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Nebraska Rural Health Works Health Economic Profile for Furnas County, Nebraska

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Executive Summary on the Economic Impact of the Health Care Sector

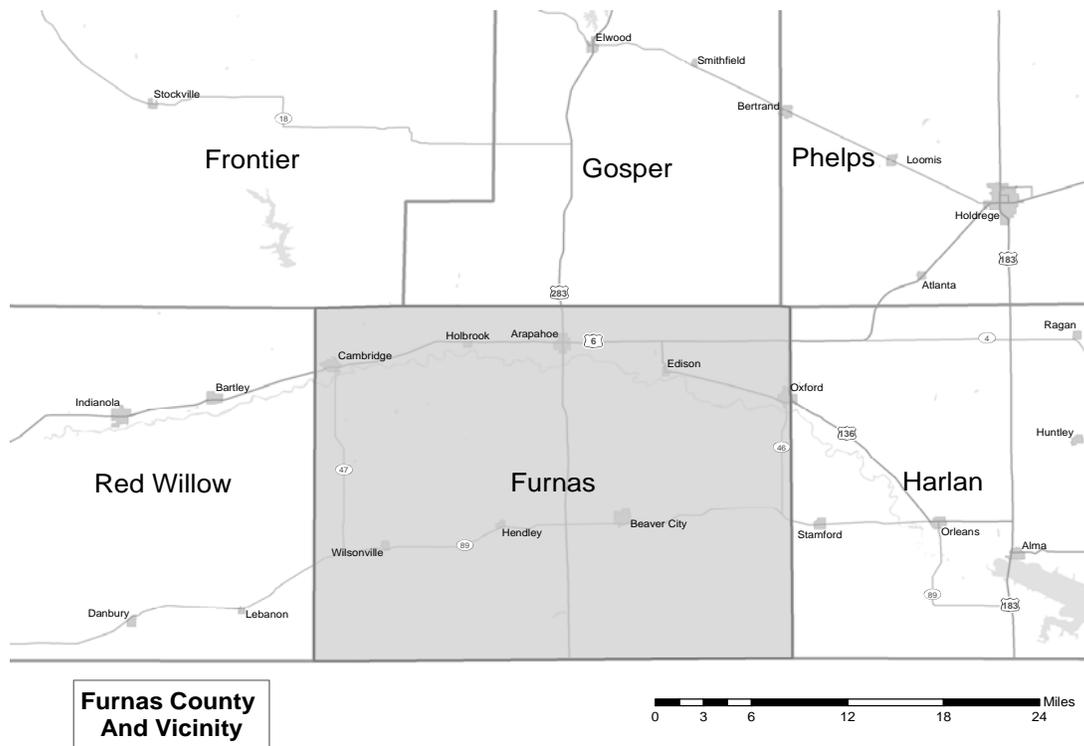
- ◆ One job created in the health care sector of Furnas County would lead to the creation of another 0.29 job in other sectors of the county's economy.
- ◆ One dollar of income earned in the health care sector of Furnas County would lead to another \$0.20 of income earned in other sectors of the county's economy.
- ◆ One dollar spent in the health care sector of Furnas County would lead to another \$0.35 spent in other sectors of the county's economy.
- ◆ The overall job creation due to health care (directly and indirectly) in Furnas County is estimated at 281 jobs, which accounts for 9% of the county's total employment.
- ◆ The overall income earned due to health care (directly and indirectly) in Furnas County is estimated at \$8.07 million, which accounts for 11% of the county's total income.
- ◆ The overall spending due to health care (directly and indirectly) in Furnas County is estimated at \$20.39 million, which accounts for 7% of the county's total economic output.

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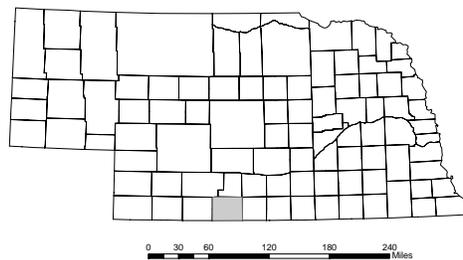
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I. GEOGRAPHY

Furnas County is located on the southern border of Nebraska. The county has a total of 718.09 square miles with a population density of 7.4 people per square mile (Nebraska: 22.3 per square mile). The county seat of Furnas County is Beaver City, Nebraska.



