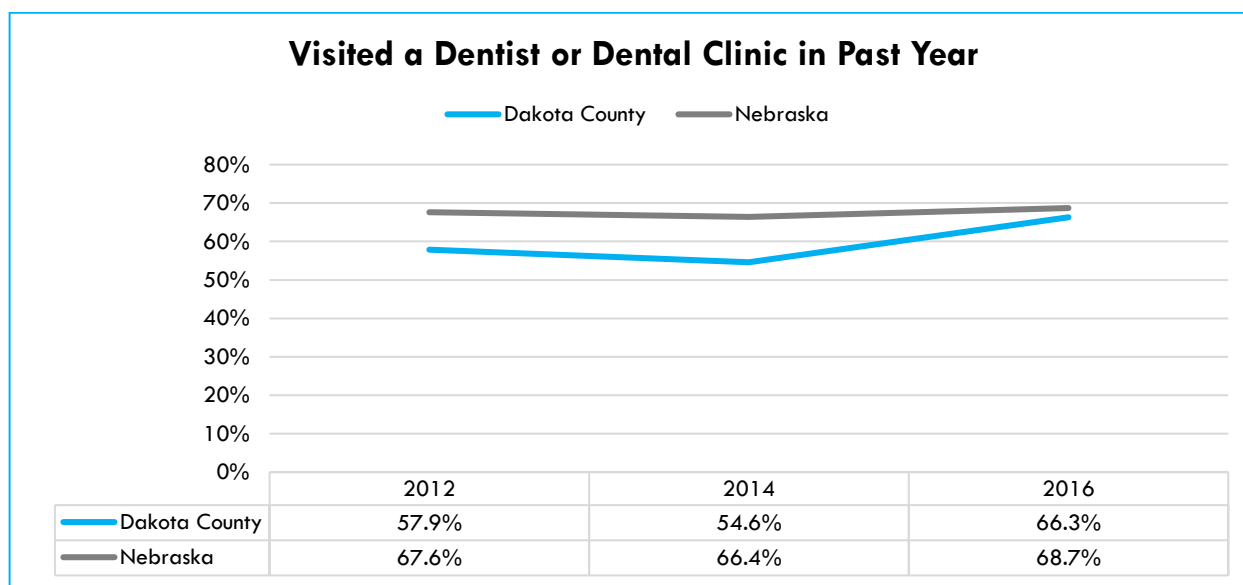
Dental Visits

Dental Visits among Adults

According to the 2016 BRFSS, two-thirds of Dakota County adults (66.3%) reported that they visited a dentist or dental clinic for any reason during the past year; indicating that over one-third did not receive any dental care services in the past year.

The percentage receiving dental care increased in 2016 when compared to 2014 in the Dakota County (Figure 46). The Dakota County Health District showed a lower percentage of adults who received past year dental services when compared to Nebraska adults (66.3% and 68.7%, respectively, in 2016).

Figure 46: Visited a Dentist or Dental Clinic in Past Year among Adults*, Dakota County and Nebraska, 2012-2016

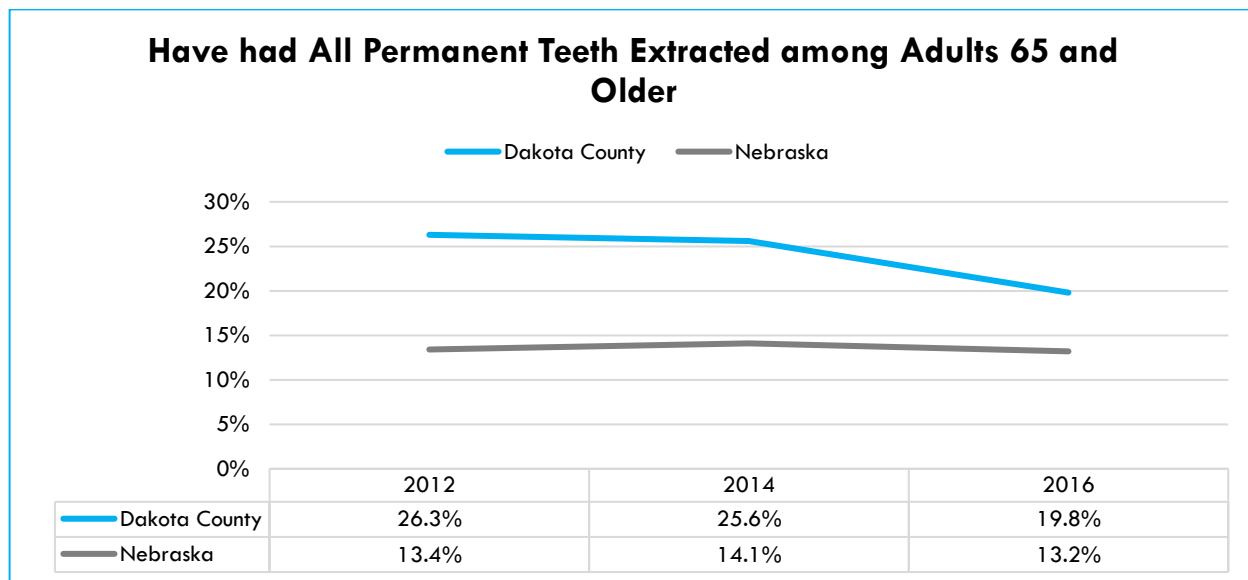


*Percentage of adults 18 and older who report that they visited a dentist or dental clinic for any reason within the past year. Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

Loss of Permanent Teeth

In 2016, 1 in 5 Dakota County adults 65 and older (19.8%) had all their permanent teeth extracted due to tooth decay or gum disease. This percentage is the lowest when compared to 2012 (26.3%) and 2014 (25.6%). Statewide, adults reported a lower percentage in 2016 when compared to Dakota County (13.2% and 19.8%, respectively). Figure 47.

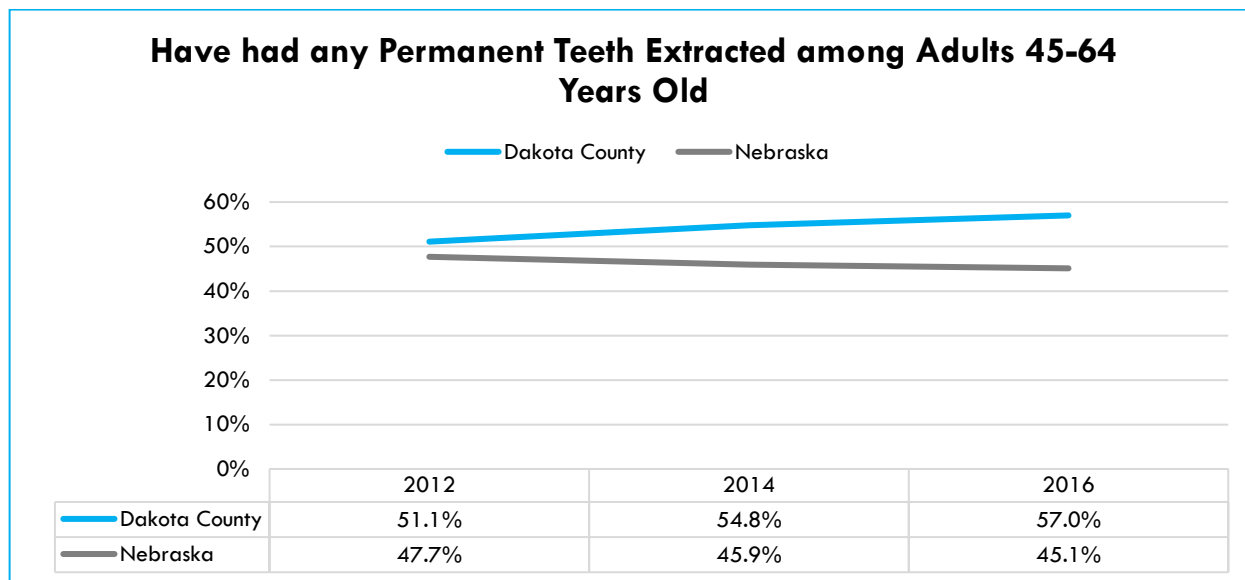
Figure 47: Have had All Permanent Teeth Extracted among Adults 65 and Older*, Dakota County and Nebraska, 2012-2016



