



Nebraska  
Center  
For  
Rural  
Health  
Research

---

# Nebraska Rural Health Works Health Economic Profile for Burt County, Nebraska

---

Prepared by  
Li-Wu Chen, Ph.D., Project Director  
Roslyn Fraser, M.A., Health Data Analyst  
Liyan Xu, M.S., Health Data Analyst  
Anh Nguyen, Graduate Research Assistant

January 2007

## Executive Summary on the Economic Impact of Health Care Sector

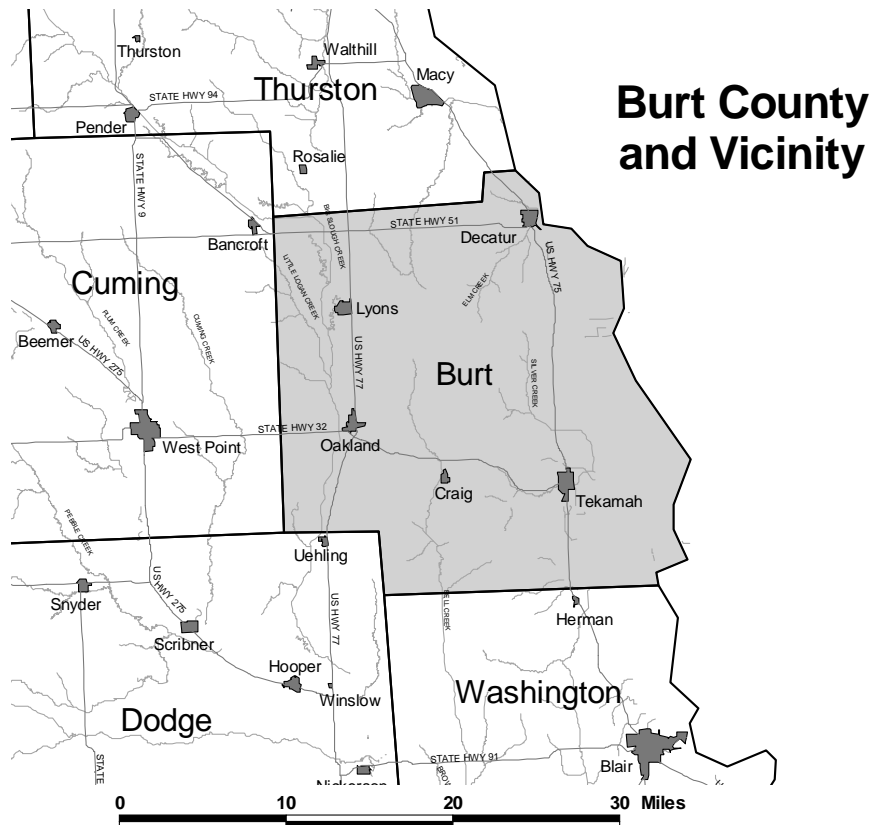
- ◆ One job created in the health care sector of Burt County would lead to the creation of another 0.18 job in other sectors of the county's economy.
- ◆ One dollar of income earned in the health care sector of Burt County would lead to another \$0.18 of income earned in other sectors of the county's economy.
- ◆ One dollar spent in the health care sector of Burt County would lead to another \$0.31 spent in other sectors of the county's economy.
- ◆ The overall job creation due to health care (directly and indirectly) in Burt County is estimated at 378 jobs, which accounts for 9.84% of the county's total employment.
- ◆ The overall income earned due to health care (directly and indirectly) in Burt County is estimated at \$7.78 million, which accounts for 9.26% of the county's total income.
- ◆ The overall spending due to health care (directly and indirectly) in Burt County is estimated at \$15.98 million, which accounts for 4.98% of the county's total economic output.

Report Number  
PR07-05

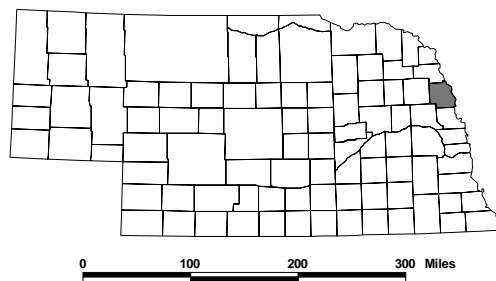
University of Nebraska Medical Center  
Nebraska Center for Rural Health Research  
in partnership with  
Nebraska Office of Rural Health  
and  
Nebraska Hospital Association

## I. GEOGRAPHY

Burt County is located in the northeast region of Nebraska. The county has a total of 492 square miles with a population density of 15.8 people per square mile (Nebraska: 22.3 per square mile). The county seat of Burt County is Tekamah, Nebraska.



