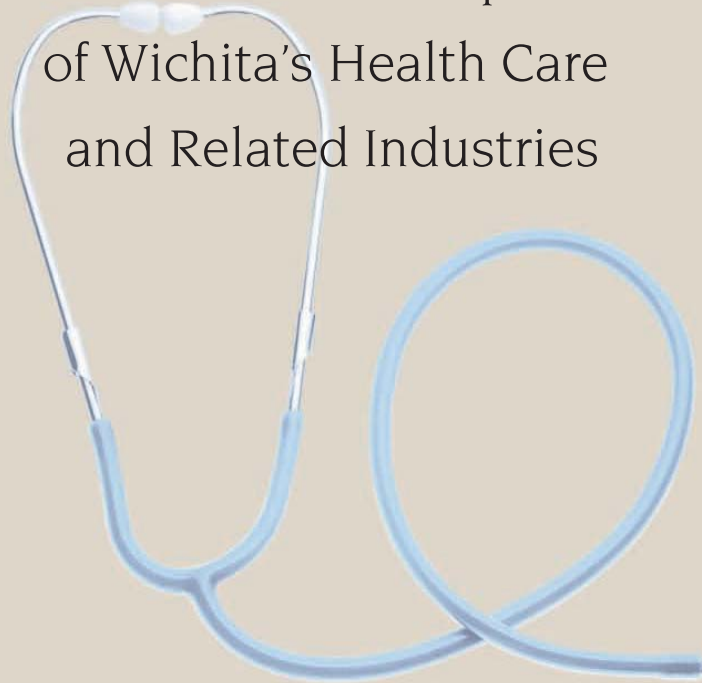


Serving the Community Well:

The Economic Impact
of Wichita's Health Care
and Related Industries



2010

Analysis prepared by:

Center for Economic Development
and Business Research
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Wichita State University



Economic impact of the Health Care and Related Industries to the Wichita MSA in 2007:

\$2.5 billion in payroll stimulus to local economy (*page 4*)

#2 in employment in Wichita MSA (*page 1*)

72,545 employees in Wichita MSA health care or related industries (*page 2*)

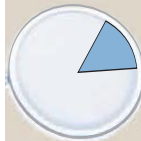
Lowest health care costs compared to Kansas City, Oklahoma City, Omaha and Tulsa (*page 7*)

\$203.7 million in tax revenue generated for city, county and state from Health Care and Related industries wages (*page 5*)

\$962 million added to local economy from hospital patients from outside Wichita MSA (*page 6*)

More than \$6 billion in direct revenues added to local economy (*page 5*)

#1 in employment level growth from 2000-2007 (*page 1*)



1 in 6 employees in Wichita MSA worked directly in Health Care and Related Industries (*page 2*)



Prepared for the



MSSC
MEDICAL SOCIETY of
SEDGWICK COUNTY

*Physicians who care...
for our patients,
our community and
our profession*



MSSC
MEDICAL SOCIETY *of*
SEDGWICK COUNTY

Founded in 1903, the Medical Society of Sedgwick County represents nearly 1,200 physicians on issues related to the private practice of medicine. With a membership base that includes 95 percent of the area's practicing physicians, MSSC is one of the most active county medical societies in the country.