*Percentage of adults 65 and older who report that they have had all their permanent teeth extracted because of tooth decay or gum disease, including teeth lost to infection, but not lost for other reasons, such as an injury or orthodontics. Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

The percentage of Dakota County adults 45-64 years of age reporting that they had any permanent teeth extracted due to tooth decay or gum disease slightly increased between 2014 (54.8%) and 2016 (57.0%), and it has increased overall 5.9% since 2012 (Figure 48).

Figure 48: Have had any Permanent Teeth Extracted among Adults 45-64 Years Old*, Dakota County and Nebraska, 2012-2016

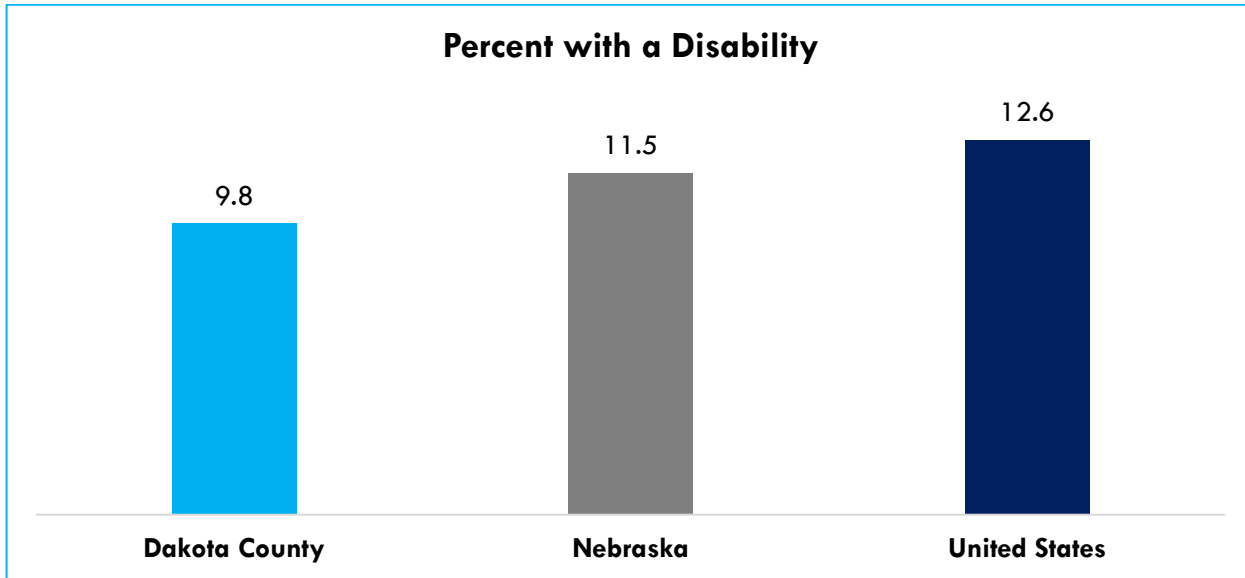


*Percentage of adults 45-64 years who report that they have had any of their permanent teeth extracted because of tooth decay or gum disease, including teeth lost to infection, but not lost for other reasons, such as an injury or orthodontics. Source: Nebraska Behavioral Risk Factor Surveillance System (BRFSS); November 2018

DISABILITY

According to the American Community Survey (ACS, 5-year estimates, 2013-2017), 9.8 percent of the Dakota County population is affected by a disability (i.e., hearing difficulty, vision difficulty, cognitive difficulty, ambulatory difficulty, self-care difficulty, or independent living difficulty). The prevalence of disabilities among the Dakota County population is 1.7 percent points lower than the State (11.5%), and 2.8 percent points lower when compared to the United States (12.6). Figure 49.

Figure 49: Population with a Disability, Dakota County, State, and the United States, ACS 2013-2017



Source: American Community Survey (ACS, 2013-2017. Table S1810).

Social Determinants of Health

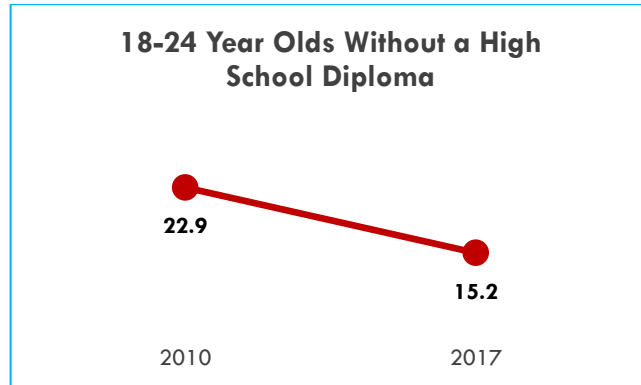
Social Determinants of Health Definition

The Centers for Disease Control and Prevention (CDC) defines **Social Determinants of Health** as “the complex, integrated, and overlapping social structures and economic systems that are responsible for most health inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors. Social determinants of health are shaped by the distribution of money, power, and resources throughout local communities, nations, and the world.” The following indicators were selected to depict social determinants of health in Dakota County:

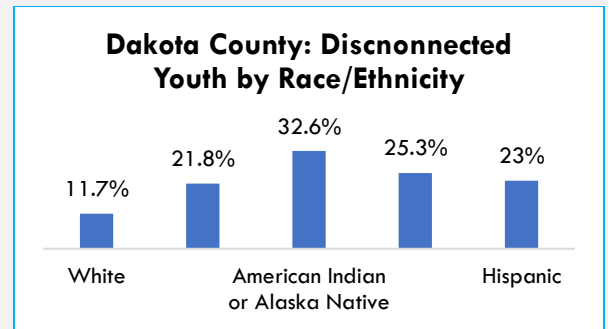
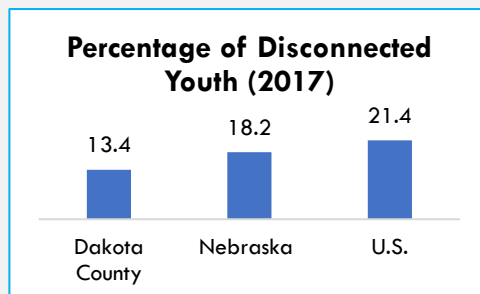
- 18-24 Year Olds Without a High School Diploma
- Low Access to Healthy Food
- Median Household Income
- Personal Income \$100K and Over
- Personal Income Under \$ 25K
- Population Without a High School Diploma
- Poverty
- Unemployment Rate

