

Health Care Employment Projections:

An Analysis of

Bureau of Labor Statistics Occupational Projections,

2004-2014

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Prepared by
Robert Martiniano
Jean Moore

The Center for Health Workforce Studies
School of Public Health, University at Albany
7 University Place
Rensselaer, NY 12144-3458
Phone: (518) 402-0250
Fax: (518) 402-0252
<http://chws.albany.edu>

PREFACE

This report, prepared by the Center for Health Workforce Studies, provides a summary of labor projections for the period 2004 and 2014 for health care settings and health care occupations. The report is designed to provide information about projected trends to help the health industry, educators, policy makers, and other stakeholders better understand which health occupations and professions will be in greatest demand over the next ten years and how better allocate resources to meet those needs.

The Center for Health Workforce Studies (the Center) is part of the School of Public Health, University at Albany, State University of New York. The Center is a not-for-profit research organization dedicated to health workforce data collection and analysis. This report was prepared by Robert Martiniano and Jean Moore. Other staff members who contributed to the report included Debra Krohl, Dwayne Robertson, and Lyrysa Smith. The views expressed in this report are those of the Center for Health Workforce Studies and do not necessarily represent positions or policies of the University at Albany, State University of New York, or the School of Public Health.

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 2004 through 2014 were released in November 2005. The Center analyzed these projections and summarized the most significant findings related to health care employment.

This report presents information on health care employment projections which encompasses health sector¹ employment and health occupations employment. Health sector employment consists of jobs in health care settings both inside and outside of health occupations. Examples of health sector jobs that are not health occupations include computer technicians and food service workers. Health occupations employment² are jobs within the health sector, such as nurses working in hospitals, and jobs outside 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 an aging population, are likely to have similar effects on demand at the regional, state, and local levels, although geographic variation is possible. It is difficult to accurately predict health care employment because many factors influence the demand for and use of services (e.g., the nation's economy, reimbursement policies, health workforce shortages). Nevertheless, the BLS projections represent the most comprehensive forecast of future jobs in the United States.

SUMMARY OF FINDINGS

Health care continues to be the fastest growing employment sector in the country. Between 2004 and 2014, the health care sector is projected to grow by more than 27%, compared to less than 12% for all other employment sectors. Within health care, jobs in home health care and offices of health practitioners, particularly physician offices, are projected to grow the fastest.

¹ Includes all employment in the health sector, such as settings such as hospitals, nursing homes, home health services, and private practitioner offices.

² Includes 79 health occupations as identified by the Center for Health Workforce Studies.

The health occupations projected to add the most new jobs between 2004 and 2014 are registered nurses; home health aides; nursing aides, orderlies, and attendants; and personal and home care aides. In addition, many of these occupations will need more recruits to fill vacancies created by retirements or other departures. Demand for other health professions including medicine, pharmacy, and dentistry are also expected to grow. Given the growing demand for health care workers in a variety of occupations and professions, current health workforce shortages are likely not only to persist, but to worsen.

KEY FINDINGS

1. Health care employment comprises a growing share of the total U.S. workforce.

In 2004, there were more than 17 million jobs either in the health sector or in health occupations outside of the health sector, accounting for nearly 12% of the total U.S. workforce.

Of the 17 million, slightly more than 13 million jobs, or 9% of U.S. employment were in the health sector in 2004, including employment both within and outside of health occupations. The remaining four million jobs, or 3% of U.S. employment, were in health occupations outside of the health sector (Figure 1 and Table 1).

