

News

U.S. Department of Labor
Bureau of Labor Statistics
Two Pershing Square Building
2300 Main Street, Suite 1190
Kansas City, Missouri 64108



FOR FURTHER INFORMATION:

(816) 285-7000

Media Contact: Jacqueline Michael-Midkiff 816-285-7001

www Access: <http://www.bls.gov/ro7>

FOR RELEASE:

February 13, 2008

OCCUPATIONAL EMPLOYMENT AND WAGES FOR NURSES IN MISSOURI, MAY 2006

In Missouri, registered nurses earned an average (mean) hourly wage of \$25.55 and licensed practical and licensed vocational nurses averaged \$15.69 during May 2006, according to survey results from the Occupational Employment Statistics (OES) program released by the U.S. Department of Labor's Bureau of Labor Statistics (BLS). Nationwide, the average wage for registered nurses was \$28.71 and for licensed practical and licensed vocational nurses, \$18.05. Regional Commissioner Stanley W. Suchman noted that the average wages for Missouri's registered nurses and licensed practical and licensed vocational nurses were significantly below the wages of their national counterparts.

Registered nurses were among the most prevalent occupations in Missouri, with 55,470 workers representing 2.1 percent of total employment in May 2006. (See table A.) The number of licensed practical and licensed vocational nurses was smaller, 17,860, but still made up a 0.7-percent share of employment in the State. Missouri's employment shares for both registered nurses and licensed practical and licensed vocational nurses were significantly above average when compared to their distributions nationally at 1.8 and 0.5 percent, respectively.

These statistics are from the Occupational Employment Statistics (OES) survey, a federal-state cooperative program between BLS and State Workforce Agencies, in this case the Missouri Economic Research and Information Center Department of Economic Development, Arkansas Department of Workforce Services, Illinois Department of Employment Security, and Kansas Department of Labor. The OES survey provides estimates of employment and hourly and annual wages for wage and salary workers in 22 major occupational groups and up to 801 non-military detailed occupations for the nation, the States, and 484 metropolitan and nonmetropolitan areas.

Employment and wages for registered nurses in metropolitan areas in Missouri

Compared to their counterparts nationwide, registered nurses in Missouri earned a lower-than-average wage in the five metropolitan areas for which data were published during May 2006. Registered nurses in Kansas City averaged \$27.16 per hour. Three other areas—St. Louis, Jefferson City, and Columbia—averaged between \$25.00 and \$26.00 an hour, and the remaining area, Fayetteville-Springdale-Rogers, had wages averaging \$23.24. (For comprehensive definitions of metropolitan areas in Missouri, please see Technical Note.)

Among the metropolitan areas in Missouri the employment distribution of registered nurses ranged from a 3.1-percent share of local employment in Columbia to a 1.1-percent share in Fayetteville-Springdale-Rogers. Fayetteville-Springdale-Rogers was the only metropolitan area of the five with an employment concentration significantly lower than the 1.8-percent national average. Employment shares for registered nurses in the other areas were measurably above or not significantly different from that for the United States.

Table A. Employment and mean hourly wages for registered nurses in the United States and metropolitan areas in Missouri, May 2006

Area	Registered nurses			Licensed practical and licensed vocational nurses		
	Employment		Mean hourly wage	Employment		Mean hourly wage
	Level	Share of total (in percent)		Level	Share of total (in percent)	
United States	2,417,150	1.8	\$28.71	720,380	0.5	\$18.05
Missouri	55,470	2.1*	25.55*	17,860	0.7*	15.69*
Columbia, MO	2,580	3.1	25.04*	730	0.9*	14.74*
Fayetteville-Springdale-Rogers, AR-MO	2,250	1.1*	23.24*	1,030	0.5	15.97*
Jefferson City, MO	1,240	1.7	25.17*	570	0.8*	14.79*
Joplin, MO	--	--	--	460	0.6	13.17*
Kansas City, MO-KS	17,780	1.8	27.16*	5,090	0.5	17.06*
St. Louis, MO-IL	27,720	2.1*	25.98*	6,970	0.5	17.66
Springfield, MO	--	--	--	1,300	0.7*	14.07*

* = the employment share or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.

-- Data not available.

