RWJF Culture of Health
Sentinel Community Snapshot:

North Central Nebraska
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ABOUT THIS REPORT

The Sentinel Communities project, conducted by RTI International in collaboration with The RAND Corporation, is sponsored by the Robert Wood Johnson Foundation. The project will monitor activities in each of 30 diverse communities around the country for at least five years. This Snapshot is the first in a series of planned reports about this Sentinel Community. Using data compiled in early 2016, it provides an initial overview of the community’s history, challenges, and approaches to building a Culture of Health. Visit cultureofhealth.org to see the full list of communities, links to other reports, and information about the project.
Introduction

North Central Nebraska is a vast, sparsely populated region composed of nine counties: Antelope, Boyd, Brown, Cherry, Holt, Keya Paha, Knox, Pierce, and Rock. The region spans more than 14,000 square miles (one-fifth of Nebraska’s land area,) but it is home to less than 3 percent (45,800) of the state’s 1.8 million residents. Since 2001, the nine counties in North Central Nebraska have operated under the North Central District Health Department (NCDHD).

In the mid to late 1800s, homesteaders seeking to develop farms and ranches settled in North Central Nebraska. The region remains a predominantly agricultural area, with eastern counties focused on farming and western counties focused on ranching. The division in agricultural focus is, in large part, a result of the geographical differences across the counties. Brown, Cherry, Holt, and Rock counties are part of the Sandhills region—19,000 square miles of sand dunes—covered with grasses. Although the Sandhills region is not well suited for farming, it is adequate for ranching. North Central Nebraska sits atop the Ogallala aquifer, one of the world’s largest underground reservoirs. The aquifer stretches from South Dakota to Texas and serves as a major water supply for more than 2 million people across the Great Plains.

EXIT OF YOUNGER POPULATION

As the agriculture industry becomes more efficient and mechanized, the region’s population is shrinking and aging as many young people move...
This aging population brings significant health care needs to the area.

Nebraska is a largely rural and agriculture-dependent state, and the characteristics and needs of North Central Nebraska residents are similar to those of residents in other rural and agricultural areas. Major concerns include meeting the health needs of an aging population in an area with limited resources; protecting the unique environment; and ensuring water supply necessary to maintain the region’s agriculture industry. North Central Nebraska’s physician shortages and limited health care and public health funding create significant challenges to meeting residents’ needs. In response to these challenges, NCDHD—established in 2001 as part of a grant to improve public health—provides services at schools and worksites. With respect to environmental health, multiple stakeholders are working together to preserve the region’s environment and wildlife.

MECHANIZATION DECREASES LABOR FORCE

Agriculture remains the primary driver of North Central Nebraska’s economy. More than one in five residents in the region (21%) work in agriculture, compared with just 5 percent of residents in Nebraska. But the agricultural sector’s impact on the region is changing. Advances in farming technology, including increased mechanization of farms and the growing prevalence of large, specialized farms, have reduced the demand for farm workers. As a result, the percentage of agricultural workers in North Central Nebraska has decreased over time, from 35 percent in 1980 to 21 percent in 2014. Moreover, many of the counties in the region are no longer classified as “farming-dependent,” which means that less than 15 percent of the average annual earnings were derived from farming, or less than 15 percent of the residents worked in farming.

As a result of the shifting nature of agriculture, North Central Nebraska’s population is aging and shrinking, with many young people moving to the state’s larger cities, notably Omaha. In 2014, 20 percent of North Central Nebraskans were ages 65 or older, compared with 13 percent of Nebraskans overall (Figure 1). Nebraska expects this age group to increase statewide by nearly 32 percent from 2010 to 2020. At the same time, the region’s population decreased, falling 11 percent from 2000 to 2010, and was 45,800 in 2014.

The vast majority of North Central Nebraska’s residents are white (94%), with American Indians and Hispanics representing roughly 2 percent of the population each.

Residents in North Central Nebraska also have low educational attainment and median incomes. Approximately 20 percent of the region’s population has a four-year college degree or higher, which is lower than the state (29%) and national rates (29%). Additionally, median income is lower in North Central Nebraska ($45,600) than in the state ($52,500) and nation ($53,500).

HEALTH ISSUES AND POOR ACCESS TO CARE

North Central Nebraska is comparable to the rest of the state on most health indicators. Like much of Nebraska, the region faces a shortage of health care providers and funding for new health care initiatives.

