



## Center for Rural Health

The University of North Dakota  
School of Medicine & Health Sciences

# **The Economic Importance of Union Hospital to Traill County, North Dakota**



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

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## Introduction

Union Hospital is a primary care Critical Access Hospital located in Mayville, ND. The hospital gained Critical Access designation in 2000 and is licensed for 25 acute care beds. A portion of these beds have been designated for swing bed patients. The hospital operates a number of departments which provide an all-encompassing level of care and service.

The operating room of Union Hospital is dedicated to providing optimum care to patients for a variety of surgical procedures. The nursing department staffs the general floor and swing bed unit as well as the level V certified emergency room. This staff is made up of trained and educated RNs, LPNs, and CNAs. The clinical laboratory and X-ray are available 24 hours a day with an on-site radiologist once a week. Also on site are CT scan and Dexascan services. Home Health Care, contracted through MeritCare Health Network, offers services including skilled nursing; home health aides; social work services; and physical, occupational, and speech therapy. Other departments at the hospital included cardiac rehabilitation, respiratory therapy, physical therapy, occupational therapy, diabetic education, dietary, and social services.

The mission of Union Hospital is to

*Provide or arrange for high quality, comprehensive health care services for the population that it serves. The goal is that of improving the health and well-being of that population, within the limits of available resources.*

Union Hospital carries out the social responsibility for maintaining health of all members of the population they serve. This role includes providing care of the sick and injured; offering education to all persons involved in the health care delivery system; assisting public health prevention of disease and promotion of health; and advancing appropriate services for the area.

## Objective

The purpose of this study is to illustrate the economic impact that Union Hospital has on the economy of Traill County. The objective is to show how Union Hospital positively affects its local economy by quantifying the facility's effect on employment levels and labor income. This report will also address the important role that Union Hospital has in offering services to the residents of Traill 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 is also typically 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.

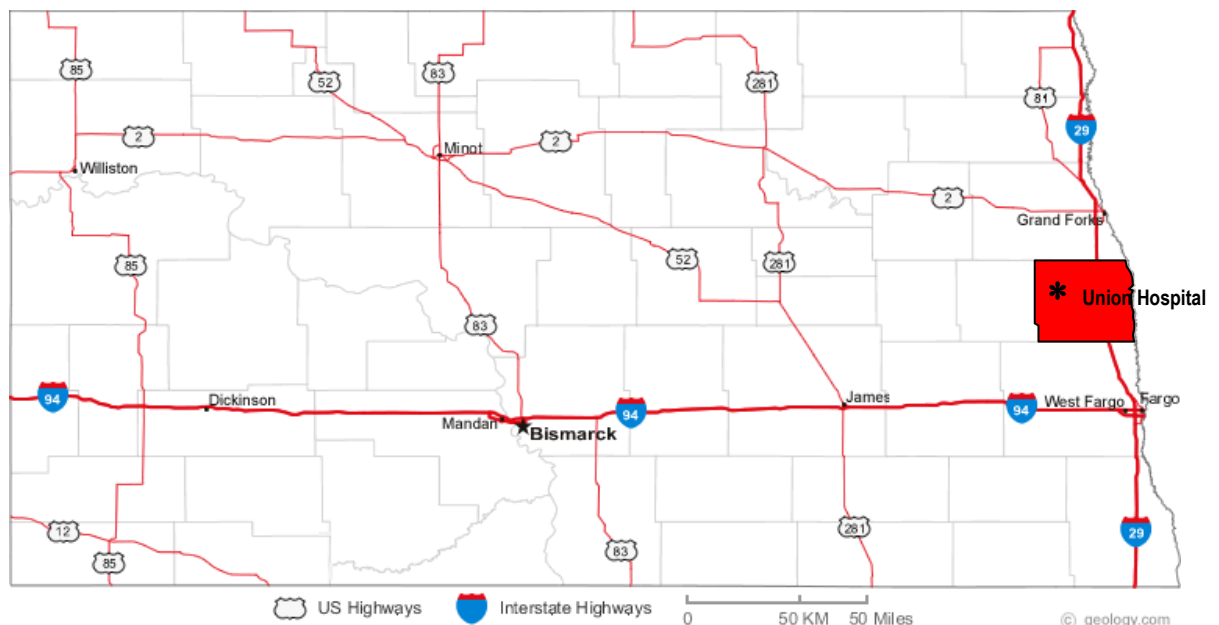
A type-II multiplier will be used in this report to derive secondary effects in two areas of Union Hospital: employment and labor income. The multipliers for employment and labor income have been calculated using the IMPLAN economic impact modeling software and data from The Minnesota IMPLAN Group, Inc. 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 Traill County to derive the economic impact of Union Hospital'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 Traill County.