Wages for registered nurses across the nation

The average hourly wage for registered nurses in San Jose-Sunnyvale-Santa Clara, Calif., at \$44.42, was the highest among the metropolitan statistical areas in the nation during May 2006. The next four highest-paying areas in the United States were also in California: San Francisco-Oakland-Fremont (\$41.61), Salinas (\$40.83), Santa Rosa-Petaluma (\$38.84), and Sacramento-Arden-Arcade-Roseville (\$37.65). All five of these areas recorded wage levels for registered nurses significantly higher than that for the nation. Blacksburg-Christiansburg-Radford, Va., reported the lowest average hourly wage at \$19.70, followed by the metropolitan areas of Morristown, Tenn. (\$20.16); Lawrence, Kans. (\$20.55); Jonesboro, Ark. (\$20.68); and State College, Pa. (\$20.76). These five areas all had wage levels significantly below the national average. Overall, 50 metropolitan areas had measurably higher-than-average wages for this occupation and 204 had lower-than-average wages.

Nationwide, 14 states and the District of Columbia had average hourly wages for registered nurses that were significantly higher than in the nation as a whole. All five states in the Pacific geographic division recorded wages that were significantly above that for the nation. Along the east coast, seven states and the District of Columbia also had wages measurably higher than average, forming a contiguous band stretching from Massachusetts to Maryland. The New England and South Atlantic divisions each contained three of these states, and the Middle Atlantic division contained two. The five highest wage levels in the nation for registered nurses were recorded in California (\$36.12), Massachusetts (\$34.09), Hawaii (\$33.02), Maryland (\$32.87), and New Jersey (\$32.02). At the other end of the spectrum, wages for registered nurses were below the national average in 35 states. The eight states composing the East South Central and West South Central divisions had wages that were measurably below average for registered nurses. The five states at the low end of the wage scale were Iowa (\$22.61), Oklahoma (\$23.31), Wyoming (\$23.54), Kansas (\$23.64), and West Virginia (\$23.78). (For comprehensive definitions of the geographic divisions in the United States, please see Technical Note.)

Employment and wages for licensed practical and licensed vocational nurses in metropolitan areas in Missouri

As with registered nurses, licensed practical and licensed vocational nurses in metropolitan areas in Missouri received wages that were, with one exception, significantly lower than the national average. Among the lowest-paying metropolitan areas in the State were Springfield at \$14.07 and Joplin at \$13.17. Workers in St. Louis were the exception, averaging \$17.66 per hour, which was not significantly different from the \$18.05 earned nationally.

Among Missouri's metropolitan areas, the concentrations of licensed practical and licensed vocational nurses in Columbia (0.9 percent), Jefferson City (0.8 percent), and Springfield (0.7 percent), were significantly higher than the national share of 0.5 percent. The four remaining metropolitan areas in Missouri recorded employment concentrations that were not measurably different from the nationwide average for this occupation.

Wages for licensed practical and licensed vocational nurses across the nation

The average hourly wage for licensed practical and licensed vocational nurses in San Jose-Sunnyvale-Santa Clara, Calif., at \$26.25, was the highest among the metropolitan statistical areas in the nation as of May 2006. San Francisco-Oakland-Fremont, Calif., was next with an average wage of \$26.16, followed by Bridgeport-Stamford-Norwalk, Conn., (\$24.97); Hartford-West Hartford-East Hartford, Conn. (\$24.94); and Santa Rosa-Petaluma, Calif. (\$24.86). The average wages for these five metropolitan areas were significantly higher than that for the nation as a whole. Albany, Ga., reported the lowest average hourly wage at \$12.45, followed by Decatur, Ill. (\$13.01), Joplin, Mo. (\$13.17), Morristown, Tenn. (\$13.23), and Glens Falls, N.Y. (\$13.25). All five of these areas recorded average wages significantly lower than the U.S. average. Nationwide, 88 metropolitan areas had measurably higher-than-average wages for this occupation and 194 had lower-than-average wages.

