



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

Prepared by
Li-Wu Chen, Ph.D., Project Director
Donadea Rasmussen, Graduate Research Assistant
Tin Mak, Graduate Research Assistant

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Executive Summary on the Economic Impact of Health Care Sector

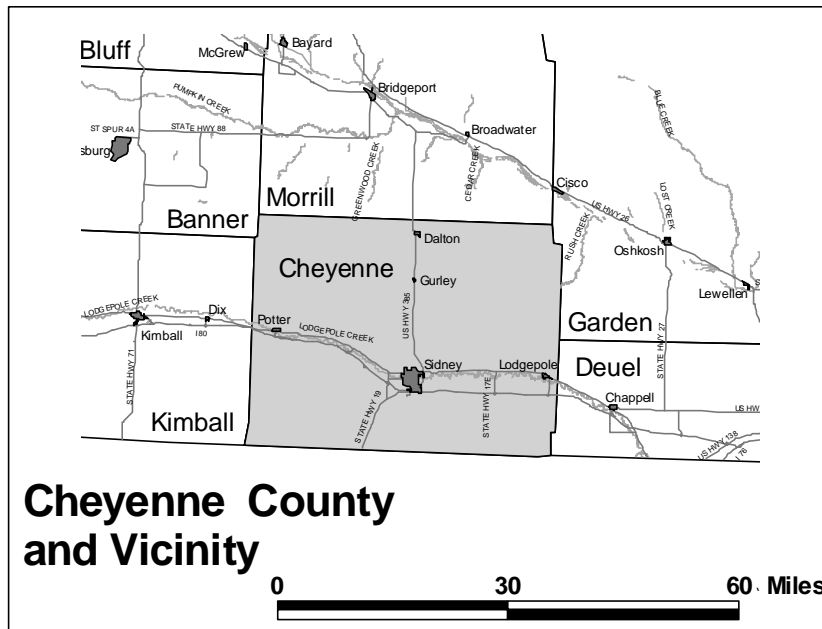
- ◆ One job created in the health care sector of Cheyenne County would lead to the creation of another 0.61 job in other sectors of the county's economy.
- ◆ One dollar of income earned in the health care sector of Cheyenne County would lead to another \$0.46 of income earned in other sectors of the county's economy.
- ◆ One dollar spent in the health care sector of Cheyenne County would lead to another \$0.65 spent in other sectors of the county's economy.
- ◆ The overall job creation due to health care (directly and indirectly) in Cheyenne County is estimated at 736 jobs, which accounts for 10.1% of the county's total employment.
- ◆ The overall income earned due to health care (directly and indirectly) in Cheyenne County is estimated at \$17.52 million, which accounts for 11% of the county's total income.
- ◆ The overall spending due to health care (directly and indirectly) in Cheyenne County is estimated at \$37.69 million, which accounts for 7.1% of the county's total economic output.

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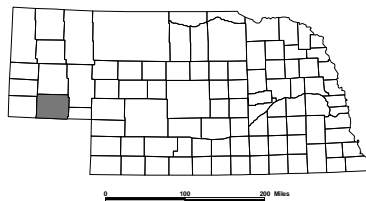
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I. GEOGRAPHY

Cheyenne County is located in the southwest corner of Nebraska. The county has a total of 1,196 square miles with a population density of 8.2 people per square mile (Nebraska: 22.3 per square mile). The county seat of Cheyenne County is Sidney, Nebraska.