North Central Nebraska suffers from the same health concerns as residents across Nebraska. Approximately 13 percent of the region’s residents report being in fair or poor health—the same rate as the state. North Central Nebraska’s obesity and heart disease rates are comparable to state rates (Figure 2). However, North Central Nebraskans
experience skin cancer at a statistically higher rate than residents in the rest of the state, although it remains unclear why. Risky health behaviors in the region—notably, tobacco use, binge drinking, and physical inactivity—also broadly align with behaviors in the rest of the state (Figure 3).

Residents in North Central Nebraska have limited access to health care providers and hospital services. The area faces an acute shortage of physicians in nearly every specialty area—notably, general pediatrics; obstetrics and gynecology; and psychiatry and mental health (Table 1). Given the vastness of the region and sparse population density, it is not uncommon for residents to live many miles from the nearest health care provider.

The region has 10 hospitals, all of which are critical access centers designed to provide emergency services, treat common conditions, and offer outpatient care. More intense or long-term care is provided at other major hospitals, often many miles away. The region had 11 hospitals, but Tilden Community Hospital closed in 2014. At the time of closing, Tilden City Council members cited low patient numbers, new government regulations, and monthly losses as reasons for the closure.

Because Nebraska is a largely rural state, these issues also affect Nebraska as a whole. The state has 104 Health Profession Shortage Areas (33rd worst in the United States) and meets only 43 percent of its primary care physician needs (47th worst), according to the Kaiser Family Foundation.

Coalitions Consolidate Efforts

In 1999, the National Association of County and City Health Officials and the Robert Wood Johnson Foundation selected Nebraska as a “Turning Point” recipient. The mission of the Turning Point grant was “to transform and strengthen the public health system in the United States to make the system more effective, more community-based, and more collaborative.” Through the Turning Point grant, Nebraska developed a strategic plan proposing the use of tobacco settlement funds and federal funding to create new, regional public health departments.

In conjunction with the proposals developed through the Turning Point grant, the nine counties formed the North Central Community Care Partnership (NCCCP), a private, nonprofit organization that supports regional health efforts. In 1999, NCCCP signed an agreement to create a single public health coalition and produced the region’s first Community Health Improvement Plan, which highlighted public health concerns and laid out steps for improvement. The consolidation effort was formalized in 2001, with the establishment of NCDHD as the singular health department for the entire region.

Steps to Improve Public Health

Since its creation, NCDHD has developed plans and taken steps to improve public health across the region. The department has released

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**Figure 3. Prevalence of Risky Health Behaviors in North Central Nebraska, Nebraska, and the United States**


**Table 1. Physician Shortages Across North Central Nebraska**

two updated Community Health Improvement Plans, the most recent in 2013. The latest plan outlined priorities—including chronic disease and obesity; behavioral health; nutrition; cancer prevention and education; and access to care—and plans to address many of these issues. For example, the report highlights telemedicine (i.e., diagnosing and treating conditions using telecommunications technology) as a possible solution to the shortage of physicians and limited access to care. Nebraska state laws, however, largely lag behind many other states in regard to telemedicine and do not allow the region to fully adopt it as a solution. In 2016, legislators in Nebraska, recognizing the need to address physician shortages in rural areas of the state, began studying telemedicine as a way to address the issue—including how to reimburse doctors, the cost of using the technology, and liability concerns. Despite not yet being able to implement telemedicine programs, NCDHD has implemented several other programs, including dental care and workplace safety initiatives.

**HEALTH PROGRAMS IN SCHOOLS AND WORK**

NCDHD’s Miles to Smiles program is working to improve oral health across the region. Five of the nine counties in North Central Nebraska are state-designated shortage areas for general dentistry.\(^{17}\) Started in 2013, Miles to Smiles now exists in 38 of 39 district elementary and middle schools. The program provides students with oral health screenings and fluoride varnish treatments.\(^{18}\) Given the program’s early success, NCDHD expanded the program in 2015 outside of schools and increased its hours of operation. For example, NCDHD extended the Miles to Smiles program from four to 12 hours per month at the Women, Infants and Children (WIC) program in O’Neill and added the program to WIC in the towns of Spencer and Atkinson.

