



Nebraska Rural Health Works Health Economic Profile for Box Butte County, Nebraska

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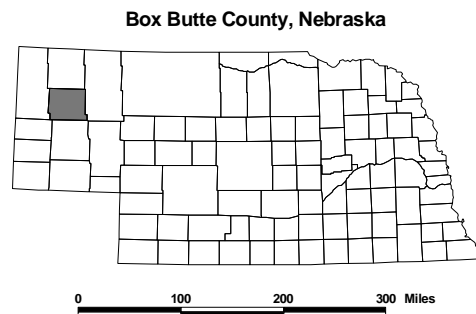
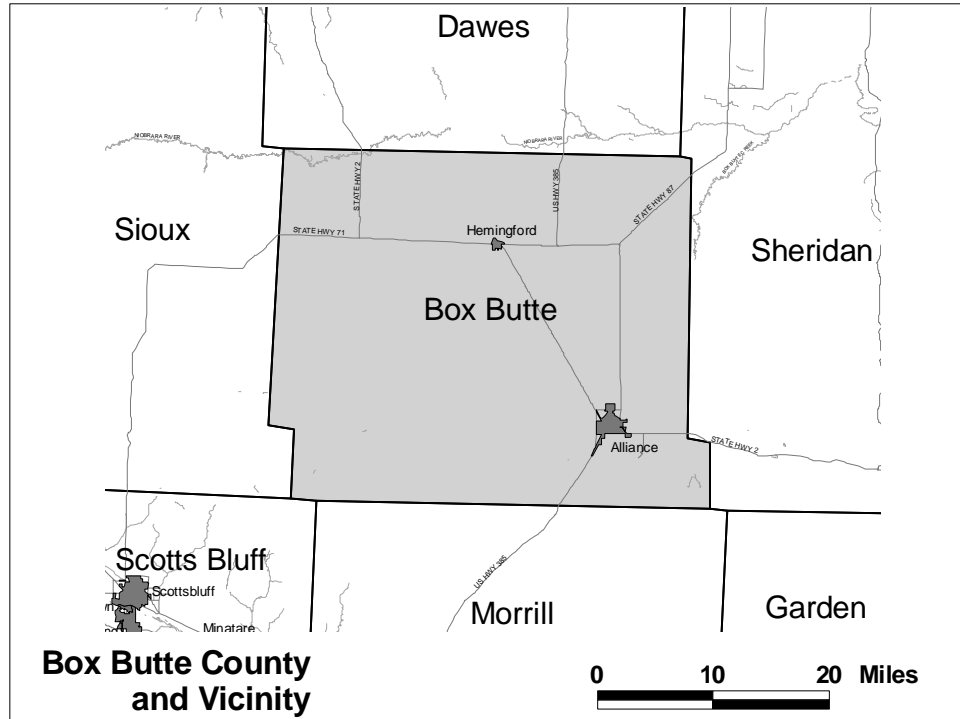
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Executive Summary on the Economic Impact of Health Care Sector

- ◆ One job created in the health care sector of Box Butte County would lead to the creation of another 0.51 job in other sectors of the County's economy.
- ◆ One dollar of income earned in the health care sector of Box Butte County would lead to another \$0.42 of income earned in other sectors of the County's economy.
- ◆ One dollar spent in the health care sector of Box Butte County would lead to another \$0.74 spent in other sectors of the County's economy.
- ◆ The overall job creation due to health care (directly and indirectly) in Box Butte County is estimated at 1,326 jobs, which accounts for 16.4% of the County's total employment.
- ◆ The overall income earned due to health care (directly and indirectly) in Box Butte County is estimated at \$29.87 million, which accounts for 15.6% of the County's total income.
- ◆ The overall spending due to health care (directly and indirectly) in Box Butte County is estimated at \$57.07 million, which accounts for 7.5% of the County's total economic output.

I. GEOGRAPHY

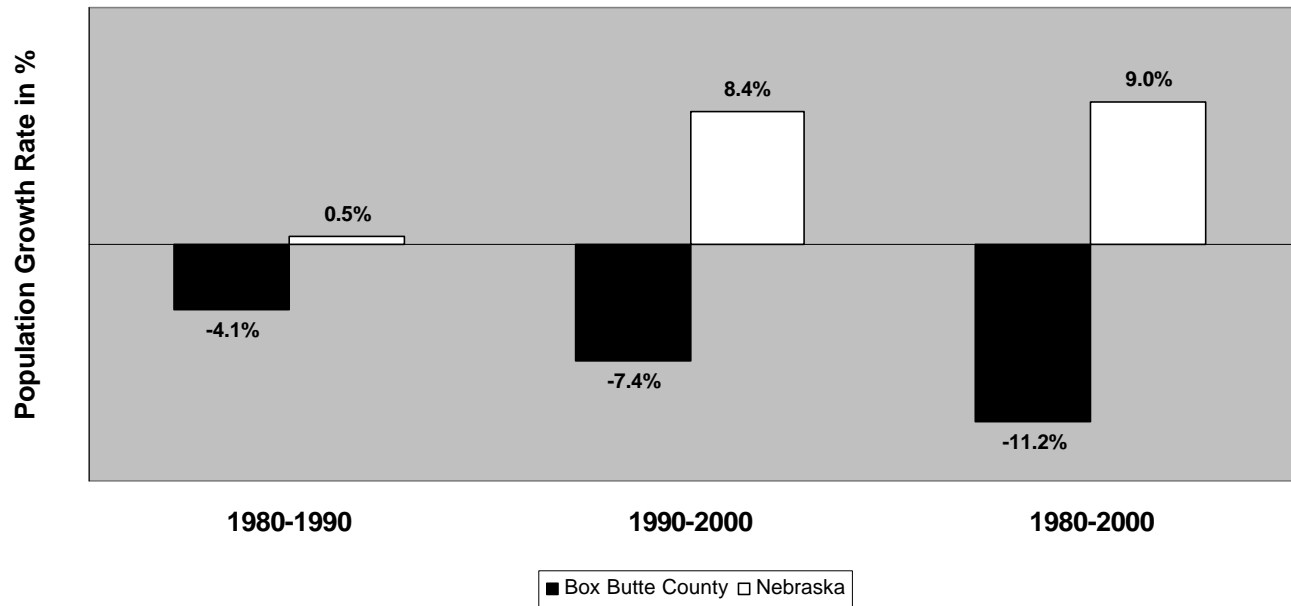
Box Butte County is located in the panhandle region of Nebraska. The County has a total of 1,075 square miles with a population density of 11.3 people per square mile (Nebraska: 22.3 per square mile). The County seat of Box Butte County is Alliance, Nebraska.