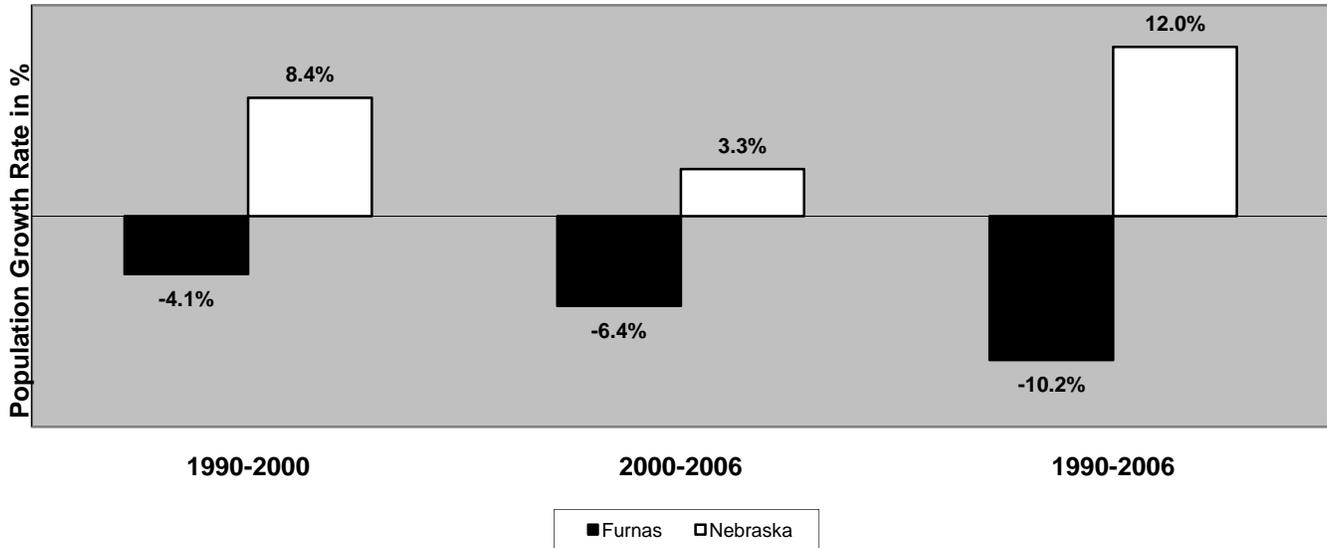
Furnas County, Nebraska



II. POPULATION

The population for Furnas County was 4,984 in 2006. The county experienced a negative population change of 10.2% (compared to +12.0% statewide) during 1990-2006 (Figure 1). The white population represented the majority of county's population in 2006 (98.3% vs. 91.8% statewide, Table 1). In addition, the county's population was older than the state's, with the elderly (aged 65+) representing 22.7% (compared to 13.9% statewide) of the population in 2006 (Table 2).

Figure 1. Population Growth Rate, Furnas County and Nebraska, 1990-2006



Sources: U.S. Bureau of the Census. Census 1990 and Census 2000, Summary Tape File 1. <http://factfinder.census.gov>. 2006 population: 2006 Estimates 2011 project by Geolytics Inc.

Table 1. Population by Race for Furnas County and Nebraska, 2000 and 2006

	Furnas County 2000	Nebraska 2000	Furnas County 2006	Nebraska 2006
White	98.2% (5,229)	89.6% (1,533,261)	98.3% (4,897)	91.8% (1,624,120)
Black	0.1% (4)	4.0% (68,541)	0.0% (2)	4.4% (77,379)
American Indian Eskimo and Aleut	0.4% (22)	0.9% (14,896)	0.7% (35)	1.0% (17,276)
Asian or Pacific Islander	0.2% (12)	1.3% (22,204)	0.3% (13)	1.7% (30,454)
Other Race	0.3% (17)	2.8% (47,845)	0.7% (37)	1.1% (20,321)
Hispanic*	1.1% (61)	5.5% (94,425)	1.3% (67)	7.5% (131,904)

* 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, 2000 Census of Population and Housing, Summary Tape File 1. <http://factfinder.census.gov>. 2006 population: 2006 Estimates 2011 project by Geolytics, Inc.

Table 2. Population by Age for Furnas County and Nebraska, 2000 and 2006

Age	Furnas County 2000	Nebraska 2000	Furnas County 2006	Nebraska 2006
0-4	5.6% (300)	6.8% (117,048)	4.4% (221)	7.1% (125,258)
5-24	23.8% (1,269)	29.7% (507,619)	25.9% (1,293)	28.0% (495,930)
25-64	46.8% (2,489)	49.9% (854,401)	46.9% (2,338)	51.1% (903,564)
65-84	19.4% (1,035)	11.6% (198,242)	18.0% (898)	11.5% (202,653)
85+	4.3% (231)	2.0% (33,953)	4.7% (235)	2.4% (42,308)

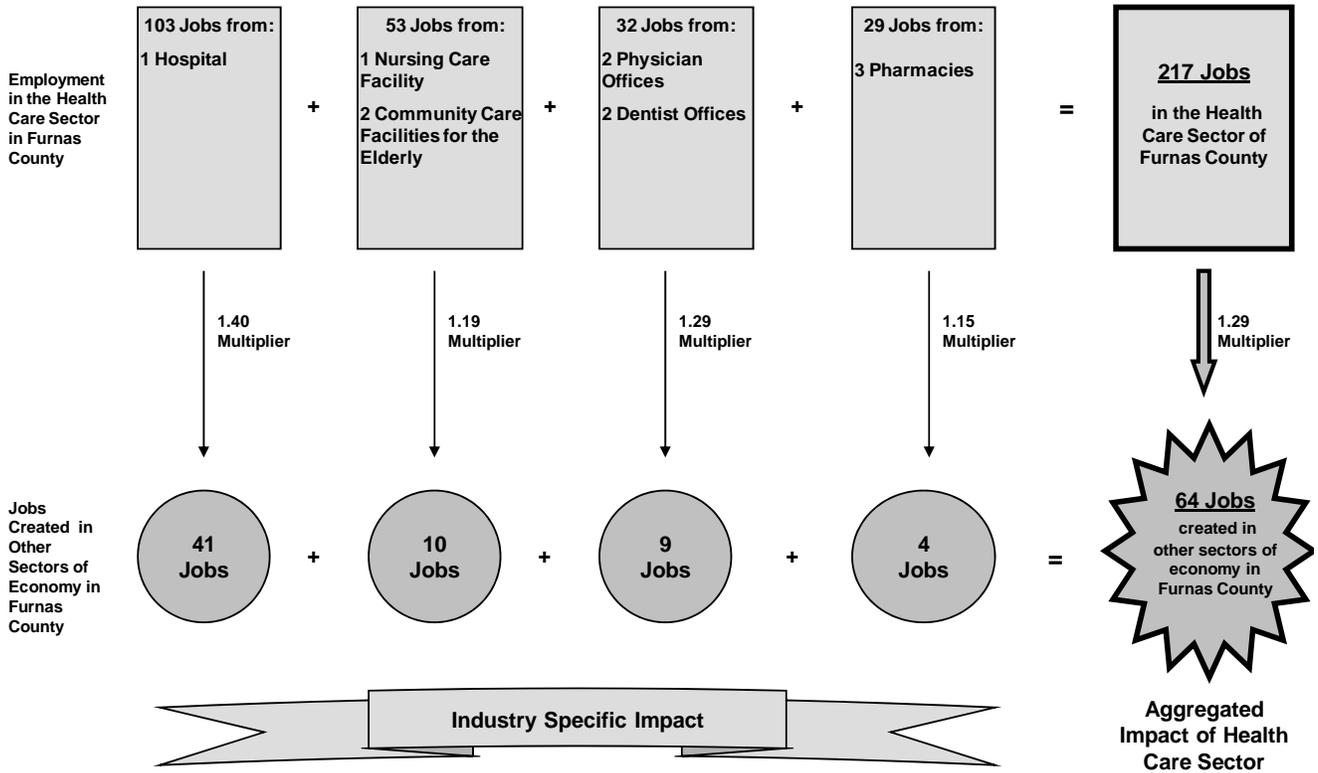
Source: U.S. Bureau of the Census, Census 2000, Summary Tape File 1. <http://factfinder.census.gov>. 2006 population: 2006 Estimates 2011 project by Geolytics, Inc.

