

Building a Resilient Public Health Workforce

Analysis and Recommendations for
Inland Southern California

OCT
2024



**Inland Health
Professions
Consortium**

POWERED BY REACH OUT

This report was made possible due to the collaborative spirit and invaluable knowledge of the following key partners.



Inland Health Professions Consortium

POWERED BY REACH OUT

As the convening force behind this report, the IHPC exists to address our region's mounting health workforce shortage by increasing access to, interest in, and retention in public health and health delivery professions. The Inland Public Health Leadership Consortium ("Public Health Committee") is a working group of IHPC consisting of leaders across public health departments, public health universities, health plans, and health systems. The shared need amongst this committee for a central set of facts is what gave rise to this report, and without their contributions and insights, or the work of IHPC's dedicated staff, this report would not have been possible.



As the parent organization of IHPC, Reach Out is a community based nonprofit organization that has been engaging in deep root cause work to advance community health outcomes in the Inland Empire for 55 years.



In addition to the passionate involvement of its visionary leadership, this report was made possible in part through funding from our partners at RUHS Public Health.

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INLAND PUBLIC HEALTH WORKFORCE REPORT

Executive Summary

Background

Inland Southern California is entering a new era.

As the fastest-growing region in the state, our region holds immense potential. But with growth also comes the responsibility to ensure that all residents have access to the health services they need to thrive. As our region prepares to welcome over 113,000 new residents by 2028, the need to strengthen and expand our public health workforce has never been more critical.

AN ALREADY STRESSED HEALTH SYSTEM

Inland Southern California's health system is already under significant pressure. The region faces a well-documented shortage of healthcare providers, with physicians seeing 60% more patients than their counterparts elsewhere in the state. The problem is further compounded by an aging workforce. Many public health professionals are nearing retirement, creating what some are calling a “retirement cliff” that threatens to further deplete our resources. In addition, the COVID-19 pandemic and the ongoing impacts of climate change have underscored the need for a well-prepared public health workforce to manage not only day-to-day population health needs but also disaster prevention and readiness. According to the data, occupations such as nurses, community health workers, and epidemiologists are particularly vulnerable to shortages over the next five years. Without immediate intervention, these gaps will leave our communities exposed and unprepared for the future.

THE ECONOMIC PAYOFF OF HEALTH WORKFORCE INVESTMENT

Investing in the public health workforce offers more than just improvements in health access—it also promises economic benefits. Public health is one of the largest employment sectors in Inland Southern California, with jobs spanning healthcare, community services, and scientific roles. These positions offer wages that not only meet but often exceed the living wage standard for the region. A stronger, well-compensated workforce means more individuals will have the economic stability to take control of other determinants of their health, such as housing, food security, and education. By building pathways to public health careers and ensuring they offer living wages, we are not just advancing individual well-being—we are laying the groundwork for broader economic development across the region.

A REGIONAL CALL TO ACTION

In many ways, this report is putting numbers to a problem we already know exists. The data clearly indicates the depth of our workforce shortages and the undeniable need to fill these roles. The future health of our communities depends on cross-sector collaboration among government, educational institutions, healthcare providers, and community organizations. By acting now, we have the opportunity to author a new chapter for Inland Southern California—one that ensures not only growth but also a healthy, thriving population prepared for the future.

Summary of Report Findings

This report analyzed 49 occupations selected by the Inland Public Health Leadership Consortium. Two emerging occupations were also included. These occupations were further categorized into the three public health occupational families below, based on their typical entry-level education requirements. The analysis revealed that all occupations will experience positive new job growth over the next five years. Additionally, most offer an average wage that exceeds the MIT living wage standard for Inland SoCal.



HEALTHCARE PRACTITIONERS & TECHNICAL OCCUPATIONS

- Postgraduate, bachelor's degree, and associate degree or certificate healthcare occupations are all projected to grow substantially.
- Postgraduate occupations are expected to add over 1,400 jobs, growing by 8.8%. Notable demand exists for physical therapists and physician assistants, with entry-level earnings surpassing the region's living wage standard.
- Bachelor's degree healthcare roles are forecasted to add over 1,000 jobs and grow by over 17%, particularly in medical and health services management.
- Associate degree or certificate healthcare occupations are projected to add over 3,600 jobs, growing by nearly 8%. Registered nurses are in high demand and offer excellent earnings.
- Unemployment rates across these sectors are generally low.



COMMUNITY & SOCIAL SERVICES PUBLIC HEALTH OCCUPATIONS

- Essential for addressing social determinants of health, these occupations span postgraduate, bachelor's degree, associate degree or certificate, and high school levels.
- Postgraduate healthcare social workers are projected to have 300 annual job openings, growing by over 10% over five years. Each role in this group offers average earnings of over \$42 per hour.
- Bachelor's degree occupations are expected to add over 400 jobs, growing by over 10%, with social and community service management showing strong growth.
- Associate degree or certificate occupations are projected to add over 400 jobs, growing nearly 15%, with massage therapy and physical therapist assistants leading in annual job openings.
- High school-level occupations are projected to increase employment by over 11%, with community health workers seeing the fastest growth.
- Entry-level earnings for many occupations surpass the region's living wage standards



SCIENTIFIC PUBLIC HEALTH OCCUPATIONS

- Occupations in this field require at least a bachelor's degree and are projected to add over 500 jobs, growing by about 8%.
- Epidemiologists, occupational health and safety specialists, and medical and clinical laboratory technologists are in demand, and entry-level earnings exceed the region's living wage standard.
- Postgraduate scientific occupations are forecasted to grow by over 9%, with epidemiologists having nearly 60 annual job openings.
- Unemployment rates are generally low, but representation of Hispanic or Latino workers is relatively low compared to the regional population.

TRAINING GAP & HIGH SCHOOL PATHWAYS

- The report identifies a potential training gap and emphasizes the importance of educational institutions in preparing future public health professionals.
- High school pathways are crucial in nurturing interest in public health careers through dedicated pathways, fostering early exposure and skill development.

FINAL THOUGHTS

Inland SoCal boasts a robust educational infrastructure and world-class institutions capable of meeting the needs of both the healthcare workforce and the public health workforce.

By addressing training gaps and leveraging high school pathways, the region can prepare for future pandemics and ensure a skilled cadre of professionals equipped to address emerging public health challenges effectively. Through investment in education and workforce development initiatives, particularly in disinvested communities, we can enhance community health outcomes across the entire region.

Summary of Top Occupations for Investment

Our top occupation recommendations have both a high employment demand and offer at least an average wage at or above the living wage for the Inland SoCal region.

For this study, an occupation is considered to have high demand if it has at least, or close to, 100 annual job openings and its growth is faster than the average non-health occupations in its educational level category. Occupations are considered to have a high wage if their median hourly wage meets or exceeds \$25.77 per hour or \$53,599 annually, the MIT living wage standard for a single adult in the area.

At a Glance



Healthcare Practitioners & Technical Public Health Roles

- Physical Therapists
- Occupational Therapists
- Physician Assistants
- Medical & Health Service Mgrs
- Registered Nurses
- Medical Records Specialists



Community & Social Services Public Health Roles

- Healthcare Social Workers
- Mental Health & Substance Abuse Social Workers
- Social & Community Service Mgrs
- Physical Therapist Assistants
- Social & Human Service Assistants
- Exercise & Group Fitness Instructors
- Community Health Workers



Scientific Public Health Roles

- Epidemiologists
- Occupational Health & Safety Specialists

Summary of Recommendations & Action Plan

A proactive, cross-sectoral approach will be needed to address the mounting shortages in our public health workforce, particularly as the region experiences increasing growth.

Our three-part action plan is designed to address all three stages of the talent lifecycle: from expanding awareness of public health careers to recruit more qualified candidates, to ensuring training is well-suited for the job requirements so that candidates excel and stay in their roles, to modernizing human resources practices in order to prevent and reduce turnover of our existing and future public health workforce.

FOCUS AREA #1

Closing the Gap Between Training and Job Requirements

- ACTION #1: Establish an Academic Public Health Department
- ACTION #2: Expand Paid Internship Opportunities
- ACTION #3: Develop a Formal Mentor Program & Network

FOCUS AREA #2

Building Interest to Fill Demand in Public Health Careers

- ACTION #1: Expand Work Based Learning (WBL) Programs
- ACTION #2: Align Public Health Curriculum to Real Job Demands
- ACTION #3: Host an Annual Public Health Career Fair/Boot Camp

FOCUS AREA #3

Increasing Retention Through Modernized HR Practices

- ACTION #1: Conduct a Recruitment Process Review
- ACTION #2: Modernize and Streamline the Hiring Process



INLAND PUBLIC HEALTH WORKFORCE REPORT

The Scope of Public Health

Public Health at a Glance

Public health is a vital aspect of societal well-being as it involves a wide-ranging approach to safeguarding the health of entire populations. Many professionals, including direct healthcare, community and social, and scientific public health workers, play crucial roles in this field. This report aims to provide a detailed overview of public health job opportunities available in Riverside and San Bernardino counties, job demand trends, earnings, and academic training supply.

Public health encompasses a range of activities aimed at preventing, studying, educating, engaging, promoting, and sustaining communities' mental and physical well-being. Charles-Edward Amory Winslow, who founded the Yale School of Public Health in the 19th century, described this discipline as "the science and art of preventing disease, prolonging life, and promoting health through the organized efforts and informed choices of society, organizations, public and private communities, and individuals."



How does public health differ from our conventional healthcare system? While traditional healthcare focuses on treating individuals by healthcare professionals following an injury or illness, public health operates proactively. Its primary objective is to identify and address the health needs of entire communities before they succumb to disease or injury rather than solely concentrating on individual cases. As Benjamin Franklin aptly noted, "An ounce of prevention is worth a pound of cure."¹

In short, while public health and general healthcare aim to improve health outcomes, they differ in scope, focus, approach, and target populations.

Public health emphasizes population-based interventions and preventive measures to promote health and prevent diseases at the community level. General healthcare tends to focus on providing individualized medical care to diagnose, treat, and manage health conditions for individual patients.

¹ <https://founders.archives.gov/documents/Franklin/01-02-02-0002>

Public Health vs. General Healthcare

Public health and general healthcare are distinct yet interconnected aspects of the broader healthcare system. Below, we will illustrate their key differences.

SCOPE AND FOCUS

| Public Health | General Healthcare |
|---|--|
| Focuses on improving and protecting the health of entire communities through health promotion, preventative measures, and addressing the root causes of health issues. Interventions address social determinants of health, environmental hazards, and lifestyle behaviors to promote well-being and prevent disease at a population level. | Primarily focuses on diagnosing, treating, and managing individual health conditions. It involves providing medical services, including consultations, medical procedures, surgeries, medications, and therapies, to address the specific health needs of individual patients. |

PREVENTATIVE vs. CURATIVE

| Public Health | General Healthcare |
|--|---|
| Emphasizes preventive measures to reduce the occurrence and impact of disease and injuries. It aims to identify and address health risks before they manifest as illnesses, focusing on strategies such as health education, vaccines, screenings, and environmental interventions to promote health and prevent diseases. | Primarily focuses on curative or therapeutic interventions to treat existing health conditions and alleviate symptoms. Healthcare providers diagnose illnesses, manage chronic conditions, and provide treatments to restore patients' health and well-being. |

SETTINGS & STAKEHOLDERS

| Public Health | General Healthcare |
|--|--|
| Activities occur across various settings, including government agencies, community organizations, healthcare institutions, schools, and workplaces. Public health workers collaborate with multiple stakeholders to address public health concerns, such as policymakers, researchers, healthcare providers, local leaders, and advocacy groups. | General healthcare services are typically provided in clinical settings such as hospitals, clinics, physician offices, and long-term care facilities. Healthcare providers, including physicians, nurses, pharmacists, and allied health professionals, deliver care directly to patients within these settings. |

The Three Primary Facets of Public Health

Public health is a multifaceted field encompassing various components aimed at promoting and protecting the health of communities. At the highest level, these numerous components can be broken down into three central facets.

#1

CARE & TREATMENT

This aspect of public health involves providing medical care and treatment to individuals within a community. It includes services such as vaccinations, screenings, disease management, and access to healthcare facilities. Care and treatment interventions aim to prevent and manage illnesses, injuries, and other health conditions to improve the overall health outcomes of the population.

#2

SOCIAL SERVICES

Social services encompass a wide range of interventions aimed at addressing socioeconomic factors that influence health outcomes. This includes access to housing, food security, employment opportunities, education, and social support networks. Social services initiatives aim to reduce health disparities, promote equity, and create environments supporting all community members' health and well-being.

#3

RESEARCH & SCIENCE

This component involves conducting scientific studies to understand health issues, social determinants, and trends within a population. Researchers gather data, analyze trends, and identify factors that influence health outcomes. Education initiatives focus on raising awareness, promoting healthy behaviors, and disseminating evidence-based information to empower individuals and communities to make informed health decisions.

Overall, public health efforts integrate care and treatment services with research, education, and social services to improve population health, prevent diseases, and promote well-being at the community level.

Each facet plays a vital role in advancing the overall goal of public health: to create conditions that enable all individuals to lead healthy, fulfilling lives.



INLAND PUBLIC HEALTH WORKFORCE REPORT

The Rise of the Inland Southern California Region

The Inland Southern California Region



Located in Inland Southern California, the Riverside-San Bernardino-Ontario Metropolitan Statistical Area (MSA) – composed of Riverside and San Bernardino counties combined, and commonly known as “The Inland Empire” – is among California's largest, most diverse, and fastest-growing metropolitan areas.



This two-county area spans more than 27,000 square miles and is slightly larger in area than the State of West Virginia. The region is geographically diverse, containing deserts, mountains, agricultural land, and sprawling suburbs that seamlessly mesh into the more urban Los Angeles, Orange, and San Diego counties. The Riverside-San Bernardino-Ontario MSA is referred to as Inland Southern California or Inland SoCal throughout this report.

FIGURE 1: Inland SoCal Region (Riverside-San Bernardino-Ontario MSA)

Population & Five Year Growth

POPULATION GROWTH IN THE INLAND REGION

In 2023, Inland SoCal had an estimated 4.637 million residents. From 2020 to 2023, Inland SoCal’s population increased by nearly 28,800, growing by 0.6% over the three years. By 2028, the area’s population will increase by 2.4%, adding almost 113,000 residents. Riverside and San Bernardino counties are projected to contribute 50.6% of the state’s total population growth over the next five years².

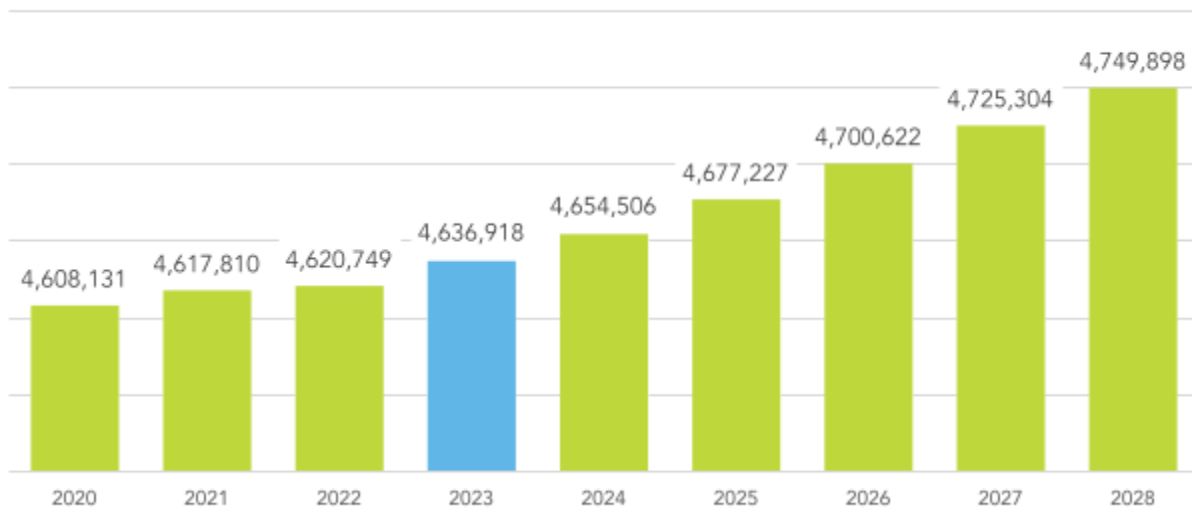


FIGURE 2: Population growth, Inland Southern California, 2020 to 2028³

#1

fastest growing region in SoCal, expected to grow twice as fast as the rest of the region over the next 25 years

50.6%

of California’s total population growth over the next five years will come from the Inland Empire region

113,000

new residents are expected to be residing in the Inland Empire region by the year 2028.

² California is projected to have a net increase of 223,317 residents and grow by 0.6% by 2028.