Figure 1
U.S. Health Care Employment, 2004

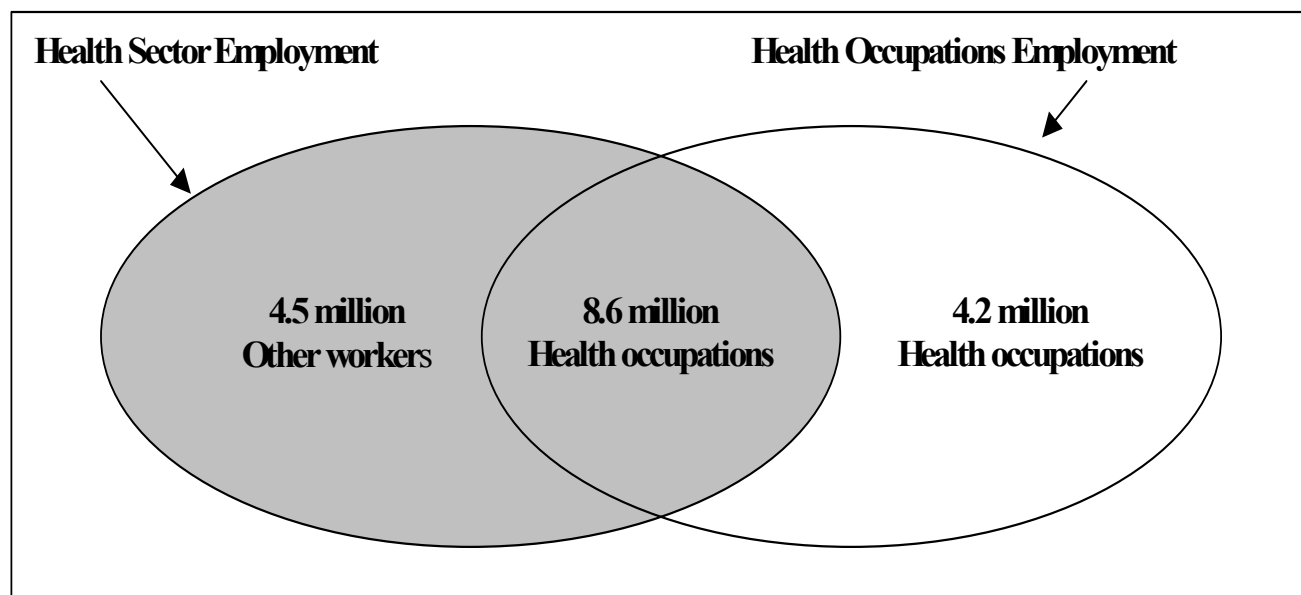


Table 1
U.S. Health Care Employment, 2004

	Health Occupations	Other Occupations	Total
Health Sector	8,588,097	4,474,003	13,062,100
Other Sectors	4,176,903	128,373,329	132,550,232
Total	12,765,000	132,847,332	145,612,332

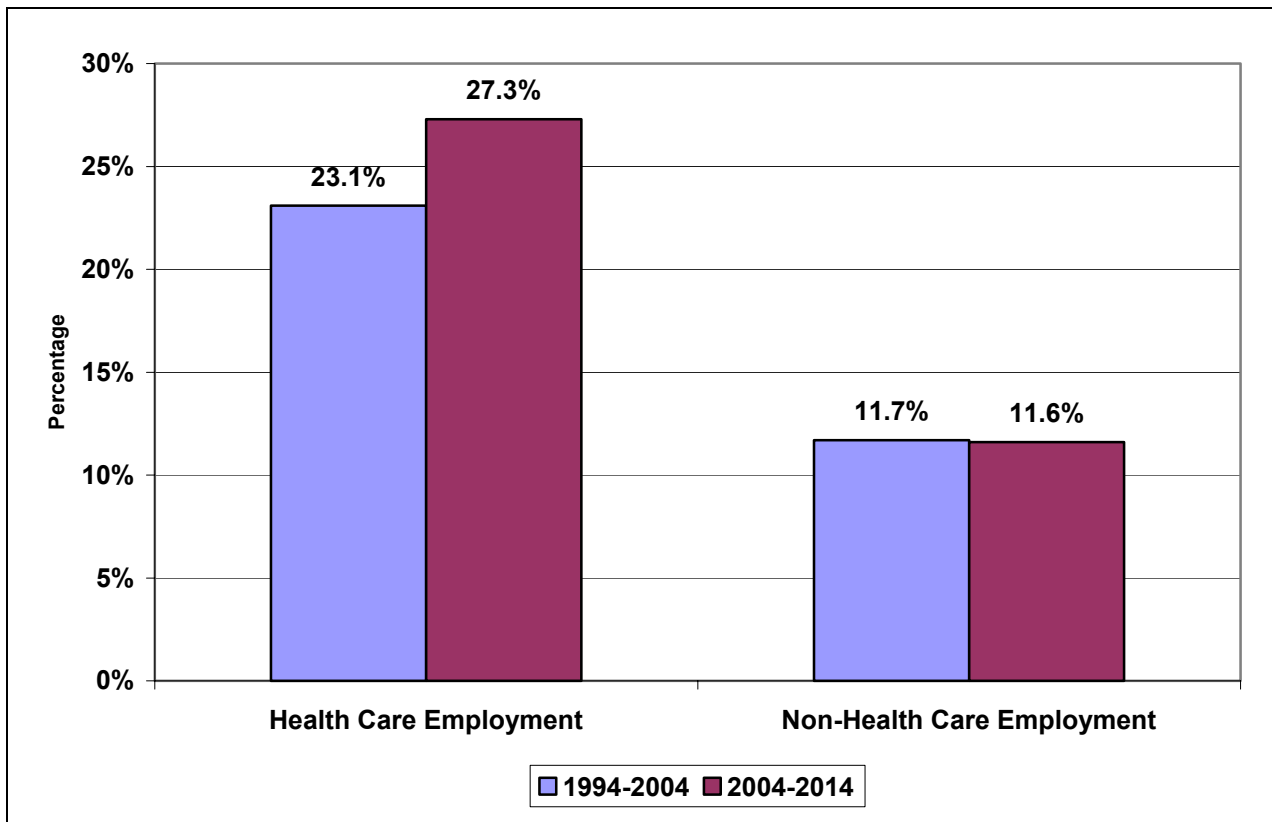
	Number	Percent of Civilian Labor Workforce
Health occupations in the health sector	8,588,097	5.8%
Other occupations in the health sector	4,474,003	3.1%
Health occupations in other sectors	4,176,903	2.9%
U.S. Health Care Employment	17,239,003	11.8%
U.S. Civilian Labor Force Employment	145,615,332	100.0%

Data Sources: U.S. Department of Labor, Bureau of Labor Statistics, National Employment Matrix, employment by industry, occupation, and percent distribution, 2004 and projected 2014.

