

Health Care Employment Projections:
An Analysis of
Bureau of Labor Statistics Occupational Projections,
2002-2012

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Background

The federal Bureau of Labor Statistics (BLS) biennially publishes occupational and industry projections for employment in the United States for the coming decade. Projections by sector and by occupation for the period 2002 through 2012¹ were released in early 2004. The Center for Health Workforce Studies at the School of Public Health, University at Albany analyzed these projections and summarized the most significant findings related to health occupations. These findings are presented below.

This report presents information on the health sector and on 68 occupations that the Center defines as health-oriented. Information on employment in the health sector includes jobs such as computer technicians and food service workers and information on health occupations includes those positions outside of the health sector, such as nurses working in schools.

The BLS projections are national in scope and do not include projections by state or region. Factors that influence demand for health services nationally, such as the population aging, are likely to have similar effects on demand at the regional, state, and local levels, although variation will exist between geographical areas based on local and regional factors. It is very difficult to accurately predict health care employment due because many factors that influence demand for and use of services are difficult to anticipate (e.g. the nation's economy and reimbursement policies). Nevertheless, the BLS projections represent the most thorough and comprehensive forecast of future jobs in America.

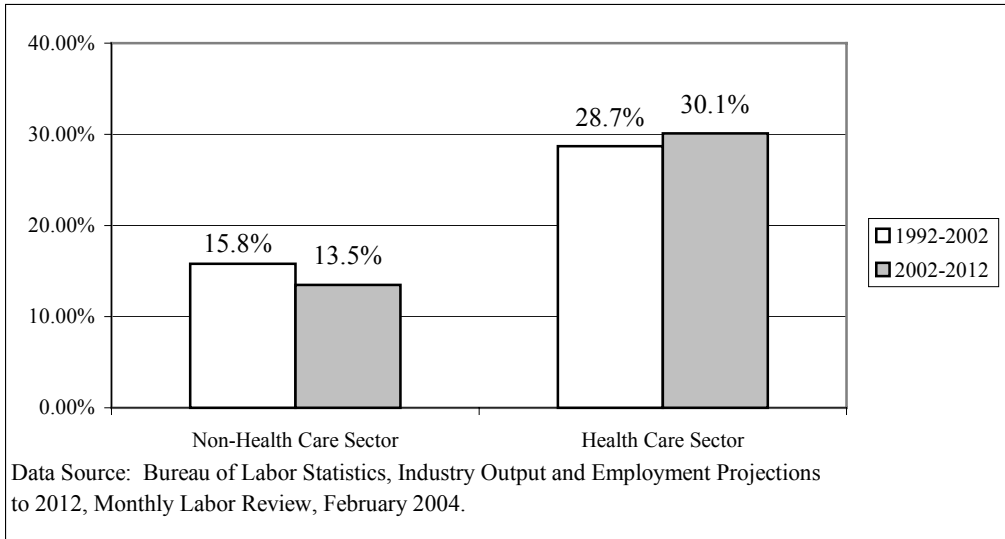
KEY FINDINGS

1. Employment in the health sector is projected to grow from 11.5 million jobs in 2002 to over 15 million jobs in 2012.

The health care sector is projected to grow by 3.5 million jobs between 2002 and 2012, or about 30%, compared to a growth rate of 13.5% for the non-health care sector. Thus, health care sector jobs are projected to grow more than two times the rate for non-health care sector jobs. The sharp growth predicted for the ten years between 2002 and 2012 is slightly higher than the actual growth in the prior ten years (Figure 1).

¹ Daniel Hecker and David S. Frank, Occupational Employment Projections to 2012, Monthly Labor Review, Bureau of Labor Statistics, February 2004; Industry Output and Employment Projections to 2012, Monthly Labor Review, Bureau of Labor Statistics, February 2004.