³ CA Department of Finance (March 2024). Demographic Research Unit. Report P-2A: Total Population Projections, California Counties, 2020-2060. www.dof.ca.gov/Forecasting/Demographics/Projections/

SOUTHERN CALIFORNIA REGIONAL GROWTH COMPARISONS

For comparison, Los Angeles County’s population is projected to decrease by 1.6% over the next five years, losing just over 155,000 residents. Other Southern California counties are projected to increase in population by 2028. Orange County is projected to add over 38,800 residents (growing by 1.2%), and San Diego will add almost 62,000 residents (increasing by 1.9%).

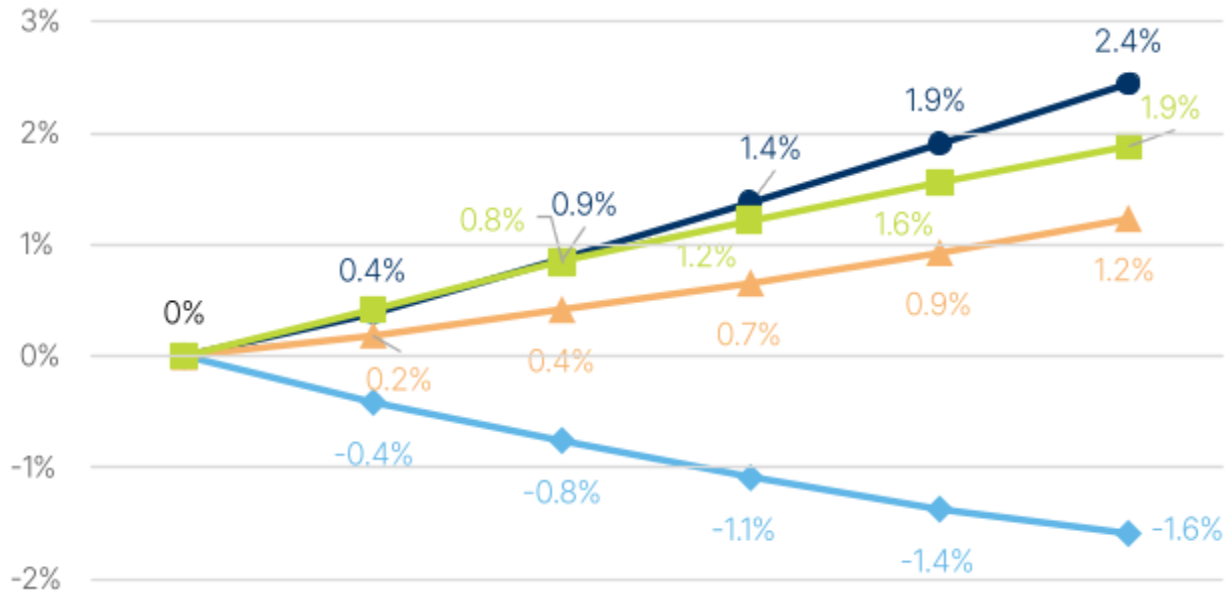


FIGURE 3: Year-over-year population % change, Southern California counties, 2023 to 2028⁴

| | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 |
|---------------------------|------|-------|-------|-------|-------|-------|
| Inland SoCal | 0% | 0.4% | 0.9% | 1.4% | 1.9% | 2.4% |
| Los Angeles County | 0% | -0.4% | -0.8% | -1.1% | -1.4% | -1.6% |
| Orange County | 0% | 0.2% | 0.4% | 0.7% | 0.9% | 1.2% |
| San Diego County | 0% | 0.4% | 0.8% | 1.2% | 1.6% | 1.9% |

⁴ CA Department of Finance (March 2024). Demographic Research Unit. Report P-2A: Total Population Projections, California Counties, 2020-2060. www.dof.ca.gov/Forecasting/Demographics/Projections/

Demographic Overview

AGE OF RESIDENTS

Figure 4 demonstrates the resident age categories by population size, which may provide insight into future demand for housing, services, healthcare needs, and educational enrollment over the next four to five years.

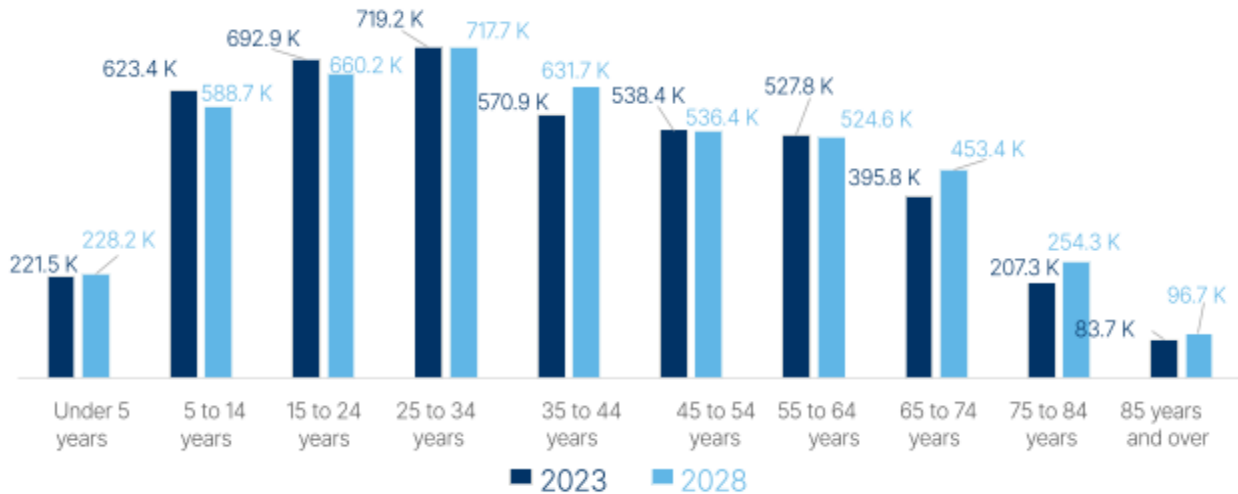


FIGURE 4: Resident Age Composition and Five-Year Change, Inland Southern California, 2023 to 2028⁵

In 2023, the 0-to-24 age group represented 34.4% of the Inland Southern California’s population. By 2028, this age group will decrease by 3.7%, or nearly 58,800 residents. The most notable declines will be seen in the 5-to-14-year-old group, down 5.6%, or almost 34,800 residents.

The working-age population, the 25-to-64 age group, comprised nearly 51% of Inland SoCal’s resident population in 2023. Over the next five years, the working-age population will gain over 54,000 residents, expanding by 2.3%. Within the working-age population, notable growth over the next five years is projected in the 35-to-44 age group, increasing by 10.6% and adding over 61,700 residents.

The age group comprising residents 65 years and older is projected to rise 17.1% over the next five years, adding nearly 117,700 residents. The 75-84 age group is the most rapidly growing population in the region, growing by almost 23% or nearly 47,000 residents. The rapid increase in residents aged 65 years and older may indicate increasing demand for healthcare services, assuming an aging population requires more healthcare.

⁵ CA Department of Finance (March 2024). Demographic Research Unit. Report P-2B: Population Projections by Individual Year of Age. www.dof.ca.gov/Forecasting/Demographics/

RACE & ETHNICITY

In 2022, residents identifying as Hispanic or Latino (of any race) represented 54% of Inland SoCal's population. White residents comprised a little over a quarter of the two-county area population, about 27%. Asians (about 8%) and Black or African Americans (about 7%) comprised about 14% of the region's residents.

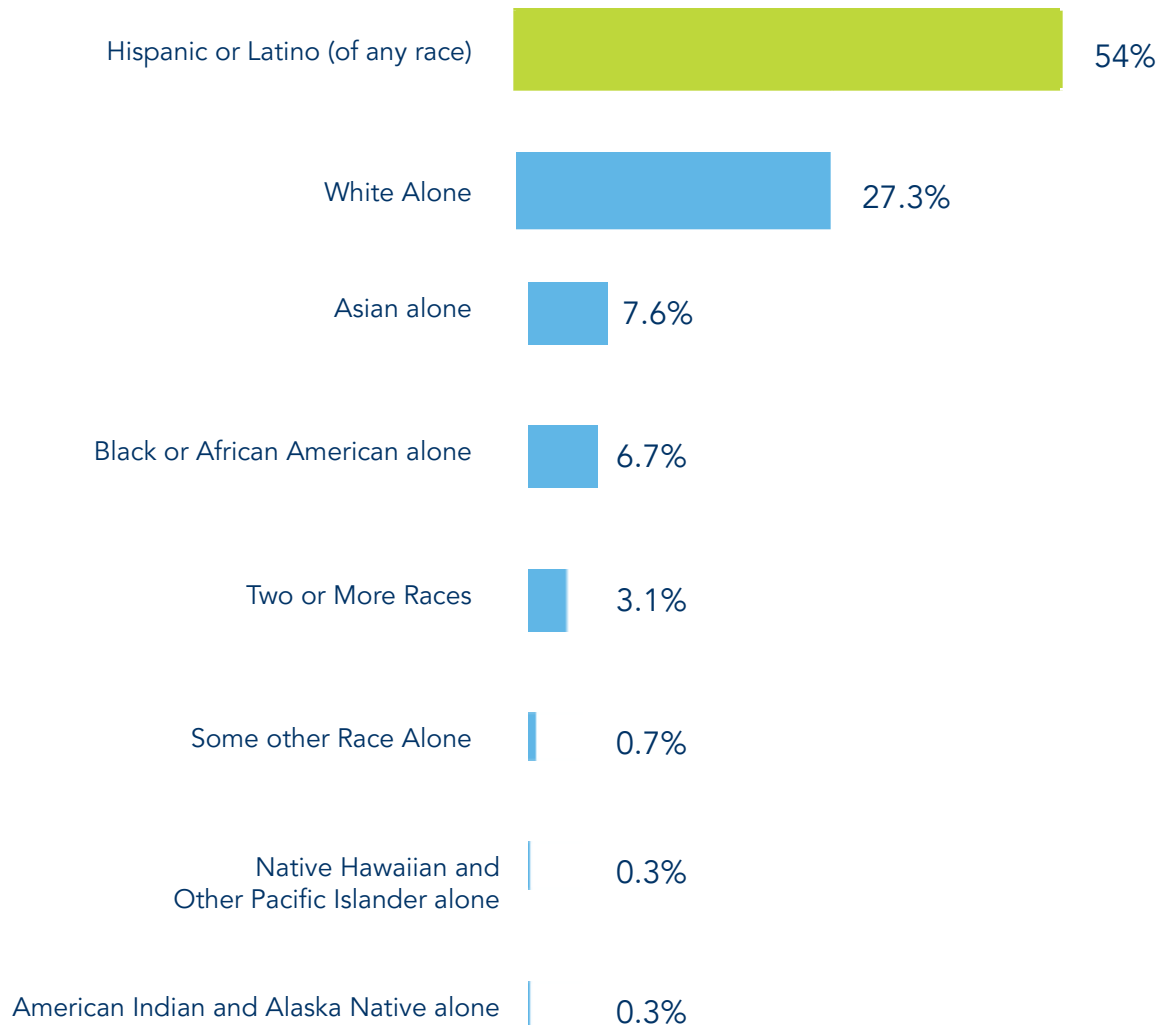


FIGURE 5: Race and Ethnicity, Inland Southern California, 2022⁶

⁶ 7 U.S. Census Bureau (2024). "ACS Demographic and Housing Estimates." American Community Survey, ACS 1-Year Estimates Data Profiles, Table DP05, 2022, <https://data.census.gov/table/ACSDP1Y2022.DP05?g=310XX00US40140>.

NOTES ON RACE & ETHNICITY DATA

The U.S. Census Bureau collects race and ethnicity data from residents in accordance with the U.S. Office of Management and Budget's guidelines.



The Census questionnaire asks each resident to self-identify race and Hispanic-ethnic origin categories that generally reflect their social definition and are "not an attempt to define race biologically, anthropologically, or genetically." Race and ethnicity data is particularly critical in federal and state civil rights policymaking, addressing issues such as equal employment opportunities and racial disparities in health and environmental assessments⁷.

In March 2024, the U.S. Office of Management and Budget updated Statistical Policy Directive No. 15 which governs the standards for collecting, maintaining, and presenting federal data on race and ethnicity. This update improves the accuracy and inclusivity of demographic data by providing clearer guidelines for data collection and reporting. Major changes include expanded racial and ethnic categories, improved methods for capturing mixed-race identities, and increased emphasis on cultural sensitivity and inclusivity. These revisions reflect ongoing efforts to better represent the diversity of the U.S. population in federal data collection and its reporting practices.

The main updates and revised definitions to questions used to collect data on race and ethnicity include:

- Combined Question for Race and Ethnicity: Implementing one combined question for race and ethnicity, allows respondents to select multiple options that apply to their identity.
- Addition of Middle Eastern or North African Category: Middle Eastern or North African as a new minimum category alongside the existing American Indian or Alaska Native, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Pacific Islander, and White categories.
- Requirement for Additional Detail: Mandating the collection of additional detail beyond the minimum required categories in most situations. This ensures further disaggregation in data collection, tabulation, and presentation when useful and appropriate, providing more comprehensive and accurate demographic information⁸

⁷ 2020 Census Frequently Asked Questions About Race and Ethnicity," United States Census Bureau, 2023, 18, 2023, <https://www.census.gov/programs-surveys/decennial-census/decade/2020/planning-management/release/faqs-race-ethnicity.html>.

⁸ Orvis, Karin (March 2024). OMB Publishes Revisions to Statistical Policy Directive No. 15: Standards for Maintaining, Collecting, and Presenting Federal Data on Race and Ethnicity. <https://www.whitehouse.gov/omb/briefing-room/2024/03/28/omb-publishes-revisions-to-statistical-policy-directive-no-15-standards-for-maintaining-collecting-and-presenting-federal-data-on-race-and-ethnicity/>

AGE OF RESIDENTS

The gender population is nearly 50% male and female, leaning slightly more toward males (50.2% male)⁹.

This equates to about 101 males for every 100 females in Inland SoCal. For residents 18 years and older, the male-to- female ratio changes to 99.7 males for every 100 females. The gender gap widens even further for residents aged 65 and older to 83.4 males for every 100 females.

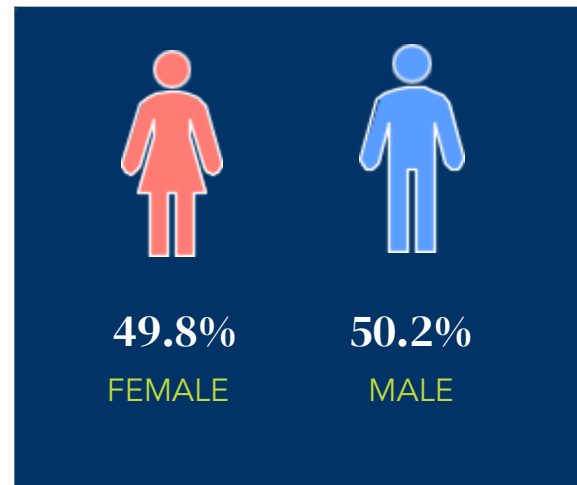


FIGURE 6: Gender Composition, Inland SoCal, 2022

LIVING WAGE

According to the MIT Living Wage Calculator, the living wage for a single adult living in Inland SoCal is \$25.77 per hour or \$53,599 per year. The rate for one adult with one child increases to \$42.52 per hour or \$88,450 annually¹⁰.

\$25.77 per hour

Living Wage for a Single Adult

\$42.52 per hour

Living Wage for a Single Adult
with One Dependent Child

The calculation assumes full-time work or 2,080 hours worked per year. A living wage is what one full-time worker must earn hourly to help cover the cost of their family's minimum basic needs where they live while still being self-sufficient.

The Living Wage Calculator's living wage estimate includes eight typical expenses or basic needs – childcare, civic engagement, food, health care, housing, internet and mobile, transportation, and other necessities. In addition, the Calculator also accounts for the additional cost to families associated with income and payroll taxes. Please visit the MIT Living Wage Calculator website for further details, including their methodology and data sources: <https://livingwage.mit.edu/>

⁹ U.S. Census Bureau (2023). 2022 American Community Survey 1-Year Estimates.

¹⁰ Amy K. Glasmeier, "Living Wage Calculator," Massachusetts Institute of Technology (2024). <https://livingwage.mit.edu/metros/40140>



INLAND PUBLIC HEALTH WORKFORCE REPORT

Public Health Employment: Growth & Demand by Occupation

Overview of Study

Organization of Occupations

An occupation is a collection of jobs and job titles that perform similar work tasks and share similar work knowledge, skills, and abilities. Workers who perform essentially the same functions are classified in the same occupation, whether or not they are in the same industry¹¹. It is important to note that some occupations are concentrated in a few industries (e.g., police officers are only employed by governmental agencies). In contrast, other occupations are found across most industries (e.g., computer user support specialists, human resource managers, maintenance and repair workers).