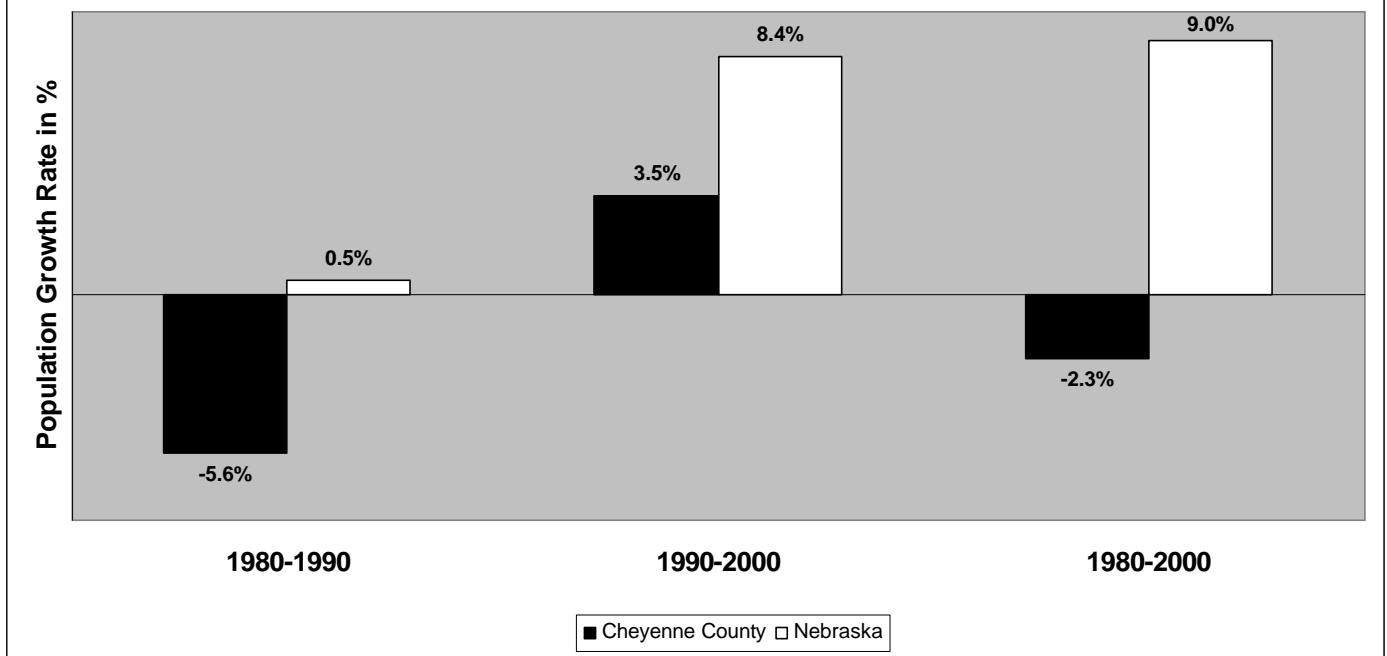
Cheyenne County, Nebraska



II. POPULATION

The population for Cheyenne County was 9,830 in 2000. The county has experienced a negative population change of -2.3% (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 (96.3% vs. 89.6% statewide, Table 1). In addition, the county's population is older than the State's, with the elderly (aged 65+) representing 17.2% (compared to 13.6% statewide) of the population in 2000 (Table 2).

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



Sources: U.S. Bureau of the Census. Census of Population and Housing, 1990 and 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 Cheyenne County and Nebraska, 1990 and 2000

	Cheyenne County 1990	Nebraska 1990	Cheyenne County 2000	Nebraska 2000
White	97.4% (9,250)	93.8% (1,480,558)	96.3% (9,470)	89.6% (1,533,261)
Black	<0.1% (8)	3.6% (57,404)	0.1% (14)	4% (68,541)
Asian or Pacific Islander	0.2% (15)	0.8% (12,422)	0.4% (42)	1.3% (22,767)
American Indian or Alaskan Native	0.8% (73)	0.8% (12,410)	0.7% (64)	0.9% (14,896)
Other Race	1.6% (148)	1% (15,591)	1.5% (144)	2.8% (47,845)
Hispanic*	3.3% (317)	2.3% (36,969)	4.5% (438)	5.5% (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%.
 Sources: 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 Cheyenne County and Nebraska, 1990 and 2000

Age	Cheyenne County 1990	Nebraska 1990	Cheyenne County 2000	Nebraska 2000
0-4	7.3% (691)	7.6% (119,606)	6.4% (628)	6.8% (117,048)
5-24	27.0% (2,566)	29.5% (465,293)	26.9% (2,643)	29.7% (507,619)
25-64	47.8% (4,536)	48.8% (770,418)	49.5% (4,866)	49.9% (854,401)
65-84	16.0% (1,521)	12.3% (193,866)	14.7% (1,443)	11.6% (198,242)
85+	1.9% (180)	1.9% (29,202)	2.5% (250)	2.0% (33,953)
TOTAL	100% (9,494)	100% (1,578,385)	100% (9,830)	100% (1,711,263)

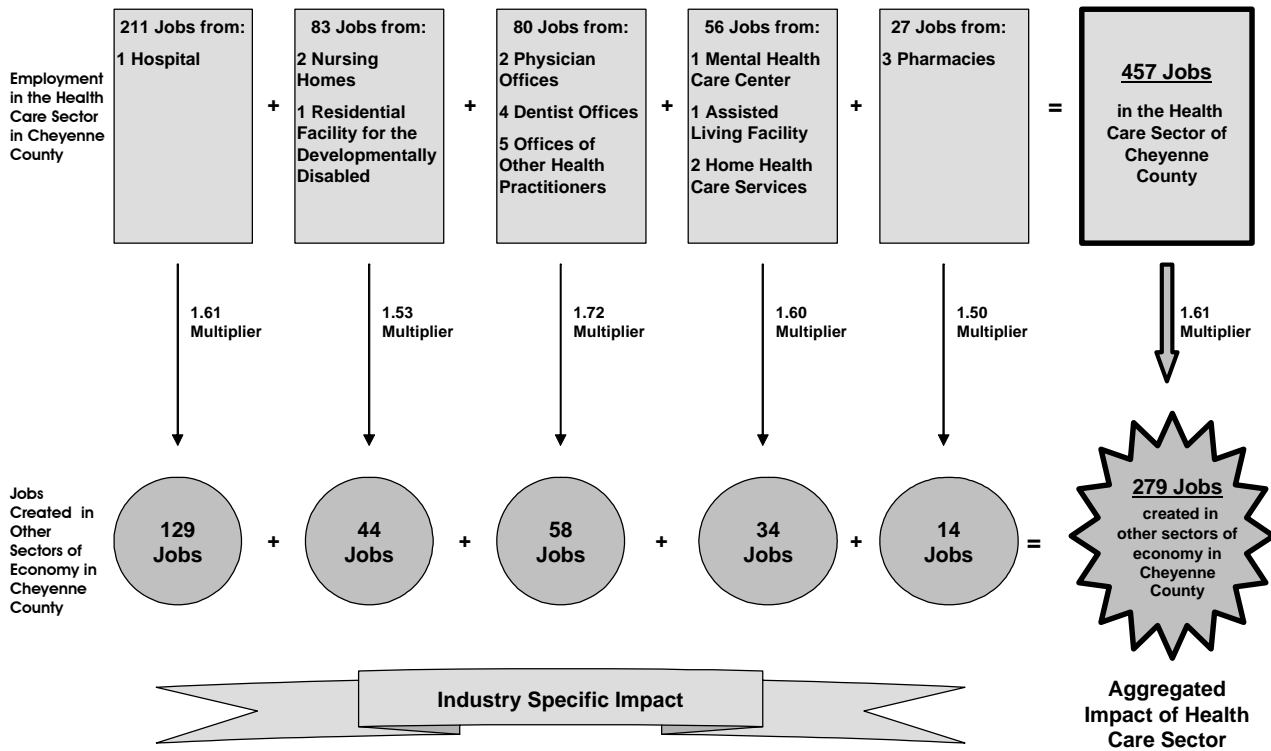
Sources: U.S. Bureau of the Census, 1990 and 2000 Census of Population and Housing, Summary Tape File 1. <http://factfinder.census.gov>.