Changes over time

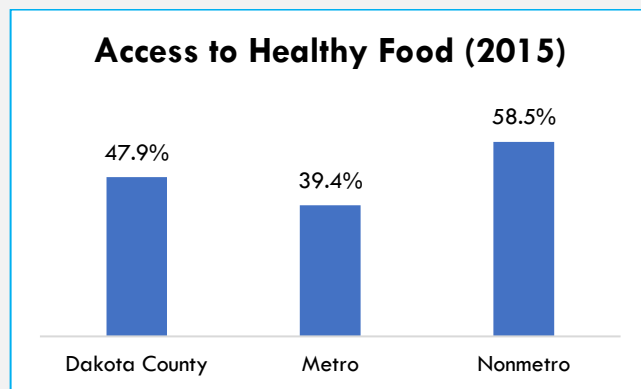
18-24 Year Olds Without a High School Diploma have substantially declined since 2010.



Disconnected youth – 2017 (16 to 24 years old who are not in labor force nor in school). American Indian youth show the highest percentage of disconnection.



Low access to healthy food. Dakota County shows higher access to healthy food when compared to Thurston and Dixon counties, but lower access when compared to metro areas in Nebraska.



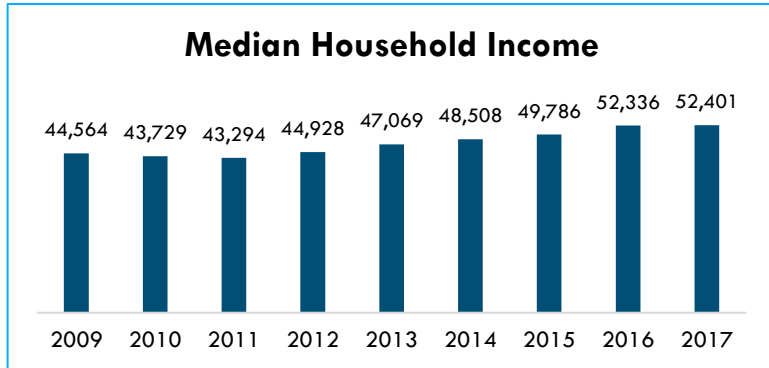
Source: USDA Economic Research Service

Social Determinants of Health (cont.)

Changes over time

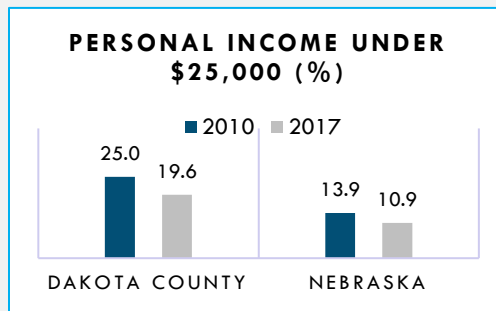
Median household income has

continuously increased since 2011 in Dakota County (a 21% growth) but is \$4,274 less when compared to the State level in 2017.

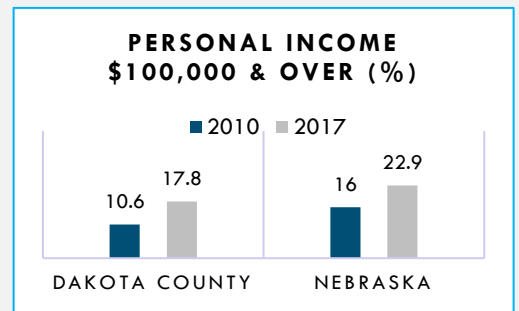


Source: ACS Table S1903

Personal Income Under \$25K & Over \$100K. Although Dakota County has made progress in income distribution, especially for those earning under \$25,000, there is still an 8.7% gap when compared to Nebraska

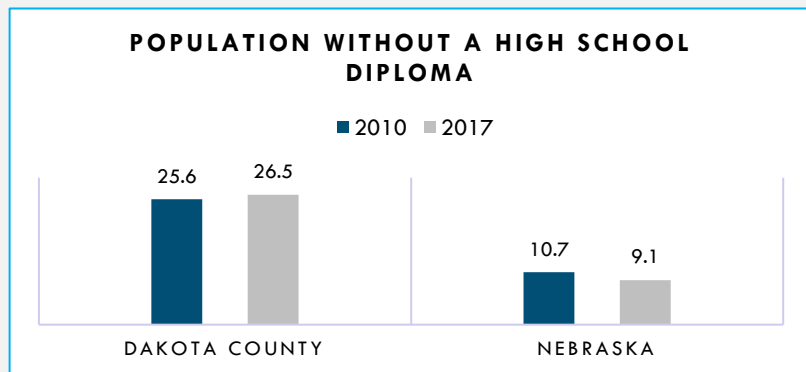


Source: ACS Table S1901



Source: ACS Table S1901

Population without a High School Diploma (%) increased between 2010 and 2017, and it's currently 17.4% higher when compared to the State. Dakota County has the second highest percentage of population without a High School Diploma in Nebraska after Colfax County.



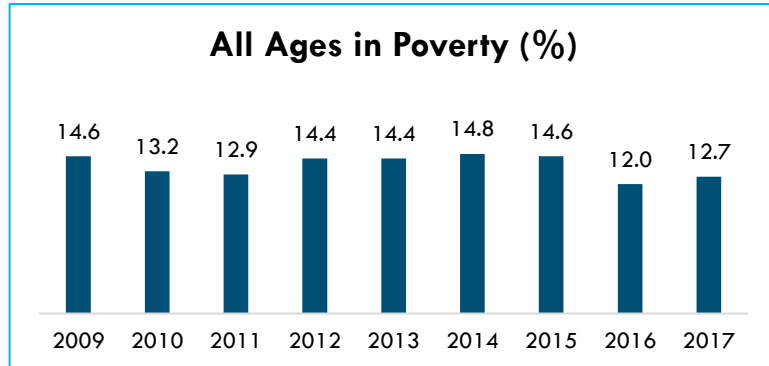
Source: ACS Table S1501

Social Determinants of Health (cont.)

Changes over time

Poverty (all ages)

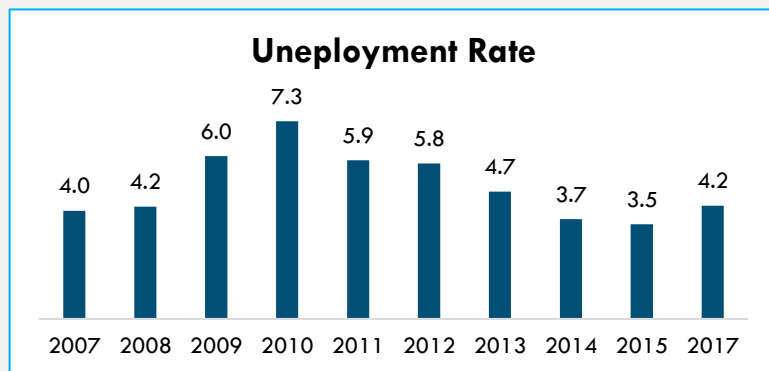
has declined in Dakota County since 2014 from 14.8% to 12.7% in 2017, but it's still 2% higher when compared to the State (10.7%).