2. **Between 2004 and 2014, employment in the health sector is projected to grow at more than twice the rate of all other employment sectors.**

Health sector employment is projected to grow from 13 million jobs in 2004 to nearly 17 million jobs by 2014. The health sector is expected to have a growth rate of more than 27%, compared to less than 12% for all other employment sectors (Figure 2).

Figure 2
Job Growth
Health Sector Compared to All Other Employment Sectors
1994 – 2004 and Projected 2004 - 2014

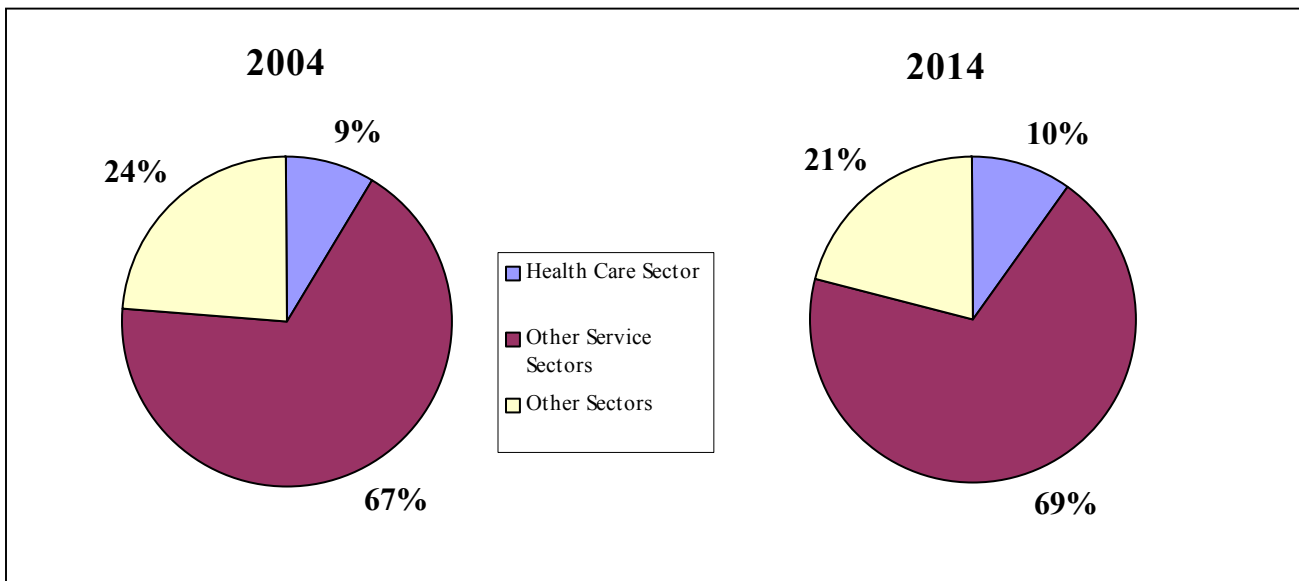


Source: Industry Output and Employment Projections to 2014, Monthly Labor Review, Bureau of Labor Statistics, November 2005.

3. One in every ten jobs in the U.S. is projected to be in the health sector by 2014.

Health sector employment is expected to comprise a larger share of total U.S. employment by 2014 than it has in the past. In 1994, slightly more than 8% of U.S. jobs were in the health sector. This increased to 9% in 2004, and is projected to grow to 10% by 2014 (Figure 3).

**Figure 3
Percentage of Health Sector Jobs to Total Jobs³**



Source: Industry Output and Employment Projections to 2014, Monthly Labor Review, Bureau of Labor Statistics, November 2005.

4. Between 2004 and 2014, nearly 6 million health workers will be needed to fill new jobs and to replace workers who leave their jobs across all employment sectors.

