



## Healthcare jobs you can get without a bachelor's degree

*By Emily Richards Rolan*

Many people think careers in healthcare require a lot of education. But the healthcare field has opportunities for workers with all levels of education. In fact, more than half of healthcare employment in 2014 was in occupations that typically need less than a bachelor's degree for entry. In this **Beyond the Numbers**, we'll look at some of these occupations and highlight those with a bright employment outlook.

### Projections for employment in healthcare

Every 2 years the U.S. Bureau of Labor Statistics (BLS) releases 10-year employment projections for the nation. The latest projections show total employment increasing 6.5 percent from 2014 to 2024, resulting in 9.8 million net

new jobs.<sup>1</sup> Healthcare support occupations and healthcare practitioners and technical occupations are projected to be the two fastest-growing occupational groups, adding a combined 2.3 million jobs, or about 1 in 4 new jobs.<sup>2</sup>

Several factors are driving the strong growth for healthcare jobs, including the aging of the baby-boom generation and increasing life expectancies. The average life expectancy in 2014 was 78.8 years, up from 75.4 years in 1990 and 69.7 years in 1960.<sup>3</sup> People age 55 and older are projected to make up 38.2 percent of the civilian noninstitutional population in 2024, up from a share of 34.2 percent in 2014 and 28.4 percent in 2004.<sup>4</sup> Older people typically have more medical problems than younger people, and they will need healthcare services to remain healthy and active.

The American Hospital Association estimates that by 2030, 6 out of 10 baby boomers (who will all be age 65 or over) will have more than one chronic condition.<sup>5</sup> The Centers for Disease Control and Prevention (CDC) notes that “lack of exercise or physical activity, poor nutrition, tobacco use, and drinking too much alcohol cause much of the illness, suffering, and early death related to chronic diseases and conditions.”<sup>6</sup> The CDC estimates that 86 percent of healthcare spending in 2010 was for patients with one or more chronic diseases.<sup>7</sup> Healthcare workers will be needed to care for people with these conditions.

With the passage of the Affordable Care Act (ACA), more people have access to healthcare services. The Department of Health and Human Services estimated in March 2016 that 20 million people had gained health insurance coverage since the ACA became law in 2010.<sup>8</sup> The ACA incentivizes health insurance by charging a fee to those who are not covered when they file federal taxes. The fee was first charged in 2014, and the fee amount has since increased.<sup>9</sup> In terms of healthcare employment, a recent study estimates that by 2022, 40 percent of new jobs in the healthcare sector will be related to demand stemming from the ACA.<sup>10</sup>

These factors—an aging population, longer life expectancies, growing rates of chronic conditions, and greater access to health insurance—are expected to affect employment for every healthcare occupation discussed in this article.

## Overview of typical entry-level pathways

The strong demand for healthcare services should lead to many opportunities for job seekers who have the appropriate education, training, and work experience. Occupations have typical pathways for entry, but people working in the same occupation may have different levels of preparation. For the job profiles that follow, BLS economists have determined the typical path for entry, along with any regulatory requirements that must be met, and have assigned one of the following eight educational categories to each occupation:<sup>11</sup>

- Doctoral or professional degree
- Master’s degree
- Bachelor’s degree
- Associate’s degree
- Postsecondary nondegree award
- Some college, no degree
- High school diploma or equivalent
- No formal educational credential

Not all jobs in a broad field like healthcare require the same level of education or training for entry. Healthcare occupations are available to jobseekers who have various levels of educational preparation, including several less-than-bachelor's degree pathways. These include associate's degree, postsecondary nondegree award, high school diploma or equivalent, and no formal educational credential needed to enter the occupation.

An associate's degree usually requires at least 2 years but not more than 4 years of full-time academic study beyond high school. Postsecondary nondegree award programs lead to a certificate or other award from an educational institution, but not a degree; some programs may last only a few weeks while others may last 1 or 2 years. The largest concentration of healthcare jobs in any education category in 2014 was in occupations that typically require a postsecondary nondegree award for entry. Some occupations, particularly those that do not require postsecondary education, also need additional preparation such as on-the-job training and related work experience.

## Regulation of healthcare occupations

Most healthcare occupations are regulated by states, which means they require a license, certification, or registration. Licenses are typically issued by states to ensure that workers meet specific legal requirements to practice in an occupation. States have regulatory boards that set standards for the practice of a licensed occupation, but rules and eligibility may vary from state to state for the same occupation. Certifications may be required or optional to show skill competency. Certifications are usually offered by professional organizations, and some licenses are tied to the certification requirements. Registrations are typically required and issued by state or local governments. Workers seeking registration may need to be licensed or certified. In most cases, workers must pay fees to receive or maintain their registration. Candidates should check with the health board in their state, as requirements vary by state. Even if a state does not require a certification, employers may prefer that candidates be certified and a certification may therefore increase a candidate's chances of securing employment.