II. POPULATION

The population for Box Butte County was 12,158 in 2000. The County has experienced a negative population growth of -11.2% (compared to +9.0% statewide) during 1980-2000 (Figure 1). Although the minority population has increased during the past decade, white (non-Hispanic) people still represented the great majority of County population in 2000 (92.6%, Table 1). In addition, the County's population is slightly older than the State's, with the elderly (aged 65+) representing 14.6% (compared to 13.6% statewide) of the population in 2000 (Table 2).

Figure 1. Population Growth Rate, Box Butte 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 Box Butte County and Nebraska, 1990 and 2000

	Box Butte County 1990	Nebraska 1990	Box Butte County 2000	Nebraska 2000
White	95.2% (12,501)	93.8% (1,480,558)	92.6% (11,261)	89.6% (1,533,261)
Black	0.4% (49)	3.6% (57,404)	0.6% (72)	4.0% (68,541)
Asian or Pacific Islander	0.4% (57)	0.8% (12,422)	0.9% (104)	1.3% (22,767)
American Indian or Alaska Native	2.3% (302)	0.8% (12,410)	3.8% (459)	0.8% (14,896)
Other Race	1.7% (221)	1.0% (15,591)	4.2% (514)	2.8% (47,845)
Hispanic*	5.5% (722)	2.3% (36,969)	7.7% (930)	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 Box Butte County and Nebraska, 1990 and 2000

Age	Box Butte County 1990	Nebraska 1990	Box Butte County 2000	Nebraska 2000
0-4	8.1% (1,066)	7.6% (119,606)	6.6% (797)	6.8% (117,048)
5-24	30.2% (3,967)	29.5% (465,293)	29.0% (3,527)	29.7% (507,619)
25-64	48.3% (6,339)	48.8% (770,418)	49.9% (6,064)	49.9% (854,401)
65-84	11.1% (1,461)	12.3% (193,866)	12.2% (1,489)	11.6% (198,242)
85+	2.3% (297)	1.9% (29,202)	2.3% (281)	2.0% (33,953)
TOTAL	100% (13,130)	100% (1,578,385)	100% (12,158)	100% (1,711,263)

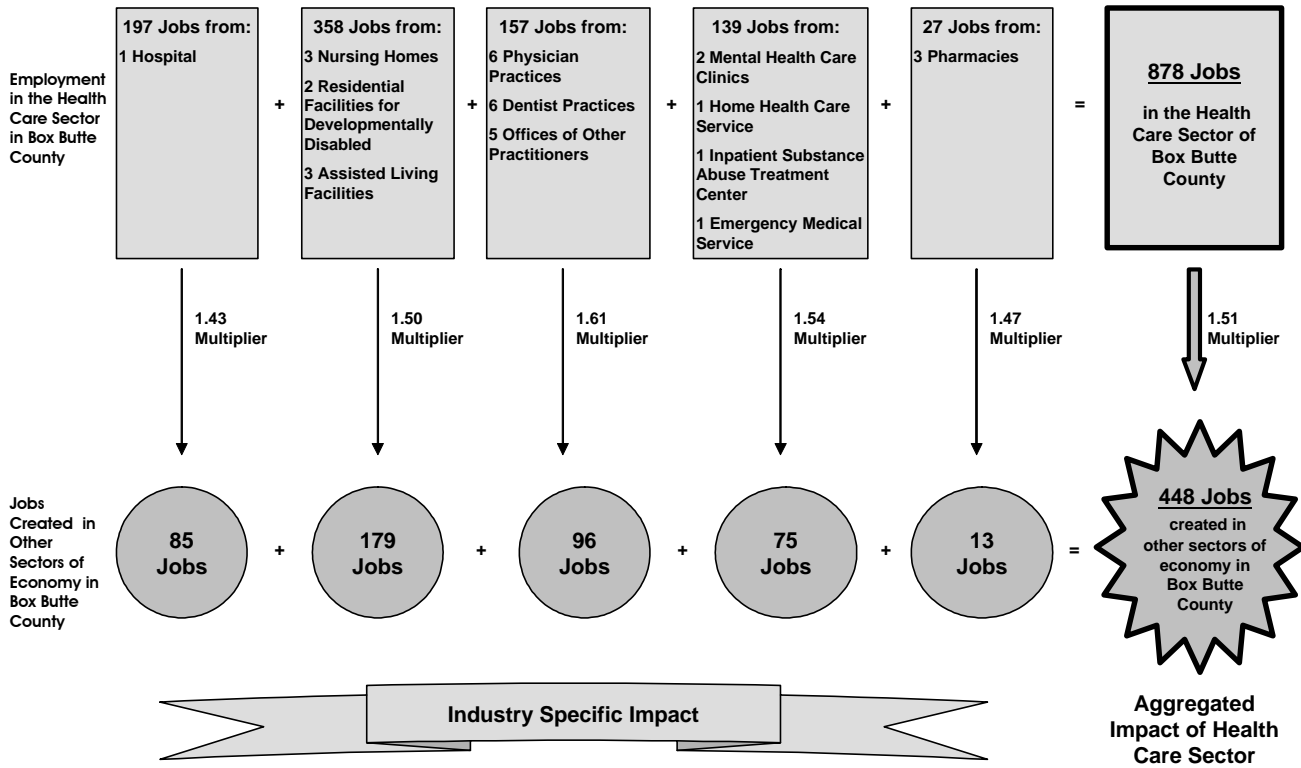
Sources: U.S. Bureau of the Census, Census 1990 and Census 2000, Summary Tape File 1. <http://factfinder.census.gov>.