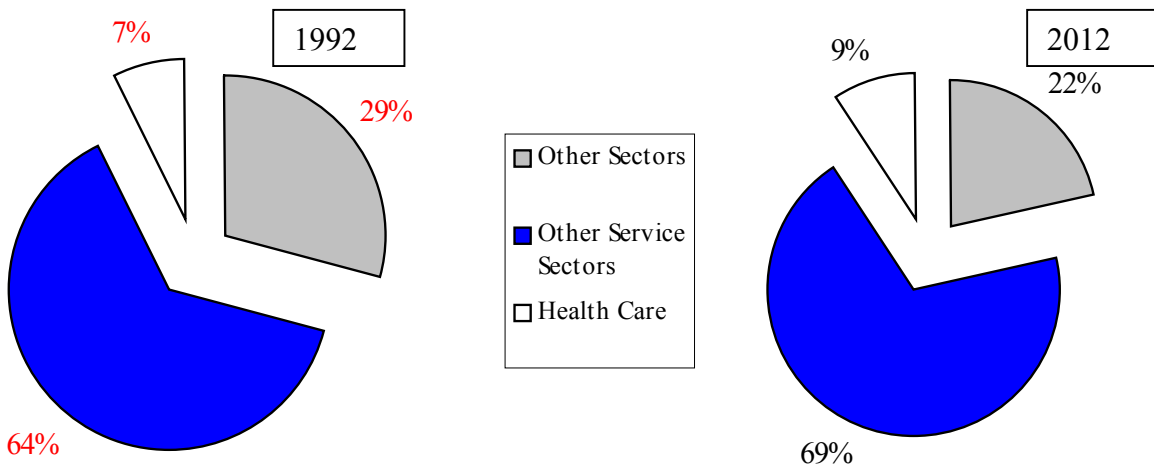
Figure 1
Growth of Health Care and Non-Health Care Sectors Jobs
1992 – 2002 and Projected 2002 - 2012



2. Employment in the health care sector is projected to comprise a larger portion of the total US workforce by 2012.

In 1992, 7% of US employment was in the health care sector. This increased to 8% in 2002, and by 2012 the health care sector is projected to employ 9% of the total US workforce, or about 1 in every 11 jobs (Figure 2).

Figure 2
Percentage of Health Sector Jobs to Total Jobs

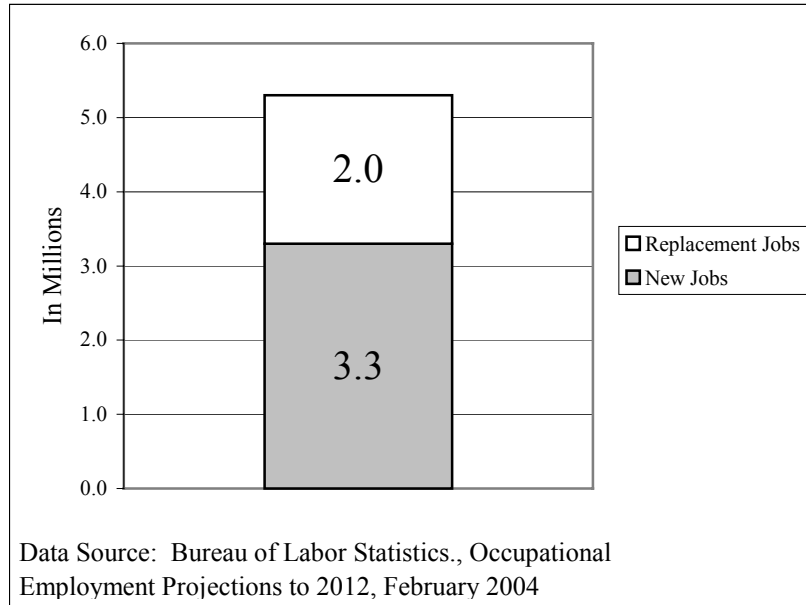


Data Source: Bureau of Labor Statistics, Industry Output and Employment Projections to 2012, Monthly Labor Review, February 2004.

3. More than 5.3 million health workers will be needed to fill the job openings created by departures and increases in new positions in health occupations in all sectors between 2002 and 2012.

The BLS projects that the total number of jobs in health occupations in all employment sectors will increase by nearly 3.3 million between 2002 and 2012. In addition, more than 2 million new health workers will be needed to replace individuals that are expected to leave their positions over the same time period (Figure 3).

