

The Economic Contributions of Oregon's Health Care Workforce



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Background

In 2010, the Oregon Health Care Workforce Committee identified a need for data on the economic contributions of Oregon's health care workforce in order to inform recommendations and investments in workforce and education.

Funded by a grant from Mercy Medical Center (Roseburg, Oregon), the Oregon Healthcare Workforce Institute partnered with the Oregon Employment Department to identify the economic contributions of Oregon's health care workforce to state and county employment, Gross Domestic Product (GDP) and taxes.

Study Highlights

- Oregon's health care industry contributed a total of **325,528 jobs, or 14% of the state's job market**, in 2008 through direct, indirect and induced employment.
- In 2008, the total value-added contribution to the state's GDP by the health care workforce was nearly **\$23.3 billion, or roughly 14% of the state's GDP**.
- Oregon's health care workforce contributed an estimated **\$1.98 billion to state and local taxes** in 2008.

Health Care Employment

Statewide in 2008, the total employment contribution of Oregon's health care organizations was 325,528 full- and part-time jobs, representing 14% of all jobs in Oregon. This includes 186,089 jobs through direct employment in health care organizations and another 139,439 indirect and induced jobs.

Direct employment represents the annual average employment in Oregon's health care organizations. The 186,089 jobs in Oregon's health care industry include all full- and part-time employment at physician, dental and other health practitioner offices, hospice and home health care firms, outpatient care centers, medical and diagnostic laboratories, other ambulatory health care services, hospitals and skilled nursing and residential care facilities.

Oregon's health care industry also contributes economically through indirect and induced jobs. This includes employment at businesses that support health care organizations, such as medical equipment suppliers, accounting firms and janitorial services. Additionally, individuals who work in health care buy goods and services from local merchants and thus support another layer of the workforce.

Thus, the total employment contribution of Oregon's health care organizations captures the direct employment totals plus the employment at businesses that support

health care organizations and at businesses that provide goods and services to households with income earned by working at those health care organizations.

Health care-contributed jobs also play major roles in the labor markets of most Oregon counties. The share of health care-contributed jobs to the labor market is defined as the total employment contribution divided by the total number of jobs.

The percentage of health care-contributed jobs to the labor markets in Oregon's counties ranged from 0.36% in Sherman County to a high of 15% in Wasco County. In Coos and Jackson counties, health care-contributed jobs constituted 14% of the total county labor market. Health care-contributed jobs constituted 13% of the labor market in Lane, Josephine and Deschutes counties and 12% in Multnomah and Douglas counties.

Conversely, vacant health care positions resulting from health care workforce shortages may not only impact access to care, but may also affect the state and county economies and have an indirect affect on local businesses. The Oregon Employment Department's job vacancy study conducted in Fall 2010 found that the health care industry had the highest number of job vacancies of any industry (Beleiciks, 2011). The study identified 5,666 job vacancies in the health care industry, representing 19% of all vacancies statewide.

Oregon's Health Care Workforce Contribution to State's Gross Domestic Product

Oregon's 2008 Gross Domestic Product (GDP) was estimated by the federal Bureau of Economic Analysis at \$169 billion. During that year, it is estimated that Oregon's health care workforce total value-added contribution to the state's GDP was nearly \$23.3 billion, or 14%. GDP measures the market value of final goods and services produced in a defined region within a given time period.

Total value-added contribution is an estimate of the total employee compensation, proprietary income, other property income, and indirect business taxes earned or paid by health care organizations, plus businesses that support those organizations and businesses that provide goods and services to households with earnings from those businesses. Total value added could be considered the health care workforce's contribution to GDP. Total value-added contribution is not a measure of the cost of health care.

In Multnomah County, the contribution to GDP attributed to the health care workforce was nearly \$5.5 billion in 2008. The health care workforce in Washington County contributed \$2.2 billion, followed by Lane County with over \$1.6 billion. The contributions to GDP by the health care workforce in Marion, Clackamas and Jackson counties were each well over \$1 billion.