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www.mssconline.org

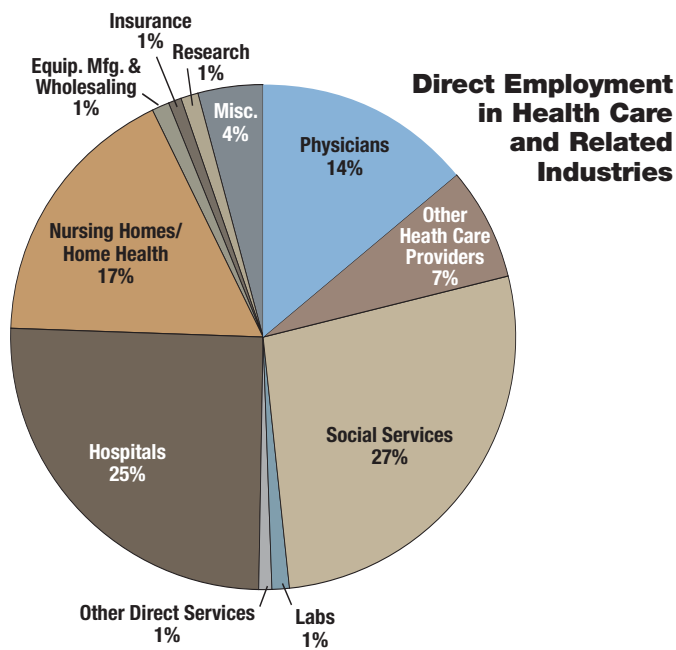
Economic Impact Summary (Wichita MSA)

	Health Care Industry	Related Industries	Health Care & Related Industries
Direct Employment (2007)	40,381	3,062	43,443
Indirect & Induced Employment (2007)	26,738	2,363	29,102
Total Employment (2007)	67,119	5,425	72,545
Direct Wages (2007 Average)	\$36,318	\$37,609	\$36,409
% Change in Direct Wages (2000-2007)	23%	41%	24%
Direct Payroll (2007) (in millions)	\$1,467	\$115	\$1,582
Indirect & Induced Payroll (2007) (in millions)	\$788	\$86	\$874
Total Payroll (2007) (in millions)	\$2,254	\$201	\$2,455

	Total
Annual Revenue (2007) (in millions)	\$6,074

	Direct	Indirect/Induced	Total
Contribution to Gross Metropolitan Product (2007) (in millions)	\$2,402	\$323	\$2,725

	Wichita	Sedgwick County	Kansas	Total
Tax Impact (2007) (in millions)	\$25	\$23	\$155	\$203



HEALTH CARE INDUSTRY HIGH RANKING

Top 5 Employment Industries (*Wichita MSA 2007*)

The Health Care Industry ranked #2 in total metropolitan employment in 2007 with 40,381 employees.

Industry	Employment	% of Total
1 Manufacturing	56,706	21.8%
2 Health Care & Social Asst.	40,381	15.5%
3 Retail Trade	31,610	12.1%
4 Professional & Business Services	29,703	11.4%
5 Leisure & Hospitality	27,086	10.4%

Top 5 Industries by Employment Level Growth

(*Wichita MSA 2000-2007*)

The Health Care Industry ranked #1 in total employment level change from 2000-2007.

Industry	Level Change	% Change
1 Health Care & Social Asst.	6,268	18.4%
2 Transportation, Warehousing & Util.	4,919	76.2%
3 Education Services	806	20.5%
4 Leisure & Hospitality	699	2.6%
5 Finance, Insurance & Real Estate	642	5.0%

Top 5 Industries by Wage (*Wichita MSA 2007*)

The average wage in the Wichita MSA in 2007 was \$37,473. The Health Care Industry's average wage of \$36,318, was 3.1% lower than the Wichita MSA's average wage, ranking Health Care #9 out of 13 total private industries in the MSA.

Industry	Average Wage
1 Manufacturing	\$53,491
2 Natural Resources & Mining	\$48,401
3 Professional Business Services	\$47,411
4 Wholesale Trade	\$45,739
5 Transportation, Warehousing & Util.	\$44,987
9 Health Care & Social Asst.	\$36,318

Top 5 Industries by Wage Growth

(*Wichita MSA 2000-2007*)

From 2000-2007 the Health Care Industry increased its average wage by 23.4%, ranking it #5 compared to nine other private industries in the Wichita MSA.

Industry	Average Wage Growth
1 Wholesale Trade	29.7%
2 Finance, Insurance & Real Estate	27.5%
3 Construction	26.2%
4 Manufacturing	25.5%
5 Health Care & Social Asst.	23.4%

17% OF THE WICHITA MSA WORKFORCE

EMPLOYMENT: Health Care & Related Industries (Wichita MSA)

Health Care and Related Industries employed one-sixth of Wichita MSA employees.