III. ECONOMIC IMPACT OF THE HEALTH CARE SECTOR

Local and State Government is the largest employer within Box Butte County, followed by Services (excluding Health Care), Retail Trade, Health Care and Agriculture. The Health Care sector of Box Butte County includes one hospital, three nursing homes, two residential facilities for the developmentally disabled, three assisted living facilities, six physician practices, six dentist practices, two optometry practices, two chiropractic practices, three mental health care practices, one inpatient substance abuse treatment center, one emergency medical service, one home health care service, and three pharmacies.

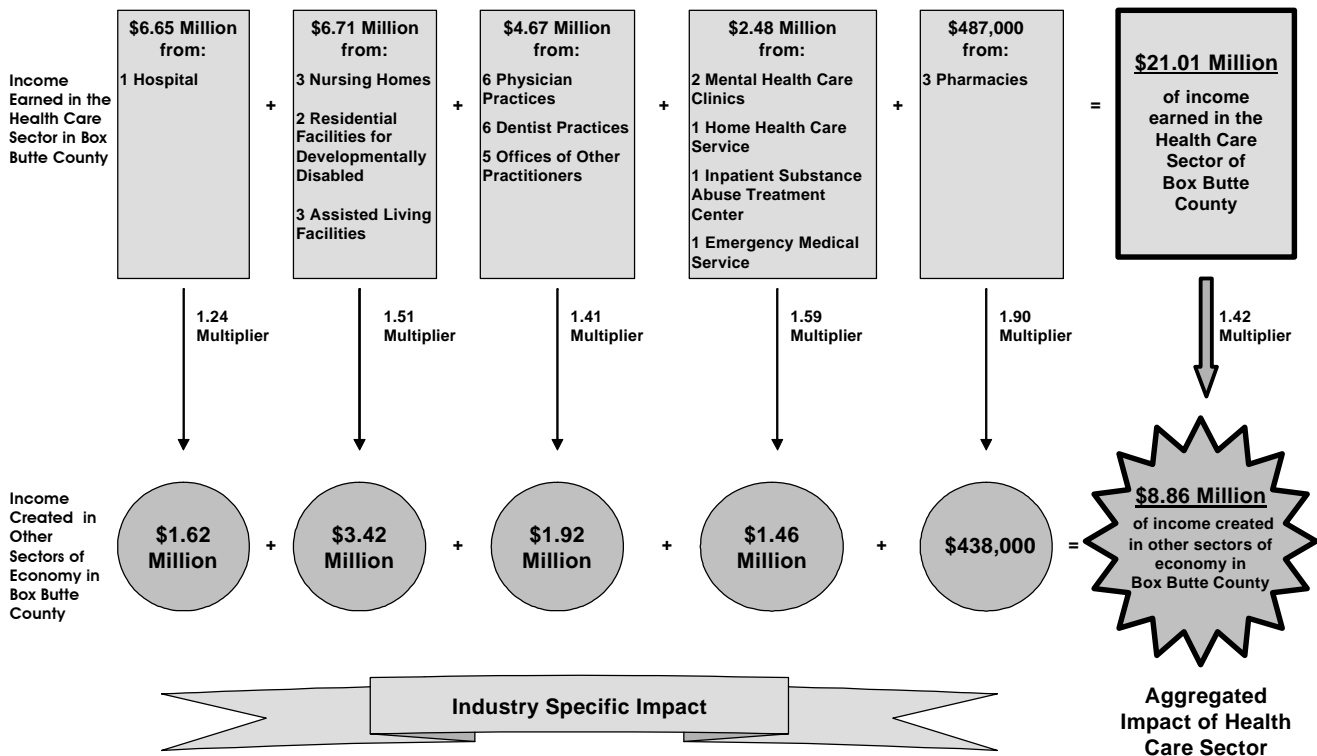
- ◆ The 878 jobs in the health care sector of Box Butte County have created (through a 1.51 multiplier) another 448 jobs in other sectors of the County's economy (Figure 2). Therefore, the combined effect represents 16.4% of the County's total employment (i.e., 1,326 out of 8,072 jobs).
- ◆ The \$21.01 million of income earned in the health care sector of Box Butte County has created (through a 1.42 multiplier) another \$8.86 million of income in other sectors of the County's economy (Figure 3). Therefore, the combined effect represents 15.6% of the County's total income (i.e., \$29.87 million out of \$192.04 million).
- ◆ The \$32.83 million spent in the health care sector of Box Butte County has created (through a 1.74 multiplier) another \$24.24 million of spending in other sectors of the County's economy (Figure 4). Therefore, the combined effect represents 7.5% of the County's total economic output (i.e., \$57.07 million out of \$761.32 million).

