



CHARTING THE COURSE II

A Coachella Valley Healthcare Workforce Needs
Assessment Update

2015

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Coachella Valley Healthcare Workforce Needs Assessment

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Introduction

The following report was commissioned by the board of the Desert Healthcare District with the recognition that a well-trained and available healthcare workforce is the cornerstone of the healthcare delivery system in the Coachella Valley. This report updates the previous healthcare workforce assessment completed in 2009. A major emphasis of this report is to highlight the many changes that have occurred in healthcare including implementation of the Affordable Care Act and the improvement of the economy in the Coachella Valley. This report was produced by Moder Research & Communications, Inc. with input from numerous individuals working in the Valley's health care, education and governmental sectors. This assessment was completed during the winter and spring of 2015. Entitled *Charting the Course*, this report provides a detailed look at the healthcare sector in the Coachella Valley in terms of its size, trends and possible growth through 2022. Information contained in this report is derived from a wide variety of sources including interviews with key employer stakeholders, State of California Employment Development Department Labor Market Information Division (EDDLMID), Office of Statewide Health Planning and Development (OSHPD) and the U.S. Department of Labor (DoL).

Charting the Course provides an overview of the Coachella Valley healthcare sector including hospitals, home healthcare, hospice, medical offices and long term care facilities. The publication is organized into the following 13 sections:

1. Executive Summary
2. Key Findings
3. Conclusions
4. Recommendations
5. Changing Environment
6. Impact of the Affordable Care Act
7. Coachella Valley Population Change
8. Coachella Valley Educational Resources
9. General Structure of Healthcare Workforce
10. Coachella Valley Healthcare Industry
11. Coachella Valley Healthcare Occupational Overview
12. Healthcare Workforce Education and Training
13. Healthcare Occupation Profiles

Sections 1 and 2 provide a brief overview of the report and some of its key findings.

Sections 3 and 4 draws some conclusions from the information contained in the report and offer a series of recommendations for consideration.

Section 5 reviews how the environment has changed since 2009 including recovery from the recession, recovery of general labor employment, changes in the healthcare workforce and some key demographic changes.

Section 6 reviews the impact the Affordable Care Act is having on the healthcare system.

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Section 7 reviews the changing Coachella Valley demographics. This section discusses the size, projected growth, distribution, age, and the race/ethnicity of the population.

Section 8 reviews the educational resources currently available in the Coachella Valley from primary through post-graduation education and a new category called distance education, which allows students to complete undergraduate and graduate degrees via the Internet.

Section 9 discusses the general structure of the healthcare workforce.

Section 10 provides information specific to the healthcare industry in the Coachella Valley including trends in employment, wages and utilization by ambulatory care, hospital and nursing and resident care.

Section 11 presents the Coachella Valley healthcare occupational overview through 2022 for 32 different healthcare occupations including current estimates of employment, projected growth in employment and the numbers of new and replacement positions within the Valley.

Section 12 presents the education and training requirements for the 32 healthcare occupations.

Section 13 provides a detailed review of each of the healthcare occupations selected for inclusion in the report. This section includes information on current and projected employment, wages, education and training requirements, education and training providers, and career opportunities for 32 occupations.

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Executive Summary

This report is an update of the *Charting the Course a Coachella Valley Healthcare Workforce Needs Assessment* report conducted in 2009 and provides information regarding changes in the healthcare sector in the Coachella Valley from 2008 to 2014 including the impact of the Affordable Care Act. The report profiles 32 healthcare occupations, providing a wealth of information about each one, including current employment estimates, projected increased demand and whether future openings will be the result of a new position or replacement position. The projection information is reported annually through 2022. In addition, this report provides an overview of the current educational resources for healthcare occupations available in the Coachella Valley.

During the past six years, there have been a number of significant changes in the Coachella Valley healthcare sector. Despite an increase in overall unemployment brought about by the recession, healthcare sector employment in the Coachella Valley has increased by over 17 percent. Implementation of the Affordable Care Act in 2014, which offers affordable healthcare coverage to thousands of people previously uninsured or under-insured, has resulted in a number of changes in healthcare delivery including increased demand for primary care services, a decline in hospital discharges and wider use of the primary care delivery model. In addition, recent and projected demographic shifts will impact the healthcare sector. The Valley's population is projected to reach 580,000 by 2020 and is expected to be older and more culturally diverse, with the largest anticipated growth in unincorporated areas. These changes will result in greater demand for healthcare services in unincorporated areas, geriatric care and cultural competency.

During 2013, the Coachella Valley's healthcare workforce accounted for 12.5 percent of overall employment, over 13,500 jobs, and one in every five payroll dollars. Based on information provided by the Labor Market Division of the California Employment Development Department, the gross payroll for employees in the healthcare sector during 2013 was over \$777,650,000. Those employed in ambulatory care accounted for the highest percentage of the jobs at 45 percent, followed by hospital, nursing and residential care employment. The most common occupation was registered nurse, accounting for over 3,000 jobs, followed by nurse's aides and licensed practical nurses.

While no major changes in pre-baccalaureate educational offerings were noted, there are three major post-MD residency programs at various stages of development. When they are fully operational in 2018, the family practice and internal medicine programs at Eisenhower Medical Center and family practice program at Desert Regional Medical Center will have the potential of graduating 24 primary care providers annually. Assuming many of these physicians stay in the Valley, these programs will help meet the growing need for primary care physicians. Finally, this report finds that there will be a huge demand for experienced and bilingual healthcare workers, especially in pre-baccalaureate and baccalaureate occupations such as nursing.

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Key Findings

- During the recession of 2009, the healthcare labor force experienced steady growth – in fact between 2007 and 2013, healthcare employment increased by 23.6%, while the overall employment in the Coachella Valley decreased by 6.3%.
- During the next several years, employment growth within the non-hospital sector of the healthcare industry is expected to grow faster than the hospital sector. Several reasons for this non-hospital growth include the impact of the Affordable Care Act, cost reduction pressures, new models of care and shorter hospital stays.
- As the demand for ambulatory healthcare increases there will be a heavy demand for experienced professionals in the ambulatory sector including primary care physicians, physician assistants, nurse practitioners and RNs.
- The emerging model of care delivery will be the primary care medical home with all care coordinated by an inter-professional team of healthcare providers.
- Between 2014 and 2020 the Coachella Valley population is expected to grow by over 30% to 581,300, with the largest growth being in the unincorporated areas of the valley.
- Based on 2013 Southern California Association of Governments (SCAG) population estimates, the people living in the Coachella Valley were ethnically diverse with Latinos representing the largest ethnic group at 51.4% of the population.
- Based on California Department of Education data, few students graduating from Coachella Valley high schools are eligible to apply to schools in the University of California or the California State University systems, ranging from 27% in Coachella Valley Unified to 32% in Desert Sand Unified.
- It is becoming more common for Coachella Valley hospitals to require RNs to have or be in the process of obtaining their BSN. Currently, 50 percent of the nurses at Eisenhower Medical Center hold a Bachelor of Science degree or higher, with a goal of 80 percent by 2020.
- Two hospitals in the Valley have developed post-MD primary care physician residency training programs. Eisenhower Medical Center currently has both a family practice residency program and an internal medicine program. Desert Regional Medical Center is accepting its first 8 family practice residents during July 2015. When these programs are fully operational they will have the potential to graduate up to 24 primary care physicians per year, many of whom may remain in the Coachella Valley to practice.
- Based on 2013 information supplied by the California Employment Development Department - Labor Market Information Division, the Coachella Valley healthcare sector accounted for 12.5 percent of employment in the Coachella Valley with 13,566 jobs and almost one of every five payroll dollars during 2013 (19.2%) with a payroll of over \$777,653,100.

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- Since 2008, healthcare sector payroll as a percent of total Coachella Valley payroll has grown from 14.7% to 19.2%.
- Since 2008, the number of hospital discharges among the three Coachella Valley hospitals has declined by over 7%, from 52,064 to 48,026.
- Based on the best available data, there are slightly more than 3,000 nurses currently employed in the Coachella Valley; the next most common healthcare occupation is nursing assistants at slightly over 1,300.
- On an annual basis, projected job openings for nurses will be approximately 109, with 60 of these being replacement jobs and 49 being new job openings. Discussions with Valley hospital recruitment staff indicate they need experienced nurses with skills in clinic areas such as ER, surgery, perinatal, oncology and critical care. New RN graduates typically do not have the minimum qualifications required. Typically, minimum qualifications include RN license, clinical experience in a specific area (i.e. surgery, emergency services, intensive care); speak more than one language and have knowledge of specific medical records software.
- Healthcare workforce educational opportunities are limited in and around the Coachella Valley with postsecondary education available for only 14 of the 32 occupations reviewed in this study.
- Attracting qualified healthcare workers to the Valley is often problematic because of difficulty finding suitable employment for a spouse or partner.

Objective of Research

The *2015 Coachella Valley Healthcare Workforce Needs Assessment* is designed to assess how economic factors, population shifts and healthcare policy changes have impacted the healthcare workforce. This report builds on the baseline report, *Charting the Course: A Coachella Valley Healthcare Workforce Needs Assessment*, published by the Desert Healthcare District in 2009.

This updated report:

- Establishes the current and projected supply of healthcare workers for select healthcare occupations within the Coachella Valley based on the most current information available.
- Completes an updated demand-supply gap analysis for select healthcare occupations within the Coachella Valley to the extent possible.
- Identifies challenges and barriers to reducing existing or expected demand-supply gaps within the healthcare professions reviewed.
- Identifies potential opportunities and collaborative partners to lessen the impact of the challenges and barriers.
- Presents a set of conclusions and recommendations.

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Conclusions

Based on the information contained in this report, the following conclusions have been drawn.

- The Valley is slowly recovering from the 2009 economic recession, which appeared to have minimal impact on the Valley's healthcare workforce.
- The healthcare workforce is a critical element of the Coachella Valley workforce, accounting for 12% of the jobs and almost 20% of the payroll.
- The full implementation of the Affordable Care Act is beginning to show its impact resulting in:
 - Increased insurance coverage leading to increased access to healthcare.
 - Increased demand for primary care services.
 - A decline in hospital discharges.
 - Wider use of the primary care delivery model.
 - Increased demand for primary care physicians and physician extenders.
- There is increasing demand for experienced and skilled workers capable of speaking more than one language in all healthcare occupations.
- There is a need for healthcare employers and educators to work collaboratively to develop opportunities for incumbent healthcare workers to progress within their occupations or find ways to move into related healthcare occupations to improve their job satisfaction and economic status rather than leave the industry. This is particularly important for workers at the bottom of the ladders for occupations such as nurse aides and home health aides who are working for very low wages, often at poverty levels. These workers are critical to the healthcare system and are often the primary caregivers to the elderly.
- The Coachella Valley healthcare workforce will need to increase both the size and cultural competence of its healthcare workforce to meet the needs of an increasingly diverse population.
- The recent development of the family practice residency programs at Eisenhower Medical Center and Desert Regional Medical Center should provide a sufficient number of primary care providers beginning in 2016, assuming they stay in the Valley.

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Recommendations

The following recommendations are offered based on the information contained in this report, discussion with key stakeholders and best practices within the industry. Links to relevant resources have been provided for more information.

Collaborative Approach

Identify and fund a mutual convener to help Coachella Valley healthcare organizations begin to identify, develop and work collaboratively on issues that impact the healthcare workforce. Some of the issues and solutions that may be included in this effort are:

- Develop a Valley-wide healthcare workforce plan by bringing together key players from acute care, skilled nursing care and ambulatory care plus educational stakeholders to work collaboratively on healthcare workforce planning. Because the healthcare sector is so critical to the Valley's economy and health of its population, ongoing workforce planning should be a top priority for both healthcare organizations and local government.

According to the American Hospital Association, there are four key components to of an effective workforce planning model: data, strategy, planning and evaluation. This approach is presented in a recent publication entitled *Developing an Effective Health Care Workforce Planning Model* available at

http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB4QFjAA&url=http%3A%2F%2Fwww.aha.org%2Fcontent%2F13%2F13wpmwhitepaperfinal.pdf&ei=4-DXVP2ZJemwsASeuYCoAg&usg=AFQjCNErjTFJhe86Db1tZZT2s91fXKRxXQ&sig2=em3UoP - XFUPw4_txgiptA

This publication presents important data and information along with assessment tools that organizations and collaboratives can use to help in their development of effective workforce plans. In addition, it provides a wealth of timely references related to this topic.

- Develop programs to assist low-skilled direct-care workers (e.g., caregivers, home health aides, medical assistants, and nursing assistants) to improve their economic status and job skills, thereby allowing them to move to better, higher paying positions while improving the quality of the services they provide. Several resources and informative publications addressing the topic include the following:

The Paraprofessional Healthcare Institute (PHI) is an organization that focuses on improving the quality of care for elders and persons with disabilities through training. They provide consulting services and policy advice to help organizations make sustainable changes in their direct-care workforce. Available at: <http://www.phinational.org/>

Reinventing Low Wage Work – Ideas that can work for Employees, Employers and the Economy. The Aspen Institute. Available at <http://www.aspenwsi.org/wordpress/wp-content/uploads/Profiles-of-the-Direct-Care-Workforce-and-PHI.pdf>

Invisible No Longer: Advancing the Entry-level Workforce in Health Care by Randall Wilson
Available at: <http://www.jff.org/sites/default/files/publications/Invisible.pdf>

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- Develop programs to help incumbent healthcare workers move up the career ladder by providing the training needed to fill positions that require higher skill levels. These types of programs require partnerships between the healthcare organizations and community colleges to meet long-term workforce needs. The following link to *Creating Opportunities in Health Care: The Community College Role in Workforce Partnerships* provides a wealth of information about some of the approaches taken by organizations throughout the U.S. Available at:
<http://www.jff.org/sites/default/files/publications/MetLife-OppsinHealthCare-040711.pdf>
- Develop a program to assist potential new hires find employment for trailing spouses or partners. Because this issue can be a real challenge in attracting experienced healthcare workers, healthcare employers may wish to borrow from the military. Not only does this effort make a job offer more attractive, it also provides a source of skilled workers for non-healthcare related employers. Several links to example of Army and university spouse employment partnerships are provided below.
<http://military.careers.org/topic/353-u-s-army-spouse-employment-partnership-asep>
<http://hr.williams.edu/spr/>

Support Healthcare Occupational Education Programs

Continue to supply support and encouragement for programs that provide career pathways into the healthcare sector. Programs such as the CVEP health pathways program help gain the attention of students at the beginning of their educational journey and the establishment of family practice residency programs are vital to the long-term supply of primary care physicians. The next step should be establishment of programs that focus on low-income and incumbent healthcare workers as discussed above.

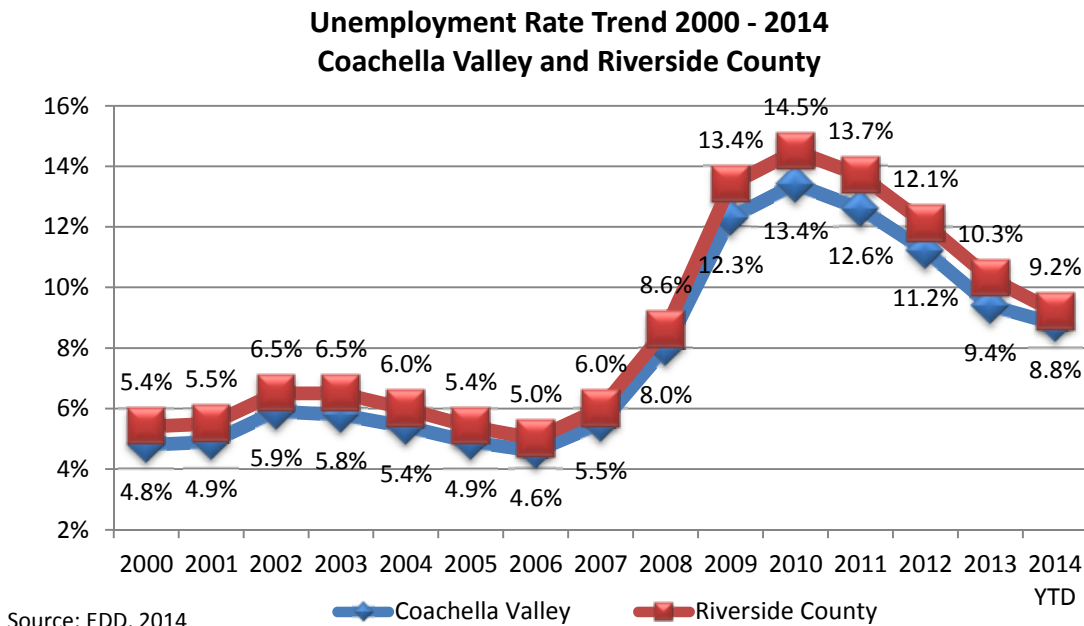
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Changing Environment

Recovery from the 2009 Recession

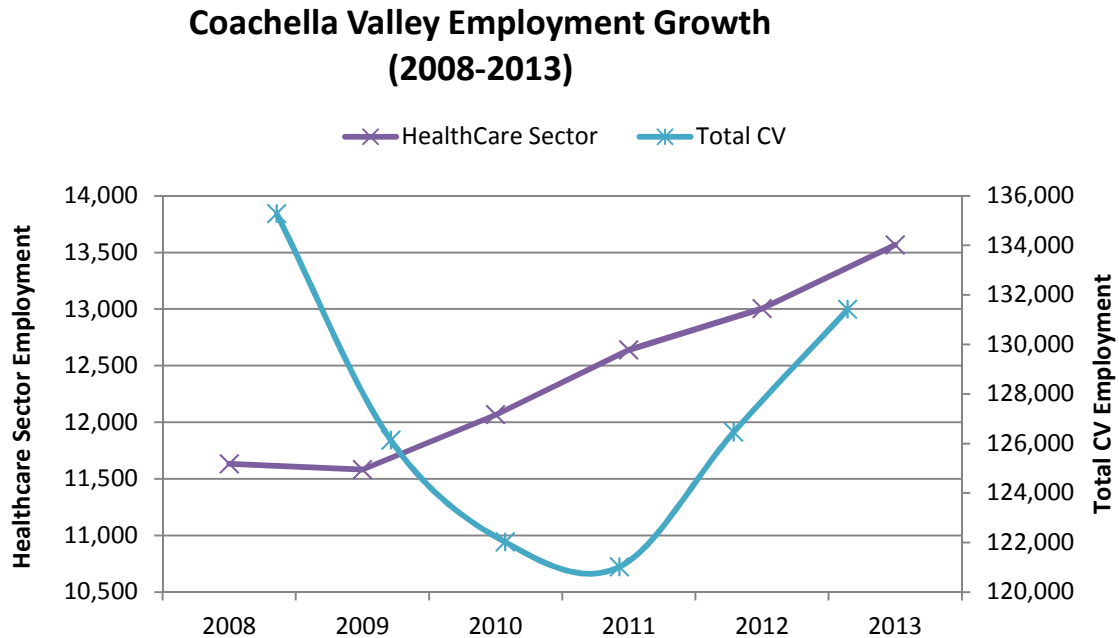
General Labor Force

The labor force in Coachella Valley has grown from 111,800 in 2000 to 131,413 in 2013, a 19.9% increase. During this same time period, healthcare employment grew by over 55%. As shown in the chart below, between 2000 and 2013, the unemployment rates for the Coachella Valley and Riverside County were similar, with Coachella Valley consistently having a slightly lower rate than the County overall.



Between 2007 and 2013, the employment rate in Coachella Valley decreased by 6.3%, while the healthcare employment rate increased by 23.6% (EDD, 2014). According to the National Bureau of Economic Research, the official arbiter of U.S. recessions, the most recent recession began in December 2007 and ended in June 2009. In the Coachella Valley, many of the statistics describing the economy have yet to return to their pre-recession values. One of the most widely recognized indicators of a recession is a decline in employment. Since the end of the recession in mid-2009, the recovery of employment in the Coachella Valley has been slow and difficult for most sectors – except healthcare. The chart below shows that the healthcare sector in the Coachella Valley has experienced sustained growth in employment through 2013, as compared to other sectors.

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According to the Bureau of Labor Statistics, the healthcare industry has grown steadily nationwide since 2003. Areas within healthcare expected to experience continued growth include:

- Services to the elderly and persons with disabilities
- Ambulatory healthcare services
- Freestanding ambulatory surgical and emergency centers
- Outpatient care centers
- Home healthcare services

Overall, during the next several years, employment growth within the non-hospital sector of the healthcare industry is expected to grow faster than that of the hospital sector. Several reasons for the growth in the non-hospital healthcare sector include:

- Impact of the Affordable Care Act (ACA)
- Cost reduction pressures
- Aging of the population
- Shorter hospital stays
- New models of care

Demographic Changes

Over the next 20 years, California's population is estimated to grow by 10.2 million people. During the same time, the number of Californians over the age of 65 will likely double. According to the Southern California Association of Governments (SCAG), the Coachella Valley population is expected to grow to 604,000 by 2020 and greater than 884,000 by 2035.

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Seniors in the Coachella Valley

A recent study of seniors aged 55 years and over and living in the Coachella Valley found that they “have a relatively high socioeconomic status and access to healthcare.” Several of the key findings from a November 2014 study published by the Health Assessment Resource Center (HARC) entitled *Senior Health in the Coachella Valley* found seniors tend to be white, have higher levels of education, are relatively wealthier and have more resources to deal with health issues than the overall population.

Overall, the study estimated the approximately 170,000 seniors 55 years of age or older who live in the Coachella Valley account for almost half of the Coachella Valley’s adult population. (HARC, 2014)

SACG’s demographic projections for the Coachella Valley indicate that the percentage of Latinos will rise, while the percentage of “non-Hispanic whites” will fall. Moreover, the number of people 65 and over will grow dramatically. Much of this growth is expected to happen in the unincorporated areas of the Valley, projected to be 308,000, or 35 percent of the Valley’s total 2035 population of 884,000.

According to the U.S. Department of Health and Human Services, population growth—particularly growth in the number of older adults—will account for more than 80 percent of the increase in demand for health care services through 2020, having a significant impact on the demand for health care (U.S. Department of Health and Human Services, Health Resources and Services Administration, 2013).

More than 92 percent of older adults nationwide report at least one chronic condition, and more than 70 percent report two or more (Hung et al. 2011). To meet the needs of this aging population, a variety of healthcare workers will be required, including primary care physicians, technicians and support staff.

The racial and ethnic composition of California’s elderly population will also change considerably in the coming decade. California’s Latino and Asian populations aged 65 and over are projected to grow by 85 percent and 66 percent, respectively, between 2014 and 2025. Statewide, nearly half (48%) of California’s total population aged 65 and over will be nonwhite in 2025, compared with about 40 percent today. A growing body of research has found that the quality of care increases when patients receive care from persons of the same racial and ethnic background. This is particularly important in the Coachella Valley, where there is a large Latino population and cultural competence and Spanish

language proficiency are important health care quality indicators. Latinos are significantly underrepresented in the healthcare workforce.

The bottom line —The Coachella Valley will need to increase both the size and cultural competence of its healthcare workforce.

Impact of the Affordable Care Act

Establishment of Essential Health Benefits

The Affordable Care Act (ACA) set a standard that all insurers must meet and mandates a set of essential health benefits (EHB) that fall within 10 general categories:

- Ambulatory care including all care received without being admitted to a hospital

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- Prescription drugs including coverage of at least one drug in every category in the U.S. Pharmacopeia. All associated out-of-pocket expenses for drugs also count as a deductible expense.
- Emergency services received in the emergency room for conditions that could lead to serious disability or death if not immediately treated, such as accidents or sudden illness
- Hospitalization including all care and treatment received while in the hospital
- Mental and behavioral health treatment including treatment for alcohol, drug and other substance abuse and addiction. However, insurance companies have found a way around paying for these diseases, as they usually require a long-term commitment. They often require different co-pays (as high as \$40 a session), and the number of therapist visits could be limited.
- Maternity and newborn care, which is considered preventive care, and must be provided without cost. Most young people who don't have insurance find this to be an essential benefit when they start a family.
- Rehabilitative and habilitative services including devices to help people with injuries, disabilities, or chronic conditions. This includes physical and occupational therapy, speech-language pathology, and psychiatric rehabilitation.
- Laboratory services, which are covered 100% if they are considered preventive. If a person has already been diagnosed with a disease, then regular copays and deductibles apply.
- Preventive and wellness visits, as well as chronic disease management. Preventive care visits have no copay requirement. The ACA requires that all 50 procedures recommended by the U.S. Preventive Services Task Force be covered as preventive services. These include vaccines, well-woman visits, domestic violence screening, and support for breastfeeding equipment and contraception.
- Pediatric services, including oral and vision care for children under age 19.

These EHBs are intended to promote consistency across insurance plans, ensure that all plans cover a core package of benefits and help limit out-of-pocket expenses.

Refocusing of Educational Resources

In the short term, the ACA offers some opportunities for refocusing education resources on professions such as nurse practitioners and physician assistants. These professions require less training time than physicians, and can help meet the demand for primary care physicians whose patient-load capacity is increasing as a result of the increased access to care brought about by the implementation of the ACA.

There is increasing data to support the conclusion that not only is total demand for health care in California on the rise—a pattern that is expected to continue through 2030—, but the form of healthcare consumption is shifting from hospital usage to ambulatory usage. In all, the total number of hospital stays per person is expected to decline from 4 days in 2010 to 3.2 days in 2020, and 2.5 days in 2030. In contrast, the number of ambulatory visits per person is expected to increase from 3.2 visits per person in 2010 to 3.6 visits per person in 2020, and 4.2 visits in 2030. This growing demand for ambulatory health

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care will result in a heavier demand for professionals employed within the ambulatory sector (OSHDP, 2014)

The ACA is also having indirect effects through initiatives using emerging models of care delivery such as the Primary Care Medical Home, which emphasizes the coordination of care by an interprofessional team of healthcare providers. Under this approach, RNs play a significant coordination role of monitoring the health status of patients, and provide health education and referrals. This type of work is very different from that of a hospital based RN and will require an entirely new set of skills (Spetz, 2014).

One of the most challenging workforce issues is the increased demand on the ambulatory healthcare workforce resulting from the expanding health coverage to thousands of Coachella Valley residents during the next several years.

Some of the healthcare workforce issues the ACA was designed to address include:

- Improving the recruitment and training of primary care, public health, nursing, and other health professionals
- Increasing the number of health care professionals in medically underserved areas
- Increasing the diversity and cultural competency of the workforce
- Increasing the number and enhancing the training of faculty in health professional training institutions
- Testing innovative models of care delivery and reimbursement that recognize the value of primary care services and improve the coordination of care for patients

From the workforce prospective, increasing primary care providers, cultural competency and developing the patient-centered medical home model are major elements that will improve the quality of care and enhance outcomes. The ACA contains provisions that promote the patient-centered medical home model, utilizing multidisciplinary teams that include physician assistants, nurse practitioners, RNs and LVNs.

As more people become insured, it is anticipated that primary care providers will be challenged by the ACA's provisions to increase preventive care services. The ACA includes provisions to ensure prevention and wellness services for Medicare and Medi-Cal beneficiaries and those with private insurance at no cost to the consumer. Medicare beneficiaries can now have an annual comprehensive health risk assessment, and create a personal prevention plan with their physician. The ACA also requires health plans to provide basic coverage for recommended immunizations; preventive care for infants, children, and adolescents; and preventive care and screenings for all women. Many of the workforce provisions contained in the ACA focus on the need to build capacity in primary care, given the current imbalance between primary care providers and specialists in the United States, and the anticipated increase in demand for preventive care. One example of building capacity is the 10 percent increase to primary care clinician payments under Medicare Part B until 2015 (Cunningham, 2013).

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Focus on Primary Care and Prevention

The Institute of Medicine's Committee on the Future of Primary Care defines primary care as:

"The provision of integrated, accessible health services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community." (Donaldson et al, 1996)

Medical specialties that meet these criteria include general and family medicine, general pediatrics, general internal medicine, and geriatrics. Nurse practitioners and physician assistants who are trained and practice in primary care specialties are also considered primary care providers.

An example of the many changes brought about by the ACA is the Primary Care Extension Program, which is intended to provide opportunities to help primary care providers (e.g., physicians, physician assistants, and nurses) gain new skills in areas such as preventive medicine, health promotion, chronic disease management, mental health and health services, evidence-based medicine practices, and evidence-informed behavioral therapies and techniques.

Coachella Population Change

Size and Growth

The following table presents the current demographics of the Coachella Valley by city and unincorporated area along with changes since 2008 and projections through 2020. The Coachella Valley is made up of nine incorporated cities plus a large unincorporated area. In 2008, the estimated population of the Coachella Valley was 422,700, and is projected to grow to 581,300 by 2020, an increase of 37.5%. Projected 2020 population growth varies by geographic area, with Desert Hot Springs and Coachella projected to grow by over 50%; the remainder of the cities are projected to grow by 11% or less. The population of unincorporated areas of the Valley is projected to almost double in growth to over 152,000 people.

City/Area	2008 Estimated Population	2014 Estimated Population	2020 Projected Population	2008 – 2014 Percent Change	2014–2020 Projected Growth
Cathedral City	50,200	52,595	57,000	4.8%	8.38%
Coachella	38,200	43,633	70,200	14.2%	60.89%
Desert Hot Springs	25,200	28,001	43,500	11.1%	55.35%
Indian Wells	4,800	5,137	5,500	7.0%	7.07%
Indio	73,300	82,398	91,500	12.4%	11.05%
La Quinta	36,100	39,032	41,600	8.1%	6.58%
Palm Desert	47,100	50,417	52,100	7.0%	3.34%
Palm Springs	43,400	46,135	48,900	6.3%	5.99%
Rancho Mirage	16,900	17,745	18,800	5.0%	5.95%
Unincorporated area	87,500	78,308	152,200	-10.5%	94.36%
Total	422,700	443,401	581,300	4.9%	31.10%

Source: Demographic Research Unit California Department of Finance

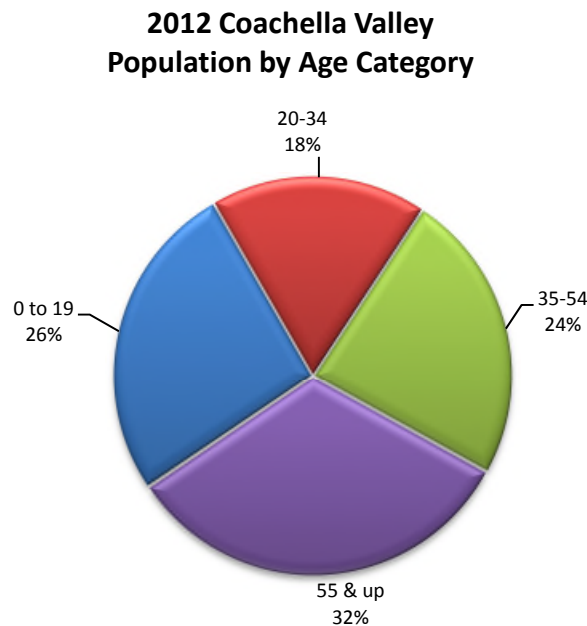
<http://www.dof.ca.gov/research/demographic/reports/estimates/e-5/2011-20/view.php>

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The unincorporated areas within the Coachella Valley include Bermuda Dunes, Indio Hills, Mecca, North Palm Springs, Oasis, Sky Valley, Thermal, and Thousand Palms. Several Indian reservations are home to the Cahuilla band of Indians in the Coachella Valley, including the Agua Caliente Indian Reservation, the Augustine Reservation, the Cabazon Indian Reservation, and the Torres-Martinez Desert Cahuilla Indian Reservation.

Population Age

The following chart presents the age profile of Valley residents based on 2012 data from the U.S. Census Bureau.

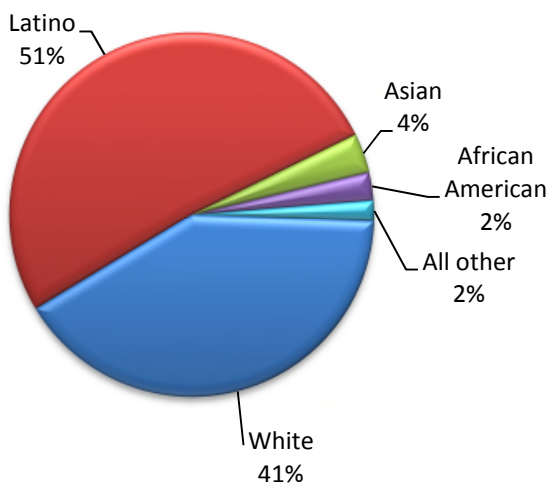


Race/ethnicity

Based on 2013 Southern California Association of Governments (SCAG) population estimates, people living in the Coachella Valley were ethnically diverse, with Latinos representing the largest ethnic group at 51.4% of the population. Another 40.8% of the residents were non-Hispanic white. The remainder of the residents included 3.5% Asian, 2.5% African American and 1.4% representing all other racial and ethnic groups. Native Americans make up less than 1% of the Coachella Valley population (SCAG, 2013).

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**2012 Coachella Valley
Race and Ethnicity Population Estimates**



Coachella Valley Educational Resources

Primary Education

Within the Coachella Valley, there are three public school districts with a combined total of 86 schools providing K-12 education for more than 71,366 children. Additionally, according to the California Department of Education, there are currently 19 private schools providing K-12 education for more than 3,000 children (CDE, 2014).

The following briefly highlights each of the public school districts located in the Coachella Valley for the 2013-14 school year, with information provided by the California Department of Education.

Coachella Valley Unified School District (CVUSD) has 14 elementary schools, three middle schools and three high schools, plus one continuation high school and one special school for teenage mothers. Current enrollment is 18,850, with Latinos of any race making up 97% of the total. Over 53% of students are classified as English learners. This designation indicates that the majority of students lack the English language skills of listening comprehension, speaking, reading and writing needed to succeed in a regular instructional program. Slightly over 91% are classified as socioeconomically disadvantaged and qualify for the free or reduced price meals program, a federal program administered by the U.S. Department of Agriculture based on the income of the child's parent or guardian. The 2013 Academic Performance Index (API) for CVUSD was 691, a slight increase from 685 in 2010. (The API is based on annual STAR testing; the California API target performance for all schools is a score of 800 or more). The high school graduation rate during the 2012-13 school-year was 79.1%, a significant increase since 2009-10, when the rate was 72.7%.

Palm Springs Unified has 30 schools including 16 elementary, five middle, four high schools, and five alternative schools. In 2012-13 total enrollment was 23,360. Over 32% of students are classified as English learners. Slightly more than 75% of the students are Latino and 83% are classified as

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socioeconomically disadvantaged and qualify for the free or reduced price meals program. The 2013 API was 752, an increase from 733 in 2010. The graduation rate during the 2012-13 school-year was 87.2%, an increase from the 81.2% recorded in 2009-2010.

Desert Sands Unified has 34 schools including 19 elementary schools, one charter elementary school, six middle schools, one charter middle school, four comprehensive high schools, two continuation high schools, one alternative education school, and one preschool, with an enrollment of 29,156. Over 24% of students are classified as English learners. Almost 72% of the students are Latino and 65% are classified as socioeconomically disadvantaged and qualify for the free or reduced price meals program. The 2013 API is 809, an increase from 787 in 2010. The high school graduation rate during the 2012-13 school-year was 93.4%, an increase from the 88.4% recorded in 2009-2010.

The California Department of Education provides data showing students' eligibility to apply to schools in the University of California or California State University systems. To be eligible, students must score a C or better on 15 specific courses, a standard that is higher than school graduation requirements. Based on this standard, the university eligibility rates for the three Coachella Valley school systems are:

- Desert Sands Unified – 32.2%
- Palm Springs Unified – 28.2%
- Coachella Valley Unified – 26.9%

Higher Education

The Coachella Valley is served by variety of organizations offering higher learning opportunities. The following briefly describes each organization.

Regional Occupational Program (ROP)

The Riverside County ROP is an accredited career/technical-training program serving more than 24,407 high school students and adults and offers more than 767 class sections in 85 career areas. In the Coachella Valley ROP offers several health care related programs at the Don F. Kenny Regional Learning Center located in Indio. These programs include:

- Medical assistant
- Home health aide

Two-year Community Colleges

College of the Desert (COD) is a two-year community college with campuses in Palm Desert, Indio and Mecca-Thermal. COD enrolled its first students in the fall of 1962 and is currently accredited by the Accrediting Commission for Community and Junior Colleges of the Western Association of Schools and Colleges. During the fall of 2013, COD had an enrollment of 10,381 students. The majority (54.9%) of students attending COD are enrolled at less than full time.

COD currently offers health sciences programs in the following areas:

- Emergency medical technician (EMT)
- Home health aide
- Nurse assistant (NA)

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- Registered nursing (ADN)
- Vocational nursing (VN)

Graduates of the ADN program are awarded the Associates in Science Degree in Nursing and are eligible to apply to the Board of Registered Nursing and take the National Council Licensing Examination (NCLEX) in order to become licensed as a registered nurse. Students completing the VN program are awarded a vocational certificate.

Within 50 miles of the Coachella Valley, there are four adult schools offering healthcare occupational courses, three of which are community colleges.

Beaumont Adult School (BAS), located in Beaumont, CA, is approximately 30 miles west of Palm Springs and offers a Licensed Vocational Nursing (LVN) program that meets the California state Board of Vocational Nursing and Psychiatric Technicians requirements for licensing. The instructional program is designed for working adults and requires students to attend the instructional program only three days a week. Overall, the BAS LVN program requires 656 hours of theory plus 1073 hours of clinical instruction. This program takes 17 months to complete and approximate fees are \$26,000.

Copper Mountain College, located in Joshua Tree, California, is approximately 38 miles north of Palm Springs, and was part of COD until it separated in 1999 to become its own community college district. The college currently offers health sciences programs similar to those offered at COD. These include:

- Emergency medical technician
- Home health aide
- Nurse assistant
- Registered nursing
- Vocational nursing

Crafton Hills College is located in Yucaipa, California, approximately 43 miles west of Palm Springs. With an enrollment of 6,200 students, Crafton Hills College offers several health sciences programs including:

- Radiologic technology
- Respiratory therapy
- Emergency medical technician-paramedic
- Mobile intensive care nurse certification

The radiologic technology program is an accredited, hospital-based program operated cooperatively by Crafton Hills College and the Arrowhead Regional Medical Center (ARMC), located in Colton, California.

