Labor Market Analysis for Program Review: 2104.00/Human Services (*Community Social Services AA Degree [SAC.CSS.AA]*)
Orange County Center of Excellence, October 2024

coe
FOR LABOR MARKET RESEARCH
ORANGE COUNTY

Program reviews are conducted by individual colleges to periodically review curriculum of their existing programs, and in the case of career technical education programs, ensure continued alignment with regional labor market needs. Because a program review evaluates an existing program, rather than establishing a new program, additional supply will not be added; therefore, the endorsement criteria included in this report is determined slightly differently than it is for a new program that requires regional recommendation.

Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met	☐	Endorsed: Some LMI Criteria Met	☒	Not LMI Endorsed	☐

Program LMI Endorsement Criteria		
Supply Gap:	Yes ☑	No ☐
	Comments: there is projected to be **3,220 annual job openings** throughout Los Angeles and Orange counties for these social services occupations, which **is more than the 1,239 awards conferred by educational institutions.**	
Self-Sufficiency Standard Living Wage[1]:	Yes ☐	No ☑
	Comments: **all annual job openings** for these social services occupations **have entry-level hourly wages below the OC living wage of $27.13**.	
Education:	Yes ☑	No ☐
	Comments: Though three of these social services occupations typically require a high school diploma, **between 25% and 34% of workers in the field have completed some college or an associate degree as their highest level of education.**	
Additional Considerations		
Emerging Occupation(s):	Yes ☐	No ☑
	Comments: N/A	
OC Resilient Job(s):	Yes ☐	No ☑
	Comments: See Resilient Jobs and US News & World Report Best Jobs	
U.S. News & World Report 2024 Best Jobs List[2]:	Yes ☑	No ☐
	Comments: See Resilient Jobs and US News & World Report Best Jobs	

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[1] At the direction of the California Community College Chancellor's Office, the living wage endorsement criteria in this report uses the University of Washington's Center for Women's Welfare Self-Sufficiency Standard, which the COE refers to as a living wage, to determine Orange County's living wage of $27.13, last updated in March 2024.
[2] "100 Best Jobs of 2024," U.S. News & World Report, accessed May 7, 2024, https://money.usnews.com/careers/best-jobs/rankings/the-100-best-jobs.

The Orange County Center of Excellence for Labor Market Research (OC COE) prepared this report to determine whether there is a supply gap in the Los Angeles/Orange County regional labor market related to four middle-skill occupations:

- *Social and Human Service Assistants (21-1093)*
- *Community Health Workers (21-1094)*

Based on the available data there appears to be a supply gap for these social services occupations and typical education requirements for these occupations align with a community college education. However, all annual job openings have entry-level wages below the Self-Sufficiency Standard living wage. **Therefore, due to some of the regional labor market criteria being met, the COE endorses this proposed program.**

Exhibit 1 lists the occupational demand, supply, typical entry-level education, and educational attainment for the occupations included in this report.

Exhibit 1: Labor Market Endorsement Summary

Occupation (SOC)	Demand (Annual Openings)	Supply (CC and Non-CC)	Entry-Level Hourly Earnings (25th Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Social and Human Service Assistants (21-1093)	LA: 2,261 OC: 557 *TTL: 2,817*	LA: 504 OC: 648 *TTL: 1,152*	OC: $18.09	High school diploma or equivalent	34%
Community Health Workers (21-1094)	LA: 315 OC: 88 *TTL: 403*	LA: 81 OC: 6 *TTL: 87*	OC: $20.55	High school diploma or equivalent	25%
Total	**3,220**	**1,239**	**N/A**	**N/A**	**N/A**

Demand:

- The number of jobs related to these social services occupations is projected to increase 14% through 2028, equating to 3,220 annual job openings.
- Hourly entry-level wages for these social services occupations range from $18.09 to $20.55 in Orange County; all annual job openings have entry-level wages below the Self-Sufficiency Standard living wage.
- There were 2,898 online job postings for these social services occupations over the past 12 months. The highest number of postings were for community health workers, housing navigators, and social services assistants.
- The typical entry-level education for these social services occupations is a high school diploma or equivalent.
- Between 25% and 34% of workers in the field have completed some college or an associate degree as their highest level of educational attainment.