III. ECONOMIC IMPACT OF THE HEALTH CARE SECTOR

Health care and social assistance is the largest employer within Furnas County, followed by retail trade, finance and insurance, transportation and warehousing, construction, and accommodation and food services. The health care sector of Furnas County includes one hospital, one nursing care facility, two community care facilities for the elderly, two dentist offices, two physician offices, and three pharmacies.

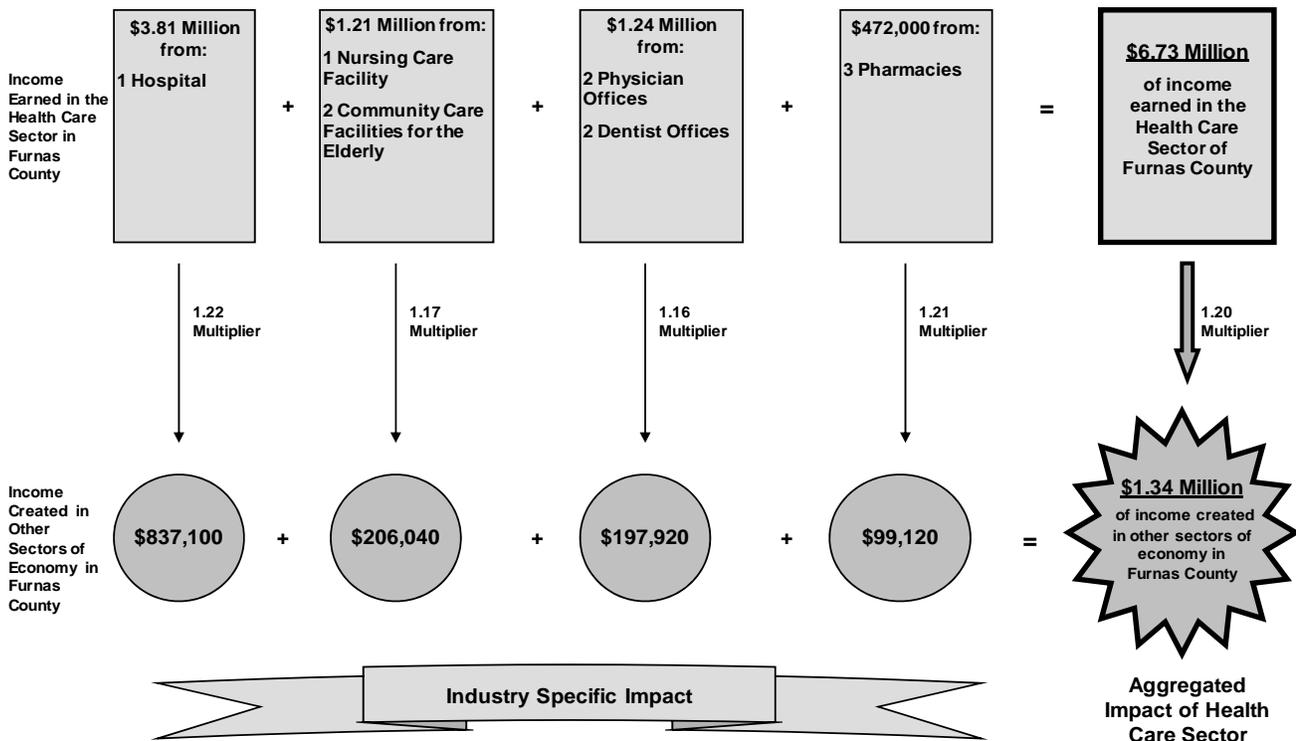
- ◆ The 217 jobs in the health care sector of Furnas County created (through a 1.29 multiplier) another 64 jobs in other sectors of the county's economy (Figure 2). Therefore, the combined effect represents 9.0% of the county's total employment (i.e., 281 out of 2,982 jobs).
- ◆ The \$6.73 million of income earned in the health care sector of Furnas County has created (through a 1.20 multiplier) another \$1.34 million of income in other sectors of the county's economy (Figure 3). Therefore, the combined effect represents 11.0% of the county's total income (i.e., \$8.07 million out of \$75.58 million).
- ◆ The \$15.09 million spent in the health care sector of Furnas County created (through a 1.35 multiplier) another \$5.29 million of spending in other sectors of the county's economy (Figure 4). Therefore, the combined effect represents 7.0% of the county's total economic output (i.e., \$20.39 million out of \$290.39 million).