III. ECONOMIC IMPACT OF THE HEALTH CARE SECTOR

The Wholesale and Retail Trade industry is the largest employer within Cheyenne County, followed by Agriculture and Farming. Health care is part of the Services sector, which is Cheyenne County's third largest employer. The health care sector of Cheyenne County includes one hospital, two nursing homes, one residential facility for the developmentally disabled, two physician offices, four dentist offices, two optometry offices, one podiatrist office, one physical therapy office, one chiropractic office, one assisted living facility, one mental health care center, two home health care services and three pharmacies.

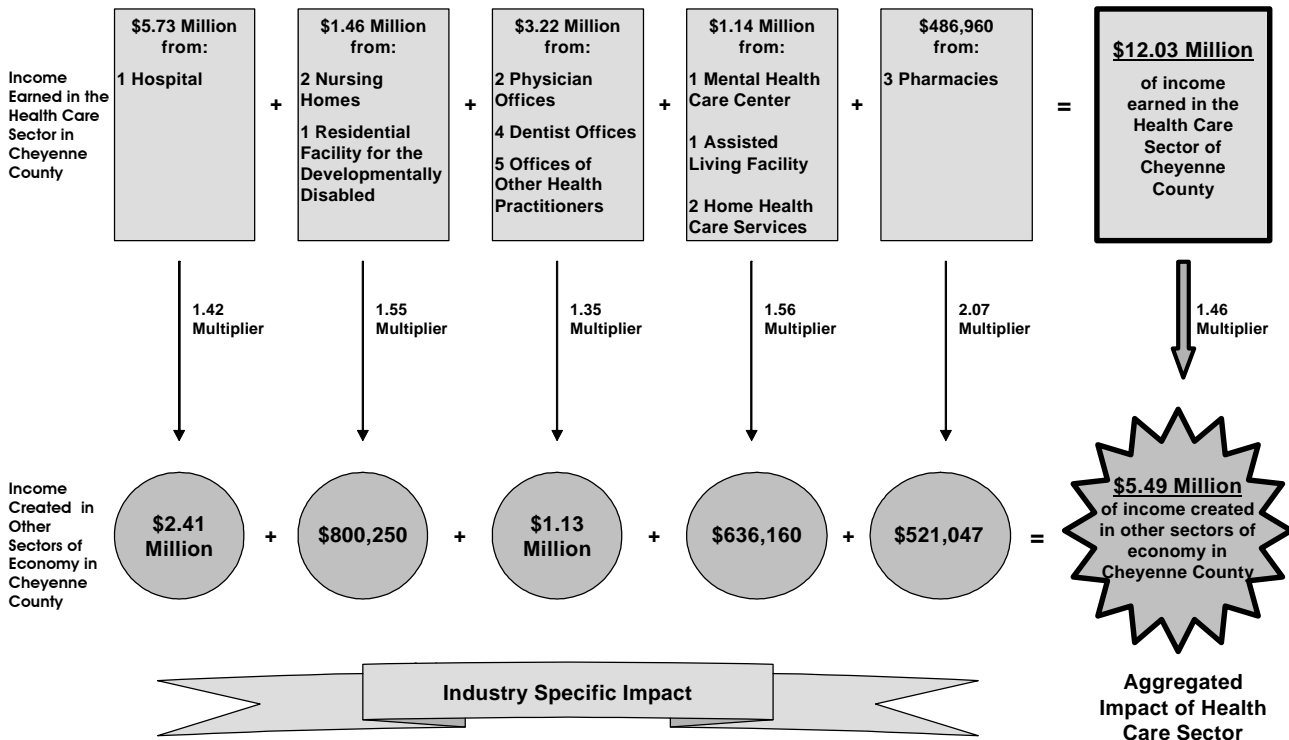
- ◆ The 457 jobs in the health care sector of Cheyenne County have created (through a 1.61 multiplier) another 279 jobs in other sectors of the county's economy (Figure 2). Therefore, the combined effect represents 10.1% of the county's total employment (i.e., 736 out of 7,296 jobs).
- ◆ The \$12.03 million of income earned in the health care sector of Cheyenne County has created (through a 1.46 multiplier) another \$5.49 million of income in other sectors of the county's economy (Figure 3). Therefore, the combined effect represents 11% of the county's total income (i.e., \$17.52 million out of \$159.56 million).
- ◆ The \$22.81 million spent in the health care sector of Cheyenne County has created (through a 1.65 multiplier) another \$14.89 million of spending in other sectors of the county's economy (Figure 4). Therefore, the combined effect represents 7.1% of the county's total economic output (i.e., \$37.69 million out of \$529.63 million).