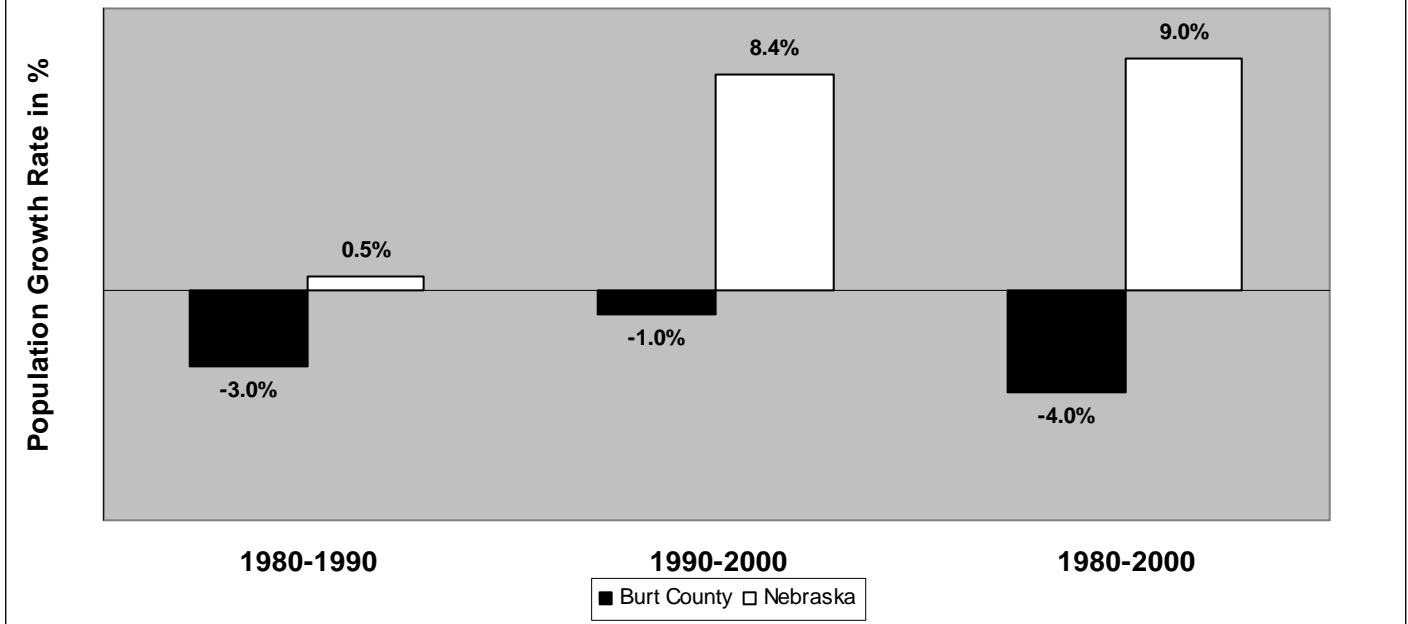
Burt County, Nebraska



## II. POPULATION

The population for Burt County was 7,791 in 2000. The county has experienced a negative population change of -4.0% (compared to +9.0% statewide) during 1980-2000 (Figure 1). Although the county's minority population has increased during the last decade, white (non-Hispanic) people still represented the great majority of county population in 2000 (97.6% vs. 89.6% statewide, Table 1). In addition, the county's population is older than the state's, with the elderly (aged 65+) representing 21.8% (compared to 13.6% statewide) of the population in 2000 (Table 2).

**Figure 1. Population Growth Rate,  
Burt County and Nebraska, 1980-2000**



Sources: U.S. Bureau of the Census. Census 1990 and Census 2000, Summary Tape File 1. <http://factfinder.census.gov>.  
Nebraska Department of Health and Human Services Vital Statistics. Population by County, 1960-2001. <http://www.hhs.state.ne.us/ced/tbl2.htm>.

**Table 1. Population by Race for Burt County and Nebraska, 1990 and 2000**

	Burt County 1990	Nebraska 1990	Burt County 2000	Nebraska 2000
<b>White</b>	<b>98.5%</b> (7,749)	<b>93.8%</b> (1,480,558)	<b>97.6%</b> (7,606)	<b>89.6%</b> (1,533,261)
<b>Black</b>	<b>0.1%</b> (8)	<b>3.6%</b> (57,404)	<b>0.2%</b> (14)	<b>4.0%</b> (68,541)
<b>American Indian, Eskimo and Aleut</b>	<b>0.9%</b> (70)	<b>0.8%</b> (12,410)	<b>1.1%</b> (83)	<b>0.8%</b> (14,896)
<b>Asian or Pacific Islander</b>	<b>0.2%</b> (14)	<b>0.8%</b> (12,422)	<b>0.2%</b> (17)	<b>1.3%</b> (22,767)
<b>Other Race</b>	<b>0.3%</b> (27)	<b>1.0%</b> (15,591)	<b>0.2%</b> (17)	<b>2.8%</b> (47,845)
<b>Hispanic*</b>	<b>0.9%</b> (74)	<b>2.3%</b> (36,969)	<b>1.3%</b> (98)	<b>5.5%</b> (94,425)

\* Hispanic individuals were allowed to identify race alone or in combination with one or more other races, therefore totals will be more than 100%.  
Source: U.S. Bureau of the Census, 1990 and 2000 Census of Population and Housing, Summary Tape File 1. <http://factfinder.census.gov>.

**Table 2. Population by Age for Burt County and Nebraska, 1990 and 2000**

Age	Burt County 1990	Nebraska 1990	Burt County 2000	Nebraska 2000
0-4	6.6% (518)	7.6% (119,606)	5.7% (441)	6.8% (117,048)
5-24	25.5% (2,003)	29.5% (465,293)	25.4% (1,979)	29.7% (507,619)
25-64	46.3% (3,645)	48.8% (770,418)	47.1% (3,673)	49.9% (854,401)
65-84	18.5% (1,453)	12.3% (193,866)	18.3% (1,426)	11.6% (198,242)
85+	3.2% (249)	1.9% (29,202)	3.5% (272)	2.0% (33,953)
<b>TOTAL</b>	<b>100%</b> <b>(7,868)</b>	<b>100%</b> <b>(1,578,385)</b>	<b>100%</b> <b>(7,791)</b>	<b>100%</b> <b>(1,711,263)</b>

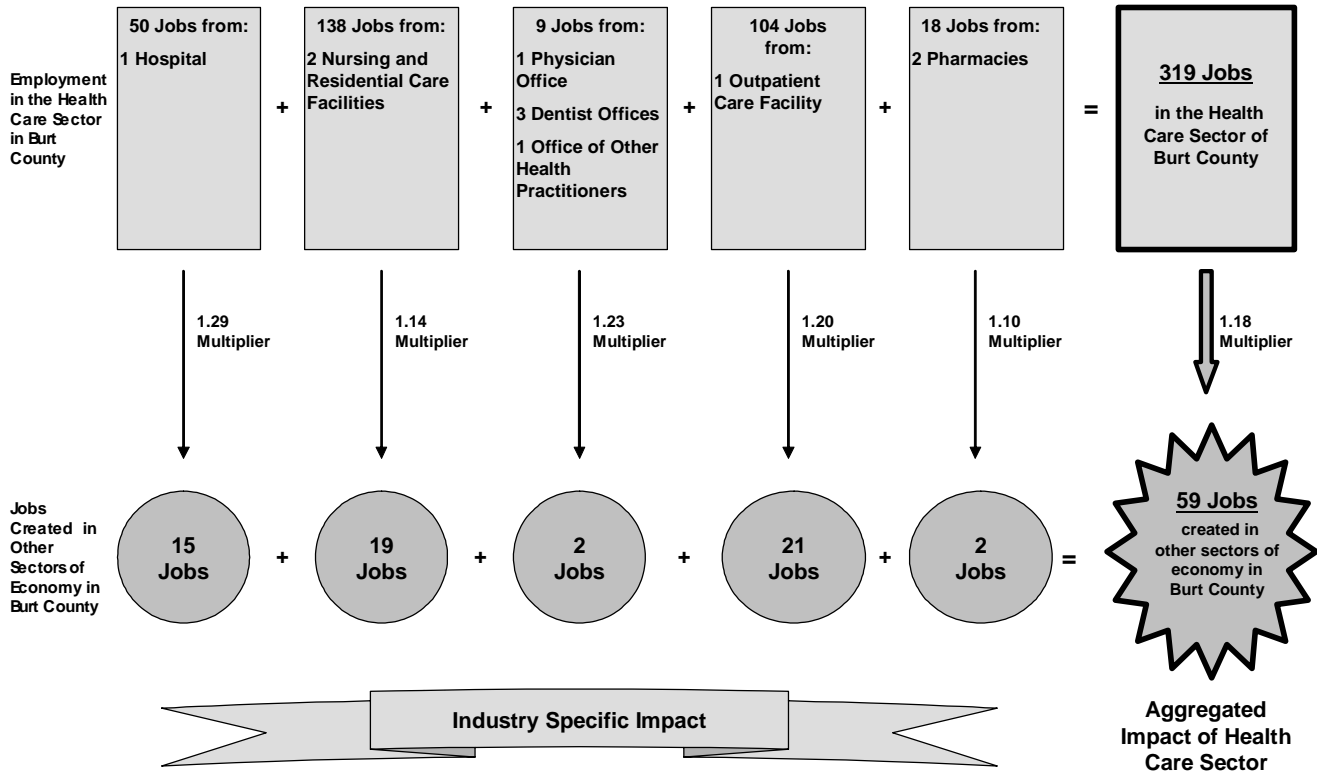
Source: U.S. Bureau of the Census, Census 1990 and Census 2000, Summary Tape File 1. <http://factfinder.census.gov>.