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



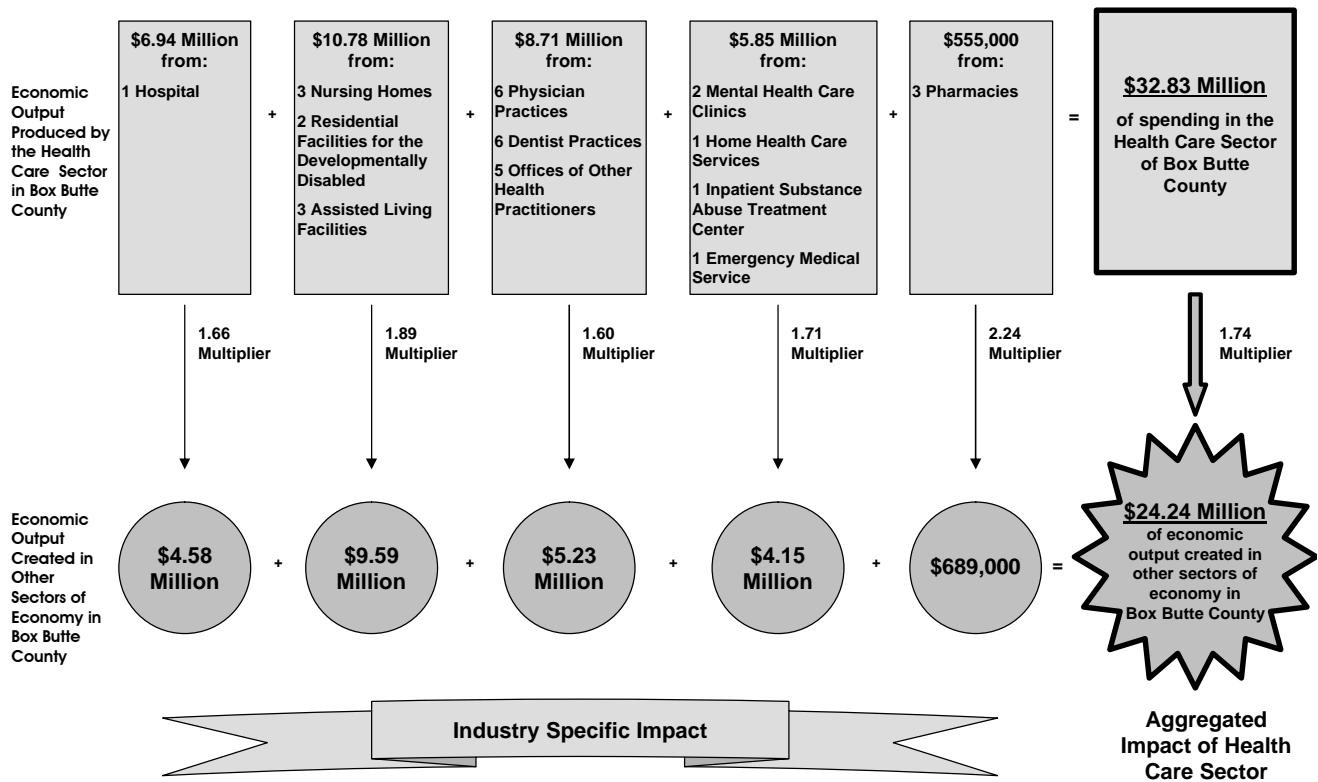
Sources: IMPLAN Data 2000. Minnesota IMPLAN Group, Inc. 2003. U.S. Census Bureau County Business Patterns, 2000. <http://www.census.gov/prod/www/abs/cbptotal.html>. Community Health System Assessment Survey, Nebraska Center for Rural Health Research, UNMC, July, 2002.

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

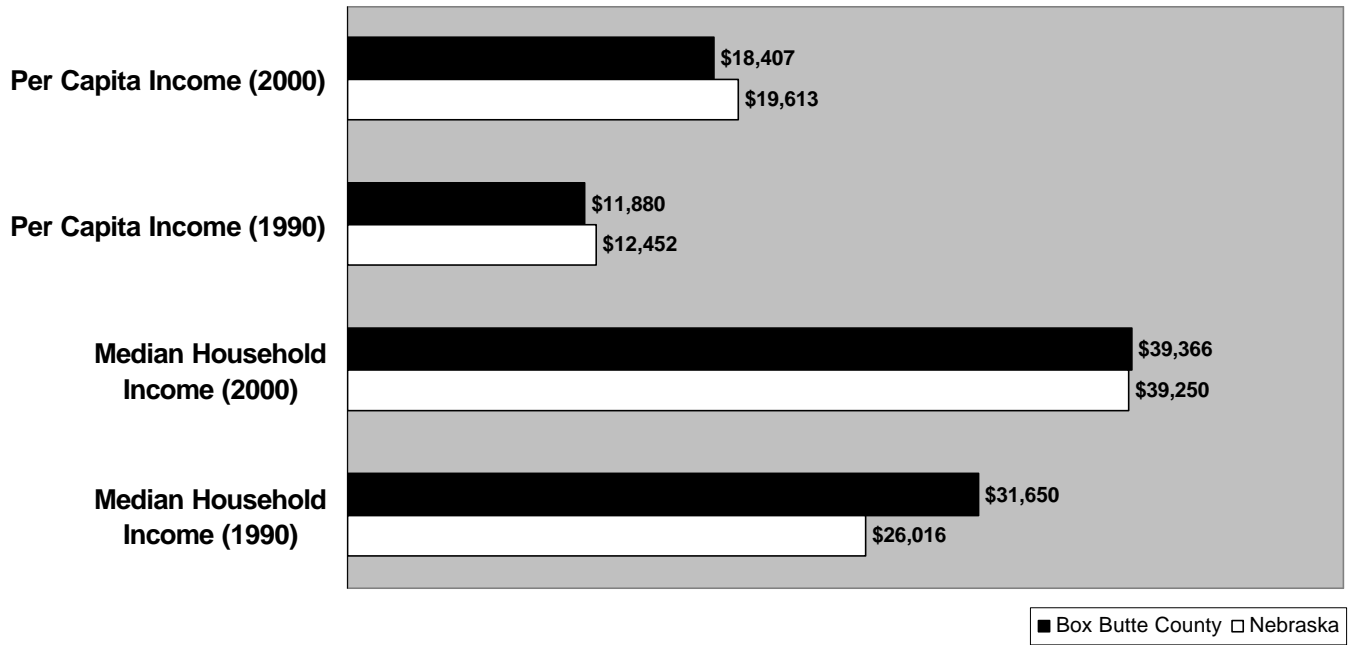


Sources: IMPLAN Data 2000. Minnesota IMPLAN Group, Inc. 2003. U.S. Census Bureau County Business Patterns, 2000. <http://www.census.gov/prod/www/abs/cbtpotal.html>. Community Health System Assessment Survey, Nebraska Center for Rural Health Research, UNMC, July, 2002.