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



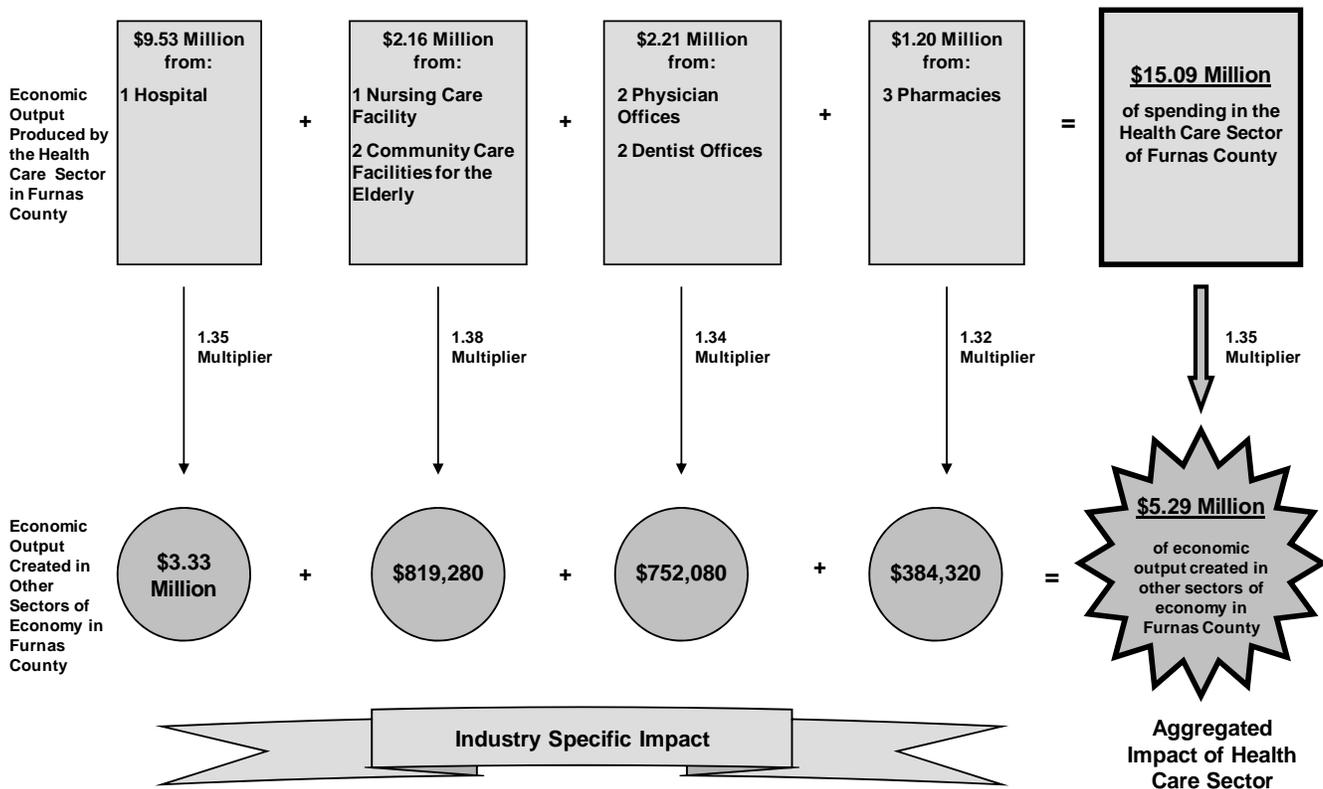
Sources: IMPLAN Data 2006. Minnesota IMPLAN Group, Inc. 2003; U.S. Census Bureau County Business Patterns, 2006. <http://www.census.gov/prod/www/abs/cbptotal.html>; Nebraska Department of Health and Human Services facility rosters, 2008

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



Sources: IMPLAN Data 2006. Minnesota IMPLAN Group, Inc. 2003; U.S. Census Bureau County Business Patterns, 2006. <http://www.census.gov/prod/www/abs/cbptotal.html>; Nebraska Department of Health and Human Services facility rosters, 2008