Supply:

- There was an average of 835 awards conferred by 23 community colleges in Los Angeles and Orange Counties from 2020 to 2023.
- Non-community college institutions conferred an average of 403 awards from 2019 to 2022.

- Orange County community college students that exited human services programs in the 2020-21 academic year had a median annual wage of $34,384 ($16.53 per hour) after exiting the program and 32% attained the regional living wage.
- Throughout Orange County, 85% of human services students that exited their program in 2019-20 reported that they are working in a job closely related to their field of study.

Demand

Occupational Projections:

Exhibit 2 shows the annual percent change in jobs for these social services occupations from 2018 through 2028. Though there was a 7% decline across all occupations from 2019 to 2020 due to the COVID-19 pandemic, employment in these social services occupations declined only 1% during the same period.

In the two years preceding the pandemic, employment for these occupations slightly increased in Orange County, with a 0.4% increase in 2018, followed by a 2% increase in 2019. After a decrease in employment in 2020 and an increase through 2022, employment declined in 2023, but is projected to increase each year through 2028, experiencing a higher rate relative to all occupations in Los Angeles and Orange counties.

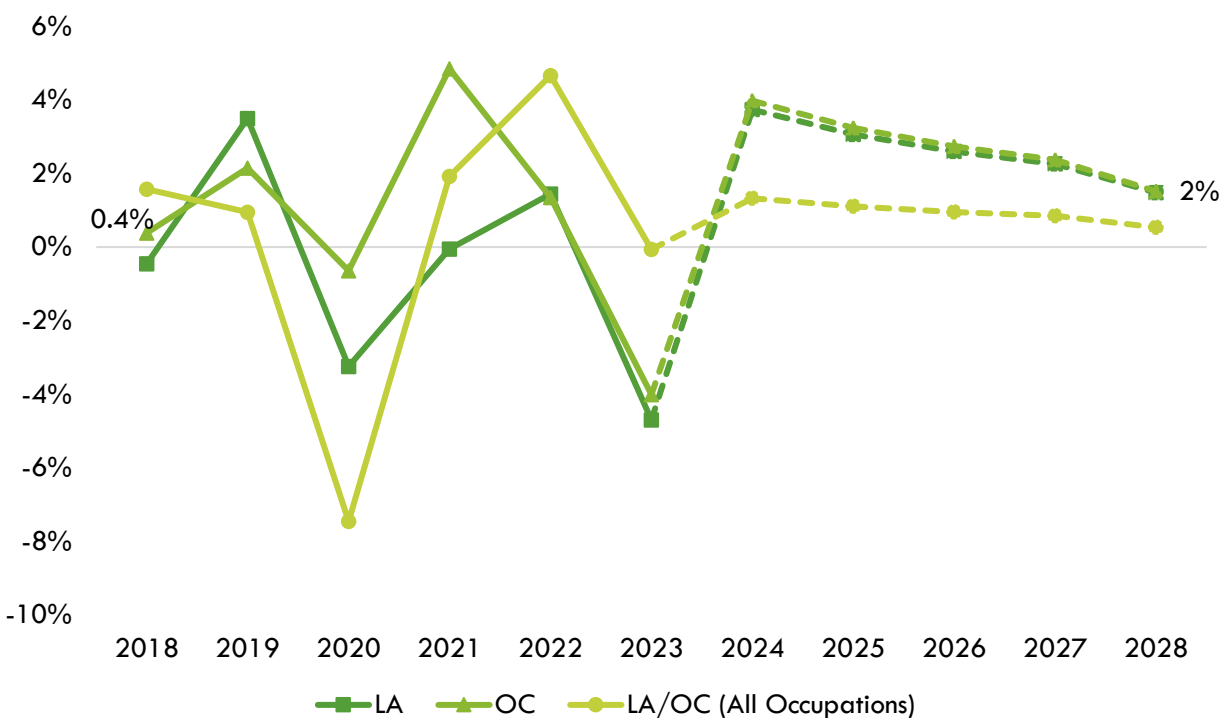Exhibit 2: Annual Percent Change in Jobs for Social Services Occupations, 2018-2028

Exhibit 3 shows the five-year occupational demand projections for these social services occupations. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 14% through 2028. There is projected to be 3,220 jobs available annually.