The respiratory therapy program is a registry eligible respiratory care program (RERT) leading to an associate's degree and certificate of completion. Enrollment in this program is limited to 35 students.

The emergency medical services program offers an emergency medical technician/paramedic certification and a mobile intensive care nurse certificate. The mobile intensive care nurse certificate is

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designed to train experienced emergency room registered nurses to interact via two-way radio communication with paramedics to help direct the care of patients in the pre-hospital setting.

Mt. San Jacinto College is a community college located in San Jacinto, California, approximately 52 miles from Palm Springs. Mt. San Jacinto College offers several healthcare occupational programs including:

- Certified nursing assistant/Home health aide (CAN/HHA)
- Emergency medical technician (EMT)
- Diagnostic medical sonography (associate of science degree or a certificate)
- Registered nursing (RN)
- Vocational nursing (LVN)

Private Colleges

In addition to the Riverside County Workforce Development ROP programs, community colleges in and around the Coachella Valley, there are several allied healthcare training providers in the private, for-profit school sector. The following briefly describes each and the type of healthcare occupational training programs they offer.

Milan Institute is a large for-profit educational company with schools located throughout California, Texas, Idaho and Nevada. In the Coachella Valley Milan Institute has a school located in Palm Desert, which offers the following health occupation related programs:

- Medical assisting
- Administrative medical assistant
- Registered dental assistant

California Nurses Educational Institute, located in Palm Springs, offers several healthcare occupation programs including:

- Licensed vocational nursing
- Psychiatric technician
- Certified nurse assistant
- Home health aide
- Phlebotomy

Kaplan College, located in Palm Springs, offers several healthcare occupational diploma programs including:

- Dental assistant
- Medical assistant
- Medical office specialist

Santa Barbara Business College, located in Rancho Mirage, offers several healthcare occupation programs including:

- Medical assisting
- Medical billing and coding

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- Vocational nursing

Public Universities

Currently, the University of California, Riverside (UCR) and California State University, San Bernardino (CSUSB) offer undergraduate and graduate degrees at branch campuses located in Palm Desert. While UCR does not offer any healthcare occupation degrees, CSUSB offers a Bachelor of Science degree in nursing (BSN) and an RN to BSN program at its Palm Desert campus and a Bachelor of Science degree in nutrition and food sciences. CSUSB also has articulation agreements with College of the Desert and Copper Mountain Community College, which allows current RNs to continue their education to become a BSN. Access to a BSN program in the Coachella Valley is critical because it is becoming common for hospitals to require RNs to have or be in the process of obtaining their BSN.

Private Universities

The Loma Linda University, in collaboration with the College of the Desert opened a three-year associate degree program in dental hygiene in Palm Desert. The faculty from College of the Desert will provide the general education and biomedical science prerequisite education, and faculty from Loma Linda University will provide the dental hygiene science and clinical training for the program.

Currently the University of Phoenix has a campus in Palm Desert and offers a broad array of health care courses and degrees including nursing, health administration, and psychology. Of specific interest to this study is their nursing program, which offers an RN to Bachelor of Science in Nursing and a Master of Science in Nursing. These courses are offered in both on-line and classroom curriculum.

The IOM recommended, in its 2011 report on the future of nursing, that 80 percent of nurses in the United States hold at least a baccalaureate in nursing (BSN) by the year 2020 (Aiken et al, 2014).

Distance Education

According to the Institute of Education Sciences, distance education courses and programs provide flexible learning opportunities to both undergraduate and post-baccalaureate students. Distance education courses include live, interactive audio- or videoconferencing; prerecorded instructional videos; webcasts; CD-ROMs or DVDs; or computer-based systems accessed over the Internet. Distance education does not include correspondence courses.

An Internet search for distance educational programs offering RN to Bachelor of Science in Nursing or Master of Science in Nursing identified hundreds of colleges and universities in the U.S. Several examples of typical RN to BSN programs can be seen at the Internet links shown below.

- California State University San Marcos - <http://degree.csusm.edu/>
- Arizona State University - <http://asuonline.asu.edu/online-degree-programs/undergraduate/bachelor-science-nursing-rn-bsn>
- University of Arizona - <http://msnonline.arizona.edu/>
- Kent State University - <https://onlinedegrees.kent.edu/programs-courses/online-undergraduate-programs/>

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- University of Maryland - <https://www.nursing.umaryland.edu/academics/undergrad/rn-bsn/>

For working nurses, online education can serve as a great opportunity to grow in their profession and further their careers. The BSN is quickly becoming the baseline for employment at many healthcare facilities. Educational organizations across the U.S. have responded to the need and are now offering students the ability to participate in on-line RN to BSN programs by attending courses on their schedule. Online education offers a convenient and flexible way to attend school, while still allowing time for work. Students can take courses on their schedule and work at their own pace.

Medical School

In 2008, the Regents of the University of California approved the establishment of a School of Medicine at the University of California, Riverside. The UCR School of Medicine welcomed its inaugural class of students in August, 2013, with an initial class size of 50 medical students. At maturity, the school expects to admit 80 students annually. The first class of medical students will graduate in 2017.

Post-MD Residency Programs

Both Eisenhower Medical Center and Desert Regional Medical Center have established post-MD physician specialty training programs. Eisenhower Medical Center recently opened its three-year Family Practice residency program, accepting eight residents in the summer of 2013. When fully operational, the program will have 24 residents and will graduate its first class in 2016.

Desert Regional Medical Center has developed a family practice residency program with an academic affiliation with the University of Riverside California medical school, and will accept their first eight residents during July, 2015. When fully operational, the program will have 24 residents and will graduate the first class in 2018.

Eisenhower Medical Center also has an internal medicine residency program with 24 students currently enrolled. Desert Regional Medical Center also envisions a future residency training program in internal medicine. Together, these three programs, when fully operational, will graduate 24 primary care physicians annually, many of which will remain in the Valley. This increase in supply will help meet the current and future needs for primary care physicians in the Coachella Valley as the current supply of providers begin to retire.

CVEP Workforce Excellence

The Coachella Valley Economic Partnership (CVEP), a 501c3, is a regional economic development organization. It is devoted to attracting, retaining and expanding business while improving the quality of the workforce in order to raise the overall economy and quality of life for the region.

The CVEP Workforce Excellence division, partners with more than 500 business partners and educational professionals from across the nine cities in the Coachella Valley to provide local students with the right connections and support to assure they are prepared for success in college and career.

A key element of this initiative is the CVEP Healthcare Industry Council, which is one of three CVEP industry councils (Healthcare, Advanced Technology, and Arts, Media & Entertainment) and is comprised of representatives from the valley's hospitals, nursing homes, physician practices, home health care

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agencies, foundations, and local K-12 school districts, community college, universities and private schools.

The Healthcare Industry Council is an intermediary platform that links education with business and addresses education and career obstacles facing disadvantaged youth in the valley. Furthermore, the Industry Council supports the integration of rigorous academics with career-based learning and real world workplace experience; helping our valley's youth excel, all while improving the economic viability of the region. The purpose of the Healthcare Industry Council is to:

- Alleviate the healthcare workforce shortage in the valley
- Improve and expand opportunities for local youth to successfully complete healthcare educational pathways in K-12 system and at the post-secondary level
- Address educational and career obstacles
- Link students to programs that meet the real labor force needs and requirements of the healthcare industry

This council has expanded over the last two years and now includes eight professional and one youth leadership work groups; Physician, Nutrition, Physical Therapy, Dental, Pharmacy, Nursing, Medical Innovations, Health Academy Lead Teachers and the Emerging Health Professionals (EHP). All work groups have set objectives that fall in line with the overarching purpose of the Industry Council and of CVEP Workforce Excellence.

The Healthcare Industry Council has been a critical component in the successful development of this regional approach; preparing students to graduate from high school, complete college and be leaders in the Coachella Valley. The number of students studying in a health pathways program has continued to increase. There are 1,146 students* studying in the local K-12 healthcare pipeline and engaged business partners provided over 36,000 student impact hours** last year alone. We expect to see growth at the high school academy level with health pathways starting at Desert Mirage High School and West Shores High School in the Eastern Coachella Valley.

*1,146 students reported in the 2013 – 2014 academic year by PSUSD, CVUSD and DSUSD.

**July 2013 – June 2014. These hours include only CVEP related activities.

General Structure of the Healthcare Workforce

The healthcare workforce covers more than 100 different occupations with educational levels ranging from highly educated subspecialty clinicians to healthcare aides with a high school education or less. The following briefly defines four groupings of the healthcare workforce in terms of education requirements.

Clinicians

Clinicians include physicians, nurse practitioners and physician assistants, all of whom have advanced educations, clinical training and credentials. They are qualified to make diagnoses and manage acute and chronic illness. In California, nurse practitioners and physician assistants must practice medicine under the supervision of a physician.

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Allied Health Professions

The term “allied health” was first used in 1966 to refer to health care professions and occupations other than medicine, dentistry and nursing that are essential to health services (IOM, 2011). Allied health professionals typically fall into two distinct categories: those with a focus on therapeutics; and those with a focus on diagnostics. The field includes more than 100 distinct occupations comprising nearly 60 percent of the healthcare workforce. Allied health professionals are involved with the delivery of health or related services pertaining to the identification, evaluation, and prevention of diseases and disorders; dietary and nutrition services; rehabilitation; and health systems management, among others. Dental hygienists, medical sonographers, dietitians, medical technologists, occupational therapists, physical therapists, radiographers, respiratory therapists, and speech-language pathologists fall under the allied health professional field.

One of the common attributes of this segment of healthcare workers is the wide range of education and training required. The training can be as short as one week for laparoscopic assistant training to years of study for Ph.D. research and postdoctoral education. Some professions require a bachelor’s or master’s degree, such as clinical laboratory scientists; however, most allied health workers are educated in community colleges or vocational schools. A recent study by the Brookings Institute found that on average, 37 percent of allied health workers held an associate’s degree or below. In the Riverside-San Bernardino-Ontario metropolitan area, 57 percent of healthcare workers were pre-baccalaureate, while 21 percent of healthcare workers held a bachelor’s degree or above (Brookings, 2014). The pre-baccalaureate healthcare workforce is critical to the healthcare system: it could not function without it.

Support Staff

Support staff in the healthcare industry includes a large contingent of workers who provide 24/7 maintenance and food service, to a variety of secretarial and administrative functions including accounting, human resource management and marketing. In addition, this grouping of occupations may include home health aides, medical assistants and a variety of technicians who support both the therapeutic and diagnostic occupations. As with the rest of the healthcare industry, this group’s education levels range from high school to master’s level and higher.

In summary, the changes being brought about by the ACA are impacting all segments of the healthcare industry. Early on in the implementation of the ACA, one of the most noticeable changes will be the shift from acute hospital care to an ambulatory and outpatient setting. Changes will be ongoing as the healthcare workforce responds to the ongoing need for advanced clinical and technical education required to meet the quality and outcome requirements of the ACA and the increased emphasis on prevention.

Coachella Valley Healthcare Industry

In this section, information related to the healthcare industry in the Coachella Valley is reported in one of the following three subsectors:

- **Ambulatory Health Care Services (NAICS Code 621):** Businesses in this subsector provide direct and indirect health care services. Ambulatory care is a personal health care consultation,

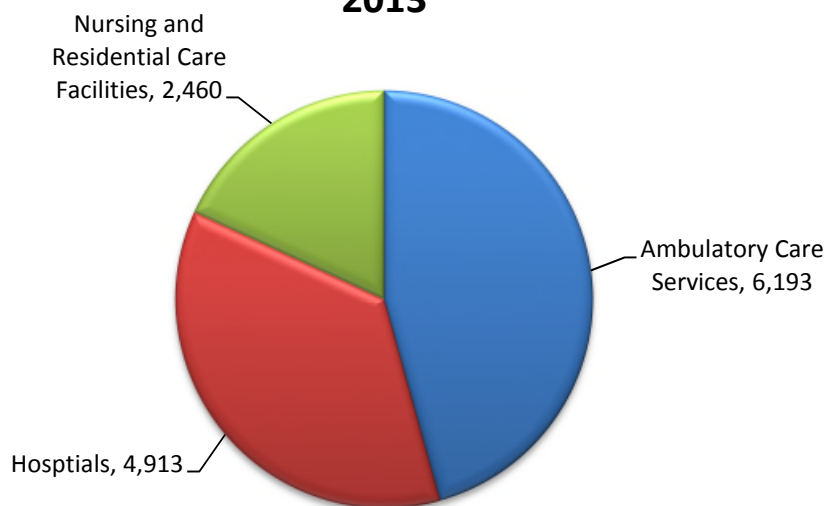
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treatment, or intervention delivered on an outpatient basis. Businesses in this subsector include physician offices, dental offices, optometrists, podiatrists, outpatient care centers, medical and diagnostic laboratories, home health care services and ambulance services.

- **Hospitals** (NAICS Code 622): Hospitals can be either for-profit or nonprofit businesses providing medical, diagnostic and treatment services that include physician, nursing and other medical services to both inpatients and outpatients. Types of hospitals include medical, surgical, psychiatric, substance abuse treatment and a variety of specialty services such as cancer and orthopedic care.
- **Nursing and Residential Care Facilities** (NAICS Code 623): Businesses in this subsector provide residential care combined with other types of care such as nursing, supervisory or other services as required by the residents. This subsector covers a broad spectrum and typically has at its core some level of nursing care mixed with other health and social services. Types of facilities include nursing care, mental health and community care for the elderly.

Based on 2013 information supplied by the California Employment Development Department - Labor Market Information Division, the Coachella Valley healthcare sector accounted for 12.5 percent of employment in the Valley, with 13,566 jobs. Ambulatory health care services accounted for 6,193 of these jobs, followed by hospitals with 4,913 jobs, and nursing and residential care facilities with 2,460 jobs. 830 health care establishments accounted for almost one of every five payroll dollars during 2013 (19.2%), with a gross payroll of over \$777,653,100.

Coachella Valley HealthCare Employment by Sector 2013

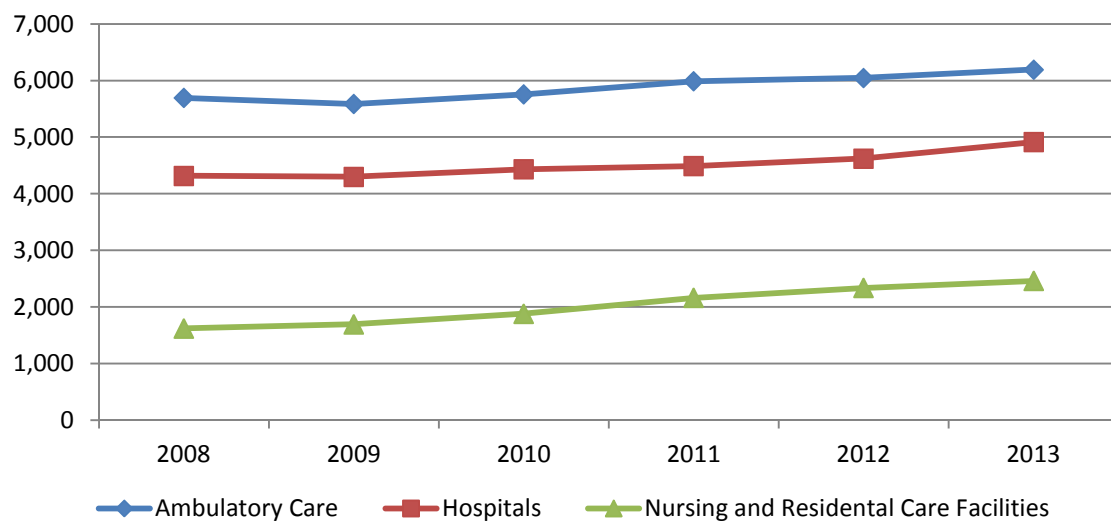


Source: EDD - Labor Market Information Division, 2014

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Between 2008 and 2013, employment in the healthcare sector grew by 16.6%. Ambulatory care and hospital employment grew at moderate rates, 8.8% and 13.8%, respectively, while nursing and residential care employment grew by over 51%. Based on employment growth projected by the California Employment Development Department, growth across all three healthcare subsectors between 2014 and 2020 is projected to be a very moderate 5%. However, the projected number of job openings per year will be almost 400 based on growth (new jobs) and replacement of persons retiring or leaving the health care sector for some other reason.

**Coachella Valley Healthcare Employment Growth
(2008-2013)**



Source: EDD - Labor Market Information Division

It is a dynamic period for the healthcare industry nationally and locally because of multiple pressures for change:

- Expanded access brought about by the ACA
- An aging population
- Retirement of an aging healthcare workforce
- Technological advancements
- Cost-reduction imperatives
- Increased emphasis on the patient-centered medical home model, which is designed to improve both the quality of care and outcomes

All of these factors are bringing about changes in the way healthcare is being financed and delivered, and will impact all sectors of the industry. One of the most obvious changes in the delivery of care is the emphasis on team-based and coordinated care with a focus on primary and preventive care. Over the past few years, there has been a significant increase in the use of electronic health records and other information technology tools, particularly in the primary care segment of ambulatory care. At the heart

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of this change is a workforce that must continue implementing the continuous stream of changes while meeting the diagnostic and treatment needs of patients.

The changing healthcare environment makes it difficult to predict future workforce needs. However, it is undeniable that education and training programs for both new and incumbent healthcare workers will need to be adopted to meet the changing practices of healthcare delivery.

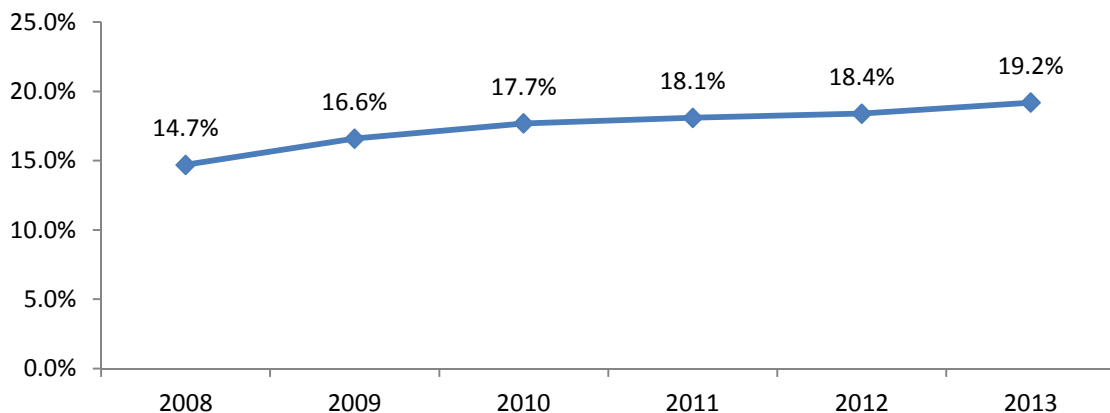
Because of increasing cost reduction pressures, there is a shifting of care to the less costly outpatient settings and an increased emphasis on prevention at the primary care level. Under this model, doctors and other advanced practitioners focus on the more complex medical issues for which they are uniquely qualified, while healthcare workers with less training take on more responsibility for screening, patient education, health coaching, and care navigation.

Wages

According to EDD data the Coachella Valley healthcare sector reported gross wages of over \$777,653,000 during 2013. Ambulatory care services accounted for \$378,869,498 (48.7%) of the total, followed by hospitals at \$322,686,597 (41.5%), and nursing and residential care facilities at \$76,097,071 (9.8%). Overall, the healthcare sector's payroll represented 19.1% of the Valley's overall payroll of \$4,047,585,417 during 2013.

As shown in the chart below, healthcare sector payroll as a percentage of total Coachella Valley payroll has increased each of the past five years.

Healthcare Sector Payroll as a percent of Total Coachella Valley Payroll

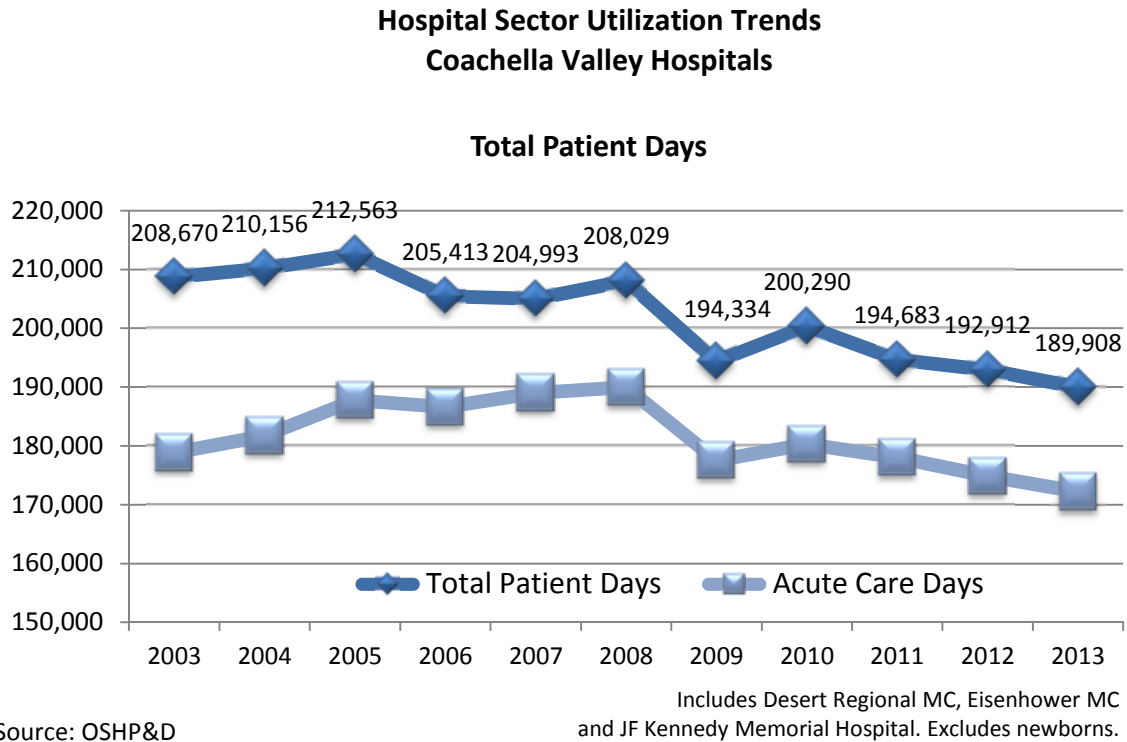


Source: EDD - Labor Market Information Division

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Hospital Utilization Trends

Between 2003 and 2013, the overall number of hospital inpatient days among the three Coachella Valley acute care hospitals declined by over 17,003 days annually, an 8.6% decrease. As shown in the chart below, the majority of this decrease began in 2009 and has continued through 2013. Overall patient days, acute patient days and discharges have declined during this period.

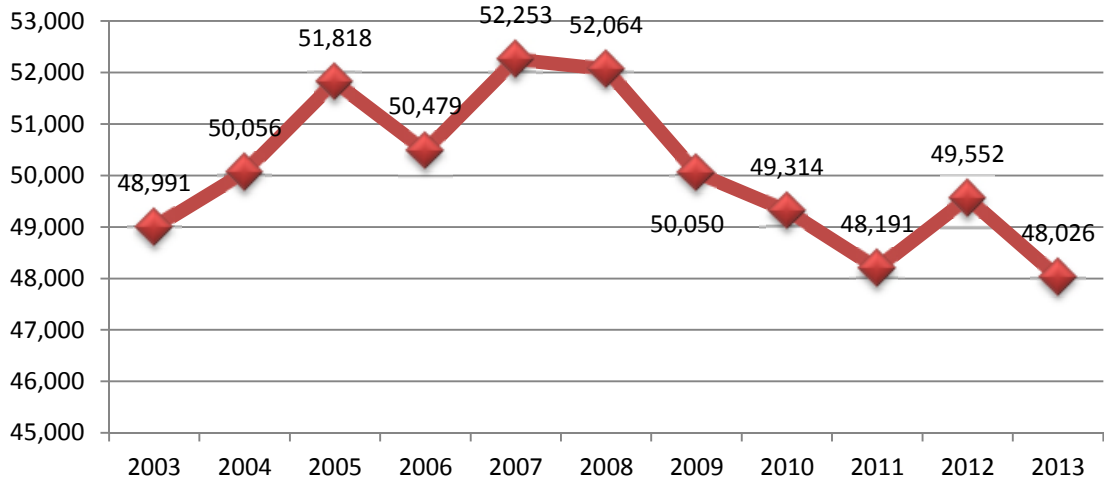


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Moreover, during this same period, total discharges and skilled nursing/intermediate care discharges declined significantly.

Hospital Sector Utilization Trends Coachella Valley Hospitals

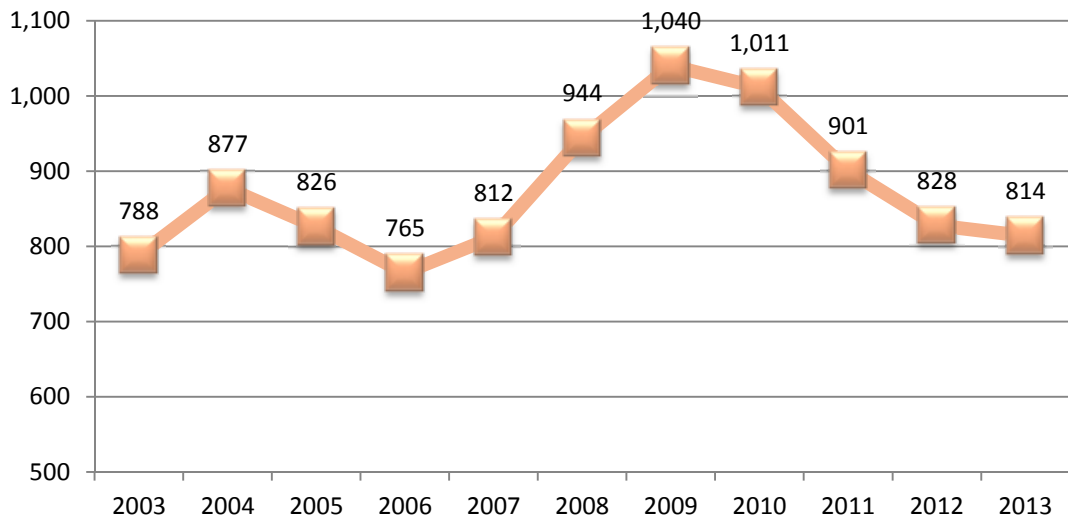
Total Discharges



Includes Desert Regional MC, Eisenhower MC
and JF Kennedy Memorial Hospital

Source: OSHP&D

Skilled Nursing / Intermediate Care discharges



Source: OSHP&D

In summary, during the past five years, there has been a decrease in both the number of patients discharged from the three Coachella Valley acute care hospitals and the total patient days. Interestingly, during this same period, the number of hospital employees increased.

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Coachella Valley Healthcare Occupational Overview

The majority of healthcare workforce occupations are highly specialized, representing a diverse set of training, skills and workplace settings. It is uncommon for members of the healthcare workforce to move between occupations because each requires unique training and skill sets. Moreover, many of the technical occupations require licensure or certification. The following section provides an overview of the most common healthcare occupations in the Coachella Valley in terms of the estimated number of people currently employed, projected changes in employment through 2022, and median 2014 hourly and annual wages.

In addition to current and projected changes in employment and wages, *Charting the Course II* also provides information on the education requirements, education and training providers, recruitment strategies, and typical movement within each occupation and between occupations for 32 healthcare occupations. This section provides data from both regional and national perspectives.

According to information provided by the Labor Market Information Division of the California Employment Development Department, during 2013, the most recent 12 month period for which data is available, there were an estimated 13,556 persons employed in healthcare or healthcare support occupations in the Coachella Valley. Occupations with the highest number employed were registered nurses, nursing aides, orderlies, attendants medical assistants licensed practical nurses, home health aides, and dental assistants, accounting for over 65% of the current healthcare employment (excluding physicians, dentists and chiropractors).

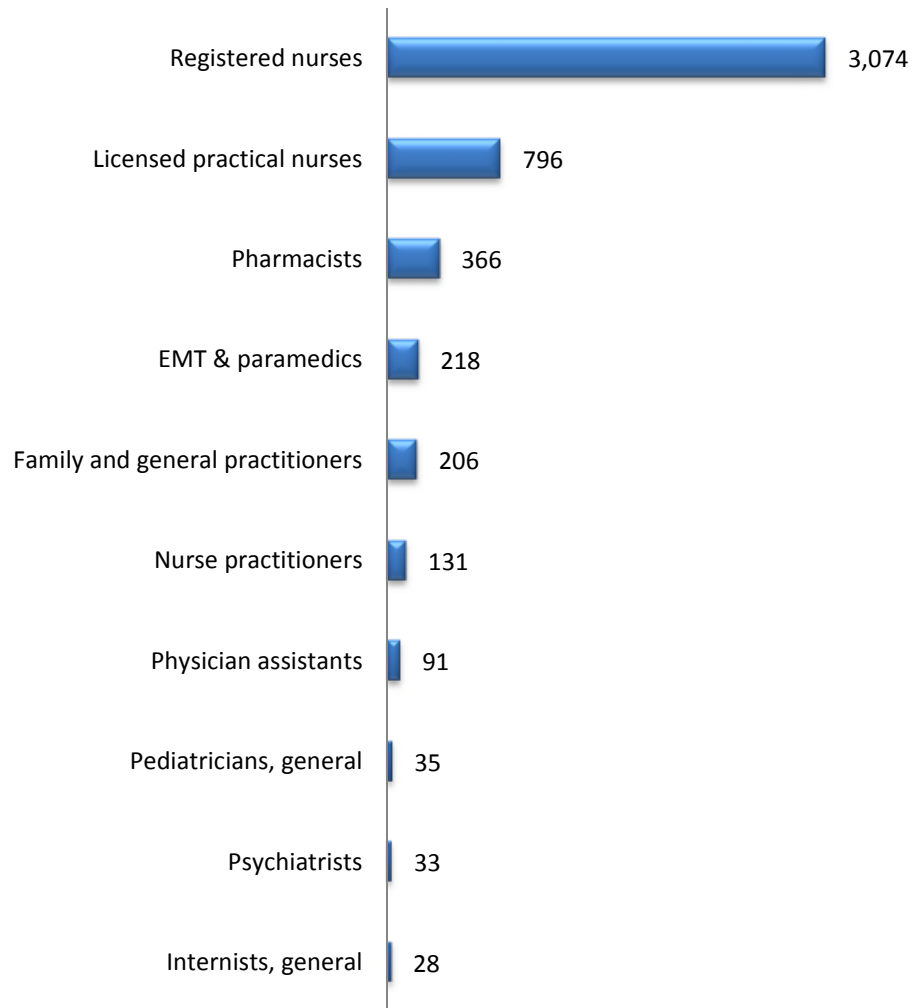
Occupational Growth

Coachella Valley healthcare employment projections through 2022 are based on the Bureau of Labor Statistics labor force projections from 2012 to 2022, published in December of 2014. According to the Bureau, labor force projections are revised every two years and developed using a complex series of economic models that relate economic theory and behavior to the labor market and other economic data. The labor force projections presented in this section are based on the Riverside San Bernardino Ontario Metropolitan Statistical Area (MSA). Because labor force projections are not available for geographic areas smaller than the MSA, additional analysis was completed utilizing recent labor force data from the Bureau and California Employment Development Department to create current estimates specific to the Coachella Valley labor force. The following tables present 2012 to 2022 projections for Coachella Valley in terms of percent growth and total employment change during this period, grouped by clinical, therapeutic, diagnostic and support occupations.

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Healthcare Employment by Occupation Coachella Valley – 2012 Estimate Persons Employed

Clinical Occupations

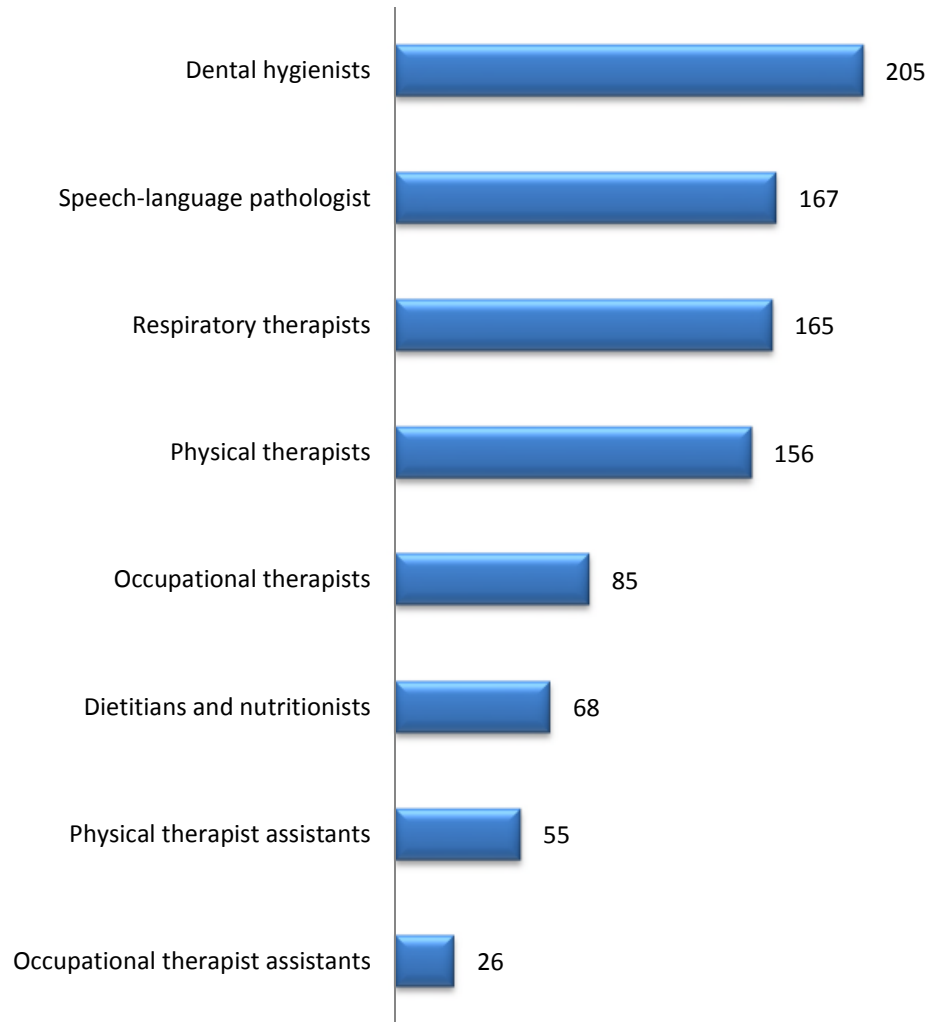


Source: CAEDD, 2014

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Healthcare Employment by Occupation Coachella Valley – 2012 Estimate Persons Employed

Therapeutic Occupations

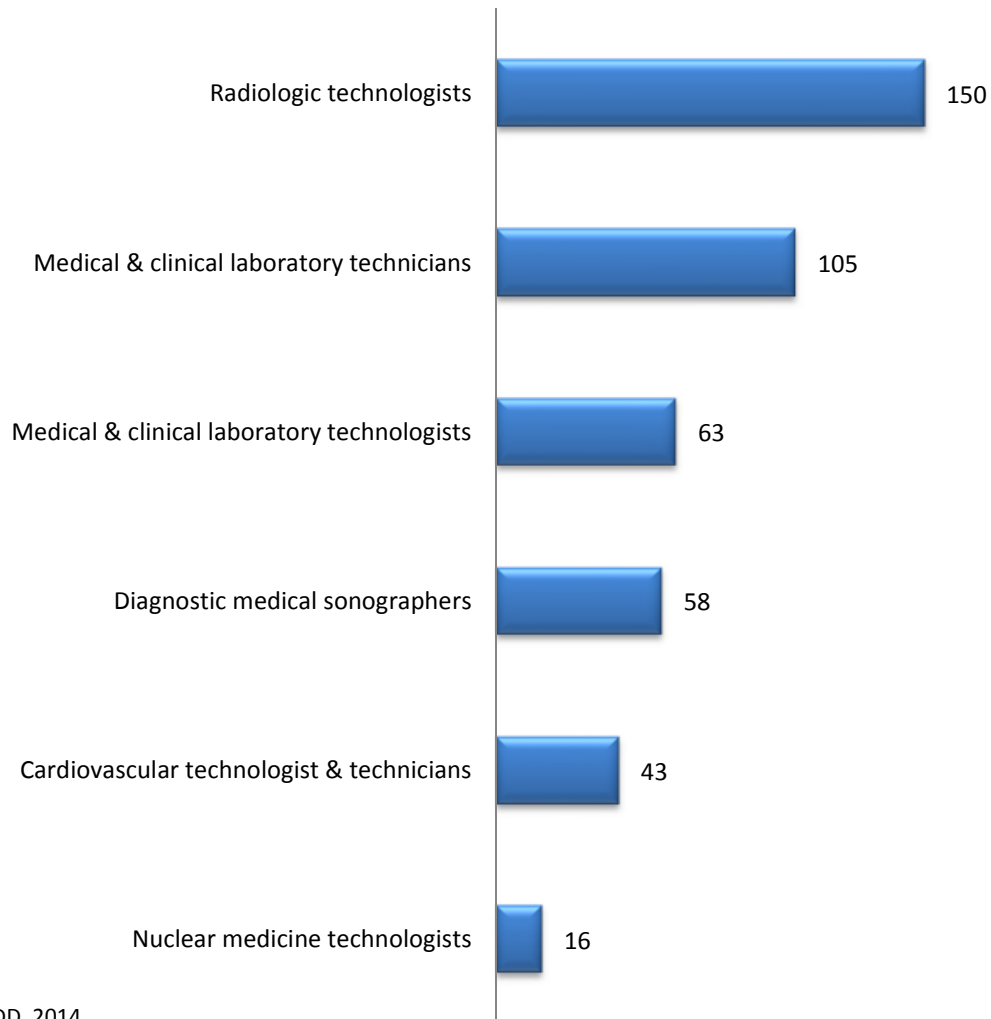


Source: CAEDD, 2014

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Healthcare Employment by Occupation Coachella Valley – 2012 Estimate Persons