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

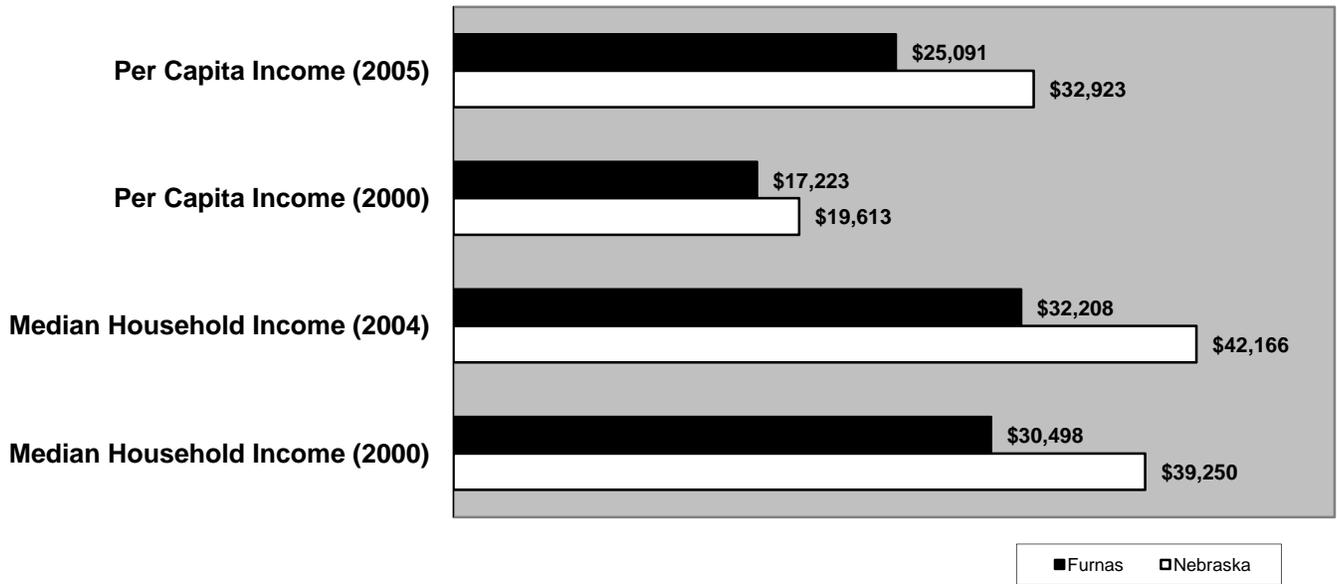


Sources: IMPLAN Data 2006. Minnesota IMPLAN Group, Inc. 2003; U.S. Census Bureau County Business Patterns, 2006. <http://www.census.gov/prod/www/abs/cbptotal.html>; Nebraska Department of Health and Human Services facility rosters, 2008

IV. SOCIO-ECONOMIC INDICATORS

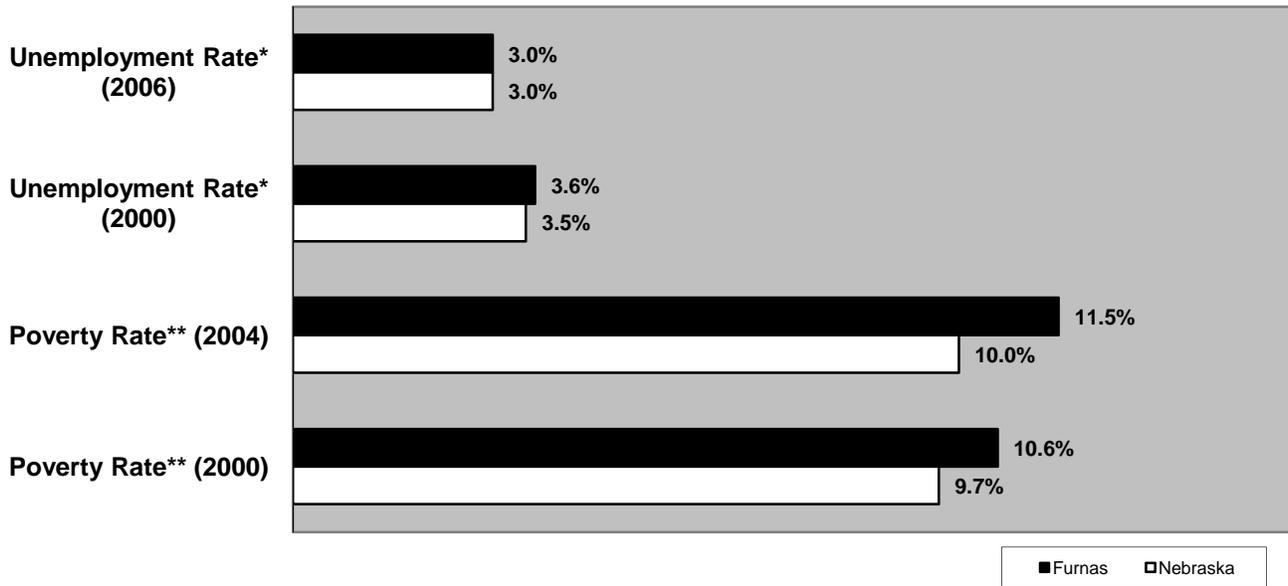
The median household income of the county increased since 2000 by 5.6% to \$32,208 in 2004 (compared to \$42,166 statewide), and the per capita income of the county increased since 2000 by 45.7% to \$25,091 in 2005 (compared to \$32,923 statewide) (Figure 5). Furnas County experienced the same unemployment rate as the state in 2006 (3.0% statewide) and a higher poverty rate (11.5% vs. 10.0% statewide) than the state in 2004 (Figure 6). The county out-performed the state in two of the four social indicators shown in Table 3, but had the same percent of first births to unmarried women who were under the age of 20, with less than a high school education, and a higher percentage of residents aged 25 and older who did not graduate from highschool.

Figure 5. Income for Furnas County and Nebraska, 2000, 2004 and 2005



Sources: U.S. Census Bureau, Census 1999, 2004, and 2005, Summary File 3. <http://factfinder.census.gov>. Per capita income: U.S. Department of Commerce Bureau of Economic Analysis. <http://www.bea.gov/bea/regional/reis/drill.cfm>.

Figure 6. Economic Indicators for Furnas County and Nebraska, 2000, 2004, and 2006



*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.

Sources: U.S. Census Bureau, Census 2000, 2004, and 2006, Summary File 3. <http://factfinder.census.gov>; U.S. Department of Labor, <ftp://ftp.bls.gov/pub/special.requests/la/laucnty06.txt>.