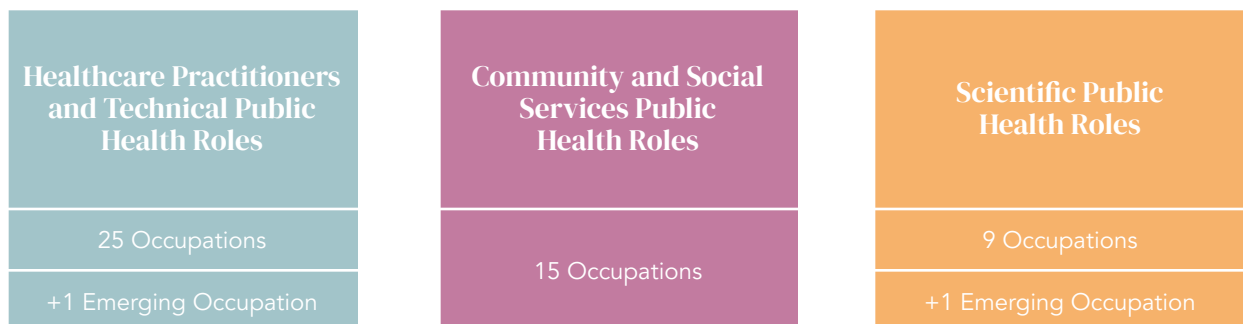
OCCUPATIONAL CLASSIFICATIONS

Employment in this study is captured as occupational employment, which organizes workers with similar knowledge, skills, and abilities into detailed standard occupational classifications (SOCs); these workers then trade skills for wages with their employers. However, public health cannot be quantified in a traditional sense. Although the demand and earnings of certain professions can be measured, it is uncertain how many of these workers are currently employed by public health organizations or how many will be needed. Traditional data sources do not provide this information.

OCCUPATIONAL FAMILIES

This study encompasses 49 detailed occupations the public health committee selected for further investigation in this report. Two additional emerging occupations were examined in this analysis. It is important to note that many of these occupations will find employment and probably currently work outside of public health organizations.

Occupations were further organized into one of three public health job families:



¹¹ U.S. Bureau of Labor Statistics (2024), "Concepts and Definitions." <https://www.bls.gov/cps/definitions.htm>

Organization of Study Results

EDUCATION LEVELS

The three public health occupational families are further divided by the typical education level required to enter employment, classified as follows:

1. Postgraduate: doctorate and/or masters degree
2. Bachelor’s degree
3. Associates degree or Certificate
4. High school diploma (where applicable)

OCCUPATION DATA DETAILS

Each education level is further organized into three sections to analyze job demand, earnings ranges, and the demographic composition provided by each occupation¹².

- **JOB DEMAND** – This section of this report illustrates the projected need for more workers over the next five years (from 2023 Q3 to 2028 Q3). Job counts are measured using three data points: current employment (2023 Q3), five-year employment change (absolute and % change) by 2028 Q3, and the number of annual job openings.
- **EARNINGS** – Earnings display the hourly and annual rate a worker may expect to earn early in their career or after gaining years of on-the-job experience.
- **DEMOGRAPHICS** – This section provides demographic statistics for each occupational family, including unemployment rate, ethnicity, gender, and the share of workers aged 55+.



¹² All Occupational Titles, Job Demand, Earnings, and Demographic information tables in this section of the report were sourced using data from Chmura Economics (2024). JobsEQ 2023 Q3 series, <http://www.chmuraecon.com/jobseq>

OCCUPATIONAL FAMILY #1

Healthcare Practitioners & Technical Public Health Roles

Jobs within the healthcare practitioners and technical job family are crucial in providing essential services to patients. These professionals are the front line of healthcare delivery, providing routine medical care and responding to public health emergencies.

Due to their complex, specialized nature, most roles in this job family require a doctoral or master's degree. This emphasizes advanced education, highlighting the critical expertise necessary to excel in these positions. Understandably, none of the occupations within this family require only a high school diploma, further emphasizing the rigorous academic preparation necessary for success in these fields.

FIGURE 7: Healthcare Practitioners and Technical Occupations by Education Level

| SOC Code | Occupation Title | Education Level | Entry Level Edu. Requirements |
|----------|--|---------------------------------|---------------------------------|
| 29-1021 | Dentists, General | Postgraduate | Doctoral or professional degree |
| 29-1041 | Optometrists | Postgraduate | Doctoral or professional degree |
| 29-1051 | Pharmacists | Postgraduate | Doctoral or professional degree |
| 29-1071 | Physician Assistants | Postgraduate | Master's degree |
| 29-1122 | Occupational Therapists | Postgraduate | Master's degree |
| 29-1123 | Physical Therapists | Postgraduate | Doctoral or professional degree |
| 29-1161 | Nurse Midwives | Postgraduate | Master's degree |
| 29-1215 | Family Medicine Physicians | Postgraduate | Doctoral or professional degree |
| 29-1216 | General Internal Medicine Physicians | Postgraduate | Doctoral or professional degree |
| 29-1218 | Obstetricians and Gynecologists | Postgraduate | Doctoral or professional degree |
| 29-1221 | Pediatricians, General | Postgraduate | Doctoral or professional degree |
| 29-1229 | Physicians, All Other | Postgraduate | Doctoral or professional degree |
| 29-9091 | Athletic Trainers | Postgraduate | Master's degree |
| 29-9092 | Genetic Counselors | Postgraduate | Master's degree |
| 11-9111 | Medical and Health Services Managers | Bachelor's degree | Bachelor's degree |
| 29-1031 | Dietitians and Nutritionists | Bachelor's degree | Bachelor's degree |
| 29-1128 | Exercise Physiologists | Bachelor's degree | Bachelor's degree |
| 29-2031 | Cardiovascular Technologists and Technicians | Associate degree or Certificate | Associate degree |
| 29-1141 | Registered Nurses | Associate degree or Certificate | Associate degree |
| 29-2051 | Dietetic Technicians | Associate degree or Certificate | Associate degree |
| 29-2061 | Licensed Vocational Nurses | Associate degree or Certificate | Postsecondary non-degree award |
| 29-2072 | Medical Records Specialists | Associate degree or Certificate | Postsecondary non-degree award |
| 31-9091 | Dental Assistants | Associate degree or Certificate | Postsecondary non-degree award |
| 31-9097 | Phlebotomists | Associate degree or Certificate | Postsecondary non-degree award |

*CA registered nurses may enter employment with an Associate Degree in Nursing (ADN) or a Licensed Vocational Nursing 30-unit non-degree award¹³

¹³ 12 California Board of Registered Nursing (2024). Steps to becoming a California Registered Nurse.



Healthcare Practitioners & Technical Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES

JOB DEMAND

FIGURE 8: Job Demand for Postgraduate Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|--------------------------------------|---------------------------------|----------------------|----------------------|-------------------|-----------------|
| Pharmacists | Doctoral or professional degree | 3,387 | 204 | 6% | 171 |
| Physicians, All Other | Doctoral or professional degree | 2,467 | 157 | 6.4% | 98 |
| Physical Therapists | Doctoral or professional degree | 2,353 | 274 | 11.6% | 149 |
| Dentists, General | Doctoral or professional degree | 1,744 | 120 | 6.9% | 75 |
| Family Medicine Physicians | Doctoral or professional degree | 1,089 | 76 | 7% | 45 |
| General Internal Medicine Physicians | Doctoral or professional degree | 707 | 44 | 6.2% | 28 |
| Optometrists | Doctoral or professional degree | 609 | 54 | 8.9% | 30 |
| Pediatricians, General | Doctoral or professional degree | 336 | 19 | 5.6% | 13 |
| OBGYN | Doctoral or professional degree | 221 | 14 | 6.2% | 9 |
| Physician Assistants | Master's degree | 1,530 | 290 | 18.9% | 139 |
| Occupational Therapists | Master's degree | 1,336 | 127 | 9.5% | 101 |
| Athletic Trainers | Master's degree | 176 | 18 | 10.3% | 15 |
| Nurse Midwives | Master's degree | 89 | 8 | 8.5% | 6 |
| Genetic Counselors | Master's degree | 27 | 4 | 12.9% | 2 |
| TOTAL | POSTGRADUATE | 16,071 | 1,409 | 8.8% | 881 |

+8.8%
Rise in Employment over the next five years

1,400
New Jobs to be added over the next five years

881
Annual Job Openings in Healthcare/Technical

For comparison, all non-health postgraduate jobs (those requiring a master's degree and higher) are projected to grow by 7.3% during the same time frame. Notable job demand is projected for physical therapists (increasing by nearly 12% over the next five years and having almost 150 annual job openings) and physician assistants (growing by nearly 19% through 2028 and having almost 140 annual openings).



Healthcare Practitioners & Technical Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES

EARNINGS

FIGURE 9: Earnings for Postgraduate Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|--------------------------------------|---------------------------------|--------------|---------|-------------|--------------|-----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Dentists, General | Doctoral or professional degree | \$37 | \$82 | \$105 | \$76,000 | \$170,500 | \$217,700 |
| Family Medicine Physicians | Doctoral or professional degree | \$45 | \$113 | \$147 | \$93,200 | \$235,400 | \$306,500 |
| General Internal Medicine Physicians | Doctoral or professional degree | \$68 | \$109 | \$129 | \$141,500 | \$226,000 | \$268,300 |
| OBGYN | Doctoral or professional degree | \$69 | \$136 | \$169 | \$144,100 | \$282,900 | \$352,300 |
| Optometrists | Doctoral or professional degree | \$46 | \$63 | \$71 | \$95,700 | \$130,600 | \$148,100 |
| Pediatricians, General | Doctoral or professional degree | \$103 | \$114 | \$120 | \$214,100 | \$237,400 | \$249,000 |
| Pharmacists | Doctoral or professional degree | \$56 | \$75 | \$84 | \$117,100 | \$156,100 | \$175,700 |
| Physical Therapists | Doctoral or professional degree | \$45 | \$57 | \$63 | \$92,900 | \$118,600 | \$131,400 |
| Physicians, All Other | Doctoral or professional degree | \$39 | \$79 | \$99 | \$80,300 | \$164,100 | \$205,900 |
| Athletic Trainers | Master's degree | \$26 | \$34 | \$39 | \$54,600 | \$71,600 | \$80,100 |
| Genetic Counselors | Master's degree | \$49 | \$62 | \$69 | \$101,700 | \$128,900 | \$142,600 |
| Nurse Midwives | Master's degree | \$53 | \$80 | \$93 | \$110,000 | \$165,900 | \$193,800 |
| Occupational Therapists | Master's degree | \$38 | \$51 | \$58 | \$79,500 | \$106,800 | \$120,400 |
| Physician Assistants | Master's degree | \$58 | \$72 | \$79 | \$121,100 | \$149,200 | \$163,300 |

\$52/hr

Average Entry Wage for Healthcare/Technical Roles

101%

Higher Avg. Entry Wage than the SoCal Living Wage

\$167,429

Average Annual Pay Across All Experience Levels

The entry-level earnings of each postgraduate healthcare practitioner and technical occupation exceed Inland SoCal's MIT living wage standard of 25.77 per hour or \$53,599 per year. The average earnings for many occupations in this job family provide six-figure annual earnings.



Healthcare Practitioners & Technical Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES

DEMOGRAPHICS

FIGURE 10: Demographics for Postgraduate Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|--------------------------------------|---------------------------------|------------|--------------------|--------|---------|
| Dentists, General | Doctoral or professional degree | 0.8% | 24.8% | 32.2% | 27% |
| Family Medicine Physicians | Doctoral or professional degree | 0.3% | 24.8% | 38.7% | 25.10% |
| General Internal Medicine Physicians | Doctoral or professional degree | 0.3% | 25.2% | 38.7% | 25% |
| OBGYN | Doctoral or professional degree | 0.4% | 27% | 39.5% | 24.5% |
| Optometrists | Doctoral or professional degree | 0.2% | 30.4% | 71.5% | 20% |
| Pediatricians, General | Doctoral or professional degree | 0.4% | 26% | 39.1% | 24% |
| Pharmacists | Doctoral or professional degree | 1.6% | 25.2% | 54.7% | 17.3% |
| Physical Therapists | Doctoral or professional degree | 1.1% | 16.8% | 65.4% | 18.2% |
| Physicians, All Other | Doctoral or professional degree | 0.3% | 25.1% | 38.8% | 24.9% |
| Athletic Trainers | Master's degree | 2.8% | 31% | 59.1% | 24% |
| Genetic Counselors | Master's degree | 2.9% | 30.8% | 58.8% | 24.6% |
| Nurse Midwives | Master's degree | 3.5% | 29% | 69.5% | 23% |
| Occupational Therapists | Master's degree | 1.3% | 19.1% | 81.3% | 18.6% |
| Physician Assistants | Master's degree | 1.8% | 20.9% | 61% | 9% |

- **LOW UNEMPLOYMENT RATE** – Many postgraduate roles in this occupational family have a low unemployment rate compared to Inland SoCal’s average unemployment rate of 4.7% (2023).
- **LOW REPRESENTATION OF HISPANIC / LATINO WORKERS** – The region’s population consists of about 54% Hispanic or Latino individuals. Occupations in this category consist of 16.8% to 31% Hispanic or Latino workers, which is lower than the Inland SoCal representation.
- **HIGH REPRESENTATION OF FEMALE WORKERS** – Occupational therapists are over 81% female. This is a high percentage of female workers, considering that Inland SoCal's female population is around 50%. It would be beneficial for more male workers to consider entering this occupation.
- **YOUNG WORKFORCE** – Most workers in this category are relatively young, and only dentists (27%) have a notable percentage of workers nearing retirement within the next ten years.



Healthcare Practitioners & Technical Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES

JOB DEMAND

FIGURE 11: Job Demand for Bachelor's Degree-Level Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|--------------------------------------|--------------------------|----------------------|----------------------|-------------------|-----------------|
| Medical and Health Services Managers | Bachelor's degree | 4,955 | 927 | 18.7% | 560 |
| Dietitians and Nutritionists | Bachelor's degree | 850 | 72 | 8.4% | 71 |
| Exercise Physiologists | Bachelor's degree | 116 | 12 | 10.2% | 10 |
| TOTAL | BACHELOR'S DEGREE | 5,921 | 1,011 | 17.1% | 641 |



For comparison, all non-health bachelor's degree jobs are projected to grow by 9.5% during the same time frame. Medical and health services managers will add the most jobs over the next five years, increasing by nearly 19%, with over 560 annual job openings due to growth and replacement needs.



Healthcare Practitioners & Technical Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES

EARNINGS

FIGURE 12: Earnings for Bachelor's Degree-Level Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|--------------------------------------|-----------------------|--------------|---------|-------------|--------------|-----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Dietitians and Nutritionists | Bachelor's degree | \$30.00 | \$40.84 | \$46.16 | \$62,800 | \$84,900 | \$96,000 |
| Exercise Physiologists | Bachelor's degree | \$28.13 | \$37.25 | \$41.81 | \$58,500 | \$77,500 | \$87,000 |
| Medical and Health Services Managers | Bachelor's degree | \$34.27 | \$64.87 | \$80.16 | \$71,300 | \$134,900 | \$166,700 |

\$31/hr

Average Entry Wage for Healthcare/Technical Roles

20%

Higher Avg. Entry Wage than the SoCal Living Wage

\$99,100

Average Annual Pay Across All Experience Levels

The entry-level earnings of each bachelor's degree healthcare practitioner and technical occupation exceed Inland SoCal's MIT living wage standard. Medical and health services managers offer an entry-level wage of \$34.27 per hour, well above the region's living wage standard for a single adult, which is \$25.77 per hour.



Healthcare Practitioners & Technical Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES

DEMOGRAPHICS

FIGURE 13: Demographics for Bachelor’s Degree-Level Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|--------------------------------------|-----------------------|------------|--------------------|--------|---------|
| Dietitians and Nutritionists | Bachelor's degree | 0.7% | 26.3% | 84.0% | 23.0% |
| Exercise Physiologists | Bachelor's degree | 3.1% | 27.8% | 69.1% | 23.5% |
| Medical and Health Services Managers | Bachelor's degree | 1.7% | 29.7% | 66.6% | 22.7% |

- **LOW REPRESENTATION OF HISPANIC / LATINO WORKERS** – Bachelor’s degree healthcare practitioners and technical group workers ranged from 26.3% to 29.7% Hispanic or Latino, well below the Inland SoCal representation of about 54%.



