

# A Healthier Economy:

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

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WICHITA STATE UNIVERSITY

*Economic impact of the Health Care and Related Industries to the Wichita MSA in 2005:*

**\$2.3 billion in payroll** stimulus to local economy per year (see page 4).

**More than \$100 million** in additional payroll flow per year from universities and public health care institutions (see page 6).

**17.8% higher average wage** over the Wichita MSA average (see page 4).

**#1 in employment growth** for total growth in industry employment from 2000-2005 (see page 1).

**#2 employment industry** in the Wichita MSA with 41,085 employees (see page 1).

**69,000 total jobs** locally due to impact of health care industry (see page 2).



**1 in 7 employees** in the Wichita MSA worked directly in Health Care and Related Industries (see page 2).



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## DEFINITIONS

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**The Wichita Metropolitan Statistical Area** is comprised of Butler, Harvey, Sedgwick and Sumner counties. In 2007, the population was 591,356. Median household income was \$47,928. The median age of metro area residents was 35.5 years. An estimated 17.2 percent of the area's population 25 years and over had at least a bachelor's degree.<sup>1</sup>

Total Wichita Metropolitan Area employment was estimated to be 286,975 in 2005. Of the 286,975 employees, 13.7 percent worked in government-related industries, 17.3 percent worked in trade, transportation and utilities industries, 26.6 percent worked in production-related industries and 42.4 percent worked in the service sectors. Health Care employment falls within the service sector.<sup>2</sup>

**U.S. Census Bureau 2005 Data** was used in this analysis due to 2005 being the most current year of available data at this level of disaggregation.

**Health Care and Related Industries** comprise a multitude of activities from providing direct patient care to health insurance sales.

The Health Care Industry as defined by the North American Industrial Classification System (NAICS) includes

*Itemization of Health Care and Related Industries for Wichita MSA, 2005*

|                             |     |
|-----------------------------|-----|
| Social Services             | 30% |
| Hospitals                   | 24% |
| Physicians                  | 14% |
| Nursing Homes/Home Health   | 14% |
| Related Industries          | 9%  |
| Other Health Care Providers | 7%  |
| Other Direct Services       | 1%  |
| Labs                        | 1%  |

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 Metropolitan Statistical Area these additional industries were also included in the analysis.

<sup>1</sup>Data source: PCensus 2007

<sup>2</sup>Data source: U.S. Census Bureau Censtats 2005

## HEALTH CARE INDUSTRY HIGH RANKING

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The Health Care Industry ranked #2 in total metropolitan employment in 2005 with 41,085 employees.

|  |                                      |               |
|--|--------------------------------------|---------------|
| <b>Top 5<br/>Employment<br/>Industries</b> | <b>1</b> Manufacturing               | 60,708        |
|  | <b>2 Health Care</b>                 | <b>41,085</b> |
|  | <b>3</b> Retail Trade                | 30,550        |
|  | <b>4</b> Professional Business Serv. | 26,908        |
|  | <b>5</b> Leisure and Hospitality     | 26,067        |
| <i>Wichita MSA<br/>2005</i>                |                                      |               |

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The Health Care Industry ranked #1 in total growth in industry employment from 2000-2005.

|  |  |              |
|--|--|--------------|
| <b>Top 5<br/>Employment<br/>Growth by<br/>Industry</b> | <b>1 Health Care</b>                                   | <b>24.2%</b> |
|  | <b>2</b> Other Services                                | 13.4%        |
|  | <b>3</b> Transportation and Utilities                  | 5.0%         |
|  | <b>4</b> Leisure and Hospitality                       | -0.9%        |
|  | <b>5</b> Natural Resources, Mining<br>and Construction | -1.3%        |
| <i>Wichita MSA<br/>2000-2005</i>                       |  |              |

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The average wage in the Wichita Metropolitan Statistical Area in 2005 was \$30,304. The Health Care Industry's average wage is above the Wichita MSA's average wage at \$35,569, ranking #7 compared to other industries in the MSA.

|                                     |                                      |                 |
|-------------------------------------|--------------------------------------|-----------------|
| <b>Top 5<br/>Industry<br/>Wages</b> | <b>1</b> Manufacturing               | \$47,364        |
|                                     | <b>2</b> Financial Services          | \$43,338        |
|                                     | <b>3</b> Wholesale Trade             | \$41,787        |
|                                     | <b>4</b> Information                 | \$38,318        |
|                                     | <b>5</b> Professional Business Serv. | \$38,184        |
| <b>7 Health Care</b>                |                                      | <b>\$35,569</b> |
| <i>Wichita MSA<br/>2005</i>         |                                      |                 |

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From 2000-2005 the Health Care Industry increased its average wage by 16.9 percent, ranking #5 against other industries in the Wichita MSA.