IV. SOCIO-ECONOMIC INDICATORS

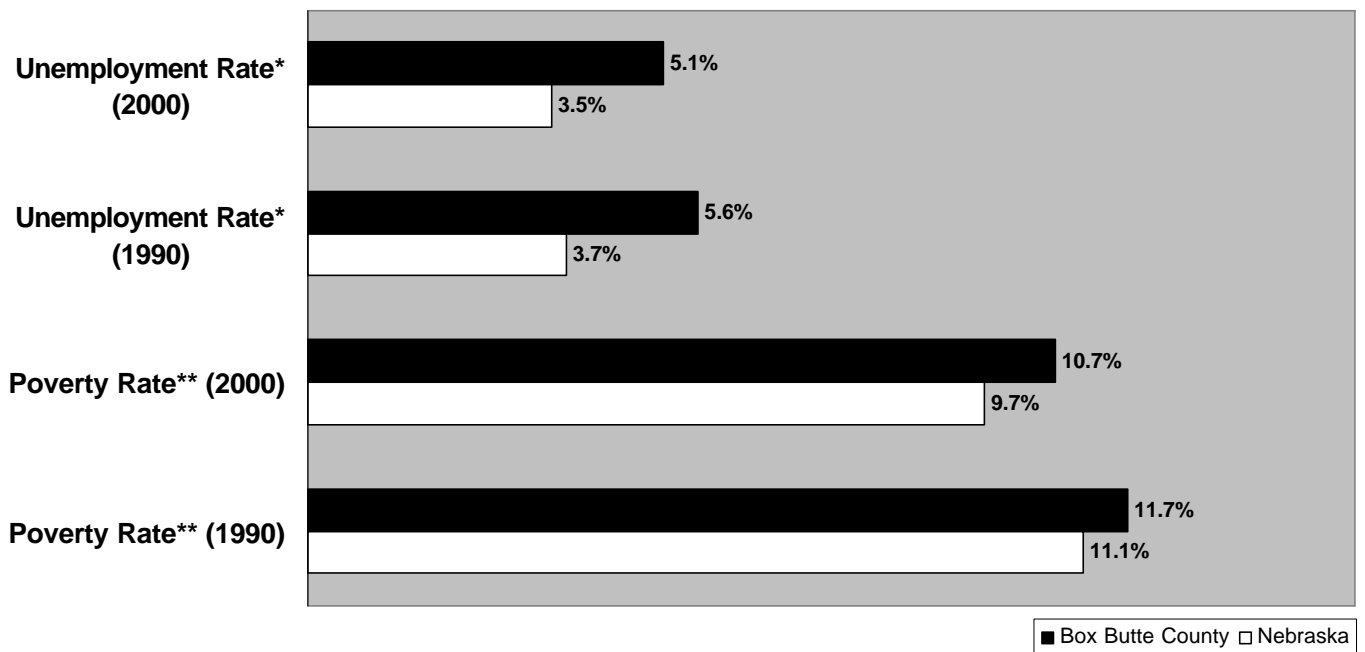
The per capita income of the County has increased since 1990 by 54.9% to \$18,407 in 2000 (compared to \$19,613 statewide), and the median household income of the County has increased since 1990 by 24.3% to \$39,366 in 2000 (compared to \$39,250 statewide) (Figure 5). Box Butte County experienced a higher unemployment rate (5.1% vs. 3.5% statewide), and a higher poverty rate (10.7% vs. 9.7% statewide) than the State in 2000 (Figure 6). Moreover, the County outperformed the State in all of the social indicators shown in Table 3, except for the overall crime rate.

Figure 5. Income for Box Butte 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 Box Butte 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.