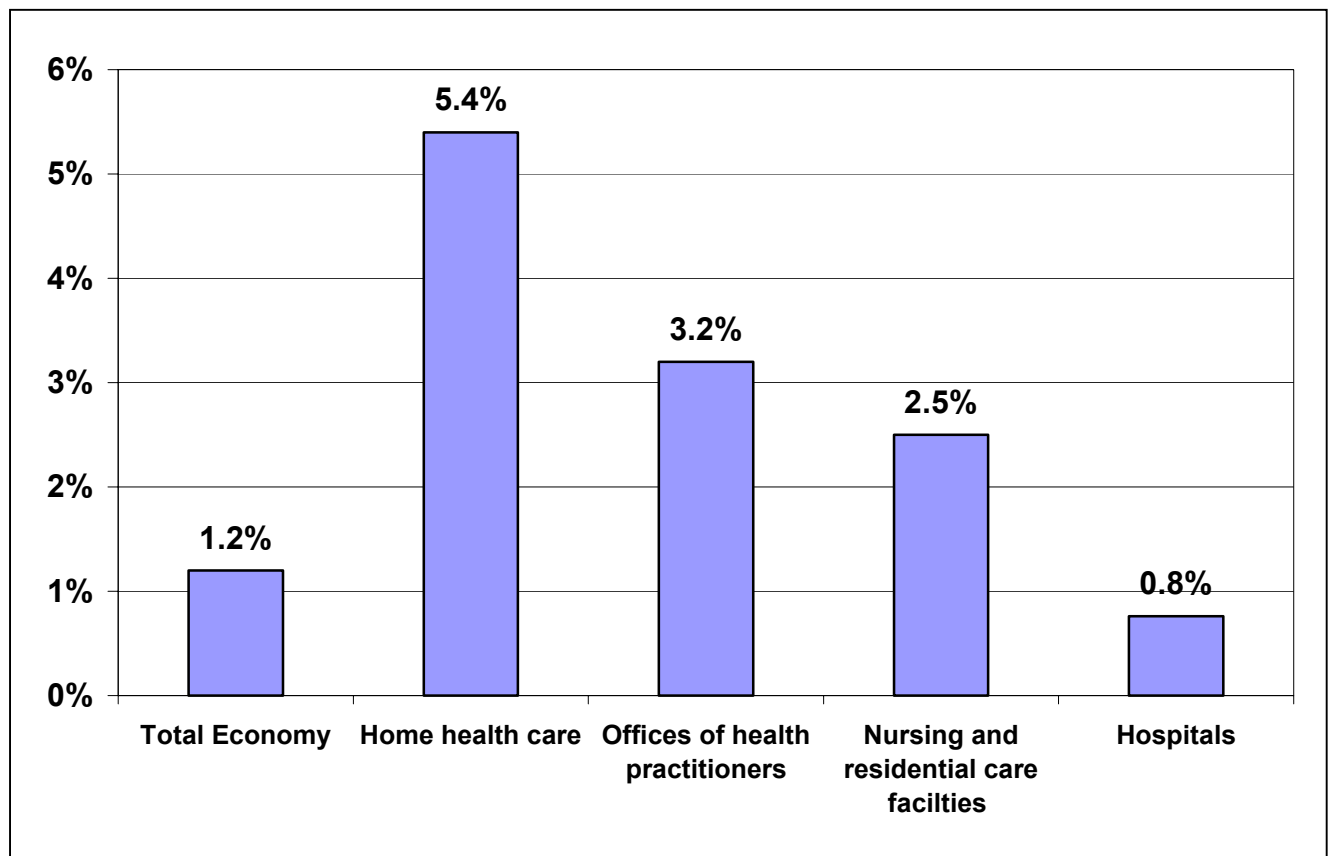
The total number of jobs in health occupations across all employment sectors will increase by nearly 3.6 million between 2004 and 2014 (Appendix 1). In addition, another 2.3 million health workers will be needed to replace individuals who are expected to leave their jobs (e.g., retirements, etc.) over the same period.

³ Other service sectors include retail and wholesale trade, information technology services, banking, education, government, transportation, and utilities. Other sectors include manufacturing, construction, mining, and agriculture, forestry, fishing, and hunting.

5. **Between 2004 and 2014, the fastest job growth is projected for two health settings, home health care and offices of health practitioners. Hospital employment is projected to grow at a much slower rate.**

Home health care and offices of health practitioners⁴ are projected to experience the fastest job growth across all health settings, at 5.4% and 3.2% average annual growth, respectively. In contrast, the expected average annual growth rate for the entire economy is 1.2% over the same period (Figure 4).

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



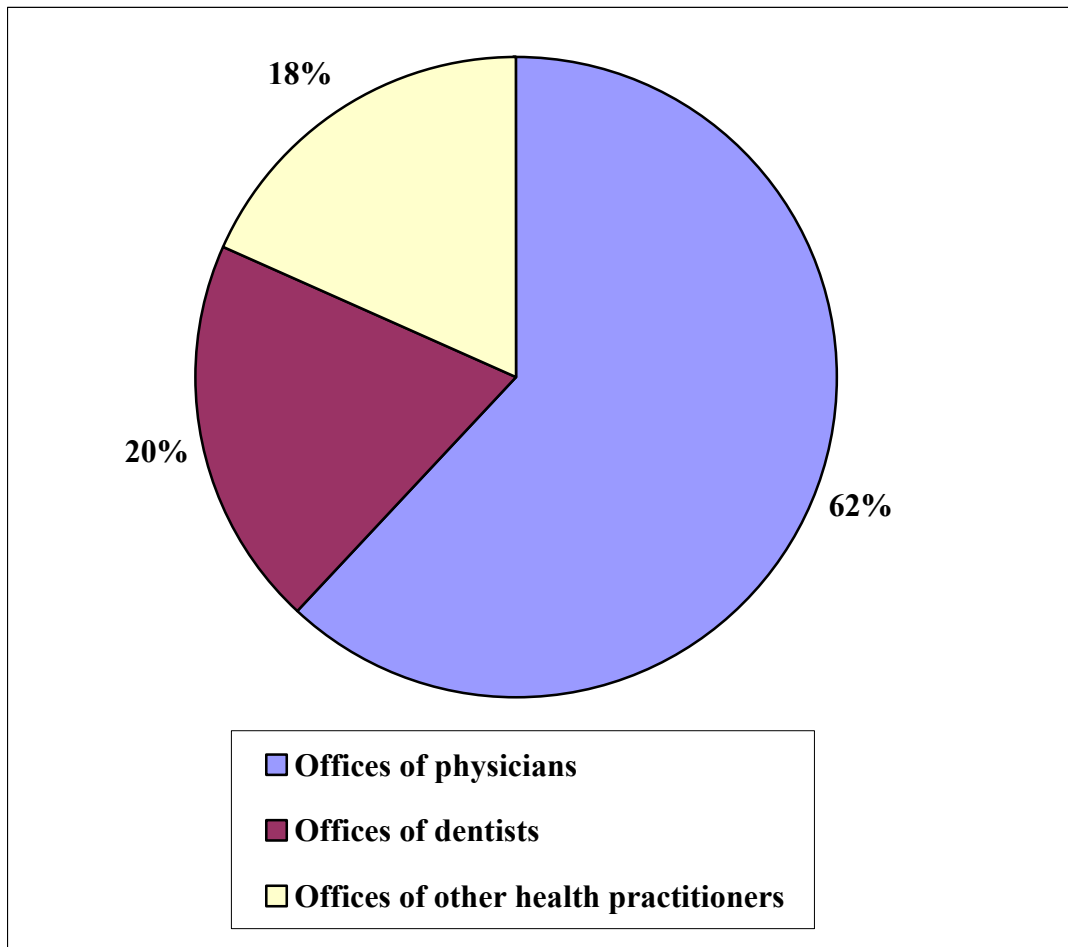
Source: Industry Output and Employment Projections to 2014, Monthly Labor Review, Bureau of Labor Statistics, November 2005.

