Professionals in the Workforce:  
Health Care Professionals and Technicians

Updated December 2014

Health care professionals and technicians represent one of the largest occupational groups in the country, with close to 8 million people employed in 2013. Professionals and technicians in health care occupations provide patient care, educate the public, maintain records, and conduct research to advance the field of medicine. As economic and demographic factors have increased demand for health care, most occupations in this field have experienced growth. Yet, income inequality, spatial mismatch, stagnant wages, and the high cost of training remain problematic for many professionals in these occupations.

Employment

In 2013, there were nearly 7.8 million professionals employed as health care practitioners and technical workers. Since 2003, these occupations added over 1.5 million jobs. As a group, health care occupations weathered the recent recession well, experiencing positive employment growth even as the total U.S. workforce shrunk.

While this demonstrates the strength of the field in general, it is important to remember that some occupations in the field faced contraction and job loss while others experienced rapid growth. For example, while the number of registered nurses grew rapidly from 2003 to 2013, the number of dentists declined.

Nurses, including registered nurses, advanced practice nurses, and licensed practical and licensed vocational nurses (LPNs and LVNs), make up the largest proportion of health care
professionals. Registered nurses and advanced practice nurses represented roughly 37 percent of all healthcare professionals, while LPNs and LVNs represented an additional nine percent. Technical workers, excluding LPNs and LVNs, represented more than 25 percent of health care professionals in 2013.3

Unsurprisingly, general medical and surgical hospitals, physicians’ offices, and nursing care facilities employ a large portion of the professional and technical health care workforce. General medical and surgical hospitals are the largest employers of health care professionals, employing just fewer than 3 million people. Second to hospitals, physicians’ offices employed over one million health care professionals in 2013.4

Representation of African American and Asian workers, and those of Hispanic or Latino ethnicity, also varies significantly by occupation. In 2013, African Americans represented 11.2 percent of the total U.S. workforce and 10.5 percent of the health care workforce. However, there was variation across health care occupations. For example, while African American workers represented 25.2 percent of LPNs and LVNs and 10.5 percent of registered nurses, they represented only 1.5 percent of veterinarians and less than one percent of chiropractors. Asian workers, who were 5.7 percent of the total workforce, were only 2.2 percent of emergency medical technicians (EMTs) and paramedics, but were 21.6 percent of physicians and surgeons. Workers of Hispanic or Latino ethnicity made up 15.6 percent of the total U.S. workforce and were underrepresented in all health care occupations in 2013.5
Earnings and Working Condition

Earnings in health care occupations vary significantly by level of training, geographic location, and specialty area. While women represent a majority of professionals in health care occupations, there is evidence of a wage disparity. While this is likely in part a function of higher concentrations of women in lower paying occupations, there is also evidence of disparity within individual occupations.

In 2013, the median weekly earnings for women working as physicians and surgeons were 71.7 percent of those for male physicians and surgeons. In all but three professional health care and technical occupations, for which data are available, the median weekly earnings reported by men were between 10 and 30 percent higher than those reported by women in the same occupations. Only among diagnostic related technologists and technicians, EMTs and paramedics, and health practitioner support technologists and technicians were the weekly median wages for men and women closer; men’s wages for these professions were roughly five percent higher than for women.6

In 2013, mean annual earnings for physicians and surgeons ranged from $170,530 for pediatricians to $235,070 for anesthesiologists. In nursing, the median annual earnings for registered nurses were $66,220, while those for advanced practice nurses such as nurse anesthetists, nurse midwives, and nurse practitioners were significantly higher: $151,090,
Wages for technicians are generally lower, in part, because these occupations require fewer years of training. Median wages for LPNs and LVNs in 2013 were $41,920, and those for EMTs and paramedics were $31,270.7

While some health care professionals enjoy a high degree of autonomy and respect, other occupations suffer from understaffing, high rates of occupational injury, and significant occupational stress. Health care professional occupations have a higher than average rate of absence from work due to injury or illness,8 and nursing care facilities and hospitals report very high incident rates of non-fatal workplace injury or illness.9 While the majority of health care professionals report they have health insurance coverage, many do not. In 2011, almost 12 percent of EMTs and paramedics, and nearly 16 percent of LPNs and LVNs reported they had no health insurance coverage. Among LPNs and LVNs, 32 percent reported they did not have insurance purchased through and employer or union.10

In addition to exposure to illness or risk of injury from lifting patients or heavy equipment, some health care occupations may put employees at risk of exposure to caustic chemicals or radiation. Many also spend much of the day on their feet adding to physical strain.11

In 2014, workers in many health care occupations were likely to report working a standard week (35-40 hours). Over half of all registered nurses report a standard workweek. Amongst dental hygienists, more than 54 percent reported usually working less than 35 hours per week. EMTs and paramedics, and physicians and surgeons were likely to report long workweeks, with a large percentage reporting usually working more than 50 or 60 hours each week.12 While some in health care occupations work typical weekday hours, hospitals and other patient care facilities are usually open 24 hours a day, requiring many health care professionals to work nights and weekends.13