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



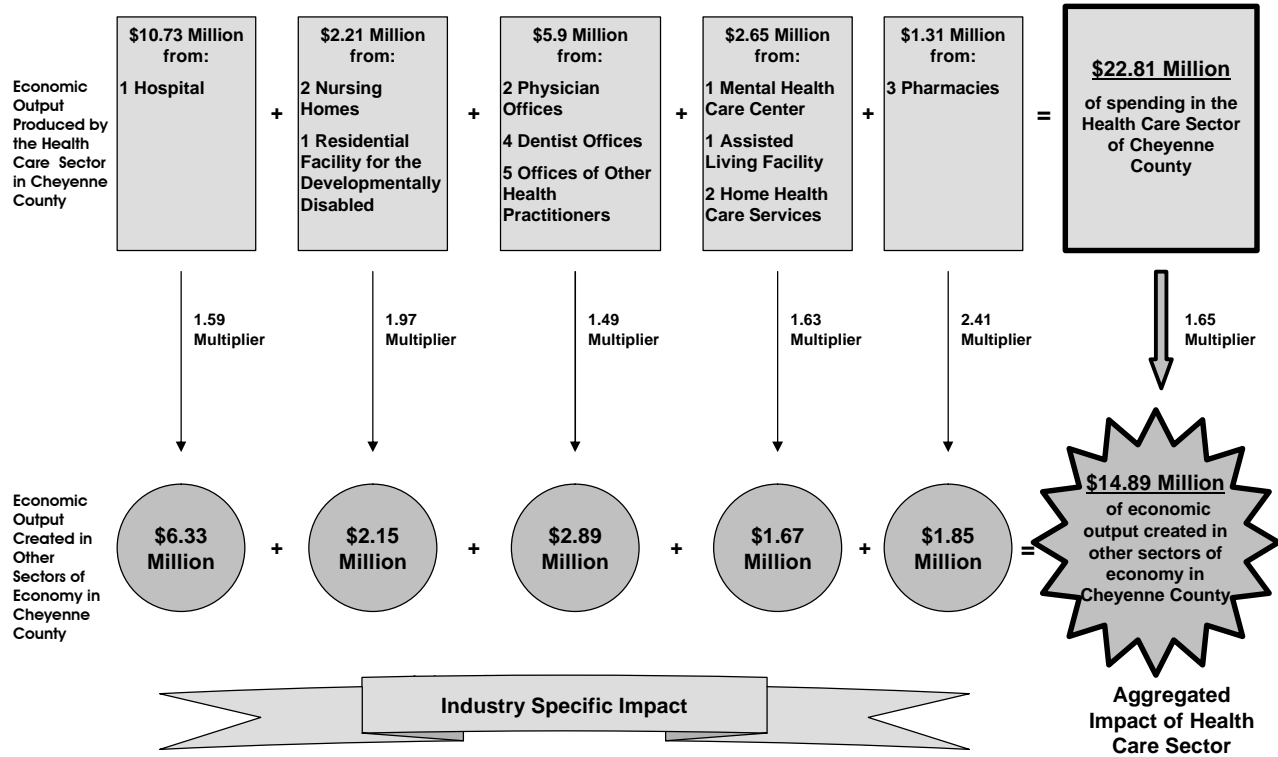
Sources: IMPLAN Data 2000. Minnesota IMPLAN Group, Inc. 2003. U.S. Census Bureau County Business Patterns, 2000. <http://www.census.gov/prod/www/abs/cbptotal.html>. Community Health System Assessment Survey, Nebraska Center for Rural Health Research, UNMC, July, 2002.

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

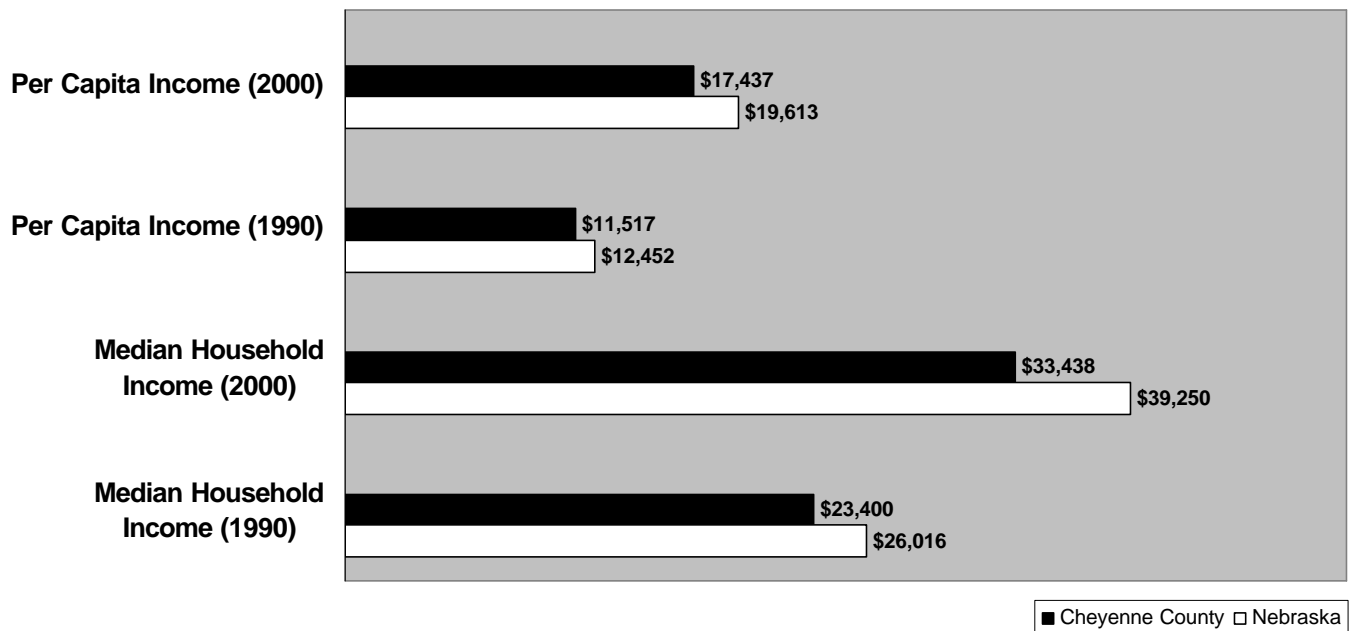


Sources: IMPLAN Data 2000. Minnesota IMPLAN Group, Inc. 2003. U.S. Census Bureau County Business Patterns, 2000. <http://www.census.gov/prod/www/abs/cbptotal.html>. Community Health System Assessment Survey, Nebraska Center for Rural Health Research, UNMC, July, 2002.