## Healthcare occupations that typically need less than a bachelor's degree for entry

Candidates can enter certain healthcare occupations with less than a bachelor's degree, such as those jobs that provide tests, scans, or patient care; assist with therapy and dental care; and keep medical records. The following sections include information on what these occupations do, the typical pathways for entry, projected employment growth, and what workers earn. For more detail on these occupations and hundreds of others, visit the *Occupational Outlook Handbook (OOH)*, the government's premier source for career information.<sup>12</sup>

### Diagnostic imaging

The following healthcare occupations create diagnostic images, which are pictures of internal body structures that help healthcare professionals understand what's going on inside your body.

**Cardiovascular technologists and technicians** create images, conduct tests, or assist with surgical procedures involving the heart. They may specialize in using ultrasound equipment to examine a patient's heart. Others monitor patients' heart rates and help physicians in diagnosing problems with patients' hearts or monitor patients during open-heart surgery. Still others specialize in electrocardiogram (EKG) testing.

**Diagnostic medical sonographers** operate equipment to create diagnostic images and conduct tests, prepare patients for tests, and monitor them throughout imaging procedures. They read the images, identify abnormalities, and provide test results to doctors. They may specialize in areas such as obstetrics or *musculoskeletal*.

**Radiologic technologists**, also known as *radiographers*, perform diagnostic imaging examinations, such as x rays and computed tomography (CT) imaging, on patients. They prepare patients for procedures, which may include preparing a mixture for the patient to drink that allows the soft issue to be viewed on the images. They operate equipment to take images and work with physicians to evaluate the images.

**MRI technologists** operate magnetic resonance imaging (MRI) scanners to create diagnostic images. They prepare patients for procedures by injecting them with contrast dyes so that the images will show up on the scanner. Technologists position the patient and the equipment to get the correct image and review images with a physician.

Each occupation in this group typically requires an associate’s degree for entry. MRI technologists often begin their careers as radiologic technologists and may become MRI techs after several years of work experience. Employers typically prefer to hire certified candidates, even in states where these workers are not regulated. Few states require a license or certification for cardiovascular technologists and technicians, diagnostic medical sonographers, or MRI technologists. However, most states require radiologic technologists to be licensed or certified.

As imaging technology evolves, medical facilities will continue to use ultrasound to replace more invasive, costly procedures. Ultrasound is often less expensive than other imaging technologies, such as x rays and MRIs, and often is used as a first-line tool for diagnosis. Occupations that use ultrasound equipment, including cardiovascular technologists and technicians (22.2 percent growth) and diagnostic medical sonographers (26.4 percent growth), will continue to be needed in healthcare settings to provide an alternative to radiation imaging techniques. Demand for these workers is reflected in their faster-than-average projected growth rate from 2014 to 2024. However, employment growth of radiologic technologists (8.7 percent) and MRI technologists (10.3 percent) may be tempered, as many medical facilities and third-party payers encourage the use of less costly, noninvasive imaging technologies such as ultrasound.

Median annual wages for occupations in this group range from about \$55,000 to about \$69,000, compared with the median for all occupations of \$36,200. (See table 1.)

**Table 1. Employment change for selected diagnostic imaging occupations, projected 2014–24**

Occupation	Employment				Typical education needed for entry	2015 median wage
	Number, in thousands		Change, 2014–24			
	2014	2024	Number	Percent		
Diagnostic medical sonographers	60.7	76.7	16.0	26.4	Associate's degree	\$68,970
Magnetic resonance imaging technologists	33.6	37.1	3.5	10.3	Associate's degree	\$67,720
Radiologic technologists	197.0	214.2	17.2	8.7	Associate's degree	\$56,670
Cardiovascular technologists and technicians	52.0	63.5	11.5	22.2	Associate's degree	\$54,880

See footnotes at end of table.

Note: Wage data are for wage and salary workers only. The median annual wage for all occupations was \$36,200 in May 2015.  
Source: U.S. Bureau of Labor Statistics.

## Therapy services

Several healthcare occupations that provide therapy services typically need less than a bachelor's degree for entry.

**Radiation therapists** treat cancer and other diseases in patients by administering radiation treatments. They x ray patients to find the exact location for treatment, operate machines to ensure the correct dose of radiation, and monitor the patient during treatment.

Radiation therapists typically need an associate's degree. Some candidates may choose to earn a bachelor's degree in radiation therapy. Still others may find employment after completing a 12-month certificate program. Most states require radiation therapists to be licensed or certified. Requirements vary by state, but often include passing a national certification exam.

**Respiratory therapists** care for patients who have trouble breathing. They examine patients, develop treatment plans with doctors, perform diagnostic tests, and teach patients how to use treatments and equipment.