### Defining the Study Area

Traill County, North Dakota makes up the economy for this impact study. It is located on the eastern edge of the state along U.S. Interstate 29. It is made up of 862 square land miles and houses 9.8 people per square mile (U.S. Census Bureau). Union Hospital is located in the city of Mayville, which is located midway between Grand Forks and Fargo, North Dakota (approximately 60 miles from each). Mayville, Traill County's largest city, had a population of 1,953 in the 2000 Census. Figure 1 highlights the location of Traill County and Union Hospital.

Figure 1 - Traill County, North Dakota



## Study Area Statistics

According to 2009 fiscal year records, Union Hospital employed a total of 65 full-time and part-time workers and provided a total of \$2,108,826 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 Union Hospital contributed to the Traill County economy in the year.

**Figure 2 - Direct Impact Data**

<h3>Direct Impact Data</h3>		
Direct Economic Impact of Union Hospital on Traill County		
Union Hospital	Employment	Income
<b>Facility Employment</b>		
Part Time	28	
Full Time	37	
<b>Labor Income</b>		
Benefits		\$ 384,966
Wages		\$ 1,723,860
<b>Total Direct Economic Impact</b>	<b><u>65</u></b>	<b><u>\$ 2,108,826</u></b>

SOURCE: Local data received from Union Hospital - FYE 2009

In addition to directly providing the county with employment and labor income, Union Hospital also provides services for an aging population. According to 2008 population estimates by the U.S. Census Bureau, Traill County has a population of 7,820 people, which is down 7.8% from the 2000 census. The 2008 estimate also shows 18.6% of the residents of Traill County to be over the age of 65. This is a large 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 Traill County is 39 years (2000). This number is a 3.4 year increase over the previous census. All of this data shows that *while the total population in Traill County is decreasing, the number of residents most likely to use Union Hospital's services is growing*. If this trend continues, adults requiring care, especially those aged 65 years and older will increase. Union Hospital 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 Union Hospital 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 hospital, 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 Union Hospital could include an employee of the hospital 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 Traill County. These multipliers were applied to Union Hospital's direct data. A breakout of the multipliers and their effects can be seen in figure 3.

**Figure 3 - Total Economic Impact**

Total Economic Impact				
Total Impact of Union Hospital on the Traill County Economy				
Area of Impact	Direct Impact	Multiplier	Secondary Impact	Total Impacts
<b>Employment</b>				
Part Time	28	1.23809	7	35
Full Time	37	1.23809	9	46
<b>Total Employment Impact</b>	65		15	<b>80</b>
<b>Labor Income</b>				
Benefits	\$ 384,966	1.1780	\$ 68,522	\$ 453,488
Wages	\$ 1,723,860	1.1780	\$ 306,838	\$ 2,030,698
<b>Total Labor Income Impact</b>	\$ 2,108,826		\$ 375,360	<b>\$ 2,484,186</b>

SOURCE: Direct data received from Union Hospital - FYE 2009  
Multipliers from Minnesota IMPLAN Group, Inc - 2007 data

The total economic impact on employment and labor income by Union Hospital is the sum of the direct impact that the facility provides and the secondary impact that the facility creates through demand. The 65 jobs that Union Hospital provides directly, creates another 15 jobs in the county outside of the facility, making a *total economic impact of 80 jobs*. Likewise, the \$2,108,826 that Union Hospital provides its employees generates another \$375,360 of income in the county, providing Traill County with a total impact of \$2,484,186 in labor income for the year.

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

Union Hospital 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**

Union Hospital greatly affects the Traill County economy by generating 80 jobs and over \$2.48 million in labor income both inside and outside the health sector. In addition, the demand for the facilities' services will grow as the senior population of Traill County continues to increase. Union Hospital positively impacts Traill County as it generates jobs and labor income, improves the quality of life for county residents, and keeps commerce active within the county.



## References

Blue Cross Blue Shield Reimbursement Workgroup. (2009). *Facility Statement of Operations Summary*. North Dakota.

Flex Monitoring Team. (2009). *CAH Financial Indicators Report: Summary of Indicator Medians by State*. Chapel Hill: University of North Carolina at Chapel Hill.

Minnesota IMPLAN Group, Inc. (2007). *IMPLAN North Dakota county data*.

North Dakota Healthcare Association. (2008). *The Economic Pulse of North Dakota*. Bismarck, North Dakota.

North Dakota State Data Center. (June 2001). Median Age in North Dakota: 1950 to 2000. *The Population Bulletin*, 17(6).

U.S. Census Bureau. (n.d.) *State & County QuickFacts*. Retrieved March 15, 2010, from <http://quickfacts.census.gov/qfd/states/38/38097.html>

U.S. Census Bureau. (n.d.) Population Division, Interim State Population Projections. Retrieved March 15, 2010, from <http://www.census.gov/population/projections/35PyrmdND3.pdf>