



Center for  
Rural Health

The University of North Dakota  
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## The Economic Importance of Nelson County Health System to Nelson County, North Dakota



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*Connecting resources and knowledge to strengthen  
the health of people in rural communities.*

## Table of Contents

Introduction.....	3
Objective.....	3
Health Care Overview .....	4
Approach and Methods.....	4
Defining the Study Area .....	5
Study Area Statistics .....	6
Results .....	7
The Fiscal Status of North Dakota Hospitals.....	8
Conclusion.....	8
References.....	9

## Introduction

Nelson County Health System (NCHS), located in McVille, North Dakota provides quality health care to Nelson County and the surrounding area. Operating a hospital, care center, and two clinics, NCHS provides an all-encompassing level of care.

The NCHS hospital is a 19 bed primary care Critical Access Hospital certified by Medicare and Medicaid. It offers 24 hours acute care, swing bed, emergency care, and respite services. The staff includes a dedicated team of licensed and certified professional staff including physicians, nurse practitioners, nurses, technicians, and therapists. NCHS is certified as a level V trauma facility by the State Department of Health.

The Nelson County Care Center is a 39 bed skilled nursing facility licensed/certified under Medicare and Medicaid which provides care under a skilled team of medical professionals. Qualified staff work cooperatively with a number of programs to provide individualized personal care to each resident's physical, mental and psychosocial needs. Hospice and Home Health services are offered locally by NCHS through branch agencies of Altru Health System of Grand Forks, North Dakota.

Two Rural Health Clinics are located in McVille and Lakota, North Dakota providing a full range of primary health care to residents across all of Nelson County and beyond.

Nelson County Health System has a mission to:

*Enhance the health status and quality of life for peoples and communities served.*

NCHS's vision is to:

*Provide leadership, working in partnership with other, to ensure continued access to a quality continuum of health care and related services.*

## Objective

The purpose of this study is to illustrate the economic impact that Nelson County Health System has on the economy of Nelson County. The objective is to show how NCHS positively affects its local economy by quantifying its effects on employment levels and labor income. This report will also address the important role that NCHS has in offering services to the residents of Nelson County.

## Health Care Overview

In rural America, the local hospital exists to meet the emergent and non-emergent needs of the community. That commitment is to the patients and their families by striving to provide the highest degree of health care for all needs. Rural Americans are guided by hometown values-committed to quality services, continuity of care, assurance of qualified staff, and family involvement.

While the hospital is vital in that it provides medical services to all residents, it typically is also one of the largest employers in the county. Health care facilities are a source of external dollars, because most of their funding comes from sources outside the community such as the federal and state government. For many communities, the hospital is a source of millions of dollars in outside revenue. On the state level, the North Dakota Healthcare Association states that, “community hospitals contribute an estimated \$1.8 billion dollars in direct impacts to North Dakota’s economy,” in 2008 alone.

In addition, hospitals are a significant employer, hiring both professional and nonprofessional staff in order to provide the care needed in the community. Those employees, in turn, buy goods and services from local businesses. Over 18,800 people were employed by community hospitals in 2008 as either part-time or full-time employees, according to the North Dakota Healthcare Association. North Dakota has 38 rural hospitals: 36 Critical Access Hospitals and two Indian Health Services hospitals. The payroll and benefit dollars that these hospitals expend cycle through the local economy to generate additional dollars of income in other industries. Thus the healthcare system is a vital component of the county’s fiscal well-being, providing not only much needed medical services but also a significant contribution to the county’s economy. A strong case exists for the economic benefits that rural hospitals bring to the cities and counties where they exist.

## Approach and Methods

This report will first define the area of study and corresponding statistics. Next, an input-output analysis will be used to show the influence of the health sector on this area and its population. An input-output analysis models the interrelationship among all sectors – industry, households, government, health care, retail, faith, etc. – within an economy. It uses a multiplier effect to estimate the secondary impacts within an entire economy attributable to a change in a single sector. In other words, the multiplier effect refers to the way impacts from a primary source multiply to create secondary impacts throughout the rest of the economy.