Respiratory therapists also typically need an associate's degree to enter the occupation. All states except Alaska require licensure for respiratory therapists. Although requirements vary by state, they typically include passing a state or professional certification exam.

**Occupational therapy (OT) assistants** and **physical therapist (PT) assistants** help occupational therapists and physical therapists care for patients. Assistants observe patients during therapy, help them with specific exercises or tasks, and report patient progress to the therapists. They also may teach patients how to use exercise equipment or assistive devices.

OT assistants and PT assistants typically enter the occupations with an associate's degree. All states require PT assistants to get a license or certification, and most states require OT assistants to be licensed or registered. Licensure typically requires the completion of an accredited education program, completion of all fieldwork requirements, and passing an exam.

**Massage therapists** treat clients by using touch to manipulate the muscles and other soft tissues of the body. They meet with clients to discuss concerns and desired results, evaluate patients to find tense or painful areas of the body, and they may promote relaxation and general wellness.

Massage therapists typically need a postsecondary nondegree award. Programs generally include at least 500 hours or more of study and experience, although specific requirements vary by state. Most states regulate massage therapy. Regulations usually require therapists to get a license or certification and pass an exam.

**Occupational therapy (OT) aides** and **physical therapist (PT) aides** help patients move to and around therapy areas and they clean treatment areas. They also may do clerical tasks, such as answering phones and scheduling patient appointments.

OT and PT aides typically need a high school diploma to qualify for the job and on-the-job training lasting 1 month or less. Aides are not required to be licensed.

Employment of radiation therapists is projected to grow 14 percent from 2014 to 2024. Faster-than-average employment growth will be driven by the aging population because the risk of cancer increases as people age. And continued advancements in the detection and treatment of cancer may also lead to greater demand for radiation therapy.

The second-largest occupation in this group, respiratory therapists, is projected to increase from 120,700 jobs in 2014 to 135,500 jobs in 2024. A growing emphasis on reducing hospital readmissions may result in more demand for respiratory therapists in nursing homes and in doctors' offices.

OT and PT assistants are projected to grow 42.7 percent and 40.6 percent, respectively—the fastest growth rates of all occupations in this article and the second- and third-fastest growing occupations overall. Healthcare providers—especially long-term care facilities such as nursing homes—are expected to hire more OT and PT assistants to reduce the cost of therapy services. After a therapist has evaluated a patient and designed a treatment plan, the assistants can provide many aspects of the treatment, with therapist supervision. Employment of OT and PT aides is also projected to grow faster than average as these workers will be needed to perform support services in many therapy environments.

As more states adopt licensing requirements and standards for massage therapists, massage is likely to be more widely accepted as a way to treat pain and improve overall wellness. As healthcare providers come to understand the benefits, massage is likely to be included in more treatment plans. However, demand in healthcare settings may be tempered by limited insurance coverage for massage services. Employment of massage therapists is projected to grow 21.6 percent from 2014 to 2024, with the addition of 36,500 new jobs.

Radiation therapists earned the highest median annual wage of any occupation in this article (\$80,220). Respiratory therapists, PT assistants, and OT assistants earn a median annual wage of about \$55,000 to \$58,000. OT aides and PT aides typically earn about one-half of the median annual wage earned by assistants. (See table 2.) Most massage therapists earn a combination of wages and tips; the wages in table 2 are for massage therapists on establishment payrolls. Nearly half of massage therapists were self-employed in 2014.

**Table 2. Employment change for selected therapy occupations, projected 2014–24**

Occupation	Employment				Typical education needed for entry	2015 median wage
	Number, in thousands		Change, 2014–24			
	2014	2024	Number	Percent		
Radiation therapists	16.6	18.9	2.3	14.0	Associate's degree	\$80,220
Occupational therapy assistants	33.0	47.1	14.1	42.7	Associate's degree	\$57,870
Respiratory therapists	120.7	135.5	14.9	12.3	Associate's degree	\$57,790
Physical therapist assistants	78.7	110.7	31.9	40.6	Associate's degree	\$55,170
Massage therapists	168.8	205.2	36.5	21.6	Postsecondary nondegree award	\$38,040
Occupational therapy aides	8.8	11.6	2.7	30.6	High school diploma or equivalent	\$27,800
Physical therapist aides	50.0	69.5	19.5	39.0	High school diploma or equivalent	\$25,120

See footnotes at end of table.

Note: Wage data are for wage and salary workers only. The median annual wage for all occupations was \$36,200 in May 2015. Most massage therapists earn a combination of wages and tips, and the OES wage data include tips. Nearly half of massage therapists were self-employed in 2014; the wages in table 2 do not include self-employed workers.

Source: U.S. Bureau of Labor Statistics.