IV. SOCIO-ECONOMIC INDICATORS

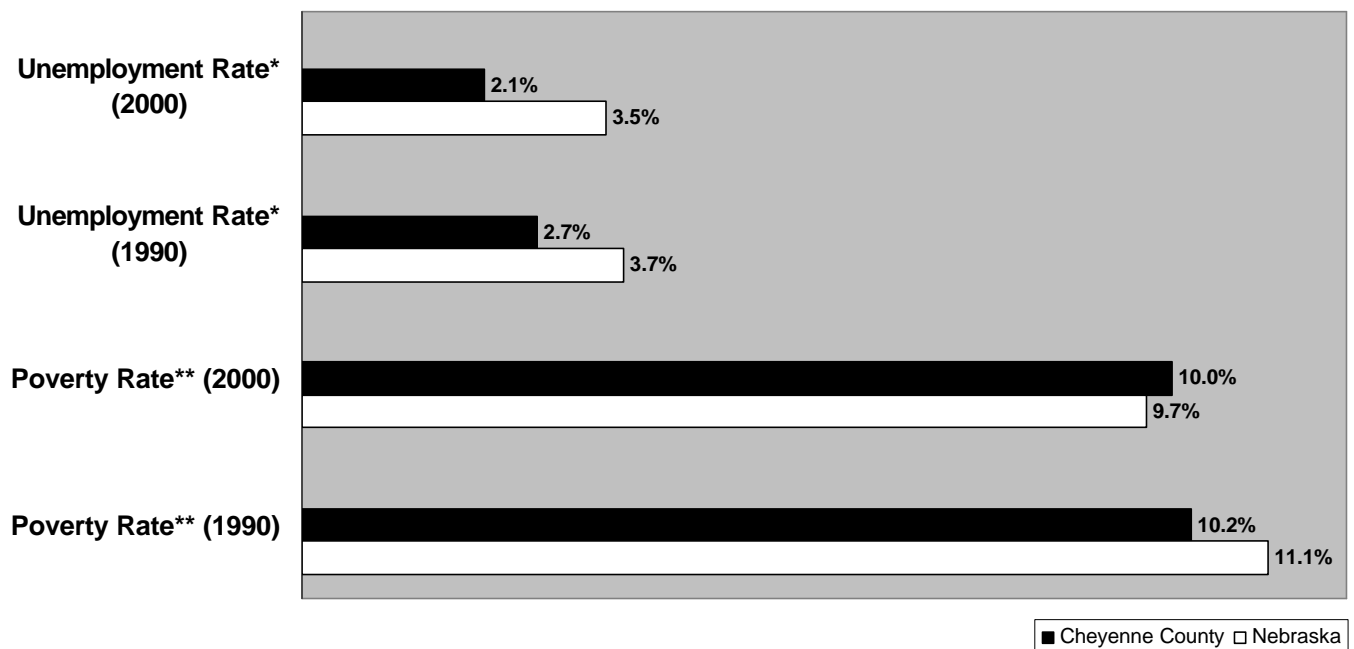
The median household income of the county has increased since 1990 by 42.8% to \$33,438 in 2000 (compared to \$39,250 statewide), and the per capita income of the county has increased since 1990 by 51.4% to \$17,437 in 2000 (compared to \$19,613 statewide) (Figure 5). Cheyenne County experienced a lower unemployment rate (2.1% vs. 3.5% statewide), while having a higher poverty rate (10% 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, while having a higher percentage of 7-12th graders who dropped out of school and a higher percentage of first births to unmarried women under 20 with less than a high school education, shown in Table 3.

Figure 5. Income for Cheyenne County and Nebraska, 1990 and 2000



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

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



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

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

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

Table 3. Selected Social Indicators for Cheyenne County and Nebraska

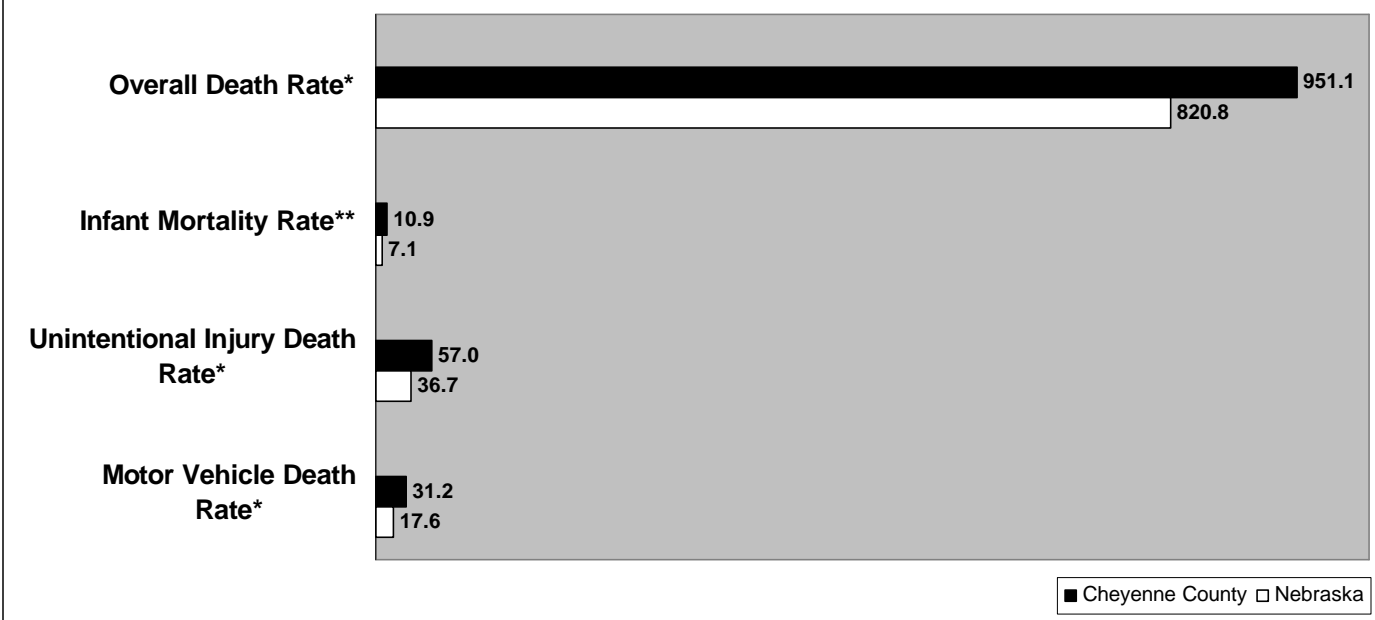
	Cheyenne County	Nebraska
Percent of residents aged 25 and older who did not graduate from high school (2000)	13.3%	13.4%
Percent of 7-12th graders who dropped out of school (2000-2001)	2.9%	2.5%
Percent of first births to unmarried women, younger than 20, with less than a high school education (1997-2001)	12.4%	10.1%
Crime arrest rate per 1,000 population (1999)	54.4	59.2