Diagnostic Occupations

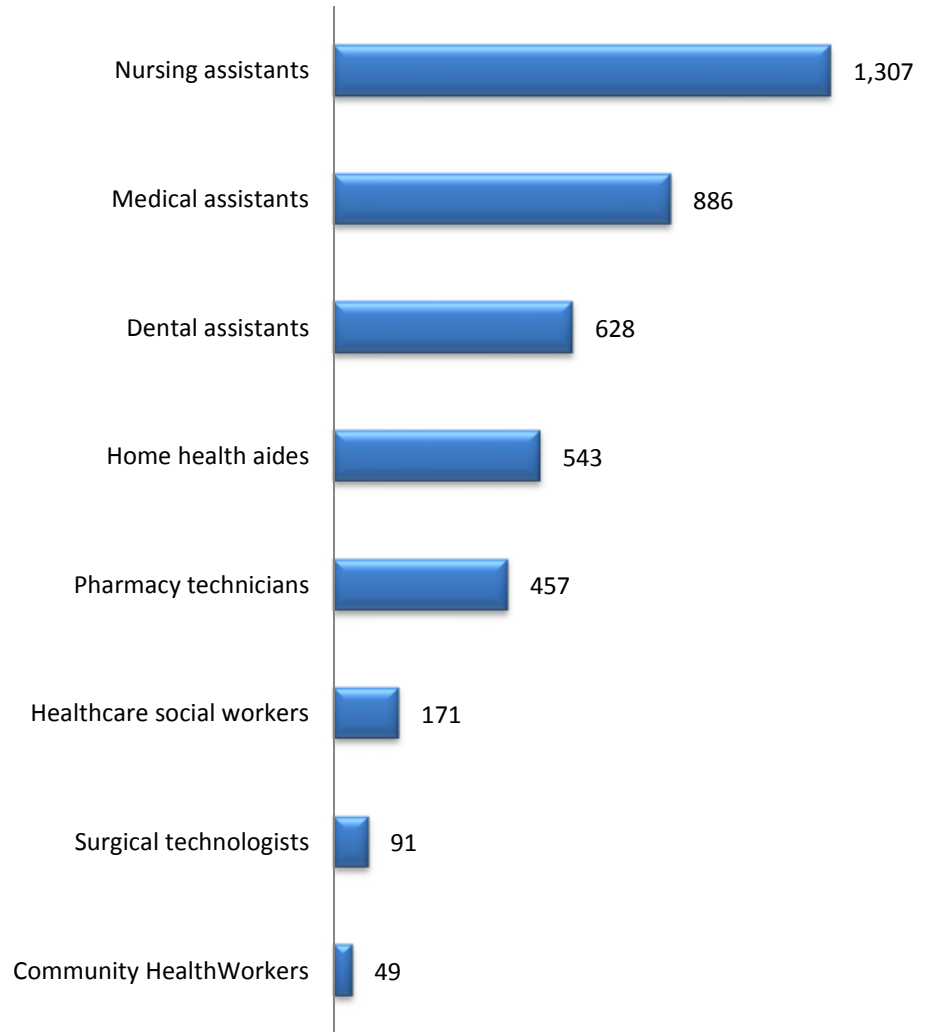


Source: CAEDD, 2014

Coachella Valley Healthcare Workforce Needs Assessment

Healthcare Employment by Occupation Coachella Valley – 2012 Estimate Persons Employed

Healthcare Support Occupations

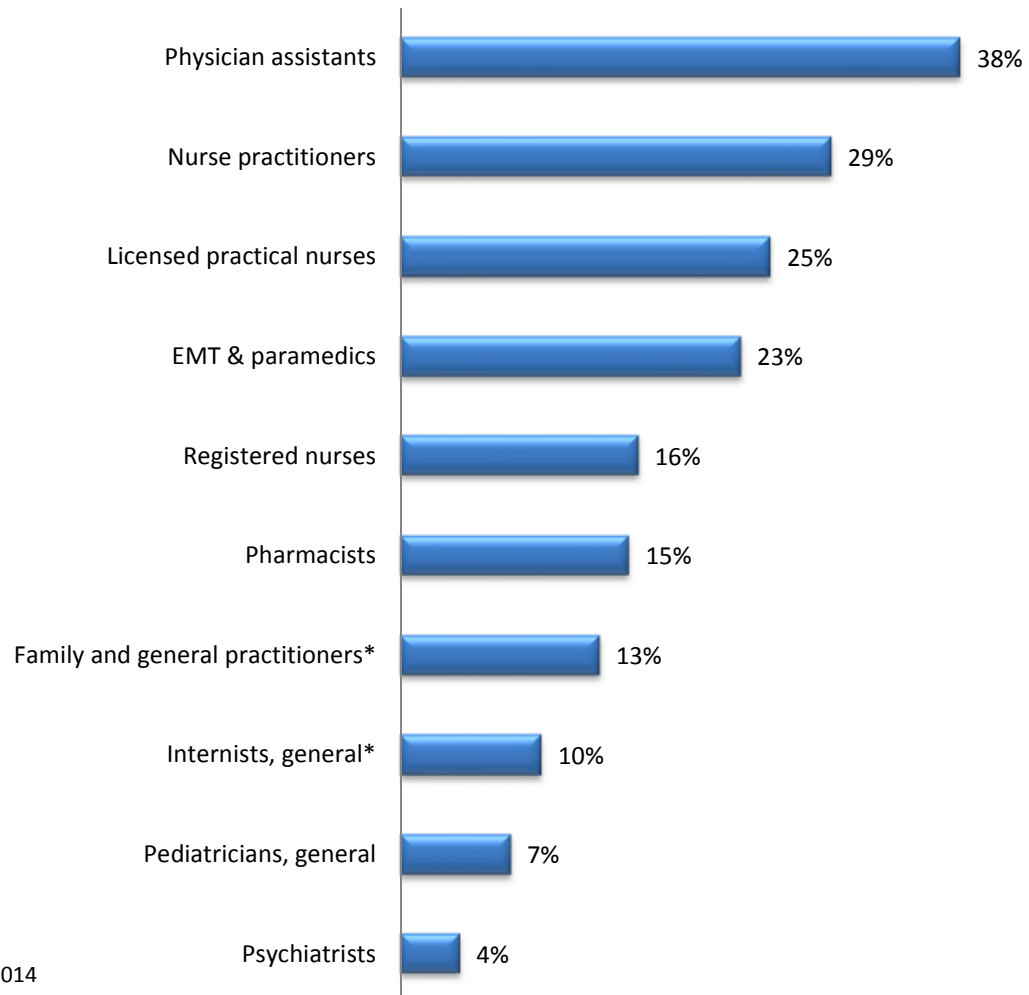


Source: CAEDD, 2014

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Coachella Valley Fastest Growing Healthcare Occupations (2012 – 2022 Projections Based on Percent Increase)

Clinical Occupations



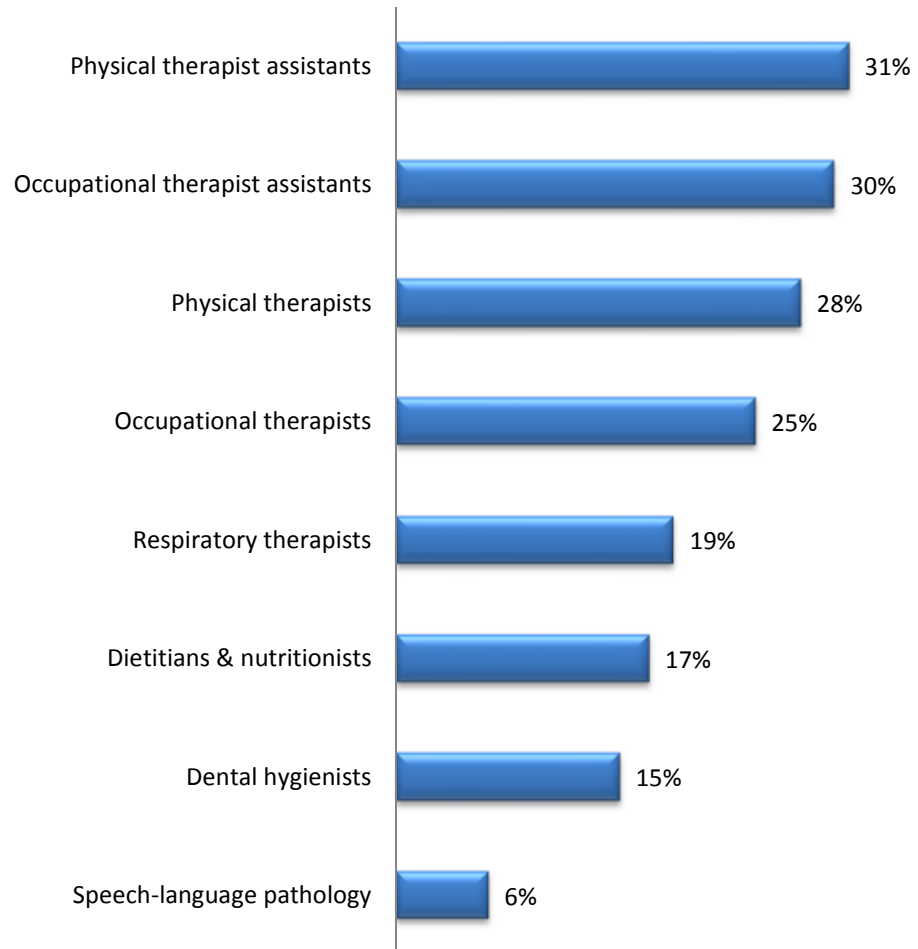
Source: CAEDD, 2014

* The projected increases for both family practitioners and internists shown in the above chart do not include the first graduating classes from the new Eisenhower Medical Center and Desert Regional Medical Center residency programs due to graduate in 2016 and 2018, respectively.

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Coachella Valley Fastest Growing Healthcare Occupations (2012 – 2022 Projections Based on Percent Increase)

Therapeutic Occupations

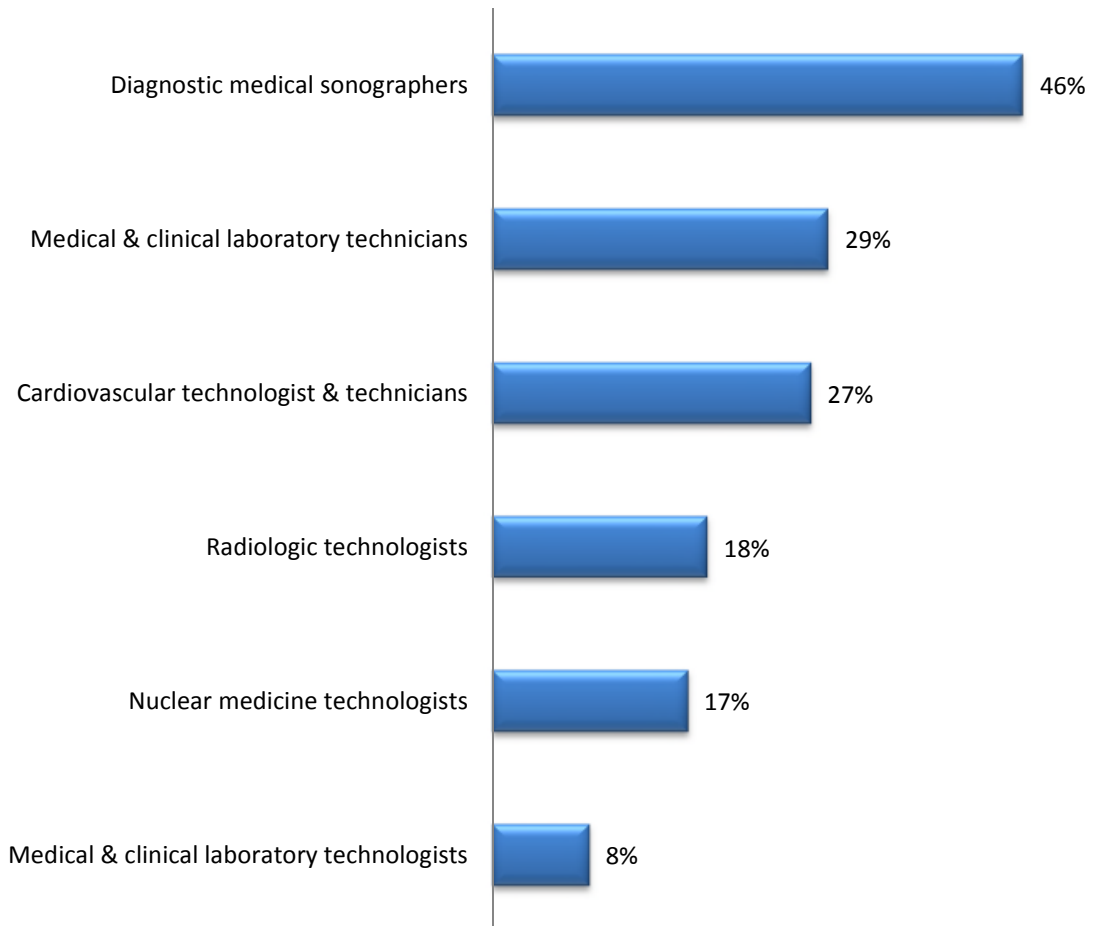


Source: CAEDD, 2014

Coachella Valley Healthcare Workforce Needs Assessment

Coachella Valley Fastest Growing Healthcare Occupations (2012 – 2022 Projections Based on Percent Increase)

Diagnostic Occupations

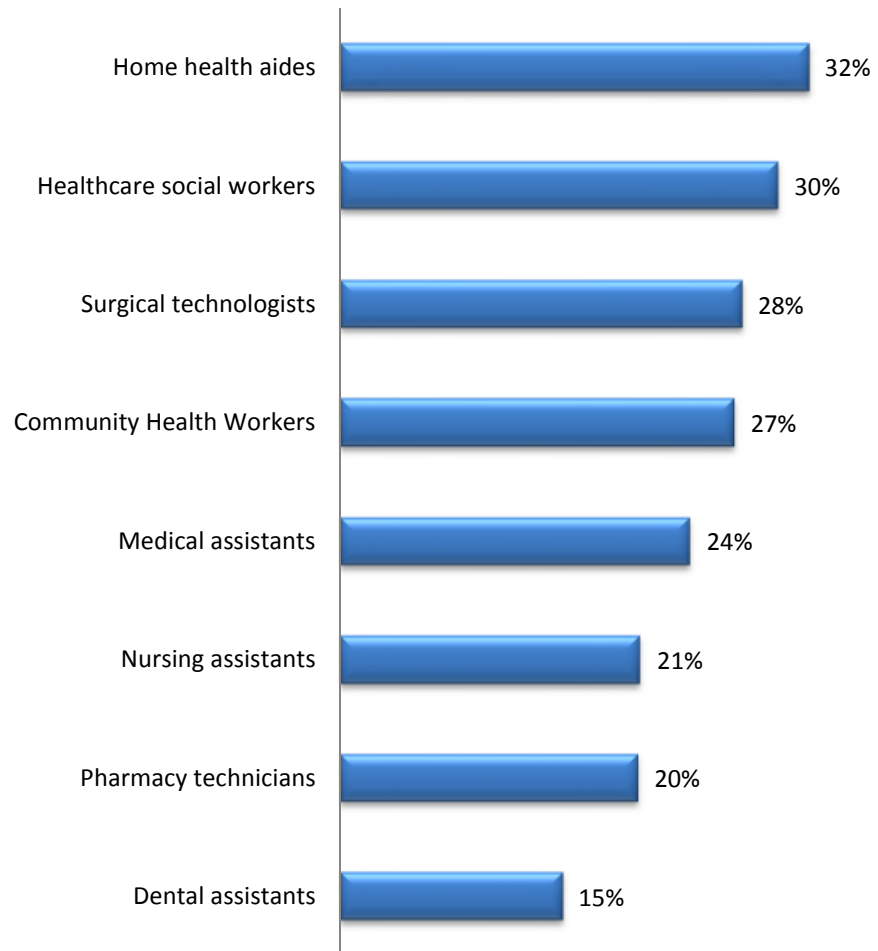


Source: CAEDD, 2014

Coachella Valley Healthcare Workforce Needs Assessment

Coachella Valley Fastest Growing Healthcare Occupations (2012 – 2022 Projections Based on Percent Increase)

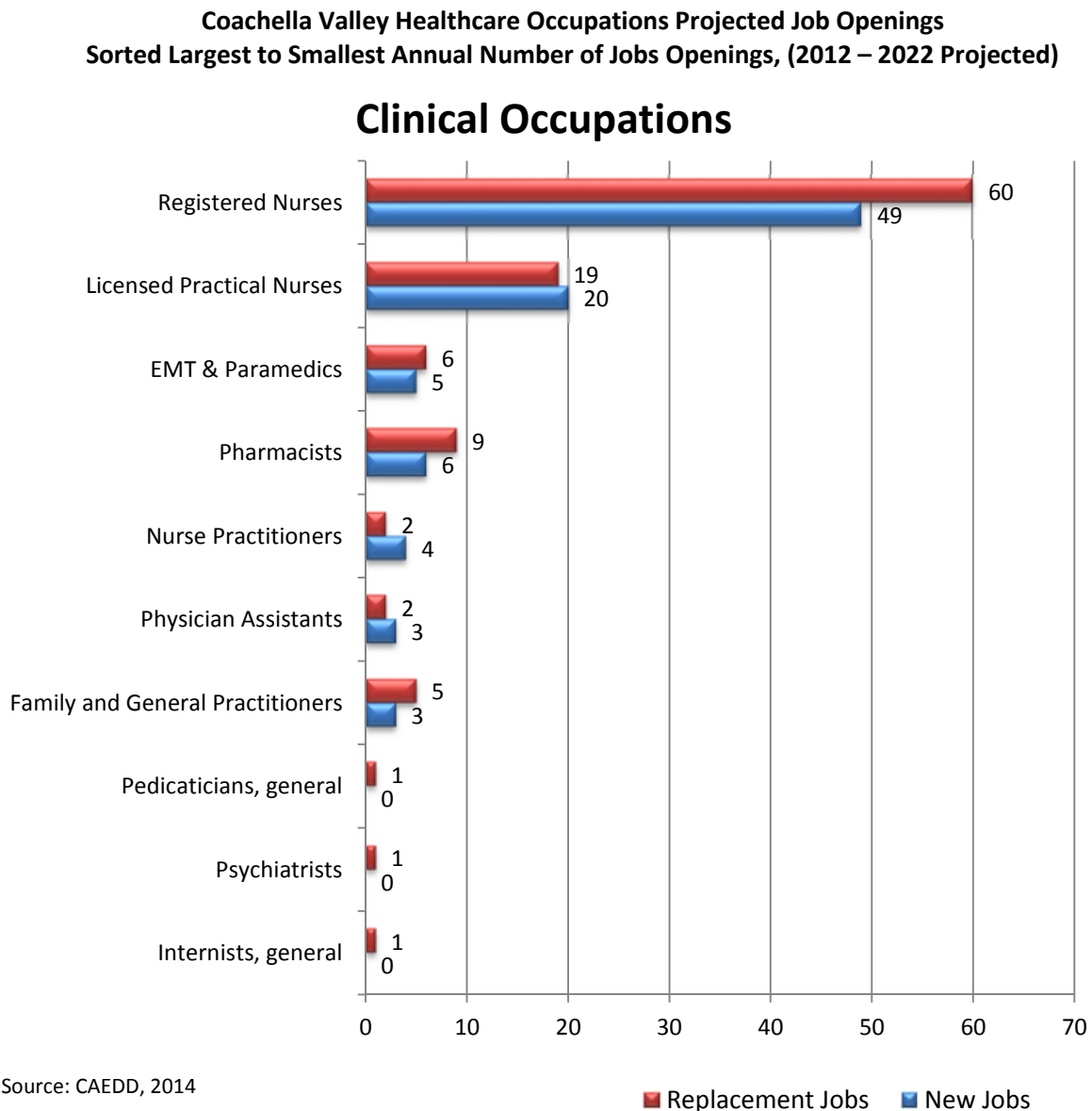
Healthcare Support Occupations



Source: CAEDD, 2014

Coachella Valley Healthcare Workforce Needs Assessment

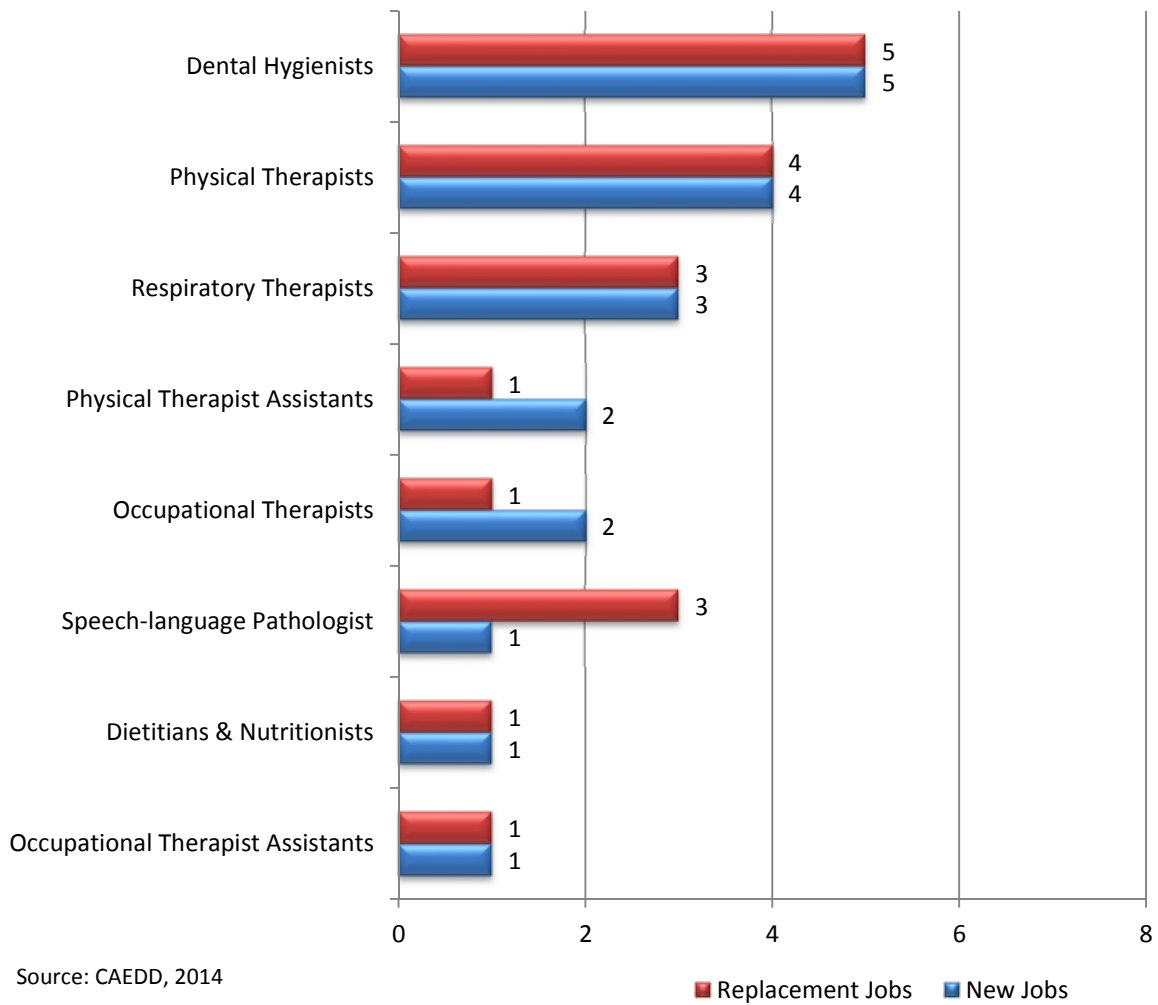
Job openings for registered nurses are projected to be the highest among healthcare job openings due to growth and net replacement between 2012 and 2022. (Note: Job openings during the 10 years are based on new jobs caused by an increase in demand, and net replacements. Net replacement openings, as defined by the BLS, are an estimate of the number of job openings expected due to people permanently leaving an occupation. It estimates the net movement of experienced workers who leave an occupation and start working in another occupation, stop working altogether, or leave the geographic area, less the experienced workers who move into such openings. It does not represent the total number of jobs to be filled due to the need to replace workers.)



Coachella Valley Healthcare Workforce Needs Assessment

Coachella Valley Healthcare Occupations Projected Job Openings
Sorted Largest to Smallest Annual Number of Jobs Openings, (2012 – 2022 Projected)

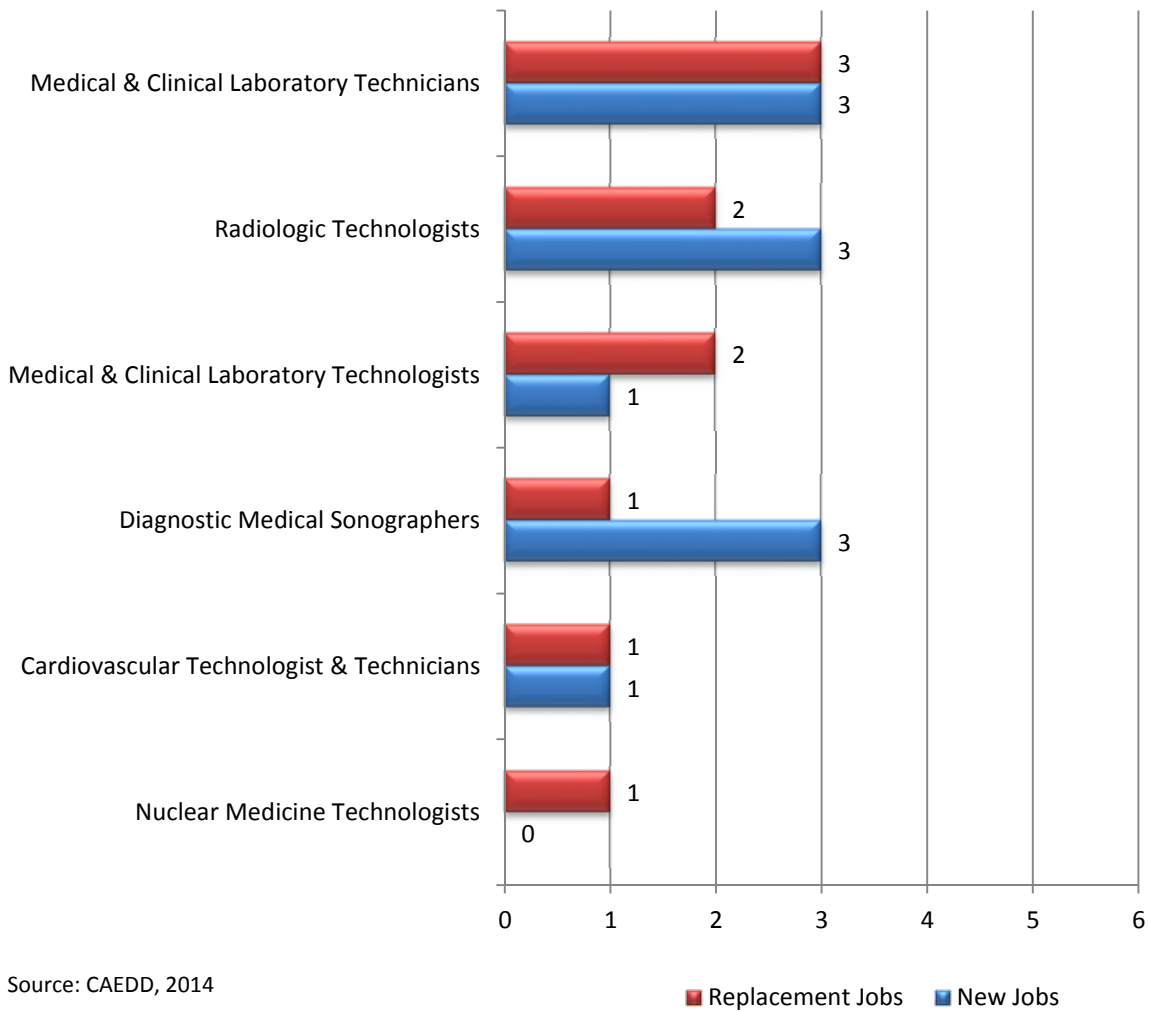
Therapeutic Occupations



Coachella Valley Healthcare Workforce Needs Assessment

Coachella Valley Healthcare Occupations Projected Job Openings Sorted Largest to Smallest Annual Number of Jobs Openings, (2012 – 2022 Projected)

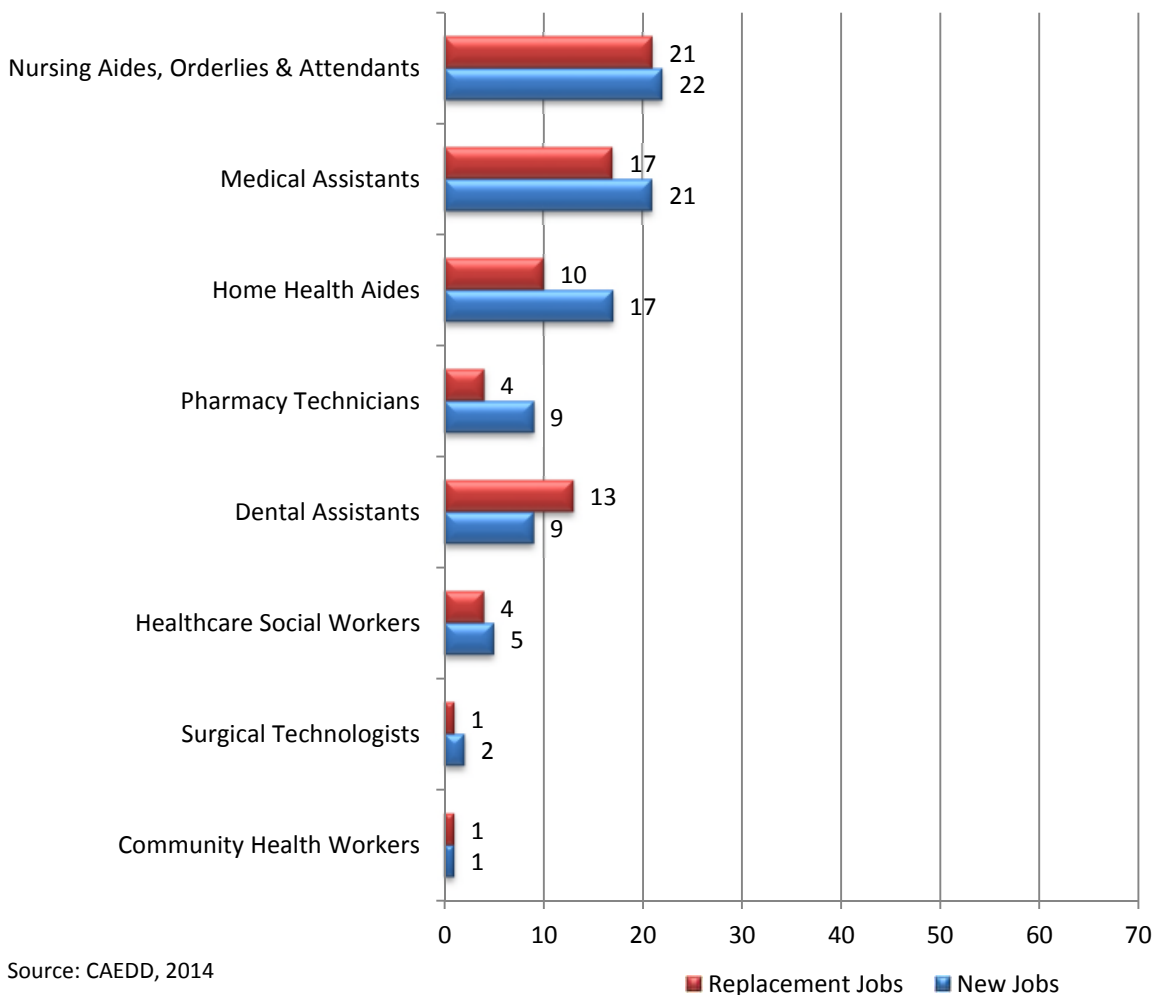
Diagnostic Occupations



Coachella Valley Healthcare Workforce Needs Assessment

Coachella Valley Healthcare Occupations Projected Job Openings Sorted Largest to Smallest Annual Number of Jobs Openings, (2012 – 2022 Projected)

Healthcare Support Occupations



One of the biggest challenges facing healthcare organizations is finding well trained, experienced workers. This issue is particularly challenging for recruiting hospital based nurses because there are so many areas within hospitals requiring extensive experience. Several examples are emergency, intensive care, surgery, obstetrics and oncology departments. All of these areas require nurses with the type of advance training and skills that preclude new graduates from these positions. This same issue also holds true for finding well trained and experience specialized occupations such as physical therapists, occupational therapists, and radiology catheterization technologists.

Wages

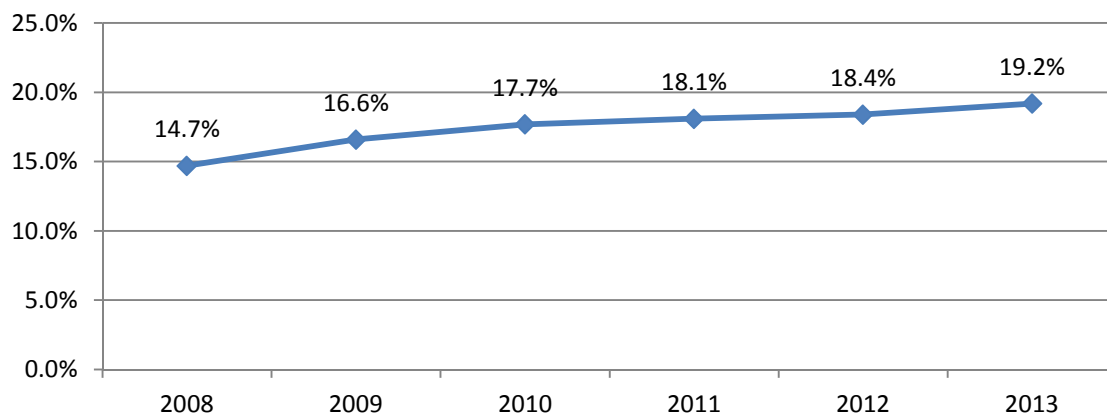
During 2013, according to EDD data, the Coachella Valley healthcare sector reported wages of over \$777,653,000. Ambulatory care services accounted for \$378,869,498 (48.7%) of the total, followed by hospitals at \$322,686,597 (41.5%) and nursing and residential care facilities at \$76,097,071 (9.8%).

Coachella Valley Healthcare Workforce Needs Assessment

Overall, the healthcare sector's payroll represented 19.1% of the Valley's total \$4,047,585,417 payroll paid during 2013.

As shown in the chart below, healthcare sector payroll as a percentage of the total Coachella Valley payroll has increased in each of the past five years.

Healthcare Sector Payroll as a percent of Total Coachella Valley Payroll



Source: EDD - Labor Market Information Division

Wages for individual healthcare workers at the occupational level are only available at the Riverside San Bernardino Ontario MSA level. The following table provides the mean hourly and mean annual wage data for 47 healthcare occupations (SOC codes 29-0000 through 28-9099) and 13 healthcare support occupations (SOC codes 31-0000 through 31-9099) as of first quarter 2013.

Change in Occupation Hourly and Annual Wage Estimates first Quarter 2008 vs 2014 Riverside San Bernardino Ontario MSA

Occupational Code	Occupational Title	2008 Mean Hourly Wage	2008 Mean Annual Wage	2014 Median Hourly Wage	2014 Median Annual Wage
00-0000	All Occupations	\$19.59	\$40,760	\$16.34	\$44,160
21-1022	Healthcare social worker	\$27.50	\$57,211	\$30.78	\$64,021
21-1094	Community Health Worker	*	*	\$17.11	\$35,582
29-0000	Healthcare practitioners and technical occupations	\$35.86	\$74,590	\$36.28	\$75,454
29-1011	Chiropractors	\$32.12	\$66,810	\$56.22	\$116,944
29-1021	Dentists, general	\$64.11	\$133,350	\$62.15	\$129,257
29-1031	Dietitians and nutritionists	\$30.31	\$63,050	\$33.34	\$69,333
29-1041	Optometrists	\$52.70	\$109,610	\$42.81	\$89,031
29-1051	Pharmacists	\$55.87	\$116,210	\$63.99	\$133,101
29-1062	Family and general practitioners	\$77.61	\$161,420	*	*

Coachella Valley Healthcare Workforce Needs Assessment

Occupational Code	Occupational Title	2008 Mean Hourly Wage	2008 Mean Annual Wage	2014 Median Hourly Wage	2014 Median Annual Wage
29-1063	Internists, general	\$86.23	\$179,350	\$86.57	\$180,055
29-1064	Obstetricians and gynecologists	\$82.16	\$170,890	*	*
29-1065	Pediatricians, general	\$72.52	\$150,840	\$77.37	\$160,923
29-1066	Psychiatrists	\$94.29	\$196,120	*	*
29-1067	Surgeons	\$105.02	\$218,450	*	*
29-1071	Physician assistants	\$36.56	\$76,030	\$44.29	\$92,127
29-1121	Audiologists	\$36.63	\$76,180	*	*
29-1122	Occupational therapists	\$37.40	\$77,790	\$44.23	\$91,995
29-1123	Physical therapists	\$41.96	\$87,280	\$41.49	\$86,299
29-1124	Radiation therapists	\$37.12	\$77,200	\$42.98	\$89,385
29-1125	Recreational therapists	\$24.22	\$50,380	\$34.44	\$71,460
29-1126	Respiratory therapists	\$28.99	\$60,300	\$32.75	\$68,109
29-1127	Speech-language pathologists	\$37.55	\$78,100	\$43.82	\$91,145
29-1129	Therapists, all other	\$36.18	\$75,260	\$43.55	\$90,579
29-1141	Registered nurses	\$36.07	\$75,020	\$42.39	\$88,181
29-1171	Nurse practitioners	*	*	\$52.35	\$108,871
29-1199	Health diagnosing and treating practitioners, all other	\$49.39	\$102,720	\$38.03	\$79,106
29-2011	Medical and clinical laboratory technologists	\$33.12	\$68,880	\$36.35	\$75,616
29-2012	Medical and clinical laboratory technicians	\$19.63	\$40,840	\$18.27	\$38,010
29-2021	Dental hygienists	\$40.12	\$83,440	\$44.02	\$91,550
29-2031	Cardiovascular technologists and technicians	\$24.36	\$50,660	\$23.17	\$48,188
29-2032	Diagnostic medical sonographers	\$33.53	\$69,750	\$33.50	\$69,677
29-2033	Nuclear medicine technologists	\$39.64	\$82,450	\$44.48	\$92,511
29-2034	Radiologic technologists	\$27.19	\$56,560	\$29.92	\$62,231
29-2035	Magnetic Resonance Imaging Technologists	*	*	\$36.17	\$75,221
29-2041	Emergency medical technicians and paramedics	\$14.74	\$30,660	\$11.46	\$23,846
29-2051	Dietetic technicians	\$15.24	\$31,690	\$13.19	\$27,438
29-2052	Pharmacy technicians	\$16.08	\$33,450	\$16.27	\$33,842
29-2053	Psychiatric technicians	\$23.86	\$49,620	\$28.00	\$58,255
29-2055	Surgical technologists	\$20.29	\$42,200	\$24.29	\$50,535
29-2061	Licensed practical and licensed vocational nurses	\$20.57	\$42,780	\$22.17	\$46,104
29-2071	Medical records and health information technicians	\$18.17	\$37,800	\$19.00	\$39,507
29-2081	Opticians, dispensing	\$15.70	\$32,650	\$17.47	\$36,341
29-2099	Health technologists and technicians, all other	\$20.97	\$43,620	\$19.13	\$39,781
31-0000	Healthcare support occupations	\$ 13.16	\$27,370	\$13.63	\$28,355

Coachella Valley Healthcare Workforce Needs Assessment

Occupational Code	Occupational Title	2008 Mean Hourly Wage	2008 Mean Annual Wage	2014 Median Hourly Wage	2014 Median Annual Wage
31-1011	Home health aides	\$10.20	\$21,210	\$10.72	\$22,299
31-1014	Nursing assistants	*	*	\$12.66	\$26,330
31-1015	Orderlies	*	*	\$14.16	\$29,454
31-2011	Occupational therapist assistants	\$28.73	\$59,750	\$32.14	\$66,858
31-2021	Physical therapist assistants	\$26.89	\$55,940	\$31.48	\$66,858
31-2022	Physical therapist aides	\$12.52	\$26,050	\$13.17	\$27,398
31-9011	Massage therapists	\$22.48	\$46,760	\$17.97	\$37,364
31-9091	Dental assistants	\$14.40	\$29,960	\$16.18	\$33,666
31-9092	Medical assistants	\$13.28	\$27,620	\$13.01	\$27,045
31-9093	Medical equipment preparers	\$14.10	\$29,330	\$18.88	\$39,278
31-9094	Medical transcriptionists	\$18.08	\$37,610	\$22.42	\$46,634
31-9099	Healthcare support workers, all other	\$15.55	\$32,340	\$16.89	\$35,137

* Indicates information not available.