## Patient care

Several patient care occupations typically need less than a bachelor's degree for entry. Five of the jobs listed below—EMTs and paramedics, surgical technologists, LPNs or LVNs, nursing assistants, and medical assistants—typically require a postsecondary nondegree award for entry.

**Emergency medical technicians (EMTs) and paramedics** respond to emergency calls and care for the sick or injured. They assess a patient's condition, determine the course of treatment, provide first-aid or life support care, and transfer patients to hospitals or other healthcare facilities. They also may drive an ambulance. The specific responsibilities depend on their level of certification: EMT, advanced EMT, or paramedic. Paramedics may complete additional tasks, such as interpreting EKGs or administering IV medications.

Postsecondary nondegree award programs for EMTs can be completed in 1 year or less, though more advanced training may take up to 2 years. Because of their broader scope of practice, paramedics may need an associate's degree. All states require EMTs and paramedics to be licensed. State requirements vary. Some require candidates to pass a state-specific exam, though in most states a candidate who passes the written and practical portions of the [National Registry of Emergency Medical Technicians](#) (NREMT) exam will qualify for licensure.

**Surgical technologists**, also called *operating room technicians*, assist in surgical operations. They prepare patients for surgery, sterilize equipment, pass instruments to surgeons during a procedure, and move patients to recovery rooms.

Although surgical technologists typically need a postsecondary certificate or diploma to enter the occupation, some candidates choose to earn an associate's degree. Programs are available in community colleges, vocational schools, and some hospitals. Although only a small number of states regulate surgical technologists, several organizations offer certification. Earning certification can be beneficial in finding employment.

**Licensed practical and licensed vocational nurses (LPNs/LVNs) and nursing assistants** provide basic patient care. They check blood pressure, help patients dress or bathe, and report patients' status or concerns to registered nurses. LPNs/LVNs often can perform more sophisticated tasks than nursing assistants, depending on the work setting and the state in which they work.

LPN and nursing assistant programs are found in technical schools, community colleges, and sometimes high schools or hospitals. After completing a state-approved educational program, both LPNs/LVNs and nursing assistants must pass an exam to become licensed. Prospective LPNs and LVNs must take the National Council Licensure Examination (NCLEX-PN) and nursing assistants take a state competency exam.

**Medical assistants** perform clinical tasks such as checking vital signs and giving injections. They also perform administrative duties, including scheduling appointments or entering patient information into medical records.

Although there are no formal educational requirements in most states, most medical assistants enter the occupation with a postsecondary nondegree award. Some medical assistants may enter the occupation through a combination of a high school diploma and on-the-job training, though this path is less common. Certifications are

available from several organizations, though most states do not require them. Employers typically prefer to hire candidates who have completed formal education and hold certification.

**Orderlies** clean medical equipment, stock supplies, and help patients move through a healthcare facility.

Orderlies typically need a high school diploma. Orderlies learn how to perform their jobs through on-the-job training (lasting less than 1 month) and usually are required to obtain CPR certification. Orderlies do not need a state license.

**Home health aides** assist people, often older adults, with activities of daily living. They also may do some housekeeping tasks, such as laundry and grocery shopping. In some states, home health aides give a client medication or check the client's vital signs under the direction of a nurse or other healthcare practitioner.

Home health aides is the only occupation in this article that does not typically require any formal education. Home health aides learn how to perform their jobs through a short period of on-the-job training (lasting less than 1 month) and usually are required to obtain CPR certification. Home health aides who work for agencies that receive reimbursement from Medicare or Medicaid must complete a minimum level of training and pass a competency evaluation to be certified. Additional requirements, such as on-the-job training or educational programs, vary by state.

These patient care occupations have high employment. Their size, combined with faster-than-average growth, accounts for several of the largest projected employment changes of any occupations covered in this article. Together, these seven occupations are projected to add 945,600 new jobs from 2014 to 2024.

The aging population is driving the demand for the services provided by these occupations. LPNs/LVNs and nursing assistants will be needed to provide patient care, particularly in long-term care settings where they treat the elderly. More medical assistants will be needed to perform routine administrative and clinical duties in primary care practices and in group practices, allowing physicians to do more patient care services. In addition, employment of home health aides, the fastest-growing occupation in this group at 38.1 percent (and projected to add the third-most jobs of all occupations), is supported by patient preferences and shifts in federal funding that favor in-home or community-based care. Many people find aging in their own homes to be more comfortable and less costly than living in a nursing home. Despite this preference nursing assistants will continue to be needed to care for elderly clients and people with disabilities who live in long-term care facilities, as well as in home health and community-based settings. Employment of nursing assistants is projected to add 262,000 jobs by 2024, the sixth-most jobs of all occupations in the U.S. economy.