### III. ECONOMIC IMPACT OF THE HEALTH CARE SECTOR

Retail trade is the largest employer within Burt County, followed by health care and social assistance, accommodation and food services, wholesale trade, and construction. The Health Care sector of Burt County includes one hospital, two nursing and residential care facilities, one physician office, three dentist offices, one office of other health practitioners, one outpatient care facility and two pharmacies.

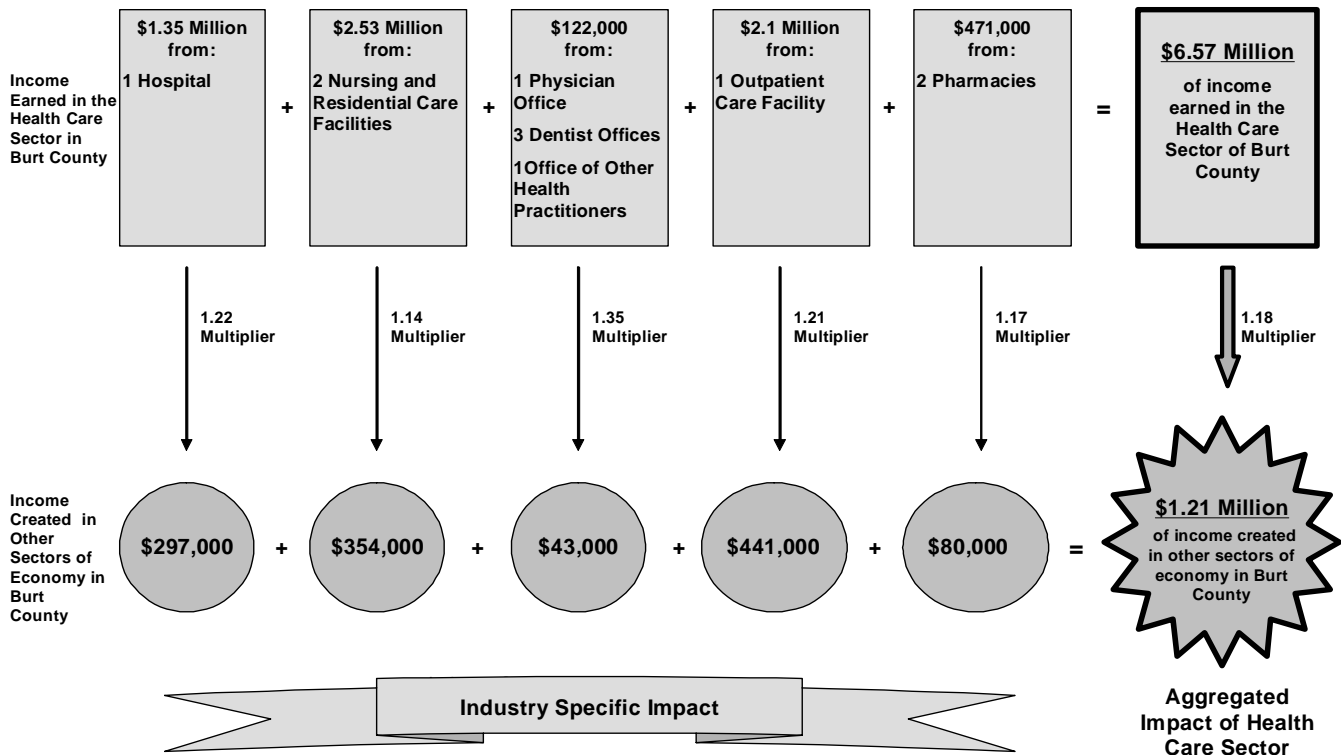
- ◆ The 319 jobs in the health care sector of Burt County have created (through a 1.18 multiplier) another 59 jobs in other sectors of the county's economy (Figure 2). Therefore, the combined effect represents 9.84% of the county's total employment (i.e., 378 out of 3,843 jobs).
- ◆ The \$6.57 million of income earned in the health care sector of Burt County has created (through a 1.18 multiplier) another \$1.21 million of income in other sectors of the county's economy (Figure 3). Therefore, the combined effect represents 9.26% of the county's total income (i.e., \$7.78 million out of \$84.04 million).
- ◆ The \$12.21 million spent in the health care sector of Burt County has created (through a 1.31 multiplier) another \$3.77 million of spending in other sectors of the county's economy (Figure 4). Therefore, the combined effect represents 4.98% of the county's total economic output (i.e., \$15.98 million out of \$320.7 million).