Source: US Census Small Area Income and Poverty Estimates (SAIPE), 2009-2017

Unemployment rate

has steadily decreased since 2010, with a slight spike in 2017. On average, Dakota County has maintained an unemployment rate 1.2% higher than the State.



Source: USDA Economic Research Service, 2007-2016

Health Disparities

Health Disparities Definition

Healthy People 2020 defines health disparities as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.”

Health Indicators (BRFSS, 2017)

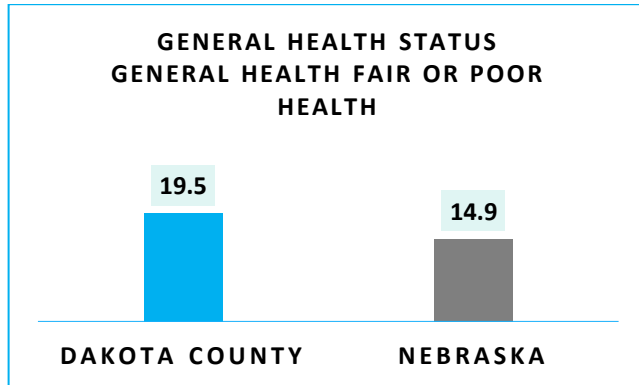
Nebraska Behavioral Risk Factor Surveillance System (BRFSS)

The following tables show prevalence estimates (percentages and means) for 27 health indicators collected from Nebraska adults aged 18 and older between 2011 and 2017 through the Nebraska Behavioral Risk Factor Surveillance System (BRFSS) reporting. The first set of summary tables show the current prevalence rates (2017) of health indicators comparing Dakota County with Nebraska outputs. The second set of tables show detailed changes over time of these health indicators, covering seven years of data (2011-2017). Statistically significant changes are estimated between Dakota County Health Department and the State of Nebraska, along with significant gender differences, if any, within the local department. Linear trendlines were added to charts for Dakota County data to graphically demonstrate whether changes were positive, negative, or neutral.

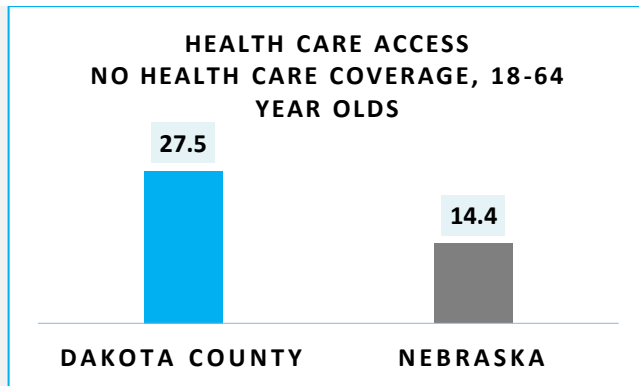
“The BRFSS is a telephone survey of adults 18 and older and includes landline telephone and cell phone data collection. To be more representative of all adults, data are weighted according to the CDC BRFSS weighting methodology (i.e. iterative proportional fitting, also known as raking). Responses of “Don’t know/Not sure” and “Refused” were removed from the denominators when calculating prevalence estimates for these detailed tables.” (Nebraska DHHS, BRFSS, 2018).

Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

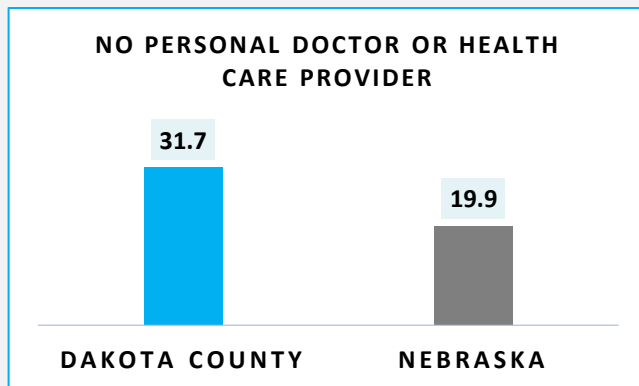
General health fair or poor health (2017) is 4.6% higher in Dakota County when compared to the State.



Health Care Access (2017). Dakota County adults are 1.9 times more likely to not have access to health care coverage when compared to the State.



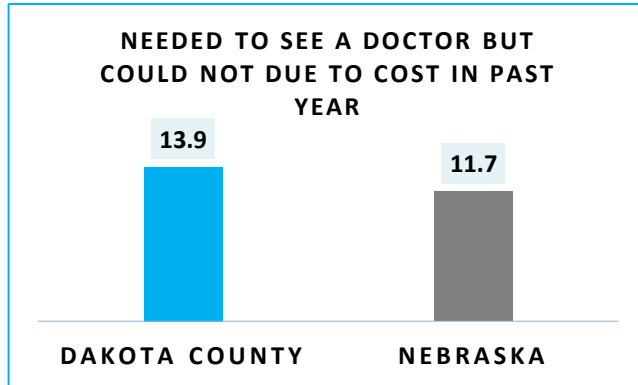
No Personal Doctor or Health Care Provider (2017). Residents of Dakota County adults are 1.6 times more likely to not have a health care provider when compared to the State.



Health Indicators (cont.)

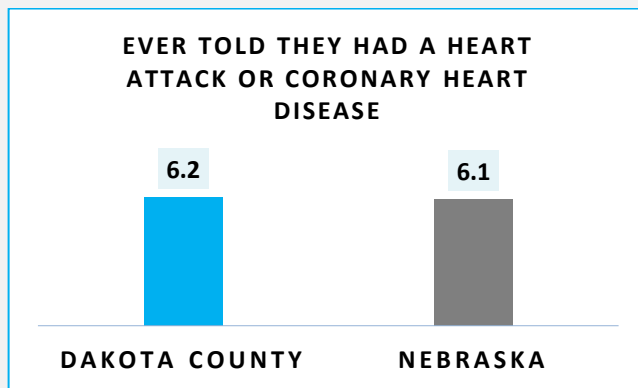
Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

Needed to see a doctor but could not due to cost in past year (%) is 2.2% higher in Dakota County when compared to the State.

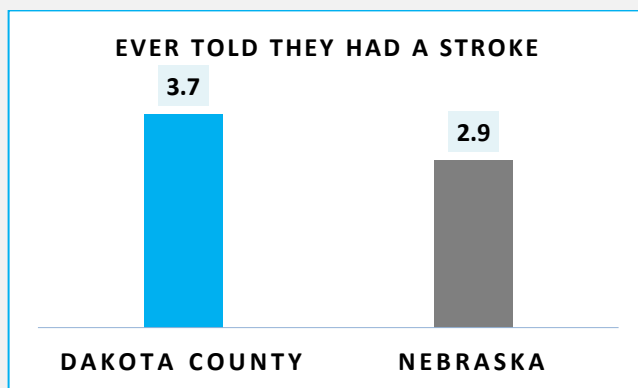


Chronic Disease and Clinical Risk Factors

Ever told they had a heart attack or coronary heart disease (%) is slightly higher in Dakota County when compared to the State.