To some degree all of Oregon's counties benefited from the health care workforce's total value-added contribution to county GDP. Even Sherman County, with the smallest number of health care jobs in the health care industry, saw contributions to the county's GDP resulting from health care employment.

Estimated State and Local Tax Contributions by Oregon's Health Care Workforce

Statewide in 2008, the estimated total direct contribution to state and local taxes by Oregon's health care workforce was \$1.98 billion. This estimate includes the taxes paid on employee compensation, indirect business taxes, taxes paid by households, and taxes paid by corporations.

Across Oregon's 36 counties in 2008, Multnomah County had the highest combined total estimated state and local tax contribution through health care employment at \$343.8 million. Washington County had the second highest at \$181 million and Lane County followed at \$121 million. Marion County's health care workforce contributed an estimated \$107 million to state and local taxes.

In Southwest Oregon, the estimated combined contribution to state and local taxes in 2008 by the health care workforce in Jackson County was \$79.3 million and \$22.8 million in Douglas County.

In Eastern Oregon, the health care workforce in Deschutes County contributed an estimated \$71 million to state and local taxes in 2008, while in Umatilla County the estimated contribution was \$15.9 million.

Along the coast, the estimated contribution to state and local taxes in 2008 by the health care workforce in Coos County was \$17.8 million, \$12.45 million in Clatsop County, and \$11 million in Lincoln County.

The Economic Contribution of Health Care Employment to Oregon Counties (2008)

Area	U.S. Census 2008 Population Estimate	Direct Employment (jobs)	Total Employment Contribution (jobs)	Total Value-Added Contribution to Area GDP (2008 \$millions)	Total Number of Jobs in Area Labor Market	Percentage of Total Health Care- Contributed Jobs in Area Labor Market	Estimated Tax Contribution Related to Health Care Employment (2008 \$millions)
Baker	15,983	647	806	\$67.4	7,295	11%	\$4.20
Benton	81,859	4,475	5,221	\$351.9	49,686	11%	\$24.63
Clackamas	380,576	15,396	15,682	\$1,210.2	213,549	7%	\$80.92
Clatsop	37,404	1,707	2,481	\$152.2	23,737	10%	\$12.45
Columbia	49,408	811	985	\$46.8	15,013	7%	\$4.57
Coos	63,453	3,163	4,418	\$250.4	30,548	14%	\$17.80
Crook	23,023	559	566	\$31.4	9,380	6%	\$1.83
Curry	21,523	725	927	\$44.1	9,890	9%	\$3.27
Deschutes	158,456	7,502	12,440	\$881.8	98,276	13%	\$71.34
Douglas	104,059	4,880	5,932	\$377.9	48,398	12%	\$22.84
Gilliam	1,747	55	59	\$2.1	1,646	4%	\$0.10
Grant	6,916	301	356	\$15.7	3,393	10%	\$1.19
Harney	6,747	295	302	\$14.6	4,196	7%	\$0.89
Hood River	21,536	1,172	1,606	\$97.1	15,764	10%	\$6.99
Jackson	201,138	11,511	17,302	\$1,079.6	122,501	14%	\$79.34
Jefferson	20,512	428	491	\$26.3	8,134	6%	\$1.69
Josephine	81,618	3,759	4,431	\$252.1	34,637	13%	\$16.59
Klamath	66,425	2,685	3,708	\$223.0	32,284	11%	\$15.42
Lake	7,239	232	272	\$13.6	3,744	7%	\$0.93
Lane	346,560	17,526	24,982	\$1,646.4	194,279	13%	\$121.06
Lincoln	45,946	1,536	2,336	\$143.1	26,680	9%	\$11.10
Linn	115,348	3,598	3,722	\$209.9	54,189	7%	\$12.32
Malheur	30,907	1,432	1,451	\$79.4	18,300	8%	\$4.63
Marion	314,606	14,695	21,010	\$1,463.3	188,945	11%	\$107.02
Morrow	11,140	186	186	\$9.3	5,865	3%	\$0.62
Multnomah	714,567	54,082	73,531	\$5,489.6	593,391	12%	\$343.79
Polk	77,074	1,788	1,884	\$79.5	24,446	8%	\$6.19
Sherman	1,638	5	5	\$0.1	1,396	0.36%	\$0.00
Tillamook	24,927	700	962	\$57.7	12,374	8%	\$4.43
Umatilla	73,526	3,011	3,968	\$214.5	39,587	10%	\$15.91
Union	24,961	1,153	1,496	\$77.3	14,086	11%	\$5.47
Wallowa	6,760	337	403	\$16.8	4,390	9%	\$1.13
Wasco	23,775	1,622	1,830	\$112.4	12,477	15%	\$7.45
Washington	529,216	20,037	28,067	\$2,177.8	298,252	9%	\$181.13
Wheeler	1,319	38	43	\$2.3	636	7%	\$0.14
Yamhill	98,168	3,468	3,957	\$237.1	41,747	9%	\$18.52
Oregon Statewide*	3,790,060	186,089	325,528	\$23,251.9	2,262,267	14%	\$1,982.81