Exhibit 3: Occupational Demand in Los Angeles and Orange Counties[3]

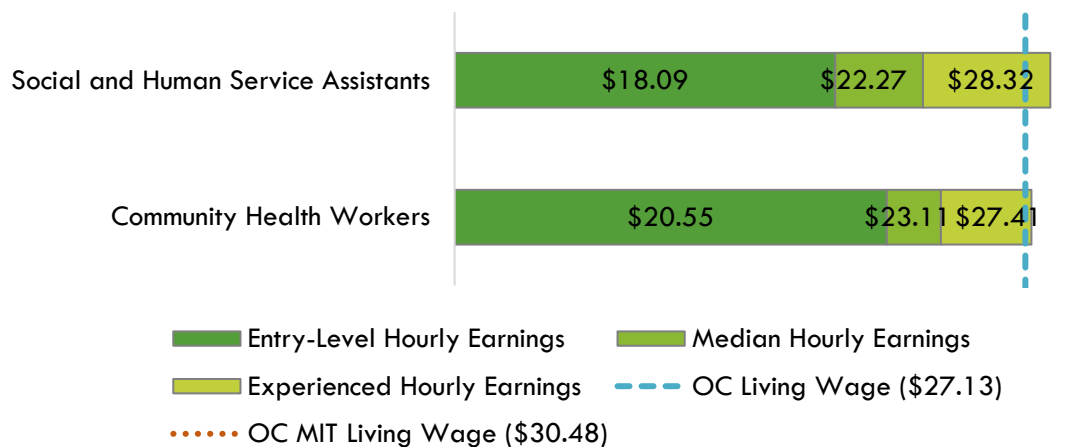| Geography	2023 Jobs	2028 Jobs	2023-2028 Change	2023-2028 % Change	Annual Openings
Los Angeles	19,106	21,746	2,640	14%	2,575
Orange	4,716	5,405	689	15%	645
Total	**23,821**	**27,151**	**3,329**	**14%**	**3,220**

Wages:

The labor market endorsement in this report considers the entry-level hourly wages for these social services occupations in Orange County as they relate to the county's living wage. Los Angeles County wages are included below to provide a complete analysis of the LA/OC region.

At the direction of the California Community College Chancellor's Office, the living wage endorsement criteria in this report uses the University of Washington's Center for Women's Welfare Self-Sufficiency Standard, which the COE refers to as a living wage, to determine Orange County's living wage of $27.13, last updated in March 2024. Additionally, data for the MIT Living Wage, updated on February 14, 2024, is provided as a reference. Currently, the MIT Living Wage in Orange County is $30.48. Both figures, which account for geographic-specific costs of necessities such as housing, food, health care, and transportation to assess the cost of living, are notated in the exhibits below.

All annual openings for these social services occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult ($27.13 in Orange County). Typical entry-level hourly wages range between $18.09 and $20.55. Experienced level hourly wages range from $27.41 to $28.32, which is above the living wage. Orange County's average wages are below the average statewide wage of $25.31 for these occupations. Exhibit 4 shows the wage range for each of these social services occupations in Orange County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.