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

V. HEALTH STATUS INDICATORS

The residents of Cheyenne County have a higher infant mortality rate, and higher mortality rates for motor vehicle death, unintentional injury death, and overall death compared with the State (Figure 7). Cheyenne County out-performed the State in two of the maternal and child health related indicators, except for percent of births to adolescents ages 10 to 17 and percent of pregnant women who reported obtaining prenatal care in the first trimester, shown in Figure 8. Among the top 5 leading causes of death of Cheyenne County residents, the county has a higher mortality rate than the State for cancer, unintentional injuries and chronic lung disease (Figure 9). Among the top 5 leading causes of hospitalization of Cheyenne County's residents, the county has a higher hospitalization rate than the State for digestive diseases, diabetes related diseases, and genitourinary diseases (Figure 10).

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

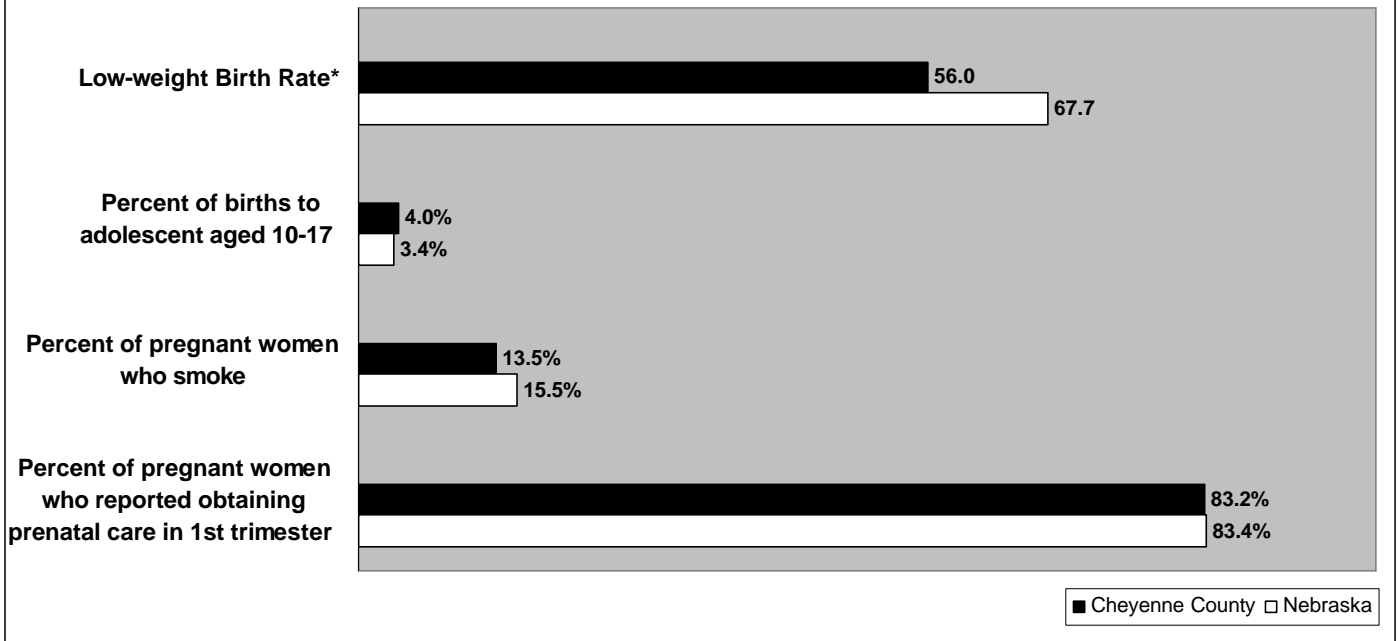


* Number of deaths per 100,000 population (age adjusted).