Year	Total	Direct	Indirect/Induced
2000	61,796	36,544	25,252
2001	63,583	37,741	25,842
2002	66,666	39,136	27,530
2003	66,900	40,063	26,837
2004	68,468	40,931	27,537
2005	69,218	41,394	27,824
2006	69,456	41,592	27,864
2007	72,545	43,443	29,102

EMPLOYMENT: Health Care Industry (Wichita MSA)

Health Care Industry employment is comprised of ambulatory Health Care services, hospitals, nursing and residential care facilities and social assistance. In 2007, there were 40,381 direct employees in the Health Care Industry — 18.4% increase compared to 2000. The total economic impact of the Health Care Industry in 2007 was 67,119, representing a 16.7% increase compared to 2000.

Year	Total	Direct	Indirect/Induced
2000	57,528	34,113	23,415
2001	59,442	35,363	24,079
2002	59,704	35,490	24,214
2003	59,514	36,024	23,490
2004	61,051	36,890	24,161
2005	61,819	37,337	24,482
2006	64,361	38,725	25,636
2007	67,119	40,381	26,738



The annual economic impact of one family physician in Kansas is \$878,642

(American Academy of Family Physicians, 2009).

EMPLOYMENT: Related Industries *(Wichita MSA)*

Related Industries are intertwined with the Health Care service sector to the extent that one could not exist without the other. For example, if there were no doctors in a given area, there would be no need to have a medical supplier. Related industries include: pharmaceutical and medicine manufacturing, medical equipment and supply manufacturing, wholesale trade, retail trade, medical insurance sales and grant making and giving services.

The direct economic impact on employment of Related Industries in 2007 was 3,062 jobs, a 26% increase compared to 2000. The total economic impact of Related Industries on employment in 2007 was 5,425 jobs, representing a 27.1% increase compared to 2000.

Year	Total	Direct	Indirect/Induced
2000	4,267	2,431	1,836
2001	4,141	2,378	1,763
2002	6,962	3,646	3,316
2003	7,386	4,039	3,347
2004	7,417	4,041	3,376
2005	7,399	4,057	3,342
2006	5,095	2,867	2,228
2007	5,425	3,062	2,363

WAGE GROWTH

AVERAGE ANNUAL WAGE:
Health Care and Related Industries *(Wichita MSA)*

Employees in Health Care and Related industries earn near average wages. In 2007, the average wage of these employees was \$36,409 or 2.9% lower than the Wichita MSA average for all private industries.

Year	Annual Wages
2000	\$29,343
2001	\$30,757
2002	\$31,832
2003	\$32,332
2004	\$34,461
2005	\$35,030
2006	\$35,328
2007	\$36,409

WAGE GROWTH (cont.)

ANNUAL PAYROLL: Health Care and Related Industries *(Wichita MSA, in millions of dollars)*

Between 2000 and 2007, total payroll for the industry increased 6.9% annually, or 48% over the seven-year span.

The average direct payroll for Health Care and Related industries in 2007 was \$1.6 billion (includes salaries, wages, reported tips, commissions, bonuses, vacation allowances, sick-leave pay, employee contributions to qualified pension plans and the value of taxable fringe benefits).

Year	Total	Direct	Indirect/Induced
2000	\$1,654	\$1,068	\$586
2001	\$1,798	\$1,161	\$637
2002	\$1,944	\$1,246	\$698
2003	\$2,015	\$1,295	\$720
2004	\$2,172	\$1,398	\$774
2005	\$2,258	\$1,450	\$808
2006	\$2,281	\$1,472	\$809
2007	\$2,456	\$1,582	\$874

Over the eight years of annual payroll graphed above, the average ratio of direct payroll to indirect/induced payroll is 1:0.55. In other words, for every \$1 of payroll paid in Health Care and Related industries, an additional \$0.55 worth of payroll is created in other industries.