Table 3. Selected Social Indicators for Furnas County and Nebraska

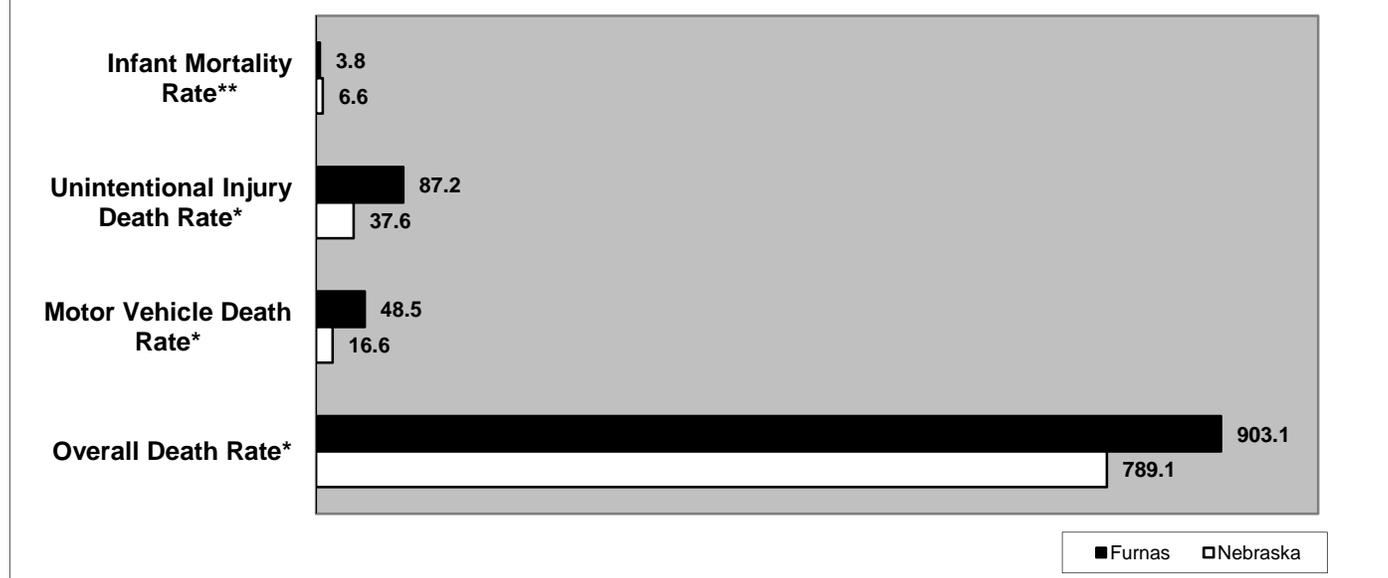
	Furnas County	Nebraska
Percent of residents aged 25 and older who did not graduate from high school (2000)	15.8%	13.4%
Percent of 7-12th graders who dropped out of school (2003-2004)	0.2%	1.9%
Percent of first births born to unmarried women, younger than 20, with less than a high school education (2000-2004)	9.0%	9.0%
Crime arrest rate per 1,000 population (2004)	32.4	54.2

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

V. HEALTH STATUS INDICATORS

Furnas County had a lower infant mortality rate, but had a higher overall death rate, motor vehicle death rate, and unintentional injury death rate compared with the state between 2000 and 2004 (Figure 7). Furnas County had a lower low-weight birth rate, a lower percentage of births to adolescents aged 10 to 17, a higher percentage of pregnant women who reported obtaining prenatal care in 1st trimester, but had a higher percentage of pregnant women who smoke (Figure 8). Among the top 5 leading causes of death of Furnas County residents, the county had a higher rate of death for heart disease, cerebrovascular disease, unintentional injuries, and chronic lung disease than the state (Figure 9). Among the top 5 leading causes of hospitalization of Furnas County residents between 2003 and 2004, the county had a higher hospitalization rate than the state for all causes listed here (Figure 10).

Figure 7. Selected Mortality Rates for Furnas County and Nebraska, 2000-2004

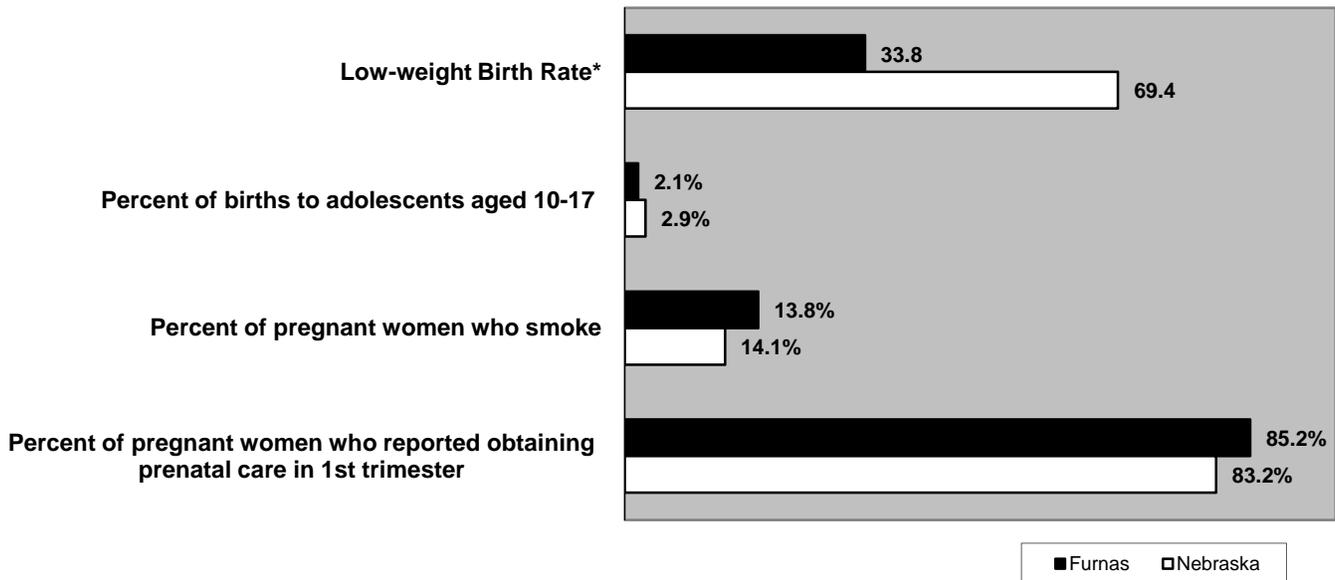


*Number of deaths per 100,000 populations (age-adjusted).