Healthcare Practitioners & Technical Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

• ASSOCIATE & CERTIFICATE LEVEL ROLES

JOB DEMAND

FIGURE 14: Job Demand for Associate & Certificate-Level Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|----------------------------------|----------------------------------|----------------------|----------------------|-------------------|-----------------|
| Registered Nurses | Bachelor's degree | 32,420 | 2,413 | 7.4% | 2,314 |
| Cardiovascular Technologists | Associate degree or Certificate | 537 | 34 | 6.4% | 41 |
| Dietetic Technicians | Associate degree or Certificate | 300 | 19 | 6.3% | 37 |
| Health Information Technologists | Associate degree or Certificate | 289 | 36 | 12.5% | 26 |
| Licensed Vocational Nurses | Postsecondary non-degree award | 6,867 | 504 | 7.3% | 648 |
| Dental Assistants | Postsecondary non-degree award | 4,762 | 386 | 8.1% | 765 |
| Medical Records Specialists | Postsecondary non-degree award | 1,730 | 150 | 8.7% | 150 |
| Phlebotomists | Postsecondary non-degree award | 1,190 | 96 | 8.0% | 178 |
| TOTAL | ASSOCIATE AND CERTIFICATE | 48,095 | 3,638 | 7.6% | 4,159 |

+7.6%
Rise in Employment over the next five years

3,638
New Jobs to be added over the next five years

4,159
Annual Job Openings in Healthcare/Technical

Associate degree or certificate healthcare practitioners and technical occupations are projected to add more than 3,600 jobs over the next five years (between 2023 Q3 to 2028 Q3), growing on average by nearly 9%. For comparison, all non-health bachelor's degree jobs are projected to grow 5.4% during the same time frame. The combined occupations in this job family are projected to have nearly 4,200 annual job openings. Registered nurses will have over 2,300 annual job openings, growing by over 7%. Medical records specialists will increase by almost 9% and are expected to have 150 annual job openings.



Healthcare Practitioners & Technical Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES

EARNINGS

FIGURE 15: Earnings for Associate & Certificate-Level Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|----------------------------------|---------------------------------|--------------|---------|-------------|--------------|-----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Registered Nurses | Associate degree or Certificate | \$45.83 | \$62.24 | \$70.45 | \$95,300 | \$129,500 | \$146,500 |
| Cardiovascular Technologists | Associate degree or Certificate | \$30.01 | \$38.12 | \$42.17 | \$62,400 | \$79,300 | \$87,700 |
| Dietetic Technicians | Associate degree or Certificate | \$19.32 | \$22.86 | \$24.63 | \$40,200 | \$47,500 | \$51,200 |
| Health Information Technologists | Associate degree or Certificate | \$20.77 | \$26.73 | \$29.72 | \$43,200 | \$55,600 | \$61,800 |
| Licensed Vocational Nurses | Postsecondary non-degree award | \$25.46 | \$31.48 | \$34.49 | \$52,900 | \$65,500 | \$71,700 |
| Dental Assistants | Postsecondary non-degree award | \$20.57 | \$24.46 | \$26.41 | \$42,800 | \$50,900 | \$54,900 |
| Medical Records Specialists | Postsecondary non-degree award | \$17.47 | \$22.88 | \$25.58 | \$36,300 | \$47,600 | \$53,200 |
| Phlebotomists | Postsecondary non-degree award | \$19.22 | \$22.54 | \$24.20 | \$40,000 | \$46,900 | \$50,400 |

\$24.83/hr

Average Entry Wage for Healthcare/Technical Roles

\$65,350

Average Annual Pay Across All Experience Levels

\$129,500

Average Annual Pay for A Registered Nurse

The average earnings of many occupations in the associate degree or certificate healthcare practitioner and technical occupation family exceed Inland SoCal's MIT living wage standard of \$25.77 per hour or \$53,599 annually, while some roles fall slightly short of this living wage at the entry level. Notable, registered nurses earn an outstanding average wage of \$62.24 per hour or \$129,500 annually.



Healthcare Practitioners & Technical Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

- ASSOCIATE & CERTIFICATE LEVEL ROLES

DEMOGRAPHICS

FIGURE 16: Demographics for Associate & Certificate-Level Healthcare Practitioners and Technical Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|----------------------------------|---------------------------------|------------|--------------------|--------|---------|
| Registered Nurses | Associate degree or Certificate | 1.3% | 18.1% | 87.9% | 27.6% |
| Cardiovascular Technologists | Associate degree or Certificate | 2.7% | 17.8% | 64.6% | 24% |
| Dietetic Technicians | Associate degree or Certificate | 1.8% | 32.5% | 81.7% | 21.4% |
| Health Information Technologists | Associate degree or Certificate | 1.5% | 31.9% | 80.4% | 21.7% |
| Licensed Vocational Nurses | Postsecondary non-degree award | 1.7% | 34.8% | 85.3% | 25% |
| Dental Assistants | Postsecondary non-degree award | 2.1% | 34.7% | 95.6% | 16.7% |
| Medical Records Specialists | Postsecondary non-degree award | 1.9% | 25.1% | 85.5% | 25.2% |
| Phlebotomists | Postsecondary non-degree award | 2.6% | 27.9% | 85.7% | 21% |

- **LOW UNEMPLOYMENT RATE** – Most healthcare practitioners and technical occupations that require an associate degree or certificate enjoy low unemployment rates, indicating that this classification of workers should have a relatively easy time securing employment
- **LOW REPRESENTATION OF HISPANIC CARDIO TECHS** – There is an opportunity to recruit more Hispanic cardiovascular technicians and technologists.
- **HIGH REPRESENTATION OF FEMALE WORKERS** – Many workers in these associate degree or certificate-level jobs are overwhelmingly female; registered nurses and dental assistants are nearly 86% and 93% female, respectively. Health information technologists and medical registers is the only occupation closely aligning with the region’s gender composition
- **YOUNG WORKFORCE** – Most of the workers in these occupations are relatively young, and medical records specialists (nearly 28%) are the only occupation with a notable share of workers nearing retirement age within the next ten years



Health Informatics Specialist (15-1211.01)¹⁴

The Health Informatics Specialist is an emerging occupation that requires both the skills of a computer systems analyst as well as nursing skills.

JOB DESCRIPTION

Apply knowledge of nursing and informatics to assist in the design, development, and ongoing modification of computerized health care systems. May educate staff and assist in problem solving to promote the implementation of the health care system.

SAMPLE REPORT OF JOB TITLES

- Clinical Informatics Analyst
- Clinical Informatics Nurse
- Clinical Informatics Specialist
- Clinical Info. Systems Analyst
- Nursing Informatics Specialist
- Registered Nurse Clinical Info. Systems Coordinator (RN Clinical Information Systems Coordinator)
- Registered Nurse Clinical Info. Systems Educator (RN Clinical Information Systems Educator)

DEMAND DATA

Occupational demand and earnings data exists for the computer systems analyst occupation, but the demand for these workers is unknown and the earnings are likely understated due to the dual nature of this emerging occupation.

Computer Systems Analysts

(parent occupation of Health Informatics Specialist)

- Demand: 1,047 annual job openings and 7.6% growth through 2028 Q3.
- Earnings: the entry hourly rate is \$35.81 (\$74,500 annual) to \$60.86 experienced hourly rate (\$126,600 annual). The mean hourly rate is \$52.51 (\$109,200 annual).

Job Postings for Health Informatics Specialist

(April 1 to June 1, 2024)

- 30 total job posting were observed in Southern California (Los Angeles, Orange, and Inland SoCal)
- 5 were observed in Inland SoCal
 - Informatics R.N. (\$44.73 – \$64.85 per hour)
 - Clinical Systems Analyst (NextGen) - DVH Data Processing (\$24.00 – \$36.00 per hour)
 - Epic Application Analyst Lead (\$97k – \$131k)
 - Epic Implementation Manager (\$88k – \$158k)
 - Patient Monitoring Clinical Solutions Delivery Consultant (\$90k – \$155k)

¹⁴ National Center for O*NET Development. O*NET OnLine. Retrieved June 2, 2024, from <https://www.onetonline.org/>

OCCUPATIONAL FAMILY #2

Community & Social Services Public Health Roles

The 15 occupations within the community and social services public health job family are crucial in addressing the social determinants of health, encompassing a wide range of interventions to address socioeconomic factors that influence health outcomes. This includes access to housing, food security, employment, education, and social support networks. These initiatives aim to reduce health disparities, promote equity, and create environments supporting all community members' health and well-being.

Most jobs in this family can be secured with an undergraduate degree, and some only typically require a high school diploma to enter employment. The healthcare social workers occupation is the only job in this family that needs a postgraduate degree (master's degree).

FIGURE 17: Community & Social Services Occupations by Education Level

| SOC Code | Occupation Title | Education Level | Entry Level Edu. Requirements |
|----------|---|---------------------------------|-----------------------------------|
| 21-1022 | Healthcare Social Workers | Postgraduate | Master's degree |
| 21-1023 | Mental Health and Substance Abuse Social Workers | Postgraduate | Master's degree |
| 11-9151 | Social and Community Service Managers | Bachelor's degree | Bachelor's degree |
| 11-9161 | Emergency Management Directors | Bachelor's degree | Bachelor's degree |
| 19-4061 | Social Science Research Assistants | Bachelor's degree | Bachelor's degree |
| 21-1091 | Health Education Specialists | Bachelor's degree | Bachelor's degree |
| 21-1099 | Community and Social Service Specialists, All Other | Bachelor's degree | Bachelor's degree |
| 31-2011 | Occupational Therapy Assistants | Associate degree or certificate | Associate degree |
| 31-2021 | Physical Therapist Assistants | Associate degree or certificate | Associate degree |
| 31-9011 | Massage Therapists | Associate degree or certificate | Postsecondary non-degree award |
| 21-1093 | Social and Human Service Assistants | High school diploma | High school diploma or equivalent |
| 21-1094 | Community Health Workers | High school diploma | High school diploma or equivalent |
| 31-2012 | Occupational Therapy Aides | High school diploma | High school diploma or equivalent |
| 31-2022 | Physical Therapist Aides | High school diploma | High school diploma or equivalent |
| 39-9031 | Exercise Trainers and Group Fitness Instructors | High school diploma | High school diploma or equivalent |



Community & Social Services Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES
- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

JOB DEMAND

FIGURE 18: Job Demand for Postgraduate Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|--|-----------------------|----------------------|----------------------|-------------------|-----------------|
| Healthcare Social Workers | Master's degree | 1,527 | 164 | 10.7% | 170 |
| Mental Health & Substance Abuse Social Workers | Master's degree | 1,380 | 139 | 10.1% | 130 |
| TOTAL | POSTGRADUATE | 2,907 | 303 | 10.4% | 300 |

+10.4%

Rise in Employment over the next five years

303

New Jobs to be added over the next five years

300

Annual Job Openings in Community/Social Services

The postgraduate community and social services public health family contains two occupations, each typically requiring a master's degree to enter employment. Healthcare social workers are projected to have 170 annual job openings and grow by nearly 11% over the next five years (between 2023 Q3 and 2028 Q3). Mental health and substance abuse social workers are to have 130 annual job openings and increase employment by 10.1% through 2028 Q3.

For comparison, all non-health postgraduate jobs (those requiring a master's degree and higher) are projected to grow by 7.3% during the same time frame.



Community & Social Services Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES
- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

EARNINGS

FIGURE 19: Earnings for Postgraduate Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|--|-----------------------|--------------|---------|-------------|--------------|----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Healthcare Social Workers | Master's degree | \$27.96 | \$42.12 | \$49.20 | \$58,200 | \$87,600 | \$102,300 |
| Mental Health and Substance Abuse Social Workers | Master's degree | \$23.46 | \$42.42 | \$51.89 | \$48,800 | \$88,200 | \$107,900 |

\$25.71/hr

Average Entry Wage for Healthcare/Technical Roles

-0.23%

Lower Avg. Entry Wage than the SoCal Living Wage

\$87,000

Average Annual Pay Across All Experience Levels

The entry-level earnings of healthcare social workers are nearly \$28 per hour or \$58,200 annually, exceeding Inland SoCal's MIT living wage standard of \$25.77 per hour or \$53,599 per year, while the entry-level earnings of mental health and substance abuse social workers is \$23.46 per hour or \$48,800 annually, falling just short of Inland SoCal's living wage.



Community & Social Services Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- ASSOCIATE & CERTIFICATE LEVEL ROLES
- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

DEMOGRAPHICS

FIGURE 20: Demographics for Postgraduate Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|--|-----------------------|------------|--------------------|--------|---------|
| Healthcare Social Workers | Master's degree | 1.6% | 37.9% | 67.2% | 21.0% |
| Mental Health and Substance Abuse Social Workers | Master's degree | 7.4% | 37.3% | 59.7% | 24.1% |

- **NOTABLE UNEMPLOYMENT RATE FOR MENTAL HEALTH & SUBSTANCE ABUSE SOCIAL WORKERS** – The postgraduate mental health and substance abuse social worker occupation has a relatively high unemployment rate of 7.4%, compared to Inland SoCal's average unemployment rate of 4.7% (2023), indicating that professionals in this role may struggle with job security
- **LOW UNEMPLOYMENT RATE FOR HEALTHCARE SOCIAL WORKERS** – The healthcare social workers occupation has a low unemployment rate of 1.6%, meaning professionals entering this field are less likely to struggle with job security.
- **LOWER REPRESENTATION OF HISPANIC / LATINO WORKERS** – Nearly 38% of workers in this occupation self-identified as Hispanics or Latinos, compared to 54% of the two-county region's population identifying as Hispanic or Latino.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

- BACHELOR'S DEGREE LEVEL ROLES

ASSOCIATE & CERTIFICATE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

JOB DEMAND

FIGURE 21: Job Demand for Bachelor's Degree-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|---|--------------------------|----------------------|----------------------|-------------------|-----------------|
| Social and Community Service Managers | Bachelor's degree | 2,078 | 247 | 11.9% | 221 |
| Community and Social Service Specialists, All Other | Bachelor's degree | 1,016 | 89 | 8.7% | 123 |
| Health Education Specialists | Bachelor's degree | 620 | 57 | 9.2% | 76 |
| Social Science Research Assistants | Bachelor's degree | 169 | 12 | 7.2% | 25 |
| Emergency Management Directors | Bachelor's degree | 77 | 5 | 6.6% | 6 |
| TOTAL | BACHELOR'S DEGREE | 3,960 | 410 | 10.4% | 451 |

+10.4%

Rise in Employment over the next five years

410

New Jobs to be added over the next five years

451

Annual Job Openings in Community/Social Services

Bachelor's degree community and social services occupations are projected to add over 400 jobs over the next five years (between 2023 Q3 to 2028 Q3), growing on average by 10.4%. The social and community service managers occupation is projected to grow by nearly 12% and have over 220 job openings due to job growth and replacement needs.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

- BACHELOR'S DEGREE LEVEL ROLES

ASSOCIATE & CERTIFICATE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

EARNINGS

FIGURE 22: Earnings for Bachelor's Degree-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|---|-----------------------|--------------|---------|-------------|--------------|-----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Community and Social Service Specialists, All Other | Bachelor's degree | \$17.33 | \$25.42 | \$29.47 | \$36,000 | \$52,900 | \$61,300 |
| Emergency Management Directors | Bachelor's degree | \$41.31 | \$61.14 | \$71.06 | \$85,900 | \$127,200 | \$147,800 |
| Health Education Specialists | Bachelor's degree | \$21.90 | \$33.93 | \$39.95 | \$45,600 | \$70,600 | \$83,100 |
| Social and Community Service Managers | Bachelor's degree | \$26.31 | \$40.38 | \$47.42 | \$54,700 | \$84,000 | \$98,600 |
| Social Science Research Assistants | Bachelor's degree | \$22.30 | \$31.15 | \$35.57 | \$46,400 | \$64,800 | \$74,000 |

\$26/hr

Average Entry Wage for Healthcare/Technical Roles

0.89%

Higher Avg. Entry Wage than the SoCal Living Wage

\$79,900

Average Annual Pay Across All Experience Levels

The average earnings of each bachelor's degree community and social services occupations exceed Inland SoCal's MIT living wage standard, except for community and social services specialists. The entry-level earnings for emergency management directors is \$41.31 per hour, far exceeding the two-county area's living wage standard of \$25.77 per hour or \$53,599 per year.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

- BACHELOR'S DEGREE LEVEL ROLES

ASSOCIATE & CERTIFICATE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

DEMOGRAPHICS

FIGURE 23: Demographics for Bachelor's Degree Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|---|-----------------------|------------|--------------------|--------|---------|
| Social and Community Service Managers | Bachelor's degree | 1.9% | 48.2% | 62.6% | 17.8% |
| Community and Social Service Specialists, All Other | Bachelor's degree | 1.8% | 30.1% | 33.5% | 28.8% |
| Health Education Specialists | Bachelor's degree | 1.9% | 47.2% | 62.4% | 18.3% |
| Social Science Research Assistants | Bachelor's degree | 1.5% | 35.3% | 64.7% | 28.0% |
| Emergency Management Directors | Bachelor's degree | 11.2% | 21.5% | 41.7% | 20.1% |