Source: CAEDD, 2014

Healthcare Workforce Education and Training

This section explores the healthcare workforce in terms of how individuals enter and move within the healthcare sector. It contains profiles of the different occupations covered in this report and the education required for entry into each.

Healthcare Workforce Education Attainment

The table below profiles the educational requirements for entry into the healthcare occupations presented in this report. The most common educational level is an associate's degree or less, aka pre-baccalaureate, accounting for 18 of the 32 occupations discussed. A bachelor's degree is required by four occupations, three occupations require a master's degree, and six occupations require a doctoral or professional degree.

Occupation	Entry Level Educational Requirements
Clinical Occupations	
Pharmacist	Doctoral or professional degree
Family and general practitioner	Doctoral degree
Internist, general	Doctoral degree
Pediatrician, general	Doctoral degree
Psychiatrist	Doctoral degree
Registered nurse	Associate's or bachelor's degree (2-4 years)
Nurse practitioner	Master's degree
Physician assistant	Certificate (2 years)/associate's to master's degree (depending on previous education and experience)
Licensed practical and vocational nurse	Certificate (1-2 years)
Emergency medical technician and paramedic	Certificate (1-2 years)

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Occupation	Entry Level Educational Requirements
Therapeutic Occupations	
Occupational therapist	Bachelor's degree
Occupational therapist assistant	Certificate (1-2 years) or associate's degree
Dietitian and nutritionist	Bachelor's degree
Physical therapist	Doctor of Physical Therapy (DPT) degree
Physical therapist assistant	Associate's degree
Respiratory therapist	Associate's degree
Speech-language pathologist	Master's degree
Dental hygienist	Associate's degree
Diagnostic Occupations	
Medical and clinical laboratory technician	Associate's degree
Medical and clinical laboratory technologist	Bachelor's degree
Cardiovascular Technologist and technician	Associate's degree
Diagnostic medical sonographer	Associate's degree
Nuclear medicine technologist	Associate's degree
Radiologic technologist	Associate's degree
Healthcare Support Occupations	
Healthcare social worker	Bachelor's degree (BSW) or master's degree (MSW)
Pharmacy technician	Certificate (1-2 years)
Surgical technologist	Certificate (1-2 years)
Home health aide	On the job
Nursing assistant	On the job
Dental assistant	Certificate (1-2 years)
Medical assistant	Certificate (1-2 years)
Community Health Worker	On the job or special training program

Educational Opportunities

With very few exceptions, healthcare occupations require some level of postsecondary education, with community colleges and private schools providing the majority of this training. A review of the current educational opportunities available in and around the Coachella Valley finds that postsecondary education is available for only 14 of the 32 occupations covered in this study. The type of training and number of programs offered within a fifty mile radius of Palm Springs include:

- Registered nurse – 4
- Medical assistant – 4
- Dietitian and nutritionist – 1
- Nursing aide, orderly and attendant - 5
- Licensed practical nurse – 6
- Pharmacy technician – 3
- Dental hygienist – 1
- Dental assistant – 1
- Home health aide – 4
- Radiologic technologist – 1

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- Respiratory therapist – 1
- Respiratory therapy technician – 1
- EMT & paramedic – 4
- Community Health Worker – 1

RN Residency Program

To help meet the need for RNs with hospital experience, Desert Regional Medical Center and JF Kennedy Medical Center have begun offering an 18-week Versant RN Residency Program to new graduate nurses to help transition them from students to safe, competent and professional practitioners. The Versant RN Residency program is widely used by hospitals across the U.S. and has been shown to help new graduate RNs improve the competency and confidence as patient care givers.

Educational Capacity Shortfalls

Educational resources for 18 of the healthcare occupations studied are not available within 50 miles of the Coachella Valley. The level of education required for entry level positions into these healthcare occupations includes:

Certificate

- Surgical technologist

Associate's Degree

- Cardiovascular technologist and technician
- Diagnostic medical sonographer
- Medical and clinical laboratory technician
- Nuclear medicine technologist
- Occupational therapist assistant
- Physical therapist assistant
- Speech language pathology assistant

Bachelor's Degree

- Medical and clinical laboratory technologist
- Occupational therapist

Master's Degree

- Advanced practice registered nurse (APRN)
- Medical and public health social worker
- Physician assistant
- Speech-language pathologist

Doctorate Degree

- Physical therapist
- Pediatrician
- Pharmacist
- Psychiatrist

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Healthcare Occupational Profiles

This section profiles 32 occupations with a brief description of each, including education and training requirements, certification, advancement, employment, wages and job outlook. Note: the information contained in this section has been drawn from a variety of sources including the U.S. Bureau of Labor Statistics, California Employment Development Department, different professional association websites and educational websites. There are links to relevant and informative websites at the end of each profile.

SOC Occupational Code	Occupational Title	Page
Clinical Occupations		
29-1051	Pharmacists	52
29-1062	Family and general practitioners	55
29-1063	General Internists	58
29-1065	General Pediatricians	62
29-1066	Psychiatrists	66
29-1071	Physician assistants	70
29-1141	Registered nurses	74
29-1171	Nurse practitioners	78
29-2061	Licensed practical and licensed vocational nurses	81
29-2041	Emergency medical technicians and paramedics	84
Therapeutic Occupations		
29-1122	Occupational therapists	87
31-2011	Occupational therapist assistants	90
29-1031	Dietitians and nutritionists	93
29-1123	Physical therapists	97
31-2021	Physical therapist assistants	100
29-1126	Respiratory therapists	103
29-1127	Speech-language pathologists	106
29-2021	Dental hygienists	109
Diagnostic Occupations		
29-2011	Medical and clinical laboratory technologists	112
29-2012	Medical and clinical laboratory technicians	115
29-2031	Cardiovascular technologists and technicians	118
29-2032	Diagnostic medical sonographers	121
29-2033	Nuclear medicine technologists	124
29-2034	Radiologic technologists and technicians	127
Healthcare support occupations		
21-1022	Medical case manager, medical social worker	130
29-2052	Pharmacy technicians	133

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SOC Occupational Code	Occupational Title	Page
21-1394	Community Health Worker	136
29-2055	Surgical technologists	139
31-1011	Home health aides	142
31-1014	Nursing assistants	145
31-9091	Dental assistants	148
31-9092	Medical assistants	151

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Pharmacists

Occupation Description

Pharmacists dispense drugs prescribed by physicians and other health practitioners and provide information to patients about medications and their use. They also may provide advice on how to lead a healthy lifestyle, conduct health and wellness screenings, provide immunizations, and oversee the medications given to patients. They may also consult with and advise physicians and other health practitioners on the selection, dosage, interactions, and side effects of medications.

Pharmacists typically:

- Fill prescriptions, verifying instructions from physicians on the proper amounts of medication to give to patients
- Check whether the prescription might interact negatively with other drugs that a patient is taking or with any medical conditions the patient has
- Instruct patients on how and when to take a prescribed medicine and inform them about potential side effects they may experience from taking the medicine
- Advise patients about general health topics such as diet, exercise, managing stress, and on other issues such as the best equipment or supplies for treating a health problem
- Give flu shots and, in most states, other vaccinations
- Complete insurance forms and work with insurance companies to ensure that patients get the medicines they need
- Oversee the work of pharmacy technicians and pharmacists in training (interns)
- Keep records and do other administrative tasks
- Teach other healthcare practitioners about proper medication therapies for patients

Education and Training

Pharmacists must have a Doctor of Pharmacy (Pharm.D.), which is a four-year professional degree. They also must be licensed, which requires passing two exams. In California, there are currently 11 Doctor of Pharmacy programs fully accredited by the Accreditation Council for Pharmacy Education.

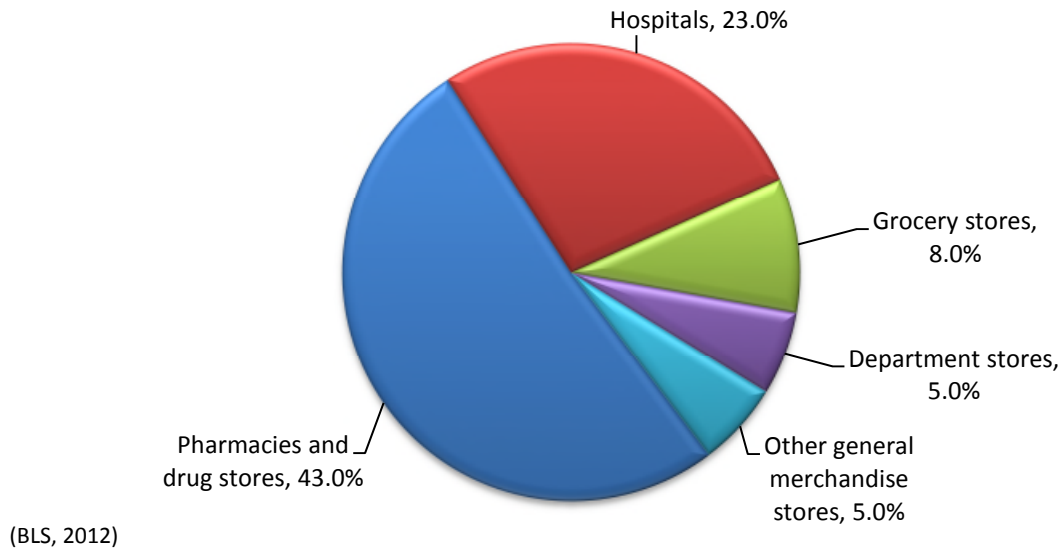
Licenses, Certifications, and Registrations

All states require pharmacists to be licensed. Once they finish their educational program, prospective pharmacists must pass two exams to get a license: the North American Pharmacist Licensure Exam (NAPLEX), and the Multistate Pharmacy Jurisprudence Exam (MPJE) or a state-specific test on pharmacy law.

Employment

Pharmacies are the most common source of employment for pharmacists. According to the BLS and estimates developed for this report, there are currently an estimated 366 pharmacists employed in the Coachella Valley. Between 2012 and 2022, there are projected to be 15 pharmacists' job openings annually, which includes six new jobs and nine replacement jobs. The following chart profiles the sources of employment for pharmacists nationally.

Sources of Employment



Wages

During May 2014, the median hourly wage among pharmacists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$63.99, or \$133,101 annually. The average wage depends on the type of employer.

Job Outlook

Overall, according to the BLS, employment of pharmacists is projected to grow 15.4 percent from 2012 to 2022, about as fast as the average for all occupations. Several factors are likely to contribute to this increase:

- The population is aging, and older people typically use more prescription medicines than younger people
- Higher rates of chronic diseases among all age groups requiring prescription medications
- Scientific advances bringing more pharmaceutical treatments to the market
- Increased number of individuals having access to health insurance
- The need to replace aging workers leaving the labor force

Recruitment Strategies

Pharmacists find positions by applying to hospitals, pharmacies, drug stores, college placement centers, and private employment agencies. There is information about job openings on a variety of websites such as Craig's List, Monster and Hot Jobs, plus association and health system websites.

Additional Information

For more information about pharmacists, visit the following sites:

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- American Society of Health-System Pharmacists - <http://www.ashp.org/>
- National Association of Chain Drug Stores - <http://www.nacds.org/>
- American Pharmacists Association - <http://www.pharmacist.com/>
- American College of Clinical Pharmacy - <http://www.accp.com/index.aspx>

For more information on pharmacy as a career, pre-professional and professional requirements, programs offered by colleges of pharmacy, and student financial aid, visit

American Association of Colleges of Pharmacy - <http://www.aacp.org/Pages/Default.aspx>

For more information about accredited Doctor of Pharmacy programs, visit

Accreditation Council for Pharmacy Education - <https://www.acpe-accredit.org/>

For information about certification, visit:

- Board of Pharmacy Specialties - <http://www.bpsweb.org/>
- National Certification Board for Diabetes Educators - http://www.ncbde.org/certification_info/

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Family and General Practitioners

Occupation Description

Family and general practitioners diagnose and treat injuries or illnesses. Physicians examine patients; take medical histories; prescribe medications; and order, perform, and interpret diagnostic tests. They often counsel patients on diet, hygiene, and preventive healthcare. Family and general physicians typically have regular, long-term patients.

Education and Training

At a minimum, family and general physicians have at least a bachelor's degree, and many have advanced degrees. Although no specific major is required, all students must complete undergraduate work in biology, chemistry, physics, mathematics, and English. Students also take courses in the humanities and social sciences.

Medical schools are highly competitive, requiring students to submit transcripts, scores from the Medical College Admission Test (MCAT), and letters of recommendation. Schools also consider an applicant's personality, leadership qualities, and participation in extracurricular activities. Most schools require applicants to interview with members of the admissions committee.

Typically, students spend most of the first two years of medical school in laboratories and classrooms, taking courses such as anatomy, biochemistry, pharmacology, psychology, medical ethics, and the laws governing medicine. They also gain practical skills, learning to take medical histories, examine patients, and diagnose illnesses.

During their last two years, medical students work with patients under the supervision of experienced physicians in hospitals and clinics. Through rotations in internal medicine, family practice, obstetrics and gynecology, pediatrics, psychiatry, and surgery, they gain experience in diagnosing and treating illnesses in a variety of areas.

Upon completion, medical students are awarded either a Doctor of Medicine (MD) or Doctor of Osteopathic Medicine (DO) degree, depending upon the type of medical school attended. There are currently 141 accredited MD-granting institutions and 30 accredited DO-granting institutions in the U.S. In California, there are 11 schools of medicine, seven of which are located in southern California. The closest and newest is the University of California, Riverside School of Medicine, which will not graduate its first class until 2017. Following is a list of California schools of medicine with the degrees granted:

- University of California, Riverside School of Medicine – MD
- Loma Linda University School of Medicine – MD
- University of California, Irvine School of Medicine – MD
- Keck School of Medicine of University of Southern California – MD
- David Geffen School of Medicine at UCLA – MD
- University of California, San Diego School of Medicine – MD

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- Western University of Health Sciences College of Osteopathic Medicine of the Pacific – DO

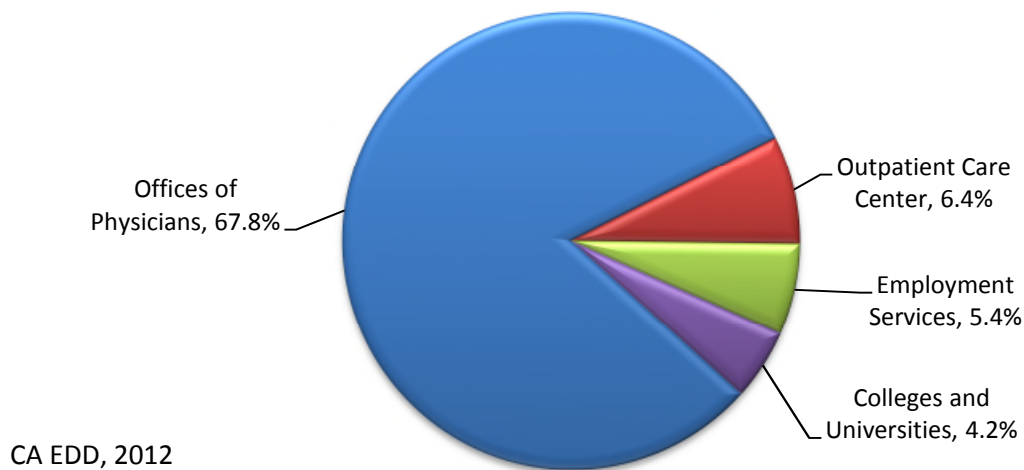
Licensure

All states require physicians to be licensed; requirements vary by state. To qualify for a license, candidates must graduate from an accredited medical school, complete residency training in their specialty, and pass written and practical exams. In California, all physicians must pass a standardized national licensure examination. M.D.s take the U.S. Medical Licensing Examination (USMLE). D.O.s take the Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA).

Employment

Increasingly, family and general practitioners are working in group practices or healthcare organizations, where they share a large number of patients with other doctors. The group setting allows them more time off and lets them coordinate care for their patients; however, it gives them less independence than solo practitioners. Currently, there are an estimated 206 family and general practitioners in the Coachella Valley.

Sources of Employment



Wages

During May 2013, the average hourly wage among family and general practitioners employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$99.54, or \$207,040 annually, an increase of 28.3% since 2008. The average hourly and annual wage varies depending upon the type of employer. Typically, outpatient care centers and offices of physicians pay more than other types of employers (BLS, 2013).

Job Outlook

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Overall, according to the BLS, employment for family and general practitioners is expected to be less than average through 2022. The projected number of jobs available annually in the Coachella Valley for this occupation through 2022 is three new practitioners and five practitioners to replace those who are retiring or leaving the area, for a total of eight. Factors affecting the growth of this occupation include:

- Implementation of the ACA, which has expanded the number of patients who have access to health insurance, increasing access to medical care and resulting in an increased demand for physician services.
- New technologies allowing physicians to treat more patients in the same amount of time.
- Increased use of PAs and NAs to do routine tasks.

Recruitment Strategies

There are a vast number of opportunities for finding employment as a primary care physician. Some of these include placement assistance from the medical schools, professional “head hunters” sponsored by numerous healthcare systems, professional journals and websites and the American Medical Association, to name a few.

Positions that Move into this Occupation

None without significantly more education and training.

Positions that Build upon this Occupation

None without significantly more education and training.

Additional Information

Additional information about family and general practitioners is available at the following websites:

- American Medical Association - <http://www.ama-assn.org/>
- American Osteopathic Association - <http://www.osteopathic.org/>
- American Academy of Family Physicians - <http://www.aafp.org/online/en/home.html>
- American Board of Medical Specialties - <http://www.abms.org/>

For a list of medical schools and residency programs, as well as general information on premedical education, financial aid, and medicine as a career, visit the following websites:

- Association of American Medical Colleges - <https://www.aamc.org/>
- American Association of Colleges of Osteopathic Medicine - <http://www.aacom.org/Pages/default.aspx>

For information about licensing, visit:

- Federation of State Medical Boards - <http://www.fsmb.org/>
- Medical Board of California - <http://www.mbc.ca.gov/>
- Osteopathic Medical Board of California - <http://www.ombc.ca.gov/>

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General Internists

Occupation Description

Internists without a sub-specialty are typically referred to as general internists and are considered primary care providers. They diagnose and provide non-surgical treatment of diseases and injuries of internal organ systems. Internists examine patients; take medical histories; prescribe medications; and order, perform, interpret diagnostic tests and management of chronic conditions and illnesses. They often counsel patients on diet, hygiene, and preventive healthcare. Internal medicine physicians typically have regular, long-term patients.

Education and Training

Like all physicians, internists have a bachelor's degree, and many have advanced degrees. Although no specific major is required, all students must complete undergraduate work in biology, chemistry, physics, mathematics, and English. Students also take courses in the humanities and social sciences.

Medical schools are highly competitive, requiring students to submit transcripts, scores from the Medical College Admission Test (MCAT), and letters of recommendation. Schools also consider an applicant's personality, leadership qualities, and participation in extracurricular activities. Most schools require applicants to interview with members of the admissions committee.

Typically, students spend most of the first two years of medical school in laboratories and classrooms, taking courses such as anatomy, biochemistry, pharmacology, psychology, medical ethics, and the laws governing medicine. They also gain practical skills, learning to take medical histories, examine patients, and diagnose illnesses.

During their last two years, medical students work with patients under the supervision of experienced physicians in hospitals and clinics. Through rotations in internal medicine, family practice, obstetrics and gynecology, pediatrics, psychiatry, and surgery, they gain experience in diagnosing and treating illnesses in a variety of areas.

Upon completion internists are awarded a Doctor of Medicine (MD) or Doctor of Osteopathic Medicine (DO) degree, depending upon the type of medical school attended. In addition to their undergraduate and graduate education, an internist must complete several years of graduate medical education (GME) to include a one-year internship, plus three years of residency training. Furthermore, all internists must pass the necessary medical certification and licensing exams, including all three steps of the USMLE, and state licensing exams. Most internists are also required to be board certified in internal medicine, which is achieved by passing the oral and written board certification exams as well.

There are currently 141 accredited MD-granting institutions and 30 accredited DO-granting institutions in the U.S. In California, there are 11 schools of medicine, seven of which are located in southern California. The closest and newest is the University of California, Riverside School of Medicine, which will not graduate its first class until 2017. Following is a list of California schools of medicine with the degrees granted:

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- Keck School of Medicine of University of Southern California - MD
- David Geffen School of Medicine at UCLA – MD
- University of California, San Diego School of Medicine – MD
- Western University of Health Sciences College of Osteopathic Medicine of the Pacific - DO

Licensure

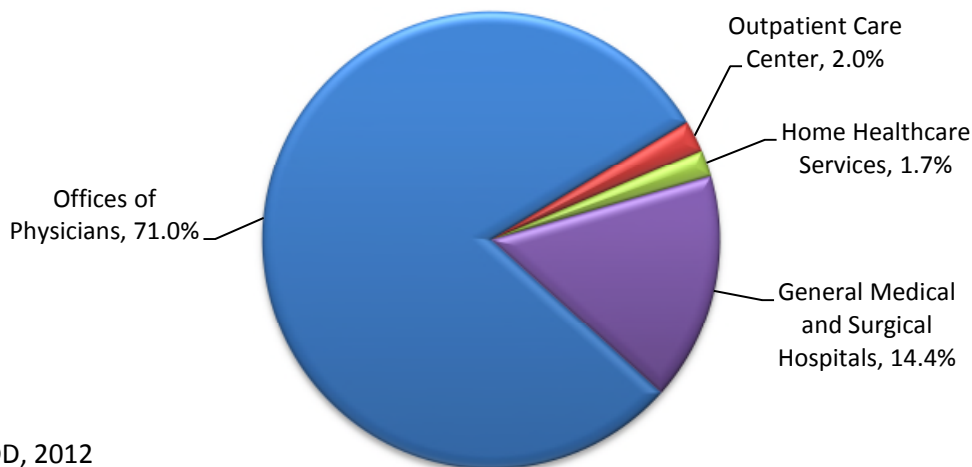
All states require internists to be licensed; requirements vary by state. To qualify for a license, candidates must graduate from an accredited medical school, complete residency training in their specialty, and pass written and practical exams.

In California, all internists must pass a standardized national licensure examination. M.D.s take the U.S. Medical Licensing Examination (USMLE). D.O.s take the Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA).

Employment

Due to the broad scope of their work, internists have many options of where to work and how their work is structured. Internists may work in medical offices, clinics, and hospitals, often in combination. An internist may work independently as a solo practitioner, owning and managing his or her own practice, or an internist may partner with other physicians to form a group practice in which the doctors each have partial ownership. Or, some internists may be employed as salaried staff by a clinic or hospital. Currently, there are an estimated 28 general internists in the Coachella Valley.

Sources of Employment



Coachella Valley Healthcare Workforce Needs Assessment

Wages

During May 2013, the average hourly wage among internists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$88.55, or \$184,180 annually, an increase of 2.7% since 2008. Depending on the type of employer, the average hourly and annual wage may vary. Internists working in an office-based multispecialty group practice and single-specialty group practice tend to earn more, \$203,000 and \$196,000, respectively while those working in academic research and outpatient clinics earn the least, \$153,000 and \$159,000, respectively (Medscape, 2012).

Job Outlook

Overall, according to the BLS, employment for internists is expected to be less than average through 2022. The projected number of jobs available annually in the Coachella Valley for this occupation, including new openings and net replacement openings through 2022 is one replacement internist. Factors affecting the growth of this occupation include:

- Implementation of the ACA, which has expanded the number of patients who have access to health insurance, increasing access to medical care and resulting in an increased demand for physician services.
- New technologies allowing physicians to treat more patients in the same amount of time.
- Increased use of PAs and NAs to do routine tasks.

Recruitment Strategies

There are a vast number of opportunities for finding employment as a primary care physician. Some of these include placement assistance from the medical schools, professional “head hunters” sponsored by numerous healthcare systems, professional journals and websites, and the American Medical Association, to name a few.

Positions that Build upon this Occupation

Internists have the option to complete additional GME (graduate medical education) in the form of a fellowship. This enables an internist to sub-specialize in other medical disciplines and focus on a certain condition group or body system. Internists will often specialize in one of the following sub-specialties of internal medicine:

- **Cardiologist:** treats diseases of the heart, lungs, blood vessels and complex cardiac conditions; requires a three-year fellowship.
- **Gastroenterologist:** treats the digestive system including stomach, liver, and intestines; requires a two-year fellowship.
- **Endocrinologist:** treats diseases or conditions of the glands, hormones and other internal secretions; requires a two-year fellowship.
- **Nephrologist:** treats kidney disorders; requires a two-year fellowship.

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- **Oncologist:** treats cancers and solid tumors of all kinds, and administers chemotherapy. Requires a two-year fellowship.
- **Pulmonologist:** treats lung diseases and disorders such as COPD, asthma, cancer, breathing and sleep problems. Requires a two-year fellowship.
- **Allergist & Immunologist:** diagnoses, evaluates, and manages severe allergies and deficiencies of the immune system. Requires a two-year fellowship.
- **Rheumatologist:** treats disorders of joints, muscles and bones, such as arthritis. Requires a three-year fellowship.

Additional Information

Additional information about internal medicine is available at the following websites:

- American Medical Association - <http://www.ama-assn.org/>
- American Osteopathic Association - <http://www.osteopathic.org/>
- American Board of Medical Specialties - <http://www.abms.org/>

For a list of medical schools and residency programs, as well as general information on premedical education, financial aid, and medicine as a career, visit the following websites:

- Association of American Medical Colleges - <https://www.aamc.org/>
- American Association of Colleges of Osteopathic Medicine - <http://www.aacom.org/Pages/default.aspx>

For information about licensing, visit:

- Federation of State Medical Boards - <http://www.fsmb.org/>
- Medical Board of California - <http://www.mbc.ca.gov/>
- Osteopathic Medical Board of California - <http://www.ombc.ca.gov/>

Coachella Valley Healthcare Workforce Needs Assessment

General Pediatricians

Occupation Description

Pediatricians specialize in the care of infants, children, and adolescents. Pediatricians provide a range of services from well-child care and basic childhood immunizations and illnesses, to managing complex medical conditions and chronic disorders. Because many of their patients have yet to develop communication skills, pediatricians must be able to provide a diagnosis based on visual and auditory clues. Pediatricians are considered primary care providers and typically have a long-term relationship with their patients, providing care from birth, and tracking the person's growth into adulthood.

Education and Training

Like all physicians, pediatricians have a bachelor's degree, and many have advanced degrees. Although no specific major is required, all students must complete undergraduate work in biology, chemistry, physics, mathematics, and English. Students also take courses in the humanities and social sciences.

Medical schools are highly competitive, requiring students to submit transcripts, scores from the Medical College Admission Test (MCAT), and letters of recommendation. Schools also consider an applicant's personality, leadership qualities, and participation in extracurricular activities. Most schools require applicants to interview with members of the admissions committee.

Typically, students spend most of the first two years of medical school in laboratories and classrooms, taking courses such as anatomy, biochemistry, pharmacology, psychology, medical ethics, and the laws governing medicine. They also gain practical skills, learning to take medical histories, examine patients, and diagnose illnesses.

During their last two years, medical students work with patients under the supervision of experienced physicians in hospitals and clinics. Through rotations in internal medicine, family practice, obstetrics and gynecology, pediatrics, psychiatry, and surgery, they gain experience in diagnosing and treating illnesses in a variety of areas.

Upon completion, they are awarded either a Doctor of Medicine (MD) or Doctor of Osteopathic Medicine (DO) degree, depending upon the type of medical school attended. In addition to their undergraduate and graduate education, pediatricians must complete several years of graduate medical education (GME) to include a one-year internship, plus two or more years of residency training. Upon completing medical school and a residency, the doctor must also pass the United States Medical Licensing examination in order to practice medicine.

There are currently 141 accredited MD-granting institutions and 30 accredited DO-granting institutions in the U.S. In California, there are 11 schools of medicine, seven of which are located in southern California. The closest and newest is the University of California, Riverside School of Medicine which will not graduate its first class until 2017. Following is a list of California schools of medicine with the degrees granted:

- University of California, Riverside School of Medicine – MD

Coachella Valley Healthcare Workforce Needs Assessment

- Loma Linda University School of Medicine – MD
- University of California, Irvine School of Medicine – MD
- Keck School of Medicine of University of Southern California – MD
- David Geffen School of Medicine at UCLA – MD
- University of California, San Diego School of Medicine – MD
- Western University of Health Sciences College of Osteopathic Medicine of the Pacific – DO

Licensure

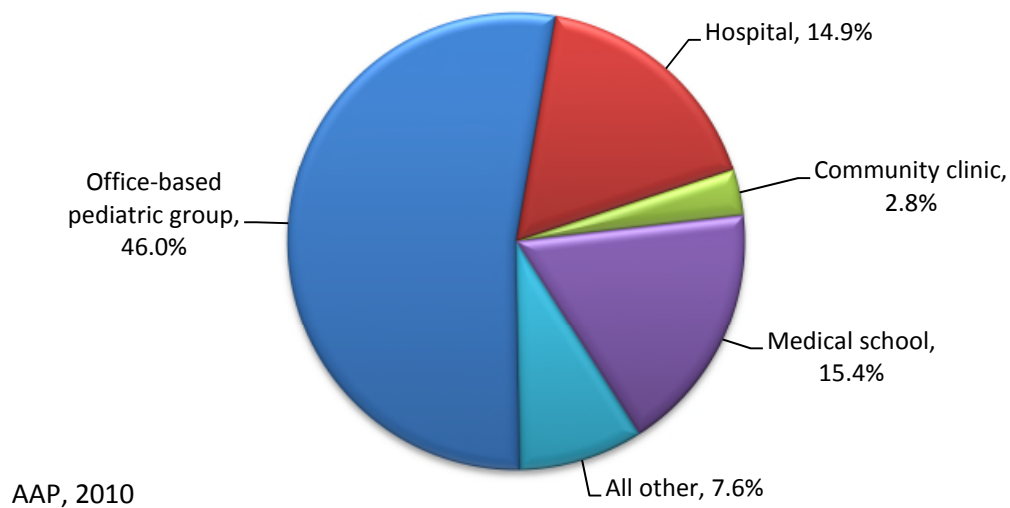
All states require physicians to be licensed; requirements vary by state. To qualify for a license, candidates must graduate from an accredited medical school, complete residency training in their specialty, and pass written and practical exams.

In California, all physicians must pass a standardized national licensure examination. M.D.s take the U.S. Medical Licensing Examination (USMLE). D.O.s take the Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA).

Employment

Pediatricians work in a wide variety of settings including office-based pediatric groups, multi-specialty groups, clinics, and hospitals. Only about 12% work in very small one or two-physician groups. Currently, there are an estimated 35 general pediatricians in the Coachella Valley.

Sources of Employment



Wages

Coachella Valley Healthcare Workforce Needs Assessment

During May 2013, the average hourly wage among general pediatricians employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$77.37, or \$160,923 annually, an increase of 11.6% since 2008. Depending on the type of employer, the average hourly and annual wage may vary. General pediatricians working in an office-based multispecialty group practice and single-specialty group practice tend to earn more, \$203,000 and \$196,000 respectively, while those working in academic research and outpatient clinics earn the least, \$153,000 and \$159,000, respectively. (Medscape, 2012).

Job Outlook

Overall, according to the BLS, employment for general pediatricians is expected to be below average through 2022. The projected number of jobs available annually in the Coachella Valley for this occupation through 2022, including new openings and net replacement openings, is one replacement pediatrician. Factors affecting the growth of this occupation include:

- Implementation of the ACA, which has expanded the number of children who have access to health insurance, increasing access to medical care resulting in an increased demand for pediatric services.
- New technologies allowing pediatricians to treat more patients in the same amount of time.
- Increased use of PAs and NAs with specialized training in pediatrics to do routine tasks.

Recruitment Strategies

There are a vast number of opportunities for finding employment as a primary care physician. Some of these include placement assistance from the medical schools, professional “head hunters” sponsored by numerous healthcare systems, professional journals and websites, and the American Medical Association, to name a few.

Positions that Build upon this Occupation

A general pediatrician has the option to complete additional GME in the form of a fellowship. This enables a pediatrician to sub-specialize in other pediatric medical disciplines. Below are just a few of the many sub-specialties pediatricians can specialize in with additional GME:

- **Pediatric cardiology:** treats diseases of the heart, lungs, blood vessels and complex cardiac conditions; requires a three-year fellowship.
- **Pediatric gastroenterology:** treats the digestive system including stomach, liver, and intestines; requires a two-year fellowship.
- **Pediatric neurology:** treats conditions and diseases of the brain and neurological system in children. They may treat young patients who have experienced seizures, severe headaches, or suffer from epilepsy, Tourette's syndrome, Autism, multiple sclerosis, brain tumors, sleep disorders, or many other neurological issues. Pediatric neurology requires a three-year fellowship.
- **Pediatric pulmonology:** diagnose and treat children with chronic cough, difficulty breathing, asthma, recurring pneumonia or noisy breathing, and more serious conditions such as cystic fibrosis, apnea and chronic lung disease. Pediatric pulmonology requires a three-year fellowship.
-

Coachella Valley Healthcare Workforce Needs Assessment

Additional Information

Additional information about internal medicine is available at the following websites:

- American Academy of Pediatrics - <http://www.aap.org/en-us/Pages/Default.aspx>
- American Medical Association - <http://www.ama-assn.org/>
- American Osteopathic Association - <http://www.osteopathic.org/>
- American Board of Medical Specialties - <http://www.abms.org/>

For a list of medical schools and residency programs, as well as for general information on premedical education, financial aid, and medicine as a career, visit the following websites:

- Association of American Medical Colleges - <https://www.aamc.org/>
- American Association of Colleges of Osteopathic Medicine - <http://www.aacom.org/Pages/default.aspx>

For information about licensing, visit

- Federation of State Medical Boards - <http://www.fsmb.org/>
- Medical Board of California - <http://www.mbc.ca.gov/>
- Osteopathic Medical Board of California - <http://www.ombc.ca.gov/>

Coachella Valley Healthcare Workforce Needs Assessment

Psychiatrists

Occupation Description

Psychiatry is the medical specialty devoted to the study, diagnosis, treatment, and prevention of mental disorders. These include various affective, behavioral, cognitive and perceptual abnormalities.

Psychiatrists are physicians who have completed their undergraduate medical training identical to all other physicians with the addition of residency training (three to four years) in psychiatry. Psychiatrists can therefore counsel patients, prescribe medication, order laboratory tests, order neuroimaging, and conduct physical examinations.

Education and Training

Like all physicians, psychiatrists have a bachelor's degree, and many have advanced degrees. Although no specific major is required, all students must complete undergraduate work in biology, chemistry, physics, mathematics, and English. Students also take courses in the humanities and social sciences.

Medical schools are highly competitive, requiring students to submit transcripts, scores from the Medical College Admission Test (MCAT), and letters of recommendation. Schools also consider an applicant's personality, leadership qualities, and participation in extracurricular activities. Most schools require applicants to interview with members of the admissions committee.

Typically, students spend most of the first two years of medical school in laboratories and classrooms, taking courses such as anatomy, biochemistry, pharmacology, psychology, medical ethics, and the laws governing medicine. They also gain practical skills, learning to take medical histories, examine patients, and diagnose illnesses.

During their last two years, medical students work with patients under the supervision of experienced physicians in hospitals and clinics. Through rotations in internal medicine, family practice, obstetrics and gynecology, pediatrics, psychiatry, and surgery, they gain experience in diagnosing and treating illnesses in a variety of areas.

Upon completion, they are awarded either the Doctor of Medicine (MD) or Doctor of Osteopathic Medicine (DO) degrees, depending upon the type of medical school attended. In addition to their undergraduate and graduate education, a psychiatrist must also complete several years of graduate medical education (GME) to include a one-year internship, plus three years of psychiatric residency training.