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

Table 3. Selected Social Indicators for Box Butte County and Nebraska

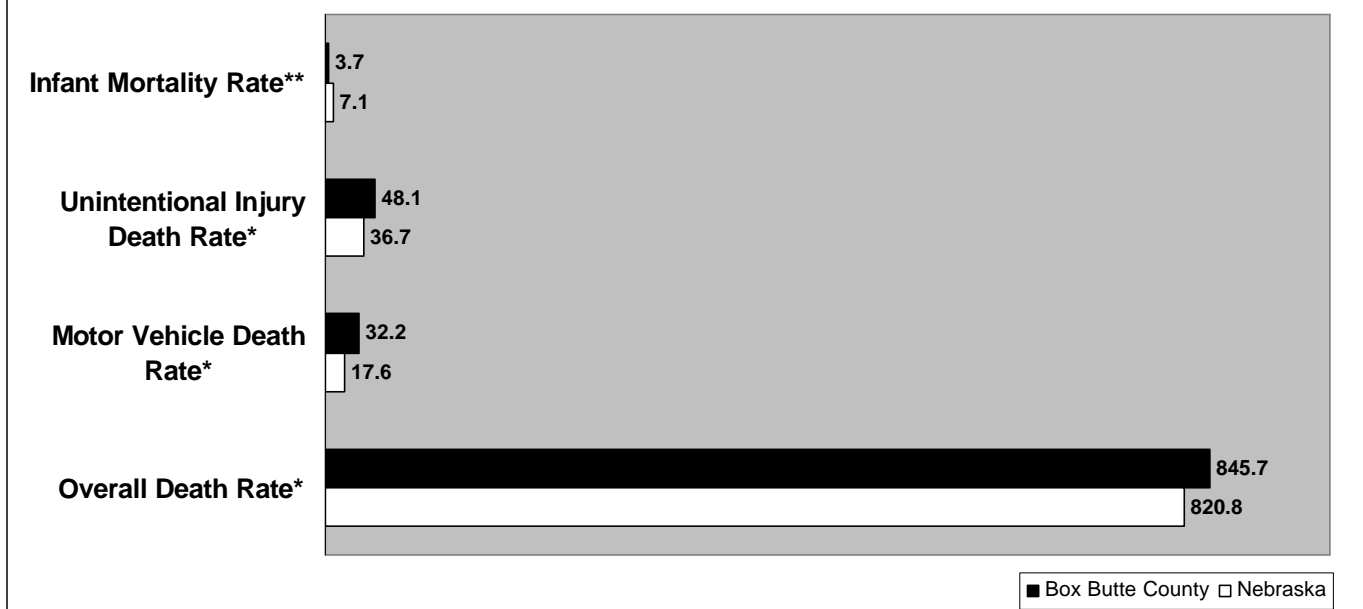
	Box Butte County	Nebraska
Percent of residents aged 25 and older who did not graduate from high school (2000)	11.9%	13.4%
Percent of 7-12th graders who dropped out of school (2000-2001)	1.1%	2.5%
Percent of first births born to unmarried women, younger than 20, with less than a high school education (1997-2001)	9.8%	10.1%
Crime arrest rate per 1,000 population (1999)	69.5	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/Box Butte/profiles.htm>

V. HEALTH STATUS INDICATORS

The residents of Box Butte County had a higher overall death rate, unintentional injury death rate, and motor vehicle death rate compared to the State between 1997-2001 (Figure 7). Box Butte County out-performed the State in two of the maternal and child health related indicators, shown in Figure 8, but had a higher percentage of pregnant women who smoke and a slightly lower percentage of pregnant women who received prenatal care in the first trimester. Among the top 5 leading causes of death of Box Butte County residents during 1997-2001, the County had a higher mortality rate than the State for heart disease, cancer, chronic lung disease and unintentional injuries (Figure 9). Among the top 5 leading causes of hospitalization of Box Butte County's residents between 1999-2000, the County had a higher hospitalization rate than the State for injuries, digestive diseases, diabetes related diseases, and genitourinary diseases (Figure 10).

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

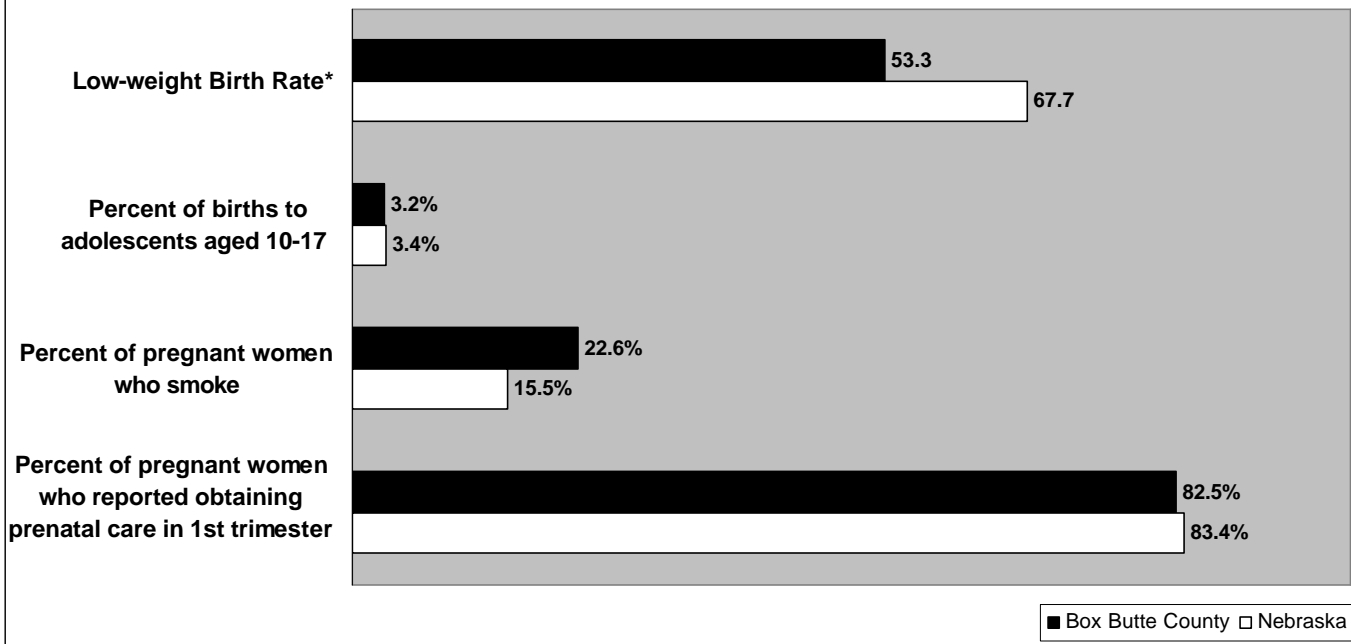


* Number of deaths per 100,000 population (age adjusted).