⁴ Offices of health practitioners include offices privately operated by physicians, psychiatrists, dentists, chiropractors, podiatrists, psychologists, social workers, and other community-based practitioners.

6. More than 1.2 million new jobs will be added to offices of health practitioners between 2004 and 2014, with more than half of them in physician offices.

Employment in offices of health practitioners is expected to grow by nearly 37% between 2004 and 2014. This represents more than one-third of the total projected growth in health sector employment. Physician and dental offices are projected to add nearly 760,000 and more than 240,000 jobs, respectively (Figure 5).

**Figure 5
Projected Job Growth in Offices of Health Practitioners
Between 2004 and 2014**



Sources: U.S. Department of Labor, Bureau of Labor Statistics, National Employment Matrix, employment by industry, occupation, and percent distribution, 2004 and projected 2014.

7. Between 2004 and 2014, three-quarters of the twenty occupations projected to grow the fastest in the United States are health occupations.

Seventeen health occupations ranked in the top thirty fastest growing occupations, with seven ranking in the top 10 and 15 ranking in the top 20 (Appendix 2). The 17 fastest growing health occupations⁵ are projected to be:

- Home health aides (56%);
- Medical assistants (52%);
- Physician assistants (50%);
- Physical therapist assistants (44%);
- Dental hygienists (43%);
- Dental assistants (43%);
- Personal and home care aides (41%);
- Physical therapists (37%);
- Forensic science technicians (36%);
- Veterinary technologists and technicians (35%);
- Diagnostic medical sonographers (35%);
- Physical therapist aides (34%);
- Occupational therapist assistants (34%);
- Medical scientists (34%);
- Occupational therapists (34%);
- Cardiovascular technologists and technicians (33%); and
- Environmental engineer (30%).

8. Registered nursing is one of 10 occupations projected to add the most new jobs in the United States between 2004 and 2014.

Five health occupations were in the top 30 occupations with the greatest number of new jobs⁶ projected to be added (Appendix 3). The five health occupations expected to add the largest numbers of new jobs are:

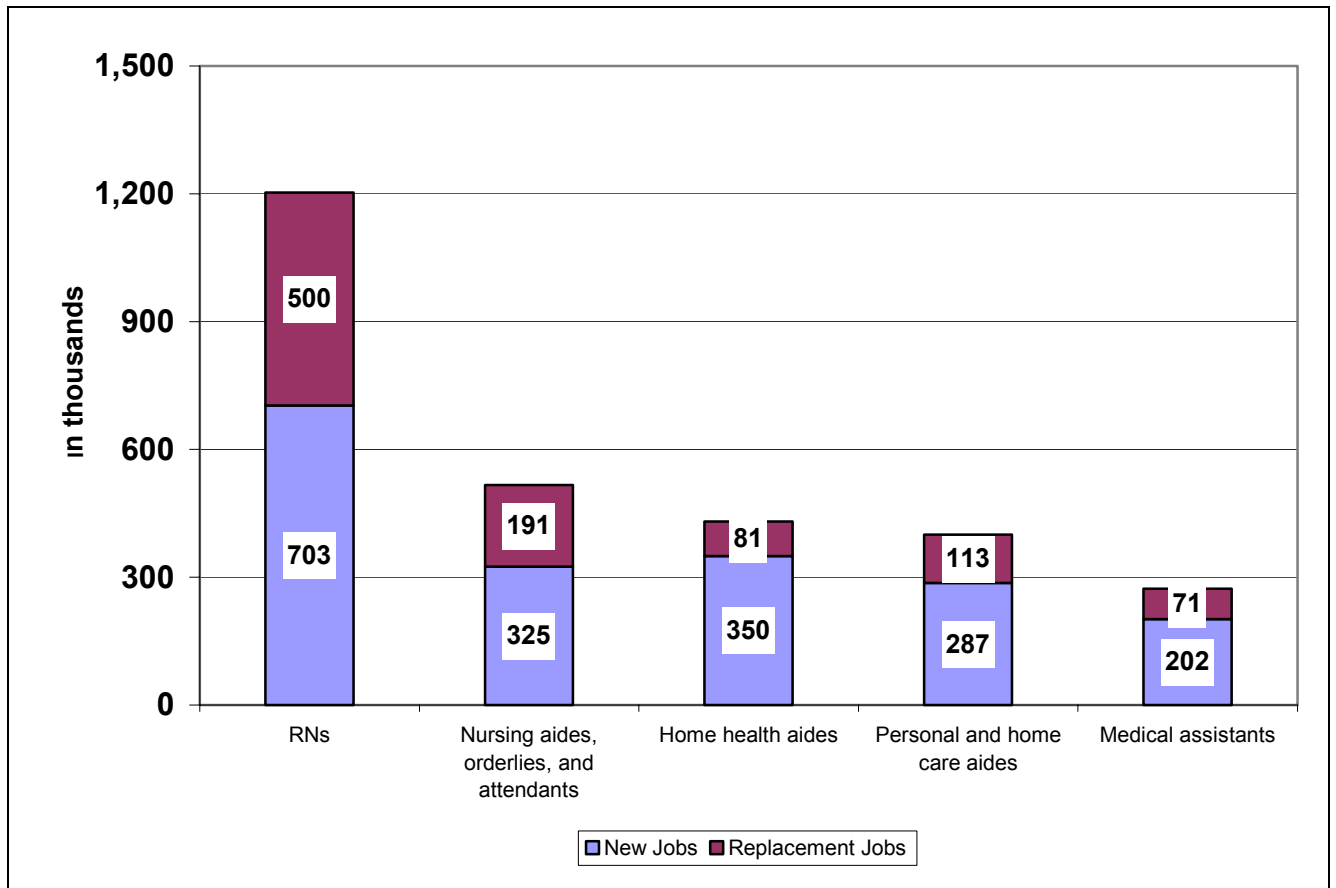
- Registered nurses (703,000);
- Home health aides (350,000);
- Nurse aides, orderlies and attendants (325,000);
- Personal and home care aides (287,000); and
- Medical assistants (202,000).

⁵ Figures in parentheses represent the increase in *new* jobs in the occupation and do not include numbers needed to replace existing workers who may retire or leave their jobs for other reasons.

⁶ Figures in parentheses represent the increase in *new* jobs in the occupation and do not include numbers needed to replace existing workers who will retire or leave their occupation for other reasons.

Also, a substantial number of individuals will be needed in these five occupations to replace those leaving the occupation, creating more demand. An additional 500,000 new RNs will be required to replace RNs leaving the occupation, bringing the total number of RNs needed to fill new and existing jobs to 1.2 million (Figure 6).

Figure 6
Total Demand for the Five Health Occupations with the Largest Job Growth
between 2004 and 2014



Source: Occupational Employment Projections to 2014, Monthly Labor Review, Bureau of Labor Statistics, November 2005

9. **Between 2004 and 2014, more than 200,000 new physicians and 100,000 new pharmacists will be needed to fill newly created positions and replace those who leave existing positions.**

Between 2004 and 2014, more than 136,000 new jobs for physicians will be created, while another 76,000 jobs will be vacated and require replacements. During the same period, more than 57,000 new jobs for pharmacists will be created and another 44,000 jobs will require replacements.

Appendix 1: Employment by occupation, 2004 and projected 2014

[Numbers in thousands of jobs]