After completing residency training, most psychiatrists take a voluntary written and oral examination given by the American Board of Psychiatry and Neurology to become a "board certified" psychiatrist.

There are currently 141 accredited MD-granting institutions and 30 accredited DO-granting institutions in the U.S. In California, there are 11 schools of medicine, seven of which are located in southern California. The closest and newest is the University of California, Riverside School of Medicine which will not graduate its first class until 2017. Following is a list of California schools of medicine with the degrees granted:

- University of California, Riverside School of Medicine – MD

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- Loma Linda University School of Medicine – MD
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Licensure

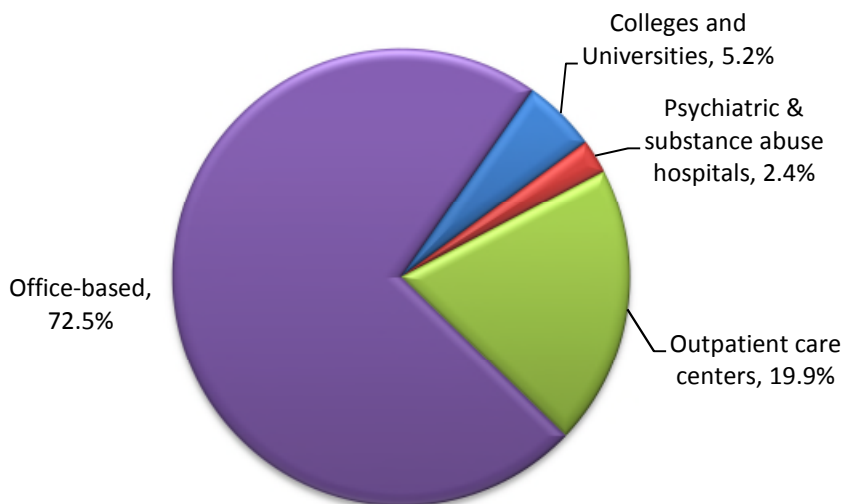
All states require physicians to be licensed; requirements vary by state. To qualify for a license, candidates must graduate from an accredited medical school, complete residency training in their specialty, and pass written and practical exams.

In California, all physicians must pass a standardized national licensure examination. M.D.s take the U.S. Medical Licensing Examination (USMLE). D.O.s take the Comprehensive Osteopathic Medical Licensing Examination (COMLEX-USA).

Employment

Psychiatrists work in a variety of settings, including private practices, clinics, general and psychiatric hospitals, university medical centers, community agencies, courts and prisons, nursing homes, industry, government, military settings, schools and universities, rehabilitation programs, emergency rooms, and hospices. About half of the psychiatrists in the U.S. maintain private practices and many psychiatrists work in multiple settings (APA, 2014). Currently, there are an estimated 33 psychiatrists in the Coachella Valley.

Sources of Employment



CA EDD, 2014

Coachella Valley Healthcare Workforce Needs Assessment

Wages

During May 2013, the average hourly wage among psychiatrists employed in California was \$92.05, or \$191,460 annually. For this same period, the BLS did not provide the wage information for psychologists in the Riverside-San Bernardino-Ontario metropolitan statistical area. Because comparable data is not available, a comparison to the wage rate in 2008 is not presented.

Depending on the type of employer, the average hourly and annual wage may vary. According to BLS national data, psychiatrists working in outpatient care centers earned an average of \$201,460 annually in 2013, while those working in general medical and surgical hospitals earned \$173,520. (BLS, 2014).

Job Outlook

Overall, according to the BLS, employment for psychiatrists is expected to be below average through 2022. The projected number of jobs available annually for psychiatrists in the Coachella Valley through 2022, including new openings and net replacement openings, is one replacement per year. For the entire Riverside-San Bernardino-Ontario MSA, the need for psychiatrists is expected to be seven between 2012 and 2022, averaging one opening per year for new psychiatrists and six for replacement psychiatrists. Factors affecting the growth of this occupation include:

- Implementation of the ACA, which has expanded the number of people who have access to health insurance, increasing access to psychiatric care and resulting in an increased demand for psychiatrists' services.
- Changing cultural norms related to a more accepting attitude toward psychiatric services and diagnosis.
- Increased specialization and demand for pediatric and geriatric psychiatric services.
- Increased use of psychiatric nurse specialists with to do screening and routine tasks.

Recruitment Strategies

There are a vast number of opportunities for finding employment as a primary care physician. Some of these include placement assistance from the medical schools, professional "head hunters" sponsored by numerous healthcare systems, professional journals and websites, and the American Medical Association to name a few.

Positions that Build upon this Occupation

There are many sub-specialties related to the field of psychiatry. These include:

- Addiction psychiatry, which focuses on evaluation and treatment of individuals with alcohol, drug, or other substance-related disorders, and of individuals with dual diagnosis of substance-related and other psychiatric disorders. Requires an additional one-year residency in addiction psychiatry.
- Child and adolescent psychiatry, which is the branch of psychiatry specializing in work with children, teenagers, and their families. Requires an additional two-year residency in child and adolescent psychiatry.

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- Forensic psychiatry, which focuses on the interface between law and psychiatry. One-year fellowships are available in forensic psychiatry.
- Geriatric psychiatry, which is the branch of psychiatry dealing with the study, prevention, and treatment of mental disorders in older age patients. One-year fellowships in geriatric psychiatry are available.

Additional Information

Additional information about psychiatry is available at the following websites:

- American Psychiatric Association - <http://www.psychiatry.org/about-apa--psychiatry>
- American Medical Association - <http://www.ama-assn.org/>
- American Osteopathic Association - <http://www.osteopathic.org/>
- American Board of Medical Specialties - <http://www.abms.org/>

For a list of medical schools and residency programs, as well as general information on premedical education, financial aid and medicine as a career, visit the following websites:

- Association of American Medical Colleges - <https://www.aamc.org/>
- American Association of Colleges of Osteopathic Medicine - <http://www.aacom.org/Pages/default.aspx>
- For information about licensing, visit
- Osteopathic Medical Board of California - <http://www.ombc.ca.gov/>
- Federation of State Medical Boards - <http://www.fsmb.org/>
- Medical Board of California - <http://www.mbc.ca.gov/>

Coachella Valley Healthcare Workforce Needs Assessment

Physician Assistants

Occupation Description

Physician assistants (PAs) practice medicine under the supervision of a physician. They conduct complete physicals, provide treatment, diagnose injuries and illnesses, and counsel patients. As a member of the healthcare team, PAs have a broad scope of practice including:

- Taking health histories
- Performing physical examinations
- Ordering X-rays and laboratory tests
- Performing routine diagnostic tests
- Establishing diagnoses
- Treating and managing patient health problems
- Administering immunizations and injections
- Instructing and counseling patients
- Providing continuing care to patients in the home, hospital, or extended care facility
- Providing referrals for other health services
- Performing minor surgery
- Providing preventive healthcare services
- Acting as first or second assistants during surgery
- Responding to life-threatening emergencies

In California, the Department of Consumer Affairs Physician Assistant Committee is responsible for making recommendations about the scope of practice of PAs.

Education and Training

Physician assistants are educated in intensive medical programs accredited by the Accreditation Review Commission on Education for the Physician Assistant (ARC-PA). The average PA program runs approximately 26 months. There are 10 ARC-PA accredited programs in California and approximately 140 accredited programs nationally. Because of the close working relationship PAs have with physicians, PAs are educated in a medical model designed to complement physician training. PA students are taught, as are medical students, to diagnose and treat medical problems.

Education consists of classroom and laboratory instruction in the basic medical and behavioral sciences including anatomy, pharmacology, pathophysiology, clinical medicine, and physical diagnosis, followed by clinical rotations in internal medicine, family medicine, surgery, pediatrics, obstetrics and gynecology, emergency medicine, and geriatric medicine.

Most physician assistant programs require applicants to have previous healthcare experience and some college education. Educational prerequisites vary by program and may include a bachelor's degree with science and other courses such as anatomy, physiology, biology, microbiology or bacteriology, chemistry, organic chemistry, biochemistry, physics and genetics.

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The number of accredited PA programs has increased from 174 in 2013 to 187 in 2014. Over 90% of programs offer a master's degree. The remainder offer either a bachelor's degree, associate's degree or certificate of completion. Starting in 2020, all PA programs will be required to offer a master's degree.

Currently, there are 10 ARC-PA programs in California; four of these PA programs are located relatively close to Coachella Valley:

- Loma Linda University — Master's degree
- Moreno Valley College – Certificate of Completion, associate's degree and master's degree for students entering the program with a bachelor's degree (program on probation)
- Western University of Health Sciences, Pomona – Master's degree
- Marshall B. Ketchum University, School of Physician Assistant Studies, Fullerton – Master's degree

Certification

Licensure in California is through the Department of Consumer Affairs Physician Assistant Committee and requires PAs to have graduated from an ARC-PA accredited program and also have passed the Physician Assistant National Certifying Exam (PANCE). PAs are also required to take ongoing continuing medical education classes and be retested for clinical skills on a regular basis.

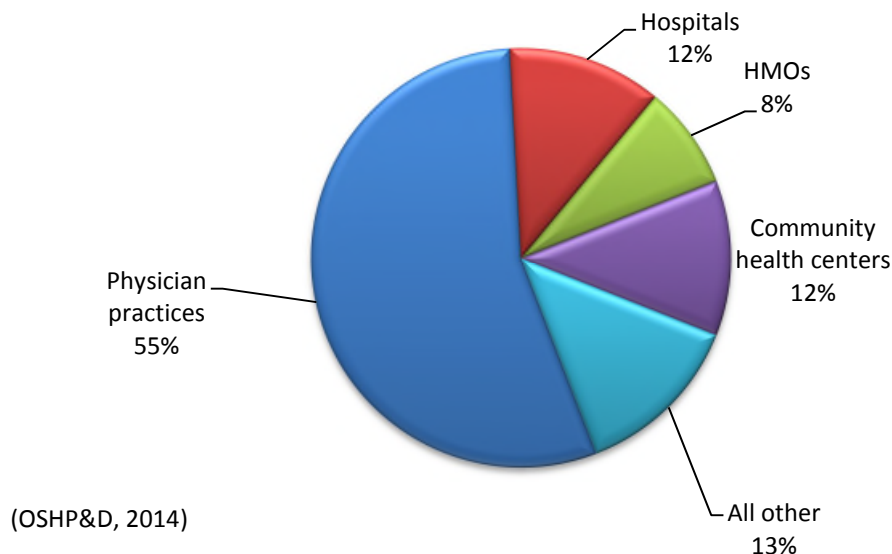
Advancement

While PAs can pursue additional education in specialty areas such as surgery, neonatology or emergency medicine, by the very nature of the profession, clinically practicing PAs must always be supervised by a physician. There are, however, many opportunities to attain greater clinical knowledge and experience leading to additional responsibility and higher earnings.

Employment

PAs are employed in a variety of settings including physician offices, community health centers and hospitals. The following chart presents a 2014 profile of employers for PAs in California based on a survey completed by the Office of Statewide Health Planning and Development. According to the BLS, there are currently an estimated 950 PAs employed in the Riverside-San Bernardino-Ontario Metropolitan Statistical Area, and 91 in the Coachella Valley.

Sources of Employment



Wages

During May 2013, the average hourly wage among PAs employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$43.93, or \$91,380 annually, an increase of 20.2% since 2008. Depending on the type of employer, the average hourly and annual wage may vary. PAs working in hospitals and outpatient centers tend to earn more, \$93,520 and \$93,520, respectively, while those working in practitioner's offices earn slightly less, earning \$90,150. (BLS, 2014).

Job Outlook

Overall, according to the BLS, employment opportunities for PAs are expected to be excellent and much greater than average through 2022. The projected number of jobs available annually in the Coachella Valley for this occupation through 2022 is three new openings and two replacement openings, for a total of five. Several factors affecting the growth of this occupation include:

- Implementation of the ACA, which has expanded the number of people who have access to health insurance, increasing access to medical care resulting in an increased demand for medical services.
- Increased emphasis on cost containment.
- PAs becoming more widely recognized by the general public as a source of primary healthcare.

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Recruitment Strategies

There are numerous websites focusing on recruitment of physician assistants for positions throughout the country. In addition, most schools offer placement assistance to program graduates, and the American Academy of Physician Assistants has job postings on their website with hundreds of positions listed.

Positions that Move into this Occupation

Because many PA programs require prior healthcare experience with hands-on patient care in addition to the academic prerequisites, there are many healthcare related jobs that can move into this occupation. Some of these include:

- Medical assistant
- Emergency medical technician (EMT)
- Paramedic
- Medic or medical corpsman
- Peace Corps volunteer
- Lab assistant/phlebotomist
- Registered nurse
- Emergency room technician
- Surgical tech
- Certified nursing assistant (CNA)

Positions that Build upon this Occupation

There are no occupations that build on the occupation.

Additional Information

Additional information about physician assistance is available at the following websites:

- Accreditation Review Commission for Physician Assistants - <http://arc-pa.org/>
- American Academy of Physician Assistants - <http://aapa.org/>
- National Commission on Certification of Physician Assistants - <http://www.nccpa.net/>
- PA Focus, a web site for pre-PAs, applicants and students - <http://pafocus.org/>
- Physician Assistant Education Association - <http://www.paeonline.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Registered Nurses

Occupation Description

Registered nurses (RN), regardless of work setting or specialty, assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. They care for ill, injured, convalescent, or disabled patients, help perform diagnostic tests and analyze results, administer treatment and medications, and help with patient follow-up and rehabilitation. They may also educate patients on health maintenance and disease prevention.

Education and Training

In California, there are three types of pre-licensure nursing programs and several alternative routes to become a registered nurse:

- **Associate Degree in Nursing (ADN)** — Takes two-three years. Offered at many community colleges, this type of program prepares students to become a registered nurse and provide registered nursing care in numerous settings.
- **Bachelor of Science in Nursing (BSN)** — Takes four years. This type of program is offered at many California State Universities and some private colleges. It prepares students to provide registered nursing care in numerous settings and to move to administrative and leadership positions.
- **Masters Entry Level Program in Nursing (MSN)** — Designed for adults who have a bachelor's degree in another field and wish to become registered nurses. Takes one-two years depending on how many nursing course prerequisites have already been completed. Graduates receive a master's degree.
- **LVN 30 Unit Option** — Designed as a career ladder for California Licensed Vocational Nurses wishing to become registered nurses. This option takes approximately 18-24 months. No degree is granted upon completion. Most other states do not recognize California's LVN 30 Unit Option and do not issue RN licenses to these LVNs.
- **Military Corpsmen** — California law permits military corpsmen to take the national exam for RN licensure if they have completed RN level education and clinical experience.

All nursing education programs include classroom instruction and supervised clinical experience in hospitals and other healthcare facilities. Coursework includes classes in anatomy, physiology, microbiology, chemistry, nutrition, psychology and other behavioral sciences, plus nursing. As part of a BSN or ADN program, students must also meet liberal arts educational requirements. There is a growing trend of offering RN to BSN and Masters of Nursing Science for RNs via distance learning. These programs are offered online and offer an opportunity for working nurses to earn their bachelors of science in nursing in a convenient and flexible format. Nursing programs currently offering ADN, BSN and MSN programs in or near the Coachella Valley include:

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Associate Degree Programs

Desert Community College – Palm Desert

(<http://www.collegeofthedesert.edu/students/ss/ap/healthsciences/Pages/default.aspx>)

Riverside Community College – Riverside (<http://www.rcc.edu/academicPrograms/nursing/index.cfm>)

San Bernardino Valley College – San Bernardino

(<http://www.valleycollege.edu/Department/Academic/Nursing/index.php>)

Mt. San Jacinto College – Menifee (<http://www.msjc.edu/apps/pub.asp?Q=974&B=1>)

Copper Mountain College – Joshua Tree (<http://www.cmccd.edu/>)

Baccalaureate Degree Programs

California State University – Palm Desert (<http://pdc.csusb.edu/nursing.htm>)

California State University – San Bernardino (<http://nursing.csusb.edu/>)

Loma Lima University – Loma Linda (<http://www.llu.edu/llu/nursing/>)

California Baptist University – Riverside (<http://www.calbaptist.edu/academics/school-of-nursing/>)

Master's Degree Program

California Baptist University – Riverside (<http://www.calbaptist.edu/academics/school-of-nursing/>)

California State University – San Bernardino (<http://nursing.csusb.edu/>)

Loma Linda University – Loma Linda (<http://www.llu.edu/llu/nursing/>)

Licensure

Nurses wanting to practice as an RN in California must be licensed by the California State Board of Registered Nursing (BRN), meet educational requirements, pass a criminal background check, and pass the National Council Licensing Examination (NCLEX).

Advancement

Advancement opportunities in nursing are usually broader for those with a BSN or MSN degree. In fact, some career paths are open only to nurses with a bachelor's or master's degree.

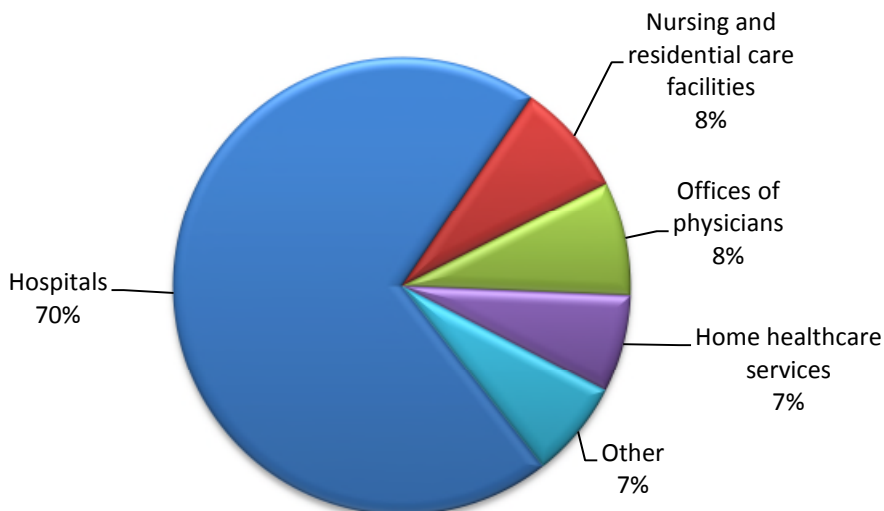
- A typical career path for nurses is a staff nurse working at the bedside in hospitals progressing through various management positions such as head nurse and unit manager.
- For those interested in more senior-level management, nursing provides opportunities such as assistant director, director and chief nurse. These positions typically require a graduate or advanced degree plus leadership, communication and negotiation skills.
- Those wanting to enter one of the four advanced practice nursing specialties – clinical nurse specialist, nurse anesthetist, nurse-midwife and nurse practitioner – must have a bachelor's or master's degree.
- Advanced practice nursing is accomplished by RNs who have taken in formal, post-basic education and who function in highly autonomous and specialized roles. Refer to the next two sections of this report for additional information about advanced practice nursing.

Coachella Valley Healthcare Workforce Needs Assessment

Employment

Hospitals are the most common source of employment for RNs. According to the BLS and estimates developed for this report, there are currently an estimated 3,074 registered nurses employed in the Coachella Valley with an estimated 1,465 employed by one of the area's three acute care hospitals. The following chart presents the national profile of employers for RNs.

Sources of Employment



(BLS, 2014)

Wages

During May 2013, the average hourly wage among RNs employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$42.37, or \$88,120, an increase of 17.5% since 2008. Annual salaries vary depending on the location.

Job Outlook

Overall, job opportunities for RNs are expected to be excellent, with job growth much faster than the average for all occupations through 2022. Depending on the type of employer, growth in employment for RNs is expected to be highest in physician offices and home healthcare agencies, and less in nursing facilities and hospitals. The projected number of jobs available annually in the Coachella Valley for this occupation will average about 109, which includes 49 new openings and 60 replacement openings through 2020 for a total of 555 job openings. Several factors affecting the demand and growth of this occupation include:

- Replacement of experienced nurses leaving the occupation or retiring
- Technological advances in patient care allowing a greater number of health problems to be treated
- An increased emphasis on preventive care
- An increase in the number of older people requiring care

Coachella Valley Healthcare Workforce Needs Assessment

- The requirement for more advanced skills

Hospital employment, healthcare's largest employer, is expected to slow more than other types of employment because inpatient care is slowing. Some of the reasons for this slower growth in hospital-based care include extensive cost reduction efforts, shorter length of stays, rapid growth of outpatient services such as same-day surgery, chemotherapy and rehabilitation, and other more sophisticated procedures being performed in outpatient centers and physicians' offices.

Recruitment Strategies

Direct application to employers remains one of the most effective job search methods. Because most organizations now list current job opportunities on their websites and allow direct applications, the Internet has become one of the most widely used recruitment strategies.

Nursing school graduate placement services link RNs and nurse practitioners with jobs. Individuals also can apply directly to hospitals, clinics, and physicians. Newspaper ads and Internet sites such as Monster also have job leads. State, county, city, and federal personnel administration offices provide announcements of jobs and requirements.

Positions that Move into this Occupation

Licensed practical nurses, licensed vocational nurses and military corpsmen can advance into positions as registered nurses.

Positions that Build upon this Occupation

Registered nurses can advance into positions as managers, nurse educators, clinical nurse specialists, nurse practitioners, and certified nurse midwives.

Riverside County, California, is designated as a Registered Nurse Shortage Area (RNSA), with an estimated RN workforce of about 18,000. This designation was approved on Mar 26, 2014 by the California Healthcare Workforce Policy Commission (OSHDP, 2014).

Coachella Valley Healthcare Workforce Needs Assessment

Nurse Practitioners

Occupation Description

A nurse practitioner (NP) is an advanced practice registered nurse (APRN) who has completed advanced coursework and clinical education beyond that required of the generalist registered nurse (RN) role. According to the International Council of Nurses, an NP/advanced practice registered nurse is "a registered nurse who has acquired the knowledge base, decision-making skills, and clinical competencies for expanded practice beyond that of an RN, the characteristics of which would be determined by the context in which he or she is credentialed to practice."

Unlike an RN, NPs are qualified to diagnose medical problems, order treatments, prescribe medications and make referrals for acute and chronic medical conditions within their scope of practice. NPs practice in pediatrics, internal medicine, anesthetics, geriatrics, and obstetrics.

The scope of practice for NPs varies by state. In California, NPs must collaborate with physicians and develop joint, written protocols that cover all major elements of their practice, and there is a cap of four drug-prescribing NPs per physician. NPs can bill directly for some, but not all, services they provide (CHF, 2008)

Education and Training

In addition to completing an undergraduate degree in nursing, becoming a registered nurse, and having at least one year of clinical experience, nurse practitioners must have a Master of Science degree or a doctoral degree in nursing. NP practitioner programs include academic courses, clinical skills courses and supervised clinical practice. According to the California Board of Registered Nursing (BRN), there are 22 NP programs in California that conform to the Board's Standards of Education for Nurse Practitioner Programs and have been approved by the BRN. Nine of these programs are located in southern California, three of which are located relatively close to the Coachella Valley. These include the following:

Loma Linda University – Loma Linda <http://www.llu.edu/nursing/index.page>

Western University of Health Sciences – Pomona <http://www.westernu.edu/>

Azuza Pacific University – Azusa <http://www.apu.edu/nursing/>

Licensure/Certification

A NP wanting to practice in California must be a licensed RN by the California State Board of Registered Nursing (BRN), meet educational requirements, pass a criminal background check, pass the National Council Licensing Examination (NCLEX-RN) and be certified as an NP.

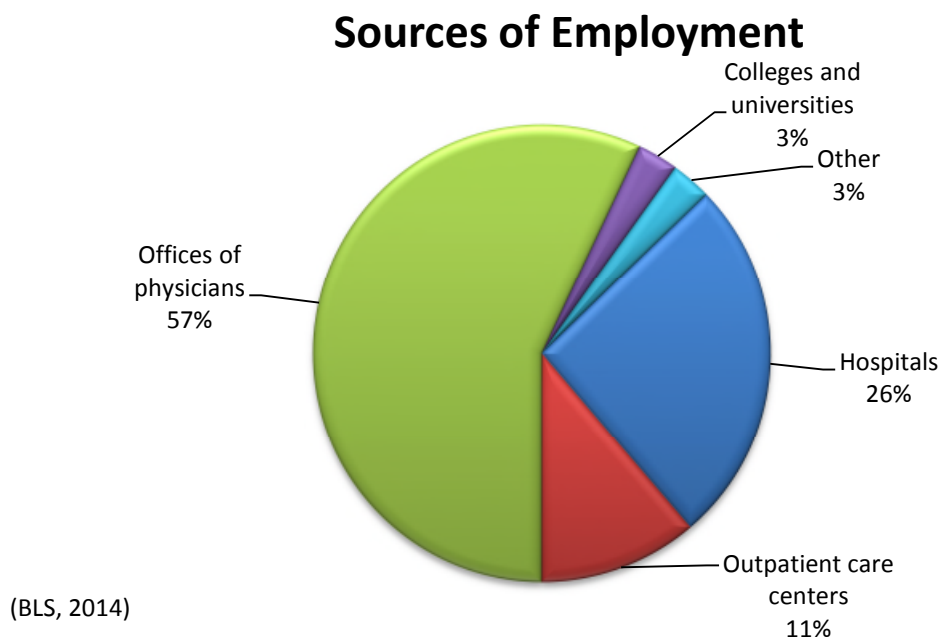
Advancement

Advanced practice nursing offers many opportunities for NPs to specialize within their scope of practice in areas such as acute care, pediatrics, family practice, gerontology, neonatology, psychiatrics, and women's health.

Coachella Valley Healthcare Workforce Needs Assessment

Employment

Physician offices are the most common source of employment for NPs, according to the BLS. The BLS does not currently provide any estimates for the current number of NPs employed in the Coachella Valley; however, information available from the California Association for Nurse Practitioners and the California Employment Development Department indicates there are an estimated 131 NPs located in the Coachella Valley. The following chart presents the national profile of employers for NPs.



Wages

During May 2014, the median hourly wage among NPs employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$52.35, or \$108,871. Data was not available for a comparison to 2008. Average annual wage may vary depending on the location.

Job Outlook

Overall, job opportunities for NPs are expected to be excellent, with job growth much faster than the average for all occupations through 2022. Growth in employment for NPs is expected to grow most in physician offices and other ambulatory care settings. The projected number of new jobs available annually in the Coachella Valley for this occupation through 2022 is estimated to be four new openings and two replacement openings, for a total of six. Several factors affecting the demand and growth of this occupation include:

- Increased use of NPs to augment the shortage of primary care physicians
- Increased patient volume attributed to ACA
- An increased emphasis on preventive care
- An increase in the number of older people requiring care
- Advancement within the profession requiring more advanced skills

Coachella Valley Healthcare Workforce Needs Assessment

Recruitment Strategies

Direct application to employers remains one of the most effective job search methods. Because most organizations now list current job opportunities on their websites and allow direct applications, the Internet has become one of the most widely used recruitment strategies.

Nursing school graduate placement services link NPs to jobs, and those already working are heavily recruited by professional recruiters. Individuals can also apply directly to hospitals, clinics, and physicians. Newspaper ads and Internet sites such as Monster also have job leads. State, county, city, and federal personnel administration offices provide announcements of jobs and requirements.

Positions that Move into this Occupation

Registered nurses and others with advanced degrees can become an NP with additional education and clinical experience.

Positions that Build upon this Occupation

NPs can advance into a wide variety of positions as nurse educators, clinical nurse specialists and certified nurse midwives.

Additional Information

California Department of Consumer Affairs, Board of Registered Nursing - www.rn.ca.gov

American Academy of Nurse Practitioners - www.aanp.org

California Association for Nurse Practitioners - www.canpweb.org

The National Certification Corporation - www.nccwebsite.org

Pediatric Nursing Certification Board - www.pncb.org

Coachella Valley Healthcare Workforce Needs Assessment

Licensed Practical Nurses and Licensed Vocational Nurses

Occupation Description

Licensed practical nurses (LPNs) and licensed vocational nurses (LVNs) provide basic bedside care for ill, injured, convalescent, or disabled people in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. They may work under the supervision of a registered nurse.

Education and Training

Training programs for LPNs and LVNs typically last for about one year and are offered at both proprietary vocational schools and community colleges in the Coachella Valley. To become licensed in California, LPNs and LVNs must successfully complete a practical nurse program and pass an examination. Schools in the Coachella Valley offering programs in practical nursing include:

- College of the Desert – Palm Desert
- California Nurses Educational Institute – Palm Springs
- Santa Barbara Business College – Rancho Mirage

Certification

To become licensed in California, practical/vocational nurses must pass the National Council Licensing Examination for Licensed Practical/Vocational Nurses (NCLEX-PN) examination.

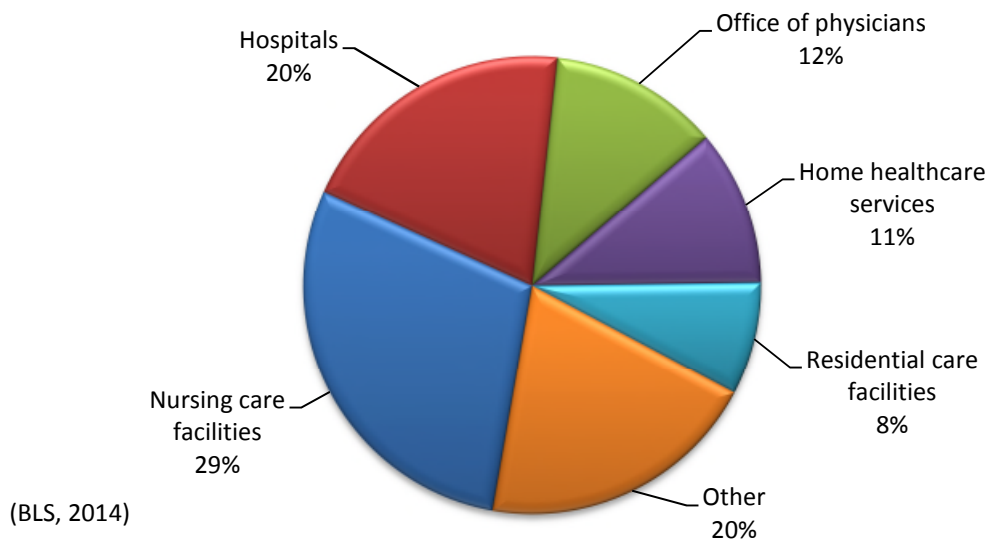
Advancement

Depending on the employment setting, LPNs can advance to become charge nurses who oversee the work of other LPNs and nursing aides. Some LPNs also choose to become registered nurses through LPN-to-RN training programs, which is offered at the College of the Desert in Palm Desert.

Employment

Nationally, licensed practical or licensed vocational nurses are employed in the long-term care hospital, medical office, and outpatient service segments of the healthcare industry. According to the BLS and estimates developed for this report, there are currently an estimated 796 licensed practical and licensed vocational nurses employed in the Coachella Valley. The following chart profiles the source of employment for licensed practical and licensed vocational nurses nationally.

Sources of Employment



Wages

During May 2013, the average hourly wage among licensed practical and licensed vocational nurses employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$22.18, or \$46,130 annually, an increase of 7.3% since 2008. The average hourly and annual wage may vary depending on the type of employer and the number of hours worked.

Job Outlook

Overall, according to the BLS, employment of LPNs is expected to increase faster than the average for all occupations through 2022. The projected annual number of job openings in the Coachella Valley for this occupation, is 20 new openings and 19 net replacement openings, for a total of 39 per year through 2022. Several factors affecting the growth of this occupation include:

- Increased demand for residential care facilities and home healthcare services for geriatric patients.
- Increased number of procedures that were previously limited to hospitals being done in outpatient care centers.
- Consumer preference for home care and advances in home-based technology.

Recruitment Strategies

Individuals looking for jobs as LVNs and LPNs may apply to employers directly, register with the California Employment Development Department Job Service or private employment agencies. Jobs may also be found through nursing associations. County, city, and federal civil service agencies provide announcements of job openings. There is information about job openings in newspaper classified ads, and Internet job listings such as Craig's List, LinkedIn, Monster and Hot Jobs frequently list job openings.

Positions that Move into this Occupation

Coachella Valley Healthcare Workforce Needs Assessment

Surgical technologists, certified nurse assistants, medical assistants, unit assistants, home health aides, respiratory therapy assistants, and physical therapy aides can advance into positions as licensed practical and licensed vocational nurses.

Positions that Build upon this Occupation

With additional education and training, licensed practical and licensed vocational nurses can advance into positions as registered nurses.

Additional Information

National Federation of Licensed Practical Nurses - <http://www.nflpn.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Emergency Medical Technicians and Paramedics

Occupation Description

Emergency medical technicians and paramedics assess injuries, administer emergency medical care, disentangle trapped individuals, and transport injured or sick people to medical facilities. The primary focus of this occupation is pre-hospital emergency care provided by fire departments and ambulance services.

Education and Training

A high school diploma is typically required to enter a training program to become an EMT or paramedic. Students move through several levels of training including formal and in-the-field training. Training is offered at progressive levels: EMT-basic, also known as EMT-1; EMT-intermediate, or EMT-2 and EMT-3; and EMT-paramedic, or EMT-4. Each level of training increases the skills of the individual and prepares the graduate, over a one to two year period, to take the National Registry of Emergency Medical Technicians (NREMT) certification examination.

Currently, state approved EMT and/or paramedic programs are offered at the following schools located in and around Coachella Valley:

- College of the Desert – Palm Desert, CA <http://www.collegeofthedesert.edu/>
- Mt. San Jacinto College – Menifee, CA <http://www.msjc.edu/>
- Palo Verde Community College – Blythe, CA <http://www.paloverde.edu/>
- Riverside Community College – Moreno Valley, CA <http://www.mcv.edu/>
- Crafton Hills College – Yucaipa, CA <http://www.craftonhills.edu/>

Crafton Hills College and Riverside Community College at Moreno Valley also offer a paramedic program in addition to an EMT program

Certification/Licensure

To be eligible for a paramedic certification in California, an individual must:

- Successfully complete an approved paramedic training program, which requires a minimum of 1,090 hours of training including class room instruction and skills (450 hours), hospital and clinical training (160 hours) and field internship, which must include a minimum of 40 advanced life support (ALS) patient contacts (480 hours)
- Pass the state licensing examination, which is the National Registry of Emergency Medical Technicians (NREMT) written and practical paramedic examination
- In addition, practicing paramedics must complete a minimum of 48 hours of approved continuing education units (CEUs) every two years to maintain licensure.

Advancement

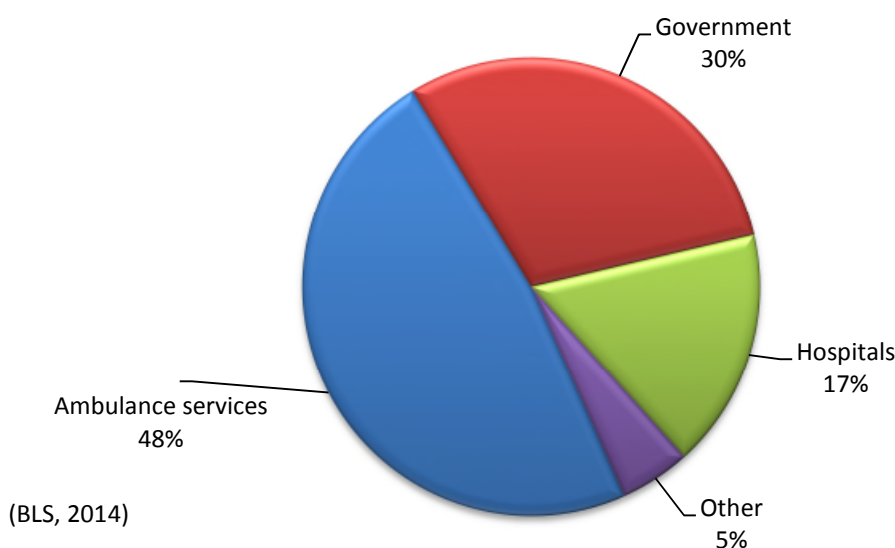
Paramedics can become supervisors, operations managers, administrative directors or executive directors of emergency services. Other potential positions may include instructors, dispatchers, physician assistants and registered nurses.

Coachella Valley Healthcare Workforce Needs Assessment

Employment

Nationally, employment as an emergency medical technician and paramedic is most often in emergency care services such as ambulance services, fire departments and, to a lesser extent, hospital emergency departments. According to the BLS and estimates developed for this report, there are an estimated 218 emergency medical technicians and paramedics currently employed in the Coachella Valley. The following chart profiles the source of employment for emergency medical technicians and paramedics nationally.

Sources of Employment



Wages

During May 2014, the median hourly wage among emergency medical technicians and paramedics employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$11.46, or \$23,846 annually. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Overall, according to the BLS, employment of EMTs and paramedics is expected to grow slightly faster than the average for all occupations through 2022. The projected annual number of job openings in the Coachella Valley for this occupation is five new openings and six net replacement openings, for a total of 11 per year through 2022. Several factors affecting the growth of this occupation include:

- Replacement of unpaid volunteers with full-time paid EMTs and paramedics
- Possible increases in the number of medical emergencies due to an increasing general population and increasing older population
- Replacement of workers leaving the occupation because of limited potential for advancement and modest pay

Coachella Valley Healthcare Workforce Needs Assessment

Recruitment Strategies

Jobs as EMTs and paramedics may be found by applying to ambulance companies, city and county governments, placement centers, and private employment agencies and job announcements at the Riverside EMS Agency website at <http://www.rivcoems.org/home/index.php/jobs>. There is also information about job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

EMT and paramedic is typically an entry level position. Some positions that may advance into this occupation include nurse assistants, home health aides and others with an interest in patient care.

Positions that Build upon this Occupation

EMTs and paramedics can advance into occupations such as firefighters, law enforcement, physician assistants and registered nurses.

Additional Information

For more information about emergency medical technicians and paramedics, visit:

- National Association of Emergency Medical Technicians - <http://www.naemt.org/>
- National Highway Traffic Safety Administration, Office of Emergency Medical Services - <http://www.ems.gov/>
- National Registry of Emergency Medical Technicians - <http://www.nremt.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Occupational Therapists

Occupation Description

Occupational therapists (OT) work with a wide variety of patients to provide both restorative and adaptive services. Typically, occupational therapists assess, plan, organize, and participate in rehabilitative programs that help restore vocational, homemaking, and daily living skills, as well as general independence, to disabled people. For those with permanent disabilities, occupational therapists develop adaptive methods so patients can remain as independent as possible.