Older people typically need more operations and experience more age-related health emergencies than younger people. Advances in medical technology have made surgery safer and more operations are being performed to treat illnesses and injuries. Employment of surgical technologists is expected to grow 14.8 percent from 2014 to 2024, as more surgical technologists will be needed to assist surgeons during operations. Emergencies, such as car accidents and acts of violence, will continue to create demand for first responders. Employment of EMTs and paramedics is projected to grow 24.2 percent by 2024, much faster than the average for all occupations.

Most occupations in this group earned a median annual wage in 2015 that was lower than the median annual wage for all occupations, \$36,200. Two occupations in this group earned more: surgical technologists earned a



median annual wage of \$44,330, and LPNs/LVNs earned \$43,170. EMTs and paramedics earned a median annual wage of \$31,980 in May 2015. Unpaid volunteer positions also exist, particularly in rural areas. (See table 3.)

**Table 3. Employment change for selected patient care occupations, projected 2014–24**

Occupation	Employment				Typical education needed for entry	2015 median wage
	Number, in thousands		Change, 2014–24			
	2014	2024	Number	Percent		
Surgical technologists	99.8	114.5	14.7	14.8	Postsecondary nondegree award	\$44,330
LPNs/LVNs	719.9	837.2	117.3	16.3	Postsecondary nondegree award	\$43,170
EMTs and paramedics	241.2	299.6	58.5	24.2	Postsecondary nondegree award	\$31,980
Medical assistants	591.3	730.2	138.9	23.5	Postsecondary nondegree award	\$30,590
Nursing assistants	1492.1	1754.1	262.0	17.6	Postsecondary nondegree award	\$25,710
Orderlies	53.0	58.8	5.8	10.9	High school diploma or equivalent	\$25,580
Home health aides	913.5	1261.9	348.4	38.1	No formal educational credential	\$21,920

Note: Wage data are for wage and salary workers only. The median annual wage for all occupations was \$36,200 in May 2015. Unpaid volunteer EMT positions also exist, particularly in rural areas.  
Source: U.S. Bureau of Labor Statistics.

## Dental care

Dentists employ dental hygienists and dental assistants to work with patients.

**Dental hygienists** clean teeth, take x rays, assess patients’ oral health, and teach patients about oral hygiene techniques.

Hygienists typically need an associate’s degree, which takes about 3 years to complete. Programs are available from community colleges, technical schools, and universities. Every state requires dental hygienists to be licensed. Common requirements include a degree from an accredited program and passing an exam. Candidates should contact their state boards for specific requirements.

**Dental assistants** prepare the treatment area, sterilize dental instruments, hand instruments to dentists during a procedure, schedule appointments, and help patients with billing and payment.

A 1-year postsecondary nondegree award is the most common path to entering the dental assistant occupation. However, some candidates may choose to complete an associate’s degree, which takes longer. Other assistants may have no postsecondary education and learn the job through on-the-job training, though this path is less common. Some states regulate dental assistants and require specific education and training.

Ongoing research linking oral health to general health will likely increase the demand for preventative dental services. The National Institutes of Health explains that “studies have demonstrated an association between periodontal diseases and diabetes, cardiovascular disease, stroke, and adverse pregnancy outcomes.”<sup>13</sup> As a result, more dental hygienists and dental assistants will be needed to meet the projected growing demand for dental services. Both are projected to grow much faster than average at 18.6 percent and 18.4 percent, respectively.

Dentists will continue to hire hygienists and assistants to do more routine tasks, allowing the dentists to see more patients in their practice. In addition, cosmetic dental services have become increasingly popular.

Dental hygienists earned a median annual wage of \$72,330 in May 2015—nearly double the median annual wage for all occupations. Hygienists earned the second-highest median annual wage of any occupation discussed in this article. Dental assistants earned a median annual wage of \$35,980, or about one-half the median annual wage of hygienists. (See table 4.)

**Table 4. Employment change for selected dental care occupations, projected 2014–24**

Occupation	Employment				Typical education needed for entry	2015 median wage
	Number, in thousands		Change, 2014–24			
	2014	2024	Number	Percent		
Dental hygienists	200.5	237.9	37.4	18.6	Associate's degree	\$72,330
Dental assistants	318.8	377.4	58.6	18.4	Postsecondary nondegree award	\$35,980

Note: Wage data are for wage and salary workers only. The median annual wage for all occupations was \$36,200 in May 2015.  
Source: U.S. Bureau of Labor Statistics.

## Laboratory services

Two occupations that provide laboratory services typically need less than a bachelor’s degree for entry.

**Medical and clinical laboratory technicians** collect samples of body fluids, such as blood, urine, or tissue, to perform tests. They perform tests, analyze samples, and log results.