Occupation	Employment		Change		Total job openings due to growth and net replacements, 2004-14
	2004	2014	Number	Percent	
Totals	12,765	16,357	3,598	28.1%	5,902
Registered nurses	2,394	3,096	703	29.4%	1,203
Nursing aides, orderlies, and attendants	1,455	1,781	325	22.3%	516
Home health aides	624	974	350	56.0%	431
Personal and home care aides	701	988	287	41.0%	400
Licensed practical and licensed vocational nurses	726	850	124	17.1%	282
Medical assistants	387	589	202	52.1%	273
Physicians and surgeons	567	702	136	24.0%	212
Dental assistants	267	382	114	42.7%	189
Medical secretaries	373	436	63	17.0%	135
Pharmacy technicians	258	332	74	28.6%	107
Medical & health services managers	248	305	57	22.8%	105
Pharmacists	230	287	57	24.6%	101
Dental Hygienists	158	226	68	43.3%	82
Healthcare support workers, all other	202	244	42	20.9%	80
Medical and clinical laboratory technicians	147	183	37	25.0%	76
Radiologic technologists and technicians	182	224	42	23.2%	76
Medical and clinical laboratory technologists	156	188	32	20.5%	74
Emergency medical technicians and paramedics	192	244	52	27.3%	74
Physical therapists	155	211	57	36.7%	72
Medical records and health information technicians	159	205	46	28.9%	69
Clinical, counseling, and school psychologists	167	199	32	19.1%	68
Rehabilitation counselors	131	162	31	23.9%	61
Respiratory therapists	94	120	27	28.4%	57
Mental health and substance abuse social workers	116	147	31	26.7%	51
Mental health counselors	96	122	26	27.2%	48
Medical and public health social workers	110	139	29	25.9%	48
Dentists	150	171	20	13.5%	46
Medical transcriptionists	105	129	24	23.3%	44
Occupational therapists	92	123	31	33.6%	43
Massage therapists	97	120	23	23.6%	42
Physician assistants	62	93	31	49.6%	40
Substance abuse and behavioral disorder counselors	76	98	22	28.7%	39
Speech-language pathologists	96	110	14	14.6%	38
Medical scientists, except epidemiologists	72	97	25	34.1%	37
Surgical technologists	84	109	25	29.5%	36
Physical therapist assistants	59	85	26	44.2%	36
Healthcare technologists and technicians, all others	85	104	19	22.9%	35
Health diagnosing and treating practitioners, all others	72	88	16	22.5%	32
Veterinary technologists and technicians	60	81	21	35.3%	29
Veterinary assistants and laboratory animal caretakers	74	90	16	21.0%	29
Environmental scientists and specialists, including health	73	86	13	17.1%	26
Veterinarians	61	71	11	17.4%	25
Environmental engineers	49	64	15	30.0%	23
Cardiovascular technologists and technicians	45	60	15	32.6%	23
Diagnostic medical sonographers	42	57	15	34.8%	23
Healthcare practitioner and technical workers, all other	55	68	13	23.8%	23
Chiropractors	53	64	12	22.4%	22
Dietitians and nutritionists	50	59	9	18.3%	22
Physical therapist aides	43	57	15	34.4%	22
Opticians, dispensing	66	75	9	13.6%	21

Appendix 1: Employment by occupation, 2004 and projected 2014

[Numbers in thousands of jobs]

Occupation	Employment		Change		Total job openings due to growth and net replacements, 2004-14
	2004	2014	Number	Percent	
Totals	12,765	16,357	3,598	28.1%	5,902
Health educators	49	60	11	22.5%	20
Pharmacy aides	50	59	9	17.4%	18
Optometrists	34	40	7	19.7%	16
Medical equipment preparers	43	51	9	20.0%	16
Dental laboratory technicians	50	54	4	7.6%	15
Occupational health and safety specialists	40	45	5	12.4%	14
Environmental science and protection technicians incl. health	31	36	5	16.3%	12
Marriage and family therapists	24	30	6	25.4%	12
Health & safety engineers, except mining	27	30	4	13.4%	10
Psychiatric technicians	61	63	2	3.2%	10
Occupational therapist assistants	21	29	7	34.1%	10
Environmental engineering technicians	20	25	5	24.4%	9
Therapists, all other	24	28	4	15.0%	9
Psychiatric aides	59	61	1	2.3%	9
Dietetic technicians	25	30	5	19.1%	8
Athletic trainers	15	19	4	29.3%	8
Radiation therapists	15	19	4	26.3%	7
Recreational therapists	24	25	1	5.7%	7
Nuclear medicine technologists	18	22	4	21.5%	7
Ophthalmic laboratory technicians	25	27	2	7.8%	7
Forensic science technicians	10	13	4	36.4%	6
Occupational health and safety technicians	12	14	2	17.1%	5
Podiatrists	10	12	2	16.2%	4
Respiratory therapy technicians	25	26	1	3.3%	4
Medical appliance technicians	11	13	2	13.2%	4
Audiologists	10	11	1	9.1%	3
Epidemiologists	5	6	1	26.2%	2
Orthotists and prosthetists	6	7	1	18.0%	2
Occupational therapist aides	5	7	1	26.3%	2

Appendix 2: Fastest Growing Occupations, 2004-2014

[Numbers in thousands of jobs]

Occupation	Employment		Change		Quartile rank by 2004 median annual earnings ¹	Most significant source of postsecondary education or training ²
	2004	2014	Number	Percent		
Home health aides	624	974	350	56.0	VL	Short-term on-the-job training
Network systems and data communications analysts	231	357	126	54.6	VH	Bachelor's degree
Medical assistants	387	589	202	52.1	L	Moderate-term on-the-job training
Physician assistants	62	93	31	49.6	VH	Bachelor's degree
Computer software engineers, applications	460	682	222	48.4	VH	Bachelor's degree
Physical therapist assistants	59	85	26	44.2	H	Associate degree
Dental hygienists	158	226	68	43.3	VH	Associate degree
Computer software engineers, systems software	340	486	146	43.0	VH	Bachelor's degree
Dental assistants	267	382	114	42.7	L	Moderate-term on-the-job training
Personal and home care aides	701	988	287	41.0	VL	Short-term on-the-job training
Network and computer administrators	278	385	107	38.4	VH	Bachelor's degree
Database administrators	104	144	40	38.2	VH	Bachelor's degree
Physical therapists	155	211	57	36.7	VH	Master's degree
Forensic science technicians	10	13	4	36.4	VH	Associate degree
Veterinary technologists and technicians	60	81	21	35.3	L	Associate degree
Diagnostic medical sonographers	42	57	15	34.8	VH	Associate degree
Physical therapist aides	43	57	15	34.4	L	Short-term on-the-job training
Occupational therapist assistants	21	29	7	34.1	H	Associate degree
Medical scientists, except epidemiologists	72	97	25	34.1	VH	Doctoral degree
Occupational therapists	92	123	31	33.6	VH	Master's degree
Preschool teachers, except special education	431	573	143	33.1	L	Postsecondary vocational award
Cardiovascular technologists and technicians	45	60	15	32.6	H	Associate degree
Postsecondary teachers	1,628	2,153	524	32.2	VH	Doctoral degree
Hydrologists	8	11	3	31.6	VH	Master's degree
Computer systems analysts	487	640	153	31.4	VH	Bachelor's degree
Hazardous materials removal workers	38	50	12	31.2	H	Moderate-term on-the-job training
Biomedical engineers	10	13	3	30.7	VH	Bachelor's degree
Employment, recruitment, and placement specialists	182	237	55	30.5	H	Bachelor's degree
Environmental engineers	49	64	15	30.0	VH	Bachelor's degree
Paralegals and legal assistants	224	291	67	29.7	H	Associate degree