Education and Training

An occupational therapist is required to have a master's or doctoral degree to enter the field. Included in this education is typically 24 weeks of field work as an OT intern.

According to the American Occupational Therapy Association, there are seven schools in California offering entry-level master's occupational therapy programs, all of which are accredited by the Accreditation Council for Occupational Therapy Education (ACOTE). Four of these programs are located in southern California. The closest program to the Coachella Valley is located at Loma Linda University. The four closest programs are:

Loma Linda University – <http://www.llu.edu/allied-health/sahp/ot/otwelcome.page>

University of Southern California – <http://chan.usc.edu/>

University of St. Augustine for Health Sciences – San Marcos Campus - <http://www.usa.edu/>

California State University, Dominguez Hills – <http://www.csudh.edu/cps/hhs/ot/>

Certification/Licensure

In California, occupational therapy practitioners are licensed and regulated through the California Department of Consumer Affairs - Board of Occupational Therapy (BOT) in accordance with the California Business and Professions Code Section 2570-2571.

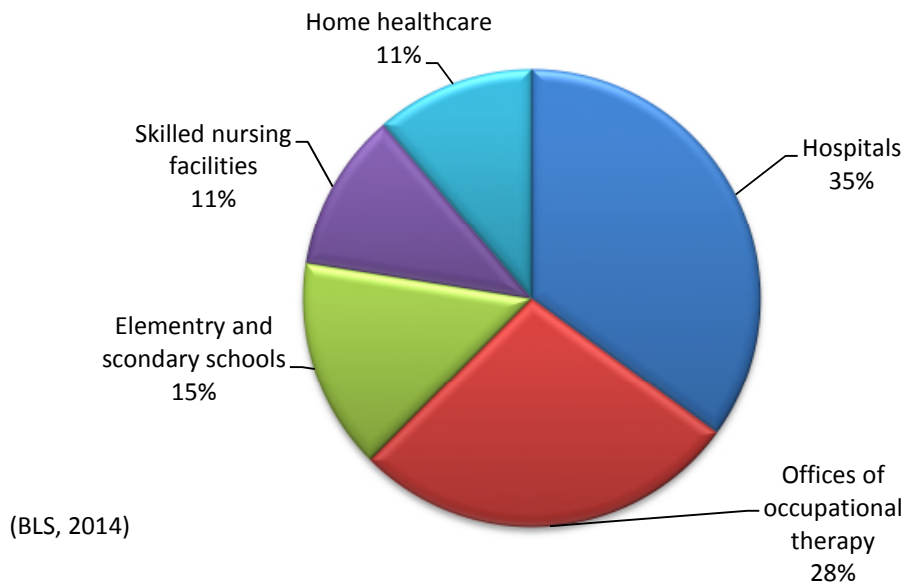
Advancement

Occupational therapists can advance into supervisory positions or specialize in various clinical areas such as gerontology, mental health, pediatrics or physical rehabilitation. Additionally, there are educational positions in occupational therapy programs for those wishing to teach.

Employment

About half of occupational therapists work in offices of occupational therapy or in hospitals. Others work in schools, nursing homes, physicians' offices, and home health services. According to the BLS and estimates developed for this report, there are an estimated 85 occupational therapists currently employed in the Coachella Valley. The following chart profiles the sources of employment for occupational therapists nationally.

Sources of Employment



Wages

During May 2013, the average hourly wage among occupational therapists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$44.43, or \$91,800 annually. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Overall, according to the BLS, employment for occupational therapists is expected to be slightly above average through 2022. The projected number of jobs available in the Coachella Valley for this occupation through 2022 is three openings per year, two new, and one replacement. Several factors affecting the growth of this occupation include:

- An increasing elderly population, which will result in increased demand for occupational therapy services
- An expected growth in outpatient rehabilitation programs, which will increase the need for occupation therapy services
- An increased demand in school employment for special education programs

Recruitment Strategies

Occupational therapists are often hired by the hospitals and agencies where they worked as interns. Therefore, an internship is a vital step in a therapist's career. The American Occupational Therapy Association (AOTA) has an extensive listing of openings from throughout the nation at <http://www.aota.org/>; the Occupational Therapy Association of California has listings of job openings throughout the state at <http://www.otaconline.org//AM/Template.cfm?Section=Home>. Job seekers may also check job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs, and apply directly to hospitals, school districts and health service centers.

Coachella Valley Healthcare Workforce Needs Assessment

Positions that Move into this Occupation

With significantly more education and training, occupational therapist assistants and physical therapist assistants can become occupational therapists.

Positions that Build upon this Occupation

Occupational therapists can become department supervisors or stay within patient care by specializing in a clinical area and gaining expertise in treating certain types of patients or ailments. Therapists can specialize in gerontology, mental health, pediatrics, and physical rehabilitation. In addition, occupational therapists can teach classes in accredited occupational therapy educational programs.

Additional Information

American Occupational Therapy Association - <http://www.aota.org/>

Occupational Therapy Association of California - <http://www.otaonline.org/>

National Board for Certification in Occupational Therapy - <http://www.nbcot.org/>

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Occupational Therapy Assistant

Occupation Description

Occupational therapy assistants (OTA) help patients develop, recover, and improve skills needed for daily living and work. OTAs work under the direction of an occupational therapist.

Occupational therapy assistants typically do the following:

- Help patients do therapeutic activities such as stretches and other exercises
- Lead children who have developmental disabilities in play activities that promote coordination and socialization
- Teach patients how to use special equipment; for example, showing a patient with Parkinson's disease how to use devices that make eating easier
- Record patients' progress, report to occupational therapists, and other administrative tasks

Education and Training

Occupational therapy assistants must have an associate's degree from an accredited occupational therapist assistant program. They can apply for licensing through education equivalency. There are only four schools offering an accredited occupational therapist assistant program in California. Programs closest to the Coachella Valley are:

- Santa Ana College – Santa Ana [www.sac.edu/Academic Progs/HST/OTA](http://www.sac.edu/Academic%20Progs/HST/OTA)
- Stanbridge College – Irvine www.stanbridge.edu
- Grossmont College – El Cajon www.grossmont.net/healthprofessions/OTAWebpage/default.sap

Certification

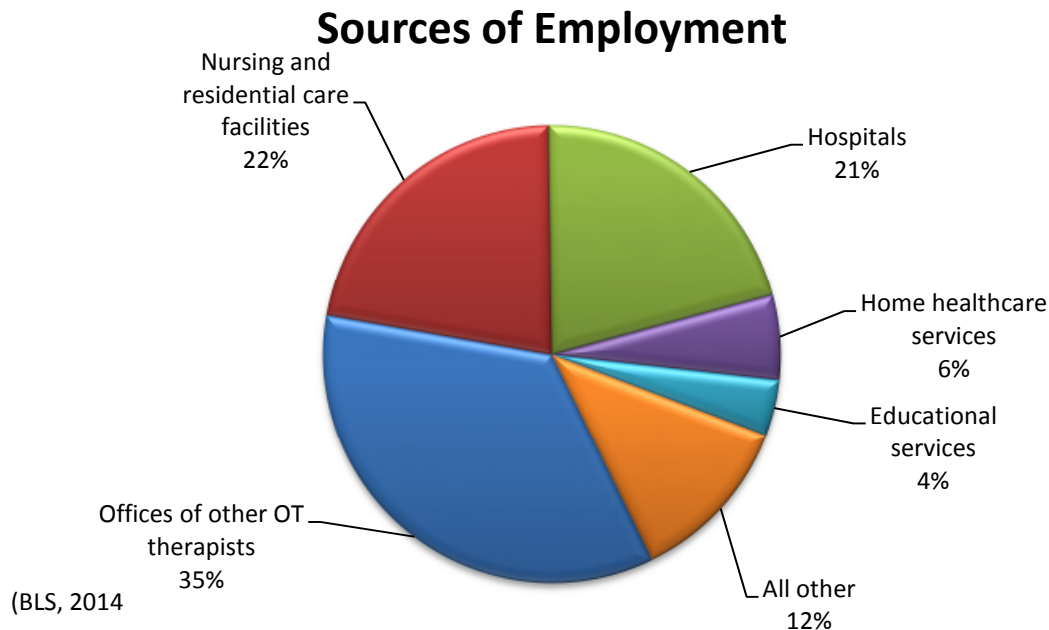
In California, occupational therapist assistants must be licensed by the Occupational Therapy Board of California and can only provide occupational therapy care under the supervision of an occupational therapist. Licensure requires graduation from an accredited physician therapist assistant program and passing the National Occupational Therapist Assistant Examination and the California Law Examination.

Advancement

Occupational therapist assistants can advance into specialized clinical areas such as the treatment of older patients (geriatrics), the treatment of children (pediatrics), or the treatment of sports injuries. Occupational therapist assistants can also advance into administration positions in larger occupational therapy organizations.

Employment

Nationally, occupational therapist assistants are typically employed in offices of health practitioners. According to the BLS and estimates developed for this report, there are an estimated 26 occupational therapist assistants currently employed in the Coachella Valley. The following chart profiles the sources of employment for occupational therapy assistants nationally.



Wages

During May 2013, the average hourly wage among occupational therapist assistants employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$30.66, or \$63,700 annually, a 6.7% increase since 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Overall, according to the BLS, employment for occupational therapist assistants is expected to be slow through 2022. The projected number of jobs available in the Coachella Valley for this occupation, including new openings and net replacement openings, is two openings per year through 2022. Several factors affecting the growth of this occupation include:

- An increasing number of people with disabilities or limited function
- Increasing elderly population
- Increasing use of assistants to reduce the cost of occupational therapy care

Recruitment Strategies

Applying directly to hospitals and private practices is felt to be the best way for both experienced and trainee occupational therapy assistants to find a job. Accredited occupational therapy assisting schools provide an important link between employers and students through on campus recruitment programs. Job seekers can also find job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

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Certified nurse assistants, medical assistants, unit assistants, home health aides, respiratory therapy assistants, and occupational therapy aides can advance into positions as occupational therapist assistants.

Positions that Build upon this Occupation

Occupational therapist assistants can advance, with significant additional education, into positions as occupational therapists.

Additional Information

American Occupational Therapy Association - <http://www.aota.org/>

National Board for Certification in Occupational Therapy - <http://www.nbcot.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Dietitians and Nutritionists

Occupation Description

Dietitians and nutritionists plan and conduct food service or nutritional programs, help promote healthy eating habits, and recommend dietary modifications for individuals needing to achieve and maintain healthy eating habits. They may supervise activities of a food service department, counsel individuals, or conduct nutritional research.

Dietitians and nutritionists may specialize in one of the following four areas:

- Clinical dietitian – Provide nutritional services to patients in hospitals, nursing care facilities and other institutions. Duties include assessing patients' nutritional needs, developing and implementing nutritional programs and evaluating nutritional program results.
- Community dietitians – Work with a wide variety of individuals, groups and organizations to provide education and/or consult on nutritional issues such as the assessment of dietary needs, nutritional planning, instruction, grocery shopping and food preparation.
- Management dietitians – Provide day-to-day management of meal planning and preparation in healthcare facilities, cafeterias, schools and prisons. Typical job duties include planning, personnel management and training, budgeting, purchasing, sanitary and safety enforcement, record keeping and reporting.
- Consulting dietitians – Work as independent consultants for large organizations, providing nutritional screenings and offering advice on diet related issues such as weight loss and cholesterol reduction. Typical clients include wellness programs, sports teams, supermarkets and other nutrition-related businesses.

Education and Training

Dietitians and nutritionists need at least a bachelor's degree in dietetics, foods and nutrition, food service systems management, or a related area. The American Dietetic Association's (ADA) Commission on Accreditation for Dietetics Education (CADE) is ADA's accrediting agency for education programs that prepare individuals for careers as registered dietitians.

Currently, there are 16 bachelor's degree programs and two master's degree programs approved by the ADA CADE located in California. Programs within southern California offering bachelor's degrees include:

- * California State University, San Bernardino
- California State Polytechnic University, Pomona
- California State University, Chico
- California State University, Long Beach
- California State University, Los Angeles
- Pepperdine University, Malibu
- California State University, Northridge
- Point Loma Nazarene University, San Diego
- San Diego State University, San Diego

Coachella Valley Healthcare Workforce Needs Assessment

*The CSUSB Palm Desert campus offers a bachelor of science in nutrition and accepts 10 required lower division courses from the College of the Desert.

Master's degree programs are offered at:

- Loma Linda University
- California State University, Los Angeles

In addition to the didactic education, ADA CADE also requires a dietetic internship of at least 900 hours of supervised practice to be eligible for the CDR registration examination for dietitians. More information about the ADA requirements is available:

http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/career_401_ENU_HTML.htm

Certification/Licensure

Currently in California, there are several requirements related to the certification of dietitians and nutritionists. First, persons cannot call themselves registered dietitians unless they have met the training requirements of the ADA. Next, dietetic services supervisors must meet the training requirements of the ADA, be registered by the Commission on Dietetic Registration, or be a graduate of a program approved by the Dietary Managers Association (DMA). They also must be credentialed as a certified dietary manager by the DMA (Billingsley, 2008).

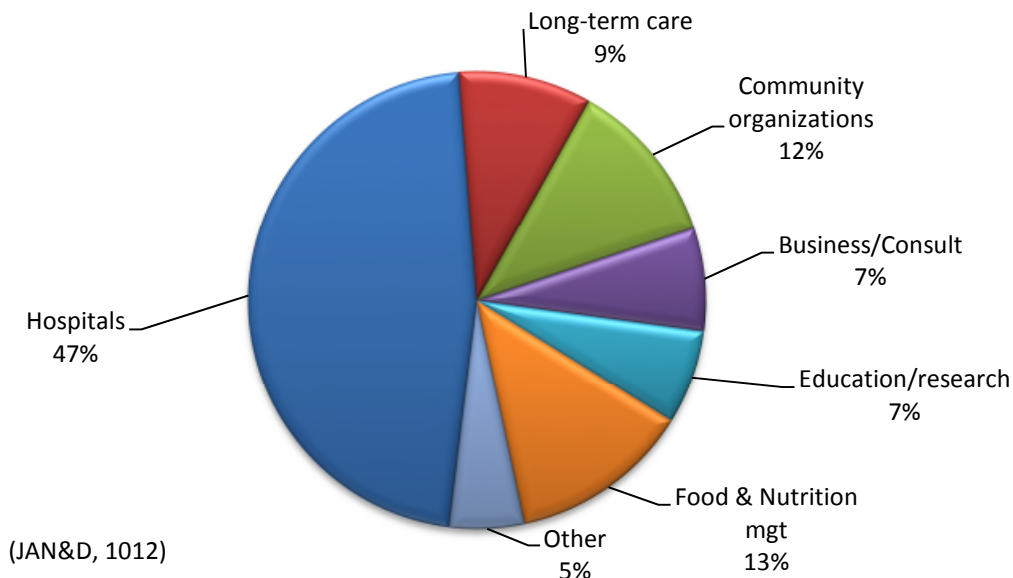
Advancement

Dietitians may advance to management positions, become self-employed or specialize in clinical areas such as renal, diabetic, cardiovascular or pediatrics. Other opportunities are available in sales, research and public health.

Employment

Hospitals are the most common source of employment for dietitians and nutritionists. According to the BLS and estimates developed for this report, there are currently an estimated 68 dietitians and nutritionists employed in the Coachella Valley. The following chart profiles the sources of employment for dietitians and nutritionists nationally.

Sources of Employment



Wages

During May 2013, the average hourly wage among dietitians and nutritionists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$32.84, or \$68,310 annually, an 8.3% increase since 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Overall, according to the BLS, employment of dietitians and nutritionists is expected to have average occupational growth through 2022. The projected number of jobs available in the Coachella Valley for this occupation per year through 2020 is one new opening and one replacement opening. Several factors affecting the growth of this occupation include:

- An increasing emphasis on disease prevention such as diabetes and kidney disease, which are associated with obesity
- A growing and aging population
- Increased public interest in nutrition

Growth may be limited by substitution of workers such as health educators and dietetic technicians. Additionally, nursing care facilities are establishing contracts with outside agencies for food services, and limitations on insurance reimbursement for dietetic services will limit growth of this occupation.

Coachella Valley Healthcare Workforce Needs Assessment

Recruitment Strategies

Dietitian and nutritionist jobs may be found by applying to hospitals, university placement centers, private employment agencies and ADA job listings. Job openings are also posted in newspaper classified ads and Internet job listings such as Craig's List, LinkedIn, Monster and Hot Jobs.

Positions that Move into this Occupation

With additional education and training, persons in positions such as nursing, health education, dietetic technicians and food service managers can advance into positions as dietitians and nutritionists.

Positions that Build upon this Occupation

Dietitians and nutritionists can advance into sales, research, management, teaching and various clinical specialty areas.

Additional Information

Academy of Nutrition and Dietetics - <http://www.eatright.org/>

Commission on Dietetic Registration - <http://www.cdrnet.org/>

Certification Board for Nutrition Specialists - <http://cbns.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Physical Therapists

Occupation Description

Physical therapists (PTs) help injured or ill people improve their movement and manage pain. These therapists are often an important part of rehabilitation and treatment of patients with chronic conditions or injuries. The scope of a PT's practice includes:

- Reviewing patients' medical histories and any referrals or notes from doctors or surgeons
- Diagnosing patients' dysfunctional movements by observing them standing or walking, and by listening to their concerns, among other methods
- Setting up a plan of care for patients, outlining their goals and the expected outcome of the plan
- Using exercises, stretching maneuvers, hands-on therapy, and equipment to ease patients' pain, increase their mobility, prevent further pain or injury, and facilitate health and wellness
- Evaluating patients' progress and modifying a plan of care and trying new treatments as needed
- Educating patients and their families about what to expect from and how best to cope with the recovery process

Education and Training

Physical therapists entering the profession need a Doctor of Physical Therapy (DPT) degree. In California, a licensed physical therapist must have completed an accredited six-to-seven-year college program. An accredited physical therapist program requires approval of the Commission on Accreditation in Physical Therapy Education (CAPTE). The CAPTE is the accrediting commission of the American Physical Therapy Association (APTA) <http://www.apta.org/>. CAPTE accredited physician therapy education programs offering DPT education programs in southern California are located at the following schools:

- CSU – Long Beach
- CSU – Northridge
- Loma Linda University

Certification

Physical therapists must be licensed to practice by the Department of Consumer Affairs, Physical Therapy Board of California. To obtain a license, a physical therapist must possess a DPT degree in physical therapy. They must also pass the National Physical Therapy Examination (NPTE), the California Law Examination (CLE), and pass a criminal history fingerprint background check.

Advancement

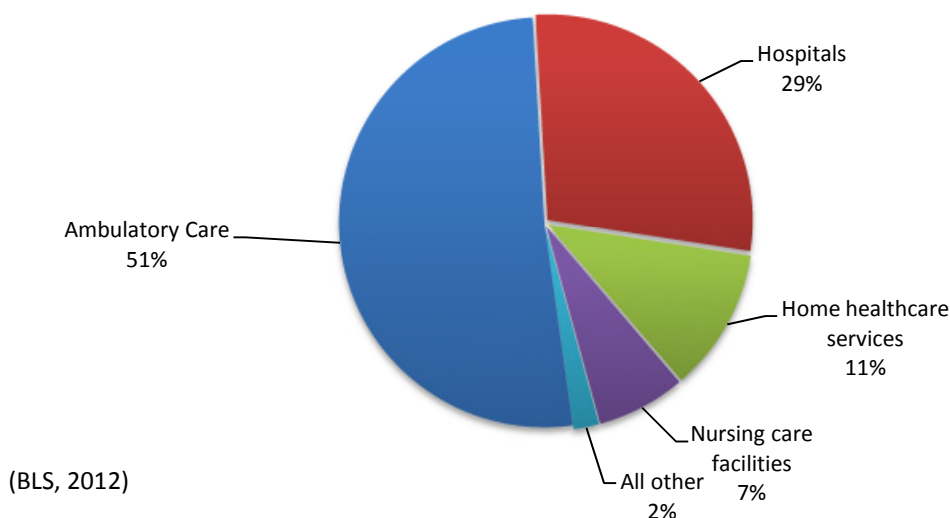
Physical therapists can advance into specialized clinical areas such as treating older patients (geriatrics), children (pediatrics), or those with sports injuries. They are expected to continue their professional development and many move into supervisor and management positions.

Coachella Valley Healthcare Workforce Needs Assessment

Employment

Offices of other health practitioners such as private physical therapy practices and hospitals are the most common source of employment for physical therapists. According to the BLS and estimates developed for this report, there are currently an estimated 156 physical therapists employed in the Coachella Valley. The following chart profiles the sources of employment for physical therapists nationally.

Sources of Employment



Wages

During May 2013, the mean hourly wage among PTs employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$41.17, or \$85,630 annually. Between 2008 and 2013, the average hourly wage for PTs remained relatively steady, \$41.96 and \$41.17, respectively. A PT's wage may vary depending on where they are employed, with home healthcare services typically offering the highest wages.

Job Outlook

Overall, according to the BLS, employment for physical therapists is expected to be much better than average through 2022. The projected number of jobs available in the Coachella Valley through 2022 for this occupation is projected to be eight per year, with four new openings and four replacements. Job opportunities will be plentiful, especially in ambulatory care, rehabilitation, and orthopedic settings. Several factors affecting the growth of this occupation include:

- The increased incidence of patients with chronic conditions such as diabetes and obesity. More physical therapists will be needed to help these patients maintain their mobility and manage the effects of chronic conditions.

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- Aging baby boomers wanting to stay active later in life who demand physician therapy services
- Increased access to PT services due to health insurance reform brought about by the ACA

Recruitment Strategies

Physical therapists can find jobs through school placement offices, professional associations, or job listings in medical and professional journals.

Direct application to employers remains one of the most effective job search methods. Private facilities are listed in the yellow pages under physical therapy, hospitals, and rehabilitation services. Job seekers can also find job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

Physical therapist assistants can, with significant additional education, advance into positions as physical therapists.

Positions that Build upon this Occupation

Positions to which this occupation can advance include research, education and subspecialties within physical therapy.

Additional information

For more information about physical therapists, visit:

American Physical Therapy Association - <http://www.apta.org/>

For more information about accredited physical therapy programs, visit:

Commission on Accreditation in Physical Therapy Education - <http://www.captonline.org/home.aspx>

For more information about state licensing requirements and about the National Physical Therapy Exam, visit:

Federation of State Boards of Physical Therapy - <https://www.fsbpt.org/>

For more information about certification, visit:

American Board of Physical Therapy Specialties - <http://www.abpts.org/home.aspx>

For more information about how to apply to DPT programs, visit

Physical Therapist Centralized Application Service (PTCAS) - <http://www.ptcas.org/>

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Physical Therapist Assistants

Occupation Description

Physical therapist assistants help physical therapists provide physical therapy treatments and procedures that improve patient mobility, relieve pain and prevent or lessen physical disability. Along with other members of the rehabilitation team, they may help develop treatment plans, carry out routine functions, document the progress of treatment, and modify specific treatments based on the patient's status and within the scope of treatment plans established by a physical therapist.

Education and Training

Physical therapist assistants typically earn an associate's degree from an accredited physical therapist assistant program. They can also apply for licensing through education equivalency. Accredited physical therapist assistant schools located in southern California include:

- Loma Linda University – Loma Linda - <http://www.llu.edu/>
- San Diego Mesa College – San Diego - <http://www.sdmesa.edu/students/academic-programs/phytr/>
- Cerritos College – Norwalk - <http://www.cerritos.edu/>

Certification/Licensure

A physical therapist assistant in California must be licensed by the Physical Therapy Board of California and provides physical therapy care under the supervision of a physical therapist. Licensure requires graduation from an accredited physical therapist assistant program and passage of the National Physical Therapist Assistant Examination (NPTE) and the California Law Examination, which is an exam on laws related to physical therapy professional practice.

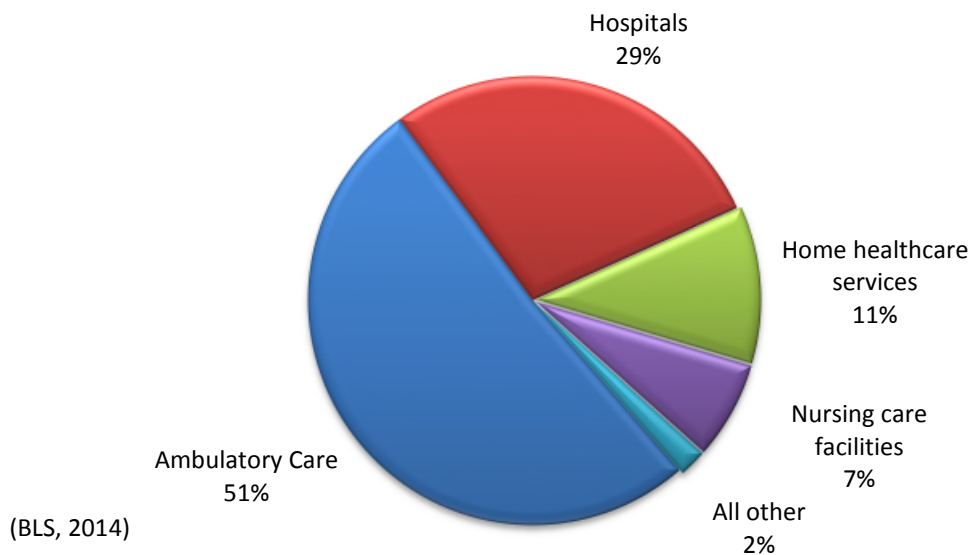
Advancement

Physical therapist assistants can advance into specialized clinical areas such as geriatrics, pediatrics or the treatment of sports injuries. Physical therapist assistants can also advance into administration positions in larger physical therapy organizations. With significantly more education, a physical therapist assistant can become a physical therapist.

Employment

Nationally, physical therapist assistants are typically employed in hospitals and in offices of health practitioners. According to the BLS and estimates developed for this report, there are an estimated 55 physical therapist assistants currently employed in the Coachella Valley.

Sources of Employment



Wages

During May 2008, the average hourly wage among physical therapist assistants employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$30.98, or \$64,440 annually, an increase of 14.9%. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

According to the BLS, overall employment for physical therapist assistants is expected to be much better than average through 2022. The projected number of jobs available in the Coachella Valley for this occupation through 2022 is three annually, with two new openings and one replacement opening. For those with formal training or experience, job opportunities are expected to be good. Several factors affecting the growth of this occupation include:

- An increasing number of people with disabilities or limited function
- An increasing elderly population
- Increasing use of assistants to reduce the cost of physical therapy care

Recruitment Strategies

Applying directly to hospital and clinic physical therapy departments and to private practice therapists is felt to be the best way for both experienced and trainee physical therapy assistants to find a job. On-campus recruitment programs of accredited physical therapy assisting schools provide an important link between employers and students. Job seekers can also find job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

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Positions that Move into this Occupation

Certified nurse assistants, medical assistants, unit assistants, home health aides, respiratory therapy assistants, and physical therapy aides can advance into positions as physical therapist assistants with additional education.

Positions that Build upon this Occupation

Physical therapist assistants can advance, with significant additional education, into positions as physical therapists.

Additional Information

American Physical Therapy Association - <http://www.apta.org/>

Commission on Accreditation in Physical Therapy Education - <http://www.captionline.org/home.aspx>

Federation of State Boards of Physical Therapy - <https://www.fsbpt.org/>

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Respiratory Therapists

Occupation Description

Respiratory therapists care for patients with breathing and other cardiopulmonary disorders. Under the direction of a physician, they assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. They initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.

Education and Training

An associate's degree is the minimal educational requirement for respiratory therapists. Training is offered at the postsecondary level by colleges and universities, medical schools, vocational-technical institutes, and the armed forces. For advancement in this occupation, a bachelor's or master's degree may be important.

Most employers require respiratory therapists to maintain a Cardiopulmonary Resuscitation (CPR) Certification.

Admission to a respiratory care program requires a minimum of a high school diploma or equivalent. High school courses in mathematics, physics, chemistry and biology are also recommended.

While there are 28 accredited respiratory therapy programs in California, none currently offer an education and training program for respiratory care in the Coachella Valley. Nearby programs located in Loma Linda, Yucaipa, and San Bernardino include:

- Loma Linda University — Baccalaureate degree
- Crafton Hills College, Yucaipa CA — Associate degree
- Concorde Career College, San Bernardino CA — Associate degree

Licensing and Certification

In California, respiratory therapists are licensed by the Respiratory Care Board of California. The National Board for Respiratory Care (NBRC) offers voluntary certification and registration to graduates of programs accredited by the Commission on Accreditation of Allied Health Education Programs or the Committee on Accreditation for Respiratory Care (CoARC). Two credentials are awarded to respiratory therapists who satisfy the requirements: Registered Respiratory Therapist (RRT) and Certified Respiratory Therapist (CRT). Graduates from accredited programs in respiratory therapy may take the CRT examination.

Advancement

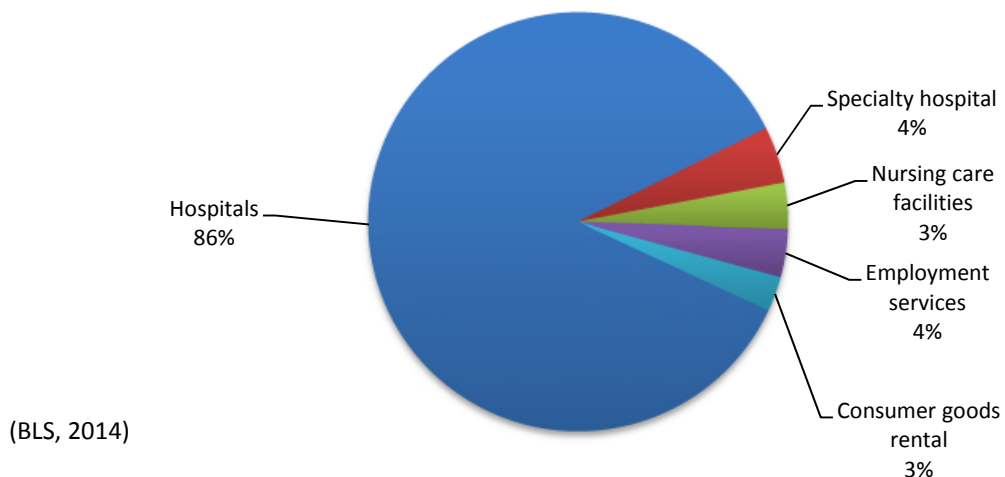
Respiratory therapists advance in clinical practice by moving from general care to the care of critically ill patients with significant health problems. In a typical hospital setting, respiratory therapists, especially those with a bachelor's or master's degree, may advance to supervisory or managerial positions within the respiratory therapy department. Outside of the hospital setting, respiratory therapists may work in home healthcare and equipment rental firms. Those with advanced skills may move into teaching positions or to firms involved in selling pharmaceuticals and medical devices.

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Employment

Hospitals are the most common source of employment for respiratory therapists. According to the BLS and estimates developed for this report, there are an estimated 165 respiratory therapists currently employed in the Coachella Valley. The following chart presents the national profile of employers for respiratory therapists.

Sources of Employment



Wages

During May 2013, the average hourly wage among respiratory therapists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$32.62, or \$67,860, a 12.5% increase since 2008. Respiratory therapists' average annual wage may vary depending on where they are employed and their current responsibility levels.

Job Outlook

Overall, job opportunities for respiratory therapists are expected to be very good, with job growth faster than the average for all occupations through 2022. The majority of the job openings are expected to be in hospitals. There is, however, a growing number of openings expected outside the hospital setting, such as home healthcare, physician offices and the employment services industry. The projected number of jobs available annually in the Coachella Valley for this occupation through 2022 are six, including three new positions and three replacement positions. Several factors affecting the growth of this occupation include:

- Replacement of experienced respiratory therapists leaving the occupation or retiring
- An aging population with a wider range of diseases that require more sophisticated treatment
- Increasing demand for respiratory therapy, mostly in hospitals and nursing homes

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Recruitment Strategies

Direct application to employers remains one of the most effective job search methods. Healthcare organizations typically list current job opportunities on their websites and allow direct applications; the Internet has become one of the most widely used recruitment strategies. Private registries and medical employment agencies are also used as a job search method. Other sources of assistance are professional associations, ads in newspapers or medical journals, Internet job listings, and referrals from instructors.

Positions that Move into this Occupation

With additional education and training, a respiratory therapy technician can advance to become a respiratory therapist.

Positions that Build upon this Occupation

With additional education and training, a respiratory therapist can advance into many different healthcare positions such as nursing or physician's assistant.

Additional Information

American Association for Respiratory Care - <https://www.aarc.org/>

Commission on Accreditation for Respiratory Care- <http://www.coarc.com/>

National Board for Respiratory Care - <http://www.nbrc.org/Pages/default.aspx>

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Speech-language Pathologists

Occupation Description

Speech-language pathologists evaluate, treat, and research communication disorders. They help children and adults with language disorders develop the communication skills needed for self-expression, social interaction, academic success, and employment. Speech-language pathologists diagnose and treat such disorders as brain injury, stroke, cerebral palsy, stuttering, delayed or impaired language, and voice and speaking problems. They observe and test speech, language, hearing, and perception. They use a variety of common objects like flash cards and toys, as well as sophisticated testing equipment, to identify disorders.

Education and Training

A master's degree in speech-language pathology is required to practice. According to information available on the American Speech-Language-Hearing Association website, there are 16 schools in California offering a masters level program in Speech-Language Pathology. Those located relatively close to the Coachella Valley include the following:

- Loma Linda University
- San Diego State University
- California State University, Los Angeles
- California State University, Northridge
- California State University, Long Beach

Certification

To practice speech-language pathology in California, a person must be licensed by the Department of Consumer Affairs Speech-Language Pathology and Audiology Board. The following qualifications are required to be eligible for licensure:

- A master's degree or equivalent in speech-language pathology from an educational institution approved by the Board
- Transcripts from an educational institution approved by the Board evidencing the successful completion of at least 60 semester units of courses related to the normal development, function, and use of speech, hearing, and language (at least 24 of the required units shall be related to disorders)
- 300 hours of supervised clinical practice in three different clinical settings
- 36 weeks of full-time supervised experience or 72 weeks of part-time supervised experience
- Taking and passing the National Examination in Speech-Language Pathology or the Educational Testing Service with a minimum score of 600

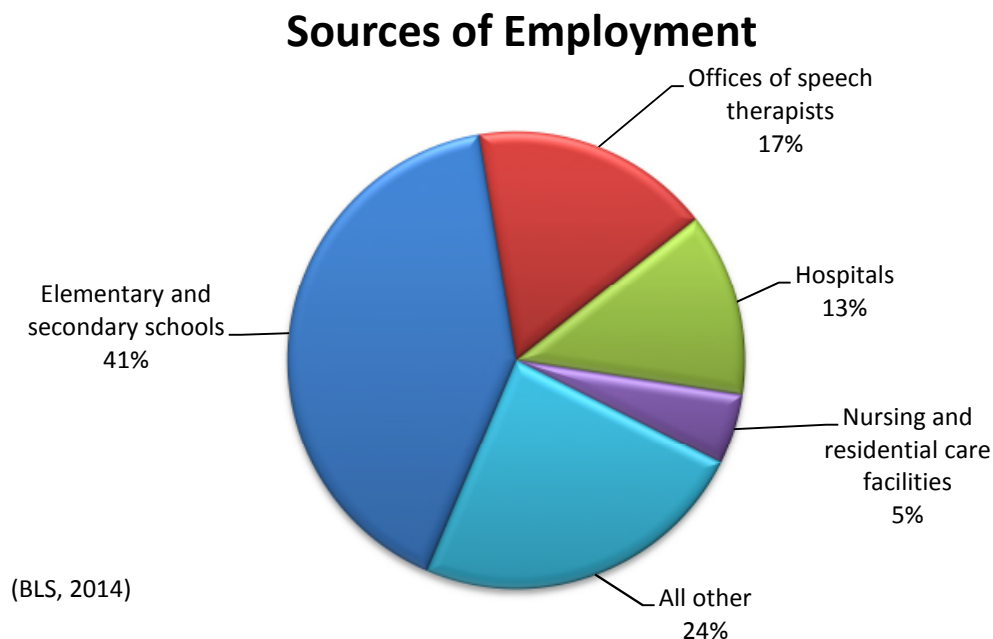
Advancement

Speech-language pathologists can advance to supervisors or school department directors. Some establish private practices or join existing group practices as partners.

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Employment

Nationally, elementary and secondary schools are the most common source of employment for speech-language pathologists. According to the BLS and estimates developed for this report, there are an estimated 167 speech-language pathologists currently employed in the Coachella Valley. The following chart presents the national profile of employers for speech-language pathologists.



Wages

During May 2013, the average hourly wage among speech-language pathologists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$44.50, or \$92,550, an increase of 18.5% since 2008. Speech-language pathologists' average annual wage may vary depending on where they are employed.

Job Outlook

According to the BLS, overall employment growth for speech-language pathologists is expected to be slightly below average through 2022. The projected annual number of jobs available in the Coachella Valley for this occupation through 2022 is four, with one new opening and three replacements. Several factors affecting the growth of this occupation include:

- An aging population, which increases the possibility of neurological disorders and associated speech, language, and swallowing impairments
- Improving survival rates of premature infants and trauma and stroke victims, which increases the need for assessment and treatment offered by speech-language pathologists
- Anticipated restrictions on reimbursement for therapy services, which may limit the growth of speech-language pathologist jobs in the near term

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Recruitment Strategies

Speech-language pathologists frequently work for the institution where they served their internship. Job seekers may network with others through ASHA, register with their school placement office, or apply directly to state, federal, and private healthcare centers. Job seekers can also find job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

There are no positions that advance into this occupation.

Positions that Build upon this Occupation

Speech-language pathologists can advance into positions as managers or directors of programs, clinics, or research.

Additional Information

American Speech-Language-Hearing Association - <http://www.asha.org/>

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Dental Hygienists

Occupation Description

Dental hygienists clean teeth, examine the oral area, head, and neck for signs of oral disease such as gingivitis, teach patients how to practice good oral hygiene, and provide other preventive dental care. They may also take and develop x-rays, and apply fluoride or sealants.