|  |                                       |              |
|--|---------------------------------------|--------------|
| <b>Top 5<br/>Industries<br/>in Wage<br/>Growth</b> | <b>1</b> Professional Business Serv.  | 32.0%        |
|  | <b>2</b> Financial Services           | 21.8%        |
|  | <b>3</b> Transportation and Utilities | 20.6%        |
|  | <b>4</b> Wholesale Trade              | 18.1%        |
|  | <b>5 Health Care</b>                  | <b>16.9%</b> |
| <i>Wichita MSA<br/>2000-2005</i>                   |                                       |              |

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## 14% OF THE WICHITA MSA WORKFORCE

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**Health Care and Related Industries** employed one-seventh of Wichita MSA employees. In 2005, the Health Care and Related Industries employed 41,085 directly.

Subsequent indirect and induced employees totaled 27,855 in 2005. Taking into account multiplier impacts, total employment due to Health Care and Related Industries in 2005 was estimated to be 68,940 employees.

### EMPLOYMENT: Health Care and Related Industries

*Wichita MSA*

|      |        |        | <b>Total</b> |
|------|--------|--------|--------------|
| 2000 | 35,129 | 23,993 | 59,122       |
| 2001 | 36,528 | 24,788 | 61,316       |
| 2002 | 37,509 | 25,614 | 63,123       |
| 2003 | 39,348 | 26,966 | 66,314       |
| 2004 | 40,533 | 27,900 | 68,433       |
| 2005 | 41,085 | 27,855 | 68,940       |

n Direct n Indirect/Induced

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**Health Care Industry** employment is comprised of ambulatory Health Care services, hospitals, nursing and residential care facilities and social assistance.

In 2005, there were a total of 37,337 direct employees in the Health Care Industry. This represented a 12.9 percent increase compared to 2000.

Subsequent indirect and induced employees from the Health Care Industry totaled 24,652 in 2005. The total economic impact of the Health Care Industry in 2005 was 61,989. This represented an 11.3 percent increase compared to 2000.

### EMPLOYMENT: Health Care Industry

*Wichita MSA*

|      |        |        | <b>Total</b> |
|------|--------|--------|--------------|
| 2000 | 33,077 | 22,614 | 55,691       |
| 2001 | 34,403 | 23,339 | 57,742       |
| 2002 | 34,584 | 23,346 | 57,930       |
| 2003 | 36,024 | 23,969 | 59,993       |
| 2004 | 36,890 | 24,762 | 61,652       |
| 2005 | 37,337 | 24,652 | 61,989       |

n Direct n Indirect/Induced

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**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 grantmaking and giving services.

The direct economic impact on employment of Related Industries in 2005 was 3,748 jobs. This represented an 82.7 percent increase compared to 2000.

Subsequent indirect and induced employees from the Related Industry totaled 3,203 in 2005. The total economic impact of Related Industries on employment in 2005 was 6,951 jobs. This represented a 102.6 percent increase compared to 2000.

**EMPLOYMENT:  
Related Industries**

*Wichita MSA*

|      |       |       | <b>Total</b> |
|------|-------|-------|--------------|
| 2000 | 2,052 | 1,379 | 3,431        |
| 2001 | 2,125 | 1,449 | 3,574        |
| 2002 | 2,925 | 2,268 | 5,193        |
| 2003 | 3,324 | 2,997 | 6,321        |
| 2004 | 3,643 | 3,139 | 6,782        |
| 2005 | 3,748 | 3,203 | 6,951        |

n Direct   n Indirect/Induced



According to a study by the American Academy of Family Physicians, the annual economic impact in Kansas of one family physician to a community is \$871,642.

## WAGES ABOVE AVERAGE AND GROWING

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This study took direct, indirect and induced effects into account<sup>3</sup>. In 2005, direct economic impacts on payroll were an estimated \$1.5 billion, while indirect/induced payroll effects were an estimated \$813.5 million. The total economic impact of Health Care and Related Industries on Wichita MSA payroll was estimated to be \$2.3 billion.

Between 2000 and 2005, total payroll for the industry increased 38.4 percent for an average annual increase of 7.7 percent. Total payroll includes all forms of compensation, such as salaries, wages, reported tips, commissions, bonuses, vacation allowances, sick-leave pay, employee contributions to qualified pension plans, and the value of taxable fringe benefits. Payroll is reported before deductions for Social Security, income tax, insurance, union dues, etc.