**Figure 2. The Economic Impact of the Health Care Sector on Employment in Burt County, Nebraska**



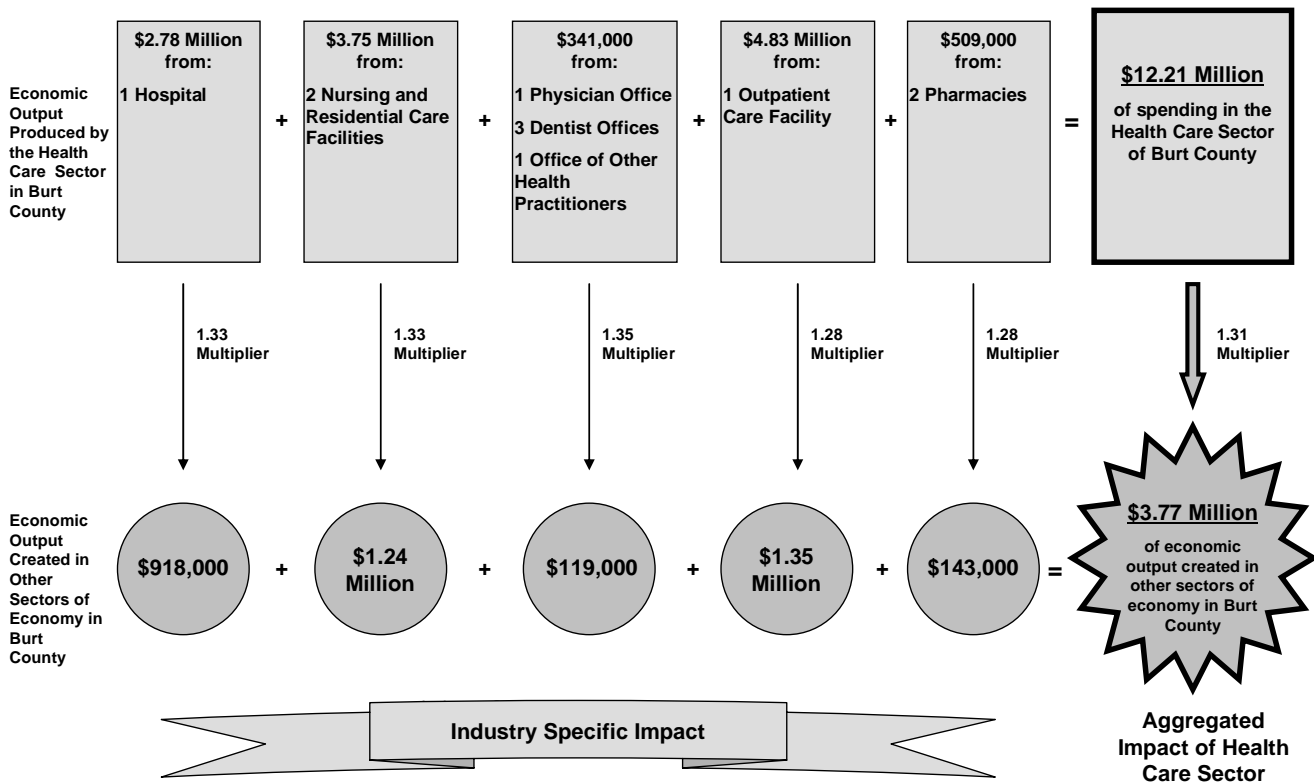
Sources: IMPLAN Data 2000, Minnesota IMPLAN Group, Inc. 2003. U.S. Census Bureau County Business Patterns, 2000. <http://www.census.gov/prod/www/abs/cbptotal.html>. Community Health System Assessment Survey, Nebraska Center for Rural Health Research, UNMC, July, 2002.

**Figure 3. The Economic Impact of the Health Care Sector on Income in Burt County, Nebraska**



Sources: IMPLAN Data 2000, Minnesota IMPLAN Group, Inc. 2003. U.S. Census Bureau County Business Patterns, 2000. <http://www.census.gov/prod/www/abs/cbptotal.html>. Community Health System Assessment Survey, Nebraska Center for Rural Health Research, UNMC, July, 2002.

**Figure 4. The Impact of the Health Care Sector on Economic Output in Burt County, Nebraska**

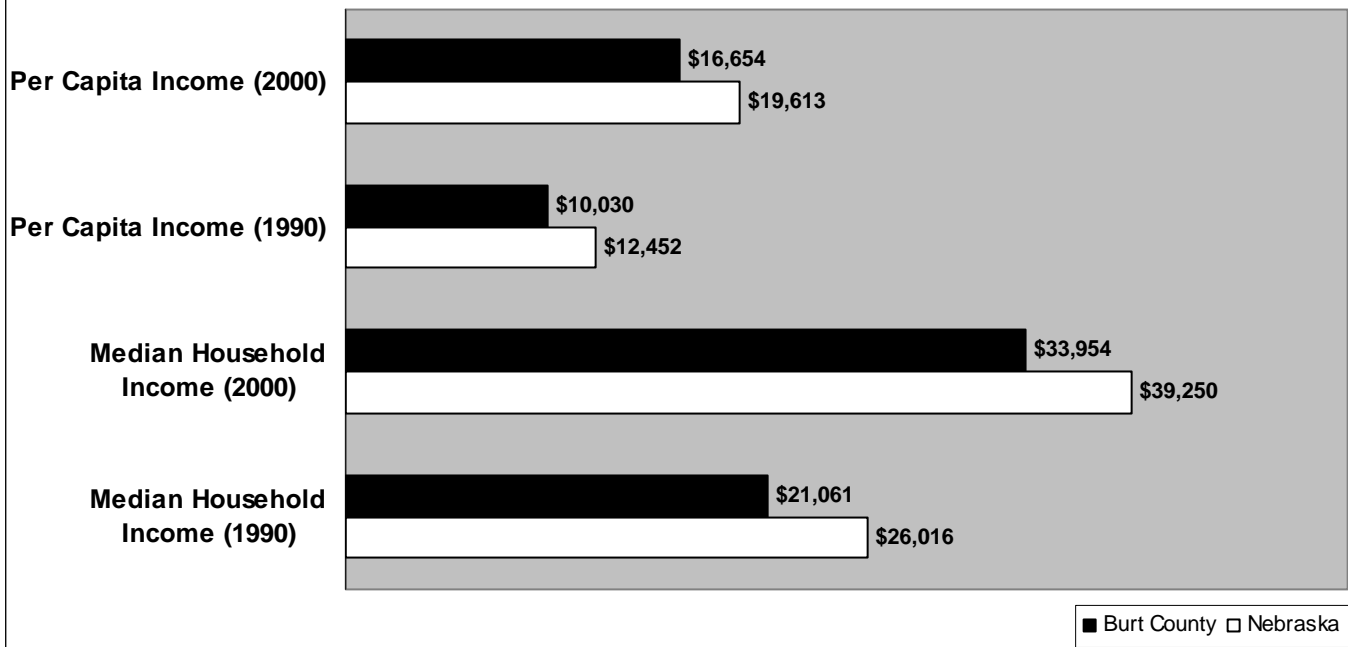


Sources: IMPLAN Data 2000. Minnesota IMPLAN Group, Inc. 2003. U.S. Census Bureau County Business Patterns, 2000. <http://www.census.gov/prod/www/abs/cbptotal.html>. Community Health System Assessment Survey, Nebraska Center for Rural Health Research, UNMC, July, 2002.