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

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

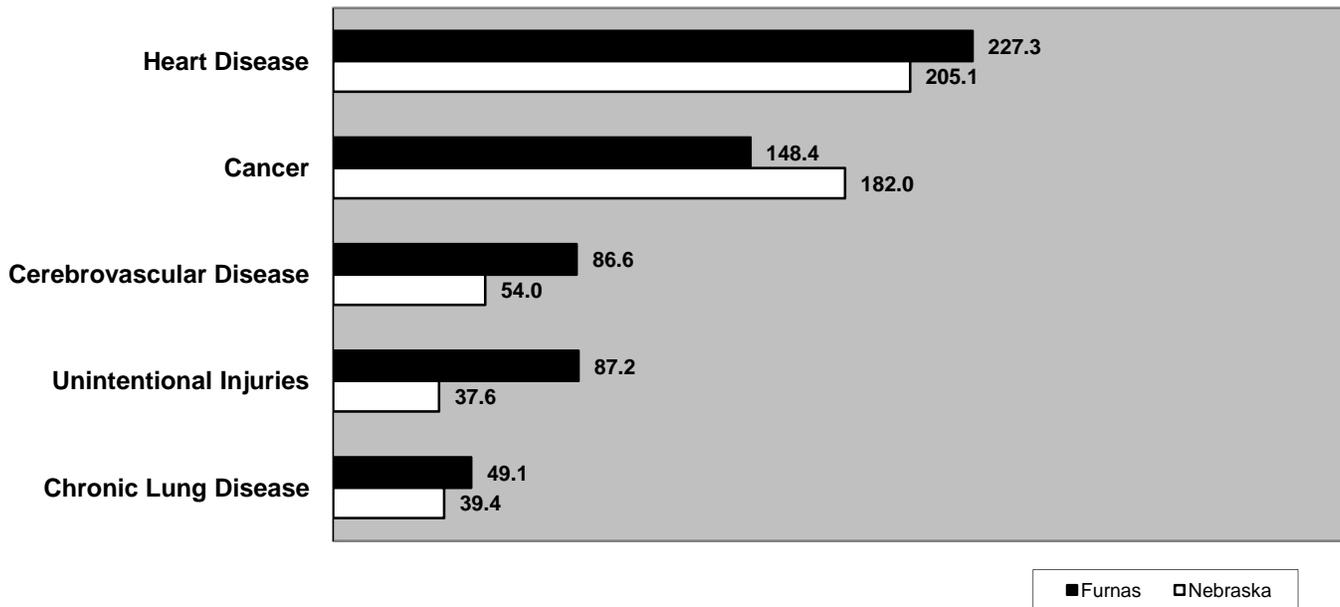
Figure 8. Selected Maternal and Child Health Indicators, Furnas County and Nebraska, 2000-2004



* 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/profiles/index.htm#County>.

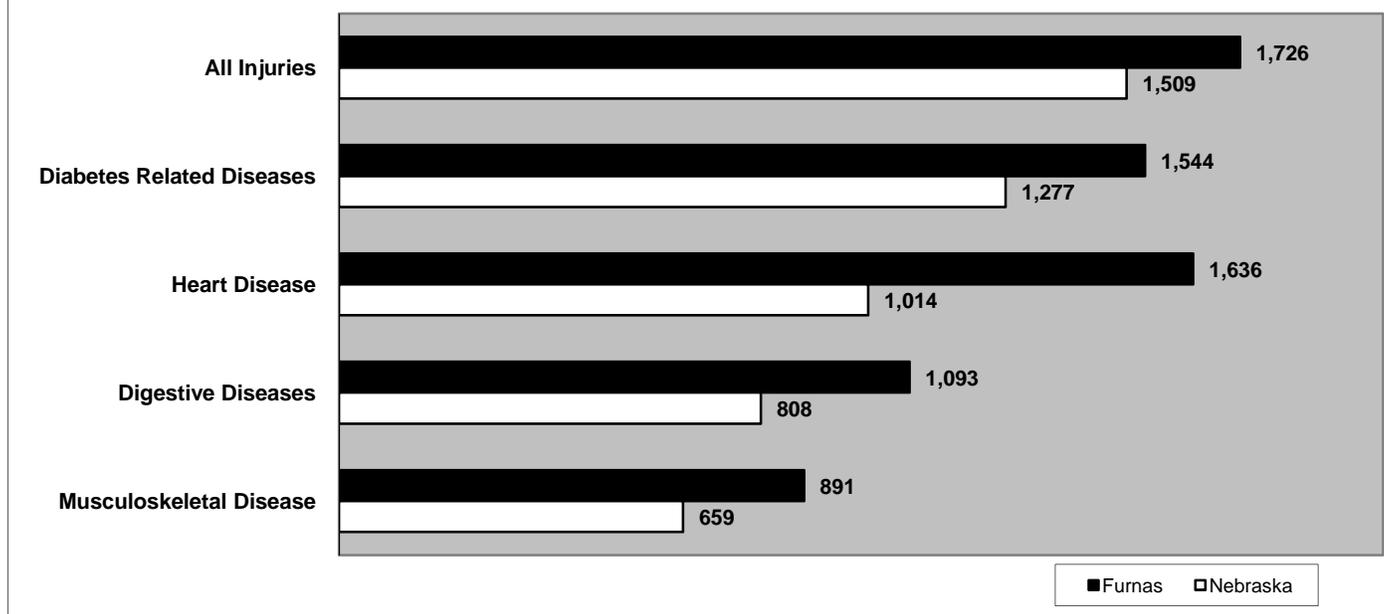
Figure 9. Top 5 Leading Causes of Death for Furnas County and the Corresponding Mortality Rates* for the County and Nebraska, 2000-2004