### WAGES: Health Care and Related Industries

Wichita MSA (in millions of dollars)

|      |            |          | Total      |
|------|------------|----------|------------|
| 2000 | \$1,059.30 | \$577.13 | \$1,636.43 |
| 2001 | \$1,147.56 | \$624.50 | \$1,772.06 |
| 2002 | \$1,213.05 | \$666.14 | \$1,879.19 |
| 2003 | \$1,305.97 | \$723.92 | \$2,029.89 |
| 2004 | \$1,426.93 | \$787.92 | \$2,214.85 |
| 2005 | \$1,466.10 | \$813.49 | \$2,279.59 |

n Direct n Indirect/Induced

<sup>3</sup>Methodology in the Technical Notes section on page 8.

Health Care and Related Industries employees earn above average wages. In 2005, the average wage of Health Care and Related industries employees was \$35,685 or 17.8 percent higher than the Wichita MSA average for all jobs.

### AVERAGE ANNUAL WAGE: Health Care and Related Industries

Wichita MSA

|      |          |
|------|----------|
| 2000 | \$30,155 |
| 2001 | \$31,416 |
| 2002 | \$32,340 |
| 2003 | \$33,190 |
| 2004 | \$35,204 |
| 2005 | \$35,685 |

## STRONG PEER EVALUATION

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The Wichita MSA is often compared to Kansas City, Oklahoma City, Omaha and Tulsa. When comparing the Health Care Industry in Wichita to other areas, Wichita fares well.

In 2005 there were 15.72 patients per Health Care professional in the Wichita MSA. Our area has fewer patients per Health Care professional than any other peer location in 2005.

| <b>Patients per Health Care Professional</b> | <b>Wichita</b> | 17.30 |
|--|----------------|-------|
|  |                |       |
| n 2000                                       | Kansas City    | 18.93 |
|  |                | 17.31 |
|  | Oklahoma City  | 18.49 |
|  |                | 16.64 |
|  | Omaha          | 17.10 |
|  |                | 16.81 |
|  | Tulsa          | 20.29 |
|  |                | 18.30 |

The Wichita MSA Health Care Industry also enjoys a competitive wage rate in comparison to peer communities. In 2005 the average wage of a Health Care professional was \$35,569 in the Wichita MSA compared to an average of \$35,790 for the other four peer communities.

| <b>Average Wage of Health Care Professional</b> | <b>Wichita</b> | \$30,437 |
|---|----------------|----------|
|   |                |          |
| n 2000  | Kansas City    | \$32,237 |
|   |                | \$38,180 |
|   | Oklahoma City  | \$29,410 |
|   |                | \$33,879 |
|   | Omaha          | \$31,221 |
|   |                | \$36,649 |
|   | Tulsa          | \$29,823 |
|   |                | \$34,451 |

## AN EVEN GREATER IMPACT

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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.

The following health care institutions add another 1,688 employees and more than \$100 million in additional payroll to the local economy:

### **Wichita Center for Graduate Medical Education**

- Employs 272 residents in 14 residency programs
- Pays residents over \$13 million annually in salaries and benefits
- Employs 50 full-time and 69 part-time faculty
- Pays faculty salaries and benefits totaling more than \$11.7 million annually
- Involves about 995 physicians who volunteer to teach residents each year
- Receives annually over \$27.2 million in Medicare reimbursements and \$5 million in Medicaid funding

### **University of Kansas School of Medicine-Wichita**

- Employs 136 faculty and 119 staff members
- Receives over \$17.3 million in payroll annually from state funds and grants
- Receives approximately \$1.2 million in research funds each year
- Enrolls approximately 106 third and fourth year medical students annually
- Graduated 1,504 medical students since 1975

### **Sedgwick County Health Department**

- Employs 142 full-time and 12 part-time staff members
  - Maintains annual budgets totaling more than \$10.9 million
  - Receives nearly \$6 million in federal, state and foundation grants each year
  - Paid just under \$9 million to local vendors for Women with Infants and Children (WIC) food vouchers that were cashed in Sedgwick County in 2007
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**WSU College of Health Related Professions**

- Employs 136 faculty and staff
- Maintains annual budgets totaling approximately \$9 million
- Receives approximately \$4 million in grant funds annually
- Enrolls over 1,500 students in eight different academic programs and has graduated nearly 11,000 students since 1971
- Features the only physician assistant program in Kansas and the only dental hygiene program at a state university

**Robert J. Dole Veterans Affairs Medical Center**

- Employs 752 full-time and part-time workers
  - Pays \$54.5 million to employees annually
  - Cares for over 19,000 veterans that travel to Wichita for medical care each year
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# TECHNICAL NOTES

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## **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.<sup>4</sup>

Direct employment or wages are those jobs and wages hired and paid directly from the firm or industry being discussed.

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

<sup>4</sup>RIMS 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.

## **NAICS Codes for Health Care and Related Industry**

### **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

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

#### Equipment Manufacturing and Wholesaling

33911 Medical Equipment & Supplies Manufacturing

42345 Medical Equipment Merchant Wholesalers

#### 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