AVERAGE ANNUAL WAGE: In Comparison to Peer Communities

The average wage of Wichita MSA Health Care industry employees falls below the average of four peer communities. This is due in part to the different cost of health care in each community.

Community	2000	2007
Wichita	\$29,424	\$36,318
Kansas City	\$32,565	\$40,724
Oklahoma City	\$29,703	\$37,392
Omaha	\$29,597	\$44,804
Tulsa	\$29,352	\$37,632

HEALTHY IMPACT ON LOCAL ECONOMY

ANNUAL REVENUE: Health Care and Related Industries *(in millions of dollars)*

This study used 2002 Economic Census data to consider the impact of Health Care and Related industries on revenues in the Wichita MSA. Results estimated that the Health Care industry contributed 66.5% of total revenues and Related industries contributed 33.5% of revenues.

Year	Revenue
2001	\$3,960.1
2002	\$4,283.8
2003	\$4,433.0
2004	\$4,736.5
2005	\$4,950.3
2006	\$5,778.4
2007	\$6,073.8

GROSS METROPOLITAN PRODUCT: Health Care Industry *(in millions of dollars)*

This study shows the annual economic impact to GMP (value of all final goods and services produced) in the Wichita MSA contributed by the Health Care industry during the year.

Year	Total	Direct	Indirect/ Induced
2003	\$1,989	\$1,753	\$236
2004	\$2,125	\$1,873	\$252
2005	\$2,221	\$1,957	\$264
2006	\$2,593	\$2,285	\$308
2007	\$2,725	\$2,402	\$323

TAX IMPACT: Health Care and Related Industries *(in millions of dollars)*

This study calculated wages and employment to highlight the tax impact felt by the Wichita MSA.¹

Year	Total	Wichita	Sedgwick County	Kansas
2000	\$146.2	\$19.7	\$18.9	\$107.6
2001	\$155.5	\$20.6	\$19.7	\$115.2
2002	\$167.8	\$21.6	\$20.6	\$125.6
2003	\$172.6	\$22.2	\$21.1	\$129.3
2004	\$183.1	\$23.3	\$21.8	\$138.1
2005	\$188.7	\$23.6	\$22.1	\$143.0
2006	\$190.8	\$24.4	\$22.2	\$144.2
2007	\$203.7	\$25.0	\$23.4	\$155.3

¹The study did not account for tax revenues generated through construction, visitors or sales of the Health Care and Related Industries sector, or corporate taxes.

ECONOMIC BOOST FROM NONRESIDENTS

NON-MSA PATIENTS: Consumers from outside Wichita MSA

The number of residents seeking inpatient care in the Wichita MSA and the number of days spent in inpatient care as pulled from the fiscal years 2008 and 2009 inpatient data sets shows 15.8% of hospital patients resided outside of the Wichita MSA. Based on this, it is estimated that non-MSA patients provided more than \$962 million in revenues to the Health Care and Related Industries in the Wichita MSA.¹

Hospital Discharges (2008 & 2009 Average)

MSA Hospital Discharges	64,991	84.2%
Non-MSA Hospital Discharges	12,236	15.8%
Total	77,227	100.0%

Total Inpatient Care Revenues 2007 (in millions of dollars)

MSA Patient Revenues	\$5,111.5	84.2%
Non-MSA Patient Revenues	\$962.2	15.8%
Total	\$6,073.8	100.0%

¹This methodology could under or overestimate actual revenues from residents living beyond the Wichita MSA. Local and nonlocal patient revenues are not consistent. Nonlocal patients tend to have larger medical bills than local residents due to a higher percentage of specialty and trauma cases. This methodology assumes consistent per patient revenues and, therefore, may underestimate the impact of nonlocal hospital patients. However, when considering nonlocal patients who visit Wichita MSA doctors' offices, revenues from those patients may be overestimated because the percentage of nonlocal patients making visits to Wichita MSA doctors' offices is probably lower than the percentage of nonlocal hospital patients.