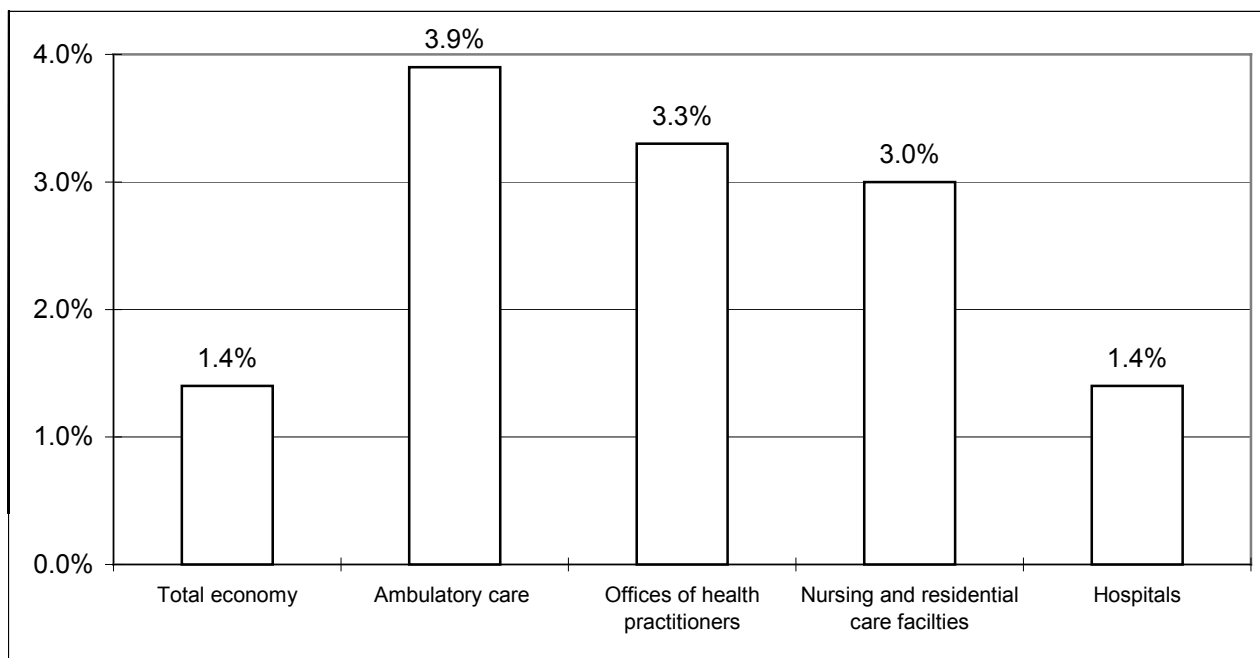
**Figure 3
Number of New Health Care Workers Needed by 2012**



4. Ambulatory care and offices of health practitioners are among the fastest growing industry settings.

Within the health care sector, offices of health practitioners and other ambulatory care settings are among the fastest growing health industry settings, at 3.3% and 3.9% average annual growth, respectively, in contrast to an average annual growth rate of 1.4% for the entire economy (Figure 4).

Figure 4
Average Annual Growth of Selected Occupational Settings with the Health Care Sector



5. Fifteen of the thirty occupations projected to grow the fastest in the United States between 2002 and 2012 are health occupations.

Fifteen health occupations ranked in the top thirty fastest growing occupations, with six ranking in the top ten. Several of these health occupations tend to be the lower paying health occupations, which require two years or less of education (Table 2). The fifteen fastest growing health occupations² are projected to be:

- Medical assistants (59%);
- Physician assistants (49%);
- Home health aides (48%);
- Medical records and health information technicians (47%);
- Physical therapist aides (46%);
- Physical therapist assistants (45%);
- Dental hygienists (43%);
- Occupational therapist aides (43%);
- Dental assistants (42%);
- Personal and home care aides (40%);

² Figures in parentheses represent the increase in *new* jobs in the occupation and does not include numbers needed to replace existing workers who will retire or leave their occupation for other reasons.

- Occupational therapy assistants (39%);
- Environmental science and protection technicians, including health (37%);
- Physical therapists (35%);
- Occupational therapists (35%); and
- Respiratory therapists (35%).

6. Five of the thirty occupations with the largest new job growth in the United States between 2002 and 2012 are predicted to be health occupations.

Five health occupations ranked in the top 30 of the occupations with the largest new job³ growth, including two in the top ten, and the occupation with the largest growth. The jobs ranked with the largest job growth (other than registered nursing) were in low paying direct care health occupations (Table 3). The five health occupations projected to have the largest number of new jobs are:

- Registered nurses (623,000 new jobs);
- Nurse aides, orderlies and attendants (343,000);
- Home health aides (279,000);
- Personal and home care aides (246,000); and
- Medical assistants (215,000).

7. Nine health care occupations are projected to grow less rapidly between 2002 and 2012 than the overall job growth in the United States.