Nebraska also offers grants to support health initiatives targeting minority populations, including those living in North Central Nebraska. The Minority Health Initiative (MHI) grants program strives to eliminate health inequities in the 15 counties with the largest minority populations.\(^{19}\) The Santee Sioux Nation in Knox County received two MHI grants to improve education and prevention of sexually transmitted infections and diabetes\(^{20}\) among American Indians, who represent 10 percent of Knox County’s population. In 2013, the health department and the Santee Sioux Nation, which maintains its own health and wellness center, received a grant to address sexually transmitted infections. As a result of this grant, 225 people received education on sexual health.\(^{21}\) In 2014, the health department and the Santee Sioux Nation received a diabetes prevention and education grant. As a result, 46 percent of those treated for diabetes achieved a reduction in blood pressure, males lost an average of 2.3 pounds and females an average of 7.3 pounds, and 40 percent of males and 60 percent of females had foot exams.\(^{22}\)

Although NCDHD is taking active steps to improve health throughout the region, funding remains a major hurdle. The region’s small population and lower median incomes do not create a large tax base from which to fund substantial operations. Nebraska used funds from the tobacco settlement to create an annual $50 million endowment to support public health initiatives and departments, but the money is spread thinly across the state.\(^{23}\) NCDHD routinely operates at a deficit.

**PROTECTING THE ENVIRONMENT**

North Central Nebraska residents, recognizing the environment’s vital role in the region’s agriculture-based economy, have worked to preserve the environment by opposing the Keystone Pipeline and participating in the Sandhills Task Force. The proposed Keystone Pipeline, which was ultimately rejected by the U.S. State Department in November 2015,\(^ {24}\) intended to carry carbon-heavy petroleum more than 2,100 miles from Alberta, Canada, across six states into the Gulf Coast. The pipeline would have been routed over the Ogallala Aquifer and through the ecologically fragile Sandhills region.\(^{25}\)

Concerned that pipeline leaks could damage the Sandhills, contaminate the Ogallala, and ultimately hurt the region’s ranching industry, Nebraska residents opposed the pipeline. Many landowners filed suits against the pipeline company to prevent construction in Nebraska.\(^ {26}\) Environmental groups encouraged residents to write to their congressional representatives,\(^ {27}\) while many others attended U.S. State Department hearings in Nebraska to voice their opposition.\(^ {28,29}\)

Despite those efforts, backers of the pipeline filed suit challenging the State Department’s ruling, and that dispute is moving to arbitration. Regardless, the push for the pipeline is likely to be renewed.\(^ {26}\)

The Sandhills Task Force is a nonprofit land trust that works with public-private partnerships—including ranchers, conservation organizations, and natural resource agencies—to safeguard the ecosystem while sustaining ranching and biodiversity.\(^ {30}\) The organization has provided hundreds of thousands of dollars to dozens of projects across the Sandhills, including partnering with landowners to remove invasive species; working with ranchers to create grazing plans that help maintain diversity of plants; and offering education to new ranchers.\(^ {31}\)

One of the Task Force’s most notable accomplishments is the diverse collection of partners it assembled, including The Nebraska Cattlemen (a lobbying group), Nebraska Environmental Trust, U.S. Fish and Wildlife Service, and the Nebraska Game and Parks Commission.\(^ {32}\)

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**Finding Solutions to Health Challenges**

North Central Nebraska is a vast, biodiverse region that economically relies on agriculture. The region is characterized by an aging population with numerous health challenges and a lack of resources to tackle them adequately. NCDHD, formed in 2001, is working to address the region’s health concerns and has made small steps toward that end. Additional surveillance; data and information gathering; analysis; and reporting will examine how initiatives are coordinating their efforts and the extent of their impact. Future reports will also convey how stakeholders are working to create a healthier, more equitable community; the impact of new and ongoing initiatives to address priority health concerns; and whether gaps are emerging in priority areas. Answers to the following
questions could provide insights into the degree to which meaningful change is taking place and can be sustained:

- To what extent will NCDHD be able to achieve its goals given its limited funding? Where will it find new or additional funding sources? Is the region adopting any innovative approaches to work within funding constraints?

- How will the region’s physician shortages affect its aging population? What is the region doing to expand access to care? How and when will the region implement telemedicine to address physician shortages?

- As the region’s population shrinks and hospitals close, what steps is the region taking to ensure that residents have access to health care services, including emergency care needs?

- How is the region following up on goals outlined in its Community Health Improvement Plans, and how is it working to overcome any barriers to successful implementation?

- How will the region continue to work to protect the environment, and what impact would any environmental changes, such as the potential Keystone Pipeline, have on the population and its health?
References