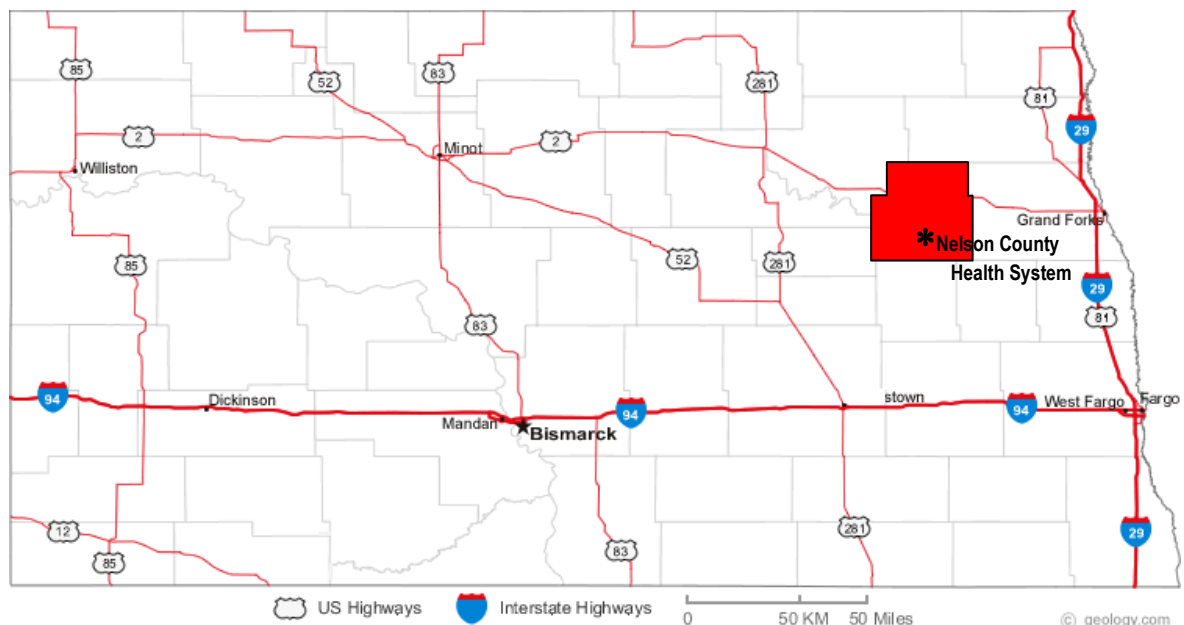
A type-II multiplier will be used in this report to derive secondary effects in two areas of Nelson County Health System: employment and labor income. The multipliers for employment and labor income have been calculated using the IMPLAN economic impact modeling software and data from The Minnesota IMPLAN Group, Inc. IMPLAN uses existing economic data in an input-output model. It uses a geographical database for model construction and impact analysis. IMPLAN was used to develop a countywide model of Nelson County to derive the economic impact of NCHS's services.

In addition to the economic multipliers, population data will be used to display the potential growth of demand for health care services in Nelson County.

### Defining the Study Area

Nelson County, North Dakota makes up the economy for this impact study. The county is located in northeast North Dakota along U.S. Highway 2. It is made up of 981 square land miles and houses 3.8 people per square mile (U.S. Census Bureau). NCHS is located in the city of McVille. McVille is located approximately 67 miles southwest of Grand Forks, ND and had a population of 470 in the 2000 census. Figure 1 highlights the location of Nelson County and NCHS.

**Figure 1 - Nelson County, North Dakota**



## Study Area Statistics

According to 2009 fiscal year records, NCHS employed a total of 92 full-time and part-time workers and provided \$2,634,501 in income and benefits to these employees. A breakdown of employment and labor income can be seen in figure 2. These values are direct impacts that NCHS contributed to the Nelson County economy throughout the year.

**Figure 2 - Direct Impact Data**

<h3>Direct Impact Data</h3>		
Direct Economic Impact of Nelson County Health System on Nelson County		
Nelson County Health System	Employment (Full Time & Part Time)	Income (Wages & Benefits)
<b>Facility Employment</b>		
Hospital	35	
Long Term Care	57	
<b>Labor Income</b>		
Hospital		\$ 1,169,134
Long Term Care		\$ 1,465,367
<b>Total Direct Economic Impact</b>	<b><u>92</u></b>	<b><u>\$ 2,634,501</u></b>