Medical and clinical laboratory technicians typically need an associate’s degree, though some candidates enter the occupation after completing a 1-year certificate program. Some states require technicians to be licensed. Requirements for licensure vary. Some states require candidates to earn certification. Even in states where certification is not required, employers typically prefer to hire candidates who are certified.

**Phlebotomists** draw blood for tests, research, or blood donations. They label drawn blood; enter patient information in a database; and maintain needles, blood vials, and other instruments.

Phlebotomists typically enter the occupation with a postsecondary nondegree award from a community college, vocational school, or technical school. Programs typically take less than 1 year to complete. Less commonly, candidates may enter the occupation with a high school diploma and on-the-job training. Employers prefer to hire certified phlebotomists. Certification is available from several organizations.

Employment of both these occupations is projected to grow much faster than the average for all occupations. Medical and clinical laboratory technicians are projected to add 29,000 new jobs by 2024 and phlebotomists are projected to add 28,100 new jobs. Blood analysis remains an essential function in medical laboratories and hospitals. Phlebotomists and medical and clinical laboratory technicians will be needed to collect samples for analysis and diagnosis of medical conditions.

Medical and clinical laboratory technicians earned a median annual wage of \$38,970 in May 2015, higher than the median annual wage earned by phlebotomists, \$31,630. (See table 5.)

**Table 5. Employment change for selected laboratory services occupations, 2014–24**

Occupation	Employment				Typical education needed for entry	2015 median wage
	Number, in thousands		Change, 2014–24			
	2014	2024	Number	Percent		
Medical and clinical laboratory technicians	163.4	192.4	29.0	17.8	Associate's degree	\$38,970
Phlebotomists	112.7	140.8	28.1	24.9	Postsecondary nondegree award	\$31,630

Note: Wage data are for wage and salary workers only. The median annual wage for all occupations was \$36,200 in May 2015.  
Source: U.S. Bureau of Labor Statistics.

## Other technicians

**Pharmacy technicians** work under the supervision of pharmacists to dispense prescription medication. They measure amounts of medication before packaging and labeling prescriptions for customers and health professionals. They also collect patient information, accept customer payments, and process insurance claims.

Pharmacy technicians typically need a high school diploma or equivalent. They also must complete a period of on-the-job training lasting up to 1 year. The length and content of the training varies by employer. Some pharmacy technicians also may complete postsecondary education programs. Programs are offered by vocational schools or community colleges and typically take 1 year or less to complete. Most states regulate pharmacy technicians, though requirements vary. Candidates should consult their state Boards of Pharmacy for specific regulations, such as education or certification requirements, exams, or fees.

**Medical records and health information technicians** organize and manage health information data. They review patients’ records for completeness and accuracy, track patient outcomes, assign reimbursement codes to records, and maintain confidentiality of patients’ records. The increasing adaptation and use of electronic health records (EHRs) will continue to change the job responsibilities of health information technicians. Technicians who work in environments that use EHR software must electronically record patient information.

Medical records and health information technicians typically need a postsecondary certificate in health information technology. Less commonly, some complete an associate’s degree program. Another alternative path would be entering the occupation with a high school diploma and work experience in a healthcare setting. Technicians must learn medical terminology, classification and coding systems, and security and privacy practices. Employers may prefer to hire technicians who have certification in a specialty, such as medical coding or maintaining cancer patient registries.

As people age, they tend to use more prescription medicines. However, on average, Americans are using more prescription medications, and advances in pharmacological research will allow more prescription medications to be available to fight illnesses and diseases. According to the Centers for Disease Control, nearly 1 in 2 Americans—47.3 percent of the population—used a prescription drug in the past 30 days during the 2009–2012 period, up from 39.1 percent during the 1988–1994 period. The percent of the population using three or more drugs within the past 30 days nearly doubled during that most recent period, from 11.8 percent in the 1988–1994 period to 20.6 percent in the 2009–2012 period.<sup>14</sup> Pharmacy technicians are projected to add about 34,700 new jobs by 2024, as more technicians will be needed when demand for medication grows.

The strong employment growth for pharmacy technicians also reflects changing regulations. Pharmacists can now perform more healthcare services, such as giving immunizations and consulting with patients to manage their medications. As pharmacists perform more patient care activities there will be a greater demand for pharmacy technicians to perform tasks such as preparing medications.

Medical records and health information technicians are projected to add 29,000 jobs by 2024. Technicians will be needed as the aging population requires more medical services and the growing number of insured people seek medical treatment. More medical records and the widespread use of EHR by all types of healthcare providers will lead to an increased need for technicians to organize and manage information in the industry.

The median annual wage for pharmacy technicians was \$30,410 in May 2015, less than the median annual wage for all occupations (\$36,200). Medical records and health information technicians earned a median annual wage of \$37,110 in 2015, slightly more than the median annual wage for all occupations. (See table 6).