Nationally, 18 states and the District of Columbia had average hourly wages for licensed practical and licensed vocational nurses that were significantly higher than the U.S. average. All five states in the Pacific geographic division recorded wage levels that were significantly above that for the nation. Along the east coast, nine states and the District of Columbia also registered wages measurably higher than average, forming a contiguous band stretching from New Hampshire to Maryland. The New England division contained four of these states, and the South Atlantic and Middle Atlantic divisions each contained three. The five highest wages were recorded in Connecticut (\$24.21), Massachusetts (\$22.91), New Jersey (\$22.87), the District of Columbia (\$22.56), and Maryland (\$22.22). In contrast, wages for licensed practical and licensed vocational nurses were below the national average in 28 states. All seven states in the West North Central division and all four states in both the East South Central and West South Central divisions had wages that were measurably below average for licensed practical and licensed vocational nurses. The five lowest-paying states for this occupation were: West Virginia (\$14.43), Mississippi (\$14.45), Alabama (\$14.49), South Dakota (\$14.54), and Oklahoma (\$14.83).

The OES wage and employment data for registered nurses and licensed practical and licensed vocational nurses in states and metropolitan areas were compared to their respective national averages based on statistical significance testing. Only those occupations with wages or employment shares above or below the national wage or share after testing for significance at the 90-percent confidence level meet the criteria.

NOTE: A value that is statistically different from another does not necessarily mean that the difference has economic or practical significance. Statistical significance is concerned with the ability to make confident statements about a universe based on a sample. It is entirely possible that a large difference between two values is not significantly different statistically, while a small difference is, since both the size and heterogeneity of the sample affect the relative error of the data being tested.

Technical Note

The Occupational Employment Statistics (OES) survey is a semiannual mail survey measuring occupational employment and wage rates for wage and salary workers in nonfarm establishments in the United States. Guam, Puerto Rico, and the Virgin Islands also are surveyed, but their data are not included in this release. OES estimates are constructed from a sample of about 1.2 million establishments. Forms are mailed to approximately 200,000 establishments in May and November of each year for a 3-year period. The nationwide response rate for the May 2006 survey was 78.1 percent based on establishments and 73.4 percent based on employment. The survey included establishments sampled in the May 2006, November 2005, May 2005, November 2004, May 2004, and November 2003 semiannual panels.

The occupational coding system

The OES survey uses the Office of Management and Budget's (OMB) occupational classification system, the Standard Occupational Classification (SOC) system. The SOC system is the first OMB-required occupational classification system for federal agencies. The OES survey categorizes workers in 1 of 801 detailed occupations. Together, these detailed occupations comprise 23 major occupational groups, 22 of which are covered in this release. The one exception is military specific occupations which are not included in the OES survey.

For more information about the SOC system, please see the Bureau of Labor Statistics (BLS) Web site at <http://www.bls.gov/soc/>.

The industry coding system

The OES survey uses the North American Industry Classification System (NAICS). For more information about NAICS, see the BLS Web site at <http://www.bls.gov/bls/naics.htm>.

Survey sample

BLS funds the survey and provides the procedures and technical support, while the State Workforce Agencies (SWAs) collect most of the data. BLS produces cross-industry and industry-specific estimates for the nation, states, and metropolitan statistical areas (MSAs), as well as nonmetropolitan areas. Industry-specific estimates are produced at the NAICS sector, 3-digit, 4-digit, and selected 5-digit industry levels. BLS releases all cross-industry and national estimates; the SWAs release industry-specific estimates at the state and MSA levels.

State Unemployment Insurance (UI) files provide the universe from which the OES survey draws its sample. Employment benchmarks are obtained from reports submitted by employers to the UI program. The OES survey sample is stratified by metropolitan and nonmetropolitan areas and industry. Samples selected in panels prior to May 2005 were stratified using MSA definitions based on the 1990 Metropolitan Statistical Area standards. Beginning with the May 2005 panel, the sample was stratified using new MSA definitions based on the 2000 Metropolitan Statistical Area standards.

Concepts

Occupational employment is the estimate of total wage and salary employment in an occupation across the industries surveyed. The OES survey defines employment as the number of workers who can be classified as full- or part-time employees, including workers on paid vacations or other types of paid leave; workers on unpaid short-term absences; salaried officers, executives, and staff members of incorporated firms; employees temporarily assigned to other units; and employees for whom the reporting unit is their permanent duty station regardless of whether that unit prepares their paycheck.