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

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

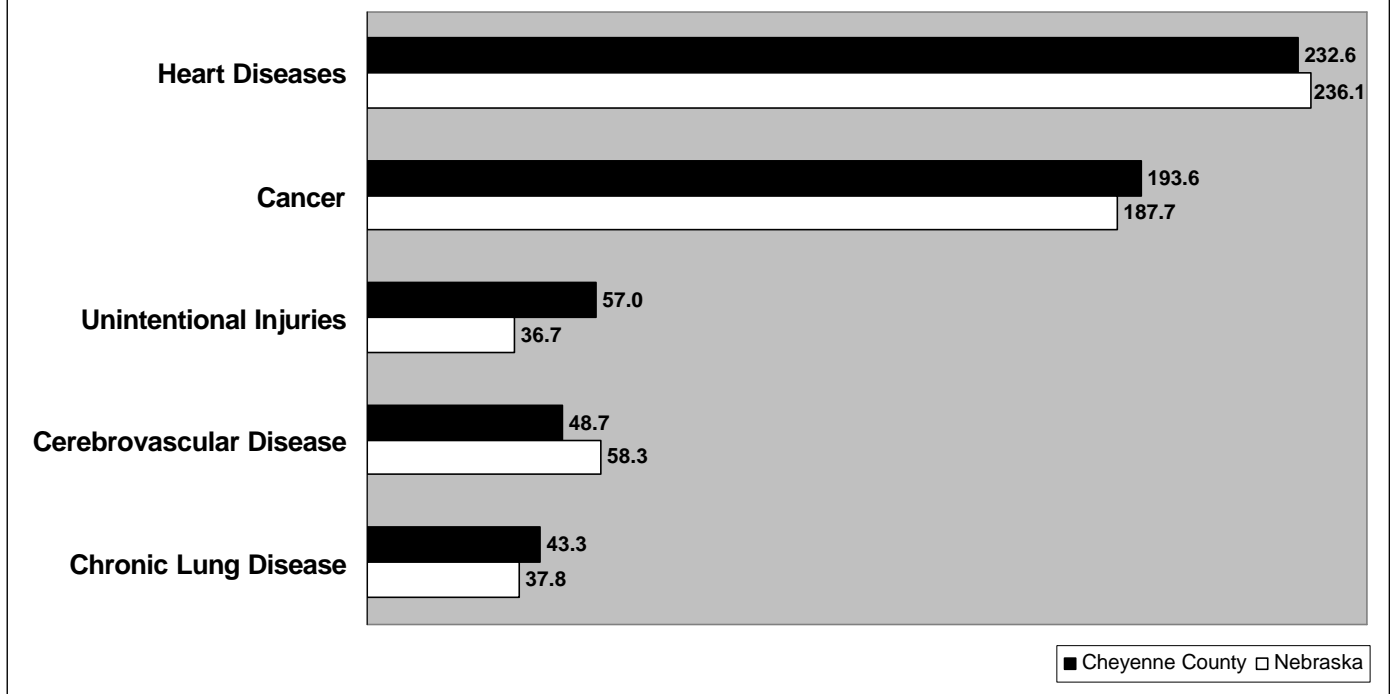
Figure 8. Selected Maternal and Child Health Indicators, Cheyenne County and Nebraska, 1997-2001



* 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/Cheyenne/profile.htm>

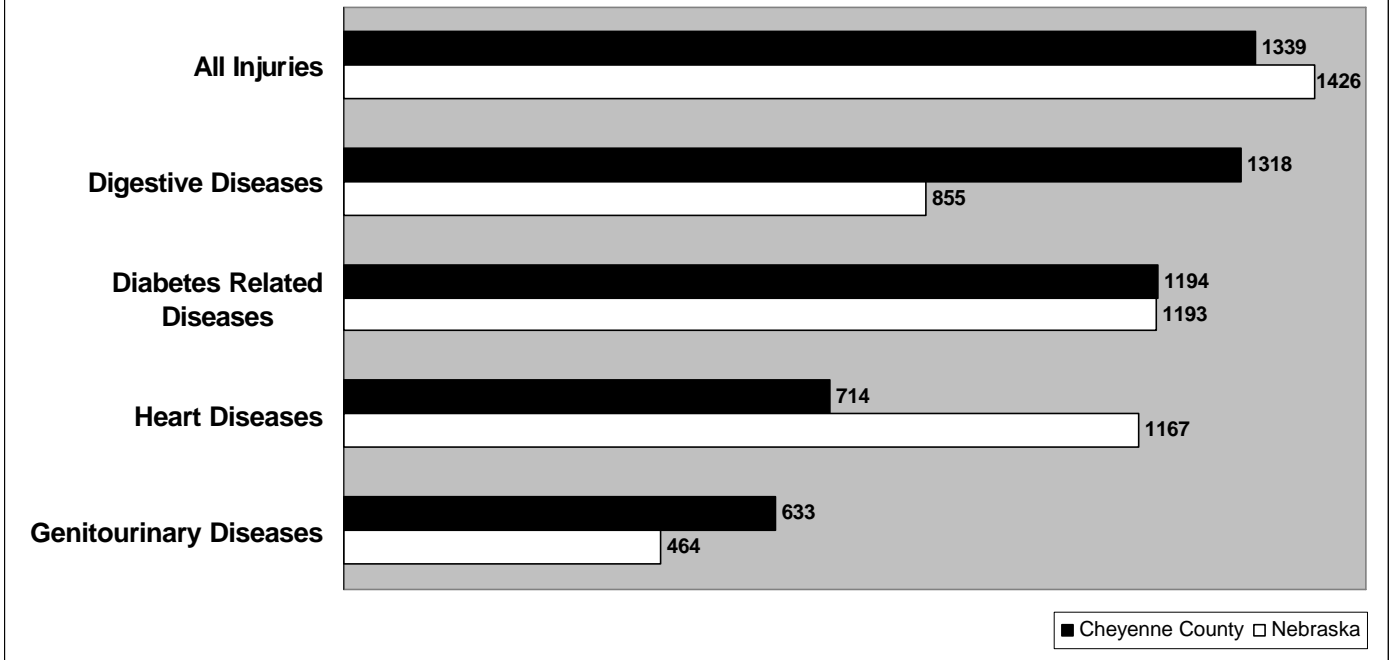
Figure 9. Top 5 Leading Causes of Death for Cheyenne County and the Corresponding Mortality Rates* for the County and Nebraska, 1997-2001



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

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

Figure 10. Top 5 Leading Causes of Hospitalization* for Cheyenne 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.