Exhibit 4: Wages by Occupation in Orange County

Social and Human Service Assistants: $18.09, $22.27, $28.32
Community Health Workers: $20.55, $23.11, $27.41

Legend:
- Entry-Level Hourly Earnings
- Median Hourly Earnings
- Experienced Hourly Earnings
- OC Living Wage ($27.13)
- OC MIT Living Wage ($30.48)

All annual openings for these social services occupations have entry-level wages below the Self-Sufficiency Standard living wage for one adult ($24.03 in Los Angeles County). Typical entry-level hourly wages range between $19.10 and $21.44. Experienced level hourly wages range from $28.58 to $29.87, which

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[3] Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

is above the living wage. Los Angeles County's average wages are similar to the average statewide wage of $25.57 for these occupations. Exhibit 5 shows the wage range for each of these social services occupations in Los Angeles County and how they compare to the regional living wage, sorted from lowest to highest entry-level wage.
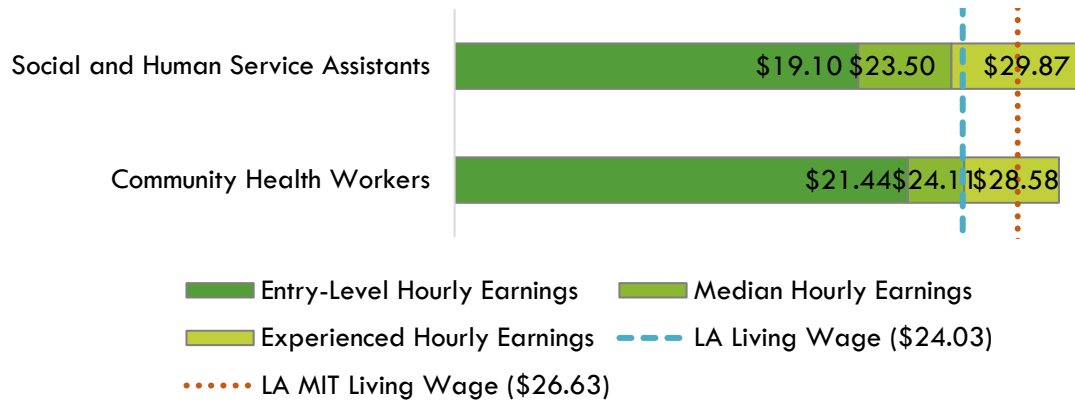
Exhibit 5: Wages by Occupation in Los Angeles County

Legend:
- Entry-Level Hourly Earnings
- Median Hourly Earnings
- Experienced Hourly Earnings
- LA Living Wage ($24.03)
- LA MIT Living Wage ($26.63)

Social and Human Service Assistants: $19.10 $23.50 $29.87
Community Health Workers: $21.44 $24.11 $28.58

Resilient Jobs and U.S. News & World Report Best Jobs:

Exhibit 6 shows if each occupation is considered an Orange County Great Recession-Resilient, COVID-19 Pandemic Recession-Resilient Job, or a 2024 U.S. News & World Report (USN&WR) Best Job. Neither occupation met the criteria to be considered a Great Recession-Resilient or COVID-19 Pandemic Recession-Resilient Job. However, *community health workers* is a USN&WR Best Job.

Exhibit 6: Resilient Jobs and USN&WR Best Jobs Designations

Occupation	Great Recession-Resilient Job	COVID-19 Pandemic Recession-Resilient Job	2024 USN&WR Best Job
Social and Human Services Assistants	☐	☐	☐
Community Health Workers	☐	☐	☑

Job Postings:

Important Online Job Postings Data Note: Online job postings data is sourced from Lightcast, a labor market analytics firm that scrapes, collects, and organizes data from online job boards such as LinkedIn, Indeed, Glassdoor, Monster, GovernmentJobs.com, and thousands more. Lightcast uses natural language processing (NLP) to determine the related company, industry, occupation, and other information for each job posting. However, NLP has limitations that include understanding contextual words of phrases; determining differences in words that can be used as nouns, verbs, and/or adjectives; and misspellings or grammatical errors.[4] For these reasons, job postings could be assigned to the wrong employer, industry, or occupation within Lightcast's database.

Additionally, there are several limitations when analyzing job postings. A single job posting may not represent a single job opening, as employers may be creating a pool of candidates for future openings or hiring for multiple positions with a single posting. Additionally, not all jobs are posted online, and jobs may be filled

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[4] K. R. Chowdhary, Fundamentals of Artificial Intelligence (Basingstoke: Springer Nature, 2020), https://link.springer.com/book/10.1007/978-81-322-3972-7.

through other methods such as internal promotion, word-of-mouth advertising, physical job boards, or a variety of other channels.