Wages for the OES survey are straight-time, gross pay, exclusive of premium pay. Base rate, cost-of-living allowances, guaranteed pay, hazardous-duty pay, incentive pay including commissions and production bonuses, tips, and on-call pay are included. Excluded are: back pay, jury duty pay, overtime pay, severance pay, shift differentials, non-production bonuses, employer cost for supplementary benefits, and tuition reimbursements.

Mean hourly wage. The mean hourly wage rate for an occupation is the total wages that all workers in the occupation earn in an hour divided by the total employment of the occupation. To calculate the mean hourly wage of each occupation, total weighted hourly wages are summed across all intervals and divided by the occupation's weighted survey employment. The mean wage for each interval is based on occupational wage data collected by the BLS Office of Compensation and Working Conditions for the National Compensation Survey (NCS).

Annual wage. Many employees are paid at an hourly rate by their employers and may work more than or less than 40 hours per week. Annual wage estimates for most occupations in this release are calculated by multiplying the mean hourly wage by a "year-round, full-time" figure of 2,080 hours (52 weeks by 40 hours). Thus, annual wage estimates may not represent the actual annual pay received by the employee if they work more or less than 2,080 hours per year. Some workers typically work less than fulltime, year round. For these occupations, the OES survey collects and reports either the annual salary or the hourly wage rate, depending on how the occupation is typically paid, but not both. For example, teachers, flight attendants, and pilots may be paid an annual salary, but do not work the usual 2,080 hours per year. In this case, an annual salary is reported. Other workers, such as entertainment workers, are paid hourly rates, but generally do not work full time, year round. For these workers, only an hourly wage is reported.

Hourly versus annual wage reporting. For each occupation, respondents are asked to report the number of employees paid within specific wage intervals. The intervals are defined both as hourly rates and the corresponding annual rates, where the annual rate for an occupation is calculated by multiplying the hourly wage rate by a typical work year of 2,080 hours. The responding establishment can reference either the hourly or the annual rate for full-time workers, but they are instructed to report the hourly rate for part-time workers.

Estimation methodology

Each OES panel includes approximately 200,000 establishments. The OES survey is designed to produce estimates using six panels (3 years) of data. The full six-panel sample of 1.2 million establishments allows the production of estimates at detailed levels of geography, industry, and occupation.

Wage updating. Significant reductions in sampling errors are obtained by combining six panels of data, particularly for small geographic areas and occupations. Wages for the current panel need no adjustment. However, wages in the five previous panels need to be updated to the current panel's reference period.

The OES program uses the BLS Employment Cost Index (ECI) to adjust survey data from prior panels before combining them with the current panel's data. The wage updating procedure adjusts each detailed occupation's wage rate, as measured in the earlier panel, according to the average movement of its broader occupational division. The procedure assumes that there are no major differences by geography, industry, or detailed occupation within the occupational division.

May 2006 OES survey estimates. The May 2006 OES survey estimates are based on all data collected from establishments in the May 2006, November 2005, May 2005, November 2004, May 2004, November 2003 semiannual samples.

Reliability of the estimates. Estimates calculated from a sample survey are subject to two types of error: sampling and nonsampling. Sampling error occurs when estimates are calculated from a subset (that is, a sample) of the population instead of the full population. When a sample of the population is surveyed, there is a chance that the sample estimate of the characteristic of interest may differ from the population value of that characteristic. Differences between the sample estimate and the population value will vary depending on the sample selected. This variability can be estimated by calculating the standard error (SE) of the sample estimate. If we were to repeat the sampling and estimation process countless times using the same survey design, approximately 90 percent of the intervals created by adding and subtracting 1.645 SEs from the sample estimate would include the population value. These intervals are called 90-percent confidence intervals. The OES survey, however, usually uses the relative standard error (RSE) of a sample estimate instead of its SE to measure sampling error. RSE is defined as the SE of a sample estimate divided by the sample estimate itself.

This statistic provides the user with a measure of the relative precision of the sample estimate. RSEs are calculated for both occupational employment and mean wage rate estimates. Occupational employment RSEs are calculated using a subsample, random group replication technique called the jackknife. Mean wage rate RSEs are calculated using a variance components model that accounts for both the observed and unobserved components of the wage data. The variances of the unobserved components are estimated using wage data from the BLS National Compensation Survey. In general, estimates based on many establishments have lower RSEs than estimates based on few establishments. If the distributional assumptions of the models are violated, the resulting confidence intervals may not reflect the prescribed level of confidence.