- **HIGH UNEMPLOYMENT FOR SOCIAL SCIENCE RESEARCH ASSISTANTS** – Most bachelor's degree community and social services workers have low unemployment rates, except for social science research assistants, who have a high 11.2% unemployment rate.
- **RETIREMENT CLIFF APPROACHING** – Social & community service managers (28%) and emergency management directors (nearly 29%) have a notable share of workers nearing retirement age within the next ten years. This indicates that many workers may need to be hired and trained soon.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

• ASSOCIATE & CERTIFICATE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

JOB DEMAND

FIGURE 24: Job Demand for Associate & Certificate-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|---------------------------------|-----------------------------------|----------------------|----------------------|-------------------|-----------------|
| Physical Therapist Assistants | Associate degree | 849 | 141 | 16.6% | 154 |
| Occupational Therapy Assistants | Associate degree | 333 | 51 | 15.4% | 60 |
| Massage Therapists | Postsecondary non-degree award | 1,636 | 220 | 13.4% | 282 |
| TOTAL | ASSOCIATE & CERT-LEVEL | 2,818 | 412 | 14.6% | 496 |

+14.6%

Rise in Employment
over the next five years

412

New Jobs to be added
over the next five years

496

Annual Job Openings in
Community/Social Services

Associate degree or certificate community and social services occupations are projected to add more than 400 jobs over the next five years (between 2023 Q3 to 2028 Q3), growing by nearly 15% on average. For comparison, all non-health associate degree or certificate jobs are projected to grow by 4.5% during the same time frame. Massage therapists are projected to have over 280 annual job openings over the next five years due to new job growth and replacement needs. Physical therapist assistants will be the fastest-growing job in this group, increasing employment by nearly 17%.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

• ASSOCIATE & CERTIFICATE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

EARNINGS

FIGURE 25: Earnings for Associate & Certificate-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|---------------------------------|--------------------------------|--------------|---------|-------------|--------------|----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Occupational Therapy Assistants | Associate degree | \$33.05 | \$39.95 | \$43.41 | \$68,700 | \$83,100 | \$90,300 |
| Physical Therapist Assistants | Associate degree | \$32.04 | \$39.78 | \$43.64 | \$66,600 | \$82,700 | \$90,800 |
| Massage Therapists | Postsecondary non-degree award | \$16.34 | \$29.82 | \$36.57 | \$34,000 | \$62,000 | \$76,100 |

\$27.14/hr

Average Entry Wage for Healthcare/Technical Roles

5.3%

Higher Avg. Entry Wage than the SoCal Living Wage

\$75,933

Average Annual Pay Across All Experience Levels

The average earnings of all occupations in the associate degree or certificate community and social services group exceeds the Inland SoCal's MIT living wage standard of \$25.77 or \$53,599 annually. Both associate degree occupations offer Average hourly earnings far exceeding the two-county area's living wage standard.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

• ASSOCIATE & CERTIFICATE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

DEMOGRAPHICS

FIGURE 28: Demographics for Associate & Certificate-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|---------------------------------|--------------------------------|------------|--------------------|--------|---------|
| Occupational Therapy Assistants | Associate degree | 0.4% | 46.0% | 80.6% | 23.8% |
| Physical Therapist Assistants | Associate degree | 1.1% | 21.8% | 65.6% | 17.8% |
| Massage Therapists | Postsecondary non-degree award | 1.8% | 31.4% | 76.2% | 19.7% |

- **JOB SECURITY** – Associate degree or certificate community and social services occupations have low unemployment rates, indicating that these workers should have a relatively easy time securing employment.
- **STRONG HISPANIC / LATINO REPRESENTATION** – About 46% of occupational therapy assistants identify as Hispanic or Latino, closely aligning with Inland SoCal’s 54% Hispanic or Latino population share
- **HIGH CONCENTRATION OF FEMALE WORKERS** – The occupations in this group skew highly female. There is an opportunity to recruit more male workers into associate degree or certificate community and social services occupations, especially occupational therapy assistants and massage therapist
- **RELATIVELY YOUNG WORKFORCE** – Most workers in these occupations are under 54 years old.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

ASSOCIATE & CERTIFICATE LEVEL ROLES

- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

JOB DEMAND

FIGURE 29: Job Demand for High School or Diploma-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|---|------------------------------------|----------------------|----------------------|-------------------|-----------------|
| Social and Human Service Assistants | High school diploma or equivalent | 4,535 | 514 | 11.3% | 594 |
| Exercise Trainers and Group Fitness Instructors | High school diploma or equivalent | 3,586 | 418 | 11.6% | 794 |
| Community Health Workers | High school diploma or equivalent | 699 | 90 | 12.8% | 92 |
| Physical Therapist Aides | High school diploma or equivalent | 618 | 36 | 5.8% | 94 |
| Occupational Therapy Aides | High school diploma or equivalent | 37 | 3 | 7.6% | 6 |
| TOTAL | HIGH SCHOOL DIPLOMA OR EQU. | 9,475 | 1,061 | 11.2% | 1,580 |

+11.2%

Rise in Employment over the next five years

1,061

New Jobs to be added over the next five years

1,580

Annual Job Openings in Community/Social Services

High school-level community and social services occupations are projected to increase employment by over 11% over the next five years. Non-health-related high school-level occupations are projected to increase employment by 4.2% during the same time frame. Social and human services assistants and exercise and group fitness instructors will have the most job openings over the next five years, with about 590 and 790 annual job openings, respectively. Community health workers will be the fastest-growing job, increasing employment by nearly 13%.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

ASSOCIATE & CERTIFICATE LEVEL ROLES

- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

EARNINGS

FIGURE 30: Earnings for High School or Diploma-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|---|-----------------------------------|--------------|---------|-------------|--------------|----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Social and Human Service Assistants | High school diploma or equivalent | \$17.35 | \$22.70 | \$25.37 | \$36,100 | \$47,200 | \$52,800 |
| Exercise Trainers and Group Fitness Instructors | High school diploma or equivalent | \$16.41 | \$29.25 | \$35.67 | \$34,100 | \$60,800 | \$74,200 |
| Community Health Workers | High school diploma or equivalent | \$19.76 | \$27.97 | \$32.08 | \$41,100 | \$58,200 | \$66,700 |
| Physical Therapist Aides | High school diploma or equivalent | \$15.72 | \$17.34 | \$18.16 | \$32,700 | \$36,100 | \$37,800 |
| Occupational Therapy Aides | High school diploma or equivalent | \$16.13 | \$22.20 | \$25.23 | \$33,600 | \$46,200 | \$52,500 |

\$17.07/hr

Average Entry Wage for Healthcare/Technical Roles

-33.8%

Lower Avg. Entry Wage than the SoCal Living Wage

\$49,700

Average Annual Pay Across All Experience Levels

The average earnings for only two high school diploma-level community and social service jobs, community health workers and exercise trainers and group fitness instructors, exceed the region's living wage standard of \$25.77 per hour or \$53,599 annually. The hourly earnings for the three occupations in this group fail to meet the living wage standard even for experienced workers. This indicates that workers entering these occupations may struggle to support themselves in Inland Southern California.



Community & Social Services Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

ASSOCIATE & CERTIFICATE LEVEL ROLES

- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

DEMOGRAPHICS

FIGURE 31: Demographics for High School or Diploma-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|---|-----------------------------------|------------|--------------------|--------|---------|
| Social and Human Service Assistants | High school diploma or equivalent | 4.9% | 45.0% | 75.2% | 21.7% |
| Exercise Trainers and Group Fitness Instructors | High school diploma or equivalent | 2.9% | 35.4% | 57.2% | 17.7% |
| Community Health Workers | High school diploma or equivalent | 1.9% | 47.3% | 62.4% | 18.3% |
| Physical Therapist Aides | High school diploma or equivalent | 1.1% | 21.4% | 65.5% | 18.0% |
| Occupational Therapy Aides | High school diploma or equivalent | 0.4% | 46.3% | 80.8% | 24.5% |

- **STABLE EMPLOYMENT OVERALL** – Overall, High school-level community and social services occupations have very low unemployment rates.
- **HIGHER UNEMPLOYMENT FOR SOCIAL & HUMAN SERVICE ASSISTANTS** – Social and human services assistants have an unemployment rate of 4.9%, just above Inland SoCal’s average unemployment rate of 4.7% (2023). While 5% unemployment is considered low, workers in this occupation may experience longer job searches than other occupational workers in this group, and employers may have an easier time finding an outstanding pool of job seekers.
- **STRONG HISPANIC / LATINO REPRESENTATION** – Except for exercise trainers & group fitness instructors and physical therapist aides, many occupational workers in this group closely align with Inland SoCal’s 54% Hispanic or Latino population share
- **HIGH CONCENTRATION OF FEMALE WORKERS** – There is an opportunity to recruit more male workers into high school-level community and social services occupations, especially occupational therapy aides and social and human services assistants
- **YOUNG WORKFORCE** – Most of the workers in these occupations are 54 years or younger

OCCUPATIONAL FAMILY #3

Scientific Public Health Roles

Scientific public health occupations conduct scientific studies to understand health issues, determinants, and trends within a population. Researchers gather data, analyze trends, and identify factors influencing health outcomes. Education initiatives focus on raising awareness, promoting healthy behaviors, and disseminating evidence to empower individuals and communities to make informed health decisions.

Most of the occupations in the scientific job family require a bachelor's degree or higher level of education to enter employment. None of the occupations in this study are obtainable only through an associates degree or certificate.

FIGURE 32: Healthcare Practitioners and Technical Occupations by Education Level

| SOC Code | Occupation Title | Education Level | Entry Level Edu. Requirements |
|----------|---|---------------------|-----------------------------------|
| 19-1041 | Epidemiologists | Postgraduate | Master's degree |
| 19-1042 | Medical Scientists, Except Epidemiologists | Postgraduate | Doctoral or professional degree |
| 17-2111 | Health and Safety Engineers, Except Mining Safety Engineers | Bachelor's degree | Bachelor's degree |
| 19-1022 | Microbiologists | Bachelor's degree | Bachelor's degree |
| 19-2041 | Environmental Scientists and Specialists, Including Health | Bachelor's degree | Bachelor's degree |
| 19-5011 | Occupational Health and Safety Specialists | Bachelor's degree | Bachelor's degree |
| 29-2011 | Medical and Clinical Laboratory Technologists | Bachelor's degree | Bachelor's degree |
| 29-2012 | Medical and Clinical Laboratory Technicians | Bachelor's degree | Bachelor's degree |
| 19-5012 | Occupational Health and Safety Technicians | High school diploma | High school diploma or equivalent |



Scientific Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

JOB DEMAND

FIGURE 33: Job Demand for Postgraduate Scientific Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|--|-----------------------|-------------------------|-------------------------|----------------------|--------------------|
| Medical Scientists, Except Epidemiologists | Doctoral degree | 607 | 51 | 8.4% | 43 |
| Epidemiologists | Master's degree | 76 | 12 | 15.8% | 59 |
| TOTAL | POSTGRADUATE | 683 | 63 | 9.2% | 102 |

+9.2%

Rise in Employment
over the next five years

63

New Jobs to be added
over the next five years

102

Annual Job Openings in
Scientific Public Health

Postgraduate scientific occupations are projected to have about 100 annual job openings each year over the next five years (between 2023 Q3 and 2028 Q3), growing on average by over 9%. For comparison, all non-health postgraduate jobs (those requiring a master's degree and higher) are projected to grow by 7.3% during the same time frame. Epidemiologists are projected to increase employment by nearly 16% over the next five years and have almost 60 annual job openings.



Scientific Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

EARNINGS

FIGURE 34: Earnings for Bachelor's Degree-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|--|-----------------------|--------------|---------|-------------|--------------|-----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Medical Scientists, Except Epidemiologists | Doctoral degree | \$46.96 | \$59.88 | \$66.33 | \$97,700 | \$124,500 | \$138,000 |
| Epidemiologists | Master's degree | \$27.31 | \$41.96 | \$49.28 | \$56,800 | \$87,300 | \$102,500 |

\$37.14/hr

Average Entry Wage for
Healthcare/Technical Roles

44%

Higher Avg. Entry Wage
than the SoCal Living Wage

\$105,900

Average Annual Pay Across
All Experience Levels

Scientific public health occupations requiring a postgraduate (a doctorate or master's degree) degree have entry-level earnings that exceed the region's \$25.77 per hour living wage standard significantly. The Average hourly and annual earnings for epidemiologists increase rapidly from the entry-level wage.



Scientific Public Health Roles

- POSTGRADUATE LEVEL ROLES
- BACHELOR'S DEGREE LEVEL ROLES
- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

DEMOGRAPHICS

FIGURE 35: Demographics for Bachelor's Degree Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|--|-----------------------|------------|--------------------|--------|---------|
| Medical Scientists, Except Epidemiologists | Doctoral degree | 0.4% | 16.1% | 41.2% | 15.0% |
| Epidemiologists | Master's degree | 0.4% | 19.6% | 43.0% | 13.8% |

- **VERY LOW UNEMPLOYMENT RATE** – Postgraduate scientific public health occupations have a low unemployment rate of 0.4%, compared to Inland SoCal's 2023 unemployment rate of 4.7%.
- **LOW REPRESENTATION OF HISPANIC / LATINO WORKERS** – The share of workers in these occupations self-identified as Hispanic or Latino is also very low. Representation for both professions is less than 20% Hispanic or Latino, compared to 54% of the two-county region's population.



Scientific Public Health Roles

POSTGRADUATE LEVEL ROLES

- BACHELOR'S DEGREE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

JOB DEMAND

FIGURE 36: Job Demand for Bachelor's Degree-Level Scientific Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|--|--------------------------|-------------------------|-------------------------|----------------------|--------------------|
| Medical and Clinical Laboratory Technologists | Bachelor's degree | 1,572 | 112 | 7.1% | 126 |
| Medical and Clinical Laboratory Technicians | Bachelor's degree | 1,567 | 110 | 7% | 125 |
| Occupational Health and Safety Specialists | Bachelor's degree | 1,083 | 135 | 12.4% | 150 |
| Environmental Scientists and Specialists, Including Health | Bachelor's degree | 616 | 45 | 7.3% | 59 |
| Health and Safety Engineers, Except Mining Safety Engineers and Inspectors | Bachelor's degree | 165 | 11 | 6.7% | 12 |
| Microbiologists | Bachelor's degree | 106 | 8 | 7.5% | 10 |
| TOTAL | BACHELOR'S DEGREE | 5,109 | 421 | 8.2% | 521 |

+8.2%

Rise in Employment
over the next five years

421

New Jobs to be added
over the next five years

521

Annual Job Openings in
Scientific Public Health

Bachelor's degree scientific occupations are projected to add over 400 jobs over the next five years (between 2023 Q3 and 2028 Q3). Jobs in this group are projected to grow by an average of about 8%, slower than all non- health bachelor's degree jobs at 9.5% during the same time frame. Occupational health and safety specialist is expected to be the fastest growing job in this group (over 12%) and will add the most job openings over the next five years (150 annual job openings due to new job growth and replacement needs). Medical & clinical laboratory technologists and medical & clinical laboratory technicians are in relatively high demand in this group, having nearly 130 annual job openings each over the next five years.



Scientific Public Health Roles

POSTGRADUATE LEVEL ROLES

- BACHELOR'S DEGREE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

EARNINGS

FIGURE 37: Earnings for Bachelor's Degree-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|--|-----------------------|--------------|---------|-------------|--------------|-----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Environmental Scientists and Specialists, Including Health | Bachelor's degree | \$29.32 | \$47.27 | \$56.25 | \$61,000 | \$98,300 | \$117,000 |
| Health and Safety Engineers, Except Mining Safety Engineers and Inspectors | Bachelor's degree | \$38.12 | \$54.69 | \$62.98 | \$79,300 | \$113,800 | \$131,000 |
| Medical and Clinical Laboratory Technicians | Bachelor's degree | \$20.67 | \$31.45 | \$36.83 | \$43,000 | \$65,400 | \$76,600 |
| Medical and Clinical Laboratory Technologists | Bachelor's degree | \$20.67 | \$31.45 | \$36.83 | \$43,000 | \$65,400 | \$76,600 |
| Microbiologists | Bachelor's degree | \$26.81 | \$41.29 | \$48.53 | \$55,800 | \$85,900 | \$100,900 |
| Occupational Health and Safety Specialists | Bachelor's degree | \$29.88 | \$44.92 | \$52.43 | \$62,200 | \$93,400 | \$109,100 |

\$27.58/hr

Average Entry Wage for
Healthcare/Technical Roles

7%

Higher Avg. Entry Wage
than the SoCal Living Wage

\$87,033

Average Annual Pay Across
All Experience Levels

The average hourly earnings of bachelor's degree scientific public health occupations exceed the area's living wage standard of \$25.77 per hour. The average earnings of health and safety engineers are more than double the living wage standard.