#### IV. SOCIO-ECONOMIC INDICATORS

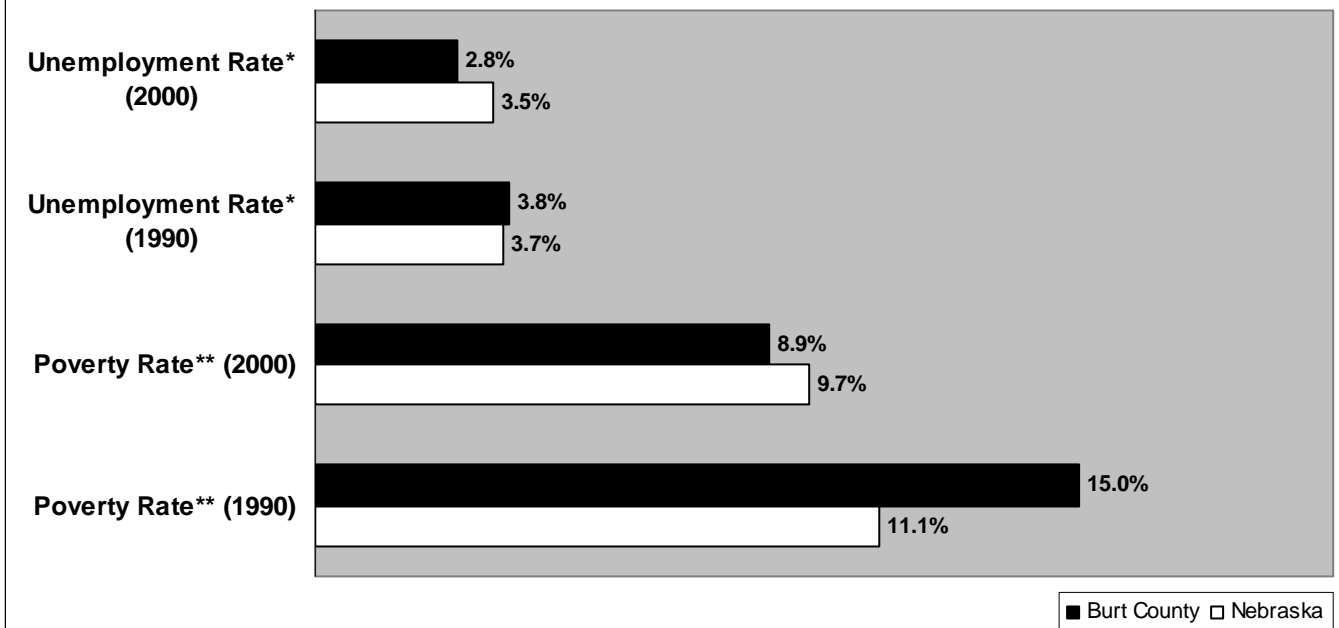
The median household income of the county has increased since 1990 by 61.2% to \$33,954 in 2000 (compared to \$39,250 statewide), and the per capita income of the county has increased since 1990 by 66.0% to \$16,654 in 2000 (compared to \$19,613 statewide) (Figure 5). Burt County experienced a lower unemployment rate (2.8% vs. 3.5% statewide) and poverty rate (8.9% vs. 9.7% statewide) than the state in 2000 (Figure 6). Moreover, the county out-performed the State in two of the social indicators shown in Table 3, but had a higher percentage of residents aged 25 and older who did not graduate from high school and percentage of first births born to unmarried women under 20 with less than a high school education.

**Figure 5. Income for Burt County and Nebraska, 1990 and 2000**



Sources: U.S. Census Bureau, Census 1990 and Census 2000, Summary File 3. <http://factfinder.census.gov>.

**Figure 6. Economic Indicators for Burt County and Nebraska, 1990 and 2000**



\* Percent of residents aged 16 and older in the labor force that are unemployed.

\*\* Percent of total population living below 100% of the Federal poverty threshold.

Source: U.S. Census Bureau, Census 1990 and Census 2000, Summary File 3. <http://factfinder.census.gov>.

**Table 3. Selected Social Indicators for Burt County and Nebraska**

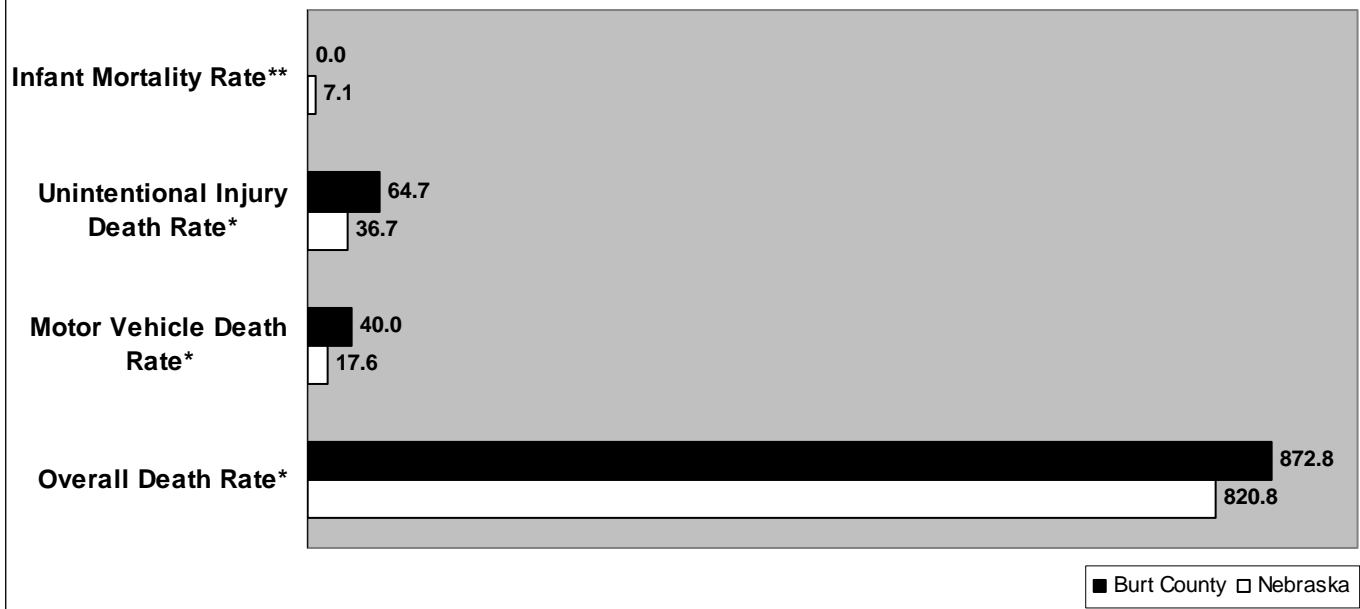
	Burt County	Nebraska
Percent of residents aged 25 and older who did not graduate from high school (2000)	15.9%	13.4%
Percent of 7-12th graders who dropped out of school (2000-2001)	2.2%	2.5%
Percent of first births born to unmarried women, younger than 20, with less than a high school education (1997-2001)	15.3%	10.1%
Crime arrest rate per 1,000 population (1999)	29.3	59.2