Only nine of the sixty-eight health occupations are projected to grow less rapidly between 2002 and 2012 than the projected national overall job growth in the United States (14.8%). The five health occupations with the lowest rate of job growth are:

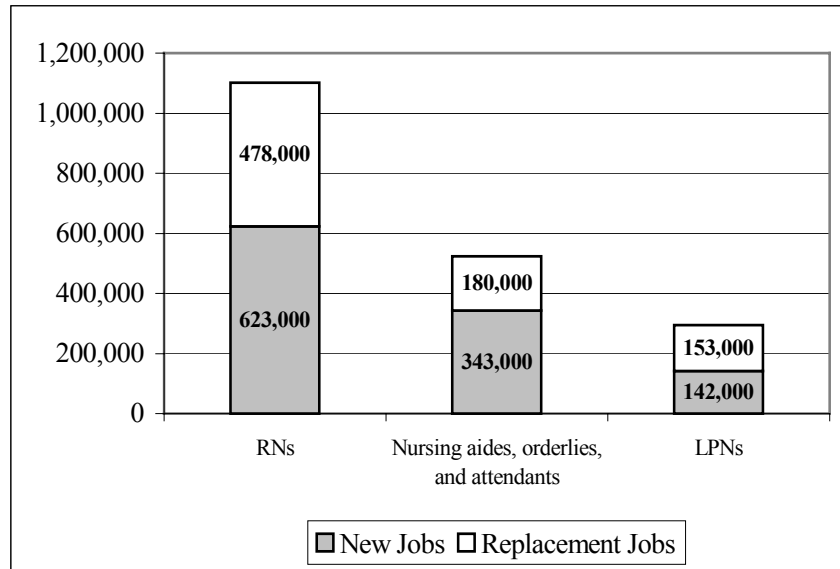
- Dentists (3.9%);
- Dental laboratory technicians (4.3%);
- Psychiatric technicians (6.7%);
- Recreational therapists (7.4%); and
- Health and safety engineers (8.3%).

8. All levels of nursing are expected to grow quickly and substantially.

Job growth for RNs, LPNs, and nurse aide/orderlies and attendants positions are projected to increase by more than 1.1 million jobs between 2002 and 2012. Total job openings (including replacement positions) are predicted to total more than 1.9 million in the three occupations (Figure 5).

³ Figures in parentheses represent the increase in *new* jobs in the occupation and does not include numbers needed to replace existing workers who will retire or leave their occupation for other reasons.

Figure 5
Projected Growth in Nursing, 2002 to 2012



Data Source: Bureau of Labor Statistics, Occupational Employment Projections to 2012, Monthly Labor Review, February 2004.

9. Home health aides and personal and home care aides are among the fastest growing and the largest growth occupations.

Jobs for individuals providing services in the home are expected to grow substantially by both number and percentage. Home health aides and personal and home care aides both rank among the fastest growing occupations (Table 2) and the occupations with the largest growth (Table 3). Nearly 700,000 job openings in these two occupations are predicted to occur between 2002 and 2012.

Table 1: Employment by Health Occupations in the United States, BLS, 2002 and Projected 2012, Ranked by Total Job Openings

[Numbers in thousands of jobs]

Occupation	Number of Jobs		Total Job Growth		Total job openings due to growth and net replacements, 2002-12
	2002	2012	Number	Percent	
Registered nurses	2,284	2,908	623	27.3	1,101
Nursing aides, orderlies, and attendants	1,375	1,718	343	24.9	523
Home health aides	580	859	279	48.1	355
Personal and home care aides	608	854	246	40.5	343
Licensed practical and licensed vocational nurses	702	844	142	20.2	295
Medical assistants	365	579	215	58.9	282
Physicians & surgeons	583	697	114	19.5	191
Dental assistants	266	379	113	42.5	187
Medical secretaries	339	398	58	17.2	123
Medical and health services managers	244	315	71	29.3	119
Pharmacists	230	299	69	30.1	114
Medical records and health information technicians	147	216	69	46.8	90
Pharmacy technicians	211	271	61	28.8	88
Emergency medical technicians and paramedics	179	238	59	33.1	80
Dental hygienists	148	212	64	43.1	76
Radiologic technologists and technicians	174	214	40	22.9	72
Medical and clinical laboratory technologists	150	179	29	19.3	69
Rehabilitation counselors	122	164	41	33.8	69
Medical and clinical laboratory technicians	147	176	29	19.4	68
Psychologists, clinical, counseling, and school	137	171	34	24.4	63
Physical therapists	137	185	48	35.3	62
Respiratory therapists	86	116	30	34.8	58
Medical and public health social workers	107	138	31	28.6	49
Mental health and substance abuse social workers	95	128	33	34.5	49
Speech-language pathologists	94	120	26	27.2	49
Massage therapists	92	117	25	27.1	43
Mental health counselors	85	107	23	26.7	42
Medical transcriptionists	101	124	23	22.6	41
Occupational therapists	82	110	29	35.2	40
Physician assistants	63	94	31	48.9	40
Dentists	153	159	6	4.1	32
Physical therapist assistants	50	73	22	44.6	31
Substance abuse & behavioral disorder counselors	67	83	16	23.3	31
Surgical technologists	72	92	20	27.9	30
Environmental scientists & specialists, including health	65	80	15	23.7	27
Environmental engineers	47	65	18	38.2	26
Cardiovascular technologists and technicians	43	58	15	33.5	23
Opticians, dispensing	63	75	11	18.2	23
Physical therapist aides	37	54	17	46.4	23