**Table 6. Employment change for other technicians, projected 2014–24**

Occupation	Employment				Typical education needed for entry	2015 median wage
	Number, in thousands		Change, 2014–24			
	2014	2024	Number	Percent		
Pharmacy technicians	372.5	407.2	34.7	9.3	High school diploma or equivalent	\$30,410
Medical records and health information technicians	188.6	217.6	29.0	15.4	Postsecondary nondegree award	\$37,110

Note: Wage data are for wage and salary workers only. The median annual wage for all occupations was \$36,200 in May 2015.  
Source: U.S. Bureau of Labor Statistics.

## Medical devices and equipment

Several occupations that can typically be entered with a high school diploma provide assistance with choosing hearing aids and corrective lenses, and another works with medical equipment.

**Hearing aid specialists** select and fit hearing aids for customers. They administer and interpret hearing tests. They also ensure that hearing instruments are working properly, and they teach customers how to use hearing aids.

**Dispensing opticians** help fit eyeglasses and contact lenses, following prescriptions from ophthalmologists and optometrists. They measure a customer’s eyes and face, help customers choose eyewear, and adjust or repair eyewear.

**Medical equipment preparers** clean and sterilize laboratory or healthcare equipment. They may prepare, install, operate, or inspect medical equipment.

Although these occupations typically need a high school diploma for entry, there are other paths. Some hearing aid specialists may enter the occupation after completing a certificate program. Those with a high school diploma may need a period of on-the-job training where they work with an audiologist. Dispensing opticians and medical equipment preparers typically need a high school diploma or equivalent for entry, along with on-the-job training. Dispensing opticians also may enter the occupation with a certificate or associate’s degree. About half of states license opticians, and licensure typically requires a formal education program or an apprenticeship and passing an

exam. Candidates should check with the licensing board in their state for specific requirements. Opticians also may choose to earn certification. Medical equipment preparers must typically complete a period of on-the-job training lasting less than 1 year in which they learn about healthcare equipment. Some candidates chose to complete vocational training or earn an associate’s degree.

The aging population will drive demand for hearing aid specialists and opticians; hearing and vision problems become more common as people age. According to the National Institutes of Health, “approximately 1 in 3 people in the United States between the ages of 65 and 74 has hearing loss, and nearly half of those older than 75 have difficulty hearing.”<sup>15</sup> Employment of hearing aid specialists is projected to grow 27.2 percent from 2014 to 2024, much faster than the average for all occupations. But because it is a small occupation, the fast growth will result in only about 1,600 new jobs over the 10-year period. As the population ages more hearing aid specialists will be needed fit and test hearing aids for customers. Similarly, a growing number of opticians will be needed to dispense eyewear as the population ages. About 17,800 new optician jobs are projected to be added to the economy by 2024. In addition, a growing proportion of opticians are expected to find employment in group medical practices as optometrists and ophthalmologists are increasingly offering glasses and contact lenses to their patients as a way to expand their businesses. Growth will be constrained by increases in productivity that allow opticians to serve more customers.

Medical equipment preparers will continue to be needed to sterilize medical and surgical equipment in hospitals and other healthcare facilities. Employment is projected to increase by 14.0 percent by 2024. Because it is a relatively small occupation, this faster-than-average growth will result in just 7,300 new jobs.

Hearing aid specialists earned a median annual wage of \$49,600 in May 2015. Dispensing opticians and medical equipment preparers earn median annual wages that are slightly less than the median annual wage for all occupations in May 2015 (\$36,200). (See table 7.)

**Table 7. Employment change for selected medical device occupations, projected 2014–24**

Occupation	Employment				Typical education needed for entry	2015 median wage
	Number, in thousands		Change, 2014–24			
	2014	2024	Number	Percent		
Hearing aid specialists	5.9	7.5	1.6	27.2	High school diploma or equivalent	\$49,600
Opticians, dispensing	75.2	93.0	17.8	23.7	High school diploma or equivalent	\$34,840
Medical equipment preparers	52.0	59.3	7.3	14.0	High school diploma or equivalent	\$33,330

Note: Wage data are for wage and salary workers only. The median annual wage for all occupations was \$36,200 in May 2015.  
Source: U.S. Bureau of Labor Statistics.

## Conclusion

Healthcare occupations are projected to grow rapidly, accounting for about 1 in 4 new jobs projected to be added to the economy from 2014 to 2024. Opportunities are available in healthcare for candidates with diverse educational backgrounds. Job seekers can better prepare themselves to enter a healthcare career by knowing the fastest-growing jobs, the education level typically needed for those jobs, and the associated duties in each occupation.

This **Beyond the Numbers** article was prepared by Emily Richards Rolen, an economist in the Office of Occupational Statistics and Employment Projections, Bureau of Labor Statistics. Email: [rolen.emily@bls.gov](mailto:rolen.emily@bls.gov), telephone: 202-691-6558.