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

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

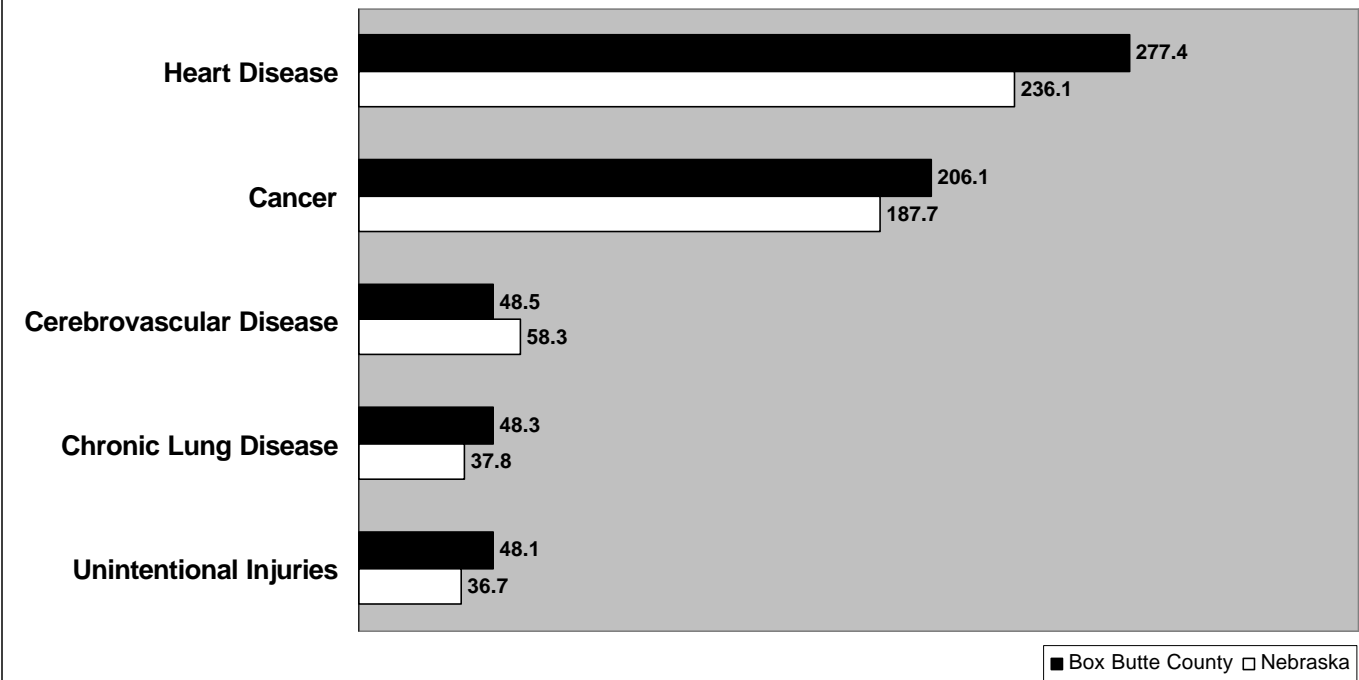
Figure 8. Selected Maternal and Child Health Indicators, Box Butte County and Nebraska, 1997-2001



* 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/Box Butte/profile.htm>.

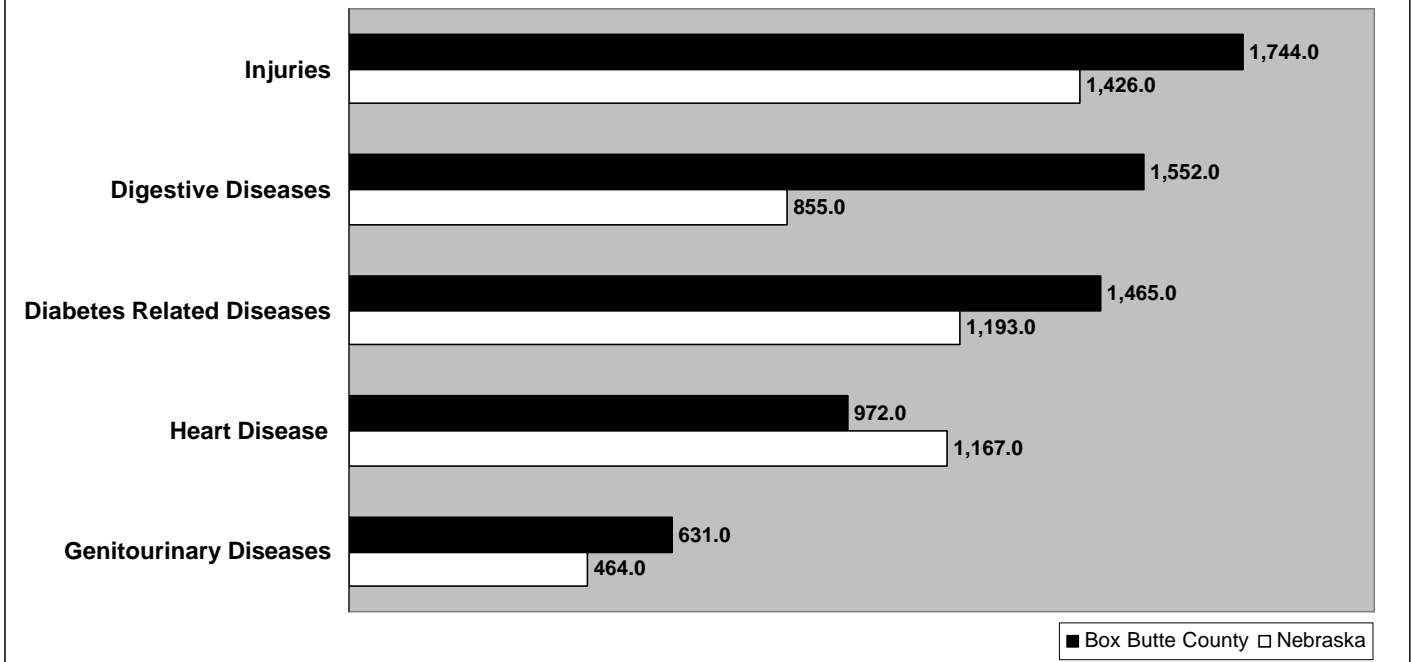
Figure 9. Top 5 Leading Causes of Death for Box Butte County and the Corresponding Mortality Rates* for the County and Nebraska, 1997-2001



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

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

Figure 10. Top 5 Leading Causes of Hospitalization* for Box Butte 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.