Nonsampling error occurs for a variety of reasons, none of which are directly connected to sampling. Examples of nonsampling error include: nonresponse, data incorrectly reported by the respondent, mistakes made in entering collected data into the database, and mistakes made in editing and processing the collected data.

Additional information

The May 2006 OES national data for all occupations are available on the BLS Web site at <http://www.bls.gov/oes/>. Users may also access each occupation's definition and percentile wages. The May 2006 cross-industry data for states, metropolitan areas, and nonmetropolitan areas are also available on the BLS Web site, as are the industry staffing patterns at the sector, 3-, 4-, and selected 5-digit NAICS levels. These data include industry-specific occupational employment and wage data. A more detailed technical note for OES is available at <http://www.bls.gov/news.release/ocwage.tn.htm>.

OES information is available through our regional web page at <http://www.bls.gov/ro7/home.htm>. If you have additional questions, you can contact the Kansas City Information Office at 816-285-7000. Information in this release will be made available to sensory impaired individuals upon request. Voice phone: 202-691-5200; TDD message referral phone number: 1-800-877-8339.

Metropolitan area definitions

The substate area data published in this release reflect the standards and definitions established by the U.S. Office of Management and Budget, dated December 2005.

Columbia, Mo. Metropolitan Statistical Area (MSA) includes Boone and Howard Counties in Missouri.

Fayetteville-Springdale-Rogers, Ar.-Mo. MSA includes Benton, Madison, and Washington Counties in Arkansas; and McDonald County in Missouri.

Jefferson City, Mo. MSA includes Callaway, Cole, Moniteau, and Osage Counties in Missouri.

Joplin, Mo. MSA includes Jasper and Newton Counties in Missouri.

Kansas City, Mo.-Ks. MSA includes Franklin, Johnson, Leavenworth, Linn, Miami, and Wyandotte Counties in Kansas; and Bates, Caldwell, Cass, Clay, Clinton, Jackson, Lafayette, Platte, and Ray Counties in Missouri.

St. Louis, Mo.-Il. MSA includes Bond, Calhoun, Clinton, Jersey, Macoupin, Madison, Monroe, and St. Clair Counties in Illinois; and Crawford (part—Sullivan city), Franklin, Jefferson, Lincoln, St. Charles, St. Louis, Warren, and Washington Counties and St. Louis city in Missouri.

Springfield, Mo. MSA includes Christian, Dallas, Greene, Polk, and Webster Counties in Missouri.

Geographic region and division definitions

Northeast region

New England division includes Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

Middle Atlantic division includes New Jersey, New York, and Pennsylvania.

Midwest region

East North Central division includes Illinois, Indiana, Michigan, Ohio, and Wisconsin.

West North Central division includes Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota.

South region

South Atlantic division includes Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia.

East South Central division includes Alabama, Kentucky, Mississippi, and Tennessee.

West South Central division includes Arkansas, Louisiana, Oklahoma, and Texas.

West region

Mountain division includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

Pacific division includes Alaska, California, Hawaii, Oregon, and Washington.