Scientific Public Health Roles

POSTGRADUATE LEVEL ROLES

- BACHELOR'S DEGREE LEVEL ROLES

HIGH SCHOOL OR DIPLOMA LEVEL ROLES

DEMOGRAPHICS

FIGURE 38: Demographics for Bachelor's Degree Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|--|-----------------------|------------|--------------------|--------|---------|
| Environmental Scientists and Specialists, Including Health | Bachelor's degree | 0.3% | 22.0% | 42.1% | 20.6% |
| Health and Safety Engineers, Except Mining Safety Engineers and Inspectors | Bachelor's degree | 1.8% | 17.2% | 21.3% | 20.4% |
| Medical and Clinical Laboratory Technicians | Bachelor's degree | 2.2% | 35.7% | 70.1% | 22.8% |
| Medical and Clinical Laboratory Technologists | Bachelor's degree | 2.2% | 36.0% | 70.2% | 22.7% |
| Microbiologists | Bachelor's degree | 2.7% | 14.3% | 53.1% | 22.9% |
| Occupational Health and Safety Specialists | Bachelor's degree | 3.0% | 41.1% | 24.6% | 22.3% |

- **JOB STABILITY** – Bachelor's degree occupations in scientific public health occupations enjoy unemployment at 3% or below, indicating that these workers may quickly find employment
- **LOW HISPANIC / LATINO REPRESENTATION** – Microbiologist (about 14%), health and safety engineers (about 17 %) and environmental scientists and specialists (22%) have a low share of Hispanic or Latino workers compared to the regional share of 54%
- **LOW REPRESENTATION OF FEMALE WORKERS** – Health and safety engineers (about 21% male), and occupational health and safety specialists (about 25% male) and male-dominated occupations provide an opportunity to recruit more female workers to these roles



Scientific Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

JOB DEMAND

FIGURE 39: Job Demand for High School or Diploma-Level Scientific Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Employment 2023 – Q3 | 5-Year Change (Jobs) | 5-Year Change (%) | Annual Openings |
|--|-----------------------|-------------------------|-------------------------|----------------------|--------------------|
| Occupational Health and Safety Technicians | High school diploma | 398 | 56 | 14% | 57 |



Occupational health and safety technician is the only high school-level job in the scientific public health group. This job is projected to increase employment by 14%, and there will be nearly 60 annual job openings over the next five years. Non-health-related high school-level occupations are projected to increase employment by 4.2% during the same time frame.



Scientific Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

EARNINGS

FIGURE 40: Earnings for for High School or Diploma-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | HOURLY WAGES | | | ANNUAL WAGES | | |
|--|-----------------------|--------------|---------|-------------|--------------|----------|-------------|
| | | Entry | Average | Experienced | Entry | Average | Experienced |
| Occupational Health and Safety Technicians | High school diploma | \$25.42 | \$31.38 | \$34.36 | \$52,900 | \$65,300 | \$71,500 |

\$25.42/hr

Average Entry Wage for
Healthcare/Technical Roles

-6.4%

Lower Avg. Entry Wage than
the SoCal Living Wage

\$65,300

Average Annual Pay Across
All Experience Levels

While the entry level wages fall just short of the living wage standard, overall average earnings for occupational health and safety technicians surpass the living wage standard substantially. This is an excellent opportunity for residents without a postsecondary degree or certification.



Scientific Public Health Roles

POSTGRADUATE LEVEL ROLES

BACHELOR'S DEGREE LEVEL ROLES

- HIGH SCHOOL OR DIPLOMA LEVEL ROLES

DEMOGRAPHICS

FIGURE 41: Demographics for High School or Diploma-Level Community & Social Services Public Health Occupations

| Occupation Title | Entry-Level Edu. Req. | Unemployed | Hispanic or Latino | Female | Age 55+ |
|--|-----------------------|------------|--------------------|--------|---------|
| Occupational Health and Safety Technicians | High school diploma | 3.0% | 41.6% | 24.8% | 21.9% |

- **RELATIVELY LOW UNEMPLOYMENT RATE** – The lone high school diploma scientific health occupation, occupational health and safety technicians, the unemployment rate is 3%. A low unemployment ratio compared to 4.9% for all non-health occupations in 2023.
- **LOW REPRESENTATION OF FEMALE WORKERS** – This occupation also has a low representation of female workers (about 25%); more female workers should consider entering this role.



Scientific Public Health Roles

EMERGING OCCUPATION

Bioinformatics Technicians (15-2099.01)¹⁵

Bioinformatics Technician is an emerging occupation that requires medical, biology, and pharmaceutical skills, along with computer information science skills.



JOB DESCRIPTION

Apply principles of bioinformatics to assist scientists in areas such as pharmaceuticals, medical technology, biotechnology, computational biology, proteomics, computer information science, biology and medical informatics. Apply bioinformatics tools to visualize, analyze, manipulate or interpret molecular data. May build and maintain databases for processing and analyzing genomic or other biological information.

SAMPLE REPORT OF JOB TITLES

- Bioinformatics Analyst
- Bioinformatics Specialist
- Bioinformatics Technician
- Biotechnician
- Museum Informatics Specialist
- Research Scientist
- Scientific Informatics Analyst

OCCUPATIONAL DATA

Occupational demand and earnings data exists for the mathematical science occupations, all other, but demand for these workers is unknown and the earnings are likely understated due to the specialized nature of this emerging occupation.

Mathematical Science Occupations, All Other (parent occupation of Bioinformatics Technicians)

- Demand: <10 annual job openings and 9.9% growth through 2028 Q3.
- Earnings: The entry hourly rate is \$23.98 (\$49,900 annual) to \$55.52 experienced hourly rate (\$115,500 annual). The mean hourly rate is \$52.51 (\$93,600 annual).

Job Postings for Bioinformatics Technicians (April 1 to June 1, 2024)

- There was one job posting for this role in Southern California (LACounty)
 - Employer: UCLA Health
 - Job title: Research Technician
 - Earnings: \$25.75- \$30.71 per hour

¹⁵ 45 National Center for O*NET Development. O*NET OnLine. Retrieved June 2, 2024, from <https://www.onetonline.org/>



INLAND PUBLIC HEALTH WORKFORCE REPORT

Top Occupations for Immediate Investment



OCCUPATIONAL FAMILY #1

Healthcare Practitioners & Technical Public Health Roles

TOP OCCUPATIONS FOR INVESTMENT

| Occupation Title | Education Level | 5-Year Empl. Change (%) | Avg. Wages (Hourly) | Annual Job Openings | Potential Training Gap |
|--------------------------------------|---------------------------------|-------------------------|---------------------|---------------------|------------------------|
| Physical Therapists | Postgraduate | 11.6% | \$57.00 | 149 | Yes |
| Occupational Therapists | Postgraduate | 9.5% | \$51.35 | 101 | Yes |
| Physician Assistants | Postgraduate | 18.9% | \$71.75 | 139 | Yes |
| Medical and Health Services Managers | Bachelor's degree | 18.7% | \$64.87 | 560 | Yes |
| Registered Nurses | Associate degree or certificate | 7.4% | \$62.24 | 2,314 | Yes |
| Medical Records Specialists | Postsecondary non-degree award | 8.7% | \$33.72 | 150 | No |

SUMMARY OF GROWTH IN OCCUPATIONAL FAMILY

| TOTAL – Healthcare Practitioners and Technical Public Health Occupations | | | |
|--|--------------------|---------------------|-----------------------|
| Total Empl. ('23) | 5-Year Δ (Jobs) | 5-Year Δ (%) | Annual Openings |
| 70,087 Jobs | +6,058 Jobs | +8.6% Growth | 5,681 Openings |

| ASSOC. / CERT-LEVEL ROLES | |
|---------------------------|------------------|
| Total Empl. ('23) | 48,095 Jobs |
| 5-Year Δ (Jobs) | +3,638 Jobs |
| 5-Year Δ (%) | +7.6% Growth |
| Annual Openings | 4,159 Openings |
| Avg. Wage Range | \$21 – \$62 / hr |

| BACHELOR'S-LEVEL ROLES | |
|--------------------------|------------------|
| Total Empl. ('23) | 5,921 Jobs |
| 5-Year Δ (Jobs) | +1,011 Jobs |
| 5-Year Δ (%) | +17.1% Growth |
| Annual Openings | 641 Openings |
| Avg. Wage Range | \$37 – \$65 / hr |

| POSTGRADUATE ROLES | |
|--------------------------|-------------------|
| Total Empl. ('23) | 16,071 Jobs |
| 5-Year Δ (Jobs) | +1,409 Jobs |
| 5-Year Δ (%) | +8.8% Growth |
| Annual Openings | 881 Openings |
| Avg. Wage Range | \$34 – \$136 / hr |



OCCUPATIONAL FAMILY #2

Community & Social Services Public Health Roles

TOP OCCUPATIONS FOR INVESTMENT

| Occupation Title | Education Level | 5-Year Empl. Change (%) | Avg. Wages (Hourly) | Annual Job Openings | Potential Training Gap |
|--|--------------------|-------------------------|---------------------|---------------------|------------------------|
| Healthcare Social Workers | Postgraduate | 10.7% | \$42.12 | 170 | No |
| Mental Health and Substance Abuse Social Workers | Postgraduate | 10.1% | \$42.42 | 130 | No |
| Social and Community Service Managers | Bachelor's degree | 11.9% | \$40.38 | 221 | No |
| Physical Therapist Assistants | Associate or cert. | 16.6% | \$39.78 | 154 | Yes |
| Massage Therapists | Associate or cert. | 13.4% | \$29.82 | 282 | Yes |
| Social and Human Service Assistants | H.S. diploma | 11.3% | \$22.70 | 594 | Yes |
| Exercise Trainers & Group Fitness Instructors | H.S. diploma | 11.6% | \$29.25 | 794 | No |
| Community Health Workers | H.S. diploma | 12.8% | \$27.97 | 92 | No |

SUMMARY OF GROWTH IN OCCUPATIONAL FAMILY

| TOTAL – Community & Social Services Public Health Occupations | | | |
|---|--------------------|----------------------|-----------------------|
| Total Empl. ('23) | 5-Year Δ (Jobs) | 5-Year Δ (%) | Annual Openings |
| 19,161 Jobs | +2,185 Jobs | +11.4% Growth | 2,827 Openings |

| HS DIPLOMA-LEVEL ROLES | |
|------------------------|------------------|
| Total Empl. ('23) | 9,475 Jobs |
| 5-Year Δ (Jobs) | +1,061 Jobs |
| 5-Year Δ (%) | +11.2% Growth |
| Annual Openings | 1,580 Openings |
| Avg Wage Range | \$17 – \$30 / hr |

| ASSOC. / CERT-LEVEL ROLES | |
|---------------------------|------------------|
| Total Empl. ('23) | 2,818 Jobs |
| 5-Year Δ (Jobs) | +412 Jobs |
| 5-Year Δ (%) | +14.6% Growth |
| Annual Openings | 496 Openings |
| Avg Wage Range | \$30 – \$40 / hr |

| BACHELOR'S-LEVEL ROLES | |
|------------------------|------------------|
| Total Empl. ('23) | 3,960 Jobs |
| 5-Year Δ (Jobs) | +410 Jobs |
| 5-Year Δ (%) | +10.4% Growth |
| Annual Openings | 451 Openings |
| Avg Wage Range | \$25 – \$61 / hr |

| POSTGRADUATE ROLES | |
|--------------------|---------------|
| Total Empl. ('23) | 2,907 Jobs |
| 5-Year Δ (Jobs) | +303 Jobs |
| 5-Year Δ (%) | +10.4% Growth |
| Annual Openings | 300 Openings |
| Avg Wage | \$42 / hr |



OCCUPATIONAL FAMILY #3

Scientific Public Health Roles

TOP OCCUPATIONS FOR INVESTMENT

| Occupation Title | Education Level | 5-Year Empl. Change (%) | Avg. Wages (Hourly) | Annual Job Openings | Potential Training Gap |
|--|-------------------|-------------------------|---------------------|---------------------|------------------------|
| Epidemiologists | Postgraduate | 15.8% | \$41.96 | 59 | Yes |
| Occupational Health and Safety Specialists | Bachelor's degree | 12.4% | \$44.92 | 150 | Yes |

SUMMARY OF GROWTH IN OCCUPATIONAL FAMILY

| TOTAL – Healthcare Practitioners and Technical Public Health Occupations | | | |
|--|------------------|----------------------|---------------------|
| Total Empl. ('23) | 5-Year Δ (Jobs) | 5-Year Δ (%) | Annual Openings |
| 6,084 Jobs | +534 Jobs | +11.4% Growth | 631 Openings |

| HS DIPLOMA-LEVEL ROLES | |
|--------------------------|-------------|
| Total Empl. ('23) | 398 Jobs |
| 5-Year Δ (Jobs) | +56 Jobs |
| 5-Year Δ (%) | +14% Growth |
| Annual Openings | 57 Openings |
| Avg. Wage | \$31 / hr |

| BACHELOR'S-LEVEL ROLES | |
|--------------------------|------------------|
| Total Empl. ('23) | 5,109 Jobs |
| 5-Year Δ (Jobs) | +421 Jobs |
| 5-Year Δ (%) | +8.2% Growth |
| Annual Openings | 521 Openings |
| Avg. Wage Range | \$31 – \$55 / hr |

| POSTGRADUATE ROLES | |
|--------------------------|------------------|
| Total Empl. ('23) | 683 Jobs |
| 5-Year Δ (Jobs) | +63 Jobs |
| 5-Year Δ (%) | +9.2% Growth |
| Annual Openings | 102 Openings |
| Avg. Wage Range | \$42 – \$60 / hr |



ADDITIONAL INFORMATION

The Rising Role of Community Health Workers

THE SCOPE OF PRACTICE FOR CHWs

CHWs play a pivotal role in addressing the Social Determinants/Drivers of Health (SDOH), recognizing the multifaceted factors beyond medical care that influence health outcomes. Their roles encompass a diverse range of functions:

- Cultural mediation
- Providing culturally appropriate education
- Care coordination and advocacy
- Social support provision
- Capacity building within communities
- Basic health assessments
- Conducting research and outreach
- Direct service delivery

EXPANDED MEDI-CAL REIMBURSEMENT

One of the primary drivers of increased demand for CHW's is their inclusion in the CalAIM Medi-Cal expansion for population health services. It is estimated that there are currently about 7,000 CHWs in California. In 2022, state leaders allocated \$281 million to train and develop more CHWs to address the healthcare practitioner shortage. The goal is to recruit, train, and ultimately certify 25,000 CHW workers. However, considering the fast-growing demographics of Inland SoCal, the number of CHWs would need to grow by 2500- 3000 to be consistent with the 10% regional share of the total California figure. Current data, albeit lagging, only supports growth from 699 to 791 between 2023 and 2028. The disparity between the current growth rate and the required expansion underscores the critical need for CHWs to expand at a much faster pace to ensure adequate and equitable healthcare delivery in the Inland SoCal.

THE NEED FOR AN EXPANDED CHW WORKFORCE

The healthcare landscape in Inland SoCal is undergoing significant shifts, driven by population growth and changing demographics. As demand for healthcare services escalates, the shortage of healthcare practitioners intensifies, necessitating innovative solutions to bridge the gap. Community Health Workers (CHWs) emerge as a vital resource in addressing these challenges. Investment in Community Health Workers (CHWs) presents an exceptional opportunity in the landscape of public health for Inland SoCal. This conclusion stems from a nuanced understanding of several key factors:

- 1. Rising Healthcare Demand**

As the population in the Inland SoCal expands, there's a corresponding surge in the demand for healthcare services. This burgeoning demand exacerbates the existing shortage of healthcare practitioners in the region.
- 2. Healthcare Practitioner Shortage**

The shortage of healthcare practitioners is a pressing issue in the IE, highlighted by projections indicating a shortfall of registered nurses and an aging healthcare workforce. CHWs offer a cost-effective solution to mitigate this shortage.
- 3. Access Disparities**

Underserved and disadvantaged communities face increasing challenges in accessing healthcare services. CHWs, as trusted members of these communities, play a pivotal role in bridging this access gap.
- 4. Changing Demographics**

The demographic composition of the Inland SoCal is evolving rapidly, with the Latinx population comprising a significant portion. Addressing the healthcare needs of this demographic requires culturally competent approaches, making CHWs indispensable.
- 5. Career Earning Opportunities**

Certified CHWs with a high school diploma have access to promising career paths with attractive earning potentials, aligning with the region's economic landscape.

For individuals seeking rewarding careers in public health, becoming a certified CHW offers a promising path. With competitive salary packages and high job security, CHWs provide an attractive option, particularly for those with a high school diploma. High schools play a crucial role in fostering interest in public health careers, including programs focused on addressing SDOH and attracting candidates from diverse backgrounds, including retirees seeking second careers. In conclusion, investing in CHWs is not only a response to current healthcare demands but also a strategic imperative for the future of public health in the Inland SoCal. By leveraging their community connections and unique skill set, CHWs can play a crucial role in advancing health equity and improving outcomes across diverse populations.