There were 2,898 online job postings related to these social services occupations listed in the past 12 months. Exhibit 7 shows the number of job postings by occupation. Over 50% of job postings were for *social services sales agents* and nearly 42% were for *property, social services, and community association managers*.

Exhibit 7: Number of Job Postings by Occupation (n=2,898)

Occupation	Job Postings	Percentage of Job Postings
Social and Human Service Assistants	2,434	84%
Community Health Workers	464	16%
Total Postings	**2,898**	**100%**

The top employers in the region, by number of job postings, are shown in Exhibit 8.

Exhibit 8: Top Employers by Number of Job Postings (n=2,898)

Employer	Job Postings	Percentage of Job Postings
Healthcare Staffing Professionals	70	3%
Volunteers of America	69	3%
University of California	52	2%
Providence	48	2%
The Salvation Army	48	2%
Mercy House	42	2%
Easterseals	34	1%
Etta	29	1%
Redwood Family Care Network	24	1%
The People Concern	24	1%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 9.
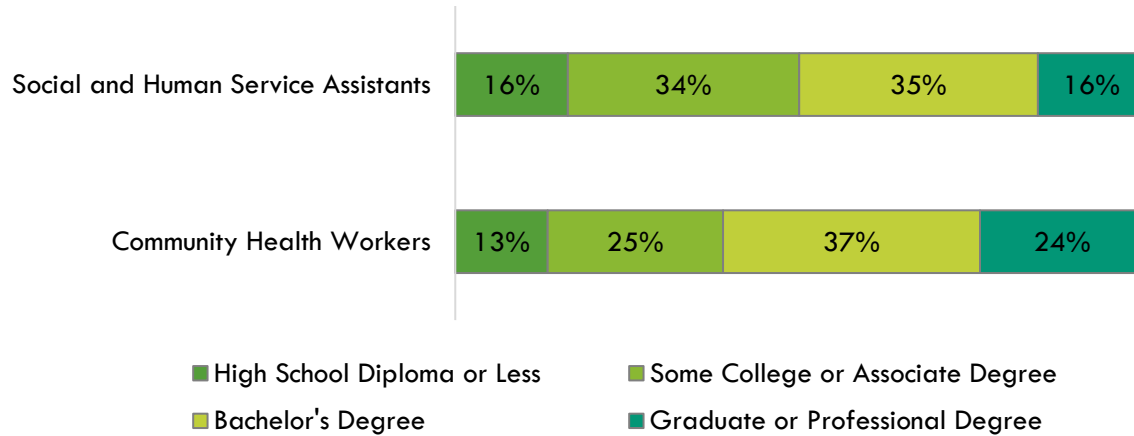
Exhibit 9: Top Skills by Number of Job Postings (n=2,898)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Social Work (936)	Communication (1,210)	Microsoft Excel (447)
Case Management (631)	Advocacy (943)	Microsoft Office (340)
Mental Health (550)	Management (558)	Microsoft Outlook (288)
Community Health (467)	Planning (523)	Microsoft PowerPoint (245)
Bilingual (Spanish/English) (446)	Multilingualism (507)	Microsoft Word (220)
Psychology (342)	Customer Service (467)	Homeless Management Information System (153)
Crisis Intervention (304)	Writing (449)	Microsoft Access (75)
Human Services (304)	Microsoft Excel (447)	Spreadsheets (60)
Community Outreach (257)	Coordinating (424)	Google Workspace (44)
Medical Records (228)	English Language (398)	Microsoft Windows (43)

Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a high school diploma or equivalent as the typical entry-level education for these social services occupations. The national-level educational attainment data indicates between 25% and 34% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 10 shows the educational attainment for each occupation, sorted by highest community college educational attainment to lowest.