POPULATION REACH: Wichita MSA and Health Care Service Area

The Health Care industry pulls people to the Wichita MSA because of the relative size of the geography and the amenities the industry offers. The number of people in the service area was determined using a market pull calculation, comparing the Wichita MSA Health Care industry concentrations to other MSAs.

Year	Total	Wichita MSA	Service Area Outside Wichita
2003	701,600	579,771	121,829
2004	717,197	581,222	135,975
2005	717,644	583,759	133,885
2006	718,783	588,228	130,555
2007	717,577	595,342	122,235

BEST VALUE IN LOCAL HEALTH CARE

COST OF HEALTH CARE: In Comparison to Peer Communities

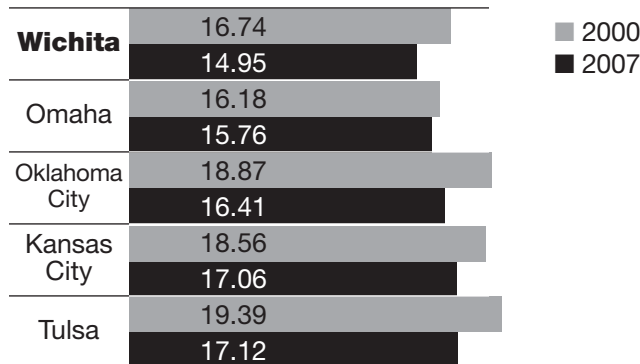
The Wichita MSA has lower health care costs than the four peer communities listed below. The table shows the 2009 Health Care Index number for each MSA and the average price for a routine doctor's examination for an established patient with a medical problem of low to moderate severity.

MSA	Health Care Index (ACCRA)	Aver. Cost of Routine Doctor's Exam
Wichita	93.3	\$75.80
Omaha	95.0	\$94.42
Kansas City	96.5	\$81.20
Oklahoma City	98.3	\$82.43
Tulsa	99.9	\$91.67

Source: C2ER, The Council for Community and Economic Research, ACCRA Cost of Living Index, 2009 Annual Average Data, published January 2010.

POPULATION PER HEALTH CARE PROFESSIONAL: In Comparison to Peer Communities

The Wichita MSA is often compared to Kansas City, Oklahoma City, Omaha and Tulsa. When comparing the local Health Care Industry to other areas, Wichita fares well. The chart below illustrates that the Wichita area had fewer people per Health Care professional than the four other peer locations.



Wichita physicians and hospitals donated \$100 million in free services since 1999 through Project Access.

AN EVEN GREATER IMPACT

Some of the largest economic contributors to the Wichita MSA Health Care Industry are not included in these figures because their census reporting data fall under education and government employment, not Health Care and Related Industries.

Sedgwick County Health Department

- Employs 145 full-time and 16 part-time staff members
- Annual budget totals more than \$11.2 million
- Receives nearly \$6 million in federal, state and foundation grants each year
- In 2009, \$10.5 million was paid to local vendors for Women with Infants and Children (WIC) food vouchers cashed in Sedgwick County

University of Kansas School of Medicine-Wichita

- Overall impact to Wichita MSA is \$49.7 million (2009)
- Enrolls approximately 110 third and fourth year medical students annually
- Graduated more than 1,600 medical students since 1975, half of whom practice in Kansas
- Approximately 50% of Sedgwick County physicians are graduates of KUSM-W and/or Wichita residency program
- Employs 143 faculty and 116 staff members
- Received \$18.5 million from state funds and \$1.4 million in research funds in fiscal year 2009

Wichita Center for Graduate Medical Education

- Employs 272 residents in 13 residency programs
- Pays residents over \$13 million in annual salaries and benefits
- Employs 61 full-time and 70 part-time faculty
- Pays faculty over \$12.3 million in annual salaries and benefits
- About 1,040 physicians volunteer to teach residents each year
- Receives more than \$16.9 million annually in Medicare reimbursements and \$3 million in Medicaid funding