SOURCE: Local data received from Nelson County Health System - FYE 2009

In addition to directly providing the county with employment and labor income, NCHS also provides services for an aging population. According to 2008 population estimates by the U.S. Census Bureau, Nelson County has a population of 3,166 people, which is down 14.8% from the 2000 census. The 2008 estimate also shows 28.3% of the residents of Nelson County to be over the age of 65. This is a significant percent of people who may have increased needs for health care services. The Population Bulletin from The North Dakota State Data Center shows that the median age for Nelson County is 47.2 years (2000). This number is a 3 year increase over the previous census. All of this data shows that *while the total population in Nelson County is decreasing, the number of residents most likely to NCHS's services is growing*. If this trend continues, adults requiring care, especially those aged 65 years and older will increase. NCHS can provide these residents a better quality of life, while at the same time retaining financial activity in the local economy. State level data also greatly supports this argument as the U.S. Census Bureau, Interim State Population Projections predict the state population of residents 65 and older to increase 61.3% between 2000 and 2030 (2005).

## Results

The economic impact of Nelson County Health System is not limited to the direct effect of employment and income it provides for the county. This direct impact also generates a secondary impact. The secondary impact looks at the relationship of the facility and its employees with other sectors in the county; it is the sum of all labor income and jobs that are created outside of the health sector. When the facility or its employees does commerce with other businesses in the county, it is demanding services and creating income for employees from those other businesses. For example, a secondary impact from NCHS could include an employee buying groceries at the local grocery store or the hospital purchasing cleaning supplies from a local retail store.

Using the IMPLAN data, as discussed above, employment and labor income multipliers were derived for health care services in Nelson County. These multipliers were applied to NCHS's direct data. A breakout of the multipliers and their effects can be seen below in figure 3.

**Figure 3 - Total Economic Impact**

<b>Total Economic Impact</b>				
Total Impact of Nelson County Health System on the Nelson County Economy				
Area of Impact	Direct Impact	Multiplier	Secondary Impact	Total Impacts
<b>Employment</b>				
Hospital	35	1.25499	9	44
Long Term Care	57	1.16371	9	66
<b>Total Employment Impact</b>	<b>92</b>		<b>18</b>	<b><u>110</u></b>
<b>Labor Income</b>				
Hospital	\$ 1,169,134	1.2550	\$ 298,113	\$ 1,467,247
Long Term Care	\$ 1,465,367	1.1263	\$ 185,137	\$ 1,650,504
<b>Total Labor Income Impact</b>	<b>\$ 2,634,501</b>		<b>\$ 483,250</b>	<b><u>\$ 3,117,751</u></b>

SOURCE: Direct data received from Nelson County Health System - FYE 2009  
Multipliers from Minnesota IMPLAN Group, Inc - 2007 data

The total economic impact on employment and labor income by NCHS is the sum of the direct impact that the facility provides and the secondary impact that the facility creates through demand. The 92 jobs that NCHS provides directly, creates another 18 jobs in the county outside of the health sector, making a *total economic impact of 110 jobs*. Likewise, the \$2,634,501 that NCHS provides its employees generates another \$483,250 of income in the county, providing Nelson County with a *total impact of \$3,117,751 in labor income* for the year.

## **The Fiscal Status of North Dakota Hospitals**

Nelson County Health System is a vital component of the county's fiscal well-being. In North Dakota, rural hospitals are an essential resource for their local communities; however, many are unfortunately in difficult financial situations. A recent assessment of the financial performance of 34 Critical Access Hospitals in North Dakota reflects that those hospitals are experiencing a mean operating margin of -3.1% (Blue Cross Blue Shield Reimbursement Workgroup, 2009). For some critical access hospitals in North Dakota this amounts to a loss of more than \$500,000 a year. Compare this -3.1% operating margin to a national study of Critical Access Hospital Financial Indicators that shows the average total margin of Critical Access Hospitals nationally is +3.64% (Flex Monitoring Team, 2009). More importantly, the losses sustained by rural hospitals are not recent in origin and, for several facilities, have existed four or more years.

### **Conclusion**

Nelson County Health System greatly affects the Nelson County economy by generating 110 jobs and over \$3.11 million in labor income both inside and outside the health sector. In addition, the demand for medical services will grow as the senior population of Nelson County continues to increase. NCHS positively impacts Nelson County as it generates jobs and labor income, improves the quality of life for county residents, and keeps commerce active within the county.



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