Source: U.S. Census Bureau, Census 2000. <http://factfinder.census.gov>. Nebraska Health and Human Services County Profiles. <http://www.hhs.state.ne.us/profiles0802/Burt/profiles.htm>

## V. HEALTH STATUS INDICATORS

The residents of Burt County experienced lower infant mortality, but had a higher unintentional injury death rate, motor vehicle death rate, and overall death rate compared with the state between 1997 and 2001 (Figure 7). Burt County out-performed the state in one of the maternal and child health related indicators, shown in Figure 8, but had a higher percentage of births to adolescents aged 10-17, a higher percentage of pregnant women who smoked, and a lower percentage of women who reported obtaining prenatal care in the first trimester. Among the top 5 leading causes of death of Burt County residents, the county had a higher mortality rate than the state for heart disease, cancer, cerebrovascular disease, unintentional injuries, and chronic lung disease (Figure 9). Among the top 5 leading causes of hospitalization of Burt County residents between 1999 and 2000, the county has a higher hospitalization rate than the state for heart, digestive, and genitourinary diseases (Figure 10).

**Figure 7. Selected Mortality Rates for Burt County and Nebraska, 1997-2001**

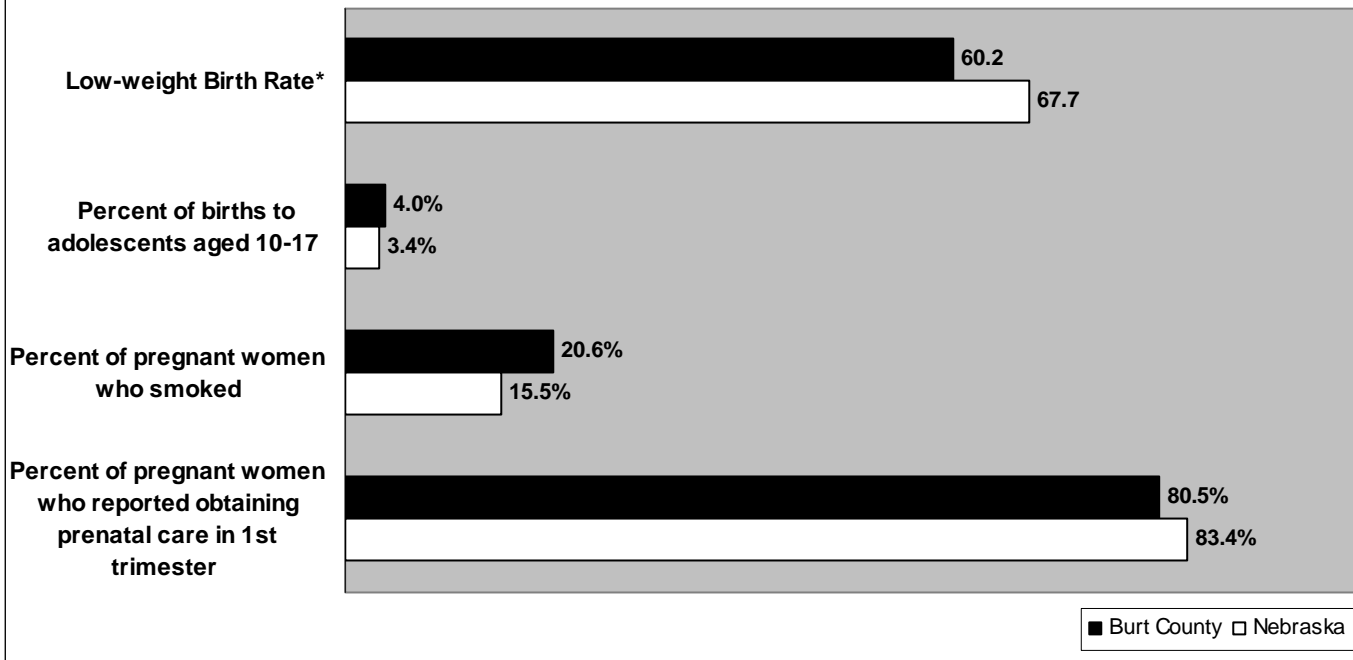


\* Number of deaths per 100,000 population (age adjusted).

\*\* Number of deaths per 1,000 live births.

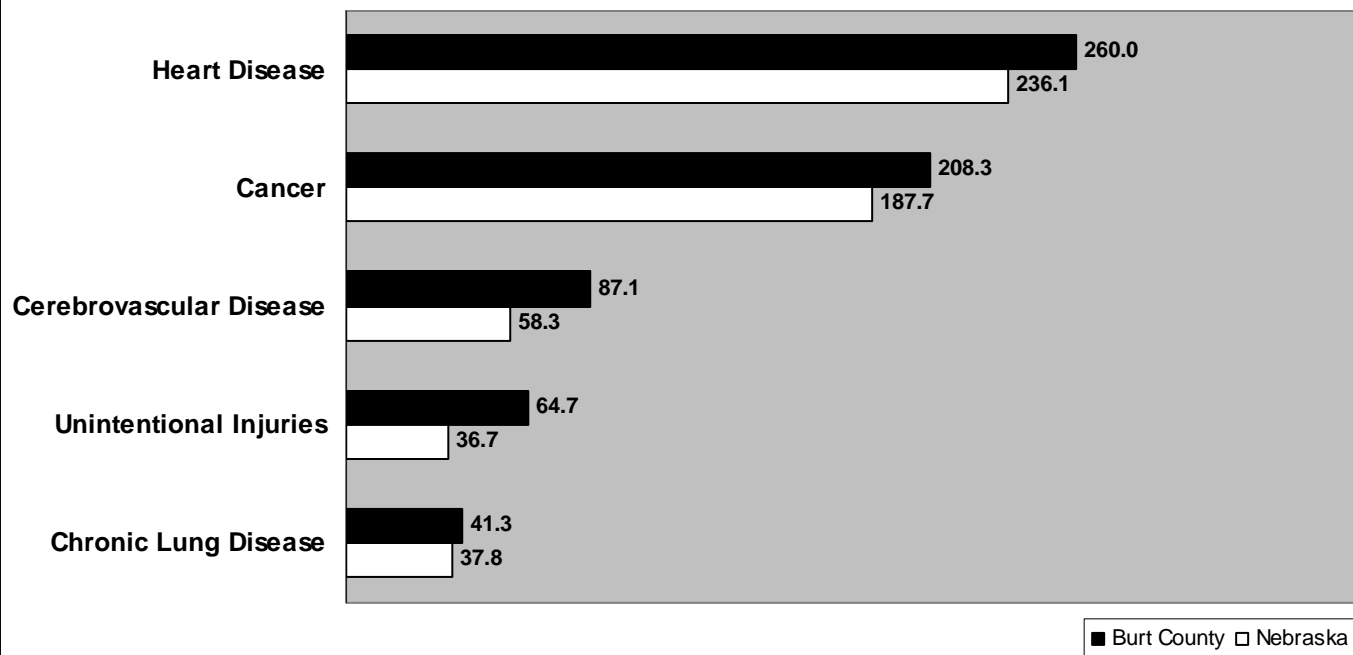
Source: Nebraska Health and Human Services County Profiles. <http://www.hhs.state.ne.us/profiles0802/Burt/profiles.htm>.