Upon request, the information in this article will be made available to individuals who are sensory impaired. Voice phone: (202) 691-5200. Federal Relay Service: 1-800-877-8339. This article is in the public domain and may be reproduced without permission.

## RELATED ARTICLES

[Occupational employment projections to 2024](#)

[The high-tech industry, what is it and why it matters to our economic future](#)

[Household healthcare spending in 2014](#)

## NOTES

<sup>1</sup> For more information about the 2014-24 employment projections data, see the news releases and corresponding tables at <https://www.bls.gov/news.release/ecopro.toc.htm>.

<sup>2</sup> There are 23 major occupational groups within the 2010 Standard Occupational Classification (SOC) system. Two of these groups cover healthcare occupations: healthcare practitioners and technical occupations, such as nurse practitioners and physical therapists; and healthcare support occupations, such as occupational therapy assistants and home health aides. More information about the 2010 SOC major groups is available at [https://www.bls.gov/soc/2010/2010\\_major\\_groups.htm](https://www.bls.gov/soc/2010/2010_major_groups.htm).

<sup>3</sup> “Life expectancy at birth, at age 65, and at age 75, by sex, race, and Hispanic origin: United States, selected years 1900–2014,” *Health, United States, 2015 with Special Feature on Racial and Ethnic Health Disparities*, table 15 (U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, May 2015), <http://www.cdc.gov/nchs/data/hus/hus15.pdf>.

<sup>4</sup> “Civilian noninstitutional population by age, gender, race, and ethnicity,” Employment Projections program, table 3.2 (U.S. Bureau of Labor Statistics, December 2015), <https://www.bls.gov/emp/tables/civilian-noninstitutional-population.htm>.

<sup>5</sup> The baby boomer generation consists of people born between 1946 and 1964. “Baby Boomers to Challenge and Change Tomorrow’s Health Care System,” press release (American Hospital Association, 2007), <http://www.aha.org/presscenter/pressrel/2007/070508-pr-boomers.shtml>.

<sup>6</sup> “Chronic Diseases: The Leading Causes of Death and Disability in the United States,” Chronic Diseases Overview (Centers for Disease Control and Prevention, February 23, 2016), <http://www.cdc.gov/chronicdisease/overview/index.htm>.

<sup>7</sup> Ibid.

<sup>8</sup> “20 million people have gained health insurance coverage because of the Affordable Care Act, new estimates show,” press release (U.S. Department of Health and Human Services, March 3, 2016), <http://www.hhs.gov/about/news/2016/03/03/20-million-people-have-gained-health-insurance-coverage-because-affordable-care-act-new-estimates>.

<sup>9</sup> “If you don’t have health insurance: How much you’ll pay,” Healthcare.gov webpage (Centers for Medicare & Medicaid Services), <https://www.healthcare.gov/fees/fee-for-not-being-covered/> .

<sup>10</sup> Bianca Frogner, “The Demand for Health Care Workers Post-ACA,” *International Journal of Health Economics and Management* (March 2015).

<sup>11</sup> BLS provides information about the education, training, and work experience typically needed to enter hundreds of occupations. More information about education and training data, along with definitions, is available at <https://www.bls.gov/emp/documentation/education-training-system.htm>.

<sup>12</sup> The 2016-17 edition of the *Occupational Outlook Handbook (OOH)*, released in December 2015, includes 329 occupational profiles covering 576 detailed occupations, or about 83 percent of total employment in 2014. See <https://www.bls.gov/ooh/>.

<sup>13</sup> “Oral Health in America: A Report of the Surgeon General.” (National Institute of Dental and Craniofacial Research, September 2000), <http://nidcr.nih.gov/DataStatistics/SurgeonGeneral/sgr/chap5.htm>.

<sup>14</sup> “Prescription drug use in the past 30 days, by sex, age, race and Hispanic origin: United States, selected years 1988–1994 through 2009–2012,” *Health, United States, 2014 with Special Feature on Adults Aged 55-64*, table 85 (U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics, May 2015), <http://www.cdc.gov/nchs/data/hus/hus14.pdf>.

<sup>15</sup> “Age-Related Hearing Loss,” National Institute on Deafness and Other Communication Disorders, (National Institutes of Health, May 2016), <https://www.nidcd.nih.gov/health/age-related-hearing-loss>.

## SUGGESTED CITATION

Emily Richards Rolen, “Healthcare jobs you can get without a bachelor’s degree,” *Beyond the Numbers: Employment and Unemployment*, vol. 5, no. 16 (U.S. Bureau of Labor Statistics, November 2016), <https://www.bls.gov/opub/btn/volume-5/healthcare-jobs-you-can-get-no-bachelors-degree.htm>