Education and Training

An associate's degree or certificate in dental hygiene is required for practice in a private dental office in California. A bachelor's or master's degree usually is required for research, teaching, or clinical practice in public or school health programs. Dental hygiene programs prefer applicants who have completed at least one year of college.

According to the California Dental Hygiene Association (CDHA), there are 24 accredited dental hygiene schools in California. Although there are no schools in the Coachella Valley offering the required training to become a dental hygienist, there are four schools offering dental hygiene programs located relatively close to the Coachella Valley. These include:

- Loma Linda University, Loma Linda - <http://www.llu.edu/llu/dentistry/dentalhygiene/index.html>
- Moreno Valley College, Moreno Valley - <http://www.rcc.edu/academicPrograms/dentalHygiene/index.cfm>
- Concorde Career College, San Bernardino - <http://www.concorde.edu/campus/san-bernardino>
- San Joaquin Valley College, Ontario - <http://www.sjvc.edu/campuses/southern-california/ontario>

The Loma Linda University, in collaboration with the College of the Desert opened a three-year associate degree dental hygiene training program in Palm Desert. The faculty from College of the Desert will provide the general education and biomedical science prerequisite education, and faculty from Loma Linda University will provide the dental hygiene science and clinical training for the program.

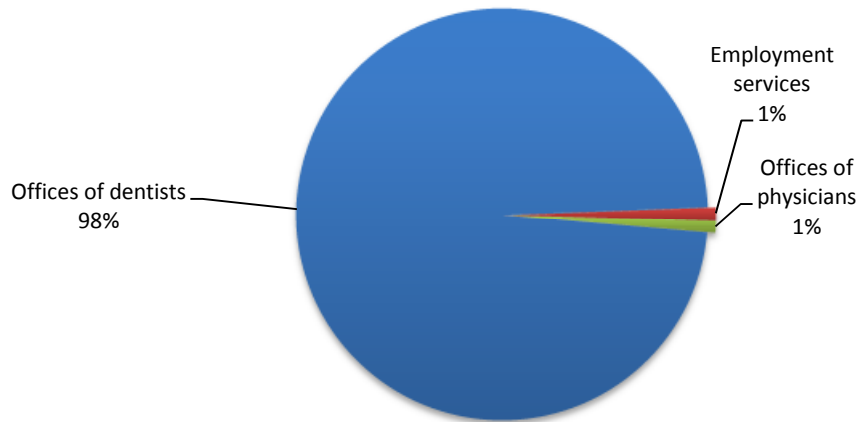
Certification/Licensure

Dental hygienists are licensed and regulated by the Dental Hygiene Committee of California (DHCC). To qualify for licensure, a candidate must graduate from an accredited dental hygiene school and pass both a written and clinical examination. Dental hygienists in California are required to take 25 hours of continuing education every two years for licensure renewal.

Employment

Dental offices are the most common source of employment for dental hygienists. According to the BLS and estimates developed for this report, there are an estimated 205 dental hygienists currently employed in the Coachella Valley. The following chart profiles the sources of employment for dental hygienists nationally.

Sources of Employment



(BLS, 2014)

Wages

During May 2013, the average hourly wage among dental hygienists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$42.92, or \$89.270 annually, an increase of 6.9% since 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Overall, according to the BLS, dental hygienists rank among the fastest growing occupations, and job prospects are expected to remain excellent through 2022. The projected number of additional jobs gained annually in the Coachella Valley for this occupation through 2022 is 10, comprising five new positions and five replacements. Several factors affecting the growth of this occupation include:

- Population growth
- Greater retention of natural teeth by middle-aged and older people
- An increased focus on preventive dental care for younger people
- An increased number of dental hygienists per office to meet the increased demand for preventive dental care

Recruitment Strategies

Dental hygienists can look for jobs by applying to dentists' offices, community college placement centers, and private employment agencies. Job openings are regularly posted in newspaper classified ads and Internet job listings such as Craig's list, Monster and Hot Jobs.

Positions that Move into this Occupation

Dental assistants can advance into positions as dental hygienists.

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Positions that Build upon this Occupation

Dental hygienists advance primarily in expanded roles and greater responsibilities. With additional education and experience, they may specialize in areas such as orthodontia. Some go into teaching. In government jobs, they may advance to dental hygienist auditor or consultant.

Additional Information

Dental Hygiene Committee of California - <http://www.dhcc.ca.gov/index.shtml>

American Dental Hygienists' Association - <https://www.adha.org/>

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Medical and Clinical Laboratory Technologists

Occupation Description

Medical and clinical laboratory technologists (also known as medical laboratory scientists) perform complex medical laboratory tests for the diagnosis, treatment, and prevention of disease, and may train or supervise staff. Tasks include performing biological, hematological, immunologic, microscopic and bacteriological tests.

Education and Training

The usual requirement for an entry-level position as a clinical laboratory technologist is a bachelor's degree in medical technology or one of the life sciences, although it is possible to qualify through a combination of education and on-the-job and specialized training.

The National Accrediting Agency for Clinical Laboratory Sciences (NAACLS) accredits educational programs for medical and clinical laboratory technologists. The only university-based program close to the Coachella Valley is at the Loma Linda University School of Allied Health Professions.

Certification

For medical and clinical laboratory technologists, certification is voluntary. Several private organizations such as professional societies grant recognition to individuals whose professional competence meets prescribed standards. While certification is optional, it may be a prerequisite for advancement depending on the employer. Agencies certifying medical and clinical laboratory technologists include the Board of Registry of the American Society for Clinical Pathology, the American Medical Technologists, the National Credentialing Agency for Laboratory Personnel, and the Board of Registry of the American Association of Bio-analysts.

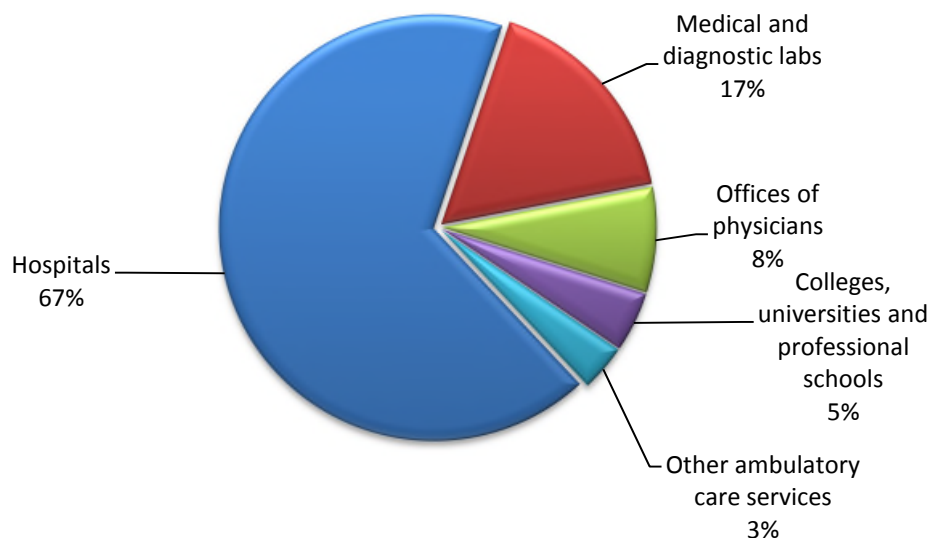
Advancement

Medical and clinical laboratory technologists may advance to supervisory positions in laboratory work, or become chief technologists or laboratory managers in hospitals. Manufacturers of home diagnostic testing kits and laboratory equipment and supplies also seek experienced technologists to work in product development, marketing, and sales. Professional certification, specialization and/or a graduate degree in medical technology, one of the biological sciences, chemistry, management, or education enhance opportunities for advancement.

Employment

Nationally, medical and clinical laboratory technologists are typically employed in a hospital or medical and diagnostic laboratory. According to the BLS and estimates developed for this report, there are an estimated 63 medical and clinical laboratory technologists currently employed in the Coachella Valley. The following chart profiles the sources of employment for medical and clinical laboratory technologists nationally.

Sources of Employment



Wages

During May 2013, the average hourly wage among medical and clinical laboratory technologists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$34.54, or \$71,850 annually, an increase of 4.3% since 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

According to the BLS, overall employment of medical and clinical laboratory technologists is expected to increase about the same as all occupations through 2022. The projected number of additional jobs gained annually in the Coachella Valley for this occupation through 2022 is three, with one new position and two replacement positions. There are countervailing forces impacting the growth of this occupation, including:

- An increasing volume of laboratory tests due to population growth and the development of new types of tests
- The simplification of routine testing procedures allowing non-laboratory personnel to perform tests
- Expected job growth in non-hospital locations such as medical and diagnostic laboratories and other ambulatory care settings
- The use of laboratory technologists to provide many of the services previously completed by laboratory technologists

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Recruitment Strategies

Technologist trainees are often hired by laboratories where they worked as interns. Therefore, an internship is a vital step in a technologist's career. The California Association for Medical Laboratory Technology (CAMLT) has an extensive listing of openings from throughout the state. Job seekers may also apply directly to medical labs and health service centers, check job openings in newspaper classified ads, medical lab journals, and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

With additional training, lab assistants and laboratory technicians can advance into positions as medical and clinical laboratory technologists.

Positions that Build upon this Occupation

Medical and clinical laboratory technologists can advance into positions as clinical lab scientists and laboratory management.

Additional Information

American Society for Clinical Laboratory Science - <http://www.ascls.org/>

American Society of Cytopathology - <http://www.cytopathology.org/>

National Accreditation Agency for Clinical Laboratory Sciences - <http://www.naacls.org/>

American Medical Technologists - <http://www.amt1.com/>

American Society for Clinical Pathology - <http://www.ascp.org/>

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Medical and Clinical Laboratory Technicians (cytotechnologists)

Occupation Description

Medical and clinical laboratory technicians perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. Typically working under the supervision of a medical technologist, they perform blood counts and urinalysis, and test cells, tissues, blood and other specimens. Technicians commonly use microscopes, automated blood analyzers and other laboratory equipment to carry out their duties. Some medical laboratory technicians are generalists and perform a wide variety of tests, while others specialize in specialized areas such as cytology (study of cells), histology (tests on tissues) or blood banking. Some medical laboratory technicians are also trained to collect blood samples.

Education and Training

The usual requirement for an entry-level position as a medical and clinical laboratory technician is an associate degree from a community college, a certificate from a hospital-based training program or the Armed Forces. Currently, there are no training programs available in the Coachella Valley. The closest colleges offering medical and clinical laboratory technician training include:

- San Diego Miramar College
- Grossmont College - El Cajon, CA
- Cerritos College - Norwalk, CA

Certification/Licensure

To qualify for a California MLT license, a medical and clinical laboratory technician is required to obtain an Associate of Arts degree and pass one of the California recognized National MLT examinations. There is a requirement for twelve continuing education units per year for license renewal. Licensing is on a two year renewal cycle.

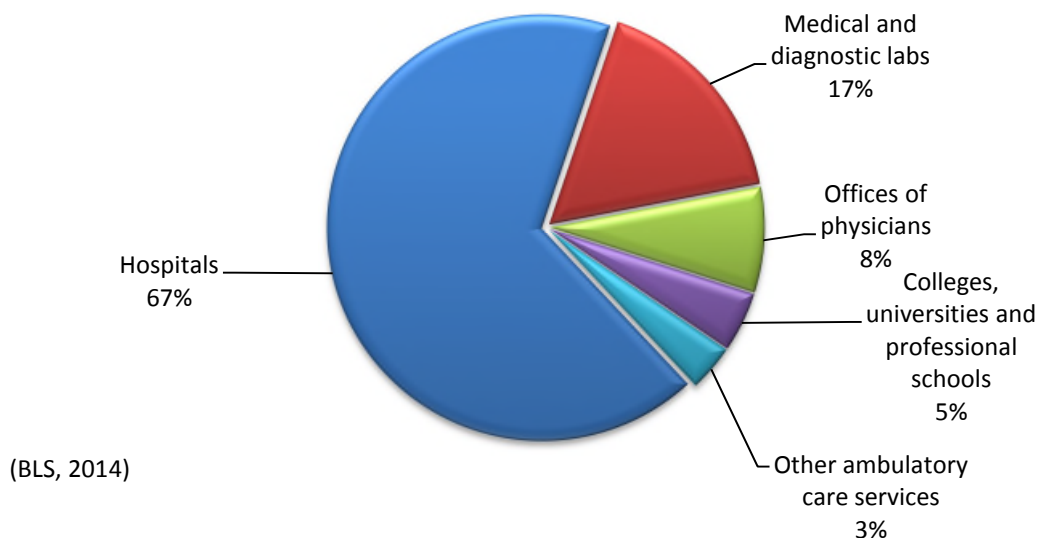
Advancement

Medical and clinical laboratory technicians can advance to become technologists through additional education and experience. (See the previous occupational description for more information about educational requirements for a medical and clinical laboratory technologist.)

Employment

Nationally, medical and clinical laboratory technicians are employed primarily in hospitals and diagnostic medical laboratories. According to the BLS and estimates developed for this report, there are an estimated 105 medical and clinical laboratory technicians currently employed in the Coachella Valley. The following chart profiles the sources of employment for medical and clinical laboratory technicians nationally.

Sources of Employment



Wages

During May 2013, the average hourly wage among medical and clinical laboratory technicians employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$19.10, or \$40,840 annually, a decline of 2.7% since 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Overall, according to the BLS, employment of medical and clinical laboratory technicians is expected to increase slightly more than the average for all occupations through 2022. The projected number of additional jobs gained in the Coachella Valley for this occupation through 2022 is six openings per year, with three new openings and three replacement openings. There are several factors impacting the growth of this occupation:

- An increasing volume of laboratory tests due to population growth and the development of new types of tests
- The simplification of routine testing procedures, which will allow non-laboratory personnel to perform tests
- Significant job growth in non-hospital locations such as medical and diagnostic laboratories and other ambulatory care settings

Recruitment Strategies

Technician trainees are often hired by laboratories where they worked as interns. The California Association for Medical Laboratory Technology (CAMLT) has an extensive listing of openings throughout the state. Job seekers may also apply directly to medical labs and health service centers, check job

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openings in newspaper classified ads, medical lab journals, and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

Histological technicians can advance into positions as medical and clinical laboratory technicians.

Positions that Build upon this Occupation

Medical and clinical laboratory technicians can advance into positions as cytogenetic technologists and medical and clinical laboratory technologists.

Additional information

American Society for Clinical Laboratory Science - <http://www.ascls.org/>

American Society of Cytopathology - <http://www.cytopathology.org/>

National Accreditation Agency for Clinical Laboratory Sciences - <http://www.naacls.org/>

American Medical Technologists - <http://www.amt1.com/>

American Society for Clinical Pathology - <http://www.ascp.org/>

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Cardiovascular Technologists and Technicians

Occupation Description

Cardiovascular technologists and technicians work in a highly technical environment using a wide array of advanced medical equipment to conduct diagnostic tests and assist physicians in the treatment of the cardiac and peripheral vascular systems. Cardiovascular technologists may specialize or work in at least four different areas of practice: invasive cardiology, noninvasive technology, echocardiography, or vascular technology.

- Invasive cardiology – Technologists specializing in invasive procedures assist cardiologists with cardiac catheterization procedures such as cardiac angiograms, balloon angioplasty, placement of cardiac stents and pacemakers, and electrophysiology tests.
- Noninvasive technology – Technologists specialize in performing noninvasive test procedures such as echocardiograms, cardiac sonograms, treadmill stress testing, Holter monitoring, Doppler ultrasounds and electrocardiograms.
- Vascular technology – Technologists assist physicians in the diagnosis of disorders affecting the circulation, including patient medical history, evaluating pulses and assessing blood flow in arteries and veins.

Education and Training

In general, cardiovascular technologists receive training in two- to four-year programs. The first year of education is dedicated to core courses and is followed by a year of specialized instruction in invasive, noninvasive, cardiovascular or noninvasive vascular technology.

Currently, the Joint Review Committee on Education in Cardiovascular Technology reviews educational programs seeking accreditation and the Commission on Accreditation of Allied Health Professionals (CAAHEP) accredits these educational programs. According to CAAHEP, there are 34 accredited programs in the U.S. for cardiovascular technology and only two are located in California. They are:

Grossmont College <http://www.grossmont.edu>, El Cajon, CA – Associate's degree with a concentration in invasive cardiology, non-invasive cardiology and non-invasive peripheral vascular technology.

Orange Coast College www.orangecoastcollege.edu, Costa Mesa, CA – Associate's degree with concentration in non-invasive cardiology.

Currently, there are no institutions offering education and training programs for cardiovascular technologists and technicians in or near the Coachella Valley.

Certification/Licensure

Certification for cardiovascular technologists is provided by two organizations, Cardiovascular Credentialing International (CCI) and American Registry of Diagnostic Medical Sonographers (ARDMS).

CCI offers three certifications:

- Certified Cardiographic Technician
- Registered Vascular Specialist
- Registered Cardiovascular Invasive Specialist

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ARDMS offers two certifications:

- Registered Diagnostic Cardiac Technologist
- Registered Vascular Technologist

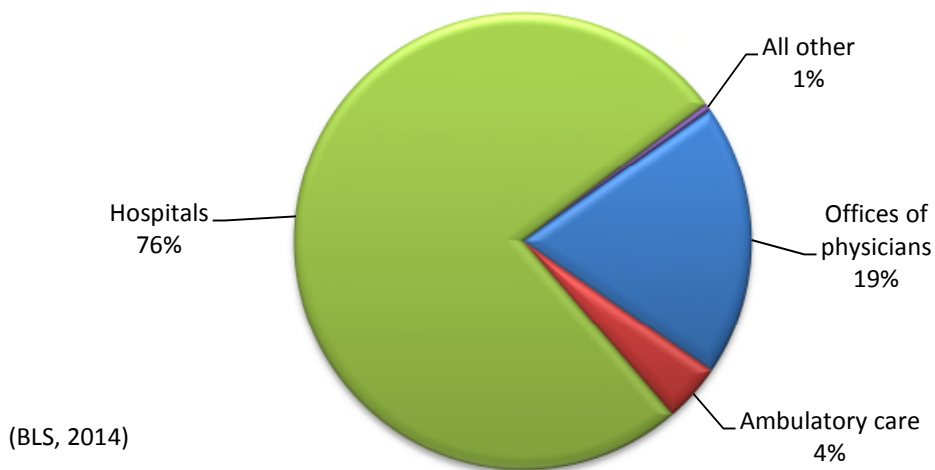
Advancement

Technologists and technicians can advance into higher levels of the profession, each having an increasing amount of responsibility, or into supervisory or management positions. Other career paths include working in education, research, or equipment sales.

Employment

Hospitals are the most common source of employment for cardiovascular technologists and technicians. According to the BLS and estimates developed for this report, there are an estimated 43 cardiovascular technologists and technicians currently employed in the Coachella Valley. The following chart profiles the sources of employment for cardiovascular technologists and technicians nationally.

Sources of Employment



Wages

In May 2013, the average wage of cardiovascular technologists and technicians employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$26.05 hourly, or \$54,180 annually, an increase of 6.9% since 2008. The average annual wages may vary depending on the type of employer.

Job Outlook

Employment of cardiovascular technologists and technicians is expected to grow at a rate faster than the average for all occupations. Through 2022, the projected number of job gains in the Coachella Valley for

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this occupation, including new openings and net replacement openings annually, is two. Factors affecting the growth of this occupation include:

- An aging population, as older people have a higher incidence of heart disease and other complications of the heart and vascular system
- Lower cost procedures such as ultrasound are being performed more often as a replacement for more expensive and more invasive procedures such as cardiac catheterizations.
- Increased awareness of the signs of vascular disease is creating a demand for more vascular studies.
- Advances in vascular technology may reduce the need for more costly and invasive procedures.

Recruitment Strategies

Cardiovascular technologists can find jobs by applying to hospitals, government personnel offices, college placement centers, and private employment agencies. There is information about job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

There are no positions that advance to this occupation.

Positions that Build upon this Occupation

There are no positions to which this occupation can advance.

Additional Information

Alliance of Cardiovascular Professionals - <http://www.acp-online.org/>

American Society of Echocardiography - <http://www.asecho.org/>

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Diagnostic Medical Sonographers

Occupation Description

Diagnostic medical sonographers produce images of internal organs using high frequency sound waves that are used by physicians to aid in the diagnosis and treatment of medical conditions throughout the body. Some of the most common types of imaging include:

- Obstetric and gynecologic sonography
- Abdominal sonography
- Vascular and cardiac sonography
- Neurologic sonography
- Breast sonography

Education and Training

While there is no preferred level of education for diagnostic medical sonography, there are several avenues of education widely accepted by employers. Sonographers may train in hospitals, community colleges, vocational schools, universities and the Armed Forces.

According to CAAHEP, there are eight accredited diagnostic medical sonographer programs in California, with Loma Linda University School of Allied Health Professions being the nearest to the Coachella Valley. West Coast Ultrasound Institute, a proprietary school located in Ontario CA, also offers training in diagnostic medical sonography.

Certification

Although California does not require licensure for diagnostic medical sonographers, the American Registry for Diagnostic Medical Sonography (ARDMS) is the registry organization for certification of skills and knowledge. More information is available at <http://www.ardms.org/default.asp?ContentID=1&menubar=1>. The ARDMS provides sonographers the opportunity to stay abreast with technological advancements related to their occupation.

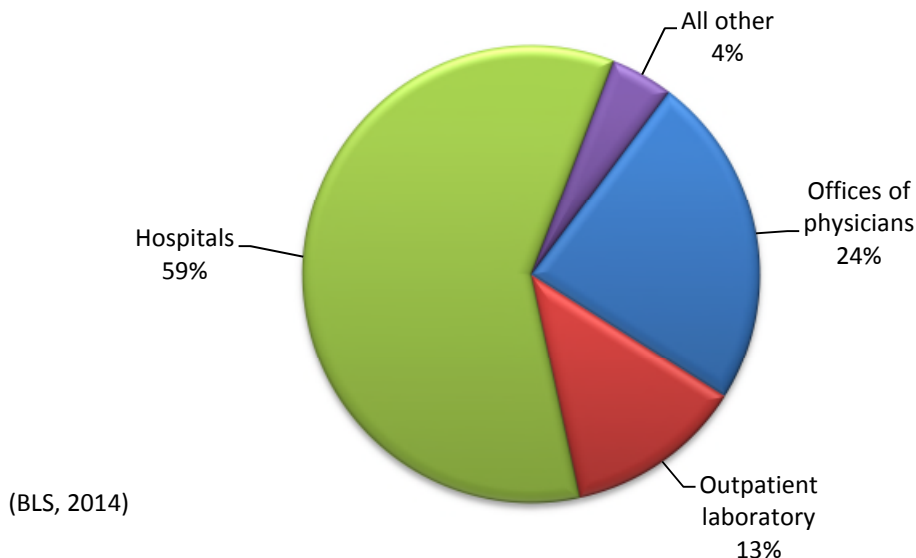
Advancement

Sonographers can specialize in multiple disciplines or seek advancement opportunities in education, administration, research or sales.

Employment

Hospitals and offices of physicians are the most common source of employment for diagnostic medical sonographers. According to the BLS and estimates developed for this report, there are an estimated 58 diagnostic medical sonographers currently employed in the Coachella Valley. The following chart profiles the sources of employment for diagnostic medical sonographers nationally.

Sources of Employment



Wages

During May 2014, the average hourly wage among diagnostic medical sonographers employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$33.49, or \$69,650 annually, about the same as in 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

According to the BLS, overall employment of diagnostic medical sonographers is expected to increase faster than the average for all occupations through 2022. The projected number of additional jobs gained annually in the Coachella Valley for this occupation through 2022, including new openings and net replacement openings, is three. Several factors affecting the growth of this occupation include:

- Population aging, which is expected to increase the demand for diagnostic imaging and alternatives to radiologic procedures
- Increased use of new sonography procedures such as 3D- and 4D-sonography

Recruitment Strategies

Diagnostic medical sonographers can find jobs by applying to hospitals, community college placement centers and private employment agencies. Job openings are posted in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

With additional training, persons in positions such as nursing assistant or medical assistant can advance into positions as diagnostic medical sonographers.

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Positions that Build upon this Occupation

Diagnostic medical sonographers advance primarily by expanding their skills into other ultrasound specialty areas and assuming greater responsibilities. Some diagnostic medical sonographers go into teaching and equipment sales.

Additional Information

Society for Vascular Ultrasound - <http://www.svunet.org/>

American Registry for Diagnostic Medical Sonography - <http://www.ardms.org/>

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Nuclear Medicine Technologists

Occupation Description

Nuclear medicine technologists administer radiopharmaceuticals to patients and then monitor the characteristics and functions of tissues or organs in which the drugs localize. They then create diagnostic images using special cameras that detect and map the radioactive drug in a patient's body. As part of this diagnostic process, they prepare the radioactive solutions and calculate doses to be administered.

Education and Training

Depending on previous education and training, the completion of a nuclear medicine technology program takes one to four years and leads to a certificate, an associate's degree, or a bachelor's degree. Generally, certificate programs are offered in hospitals, associate degree programs in community colleges, and bachelor's degree programs in four-year colleges and universities. Courses cover the physical sciences, biological effects of radiation exposure, radiation protection and procedures, the use of radiopharmaceuticals, imaging techniques, and computer applications.

According to the Joint Review Committee on Educational Programs in Nuclear Medicine Technology (JRCNMT), the nationally recognized accrediting agency for educational programs for nuclear medicine technologists, the closest program to the Coachella Valley is located at Loma Linda University - <http://www.llu.edu/assets/alliedhealth/documents/brochures/nucmed2011.pdf>.

Certification/Licensure

Certification is available from the American Registry of Radiologic Technologists (ARRT) and from the Nuclear Medicine Technology Certification Board (NMTCB). Although not required, some workers receive certification from both agencies. Nuclear medicine technologists must meet the minimum federal standards on the administration of radioactive drugs and the operation of radiation detection equipment.

In California, the Radiologic Health Branch (RHB) of the Food, Drug, and Radiation Safety Division of the Department of Public Health licenses anyone who uses x-ray machines and radioactive materials on human beings.

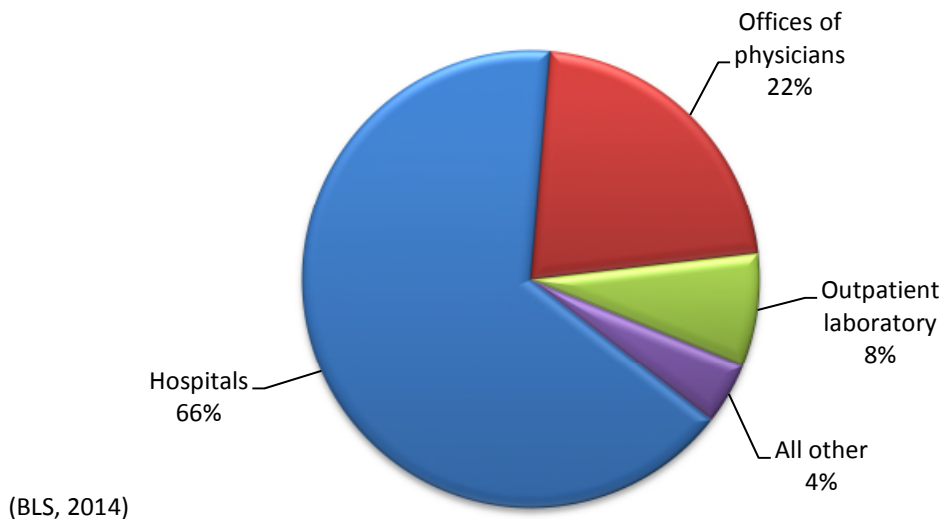
Advancement

Advancement opportunities include department supervisory positions, chief technologist, and department administrator or director. For technologists interested in clinical specialization, there are clinical areas such as nuclear cardiology or computer analysis. For those wishing to leave patient care, there are positions in research laboratories, as instructors in nuclear medicine technology programs, and as sales or training representatives for medical equipment and radiopharmaceutical manufacturing firms.

Employment

Nationally, nuclear medicine technologists are primarily employed in hospitals. According to the BLS and estimates developed for this report, there are an estimated 16 nuclear medicine technologists currently employed in the Coachella Valley. The following chart profiles the sources of employment for nuclear medicine technologists nationally.

Sources of Employment



Wages

During May 2013, the average hourly wage among nuclear medicine technologists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$46.06, or \$65,800 annually, an increase of 16.2% from 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

According to the BLS, overall employment for nuclear medicine technologists is expected to be better than average through 2022. Because there are so few persons working in this occupation in the Coachella Valley, the number of jobs available is estimated to be less than one per year.

Recruitment Strategies

Students whose performance is superior during the clinical portion of their training are frequently hired after graduation by the hospital in which they trained. School instructors also function as an important referral source for graduates. The American Society of Radiologic Technologist and the Society of Nuclear Medicine Technologist websites provide job banks for their members at <https://www.asrt.org/content/CareerCenter/careercenter.aspx> and <http://www.snm.org>, respectively.

Direct application to potential employers remains one of the most effective job search methods. Because most organizations now list current job opportunities on their websites and allow direct applications, the Internet has become one of the most widely used recruitment strategies.

Positions that Move into this Occupation

Healthcare occupations that can move into this occupation include radiologic technologists and technicians, and echo technicians.

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Positions that Build upon this Occupation

This occupation provides a basis for research and sales of radiopharmaceuticals and imaging equipment.

Additional Information

Society of Nuclear Medicine and Molecular Imaging - <http://www.snm.org/>

Joint Review Committee on Education Programs in Nuclear Medicine Technology -
<http://www.jrcnmt.org/>

Nuclear Medicine Technology Certification Board - <http://www.nmtcb.org/root/default.php>

American Registry of Radiologic Technologists - <https://www.arrt.org/>

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Radiologic Technologists and Technicians

Occupation Description

Radiologic technologists and technicians take x-rays, conduct CAT scans and administer non-radioactive materials into patients' blood stream for diagnostic purposes. Radiologic technologists also may use a variety of modalities such as computerized tomography and magnetic resonance to demonstrate portions of the human body on x-ray film or fluoroscopic screen. Radiologic technologists are required to follow physicians' orders and conform to state and national regulations concerning the use of radiation to protect themselves, their patients and co-workers from unnecessary exposure.

Education and Training

Formal training programs in radiography range in length from one to four years and lead to a certificate, associate's degree, or bachelor's degree. Two-year associate's degree programs are usually required and most prevalent. The American Registry of Radiologic Technologists (ARRT) offers voluntary registration for radiologic technologists. To be eligible for registration, technologists generally must have graduated from an accredited program and pass an examination. Many employers prefer to hire registered radiographers. To be re-registered by the ARRT, radiographers must complete 24 hours of continuing education every other year. California also requires certification for medical or dental radiography.

Admission to radiography programs require, at a minimum, a high school diploma or the equivalent. High school courses in mathematics, physics, chemistry and biology are also recommended.

Currently, there are no organizations offering education and training programs for radiologic technologists in the Coachella Valley. The closest programs are located in Loma Linda and Colton:

- Loma Linda University — programs include an associate's degree in medical radiography, bachelor's and master's degrees in radiation sciences and certificates in CT and MRI
- Crafton Hills College, Yucaipa – a fully accredited hospital-based 23-month program operated cooperatively by Crafton Hills College and Arrowhead Regional Medical Center. Upon completion, the student receives an associate's degree in radiologic technology.

Certification/Licensure

The ARRT uses the term "certification" to describe the one-time awarding of a certificate after an individual satisfies all eligibility requirements including the certification exam. A registered radiologic technologist (RRT) has satisfied standards for initial certification and has complied with the ARRT Standards of Ethics and Continuing Education Requirements. Although the ARRT examination is a voluntary certification, California requires applicants to be ARRT certified to obtain a California Radiologic Technology certificate.

Advancement

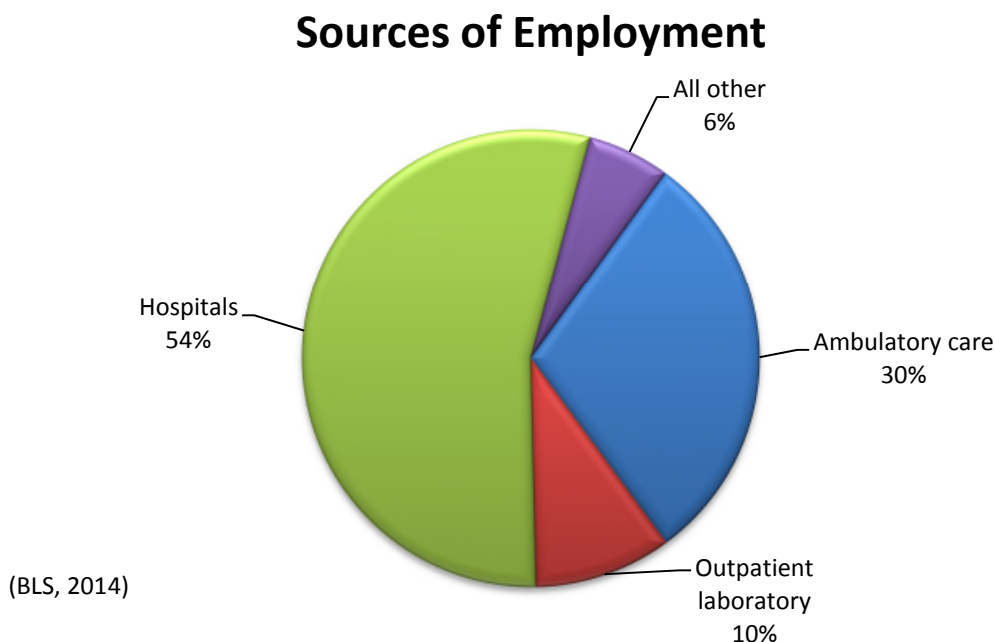
There are several areas of advancement for radiologic technologists requiring experience and additional training. For those wishing to remain in clinical areas, specialty areas include CT scanning, MRI and angiography. Technologists can also become radiologist assistants with additional education and certification. For experienced technologists interested in management, positions include supervisor, chief

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radiologic technologist, department administrator or director. Advanced degrees in business or health administration may be required for the director's position. Other positions of advancement include instructors or directors in radiologic technology programs, and working as sales representatives or instructors for equipment manufacturers.

Employment

Hospitals are the most common source of employment for radiologic technologists and technicians. According to the BLS and estimates developed for this report, there are an estimated 150 radiologic technologists and technicians currently employed in the Coachella Valley. The following chart profiles the sources of employment for radiologic technologists and technicians nationally.



Wages

During May 2013, the average hourly wage among radiologic technologists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$28.76, or \$59,830 annually, an increase of 5.8% from 2008. Radiologic technologist's wages vary depending on the employer.

Job Outlook

According to the BLS, overall employment for radiologic technologists is expected to be better than average through 2022. The projected number of jobs available annually in the Coachella Valley for this occupation through 2022 is five, which includes three new openings and two replacement openings. Several factors affecting the growth of this occupation include:

- Population growth and aging, which will increase demand for diagnostic imaging
- A shift away from hospital care to outpatient diagnostic imaging centers
- Replacement of technologists retiring or leaving the occupation

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The best employment opportunities will be for those with experience in more than one diagnostic imaging procedure such as CT, MR and mammography.

Recruitment Strategies

Students whose performance is superior during the clinical portion of their training are frequently hired after graduation by the hospital in which they trained. School instructors also function as an important referral source for graduates. The American Society of Radiologic Technologist website provides a job bank for members at <https://www.asrt.org/content/CareerCenter/careercenter.aspx>.

Direct application to potential employers remains one of the most effective job search methods. Because most organizations now list current job opportunities on their websites and allow direct applications, the Internet has become one of the most widely used recruitment strategies in all segments of healthcare.

Positions that Move into this Occupation

Orthopedic technicians, EKG technicians, ED technicians, OB monitor technicians, echo technicians, and optical technicians can advance into radiologic technology with additional education.

Positions that Build upon this Occupation

Radiologic technologists and technicians can advance into positions as diagnostic medical sonographers, nuclear medicine technicians, MRI technicians, and radiation therapy technicians.

Additional Information

American Society of Radiologic Technologists - <http://www.asrt.org/>

Joint Review Committee on Education in Radiologic Technology - <http://www.jrcert.org/>

American Registry of Radiologic Technologists - <https://www.arrt.org/>

American Registry of Magnetic Resonance Imaging Technologists - <http://www.armrit.org/index.shtml>

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Medical Case Manager, Medical Social Workers

Occupation Description

Medical case managers and medical social workers help patients understand their diagnosis and make the necessary adjustments to their lifestyle, housing, or health care. They provide information about services such as home healthcare or support groups to help patients manage their illness or disease. Social workers help doctors and other healthcare professionals understand the effects that diseases and illnesses have on patients' mental and emotional health. They also advise family caregivers, counsel patients, and help plan for patients' needs after discharge from hospitals. They may arrange for at-home services such as meals-on-wheels or home care. In some settings such as rehabilitation centers, social workers are part of an interdisciplinary team that evaluates and plans for a patient's long-term needs. Medical social workers may work for hospitals, nursing and personal care facilities and family services agencies.

Education and Training

A bachelor's degree in social work (BSW) is the most common minimum requirement to qualify for a job as a social worker; however, majors in psychology, sociology, and related fields may qualify for some entry-level jobs, especially in small community agencies. Although a bachelor's degree is sufficient for entry into the field, an advanced degree has become the standard for many positions. A master's degree in social work (MSW) is typically required for positions in health settings and is required for clinical work as well. Some jobs in public and private agencies may also require an advanced degree, such as a master's degree in social services policy or administration. Supervisory, administrative, and staff training positions usually require an advanced degree. College and university teaching positions and most research appointments normally require a doctorate in social work (DSW or Ph.D.).

According to the Council on Social Work Education (CSWE) and the California Department of Consumer Affairs Board of Behavioral Sciences, the closest BSW and MSW programs to the Coachella Valley are located at the following schools:

- Loma Linda University
- CSW San Bernardino
- CSU Long Beach
- CSW Dominguez Hills
- Point Loma Nazarene University

Certification/Licensure

To practice in California, social workers must graduate from an accredited school of social work, pass a licensed clinical social worker (LCSW) Standard Written Examination, and complete at least 104 weeks of supervision and 3,200 hours of supervised work experience.