INLAND PUBLIC HEALTH WORKFORCE REPORT

Education & Training Gaps

Educating & Training Our Future Workforce

This report highlights the training and education public health occupations require to excel in their roles. Fortunately, Inland Southern California has several options for both public and private postsecondary institutions that can help train the next generation of workers. The following section of the report provides a list of training providers and the corresponding programs for each public health occupation.

DATA CONSIDERATIONS

An assessment of an educational supply (the number of awards conferred within a program leading to an occupation) and demand (the number of annual job openings) should be viewed with caution. These points provide context for understanding education, workforce development, and employment data.

GEOGRAPHIC MOBILITY

Students often relocate after completing their education which adds depth to analyzing regional workforce dynamics. This may be especially true of our graduate programs. Students may relocate from anywhere worldwide to complete a program and move back home after exiting the program. Conversely, students from outside the area can move into Inland Southern California.

STATE BOARD EXAMS

Many professions mandate passing state board exams or obtaining licensure before practice. These requirements significantly impact the transition from education to employment and shape workforce readiness. This analysis does not include any assessment of state licensing, passing of board exams, or any necessary residencies to fully enter employment.

INDIRECT JOB TRAINING

Some postsecondary programs provide training indirectly leading to jobs typically requiring only a high school diploma. This underscores the diverse pathways available for career advancement and highlights the significance of vocational and technical education in meeting workforce demands.

EMPLOYER HIRING DECISIONS

While education and credentials are important, employers ultimately have the autonomy to select candidates based on their criteria. This emphasizes the importance of skills, experience, and cultural fit alongside formal education in the hiring process.

MULTIPLE COMPLETION AWARDS

It's important to recognize that individuals may earn multiple completion awards throughout their academic journey, especially in fields where multiple certifications or degrees are common.

Four Year Colleges & Universities

AVAILABLE PUBLIC HEALTH TRAINING

The table below displays each four-year and higher institution in Inland SoCal that provides training for the public health occupations listed in this report. This table shows the type of institution, the address, and the current available net price to attend the institution per year, as recorded by the National Center of Employment Statistics.

FIGURE 42: Four-year colleges and universities offering public health and related training, Inland Southern California¹⁶

| Institution Name | Type | Address | Net Price* |
|---|--------------------------------|--|------------|
| California Baptist University | 4-year, Private not-for-profit | 8432 Magnolia Ave, Riverside, CA 92504-3297 | \$27,304 |
| California State University-San Bernardino | 4-year, Public | 5500 University Parkway, San Bernardino, CA 92407-2393 | \$8,805 |
| California University of Science and Medicine | 4-year, Private not-for-profit | 1501 Violet Street, Colton, CA 92324-1603 | N/A |
| DeVry University-California | 4-year, Private for-profit | 2970 Inland Empire Blvd, Ste 100, Ontario, CA 91764 | \$33,145 |
| La Sierra University | 4-year, Private not-for-profit | 4500 Riverwalk Parkway, Riverside, CA 92515-8247 | \$24,134 |
| Loma Linda University | 4-year, Private not-for-profit | 11139 Anderson Street, Loma Linda, CA 92350 | N/A |
| Platt College-Ontario | 4-year, Private for-profit | 3700 Inland Empire Blvd, Ontario, CA 91764 | \$24,210 |
| University of California- Riverside | 4-year, Public | 900 University Ave, Riverside, CA 92521 | \$11,811 |
| University of Redlands | 4-year, Private not-for-profit | 1200 E. Colton Ave, Redlands, CA 92373 | \$31,700 |
| West Coast University- Ontario | 4-year, Private for-profit | 2855 E. Guasti Rd., Ontario, CA 91761 | \$42,678 |

*The Average Net Price for 2021-2022 generated for full-time beginning undergraduate students who were awarded grant or scholarship aid from federal, state, or local governments or the institution. For public institutions, only students paying the in-state or in-district rate are included. For institutions that charge students by program, the net price is generated for the institution's largest program.

¹⁶ National Center for Employment Statistics (2024). College Navigator. <https://nces.ed.gov/collegenavigator/?s=CA&zc=91784&zcd=100&of=3>

POTENTIAL TRAINING GAPS BY OCCUPATIONAL GROUP

The following charts show the possible training gaps based on the number of annual job openings and the number of postsecondary awards conferred in related programs.

Each institution reports awards by the program's Classification of Instructional Program (CIP). Students in an educational institution with a transfer degree or certificate than the typical education required are counted in the column "Pipeline Students." For instance, students at a community college who are obtaining a degree in a field that requires a bachelor's degree are included. These students, though not currently ready for employment, represent a potential pipeline in the workforce in the near future.



Healthcare Practitioners & Technical Public Health Roles

FIGURE 43: Program Completion Under/Oversupply – Postgraduate, Bachelor's, and Higher: Healthcare & Technical Roles

| Occupation Title | Typical Edu. Required | Annual Job Openings | Completions Aligned with Edu. Required | Pipeline Students | Undersupply or Oversupply |
|--------------------------------------|---------------------------------|---------------------|--|-------------------|---------------------------|
| Dentist | Doctoral or professional degree | 75 | 138* | | 63* |
| Optometrists | Doctoral or professional degree | 30 | 0 | | -30 |
| Pharmacists | Doctoral or professional degree | 171 | 72 | | -99 |
| Physical Therapists | Doctoral or professional degree | 149 | 87 | | -62 |
| Family Medicine Physicians | Doctoral or professional degree | 45 | 281* | 281* | 236* |
| General Internal Medicine Physicians | Doctoral or professional degree | 28 | | 253* | |
| Obstetricians and Gynecologists | Doctoral or professional degree | 9 | | 272* | |
| Pediatricians, General | Doctoral or professional degree | 13 | | 268* | |
| Physicians, All Other | Doctoral or professional degree | 98 | | 183* | |
| Athletic Trainers | Master's degree | 15 | 279 | 178 | |
| Genetic Counselors | Master's degree | 2 | 0 | | -2 |
| Nurse Midwives | Master's degree | 6 | 0 | | -6 |
| Occupational Therapists | Master's degree | 101 | 53 | | -48 |
| Physician Assistants | Master's degree | 139 | 65 | | -74 |
| Dietitians and Nutritionists | Bachelor's degree | 71 | 101 | 36 | 30 |
| Exercise Physiologists | Bachelor's degree | 10 | 271 | 178 | 261 |
| Medical and Health Services Managers | Bachelor's degree | 560 | 171 | | -389 |

*An oversupply may not exist since multiple specialty occupations are reported under the same CIP program, including occupations not examined in this report.



Community & Social Services Public Health Roles

FIGURE 44: Program Completion Under/Oversupply – Postgraduate, Bachelor’s, and Higher: Community & Social Services

| Occupation Title | Typical Edu. Required | Annual Job Openings | Completions Aligned with Edu. Required | Pipeline Students | Undersupply or Oversupply |
|---|-----------------------|---------------------|--|-------------------|---------------------------|
| Healthcare Social Workers | Master’s degree | 170 | 339 | | 169 |
| Mental Health and Substance Abuse Social Workers | Master’s degree | 130 | 304 | 16 | 174 |
| Social and Community Service Managers | Bachelor’s degree | 221 | 395 | | 174 |
| Social Science Research Assistants | Bachelor’s degree | 25 | 733 | 730 | 708 |
| Emergency Management Directors | Bachelor’s degree | 6 | 0 | 4 | -6 |
| Health Education Specialists | Bachelor’s degree | 76 | 155 | | 79 |
| Community and Social Service Specialists, All Other | Bachelor’s degree | 123 | 47 | 104 | -76 |



Scientific Public Health Roles

FIGURE 45: Program Completion Under/Oversupply – Postgraduate, Bachelor’s, and Higher: Scientific Occupations

| Occupation Title | Typical Edu. Required | Annual Job Openings | Completions Aligned with Edu. Required | Pipeline Students | Undersupply or Oversupply |
|---|-----------------------|---------------------|--|-------------------|---------------------------|
| Epidemiologists | Master’s degree | 59 | 0 | | -59 |
| Health and Safety Engineers, Except Mining Safety Engineers | Bachelor’s degree | 12 | 26 | | 14 |
| Environmental Scientists and Specialists, Including Health | Bachelor’s degree | 59 | 177 | 4 | 118 |
| Microbiologists | Bachelor’s degree | 10 | 54 | | 44 |
| Occupational Health and Safety Specialists | Bachelor’s degree | 150 | 14 | | -136 |
| Medical and Clinical Laboratory Technologists | Bachelor’s degree | 126 | 24 | | -102 |
| Medical and Clinical Laboratory Technicians | Bachelor’s degree | 125 | 2 | | -123 |

Two Year Colleges & Trainings Programs

AVAILABLE PUBLIC HEALTH TRAINING

The table below displays each two-year institution in Inland SoCal that provides training for the public health occupations listed in this report. It includes the type of institution, the address, and the current available net price to attend the institution per year, as recorded by the National Center of Employment Statistics.

FIGURE 46: Two-year colleges and universities offering public health and related training, Inland Southern California¹⁷

| Institution Name | Type | Address | Net Price* |
|---|------------------------------|--|-------------|
| American Career College- Ontario | 2-year, Private for-profit | 3130 East Sedona Court, Ontario, California 91764 | \$27,126.00 |
| American College of Healthcare and Technology | 2-year, Private for-profit | 11801 Pierce St., Suite 100, Riverside, California 92505 | \$10,650.00 |
| Beaumont Adult School | < 2-year, Public | 1575 Cherry Ave, Beaumont, California 92223 | \$28,597.00 |
| California Nurses Educational Institute | 2-year, Private for-profit | 5200 E. Ramon Rd. Suite I-1, Palm Springs, California 92264 | \$19,930.00 |
| Chaffey College | 2-year, Public | 5885 Haven Ave, Rancho Cucamonga, California 91737-3002 | \$14,778.00 |
| College of the Desert | 2-year, Public | 43-500 Monterey Ave, Palm Desert, California 92260 | \$13,704.00 |
| Concorde Career College- San Bernardino | 2-year, Private for-profit | 201 East Airport Drive, Suite A, San Bernardino, California 92408-3403 | \$22,455.00 |
| Copper Mountain Community College | 2-year, Public | 6162 Rotary Way, Joshua Tree, California 92252 | \$9,038.00 |
| Crafton Hills College | 2-year, Public | 11711 Sand Canyon Road, Yucaipa, California 92339-1799 | \$15,676.00 |
| International School of Beauty Inc | < 2-year, Private for-profit | 72261 Hwy 111 Ste 121-B, Palm Desert, California 92260-2740 | \$17,356.00 |
| Milan Institute-Palm Desert | < 2-year, Private for-profit | 75-030 Gerald Ford Drive, Suite 203, Palm Desert, California 92211 | \$27,576.00 |
| Moreno Valley College | 2-year, Public | 16130 Lasselle St, Moreno Valley, California 92551-2045 | \$10,897.00 |
| Mt San Jacinto Community College District | 2-year, Public | 1499 N State St, San Jacinto, California 92583-2399 | \$8,855.00 |
| Palo Verde College | 2-year, Public | One College Drive, Blythe, California 92225-0001 | \$11,722.00 |

¹⁷ National Center for Employment Statistics (2024). College Navigator. <https://nces.ed.gov/collegenavigator/?s=CA&zc=91784&zd=100&of=3>

| | | | |
|--|----------------------------|--|-------------|
| Platt College- Riverside | 2-year, Private for-profit | 6465 Sycamore Canyon Blvd Ste 100, Riverside, California 92507 | \$16,922.00 |
| Riverside City College | 2-year, Public | 4800 Magnolia Avenue, Riverside, California 92506-1299 | \$5,626.00 |
| San Bernardino Valley College | 2-year, Public | 701 S Mt Vernon Ave, San Bernardino, California 92410 | \$6,324.00 |
| Summit College | 2-year, Private for-profit | 804 East Brier Drive, San Bernardino, California 92408 | \$25,442.00 |
| UEI College- Ontario | 2-year, Private for-profit | 4730 Ontario Mills Parkway, Ontario, California 91764 | \$21,362.00 |
| UEI College- Riverside | 2-year, Private for-profit | 1860 University Avenue, Riverside, California 92507 | \$22,112.00 |
| Victor Valley College | 2-year, Public | 18422 Bear Valley Road, Victorville, California 92395-5850 | \$14,411.00 |
| Westech College | 2-year, Private for-profit | 9460 Sierra Ave., Fontana, California 92335 | \$12,789.00 |
| West Coast University- Ontario | 2-year, Private for-profit | 2855 E. Guasti Rd, Ontario, CA 91761 | \$42,678.00 |
| Xavier College- Ontario | 2-year, Private for-profit | 218 W. Sixth Street, Ontario, CA 91762 | \$19,999.00 |
| Baldy View Regional Occupational Program | < 2-year, Public | 1501 S. Bon View Avenue, Ontario, CA 91761 | \$9,120.00 |
| Barstow Community College | 2-year, Public | 2700 Barstow Road, Barstow, CA 92311 | \$8,800.00 |
| Citrus College | 2-year, Public | 1000 West Foothill Boulevard, Glendora, CA 91741-1899 | \$11,456.00 |
| Norco College | 2-year, Public | 2001 Third Street, Norco, CA 92860 | \$10,121.00 |

*The Average Net Price for 2021-2022 generated for full-time beginning undergraduate students who were awarded grant or scholarship aid from federal, state, or local governments, or the institution. For public institutions, only students paying the in-state or in-district rate are included. For institutions that charge students by program, the net price is generated for the institution's largest program.

POTENTIAL TRAINING GAPS BY OCCUPATIONAL GROUP

The following charts show the possible shortage or surplus of job opportunities based on the number of annual job openings and the reported postsecondary awards for each program. Each institution reports awards by the program's Classification of Instructional Program (CIP).



Healthcare Practitioners & Technical Public Health Roles

FIGURE 47: Program Completion Under/Oversupply – Associate Degree & Certificate: Healthcare & Technical Roles

| Occupation Title | Typical Education Required | Annual Job Openings | Completions Aligned with Edu. Required | Undersupply or Oversupply |
|---|--------------------------------|---------------------|--|---------------------------|
| Registered Nurses | Bachelor's degree | 2314 | 1969 | -345 |
| Cardiovascular Technologists and Technicians | Associate degree | 41 | 0 | -41 |
| Dietetic Technicians | Associate degree | 37 | 136 | 99 |
| Health Information Technologists and Medical Registrars | Associate degree | 26 | 137 | 111 |
| Dental Assistants | Postsecondary non-degree award | 765 | 581 | -184 |
| Medical Records Specialists | Postsecondary non-degree award | 150 | 169 | 19 |
| Phlebotomists | Postsecondary non-degree award | 178 | 1 | -177 |
| Licensed Vocational Nurses | Postsecondary non-degree award | 648 | 793 | 145 |



Community & Social Services Public Health Roles

FIGURE 48: Program Completion Under/Oversupply – Associate Degree, Certificate, & High School: Community & Social Services

| Occupation Title | Typical Education Required | Annual Job Openings | Completions Aligned with Edu. Required | Undersupply or Oversupply |
|---|-----------------------------------|---------------------|--|---------------------------|
| Occupational Therapy Assistants | Associate degree | 60 | 0 | -60 |
| Physical Therapist Assistants | Associate degree | 154 | 78 | -76 |
| Massage Therapists | Postsecondary non-degree award | 282 | 0 | -282 |
| Social and Human Service Assistants | High school diploma or equivalent | 594 | 125 | -469 |
| Community Health Workers | High school diploma or equivalent | 92 | 147 | 55* |
| Occupational Therapy Aides | High school diploma or equivalent | 6 | 0 | -6 |
| Physical Therapist Aides | High school diploma or equivalent | 94 | 78 | -16 |
| Exercise Trainers and Group Fitness Instructors | High school diploma or equivalent | 794 | 818 | 24 |

*One of the primary drivers of increased demand for CHW's is their inclusion in the CalAIM Medi-Cal expansion for population health services. It is estimated that there are currently about 7,000 CHWs operating in California. In 2022, state leaders allocated \$281 million to train and develop more CHWs to address the healthcare practitioner shortage. The goal is to recruit, train, and ultimately certify 25,000 CHW workers. However, considering the fast-growing demographics of the IE, the number of CHWs would need to grow by 2500-3000 to be consistent with the 10% regional share of the total California figure. Current data, albeit lagging, only supports growth from 699 to 791 between 2023 and 2028. The disparity between the current growth rate and the required expansion underscores the critical need for CHWs to expand at a much faster pace to ensure adequate and equitable healthcare delivery in the Inland Empire.