**Figure 8. Selected Maternal and Child Health Indicators, Burt County and Nebraska, 1997-2001**



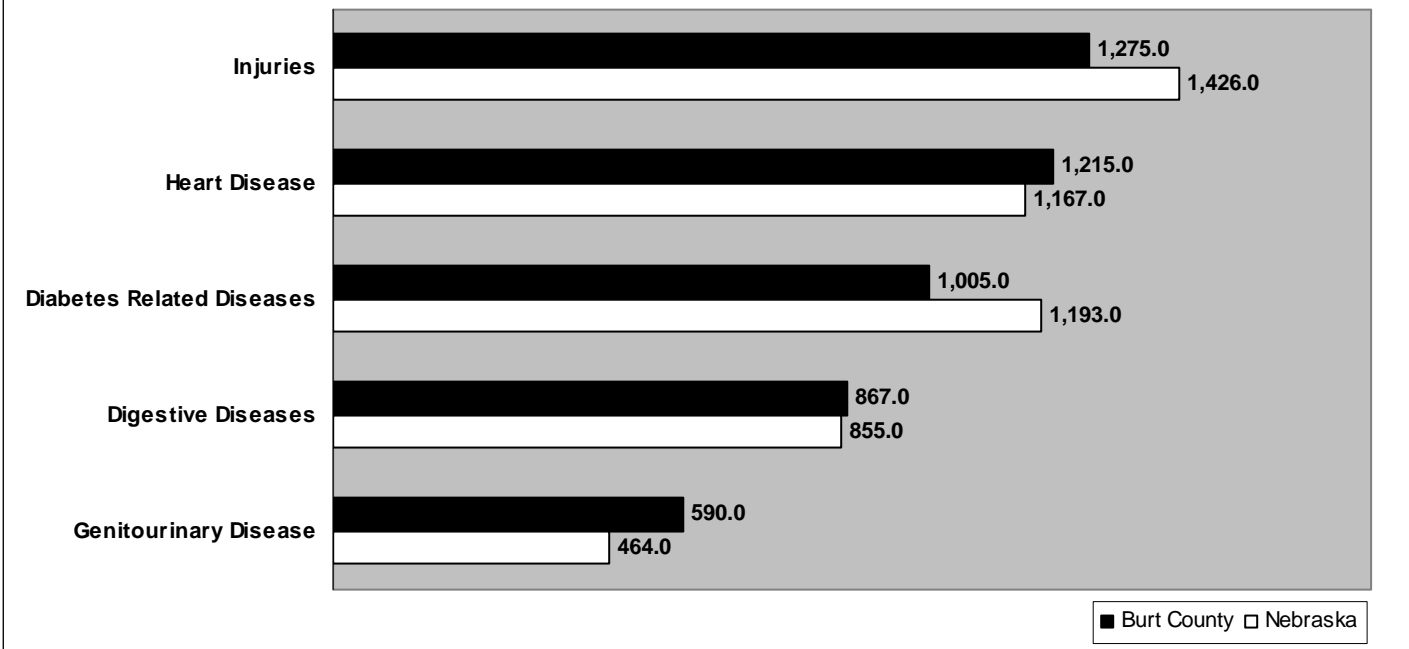
\* Number of babies born weighing less than 2500 grams (per 1,000 births).  
 Source: Nebraska Health and Human Services County Profiles. <http://www.hhs.state.ne.us/profile0802/Burt/profile.htm>.

**Figure 9. Top 5 Leading Causes of Death for Burt County and the Corresponding Mortality Rates\* for the County and Nebraska, 1997-2001**



\* Number of deaths per 100,000 population (age adjusted).  
 Source: Nebraska Health and Human Services County Profiles. <http://www.hhs.state.ne.us/profile0802/Burt/profile.htm>.

**Figure 10. Top 5 Leading Causes of Hospitalization\* for Burt County and the Corresponding Hospitalization Rates\*\* for the County and Nebraska, 1999-2000**



\* Hospitalizations for pregnancy and childbirth were excluded from this analysis.

\*\*Defined as the proportion of inpatient hospital discharges to a population within clearly specified geographic boundaries, age adjusted per 100,000 population.