The Nursing Occupations

The number of registered nurses (RNs) and advanced practice nurses has risen steadily over the last decade. From 2003-2013 the number rose by more than a half-million employees to 2,816,150 in 2013.14 In 2012, the BLS began reporting on registered nurses and advanced practice nurses separately. RNs represented the majority, at 2,661,890; however, there were also approximately 35,430 nurse anesthetists, 5,460 nurse midwives, and 113,370 nurse practitioners. These advanced practice nurses often have higher levels of education and training and earn higher salaries.15

Controlling for inflation, RNs and advanced practice nurses’ wages have risen steadily over the last decade. Median real wages for RNs was $66,220 in 2013, compared to $62,733.80 in 2003.16 Most RNs hold either an associate’s or bachelor’s degree, while the vast majority of advanced practice nurses hold at least a master’s degree.17

LPNs and LVNs, occupations that typically require training and licensing, but not necessarily a degree, have not fared as well. The number of LPNs and LVN rose steadily from 2003 to 2008; however, the number of workers in these occupations and their real wages, have
stagnated since then.\textsuperscript{18} While the majority of RNs (58 percent) work in hospitals, most LPNs and LVNs (approximately 30 percent) work in nursing care facilities. Both RNs and LPNs and LVNs also work in physicians’ offices, home health care, and other industries.\textsuperscript{19}

All nurses must obtain a license to practice. While the eligibility requirements and steps to licensure vary by state, all must pass the National Council Licensure Examination (NCLEX). The National Council of State Boards of Nursing, the non-profit organization that maintains the NCLEX, reported that in 2014, approximately 82.8 percent of examinees educated in the U.S. passed the NCLEX-RN on the first attempt, and 46 percent of repeaters passed that year.\textsuperscript{20}

On the NCLEX-PN, the exam for LPN and LVN applicants, 83 percent of U.S.-educated applicants passed on their first attempt and 30 percent of repeaters passed in 2014. While a high percentage of U.S.-educated nurse pass on their first or second attempt, the rates are lower for those educated outside of the U.S. On the NCLEX-RN 29 percent of internationally educated applicants passed on their first attempt and only 17 percent of repeaters passed. On the NCLEX-PN, 51 percent of internationally educated applicants passed on the first attempt and 15 percent of repeaters passed in 2014.\textsuperscript{21}

While employment for RNs and advanced practice nurses has risen in the last decade, and the BLS projects faster than average growth in these occupations in the decade to come, some nurses and recent graduates still face a difficult job market. Some sources, such as the American Association of Colleges of Nursing, report a significant shortage in trained nurses, and argue that an aging general population and aging nursing workforce means demand for nurses will continue to outpace supply.\textsuperscript{22} However, a 2012 survey of recent nursing school graduates conducted by the National Student Nurses’ Association found that within four months of graduation as much as 34 percent of responders had not found a job as a RN. Of these, 77 percent reported either

\begin{figure}
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\includegraphics[width=\textwidth]{chart.png}
\caption{Educational attainment of nurses, September 2014}
\end{figure}

\begin{itemize}
\item [\textbullet] H.S. diploma or less
\item [\textbullet] Associate's degree
\item [\textbullet] Master's degree
\item [\textbullet] Professional degree beyond a bachelor's degree
\item [\textbullet] Doctorate degree
\item [\textbullet] Some college, no degree
\item [\textbullet] Bachelor's degree
\end{itemize}

they could not find work in their specialty or they could not find an opening for recent RN graduates.23

While employment in the nursing profession continues to grow, so too does the number of graduates. For example, in the 2000-2001 academic year, colleges and universities conferred 40,278 associate’s degrees in nursing (RN and others). By 2011-2012, that number had more than doubled to 86,496.24 Further, tough economic times have forced lay-offs and closures in hospitals and other care facilities, which means experienced nurses and recent graduates, may find themselves in competition for jobs.

Nursing occupations are often rewarding, yet taxing, positions. While employment for nurses may be approaching equilibrium, i.e. the number of jobs available and the number of qualified nurses are roughly equal, some reports point to evidence that hospitals and other health care facilities are not hiring enough nurses to provide adequate patient care. Research suggests that understaffing in hospitals is associated with a higher rate of errors in patient care.25 Unions and professional organizations representing nurses such as the American Federation of Teachers (AFT), count issues of understaffing as central to ensuring quality patient care.