Scientific Public Health Roles

FIGURE 49: Program Completion Under/Oversupply – Associate Degree, Certificate, & High School: Scientific Occupations

| Occupation Title | Typical Education Required | Annual Job Openings | Completions Aligned with Edu. Required | Undersupply or Oversupply |
|--|-----------------------------------|---------------------|--|---------------------------|
| Occupational Health and Safety Technicians | High school diploma or equivalent | 57 | 0 | -57 |

High School Pathways



Inland Southern California’s public and charter high schools increasingly recognize the significance of integrating health education into their curriculum. Health Science and Medical Technology industry sector pathways are offered at 117 Inland SoCal charter high schools, public high schools, and ROPs across the following pathways that equip students with the essential skills and knowledge required for careers in healthcare¹⁸.

- Biotechnology Research and Development
- Biotechnology
- Healthcare Administrative Services
- Mental and Behavioral Health
- Patient Care
- Public and Community Health

By offering these pathways, high schools are preparing students for future careers in healthcare and nurturing a new generation of public health professionals. Introducing students to the field of public health during their formative years opens opportunities for exploration and inspires them to consider careers focused on improving community health outcomes. These pathways highlight the potential for high schools to serve as incubators for cultivating interest and expertise in public health among students. Schools can empower students to make meaningful contributions to the health and well-being of their communities in the future by providing opportunities for hands-on experience, mentorship, and exposure to real-world public health challenges.

Further details about the pathways in healthcare can be found [here](#).

¹⁸ All high school pathway data in this section is sourced from Inland Empire/Desert Career Education Programs, Pathways & Employers Map (2023). Health High School Pathways. https://experience.arcgis.com/experience/f626a5b21f6a45fcaf050d1b1e42272a#data_s=id%3AdataSource_16-0%3A5

PUBLIC HEALTH PATHWAYS

Public Health Pathways are offered at eight high schools and ROPS in the two-county area. These pathways give students insights into occupations or functions involved primarily in environmental health, community health and education, epidemiology, disaster management, and geriatrics.¹⁹

FIGURE 50: High schools offering public health and related training, Inland Southern California

| High School Name | District Name | Pathway | Local Pathway Focus |
|---|--|-----------------------------|---------------------|
| Cathedral City High | Palm Springs Unified | Public and Community Health | Public health |
| Colony High | Chaffey Joint Union High School | Public and Community Health | Public health |
| Elsinore High | Lake Elsinore Unified | Public and Community Health | Sports Medicine |
| Fontana A. B. Miller | Fontana Unified | Public and Community Health | Medical Professions |
| Green Valley Continuation High/CRY-ROP | Yucaipa-Calimesa Joint Unified/Colton-Redlands-Yucaipa ROP | Public and Community Health | Public Health |
| SIATech Indio Independent Study High School | Charter School | Public and Community Health | Medical Professions |
| SIATech Moreno Valley Independent Study High School | Charter School | Public and Community Health | Medical Professions |
| SIATech Perris Independent Study High School | Charter School | Public and Community Health | Medical Professions |

MENTAL & BEHAVIORAL HEALTH PATHWAYS

Mental and behavioral health pathways are offered at four Inland SoCal high schools and ROPs and relate to occupations that assist clients on their journey toward better health. Collaborating with other departments as members of interdisciplinary teams of mental health professionals, such as psychiatrists, psychologists, registered nurses, and other disciplines, they assist with the delivery of appropriate, quality treatment to patients with behavioral health concerns, psychological crises, and other biopsychological problems.²⁰

FIGURE 51: High schools offering mental and behavioral health, Inland Southern California

| High School Name | District Name | Pathway | Local Pathway Focus |
|-----------------------------------|--|------------------------------|----------------------------|
| Barstow High | Barstow Unified | Mental and Behavioral Health | Mental Health and Wellness |
| Coachella Valley High | Coachella Valley | Mental and Behavioral Health | Mental Health |
| Bloomington High/CRY-ROP | Colton Joint Unified/Colton-Redlands-Yucaipa ROP | Mental and Behavioral Health | Mental Health |
| Redlands East Valley High/CRY-ROP | Redlands Unified/Colton-Redlands-Yucaipa ROP | Mental and Behavioral Health | Mental Health |

¹⁹ California Department of Education (2024). California Career Technical Education Model Curriculum Standards. <https://www.cde.ca.gov/ci/ct/sf/documents/healthmedical.pdf>

²⁰ California Department of Education (2024). California Career Technical Education Model Curriculum Standards. <https://www.cde.ca.gov/ci/ct/sf/documents/healthmedical.pdf>

BIOTECHNOLOGY PATHWAYS

Biotechnology pathways relate to occupations and functions relevant to understanding and solving biomedical problems and creating products to improve the quality of human life.²¹ This pathway is offered at 16 local high schools and ROPs.

| High School Name | District Name | Pathway | Local Pathway Focus |
|--------------------------------|---------------------------------|--|---------------------|
| Alta Loma High | Chaffey Joint | Biotechnology Research and Development | Biotechnology |
| Arlington High | Riverside Unified | Biotechnology Research and Development | Biomedical |
| California School for the Deaf | California School for the Deaf | Biotechnology | Biotechnology |
| Chino Hills High | Chino Valley Unified | Biotechnology | Biomedical |
| Colony High | Chaffey Joint Union High School | Public and Community Health | Forensic Biology |
| Eleanor Roosevelt High | Corona-Norco Unified | Biotechnology | Biotechnology |
| Fontana High | Fontana Unified | Biotechnology | Biotechnology |
| Heritage High | Perris Union High School | Biotechnology Research and Development | Biomedical |
| La Sierra High | Alvord Unified | Biotechnology | Biomedical |
| Pacific High | San Bernardino City Unified | Biotechnology | Biomedical |
| Palm Desert High | Desert Sands Unified | Biotechnology | Biomedical |
| Paloma Valley High | Perris Union High School | Biotechnology Research and Development | Biomedical |
| San Geronio High | San Bernardino City Unified | Biotechnology | Biomedical |
| Springs Charter - Temecula | Charter School | Biotechnology | Biotechnology |
| Victor Valley High | Victor Valley Union High School | Biotechnology | Pharmacy Technician |
| Yucaipa High | Yucaipa-Calimesa Joint Unified | Biotechnology | Biomedical |

²¹ California Department of Education (2024). California Career Technical Education Model Curriculum Standards. <https://www.cde.ca.gov/ci/ct/sf/documents/healthmedical.pdf>

Addressing Education & Training Gaps

Inland SoCal has a strong educational infrastructure and renowned institutions, which positions the region to meet the evolving needs of public health domains. By addressing training gaps and harnessing the potential of high school pathways, the region can prepare for future pandemics and cultivate a proficient workforce adept at navigating public health complexities.

PUBLIC HEALTH – EDUCATIONAL PARTNERSHIPS

Public health organizations should continue to partner with our local postsecondary educational institutions. Many already provide educational programs that lead to the occupations in this report. A few occupations do not have any known local training programs. For example, there is no known training program for epidemiologists in the two-county area. For programs that have potential gaps or undersupply, public health colleges and organizations should continue to culture relationships and discuss methods of attracting more talent into these critical fields.

EARLY EXPOSURE FOR HIGH SCHOOL STUDENTS

There is an opportunity to introduce high school students to public health opportunities while still in school. Health Science and Medical Technology industry sector pathways are offered at 117 high schools in the two-county region. Public and Community Health pathways are offered at eight high schools and ROPs, Biotechnology pathways are offered at 16 high schools and ROPS, and Mental and Behavioral Health pathways are found at four high schools and ROPs. Additionally, over 90 high school pathways exist for students interested in careers in the broader health industry. It would be beneficial to work with students beginning their career exploration and introduce them to the public health space. Public health entities and stakeholders could benefit from developing strategic partnerships with educational institutions to train and immerse students in public health career opportunities and internships and promote the benefits of choosing a career in public health over private practice.

COMPETITIVE COMPENSATION & RECRUITMENT STRATEGIES

Public health employers should offer competitive compensation packages to attract and retain the best talent. Highlighting retirement benefits, a diverse population, and a relatively lower cost of living with excellent access to amenities in our neighboring coastal communities could attract potential employees.

Our region can equip individuals with the knowledge and skills to address the community's health concerns effectively, through targeted investments in education and strategic workforce development initiatives.

This will bolster the region's capacity to respond to health crises swiftly and decisively, elevating community health outcomes. By fostering collaboration across education, public health, general healthcare, and the community, we can collectively work towards building a more resilient Riverside and San Bernardino counties capable of thriving in the future.



INLAND PUBLIC HEALTH WORKFORCE REPORT

Strategic Recommendations and Action Plan

Overview of Recommendations

The urgency and importance of strengthening the public health workforce in Inland Southern California cannot be overstated. This region, with its unique challenges and opportunities, requires a cross-sectoral approach to cultivate a workforce fit to address the evolving health needs of its diverse communities.

By advocating for funding, fostering strategic partnerships, and implementing awareness initiatives, we can cultivate a resilient public health workforce capable of addressing the pressing health issues facing the region. Collaboration across departments of public health, academic institutions, high schools, and CBOs is paramount in building a sustainable framework for public health workforce development.

In this shared endeavor, we must recognize the interconnectedness of our efforts and the collective impact we can achieve. Together, we can pave the way for a healthier future for residents of the Inland region, empowering communities and advancing public health outcomes for generations to come.

FOCUS AREA #1

Closing the Gap Between Training and Job Requirements

ACTION #1: Establish an Academic Public Health Department

Formalize an Academic Public Health Department by 2025, involving at least 5 institutions from public health, health systems, and schools.

- 1 YEAR (2025) – Involve 5-7 institutions (public health, health systems, schools)
- 5 YEAR (2030) – Grow to involve 10-12 institutions
- 10-YEAR (2035) – Expand collaboration to 15-20 institutions.

ACTION PLAN

- Identify participating partners
- Develop and formalize affiliation agreements
- Collaboratively define objectives for the working group
- Hire a fellow to oversee the committee
- Hold quarterly meetings to facilitate collaboration

ACTION #2: Expand Paid Internship Opportunities

Increase access to real-world training by providing 100 new paid internships annually to high school and college students.

- 1 YEAR (2025) – Provide 50 to 100 additional paid internships
- 5 YEAR (2030) – Provide 200 to 300 paid internships annually
- 10-YEAR (2035) – Provide 500 to 600 paid internships annually

ACTION PLAN

- Solicit employer participation through direct outreach
- Secure funding to subsidize internships

ACTION #3: Develop a Formal Mentor Program & Network

Create a centralized database of at least 50 experienced public health professionals to offer mentorship to aspiring students.

- 1 YEAR (2025) – Recruit 30-50 mentors and match them with 50-75 students.
- 5 YEAR (2030) – Recruit 150-200 mentors and match them with 250-300 students.
- 10-YEAR (2035) – Grow to 300-400 mentors, mentoring 500-600 students/year.

ACTION PLAN

- Develop the web database
- Recruit and vet professional mentors
- Solicit student applications
- Initiate matchmaking process
- Implement feedback and reporting mechanisms

FOCUS AREA #2

Building Interest to Fill Demand in Public Health Careers

ACTION #1: Expand Work Based Learning (WBL) Programs

Increase regional high school participation in public health-focused work-based learning (WBL) tracks from 10% to 25% by 2029.

- 1 YEAR (2025) – 10-15 additional high schools participating in WBL programs
- 5 YEAR (2030) – expand to 25-30 high schools participating in WBL programs
- 10-YEAR (2035) – 50+ high schools participating in WBL programs regionally

ACTION PLAN

- Collaborate with high school educators to develop a public health pathway
- Pilot public health pathway at existing schools currently offering WBL
- Leverage case studies to expand participation at neighboring high schools
- Secure additional grant funding to subsidize program provision

ACTION #2: Align Public Health Curriculum to Real Job Demands

Align curriculum with the evolving demands of the public health sector, emphasizing practical skills and interdisciplinary approaches.

- 1 YEAR (2025) – integrate updated public health modules into 3-5 institutions, reaching 200-300 students
- 5 YEAR (2030) – Expand to 10-12 institutions, training 800-1,000 students/year
- 10-YEAR (2035) – Implement in 20+ institutions, training 2,000+ students/year

ACTION PLAN

- Collaborate with public health departments to ensure curriculum relevance
- Integrate relevant public health topics & emphasize social determinants of health

ACTION #3: Host an Annual Public Health Career Fair/Boot Camp

Launch the inaugural Inland Health Career Fair by 2025, exposing at least 1,000 job seekers to a wide breadth of careers in public health.

- 1 YEAR (2025) – attract 1,000+ job seekers and 20+ employers
- 5 YEAR (2029) – attract 2,500+ job seekers and 50+ employers
- 10-YEAR (2034) – attract 5,000+ job seekers and 75-100 employers annually

ACTION PLAN

- Secure sponsorship from public health employers and workforce development
- Engage media partners, workforce development agencies, and public health schools to promote the fair the potential job candidates
- Promote career paths and organize or participate in career exploration events such as the Inland Health Professions Conference for high school students, with guest speakers from the public health sector

Proceed to FOCUS AREA #3



FOCUS AREA #3

Increasing Retention Through Modernized HR Practices

ACTION #1: Conduct a Recruitment Process Review

Review and assess recruitment processes to reduce job vacancies by 20% and reduce the time positions remain open from 60 to 45 days.

- 1 YEAR (2025) – assess Public Health Depts and reduce vacancy duration by 10%
- 5 YEAR (2030) – 15-20 employers assessed, reducing vacancy duration by 20%
- 10-YEAR (2035) – 30+ employers assessed, reducing vacancy duration by 30%

ACTION PLAN

- Secure the participation of county Public Health Departments
- Recruit additional public and private employers to participate in the review
- Enlist a consultant to evaluate current recruitment methods and recommend improvements in the form of standardized best practices
- Initiate an implementation subcommittee to drive adoption of best practices

ACTION #2: Modernize and Streamline the Hiring Process

Shorten the hiring cycle from an average of 60 to 30 days by 2029.

- 1 YEAR (2025) – Reduce the hiring cycle from 60 days to 45 days
- 5 YEAR (2030) – Reduce the hiring cycle to 30 days
- 10-YEAR (2035) – Maintain a consistent 20-25 days average hiring cycle

ACTION PLAN

- Assess the findings of the hiring/application process audit
- Implement recommended changes to streamline recruitment

Addendum

Methodology

This report focuses on occupations selected by the public health committee that best represent the jobs that public health organizations may employ. Job titles were identified through O*Net's inventory of job titles and matched to the Bureau of Labor Statistics (BLS) Standard Occupational Classification (SOC) System. This report's labor market demand and educational supply data are sourced from the JobsEQ 2023 Q3 series, released in February 2024.

This report's top occupational recommendations have high employment demand and offer at least an average wage at or above the MIT Living Wage Standard for the Riverside-San Bernardino-Ontario MSA. For this study, an occupation is considered to have high demand if it has at least, or close to, 100 annual job openings and its growth is faster than the average non-health occupations in its educational level category. Occupations are considered to have a high wage if their median hourly wage meets or exceeds \$25.77 per hour or \$53,599 annually, the MIT living wage standard for a single adult in the area.

Definitions

- ANNUAL JOB OPENINGS – The calculated projected sum of job demand due to job change and replacement needs (Annual Change + Annual Replacement Jobs=Annual Job Openings).
- AVERAGE EARNINGS – Mean average hourly or annual earnings for the occupation.
- CURRENT EMPLOYMENT (2023–Q3) – The estimated number of jobs for each occupation during the third quarter of 2023. The third quarter of the year is considered the most stable because it is usually unaffected by seasonal changes in employment.
- EMERGING OCCUPATION – those occupations are expected to become more prevalent in the future due to trends such as technological advancements, shifts in consumer behavior, or changes in industry practices.
- ENTRY WAGES – Calculated 20th percentile wage by occupation.
- ETHNICITY – share of incumbent workers that identify as Hispanic or Latino.
- EXPERIENCE WAGES – Calculated 80th percentile wage by occupation.
- FIVE YEAR EMPLOYMENT CHANGE (2028–Q3) – The number of projected jobs each occupation will gain or lose over the next five years between the third quarter of 2023 and the third quarter of 2028.

- GENDER – share of works that identify as female.
- INLAND PUBLIC HEALTH LEADERSHIP CONSORTIUM – The Inland Public Health Leadership Consortium (“Public Health Committee”) is a working group of the Inland Health Professions Consortium, consisting of leaders across public health departments, public health universities, health plans, and health systems
- UNEMPLOYMENT RATE – share of occupational workers that are unemployed. A low unemployment rate indicates that workers may have an easy employment search. Inversely, employers may have a difficult time finding an available workforce.
- WORKERS AGE 55+ – Share of workers aged 55 and older who may be eligible for retirement in the next ten years, assuming many workers are eligible for retirement at age 65.

Appendices

To access the 300+ page raw data appendices that aided in the composition of this report, please visit www.we-reachout.org/HWFReport2024.