Table 1. Employment and mean hourly wages for nurses by state, May 2006

State	Registered nurses			Licensed practical and licensed vocational nurses		
	Employment		Mean hourly wage	Employment		Mean hourly wage
	Level	Share of total		Level	Share of total	
United States	2,417,150	1.8	\$28.71	720,380	0.5	\$18.05
Alabama	40,010	2.1 *	24.63 *	15,020	0.8 *	14.49 *
Alaska	5,260	1.7	31.17 *	480	0.2 *	20.90 *
Arizona	31,890	1.2 *	28.12 *	10,100	0.4 *	19.43 *
Arkansas	21,020	1.8	24.68 *	12,320	1.1 *	15.02 *
California	234,260	1.6 *	36.12 *	56,170	0.4 *	21.77 *
Colorado	34,520	1.6 *	28.18 *	6,730	0.3 *	18.27
Connecticut	34,710	2.1 *	30.87 *	8,120	0.5 *	24.21 *
Delaware	7,830	1.8	29.48 *	1,900	0.4 *	21.32 *
District of Columbia	7,930	1.3 *	30.35 *	1,910	0.3 *	22.56 *
Florida	146,290	1.9	27.26 *	50,670	0.6 *	17.87 *
Georgia	60,850	1.5 *	26.48 *	24,090	0.6 *	15.79 *
Hawaii	9,610	1.6	33.02 *	2,010	0.3 *	18.52 *
Idaho	9,100	1.5 *	24.79 *	2,760	0.4 *	16.71 *
Illinois	103,100	1.8	27.21 *	24,270	0.4 *	18.21
Indiana	52,910	1.8	25.39 *	18,840	0.6 *	17.21 *
Iowa	31,040	2.1 *	22.61 *	6,890	0.5 *	15.87 *
Kansas	23,590	1.8	23.64 *	7,330	0.6	16.21 *
Kentucky	38,120	2.1 *	25.04 *	11,730	0.7 *	16.24 *
Louisiana	37,940	2.1 *	25.51 *	18,310	1.0 *	15.46 *
Maine	13,690	2.3 *	26.47 *	1,870	0.3 *	17.23 *
Maryland	47,560	1.9	32.87 *	9,530	0.4 *	22.22 *
Massachusetts	76,350	2.4 *	34.09 *	16,910	0.5	22.91 *
Michigan	84,880	2.0 *	28.70	18,140	0.4 *	18.63 *
Minnesota	49,580	1.8	30.83 *	18,870	0.7 *	17.64 *
Mississippi	25,100	2.3 *	24.10 *	9,870	0.9 *	14.45 *
Missouri	55,470	2.1 *	25.55 *	17,860	0.7 *	15.69 *
Montana	7,290	1.7 *	24.78 *	2,740	0.6 *	14.88 *
Nebraska	16,840	1.9	24.71 *	5,680	0.6 *	16.13 *
Nevada	14,050	1.1 *	30.36 *	2,640	0.2 *	19.78 *
New Hampshire	12,440	2.0	26.54 *	2,510	0.4 *	19.01 *
New Jersey	80,330	2.0 *	32.02 *	18,180	0.5 *	22.87 *
New Mexico	11,680	1.5 *	27.40 *	4,880	0.6 *	19.29 *
New York	164,970	2.0 *	31.92 *	48,230	0.6 *	18.71 *
North Carolina	74,400	1.9 *	25.85 *	15,660	0.4 *	17.50 *
North Dakota	6,900	2.1	24.38 *	2,920	0.9 *	15.40 *
Ohio	111,840	2.1 *	26.50 *	38,060	0.7 *	18.08
Oklahoma	24,720	1.6 *	23.31 *	13,170	0.9 *	14.83 *
Oregon	28,090	1.7	30.66 *	2,720	0.2 *	19.76 *
Pennsylvania	126,120	2.2 *	27.42 *	35,630	0.6 *	18.56 *
Rhode Island	10,550	2.2 *	29.19 *	1,820	0.4 *	21.90 *
South Carolina	31,810	1.7	25.58 *	10,100	0.5	16.32 *
South Dakota	9,420	2.5 *	23.83 *	2,010	0.5	14.54 *
Tennessee	52,780	1.9 *	26.20 *	22,520	0.8 *	15.73 *
Texas	156,590	1.6 *	27.49 *	67,260	0.7 *	17.27 *
Utah	16,510	1.4 *	26.24 *	2,730	0.2 *	16.82 *
Vermont	5,870	2.0 *	25.47 *	1,560	0.5	17.39 *
Virginia	55,300	1.5 *	27.07 *	19,340	0.5	17.22 *
Washington	48,190	1.8	31.20 *	9,990	0.4 *	19.70 *
West Virginia	15,380	2.2 *	23.78 *	6,590	0.9 *	14.43 *
Wisconsin	48,460	1.8	27.59 *	10,040	0.4 *	18.09
Wyoming	4,010	1.5 *	23.54 *	700	0.3 *	16.25 *

* = The employment share or mean hourly wage for this area is significantly different from the national average of all areas at the 90-percent confidence level.