WSU College of Health Related Professions

- Employs 145 faculty and staff
- Annual budget totals approximately \$9 million
- Receives approximately \$4 million in grant funds annually
- Enrolls more than 1,630 students in 24 different academic programs
- Features the only physician assistant and dental education programs in Kansas

Robert J. Dole Veterans Affairs Medical Center

- Employs 874 full-time and part-time workers
- Annual payroll totals \$72.9 million
- About 17,500 veterans receive medical care in Wichita

TECHNICAL NOTES

Direct Employment in Health Care and Related Industries by Category

The Health Care Industry, as defined by NAICS codes, includes Health Care service industries and social service industries.

Health Care service and social service industries include: physicians, mental health practitioners, registered nurses, employees of hospitals and medical clinics, nursing home care and other family-related services.

Related Industries are additional industries, not included in the Health Care sector, that directly involve the Health Care industry. Related industries include: pharmaceutical sales, medical equipment manufacturing, wholesale medical supplies and biological research. In order to assess the total impact of the Health Care industry on the Wichita MSA, these additional industries were also included in this analysis.

Indirect Employment

Induced and indirect employment are those jobs supported by direct jobs. The induced and indirect effects are those captured by a multiplier. Total employment is the sum of direct employment and induced and indirect employment. The same is true for wages.

In other words, a multiplier of 1.3 would imply that for every one dollar of new wages a company within a given industry pays, there is an additional 30 cents paid elsewhere in the community. This makes a total wage increase in the community of \$1.30.

Health Care and Related Industry NAICS Codes

Health Care and Social Services by NAICS

Physicians

6211 Offices of Physicians

Other Health Care Providers

6212 Offices of Dentists

62131 Offices of Chiropractors

62132 Offices of Optometrists

62133 Offices of Mental Health Practitioners

62134 Offices of Specialty Therapists

62139 Offices of All Other Health Practitioners

Social Services

62141 Family Planning Centers

62142 Outpatient Mental Health Centers

62149 Other Outpatient Care Centers

6232 Residential Mental Retardation Facilities

6233 Community Care Facilities for the Elderly

6239 Other Residential Care Facilities

6241 Individual and Family Services

6242 Community Food and Housing, and
Emergency and Other Relief Services

6243 Vocational Rehabilitation Services

6244 Child Day Care Services

Labs

6215 Medical & Diagnostic Labs

Other Direct Services

6219 Other Ambulatory Health Care Services

Hospitals

6221 General Medical & Surgical Hospitals

6222 Psychiatric & Substance Abuse Hospitals

6223 Specialty (Except Psychiatric & Substance Abuse) Hospitals

Nursing Homes/Home Health

6231 Nursing Care Facilities

6216 Home Health Care Services

Related Health Care Services by NAICS

Pharmaceuticals

32541 Pharmaceutical & Medicine Manufacturing

42421 Druggists' Goods Merchant Wholesalers

(4222)*

Equipment Manufacturing and Wholesaling

33911 Medical Equipment & Supplies Manufacturing

42345 Medical Equipment Merchant Wholesalers

(42145)*

Insurance

524114 Direct Health Insurance Carriers

Research

54171 Physical Engineering & Biology Research

Miscellaneous

44611 Pharmacies & Drug Stores

44613 Optical Good Stores

44619 Other Health & Personal Care Stores

81321 Grant Making & Giving Services

81392 Professional Organizations

**Represents a change in NAICS code during the study period.*

RIMS II

Effective planning for public- and private-sector projects and programs at the national, state, and local levels requires a systematic analysis of the economic impacts of these projects and programs on the affected regions. In turn, systematic analysis of economic impacts must account for the inter-industry relationships within regions because these relationships largely determine how regional economies are likely to respond to project and program changes. Thus, regional input-output (I-O) multipliers, which account for inter-industry relationships within regions, are useful tools for conducting economic impact analysis.