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**Physicians and Surgeons**

Many physicians and surgeons, including anesthesiologists, family and general practitioners, internists, obstetricians and gynecologists, pediatricians, psychologists, and surgeons, among other specialties, work in private offices. However, increasing numbers are employed professionals working for hospitals, group practices, and other health care facilities.26 Estimates for the number of physicians vary based on the source of the data. The BLS’s Occupational Employment Statistics (OES) estimates, which do not included self-employed physicians and surgeons, reported there were 623,380 physicians employed in the U.S. in 2013, while the Current Population Survey (CPS), which includes self-employed doctors, reported approximately 934,000 physicians and surgeons.27

According to the OES, there were approximately 198,160 primary care physicians in 2013, which includes 120,860 family and general practitioners, 46,410 internists, and 30,890 pediatricians.28 While the number of pediatricians rose slightly from 2003-2013 from 26,910 to 30,890, the number of general internists fell during that time. The number of family and general practitioners fell dramatically following the 2008 recession but has recovered and is now higher than pre-recession numbers.29

Wages for primary care doctors are often lower than their colleagues in other specialized fields under the category of physicians and surgeons. However, the debt burden from the extensive training required of primary care physicians is the same as those in higher paid specialties. The Association of American Medical Colleges estimates that among 2014 graduates, 84 percent had education debt from medical school, with a median of $180,000. Thirty-four percent of graduates also had debt from their premedical education, with a median of $20,000.30
There is some indication of a spatial mismatch in access to both primary care doctors and specialists. Areas of both high poverty and low-population density often struggle with access to quality care. A study by the U.S. Department of Agriculture found that rural areas have fewer primary care and specialty doctors per 10,000 people, which may result in decreased utilization of preventative services and lower overall quality of care.31

The National Health Services Corps, part of the U.S. Department of Health and Human Services, offers loan forgiveness and repayment assistance for physicians and other medical professionals agreeing to work for a number of years in identified high needs areas and facilities to help overcome some of this spatial mismatch and encourage students to enter primary care.32

### Health Care Technicians, Technologists, and Other Health Care Professionals

In 2013, there were over 2.8 million health care technicians and technologists. These professionals operate technical equipment, assist health practitioners in administering patient care, help make medical diagnoses, and maintain patient records.33

Median hourly wages for technologists and technicians in most occupations have remained relatively stagnant since 2003, keeping pace with inflation, but not growing beyond cost of living changes. Nearly all professional and technical health care occupations grew from 2003-2013, and the BLS projects growth in years to come; however, it is unclear for how long the current pace of growth is sustainable, or at what point the demand and supply of workers in the field will reach equilibrium.

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**Mean earnings for physicians and surgeons by specialty, 2013**

<table>
<thead>
<tr>
<th>Specialty</th>
<th>Mean earnings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anesthesiologists</td>
<td>$235,070</td>
</tr>
<tr>
<td>Family and general practitioners</td>
<td>$183,940</td>
</tr>
<tr>
<td>Internists</td>
<td>$188,440</td>
</tr>
<tr>
<td>Obstetricians and gynecologists</td>
<td>$212,570</td>
</tr>
<tr>
<td>Pediatricians</td>
<td>$170,530</td>
</tr>
<tr>
<td>Psychiatrists</td>
<td>$182,660</td>
</tr>
<tr>
<td>Surgeons</td>
<td>$233,150</td>
</tr>
<tr>
<td>All other physicians and surgeons</td>
<td>$187,200</td>
</tr>
</tbody>
</table>

Union Density

Union density in the health care professions varies by occupation. Speech and language pathologists (24.9 percent), emergency medical technicians and paramedics (24 percent), occupational therapists (21.6 percent), and registered nurses (16.5 percent) had the highest rates of union density in 2013. Veterinarians, physician assistants, dentists, dental hygienists, health diagnosing and treating practitioners, and opticians (dispensing) had the lowest rates of union density with less than five percent membership in 2013.  

For most occupations, union membership translated to higher wages. Registered nurses who were union members reported a median hourly wage 25 percent higher than non-union RNs. For LPNs and LVNs union membership was associated with 13.5 percent higher hourly wages, and EMT and paramedic union members reported 22.8 percent higher hourly wages than non-union employees.
Many unions represent health care workers, including the American Federation of Government Employees, the American Federation of Teachers, the International Association of Fire Fighters, the Office and Professional Employees International Union, the Retail, Wholesale and Department Store Union, and United Steelworkers. These unions work to negotiate contracts and advocate policy to ensure safe working conditions and fair pay for employees in these occupations, which helps protect their professional autonomy and enable them to provide the high-quality of care Americans deserve.

To read DPE’s fact sheet Impact of Nurse-to-Patient Ratios: Implications of the California Nurse Staffing Mandate for Other States; to learn more about the nursing profession; to read DPE’s fact sheet The U.S. Health Care System in International Perspective; or for more information about professional and technical workers, visit the DPE website, www.dpeaflcio.org.

The Department for Professional Employees, AFL-CIO (DPE) comprises 22 AFL-CIO unions representing over four million people working in professional, technical and administrative support occupations. DPE-affiliated unions represent: teachers, college professors, and school administrators; library workers; nurses, doctors, and other health care professionals; engineers, scientists, and IT workers; journalists and writers, broadcast technicians and communications specialists; performing and visual artists; professional athletes; professional firefighters; psychologists, social workers, and many others. DPE was chartered by the AFL-CIO in 1977 in recognition of the rapidly growing professional and technical occupations.

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2 Ibid.


4 Ibid.

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10 U.S. Census Bureau, DataFerrett, American Community Survey, Public Use Microdata, 2011.


16 Ibid.

17 Ibid.

18 Ibid.

19 Ibid.

20 Ibid.

21 Ibid.


35 Ibid.