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[Numbers in thousands of jobs]

Occupation	Number of Jobs		Total Job Growth		Total job openings due to growth and net replacements, 2002-12
	2002	2012	Number	Percent	
Pharmacy aides	60	71	11	17.6	22
Chiropractors	49	60	11	23.3	21
Dietitians & nutritionists	49	58	9	17.8	21
Health educators	45	54	10	21.9	18
Environmental science & protection technicians, including health	28	38	10	36.8	17
Diagnostic medical sonographers	37	45	9	24.0	16
Psychiatric aides	59	68	9	14.5	16
Occupational health & safety specialists and technicians	41	47	5	13.2	14
Optometrists	32	38	5	17.1	14
Medical equipment preparers	36	43	7	18.1	13
Dental laboratory technicians	47	49	2	3.6	12
Respiratory therapy technicians	26	35	9	34.2	12
Health & safety engineers, except mining safety engineers and inspectors	36	38	3	7.9	11
Marriage and family therapists	23	29	5	22.4	11
Psychiatric technicians	60	63	4	5.9	11
Dietetic technicians	29	35	6	20.2	10
Occupational therapist assistants	18	26	7	39.2	10
Ophthalmic laboratory technicians	33	36	3	9.2	10
Environmental engineering technicians	19	24	5	28.4	9
Recreational therapists	27	29	2	9.1	9
Athletic trainers	14	19	4	29.9	7
Nuclear medicine technologists	17	21	4	23.6	7
Radiation therapists	14	18	4	31.6	7
Audiologists	11	14	3	29.0	6
Medical appliance technicians	14	16	2	16.1	5
Occupational therapist aides	8	12	4	42.6	5
Podiatrists	13	15	2	15.0	5
Forensic science technicians	8	10	2	18.9	4
Orthotists and prosthetists	5	6	1	18.9	2
Total, all Health Occupations	11,388	14,686	3,296	28.9	5,352

Table 2: Thirty Fastest Growing Occupations, 2002-2012

[Numbers in thousands of jobs] (Health occupations in bold)

Occupation	Employment		Change		Quartile rank by 2002 median annual earnings ¹	Most significant source of education or training
	2002	2012	Number	Percent		
Medical assistants	365	579	215	59	3	Moderate-term on-the-job training
Network systems and data communications analysts	186	292	106	57	1	Bachelor's degree
Physicians assistants	63	94	31	49	1	Bachelor's degree
Social and human service assistants	305	454	149	49	3	Moderate-term on-the-job training
Home health aides	580	859	279	48	4	Short-term on-the-job training
Medical records and health information technicians	147	216	69	47	3	Associate degree
Physical therapist aides	37	54	17	46	3	Short-term on-the-job training
Computer software engineers, applications	394	573	179	46	1	Bachelor's degree
Computer software engineers, systems software	281	409	128	45	1	Bachelor's degree
Physical therapist assistants	50	73	22	45	2	Associate degree
Fitness trainers and aerobics instructors	183	264	81	44	3	Postsecondary vocational award
Database administrators	110	159	49	44	1	Bachelor's degree
Veterinary technologists and technicians	53	76	23	44	3	Associate degree
Hazardous materials removal workers	38	54	16	43	2	Moderate-term on-the-job training
Dental hygienists	148	212	64	43	1	Associate degree
Occupational therapist aides	8	12	4	43	3	Short-term on-the-job training
Dental assistants	266	379	113	42	3	Moderate-term on-the-job training
Personal and home care aides	608	854	246	40	4	Short-term on-the-job training
Self-enrichment education teachers	200	281	80	40	2	Work experience in a related occupation
Computer systems analysts	468	653	184	39	1	Bachelor's degree
Occupational therapist assistants	18	26	7	39	2	Associate degree
Environmental engineers	47	65	18	38	1	Bachelor's degree
Postsecondary teachers	1,581	2,184	603	38	1	Doctoral degree
Network and computer administrators	251	345	94	37	1	Bachelor's degree
Environmental science and protection technicians, including health	28	38	10	37	2	Associate degree
Preschool teachers, except special education	424	577	153	36	4	Postsecondary vocational award
Computer and information systems managers	284	387	103	36	1	Bachelor's or higher degree, plus work experience degree
Physical therapists	137	185	48	35	1	Master's degree
Occupational therapist	82	110	29	35	1	Bachelor's degree
Respiratory therapists	86	116	30	35	2	Associate degree