RIMS II is based on an accounting framework called an I-O table. For each industry, an I-O table shows the industrial distribution of inputs purchased and outputs sold. A typical I-O table in RIMS II is derived mainly from two data sources: BEA's national I-O table, which shows the input and output structure of nearly 500 U.S. industries, and the BEA's regional economic accounts, which are used to adjust the national I-O table to show a region's industrial structure and trading patterns.

Using RIMS II for impact analysis has several advantages. RIMS II multipliers can be estimated for any region composed of one or more counties and for any industry, or group of industries, in the national I-O table. The accessibility of the main data sources for RIMS II keeps the cost of estimating regional multipliers relatively low. Empirical tests show that estimates based on relatively expensive surveys and RIMS II-based estimates are similar in magnitude.

RIMS II is widely used in both the public and private sector. In the public sector, for example, the Department of Defense uses RIMS II to estimate the regional impacts of military base closings. State transportation departments use RIMS II to estimate the regional impacts of airport construction and expansion. In the private sector, analysts and consultants use RIMS II to estimate the regional impacts of a variety of projects, such as the development of shopping malls and sports stadiums.¹

¹RIMS II multipliers are based on the 1997 Benchmark Input-Output Table for the Nation and 2004 regional data. Source: Regional Input-Output Modeling System (RIMS II), Regional Economic Analysis Division, Bureau of Economic Analysis.

Wichita Metropolitan Statistical Area

The Wichita MSA is comprised of Butler, Harvey, Sedgwick and Sumner counties. In 2008, the population was 603,716.¹ Median household income was \$49,827.² The median age of metro area residents was 35.4 years, and an estimated 27.8 percent of the area's population 25 years and over had at least a bachelor's degree.³

Total Wichita Metropolitan Area private employment was estimated to be 260,678 in 2007. Of the 260,678 employees, 20.3 percent worked in trade, transportation and utilities industries, 28.6 percent worked in production-related industries and 51.1 percent worked in the service sectors.⁴ Health Care employment is a segment of the service sector. U.S. Census Bureau 2007 data was used in this analysis because it was the most current year of available data at this level of disaggregation.

The health care data in this report were obtained from the U.S. Census Bureau's Metro Business Patterns. The data were grouped into three categories: Health Care and social assistance industries, known by the North American Industrial Classification System, NAICS 62; Related industries that fall within a number of NAICS codes (see page 10) ; and the total of those two groups of data, which will be called Health Care and Related industries.

It is important to note that a great deal of Business Patterns data is suppressed due to confidentiality or because data do not meet publication standards, which means that CEDBR had to impute many of the employment and wage numbers in this report. In many cases Metro Business Patterns did provide a range within which the actual numbers would fall. CEDBR used those ranges as a guide for imputing numbers in this

U.S. Census Bureau's Metro Business Patterns

Alpha Code	Range of Alpha Code
A	0-19
B	20-99
C	100-249
E	250-499
F	500-999
G	1,000-2,499
H	2,500-4,999
I	5,000-9,999
J	10,000-24,999
K	25,000-49,999
L	50,000-99,999
M	100,000 or more

report. Below are the ranges the U.S. Census Bureau uses.

As can be seen from this table, ranges vary, but can be quite large for larger industries. This, as well as the fact that NAICS categories can change from year to year, means that this report is not necessarily comparable to the study done by CEDBR in 2008. It also means that the more detailed industry data is much more likely to be an estimated number than data provided at the aggregated level, such as two-digit or three-digit NAICS codes.

¹ U.S. Census Bureau, 2008 Population Estimates.

² U.S. Census Bureau, 2008 American Community Survey, One-Year Estimates, In 2008 Inflation-Adjusted Dollars.

³ U.S. Census Bureau, 2008 American Community Survey, One-Year Estimates.

⁴ U.S. Census Bureau, 2007 Metropolitan Statistical Area Business Patterns.