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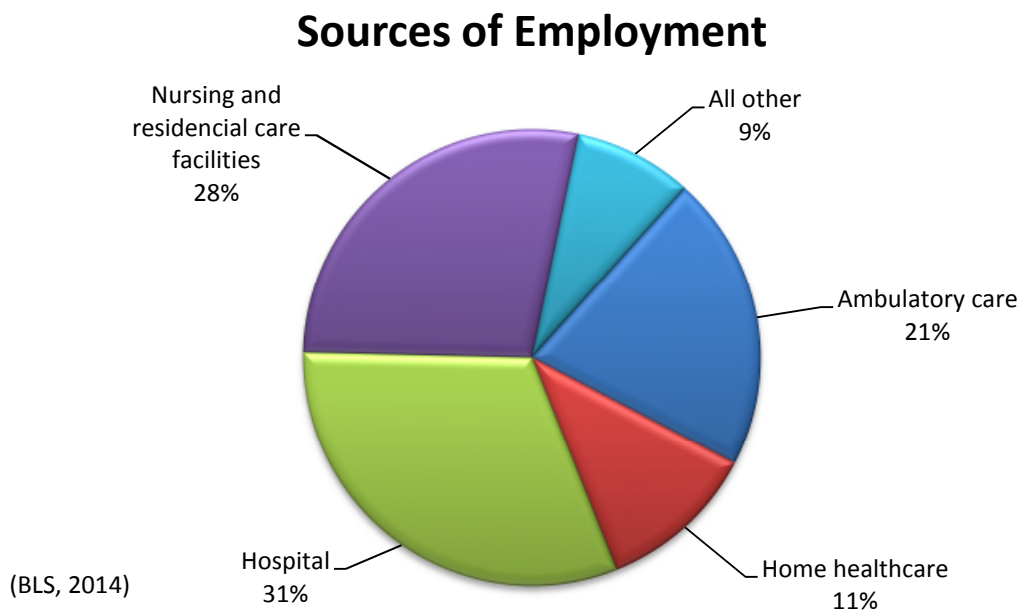
Advancement

With an advanced degree and related work experience, social workers can advance to supervisor, program manager, assistant director, or executive director of a social service agency or department. Other career advancement opportunities for social workers include teaching, research, and consulting.

Social workers can also become private practitioners who provide psychotherapy, which is typically paid for through health insurance or by the client themselves. Private practitioners must have at least a master's degree and a period of supervised work experience.

Employment

Hospitals are the most common source of employment for medical and public health social workers. According to the BLS and estimates developed for this report, there are an estimated 171 medical social workers currently employed in the Coachella Valley. The following chart profiles the sources of employment for medical social workers nationally.



Wages

During May 2013, the average hourly wage among medical and public health social workers employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$31.31, or \$65,130 annually, an increase of 13.9% from 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Overall, according to the BLS, employment for medical social workers is expected to be much better than average through 2022. The projected number of jobs available annually in the Coachella Valley for this

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occupation through 2022 is nine, which includes five new openings and four replacement openings. Job prospects are expected to be most favorable for social workers who specialize in the aging population. Several factors affecting the growth of this occupation include:

- A growing elderly population, which is expected to create a greater demand for gerontology social workers
- Growing popularity of employee assistance programs, which is expected to increase the demand for private practitioners
- Rising student enrollment, which will increase the demand for school social workers

Recruitment Strategies

Medical social workers are often hired by the organizations where they do their internships. Therefore, an internship can be a vital step in social worker's career. The Council of Social Work Education and the California Department of Consumer Affairs Board of Behavioral Sciences have an extensive listing of openings throughout the state. Job seekers may also check job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs, and apply directly to hospitals, home healthcare agencies and social service agencies.

Positions that Move into this Occupation

Without extensive education and training, there are no positions that advance into this occupation.

Positions that Build upon this Occupation

With advanced training, social workers can advance to become a social service agency program manager, assistant director, or executive director. Other career advancement opportunities for social workers include teaching, research, and consulting.

Additional Information

American Board of Examiners in Clinical Social Work - <http://www.abecsw.org/>

National Association of Social Workers - <http://www.naswdc.org/>

Council on Social Work Education - <http://www.cswe.org/>

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Pharmacy Technicians

Occupation Description

Pharmacy technicians help licensed pharmacists provide medication and other health care products to patients and must work under the direct supervision and control of a licensed pharmacist. They perform repetitive, routine tasks related to processing prescriptions in a pharmacy. Pharmacy technicians may count tablets; measure, mix, pour, and record amounts and dosages of medications; label bottles; and package pharmaceuticals. They also perform administrative duties such as answering phones, stocking shelves and operating cash registers. They must refer any questions regarding prescriptions, drug information or health matters to a pharmacist.

Education and Training

Pharmacy technicians must meet one of the following educational requirements to be registered in California:

- An associate's degree in pharmacy technology
- Completed a training course accredited by the American Society of Health-System Pharmacists (ASHP)
- Graduated from a school of pharmacy accredited by the American Council on Pharmaceutical Education
- Completed a pharmacy technician training program provided by a branch of the federal armed services
- Completed a pharmacy training course that provides a training period of at least 240 hours of instruction covering topics specified in section 1793.6 (c) of Title 16 of the California Code of Regulations

There are a number of online schools offering training programs that prepare students for certification by the Pharmacy Technician Certification Board.

Certification/Licensure

Pharmacy technicians must be licensed to practice in California by the Department of Consumer Affairs Board of Pharmacy. To obtain a license, they must submit a Pharmacy Technician application, meet specific educational requirements, pass a criminal background check, and obtain a Live Scan fingerprint clearance.

Advancement

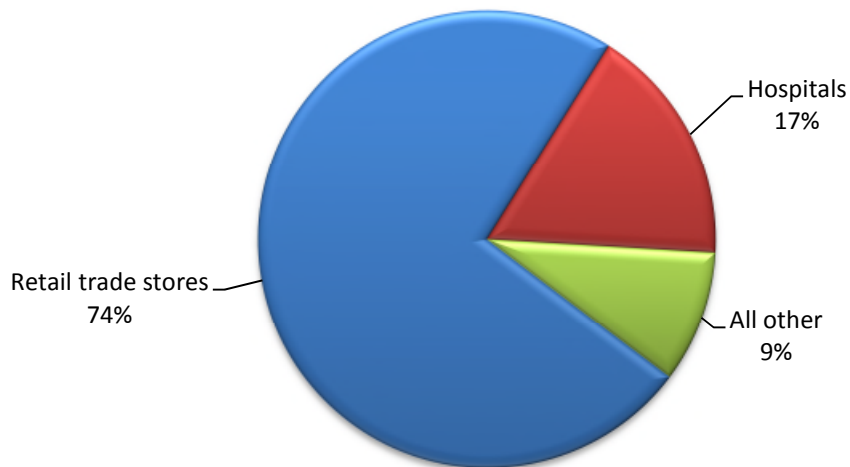
Depending on the size of the organization, pharmacy technicians with significant training, experience and certification can be promoted to supervisory positions. Becoming specialized in areas such as chemotherapy and nuclear pharmacy are also options for advancement. With a substantial amount of formal education, a pharmacy technician can become a pharmacist.

Employment

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Pharmacies are the most common source of employment for pharmacy technicians. According to the BLS and estimates developed for this report, there are an estimated 457 pharmacy technicians currently employed in the Coachella Valley. The following chart profiles the sources of employment for pharmacy technicians nationally.

Sources of Employment



(BLS, 2014)

Wages

During May 2013, the average hourly wage among pharmacy technicians employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$16.98, or \$35,310 annually, an increase of 5.6% from 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

According to the BLS, overall employment for pharmacy technicians is expected to be better than average through 2022. The projected annual number of jobs available in the Coachella Valley for this occupation through 2022 is 14, with 10 new openings and four replacement openings. For those with formal training or experience, job opportunities are expected to be good. Several factors affecting the growth of this occupation include:

- An increasing number of middle-aged and older people using more prescription drugs
- Scientific advances bringing more pharmaceutical treatments to the market
- An increasing number of group practices and clinics
- The need to replace workers leaving the occupation or leaving the labor force

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Recruitment Strategies

Pharmacy technicians may find jobs by applying to hospitals, pharmacies and drug stores, community college placement centers, and private employment agencies. Job postings are frequently found in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

Pharmacy aides can advance into positions as pharmacy technicians.

Positions that Build upon this Occupation

Pharmacy technicians can advance, with significant education, into positions such as pharmacist interns and pharmacists.

Additional Information

National Pharmacy Technician Association - <http://www.pharmacytechnician.org/>

American Society of Health System Pharmacists - <http://www.ashp.org/>

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Community Health Worker

Occupation Description

Community Health Workers (CHW) are known by a variety of names, including community health worker, community health advisor, outreach worker, community health representative (CHR), promotora/promotores de salud (health promoter/promoters), patient navigator, navigator promotoras (navegadores para pacientes), peer counselor, lay health advisor, peer health advisor, and peer leader. Promotoras assist individuals and communities to adopt healthy behaviors. They conduct outreach for medical personnel or health organizations to implement programs in the community that promote, maintain, and improve individual and community health. They also provide information on available resources, provide social support and informal counseling, advocate for individuals and community health needs, and provide services such as first aid and blood pressure screening. They may work with other organizations to collect data to help identify community health needs. Until recently, the occupation of CHW has not been viewed as a career, because CHWs have positions that are often short-term, low paid, and lack recognition by other professionals. However, this may change as CHW's become members of the patient-center health care team in primary care practices and community health centers.

Education and Training

As a relatively new occupation, formalized CHW education programs have only recently been developed in the Coachella Valley. Most CHWs receive on-the-job training in a program known as community-based training that targets narrow program objectives such as diabetes, child and infant health, nutrition and obesity, navigation and case management. A local example is the Community Health Worker Academy provided by Loma Linda University and El Sol, which offers community-based training. This training curriculum combines evidence-based content certified by Loma Linda faculty along with a structured approach to building the specific competencies CHWs need to be effective in their work with the community. The first training, "Community Health Worker 101," is an 80-hour training providing a systematic grounding in the philosophy of community health promotion, critical thinking to understand underlying causes of health problems, communication skills to relate with peers in an effective and safe way, and self-reflection to promote ongoing learning.

Certification

There currently are no certifications or certification requirements to work as a CHW in California.

Advancement

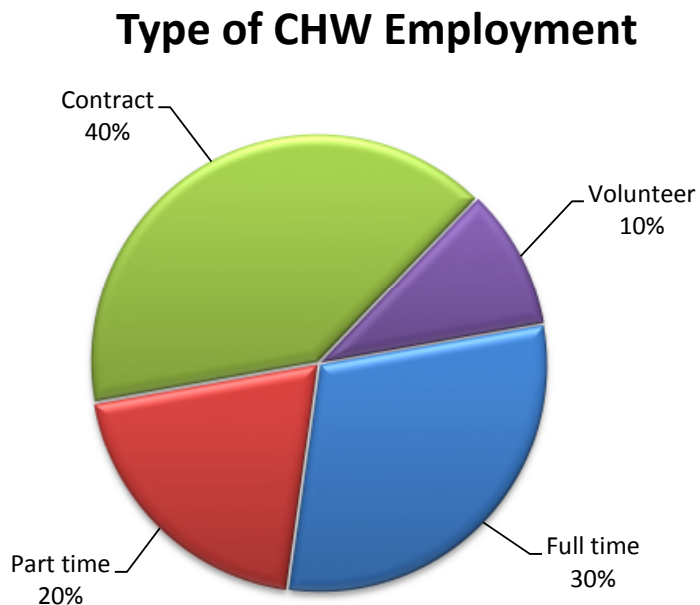
There are no clear career paths for CHWs.

Employment

The type of employment for a CHW varies depending on locale and cultural setting. CHWs most often work in underprivileged marginalized communities where people may have limited resources; lack access to quality health care; lack the means to pay for health care; have limited English fluency; or have cultural beliefs, values and behaviors different from those of the dominant Western health care system. In these communities, CHWs play an integral role in helping health care providers and systems become more culturally appropriate and relevant to the people the systems serve.

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According to the BLS and estimates developed for this report, there are an estimated 49 CHWs currently employed in the Coachella Valley. The following chart profiles the type of CHW employment in the Coachella Valley according to Alexander Fajardo, El Sol Executive Director.



Wages

During May of 2013, the average hourly wage among CHWs employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$17.11 or \$35,582 annually. Salaries vary depending on the employer and the current responsibility level.

Job Outlook

Overall, job opportunities for CHWs are expected to grow. However much depends on the ability of programs to find financing for this occupation. Organizations do not receive reimbursement for the services provided by CHWs from Medicare, MediCal or other health insurance providers in California at this time.

Additional Information

Taking Innovation to Scale: Community Health Workers, Promotores, and the Triple Aim:

[http://www.chhs.ca.gov/PRI/Taking%20Innovation%20to%20Scale%20-%20CHWs,%20Promotores%20and%20the%20Triple%20Aim%20-%20CHWA%20Report%2012-22-13%20\(1\).pdf](http://www.chhs.ca.gov/PRI/Taking%20Innovation%20to%20Scale%20-%20CHWs,%20Promotores%20and%20the%20Triple%20Aim%20-%20CHWA%20Report%2012-22-13%20(1).pdf)

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Community Health Workers in CA: Sharpening our Focus on Strategies to Improve Engagement:

<http://www.phi.org/uploads/application/files/2rapr38zarzdgvygcgnizf7o8ftv03ie3mdnioede1ou6s1cv3.pdf>

Institute of Medicine Report: <http://www.iom.edu/~media/Files/Perspectives-Files/2015/CommunityHealthWorkers.pdf?la=en>

El Sol - <http://www.elsolnec.org/index.html>

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Surgical Technologists

Occupation Description

Surgical technologists are members of the operating room team and assist in surgical operations under the supervision of surgeons, registered nurses, or other surgical personnel. They may help set up operating rooms, prepare and transport patients for surgery, adjust lights and equipment, pass instruments and other supplies to surgeons and surgeon's assistants, hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments.

Education and Training

Surgical technologists receive their training in formal programs offered by community and junior colleges, vocational schools, universities, hospitals, and the military. Currently, the Commission on Accreditation of Allied Health Education Programs (CAAHEP) recognizes 19 accredited surgical technologist programs in California, none of which are offered in the Coachella Valley. The nearest programs, located in San Bernardino and Riverside, include:

Concorde Career College, San Bernardino, CA: Diploma - <http://www.concorde.edu/>

North-West College-Riverside, CA: Diploma - <http://www.north-westcollege.edu/>

Certification

Certification by the National Board of Surgical Technology and Surgical Assisting (NBSTSA) <http://www.nbstsa.org/> is voluntary and may be a means for upward mobility, a condition for employment and possibly higher pay by some employers. Surgical Technologists must renew their certifications every four years. Certified Surgical Technologists may work alongside emergency room surgeons, neonatal surgeons, dental surgeons, cardiology surgeons or even cosmetic surgeons in hospitals, laboratories, clinics or private practices. Certificate programs similar to Surgical Technologist Certification are surgical technician certification, surgical assistant certification and surgical nurse certification programs. Surgical Technologists are also invited to become members of the Association of Surgical Technologists (AST).

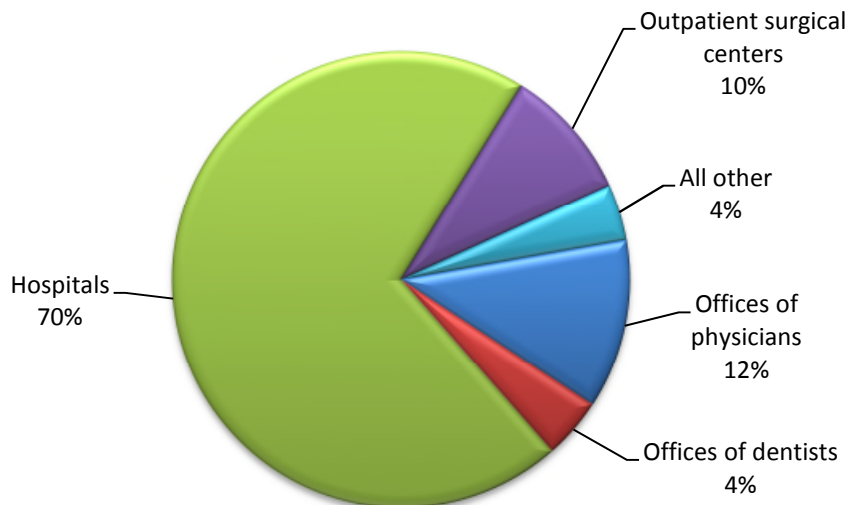
Advancement

Surgical technologists have several advancement options including specializing in a particular area of surgery such as cardiovascular or orthopedic surgery. With additional training, technologists can advance to work as first assistant. Other alternatives include managing the central supply department in a hospital, or positions in related businesses such as insurance, sterile supply services or operating equipment firms.

Employment

Hospitals are the most common source of employment for surgical technologists. The following chart presents the national profile of employers for surgical technologists. According to the BLS and estimates developed for this report, there are an estimated 91 surgical technologists currently employed in the Coachella Valley.

Sources of Employment



Wages

During May of 2013, the average hourly wage among surgical technologists employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$23.70, or \$49,300 annually, an increase of 16.8% from 2008. Salaries vary depending on the employer and the current responsibility level.

Job Outlook

Overall, job opportunities for surgical technologists are expected to be very good, with job growth faster than the average for all occupations through 2022. The majority of the openings are expected to be in hospitals. Job outlook is expected to be best for technologists who are certified. There is, however, a growing number of openings expected outside the hospital including physician offices and outpatient surgical centers. The projected number of annual jobs available in the Coachella Valley for this occupation through 2022 is three, with two new openings and one replacement opening. Several factors affecting the growth of this occupation include:

- A rising number of surgical procedures as the population ages
- Technological advances such as fiber optics, laser technology and robotics, which will allow an increase in the number of surgical procedures
- Growth in the number of ambulatory surgical centers

Recruitment Strategies

Surgical technicians who are graduates of formal training programs and are certified by the NBSTSA will have the best success finding jobs. Those without these qualifications can expect to face competition for the jobs of their choice. Some training programs offer job placement services. Job seekers can also find

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job openings in newspaper classified ads and Internet job listings such as Craig's List, Monster and Hot Jobs.

Positions that Move into this Occupation

Certified nurse assistants, medical assistants, unit assistants, home health aides, respiratory therapy assistants, and physical therapy aides can advance into positions as surgical technologists.

Positions that Build upon this Occupation

With significant additional education, surgical technologists can advance into positions as physician assistants.

Additional Information

Association of Surgical Technologists - <http://www.ast.org/>

National Board of Surgical Technology and Surgical Assisting - <http://nbtsa.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Home Health Aides and Caregivers

Occupation Description

Home health aides provide routine personal care such as bathing, dressing, or grooming to elderly, convalescent, or disabled people in the homes of patients or in residential care facilities. Home health aides are in the long-term care segment of the healthcare industry, which includes home healthcare services, residential facilities, nursing care facilities and in-home services. To be covered by Medicare, the reason for home health aide services must be to provide hands-on personal care or services needed to maintain a patient's health or to facilitate treatment of a patient's illness or injury. Unless home health aide services are ordered by a physician, they typically are not paid for by Medicare.

Education and Training

Typically, neither a high school diploma nor previous work experience is necessary for a job as a home health aide.

The federal government has guidelines for home health aides whose employers receive reimbursement from Medicare. Federal law requires home health aides to pass a competency test covering 12 areas: communication skills; documentation of patient status and care provided; reading and recording vital signs; basic infection control procedures; basic body functions; maintenance of a healthy environment; emergency procedures; physical, emotional, and developmental characteristics of patients; personal hygiene and grooming; safe transfer techniques; normal range of motion and positioning; and basic nutrition.

Home health aide training programs are currently offered at the following Coachella Valley educational organizations:

- College of the Desert – Palm Desert
- California Nurses Educational Institute – Cathedral City
- Copper Mountain College – Joshua Tree

Certification

Other than passing the competency test, there is no certification needed for this occupation.

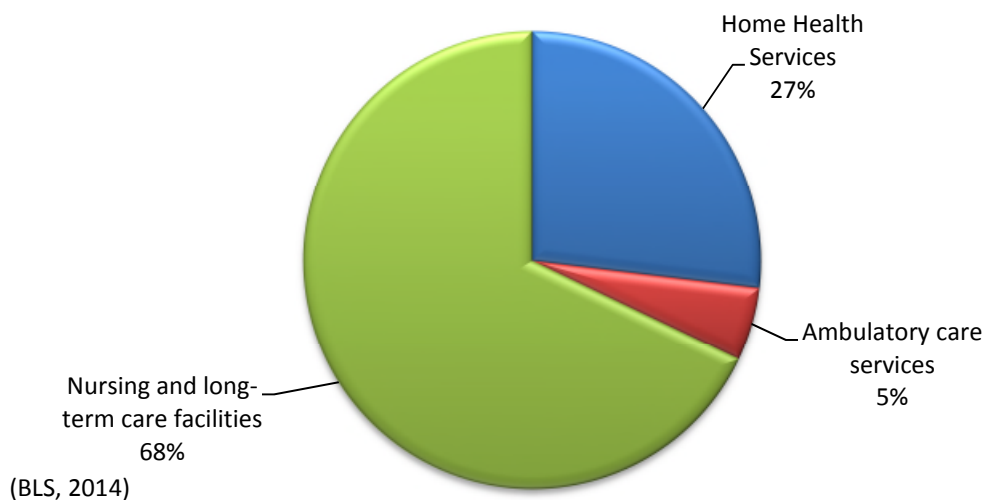
Advancement

Opportunities for advancement within this occupation are limited. Aides generally need additional formal training and/or education to enter other health occupations. For some individuals, the home health aide position serves as an entry-level job or as a part-time job while attending college.

Employment

Home healthcare services are the most common source of employment for home health aides. According to the BLS and estimates developed for this report, there are an estimated 543 home health aides currently employed in the Coachella Valley. The following chart profiles the sourced of employment for home health aides nationally.

Sources of Employment



Wages

During May 2014, the average hourly wage among home health aides employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$11.61, or \$24,140 annually, an increase of 13.8% since 2008. The average hourly and annual wage may vary depending on the type of employer.

Outlook

Employment of home health aides is expected to grow faster than the average for all occupations through 2022. The projected number of job gains annually for this occupation in the Coachella Valley through 2022 is 28, which includes 18 new openings and 10 replacement openings. Several factors affecting the growth of this occupation include:

- The need to replace the many workers who leave the occupation each year
- Long-term care needs of the increasing elderly population
- Increasing financial pressures on hospitals to discharge patients as soon as possible to lower cost settings such as skilled nursing facilities
- Consumer preference for care in the home
- Improvements in medical technologies allowing for in-home treatment

Recruitment Strategies

Newspaper ads and online job listings such as Craig's List, Monster and Hot Jobs frequently post job openings in this field.

Positions that Move into this Occupation

This is typically an entry level position; there are no positions that advance into this occupation.

Coachella Valley Healthcare Workforce Needs Assessment

Positions that Build upon this Occupation

Home health aides can advance into positions such as certified nurse assistants, medical assistants, unit assistants, home health aides, respiratory therapy assistants, and physical therapy aides.

Additional Information

National Association of Health Care Assistants - <http://www.nahcacaes.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Nursing Assistants

Occupation Description

Under the supervision of nursing staff, nursing aides provide a wide range of routine, hands-on patient care including helping patients eat, dress, and bathe. They also provide minor skin care, take and record patient vital signs including temperature, pulse rate, respiration rate and blood pressure, and help patients ambulate. Depending on the setting, nursing aides are often the principal caregivers and are responsible for observing patients' physical, mental and emotional conditions.

Education and Training

In general, there are no educational requirements for nursing assistants. However, most employers prefer nursing assistants to have training in body mechanics, nutrition, anatomy, physiology, infection control, communications skills and patient rights. Training of this type is commonly available through high schools, vocational-technical centers, on the job in some nursing care facilities and some community colleges. It is not uncommon for hospitals to require previous experience as a nursing assistant.

California has more than 1,000 approved nursing assistant training programs. There are at least two organizations currently offering education and training programs for nursing assistance, orderlies, and attendants in the Coachella Valley:

- College of the Desert – Palm Desert
- Copper Mountain College – Joshua Tree
- ROP – Indio Service Center

Certification

California guidelines for certification as a nursing assistant include the following:

- Fingerprints must be sent to the Department of Justice for background checks
- 160 hours of training, which includes
 - 60 hours of classroom work and
 - 100 hours of clinical training
- Nursing assistants must be a minimum of 16 years old

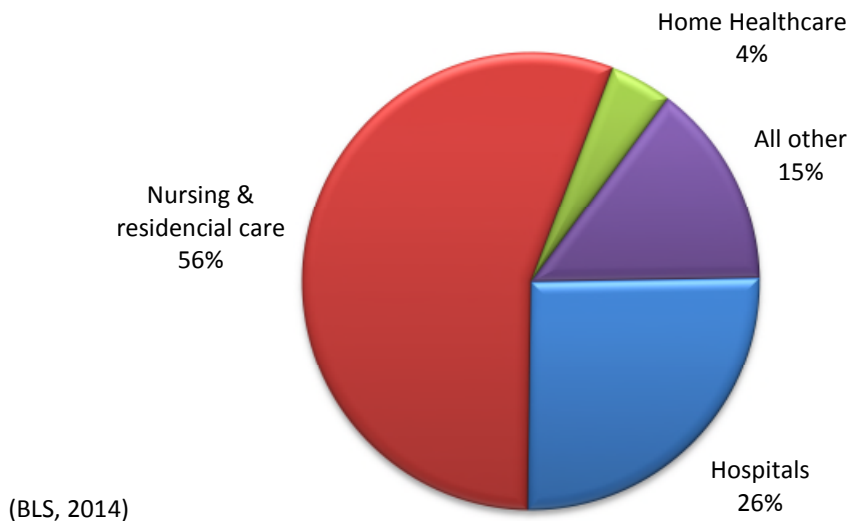
Advancement

Opportunities for advancement within this occupation are limited. Aides typically need additional formal training or education to enter other health occupations. The most common health care occupations aides move to include licensed practical nurse, registered nurse and medical assistant. For many individuals, the aide position provides an entry-level job to gain patient care and work experience while attending school for other direct patient care and allied healthcare positions.

Employment

Nursing care facilities are the most common source of employment for nursing aides. According to the BLS and estimates developed for this report, there are an estimated 1,084 nurse assistants currently employed in the Coachella Valley.

Sources of Employment



Wages

During May 2013, the average hourly wage among nursing aides employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$13.43, or \$27,930 annually, an increase of 13.1% since 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Employment of nursing aides is expected to grow faster than the average for all occupations through 2022. The projected number of jobs opening for this occupation annually in the Coachella Valley through 2022 is 43, which includes 22 new openings and 21 replacement openings. Several factors affecting the growth of this occupation include:

- The long-term care needs of the increasing elderly population
- Increasing financial pressures on hospitals to discharge patients as soon as possible to lower cost in facilities such as skilled nursing facilities
- The potential impact of modern medical technology saving and extending lives

Recruitment Strategies

Newspaper ads and online job listings such as Craig's List, Monster and Hot Jobs frequently post job openings in this field.

Positions that Move into this Occupation

Typically, this is an entry level position; there are no positions that advance into this occupation.

Positions that Build upon this Occupation

Coachella Valley Healthcare Workforce Needs Assessment

Nursing aides, orderlies, and attendants can advance into positions as certified nurse assistants, medical assistants, unit assistants, home health aides, respiratory therapy assistants, and physical therapy aides.

Additional Information

National Association of Health Care Assistants - <http://www.nahcacaes.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Dental Assistants

Occupation Description

Dental assistants work closely with dentists to provide assistance during dental examinations and treatments. They perform a variety of patient care and office and laboratory duties including:

- Sterilizing and disinfecting instruments and equipment
- Preparing and laying out the instruments and materials required to treat patients
- Assisting during dental treatment
- Preparing materials for impressions and restorations
- Taking dental x-rays and processing x-ray films as directed by the dentist

Dental assistants may also prepare patients prior to treatment and instruct patients on postoperative and general oral health care.

Education and Training

Training for dental assistants can include on-the-job training or completion of a formal dental-assisting program offered by a community college or technical school. Most training programs take one year or less to complete and lead to a certificate or diploma. Two-year programs offered at community colleges lead to an associate's degree. Admission into all dental-assisting programs requires a high school diploma or its equivalent.

Currently, only Kaplan College (http://palm-springs.kaplancollege.com/Pages/Dental_Assistant_Diploma.aspx), located in Palm Springs, offers a training program for dental assistants.

There are at least four organizations offering dental assistant training programs in eastern Riverside County:

- Concorde Career Colleges, San Bernardino - <http://www.concorde.edu/program/dental-assistant-assisting>
- Everest College, San Bernardino - http://www.everest.edu/campus/san_bernardino/program/dental-assisting
- Four-D College, Colton - <http://4dcollege.edu/dental-assistant/>
- Summit Career College, Colton - <http://www.summitcollege.edu/programs/dental-assistant>

Certification

In California, practicing as a dental assistant does not require a state license. However, a California state license and continuing education are required to become a Registered Dental Assistant, or a Registered Dental Assistant in Extended Functions.

Registered Dental Assistants (RDA): To become a Registered Dental Assistant, applicants must complete CPR training approved by the American Red Cross or the American Heart Association and:

- Graduate from a state board approved dental assistant program, or
- Complete a minimum of 18 months of on-the-job training as a dental assistant for a California state licensed dentist.

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Registered Dental Assistants in Extended Functions (RDAEF): Registered Dental Assistants may apply to take an examination leading to an RDAEF license. To obtain the RDAEF license, individuals must:

- Have a current CPR certificate from the American Red Cross or the American Heart Association;
- Possess a registered dental assistant license; and
- Successfully complete a state board approved program in extended functions.

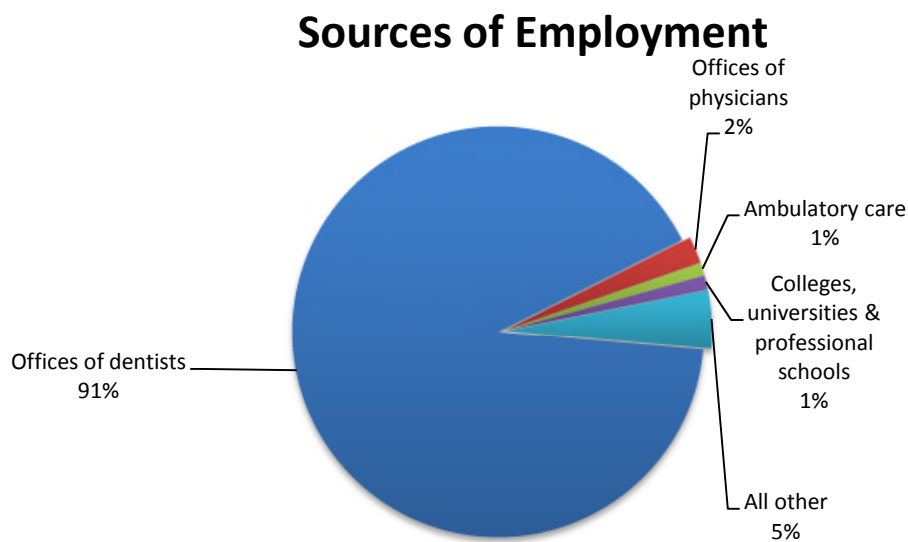
The California Dental Board's Committee on Dental Auxiliaries examines and licenses RDAs and RDAEFs in California. Additional information can be found at <http://www.comda.ca.gov/consumers/index.shtml>.

Advancement

Dental assistants wanting to become dental hygienists must complete additional education. Those wishing to stay within the dental office environment may also consider advancement to office manager.

Employment

Dental offices are the most common source of employment for dental assistants. According to the BLS and estimates developed for this report, there are an estimated 628 dental assistants currently employed in the Coachella Valley. The following chart profiles the sources of employment for dental assistants nationally.



(BLS, 2014)

Wages

During May 2013, the average hourly wage among dental assistants employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$16.10, or \$33,480 annually, an increase of 13.3% since 2008. The average hourly and annual wage may vary depending on the type of employer.

Job Outlook

Coachella Valley Healthcare Workforce Needs Assessment

According to the BLS, overall employment for dental assistants is expected to be much better than average through 2022. The projected number of additional job openings annually in the Coachella Valley for this occupation through 2022 is 22, with nine new openings and 13 replacement openings. For those with formal training or experience with certification, job opportunities are expected to be excellent. Several factors affecting the growth of this occupation include:

- Population growth
- Greater retention of natural teeth by middle-aged and older people
- An increased focus on preventive dental care for younger people
- Increasing numbers of younger dentists with a propensity to use dental assistants

Recruitment Strategies

Dental assistants may find jobs by applying to dentists' offices, community college placement centers, and private employment agencies. Newspaper ads and online job listings such as Craig's List, Monster and Hot Jobs frequently post job openings in this field.

Positions that Move into this Occupation

Dental office receptionists can advance into positions as dental assistants.

Positions that Build upon this Occupation

Dental assistants can advance into positions as dental hygienists, office managers, dental-assisting instructors, and dental product sales representatives.

Additional Information

Commission on Dental Accreditation, American Dental Association - <http://www.ada.org/117.aspx>

Dental Assisting National Board, Inc. - <http://www.danb.org/>

Coachella Valley Healthcare Workforce Needs Assessment

Medical Assistants

Occupation Description

Medical assistants perform administrative and certain clinical duties under the direction of a physician, podiatrist, chiropractor or other health practitioner. Administrative duties vary from office to office and likely depend on the size of the office. Typical administrative tasks may include scheduling appointments, maintaining medical records, billing, and coding for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by a physician.

Education and Training

Formal training in medical assisting, while generally preferred, is not always required. Some medical assistants are trained on the job, but many complete a one- to two-year training program. Employers tend to prefer experienced workers or certified applicants who have passed a national examination indicating that the medical assistant meets certain standards of competence.

Recommended high school courses for those interested in becoming a medical assistant include mathematics, health, biology, keyboarding, bookkeeping, and computer and office skills.

There are several organizations currently offering education and training programs for medical assistants in the Coachella Valley. Local programs include:

- Milan Institute — Palm Desert
- Kaplan College — Palm Springs
- Santa Barbara Business College — Palm Desert

Certification

The medical assistant occupation is unlicensed. However, several private organizations provide certification:

- The American Association of Medical Assistants awards the Certified Medical Assistant credential
- The American Medical Technologists Agency awards the Registered Medical Assistant credential
- The American Society of Podiatric Medical Assistants awards the Podiatric Medical Assistant Certified credential
- The Joint Commission on Allied Health Personnel in Ophthalmology awards credentials at three levels: Certified Ophthalmic Assistant, Certified Ophthalmic Technician, and Certified Ophthalmic Medical Technologist

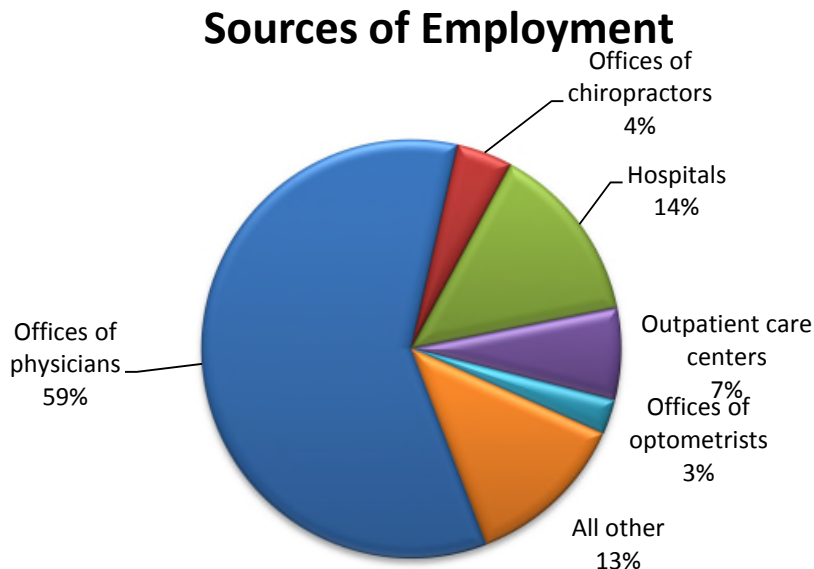
Advancement

Those working as medical assistants typically require additional education to become a nurse or other healthcare occupation. Those wishing to stay within the medical office environment may advance to office manager.

Coachella Valley Healthcare Workforce Needs Assessment

Employment

Offices of physicians and other health practitioners are the most common source of employment for medical assistants. According to the BLS and estimates developed for this report, there are an estimated 886 medical assistants currently employed in the Coachella Valley.



(EDD, 2014)

Wages

According to California Employment Development Department data, in the first quarter of 2013, the average hourly wage for medical assistants employed in the Riverside-San Bernardino-Ontario metropolitan statistical area was \$13.28, or \$27,620 annually—the same wage rate as 2008. Wages depend on the place of employment.

Job Outlook

Overall, according to the BLS, employment for medical assistants is expected to be better than average through 2022. The projected number of annual job openings in the Coachella Valley for this occupation through 2022 is 38, with 21 new openings and 17 replacement openings. For those with formal training or experience with certification, job opportunities are expected to be excellent. Several factors affecting the growth of this occupation include:

- The expanding outpatient sector of the healthcare industry
- An aging population
- An increasing number of group practices and clinics

Coachella Valley Healthcare Workforce Needs Assessment

Recruitment Strategies

Medical assistants can find jobs by applying to doctors' offices, government personnel offices, college placement centers, and private employment agencies. There is information about job openings in newspaper classified ads and Internet job listings.

Positions that Move into this Occupation

File clerks, dietary aides, and central supply technicians can advance into positions as medical assistants.

Positions that Build upon this Occupation

With additional training and education, medical assistants can advance into positions such as pharmacy aides, physical therapy assistants, histologic technicians, receptionists, LVNs, surgical techs, respiratory therapy techs, medical coder trainees, occupational therapy assistants, and lab assistants.

Additional Information

American Association of Medical Assistants - <http://www.aama-ntl.org/>

American Optometric Association - <http://www.aoa.org/>

American Society of Podiatric Medical Assistants - <http://www.aspma.org/>

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