Exhibit 10: National-level Educational Attainment for Occupations

Occupation	High School Diploma or Less	Some College or Associate Degree	Bachelor's Degree	Graduate or Professional Degree
Social and Human Service Assistants	16%	34%	35%	16%
Community Health Workers	13%	25%	37%	24%

Legend:
- ■ High School Diploma or Less
- ■ Some College or Associate Degree
- ■ Bachelor's Degree
- ■ Graduate or Professional Degree

Of the 64% of the cumulative job postings for these social services occupations that listed a minimum education requirement in Los Angeles/Orange County, 66% (1,230) requested a high school diploma, or an associate degree and 32% (586) requested a bachelor's degree.

Educational Supply

Community College Supply:

Exhibit 11 shows the three-year average number of awards conferred by community colleges in the related TOP codes: Health Occupations, General (1201.00), Community Heath Care Worker (1261.00), and Human Services (2104.00). The colleges with the most completions in the region are Saddleback, LA City, and Long Beach. Over the past 12 months, there were two other related program recommendation requests from regional community colleges.

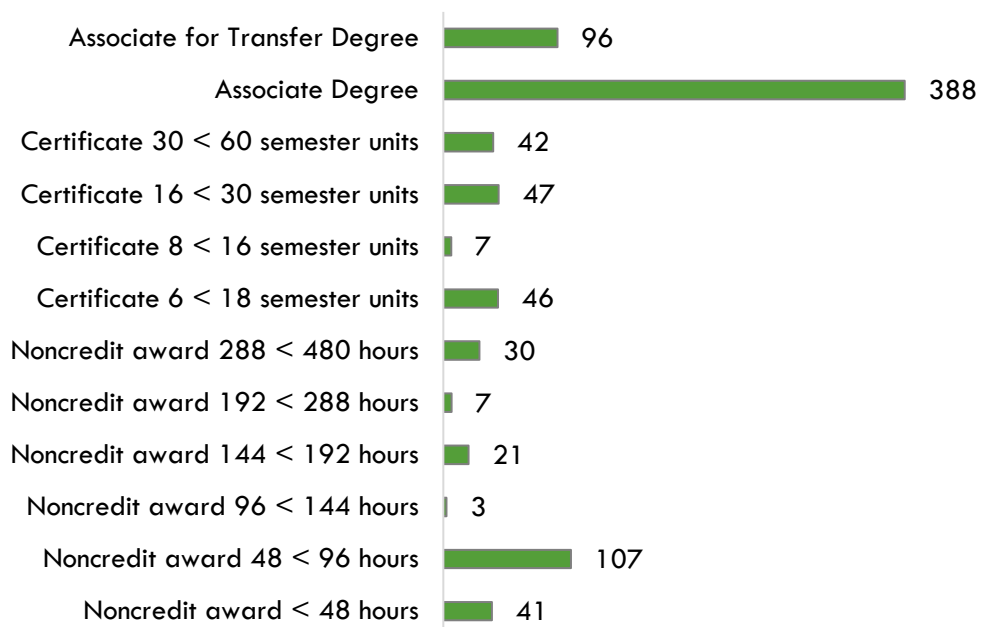### Exhibit 11: Regional Community College Awards (Certificates and Degrees), 2020-2023

TOP Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
1201.00	Health Occupations, General	Cerritos	0	0	1	0
		Citrus	5	6	1	4
		East LA	19	44	45	36
		LA City	65	55	104	75
		LA Mission	29	20	7	19
		LA Southwest	2	4	3	3
		LA Trade	3	2	14	6
		Long Beach	19	16	15	17
		Mt San Antonio	6	8	11	8
		Pasadena	32	66	42	47
		Santa Monica	0	0	22	7
		West LA	5	6	111	41
		LA Subtotal	**185**	**227**	**376**	**263**
		Cypress	12	16	6	11
		Irvine	1	1	3	2
		Orange Coast	1	2	3	2
		Saddleback	235	229	206	223
		Santa Ana	0	0	3	1
		OC Subtotal	**249**	**248**	**221**	**239**
	Supply Subtotal/Average		**434**	**475**	**597**	**502**
1261.00	Community Health Care Worker	Cerritos	0	0	1	0
		LA Pierce	1	6	83	30
		LA Valley	0	0	77	26
		Mt San Antonio	51	13	0	21
		Rio Hondo	0	1	0	0
		LA Subtotal	**52**	**28**	**170**	**83**
		Cypress	0	1	1	1
		Orange Coast	0	7	8	5