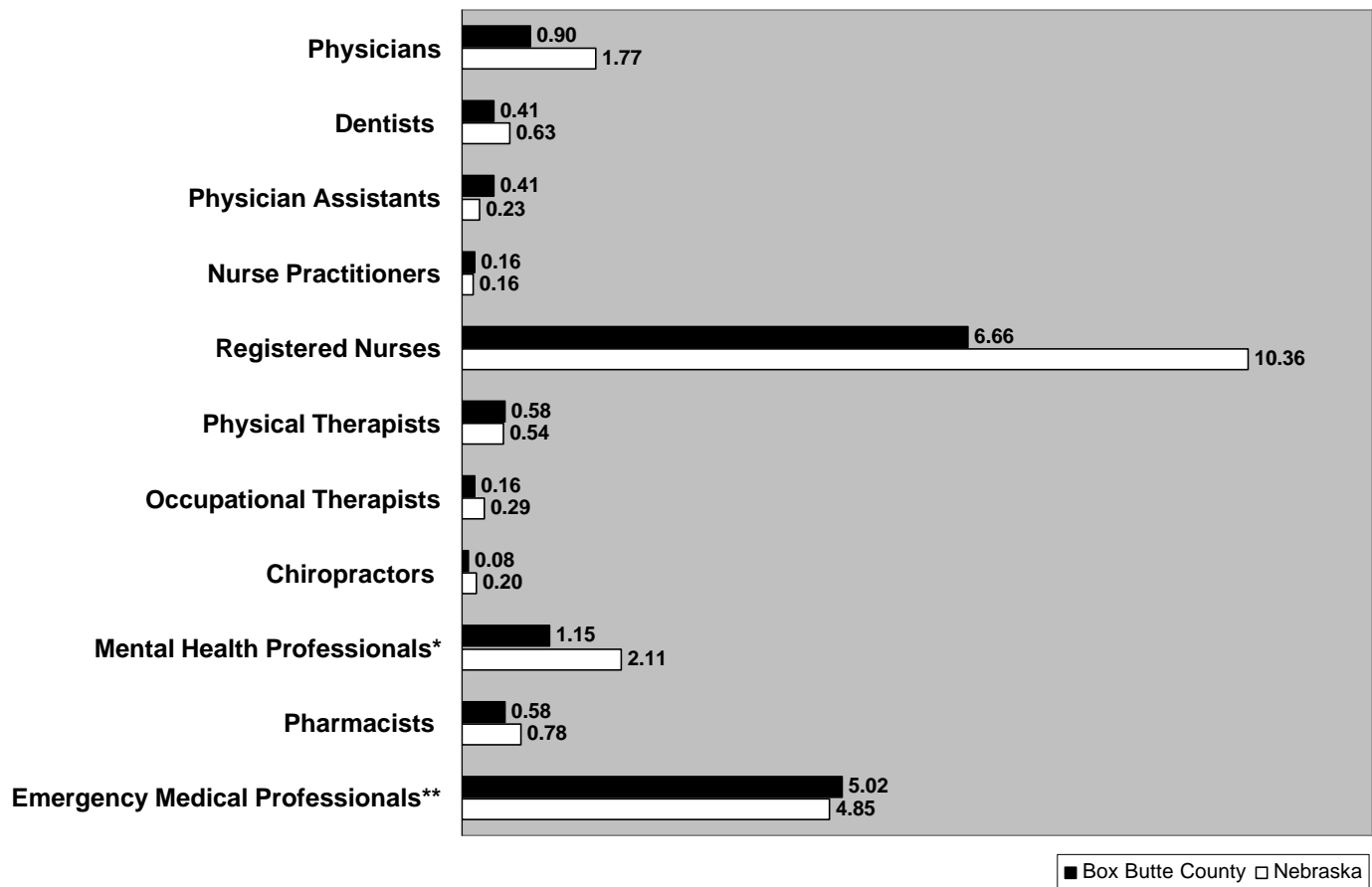
Source: Nebraska Health and Human Services County Profiles. [http://www.hhs.state.ne.us/profile0802/Box Butte/profile.htm](http://www.hhs.state.ne.us/profile0802/Box%20Butte/profile.htm).

VI. HEALTH CARE PROFESSIONALS

Box Butte County is federally designated as a primary care shortage area and mental health professional shortage area. The State government has designated Box Butte County as a health professional shortage area in the specialties of: family medicine, general surgery, internal medicine, pediatrics, OB/GYN, psychiatry, pharmacy and occupational therapy.

Box Butte County has a higher professional-to-population ratio than the State for Physician Assistants and Emergency Medical Professionals, but a lower ratio for all other health professionals shown in Figure 11.

Figure 11. Number of Practicing Health Professionals Per 1,000 Population, Box Butte 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.

** Actively Licensed Emergency Health Professionals include: Emergency Medical Technician (EMT) Paramedics, 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 Box Butte County's hospitals have an overall lower bed-to-population ratio than the State but a higher bed-to-population ratio for its long-term care 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 Beds-to-Population Ratios for Box Butte County and Nebraska

	Box Butte County	Nebraska
Number of hospital beds per 1,000 population	3.6**	5.6*
Number of Long Term Care beds per 1,000 elderly population (65+)	103.4*	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 reporting health sector impact (e.g., total payroll for 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 Terry Padden, of Box Butte General Hospital, for helping us collect data from Box Butte County. Finally, we would like to thank Michael Shambaugh-Miller and Brian Hesford, at the Nebraska Center for Rural Health Research, for their 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, 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

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