* By capturing county-level economic leakages in the state model and including employment data that cannot be attributed to a specific county, the findings reported for statewide data are larger than the cumulative total of the county findings.

Study Methodology

Health care workforce and related employment figures for 2008 were abstracted directly from administrative records provided by employers to the Oregon Employment Department (OED) as part of the state's unemployment insurance program. Employment figures reflect the annual average of monthly employment in 2008, as reported by employers.

Direct employment includes all employees in offices of physicians, dentists and other health care practitioners, pharmacies and drugstores, home health care services, outpatient care centers, medical and diagnostic laboratories, other ambulatory health care services, hospitals, and nursing care facilities, all as categorized under the North American Industrial Classification System (NAICS). The small number of corporate officers in health care organizations who opt out of unemployment insurance coverage were added as health care employment.

The number of pharmacy workers at general merchandise and grocery stores is not available through OED records. To identify pharmacy-

related employment by county in those stores, a list of licensed pharmacies in Oregon was obtained from the Oregon Board of Pharmacy. Stores considered general merchandise or grocery stores under NAICS guidelines that have a licensed pharmacy (N=305) were contacted directly for the number of pharmacy workers they employed. Seventy-three percent of the stores responded and identified 1,589 additional pharmacy workers who were added to the direct health care employment numbers.

The statewide and county-specific health care contributions to employment and value-added contributions were estimated with IMPLAN Version 3 models using 2008 data. IMPLAN is an input-output modeling software developed by the Minnesota IMPLAN Group, Inc. (2009). State and local tax estimates are derived directly from these models and are calculated based on a ratio-to-total value added. The tax ratio varies by county but not by industry (Olson, 1999).

References

- Beleiciks, N. (2011). *Job Openings Show Rebound in Hiring*. Oregon Employment Department. Available at <http://www.qualityinfo.org>.
- Minnesota IMPLAN Group, Inc. (2009). IMPLAN System, 1725 Tower Drive West, Suite 140, Stillwater, MN 55082.
- Olson, D.C. (1999). *Using Social Accounts to Estimate Tax Impacts*, Minnesota IMPLAN Group, Inc., 1725 Tower Drive West, Suite 140, Stillwater, MN 55082. Available at <http://www.implan.com>.
- U.S. Department of Commerce, Bureau of Economic Analysis (2007). *Measuring the Economy: A Primer on GDP and the National Income and Product Accounts*. Available at http://www.bea.gov/national/pdf/nipa_primer.pdf.
- U.S. Department of Commerce, Bureau of Economic Analysis (2011). Data from Bureau of Economic Analysis, using NAICS Oregon Industry detail for 2008. This data includes private industry and government. Available at <http://www.bea.gov/regional/gsp/action.cfm>.

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