¹The quartile rankings of Occupational Employment Statistics Survey annual earnings data are presented in the following categories: VH = very high (\$43,600 or more), H = high (\$28,580 to \$43,590), L = low (\$20,190 to \$28,570) and VL = very low (up to \$20,180). The rankings were based on quartiles, with one-fourth of total employment defining each quartile. Earnings are for wage and salary workers.

²An occupation is placed into 1 of 11 categories that best describes the postsecondary education or training needed by most workers to become fully qualified in that occupation. For more information about the categories, see *Occupational Projections and Training Data*, 2004-05 edition. Bulletin 2572 (Bureau of Labor Statistics, March 2004) and *Occupational Projections and Training Data*, 2006-07 edition, Bulletin 2602 (Bureau of Labor Statistics, forthcoming).

Appendix 3: Occupations with the Largest Job Growth, 2004-2014

[Numbers in thousands of jobs]

Occupation	Employment		Change		Quartile rank by 2004 median annual earnings ¹	Most significant source of postsecondary education or training ²
	2004	2014	Number	Percent		
Retail salespersons	4,256	4,992	736	17.3	VL	Short-term on-the-job training
Registered nurses	2,394	3,096	703	29.4	VH	Associate degree
Postsecondary teachers	1,628	2,153	524	32.2	VH	Doctoral degree
Customer service representative	2,063	2,534	471	22.8	L	Moderate-term on-the-job training
Janitors and cleaners, except maids and housekeeping cleaners	2,374	2,813	440	18.5	VL	Short-term on-the-job training
Waiters and waitresses	2,252	2,627	376	16.7	VL	Short-term on-the-job training
Combined food preparation and serving workers, including fast food	2,150	2,516	367	17.1	VL	Short-term on-the-job training
Home health aides	624	974	350	56	VL	Short-term on-the-job training
Nursing aides, orderlies and attendants	1,455	1,781	325	22.3	L	Postsecondary vocational award
General and operations managers	1,807	2,115	308	17	VH	Bachelor's degree plus work experience
Personal and home care aides	701	988	287	41	VL	Short-term on-the-job training
Elementary school teachers, except special education	1,457	1,722	265	18.2	H	Bachelor's degree
Accountants and auditors	1,176	1,440	264	22.4	VH	Bachelor's degree
Office clerks, general	3,138	3,401	263	8.4	L	Short-term on-the-job training
Laborers and freight, stock and material movers, hand	2,430	2,678	248	10.2	VL	Short-term on-the-job training
Receptionists and information clerks	1,133	1,379	246	21.7	L	Short-term on-the-job training
Landscaping and groundskeeping workers	1,177	1,407	230	19.5	L	Short-term on-the-job training
Truck drivers, heavy and tractor-trailer	1,738	1,962	223	12.9	H	Moderate-term on-the-job training
Computer software engineers, applications	460	682	222	48.4	VH	Bachelor's degree
Maintenance and repair workers, general	1,332	1,533	202	15.2	H	Moderate-term on-the-job training
Medical assistants	387	589	202	52.1	L	Moderate-term on-the-job training
Executive secretaries and administrative assistants	1,547	1,739	192	12.4	H	Moderate-term on-the-job training
Sales representatives, wholesale and manufacturing, except technical and scientific products	1,454	1,641	187	12.9	VH	Moderate-term on-the-job training
Carpenters	1,349	1,535	186	13.8	H	Long-term on-the-job training
Teacher assistants	1,296	1,478	183	14.1	VL	Short-term on-the-job training
Childcare workers	1,280	1,456	176	13.8	VL	Short-term on-the-job training
Food preparation workers	889	1,064	175	19.7	VL	Short-term on-the-job training
Maids and housekeeping cleaners	1422	1,587	165	11.6	VL	Short-term on-the-job training
Truck drivers, light or delivery services	1,042	1,206	164	15.7	L	Short-term on-the-job training
Computer systems analysts	487	640	153	31.4	VH	Bachelor's degree

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