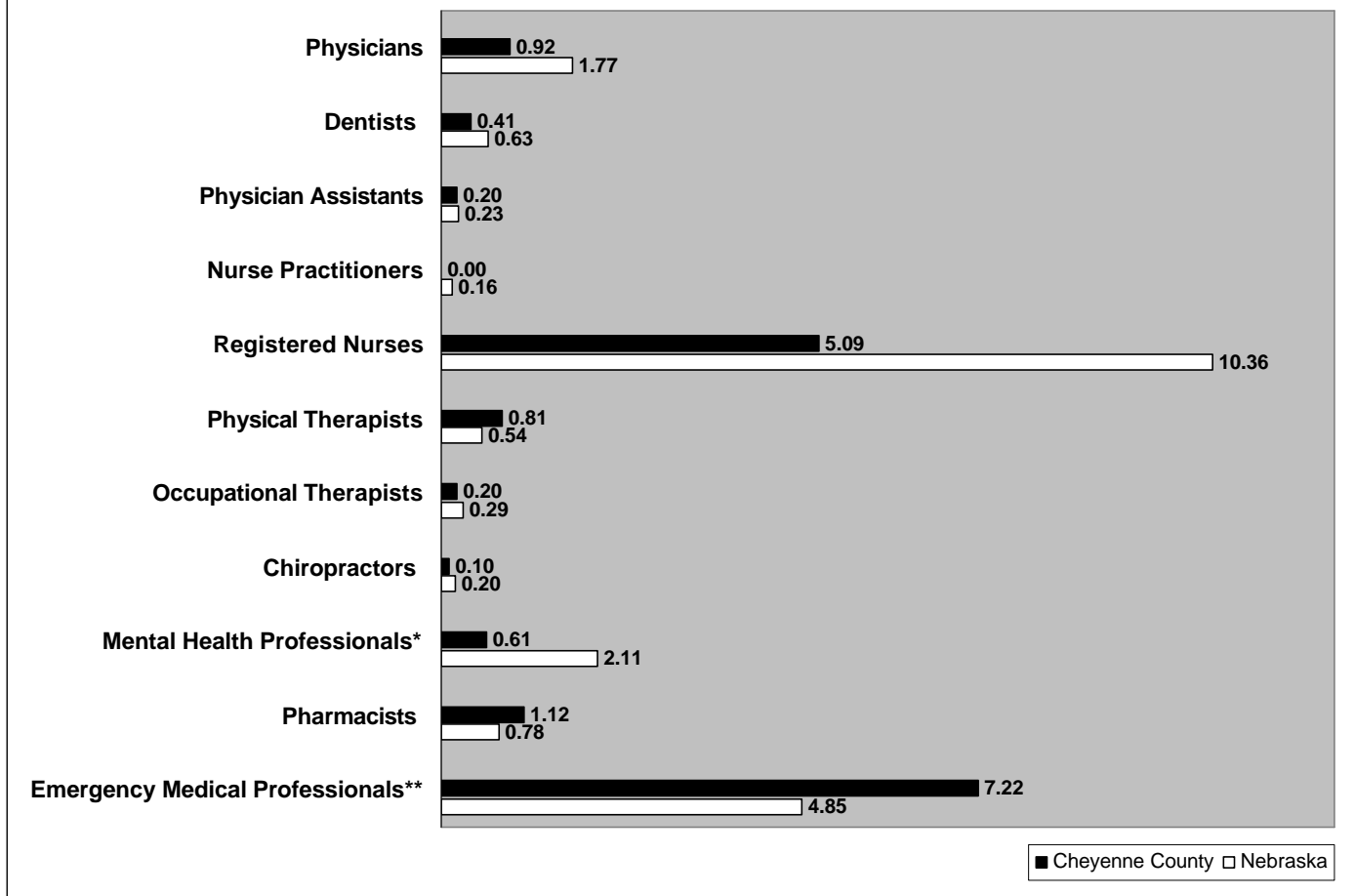
Source: Nebraska Health and Human Services County Profiles. <http://www.hhs.state.ne.us/profile0802/Cheyenne/profile.htm>

VI. HEALTH CARE PROFESSIONALS

Cheyenne County is federally designated as a mental health professional shortage area. The State government designates Cheyenne County as a health professional shortage area in the specialties of: internal medicine, pediatrics, OB/GYN, psychiatry, and general dentistry and oral surgery.

Cheyenne County has a higher professional-to-population ratio than the State for physical therapists, pharmacists, 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, Cheyenne County and Nebraska, 2001



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

** Emergency Health 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 Cheyenne County has a lower bed-to-population ratio than the State in both hospital and long-term care industries. As a result, the need for hospital inpatient care (of general public) and for long-term care (of the elderly) may not be well met within the county.

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

	Cheyenne County	Nebraska
Number of hospital beds per 1,000 population	2.5**	5.6*
Number of Long Term Care beds per 1,000 elderly population (65+)	72.1*	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

The economic impact results presented in this report were obtained from a compilation of secondary data derived from the IMPLAN database, the U.S. Census Bureau's County Business Patterns 2000, and primary data from a Community Health Systems Assessment Survey. The IMPLAN software analyzes county level data using an economic input-output model. However, certain information required for running the model (e.g., total payroll of employees in a county owned nursing home) cannot be obtained from the IMPLAN database. When this happened, we used the information from the U.S. Census Bureau's County Business Patterns 2000 and the Community Health System Assessment Survey that we conducted to calculate estimates and used them to report county specific health sector data.

Acknowledgments

We would like to thank Dennis Berens, at the Nebraska Office of Rural Health, for his enthusiastic support to the Nebraska Rural Health Works Project. We would also like to thank Kathy Hecht, of Cheyenne County Hospital, for helping us with collecting data from Cheyenne County. Finally, we would like to thank Michael Shambaugh-Miller, at the Nebraska Center for Rural Health Research, for his help with making the maps, and to the members of this project's advisory committee for their insightful comments on this report.

About the Nebraska Rural Health Works Project

The Nebraska Rural Health Works Project is a partnership made possible with the financial support of the Nebraska Office of Rural Health and the Nebraska Hospital Association, and through additional personnel and resources provided by 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 local economy, both directly and indirectly. We used the 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 community, other information such as: demographics, socio-economic and health status indicators, health care professionals and facility bed capacity are reported for a community. The Nebraska Rural Health Works website is: <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>.

Community Health Economic Profiles will be prepared upon request. Those communities interested in this project can request a profile by contacting the Project Director, Li-Wu Chen, Ph.D. (liwuchen@unmc.edu), or Donadea Rasmussen (drasmuss@unmc.edu) at the Nebraska Center for Rural Health Research, 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