Ever told they had a stroke (%) is significantly higher in Dakota County when compared to the State levels.

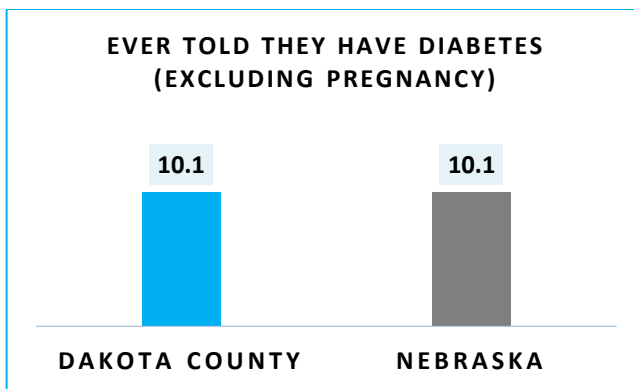


Health Indicators (cont.)

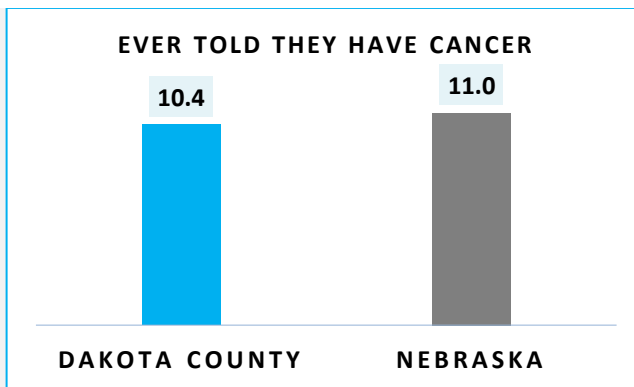
Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

Chronic Disease and Clinical Risk Factors (cont.)

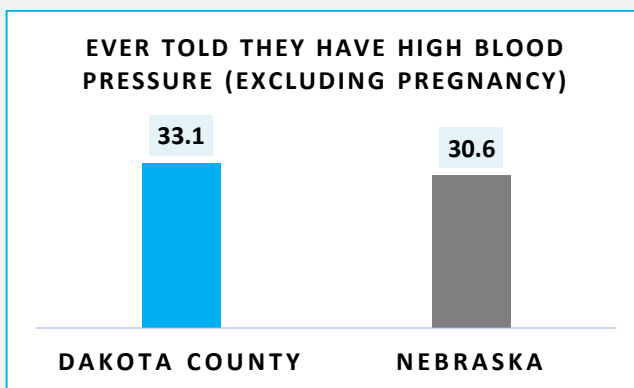
Ever told they have diabetes (excluding pregnancy) (%) show similar values between Dakota County and State rates.



Ever told they have cancer (%) show lower levels in Dakota County when compared to the State.



Ever told they have high blood pressure (excluding pregnancy) (%) is 2.5% higher in Dakota County when compared to the State.

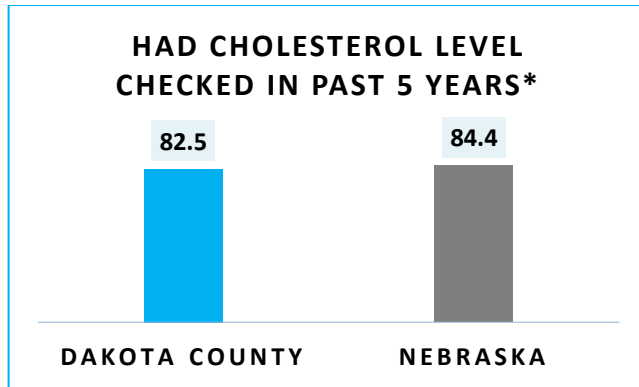


Health Indicators (cont.)

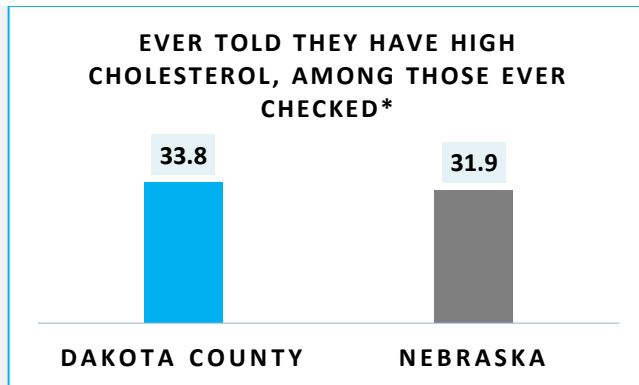
Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

Chronic Disease and Clinical Risk Factors (cont.)

Had cholesterol level checked in past 5 years* (%) is 1.9% lower in Dakota County when compared to the State.



Ever told they have high cholesterol, among those ever checked* (%) is 1.9% higher in Dakota County when compared to the State.

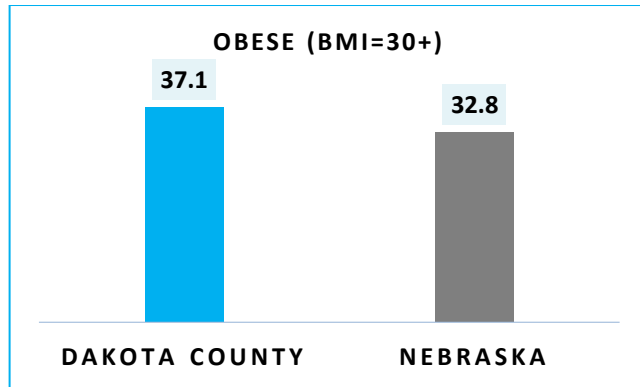


Health Indicators (cont.)

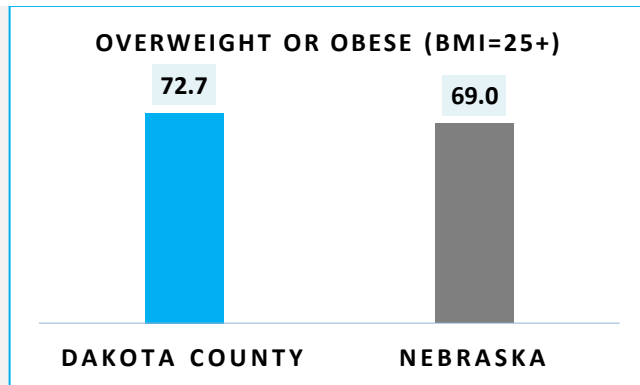
Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

Overweight and Obesity

Obese (BMI=30+)
(%) is 4.3% higher in Dakota County when compared to the State.



Overweight or Obese (BMI=25+)
(%) is 3.7% higher in Dakota County when compared to the State.

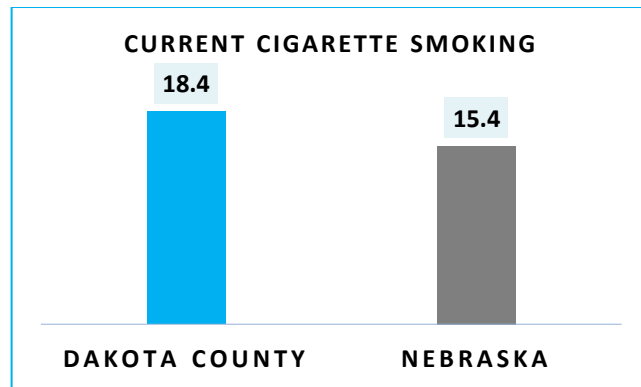


Health Indicators (cont.)