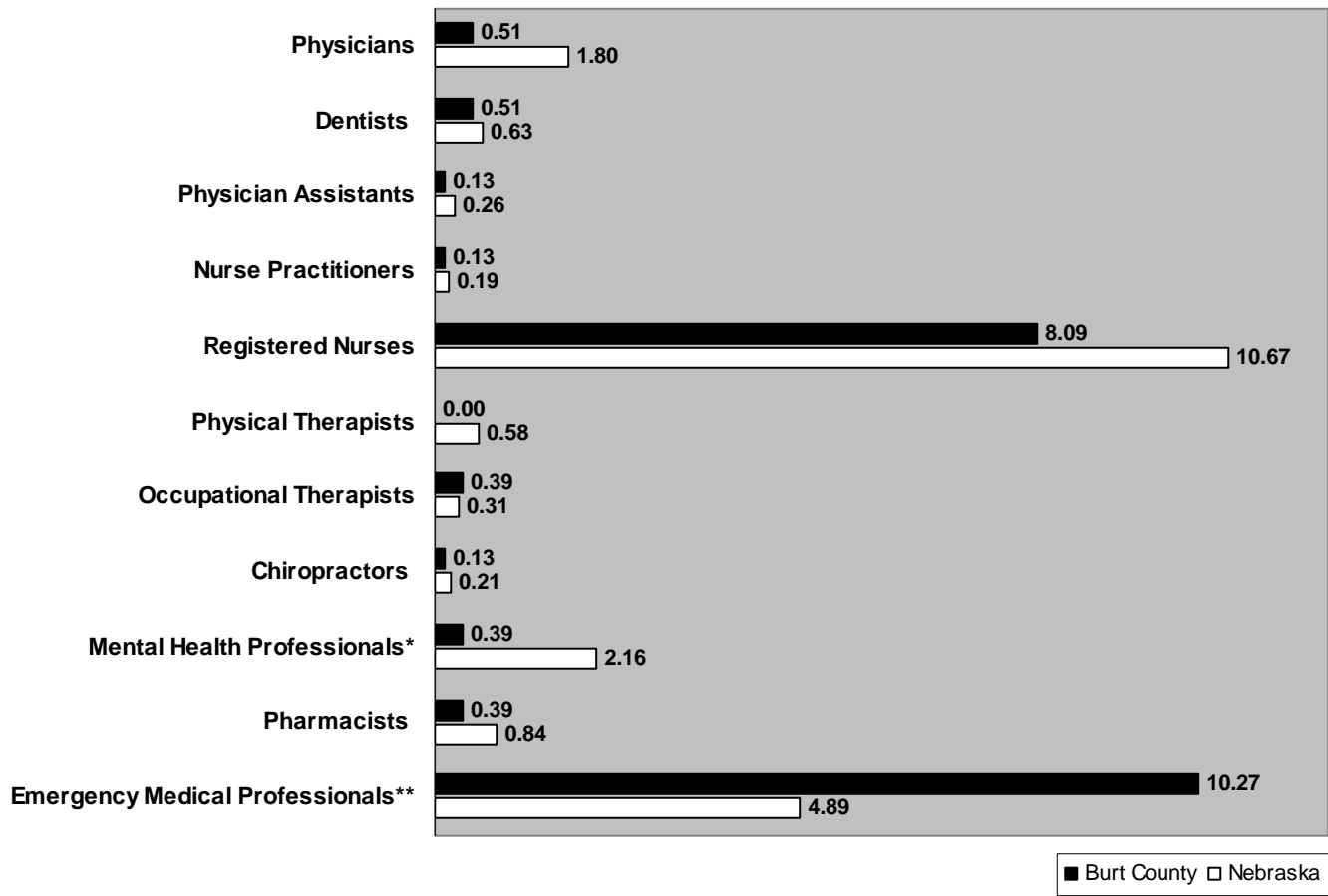
Source: Nebraska Health and Human Services County Profiles. <http://www.hhs.state.ne.us/profile0802/Burt/profile.htm>.

## VI. HEALTH CARE PROFESSIONALS

Burt County is federally designated as a mental health professional shortage area. The city of Oakland, the city of Tekamah, the township of Decatur, and the township of Everett in Burt County are federally designated as medically underserved areas. The state government has designated Burt County as a health professional shortage area in the specialties of family practice, general surgery, internal medicine, pediatrics, OB/GYN, psychiatry, dentistry and oral surgery, pharmacy, and physical therapy.

Burt County has a higher professional-to-population ratio than the state for occupational therapists and EMS professionals, but a lower ratio for other health professionals shown in Figure 11.

**Figure 11. Number of Practicing Health Professionals Per 1,000 Population, Burt County and Nebraska, 2001**



\* Mental Health Professionals include: Psychiatrists, Licensed Psychologists, Master Social Workers, Certified Professional Counselors, Licensed Mental Health Practitioners, and Marriage and Family Therapists.

\*\* Emergency Medical Professionals include: Emergency Medical Technician (EMT) Paramedic, EMT-Intermediate, EMT-Basic, and First Responders.

Source: *The Nebraska Health Information Project: 2001 Databook*. (2001) Nebraska Center for Rural Health Research, University of Nebraska Medical Center

## VII. HOSPITAL AND LONG-TERM CARE BEDS

Table 4 shows that Burt County has a higher bed-to-population ratio than the state for long-term care beds, but a lower bed-to-population ratio for its hospital industry. As a result, the need for hospital inpatient care for the general public may not be well met within the county.

**Table 4. Selected Health Care Facility Bed-to-Population Ratios for Burt County and Nebraska**

	Burt County	Nebraska
Number of hospital beds per 1,000 population	3.0**	5.6*
Number of Long Term Care beds per 1,000 elderly population (65+)	107.8*	80.6*

\* Source: *The Nebraska Health Information Project: 2001 Databook*. (2001) Nebraska Center for Rural Health Research, University of Nebraska Medical Center.

\*\* Source: Hospital Roster (4/11/2003), Nebraska Department of Health and Human Services.

## Data Notes

Using IMPLAN software and IMPLAN data for Nebraska's five health-related economic subsectors, we predict changes in overall economic activity as a result of change in health care subsectors. The IMPLAN software is based on an economic input-output model. To improve the accuracy of the dataset in order to better estimate health sector impact, we also use information from the U.S. Census Bureau's *County Business Patterns 2004* and the *American Hospital Association Annual Survey Database: Fiscal Year 2006*. Analysis is only performed at the county level.

## Acknowledgments

We would like to thank Dennis Berens, at the Nebraska Office of Rural Health, for his enthusiastic support of the Nebraska Rural Health Works Project. We would also like to thank Michael Shambaugh-Miller and Nicole Van Osdel at the Nebraska Center for Rural Health Research for making the maps.

## About the Nebraska Rural Health Works Project

The Nebraska Rural Health Works Project is made possible with the financial support of the Nebraska Office of Rural Health and through additional personnel and resources provided by the College of Public Health at the University of Nebraska Medical Center. The brief reports are designed to inform opinion leaders (from general business, health care, and government) in rural communities about the contribution health care makes to the county economy, both directly and indirectly. We use IMPLAN software, which uses an economic input-output model, to predict changes in overall economic activity as a result of change in the health care sector. In addition to the analysis of the economic impact of the health sector on a specific county, other information, such as demographics, socio-economic and health status indicators, health care professionals and facility bed capacity, are reported for a county.

If you would like to view additional County Profiles for Nebraska, please visit our Nebraska Rural Health Works website: <http://www.unmc.edu/rural/NeRHW>.

If you would like additional information regarding Nebraska's health care financing, health professionals, health status and health care delivery systems, visit the Nebraska Health Information Project website: <http://www.unmc.edu/nebraska>.

County Health Economic Profiles can be prepared upon request. At this time, we only perform analysis at the county level. If you are interested in this project, you can request a profile by contacting the Project Director, Li-Wu Chen, Ph.D. ([liwuchen@unmc.edu](mailto:liwuchen@unmc.edu)), or Michelle Mason, M.A. ([mmason@unmc.edu](mailto:mmason@unmc.edu)) at the Nebraska Center for Rural Health Research, College of Public Health, University of Nebraska Medical Center, (402) 559-5260.

---

### The Nebraska Center for Rural Health Research

University of Nebraska Medical Center  
Department of Preventive and Societal Medicine  
984350 Nebraska Medical Center  
Omaha, NE 68198-4350