¹The quartile rankings of Occupational Employment Statistics annual earnings data are presented in the following categories: 1=very high (\$41,820 and over), 2=high (\$27,500 to \$41,780), 3=low (\$19,710 to \$27,380), and 4=very low (up to \$19,600). The rankings were based on quartiles using one-fourth of total employment to define each quartile. Earnings are for wage and salary workers.

Table 3: Occupations with the Largest Job Growth, 2002-2012

[Numbers in thousands of jobs] (Health occupations in bold)

Occupation	Employment		Change		Quartile rank by 2002 median annual earnings ¹	Most significant source of education or training
	2002	2012	Number	Percent		
Registered nurses	2,284	2,908	623	27	1	Associate degree
Postsecondary teachers	1,581	2,184	603	38	1	Doctoral degree
Retail salespersons	4,076	4,672	596	15	4	Short-term on-the-job training
Customer service representative	1,894	2,354	460	24	3	Moderate-term on-the-job training
Combined food preparation and servicing workers, including fast food	1,990	2,444	454	23	4	Short-term on-the-job training
Cashiers, except gaming	3,432	3,886	454	13	4	Short-term on-the-job training
Janitors and cleaners, except maids and housekeeping cleaners	2,267	2,681	414	18	4	Short-term on-the-job training
General and occupational managers	2,049	2,425	376	18	1	Bachelor's or higher degree, plus work experience
Waiters and waitresses	2,097	2,464	367	18	4	Short-term on-the-job training
Nursing aides, orderlies and attendants	1,375	1,718	343	25	3	Short-term on-the-job training
Truck drivers, heavy and tractor-trailer	1,767	2,104	337	19	2	Moderate-term on-the-job training
Receptionists and information clerks	1,100	1,425	325	29	3	Short-term on-the-job training
Security guards	995	1,313	317	32	4	Short-term on-the-job training
Office clerks, general	2,991	3,301	310	10	3	Short-term on-the-job training
Teacher assistants	1,277	1,571	294	23	4	Short-term on-the-job training
Sales representatives, wholesale and manufacturing, except technical and scientific products	1,459	1,738	279	19	1	Moderate-term on-the-job training
Home health aides	580	859	279	48	4	Short-term on-the-job training
Personal and home care aides	608	854	246	40	4	Short-term on-the-job training
Truck drivers, light or delivery services	1,022	1,259	237	23	3	Short-term on-the-job training
Landscaping and groundskeeping workers	1,074	1,311	237	22	3	Short-term on-the-job training
Elementary school teachers, except special education	1,467	1,690	223	15	2	Bachelor's degree
Medical assistants	365	579	215	59	3	Moderate-term on-the-job training
Maintenance and repair workers, general	1,266	1,472	207	16	2	Moderate-term on-the-job training
Accountants and auditors	1,055	1,261	205	19	1	Bachelor's degree
Computer systems analysts	468	653	184	39	1	Bachelor's degree
Secondary school teachers, except special and vocational education	988	1,167	180	18	1	Bachelor's degree
Computer software engineers, applications	394	573	179	46	1	Bachelor's degree
Management analysis	577	753	176	30	1	Bachelor's degree or higher degree, plus work experience
Food preparation workers	850	1,022	172	20	4	Short-term on-the-job training
First-line supervisors/managers of retail sales workers	1,798	1,962	163	9	2	Work experience in a related occupation

¹The quartile rankings of Occupational Employment Statistics annual earnings data are presented in the following categories: 1=very high (\$41,820 and over), 2=high (\$27,500 to \$41,780), 3=low (\$19,710 to \$27,380), and 4=very low (up to \$19,600). The rankings were based on quartiles using one-fourth of total employment to define each quartile. Earnings are for wage and salary workers.