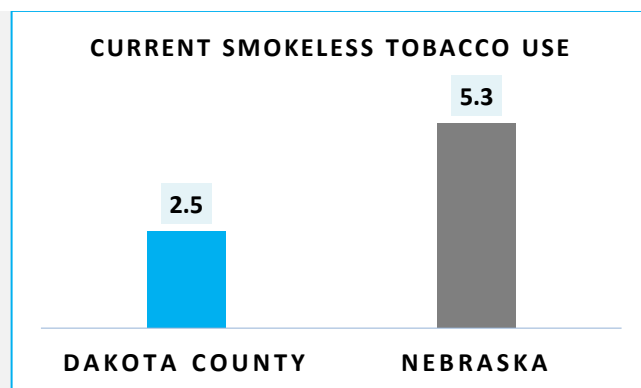
Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

High Risk Behavior

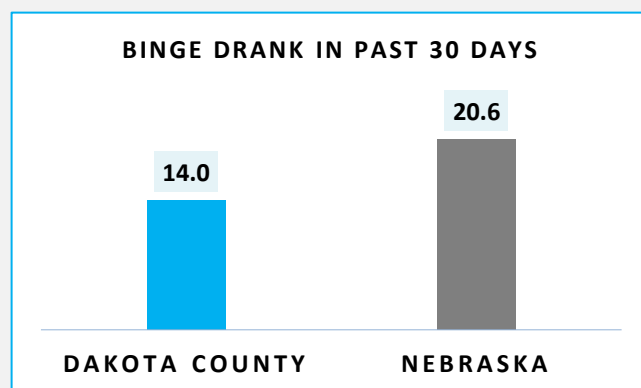
Current cigarette smoking (%) is 3.0% higher in Dakota County when compared to the State.



Current smokeless tobacco use (%) is 2.8% lower in Dakota County when compared to the State.



Binge drank in past 30 days (%) is significantly lower in Dakota County when compared to the State (14.0% vs. 20.6%, respectively).

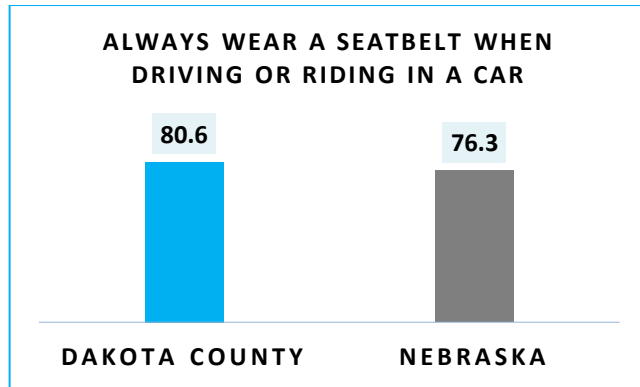


Health Indicators (cont.)

Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

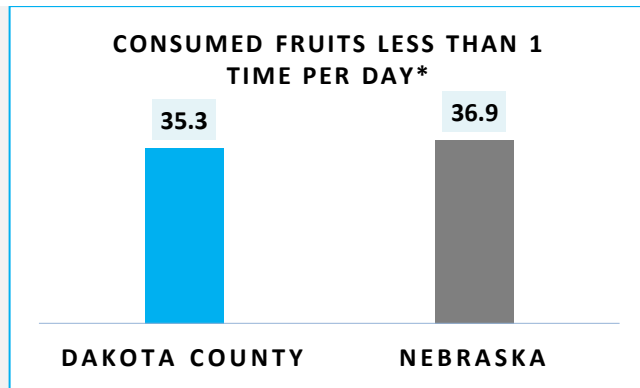
High Risk Behavior (cont.)

Always wear a seatbelt when driving or riding in a car (%) is 4.3% higher in Dakota County when compared to the State.

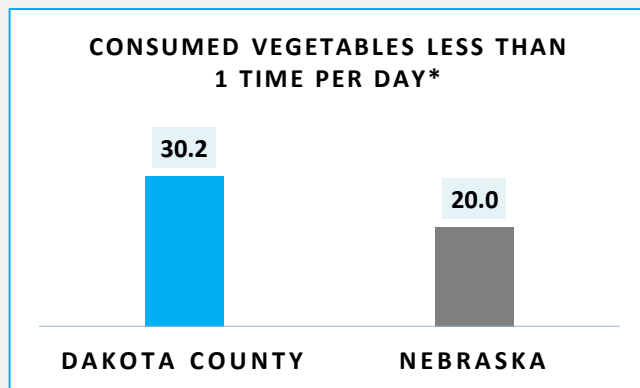


Fruit / Vegetable Consumption

Consumed fruits less than 1 time per day* (%) is 1.6% higher in Dakota County when compared to the State.



Consumed vegetables less than 1 time per day* (%) is 10.2% higher in Dakota County when compared to the State.

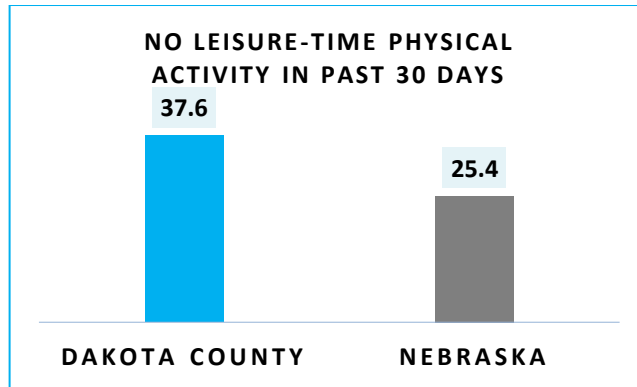


Health Indicators (cont.)

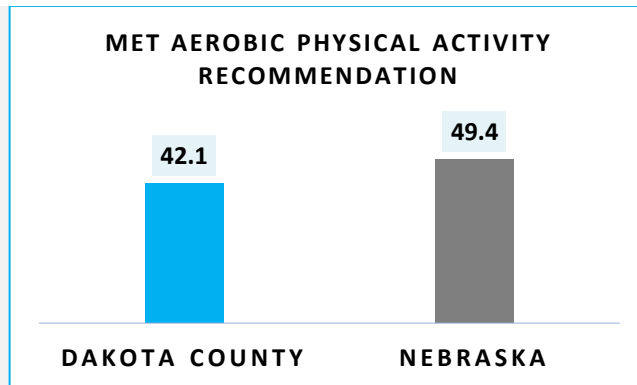
Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

Physical Activity

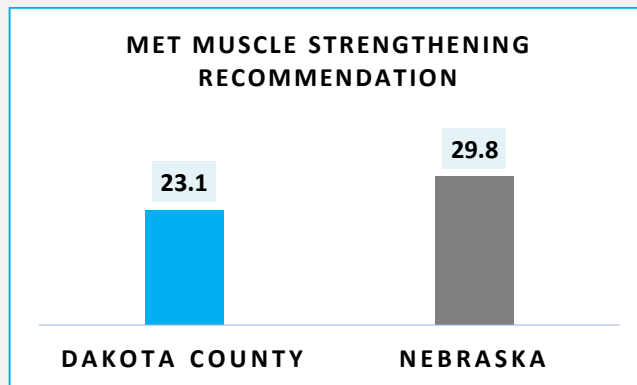
No leisure-time physical activity in past 30 days (%) is 12.2% higher in Dakota County when compared to the State.



