

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			
Physicians		Hospitals	
6211	Offices of Physicians	6221	General Medical & Surgical Hospitals
		6222	Psychiatric & Substance Abuse Hospitals
Other Health Care Providers		6223	Specialty (Except Psychiatric & Substance Abuse) Hospitals
6212	Offices of Dentists		
62131	Offices of Chiropractors	Nursing Homes/Home Health	
62132	Offices of Optometrists	6231	Nursing Care Facilities
62133	Offices of Mental Health Practitioners	6216	Home Health Care Services
62134	Offices of Specialty Therapists		
62139	Offices of All Other Health Practitioners	Pharmaceuticals	
		32541	Pharmaceutical & Medicine Manufacturing
Social Services		42421	Druggists' Goods Merchant Wholesalers
62141	Family Planning Centers		
62142	Outpatient Mental Health Centers	Equipment Manufacturing and Wholesaling	
62149	Other Outpatient Care Centers	33911	Medical Equipment & Supplies Manufacturing
6232	Residential Mental Retardation Facilities	42345	Medical Equipment Merchant Wholesalers
6233	Community Care Facilities for the Elderly		
6239	Other Residential Care Facilities	Insurance	
6241	Individual and Family Services	524114	Direct Health Insurance Carriers
6242	Community Food & Housing, and Emergency and Other Relief Services		
6243	Vocational Rehabilitation Services	Research	
6244	Child Day Care Services	54171	Physical Engineering & Biology Research
Labs		Miscellaneous	
6215	Medical & Diagnostic Labs	44611	Pharmacies & Drug Stores
		44613	Optical Good Stores
Other Direct Services		44619	Other Health & Personal Care Stores

6219	Other Ambulatory Health Care Services	81321	Grantmaking & Giving Services
		81392	Professional Organizations

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.

RIMS II multipliers are based on the 2002 Benchmark Input-Output Table for the nation and 2010 regional data. Source: Regional Input-Output Modeling System (RIMS II), Regional Economic Analysis Division, Bureau of Economic Analysis.

Wichita Metropolitan Statistical Area

In 2012, the Wichita MSA was comprised of Butler, Harvey, Sedgwick, and Sumner counties. In 2012, the population was 621,281.¹ Median household income was \$50,511.² The median age

¹ U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates.

² U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates.

of metro area residents was 35.1 years, and an estimated 27.7 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 247,783 in 2012. Of the 247,783 employees, 20.8 percent worked in trade, transportation and utilities industries, 25 percent worked in production-related industries and 54.2 percent worked in the service sectors.⁴ Health Care employment is a segment of the service sector. U.S. Census Bureau 2012 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 9); and the total of those two groups of data, which is called Health Care and Related Industries.

³ U.S. Census Bureau, 2008-2012 American Community Survey 5-Year Estimates.

⁴ U.S. Census Bureau, 2012 Metropolitan Statistical Area Business Patterns.