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

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

Figure 10. Top 5 Leading Causes of Hospitalization* for Furnas County and the Corresponding Hospitalization Rates for the County and Nebraska, 2003-2004**



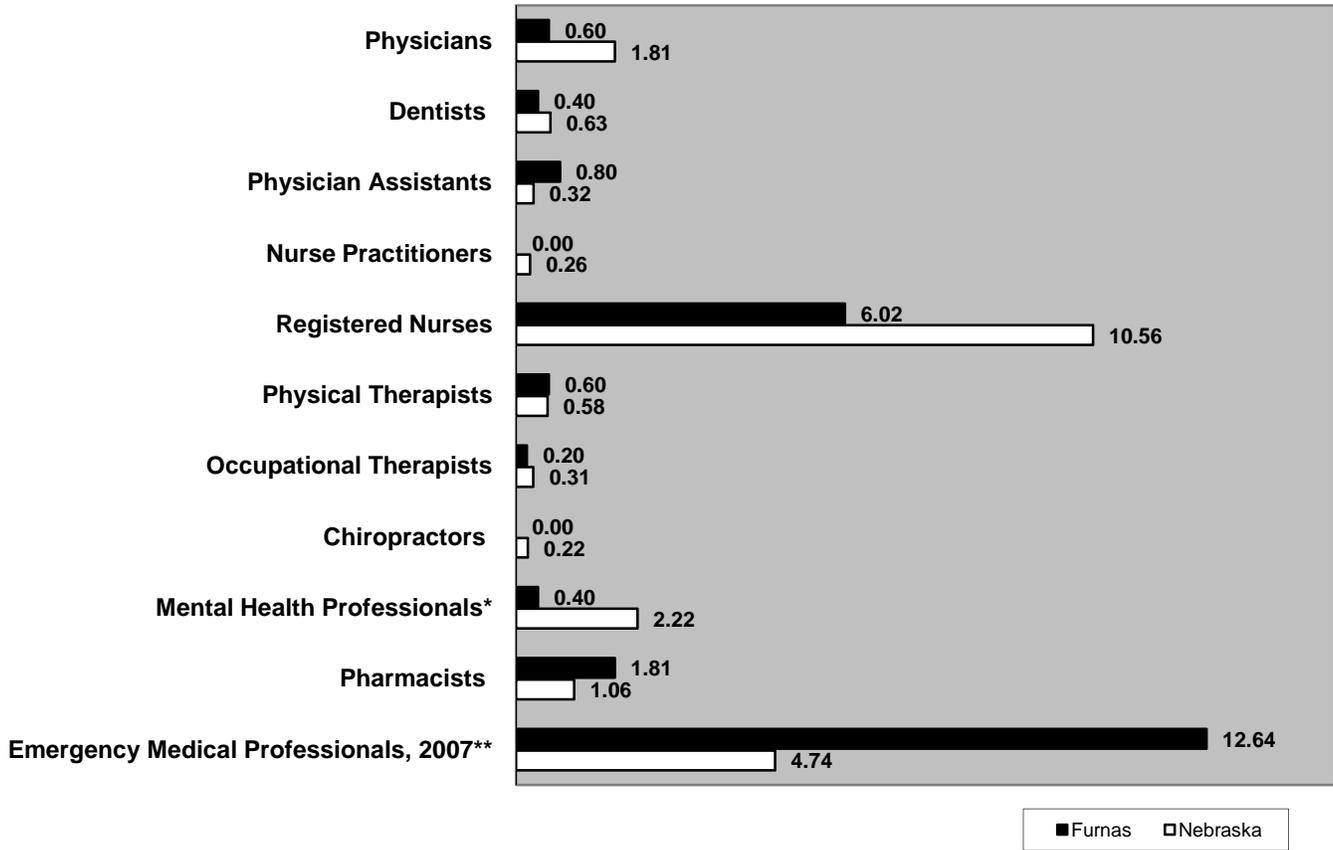
*Hospitalizations for pregnancy and childbirth were excluded from this analysis.

**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/profiles/index.htm#County>.

VI. HEALTH CARE PROFESSIONALS

Furnas County is both a federally designated mental health professional shortage area and a primary care health professional shortage area. Furnas County is also a federally designated medically underserved area. The state government has designated Furnas County as a health professional shortage area in the specialties of family practice, general surgery, internal medicine, pediatrics, OB/GYN, psychiatry, pharmacy, and occupational therapy. Furnas County has a higher professional-to-population ratio than the state for EMS professionals, Pharmacists, Physical Therapists, and Physician Assistants, but a lower ratio for other health professionals, shown in Figure 11.

Figure 11. Number of Practicing Health Professionals Per 1,000 Population, Furnas County and Nebraska, 2005



*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: 2006 Databook*. (2007) Nebraska Center for Rural Health Research, University of Nebraska Medical Center

VII. HOSPITAL AND LONG-TERM CARE BEDS

Table 4 shows that Furnas County’s hospital has a higher bed-to-population ratio than the state. As a result, the need for hospital inpatient care (for the general public) should be well met within the county.

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

	Furnas County	Nebraska
Number of hospital beds per 1,000 population (2007)	5.02**	3.47*
Number of Long Term Care beds per 1,000 elderly population (65+) 2005	77.9*	73.9*

*Source: *The Nebraska Health Information Project: 2006 Databook*. (2007) Nebraska Center for Rural Health Research, University of Nebraska Medical Center.
 **Source: Hospital Roster (11/9/2007), 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 2006* 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 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), or Michelle Lampman, M.A. (mlampman@unmc.edu) at the Nebraska Center for Rural Health Research, College of Public Health, University of Nebraska Medical Center, (402)559-5260.

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