Met aerobic physical activity recommendation (%) is 7.3% lower in Dakota County when compared to the State.



Met muscle strengthening recommendation (%) is 6.7% lower in Dakota County when compared to the State.

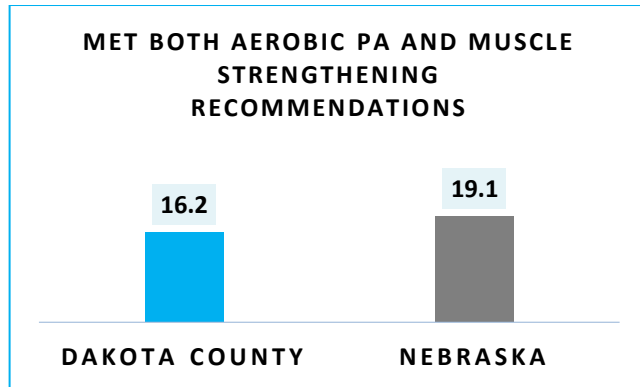


Health Disparities (cont.)

Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

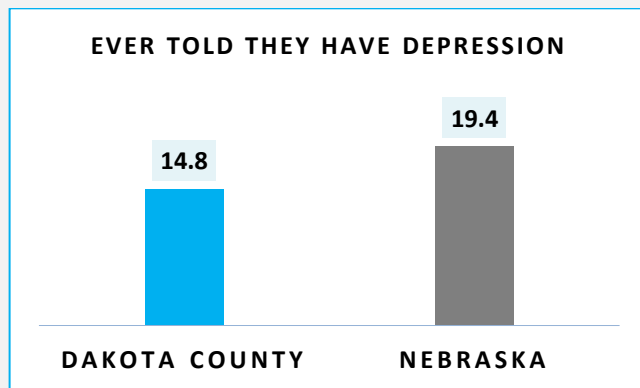
Physical Activity (cont.)

Met both aerobic PA and muscle strengthening recommendations (%) is 2.9% lower in Dakota County when compared to the State.

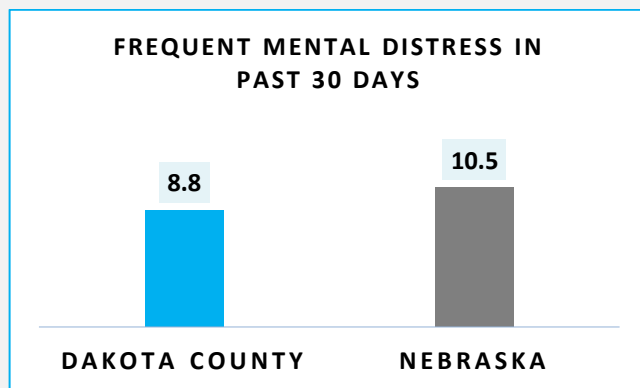


Mental Health

Ever told they have depression (%) is 4.6% lower in Dakota County when compared to the State.



Frequent mental distress in past 30 days (%) is 1.7% lower in Dakota County when compared to the State.

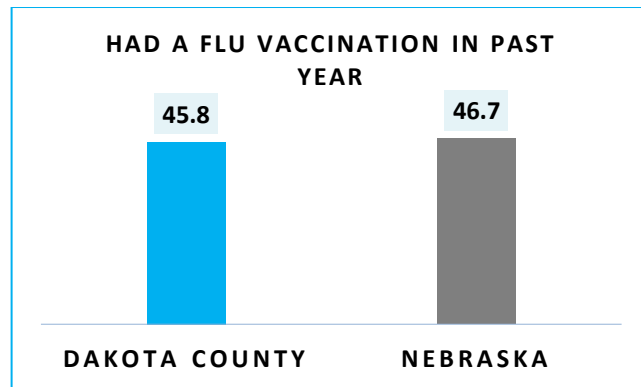


Health Indicators (cont.)

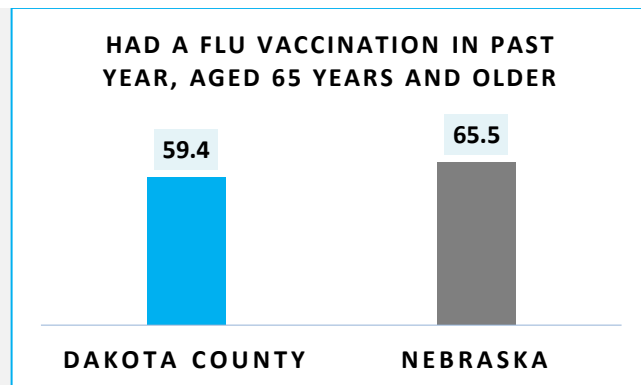
Indicators: BRFSS Summary Table for Dakota County, Adults 18 and Older, 2017

Immunization

Had a flu vaccination in past year (%) is slightly lower in Dakota County when compared to the State (45.8% vs 46.7%, respectively).



Had a flu vaccination in past year, aged 65 years and older (%) is significantly lower in Dakota County when compared to the State (59.4% vs 65.5%, respectively).



Main Findings from the Behavioral Risk Factor Surveillance System (BRFSS, 2011-2017)

The following behavioral health indicators have been significantly better in Dakota County for two or more years when compared to the State since 2011:

- Up-to-date on colon cancer screening, 50-75 year olds
- Ever told they have skin cancer
- Any alcohol consumption in past 30 days
- Texted while driving in past 30 days
- Talked on a cell phone while driving in past 30 days

The following behavioral health indicators have been significantly worse in Dakota County for two or more years when compared to the State since 2011:

- General health fair or poor
- No health care coverage, 18-64 year olds
- Needed to see a doctor but could not due to cost in past year
- No leisure-time physical activity in past 30 days
- Had a flu vaccination in past year, aged 65 years and older
- Ever had a shingles vaccination, aged 50 years and older
- Ever been tested for HIV, 18-64 year olds (excluding blood donation)

For details, see next table.

BRFSS: Selected Health Data, Dakota County Health Department and State, 2011 -2017 (percentages)

INDICATORS	2011		2012		2013		2014		2015		2016		2017	
	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE
General Health Status														
General health fair or poor	22.7	14.3	25.1	14.4	22.7	13.9	19.5	13.2	19.7	13.9	16.0	14.7	19.5	14.9
Physical health was not good on 14 or more of the past 30 days	8.6	9.6	17.0	9.8	10.0	9.2	10.9	9.0	11.8	9.6	11.8	9.8	9.6	10.3
Health Care Access and Utilization														
No health care coverage, 18-64 year olds	28.6	19.1	33.7	18.0	24.5	17.6	23.0	15.3	18.9	14.4	24.7	14.7	27.5	14.4
Needed to see a doctor but could not due to cost in past year [^]	21.5	12.5	18.5	12.8	10.3	13.0	17.4	11.8	13.4	11.5	7.6	12.1	13.9	11.7
Had a routine checkup in past year	55.9	57.7	69.8	60.4	66.6	61.6	61.8	63.3	68.3	63.9	67.3	65.4	63.7	66.7
Cardiovascular														
Ever told they had a heart attack or coronary heart disease	6.3	6.4	6.3	6.2	7.4	6.2	5.9	6.0	7.0	5.8	4.0	5.8	6.2	6.1
Ever told they had a stroke	2.9	2.6	3.6	2.4	3.0	2.5	2.6	2.6	1.9	2.5	3.8	2.8	3.7	2.9
Had blood pressure checked in past year	-	-	-	-	79.0	84.6	-	-	88.8	88.0	-	-	76.4	86.3
Ever told they have high blood pressure (excluding pregnancy) [^]	30.5	28.5	-	-	32.5	30.3	-	-	29.5	29.9	-	-	33.1	30.6
Had cholesterol checked in past 5 years ^{^#}	-	-	-	-	-	-	-	-	-	-	-	-	82.5	84.4
Ever told they have high cholesterol, among those who have ever had it checked ^{^#}	-	-	-	-	-	-	-	-	-	-	-	-	33.8	31.9
Cancer														
Ever told they have cancer (in any form)	8.3	11.2	8.8	10.8	8.8	11.4	8.2	10.7	6.7	11.6	8.3	11.2	10.4	11.0
Up-to-date on colon cancer screening, 50-75 year olds	-	-	58.4	61.1	62.2	62.8	53.2	64.1	54.5	65.2	59.9	66.0	65.9	68.3
Up-to-date on breast cancer screening, female 50-74 year olds	-	-	67.8	74.9	-	-	67.1	76.1	-	-	62.6	73.4	-	-
Ever told they have skin cancer	3.1	5.6	3.4	5.6	4.4	5.9	5.0	5.7	2.5	6.0	2.4	5.5	3.1	5.6
Tobacco														
Current cigarette smoking	23.1	20.0	16.3	19.7	21.8	18.5	19.8	17.3	15.5	17.1	18.6	17.0	18.4	15.4
Attempted to quit smoking in past year, among current cigarette smokers	56.6	55.6	57.6	57.1	61.4	57.1	65.8	58.2	41.3	59.1	40.9	54.6	45.2	55.6
Current smokeless tobacco use	5.8	5.6	9.0	5.1	4.0	5.3	4.6	4.7	6.7	5.5	6.3	5.7	2.5	5.3
Nutrition/Physical Activity														
Obese (BMI=30+)	29.5	28.4	34.2	28.6	31.7	29.6	36.1	30.2	31.5	31.4	44.8	32.0	37.1	32.8
Overweight or Obese (BMI=25+)	70.1	64.9	76.6	65.0	69.9	65.5	69.6	66.7	71.3	67.0	73.8	68.5	72.7	69.0
Ever told they have diabetes (excluding pregnancy)	10.9	8.4	9.7	8.1	11.5	9.2	8.4	9.2	10.9	8.8	10.8	8.8	10.1	10.1

Consumed fruits less than 1 time per day#	-	-	-	-	-	-	-	-	-	-	-	-	35.3	36.9
Consumed vegetables less than 1 time per day#	-	-	-	-	-	-	-	-	-	-	-	-	30.2	20.0
No leisure-time physical activity in past 30 days	36.1	26.3	33.6	21.0	28.6	25.3	27.0	21.3	34.5	25.3	29.8	22.4	37.6	25.4
Mental Health														
Ever told they have depression	17.4	16.8	24.2	16.7	14.3	18.2	17.6	17.7	15.7	17.5	11.8	17.8	14.8	19.4
Mental health was not good on 14 or more of the past 30 days (i.e., frequent mental distress)	7.8	9.2	10.2	9.0	7.4	8.9	10.8	8.2	5.1	8.9	7.9	9.5	8.8	10.5
Alcohol														
Any alcohol consumption in past 30 days	47.7	61.8	46.2	61.3	46.0	57.5	44.9	59.2	43.4	57.6	45.2	59.8	42.7	60.2
Binge drank in past 30 days [^]	19.8	22.7	20.8	22.1	15.6	20.0	17.9	20.3	12.7	19.5	13.8	20.0	14.0	20.6
Heavy drinking in past 30 days	5.0	7.5	5.0	7.2	5.9	6.8	4.3	6.4	6.8	5.7	8.6	6.6	4.0	7.0
Immunization and Infectious Disease														
Had a flu vaccination in past year, aged 18 years and older	39.5	41.1	33.6	42.2	40.1	45.2	33.5	43.9	42.0	47.2	38.5	44.4	45.8	46.7
Had a flu vaccination in past year, aged 65 years and older	57.1	61.8	51.7	62.9	57.0	66.2	61.9	64.7	66.8	65.2	53.6	62.7	59.4	65.5
Ever had a pneumonia vaccination, aged 65 years and older [^]	65.7	70.3	62.4	70.0	64.9	71.7	63.2	72.3	71.8	73.8	73.5	75.9	73.8	78.9
Ever had a shingles vaccination, aged 50 years and older	-	-	-	-	-	-	18.6	27.9	-	-	-	-	23.7	35.2
Ever been tested for HIV, 18-64 year olds (excluding blood donation)	30.4	30.8	32.0	30.9	21.7	31.8	20.9	30.9	28.3	32.0	26.0	31.9	36.1	31.9
Oral Health														
Visited a dentist or dental clinic for any reason in past year [^]	-	-	57.9	67.6	-	-	54.6	66.4	-	-	66.3	68.7	-	-
Had any permanent teeth extracted due to tooth decay or gum disease	-	-	49.5	39.8	-	-	50.7	39.1	-	-	44.3	38.2	-	-

INDICATORS	2011		2012		2013		2014		2015		2016		2017	
	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE	DCHD	NE
Injury														
Always wear a seatbelt when driving or riding in a car [^]	78.3	71.3	76.6	69.7	82.1	74.1	76.3	72.4	75.9	75.4	80.4	73.8	80.6	76.3
Texted while driving in past 30 days	-	-	11.8	26.8	-	-	-	-	14.9	24.9	-	-	12.5	26.6
Talked on a cell phone while driving in past 30 days	-	-	54.5	69.1	-	-	-	-	48.7	67.0	-	-	43.7	66.5
Injured due to a fall in past year, aged 45 years and older	-	-	13.6	9.9	-	-	9.0	8.8	-	-	13.8	10.1	-	-

Red shaded boxes: DCHD statistical significance of **worse** rate than State of Nebraska
 Green shaded boxes: DCHD statistical significance of **better** rate than State of Nebraska

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APPENDIX

Focus Group

List of participants of the focus group

Name	Organization
Joan Spencer	Dakota County Clerk
Pat Glover	Retired Registered Nurse
Theresa Grove	WeatherSHeild Insulation
Randy Grove	WeatherSHeild Insulation
Michael Tharp	Mauer Johnson Funeral Home
Tammy Tharp	Heritage Bank
Mattison Tharp	South Sioux City High School Student
Doug Janssen	Dakota City Fire and Rescue