TOP Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
		OC Subtotal	0	8	9	6
		Supply Subtotal/Average	**52**	**28**	**170**	**83**
2104.00	Human Services	Cerritos	34	32	47	38
		Glendale	3	7	9	6
		LA City	18	10	5	11
		LA Valley	0	0	5	2
		Long Beach	26	25	63	38
		Rio Hondo	1	16	50	22
		LA Subtotal	**82**	**90**	**179**	**117**
		Coastline	26	19	18	21
		Cypress	28	38	19	28
		Saddleback	17	27	22	22
		Santa Ana	89	50	39	59
		Santiago Canyon	0	3	4	2
		OC Subtotal	**160**	**137**	**102**	**133**
		Supply Subtotal/Average	**242**	**227**	**281**	**250**
		Supply Total/Average	**728**	**730**	**1,048**	**835**

Exhibit 12 shows the annual average community college awards by type from 2020-21 to 2022-23. The plurality of the awards are for associate degrees, followed by noncredit awards between 48 and less than 96 hours, and associate for transfer degrees.

Exhibit 12: Annual Average Community College Awards by Type, 2020-2023

Associate for Transfer Degree	96
Associate Degree	388
Certificate 30 < 60 semester units	42
Certificate 16 < 30 semester units	47
Certificate 8 < 16 semester units	7
Certificate 6 < 18 semester units	46
Noncredit award 288 < 480 hours	30
Noncredit award 192 < 288 hours	7
Noncredit award 144 < 192 hours	21
Noncredit award 96 < 144 hours	3
Noncredit award 48 < 96 hours	107
Noncredit award < 48 hours	41

Community College Student Outcomes:

Exhibit 13 shows the Strong Workforce Program (SWP) metrics for human services programs in Rancho Santiago Community College District (RSCCD), the Orange County Region, and California. Though RSCCD colleges offer human services programs, there is insufficient data to determine all metrics. Of the 8,587 California human services students in the 2021-22 academic year, 9% (799) attended an Orange County community college.

Orange County students that exited human services programs in the 2021-22 academic year had lower median annual earnings of $34,384 (or $16.53 per hour), which is slightly higher than human services students throughout the state ($33,482 or $16.10 per hour). However, A higher percentage of California human services students attained the wage (49%) when compared to all human services students in Orange County (32%).

Exhibit 13: Social services (0511.00) Strong Workforce Program Metrics, 2021-22[5]

SWP Metric	RSCCD	OC Region	California
SWP Students	Insufficient Data	799	8,587
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	Insufficient Data	30%	23%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	Insufficient Data	Insufficient Data	65%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	Insufficient Data	103	788
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	Insufficient Data	94	800
SWP Students with a Job Closely Related to Their Field of Study (2019-20)	Insufficient Data	85%	65%
Median Annual Earnings for SWP Exiting Students (2020-21)	Insufficient Data	$34,384 ($16.53)	$33,482 ($16.10)
Median Change in Earnings for SWP Exiting Students (2020-21)	Insufficient Data	36%	24%
SWP Exiting Students Who Attained the Living Wage (2020-21)	Insufficient Data	32%	49%

Non-Community College Supply:

To comprehensively analyze the regional supply, it is crucial to include data from other institutions offering human services training programs. Exhibit 14 displays the annual and three-year average awards granted by these institutions under the related Classification of Instructional Programs (CIP) codes: Human Services, General (44.0000) and Community Health and Preventive Medicine (51.2208). The available data covers 2019 to 2022. During this period, non-community college institutions in the region conferred an average of 403 awards annually in related programs.

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[5] All SWP metrics are for 2021-22 unless otherwise noted.

Exhibit 14: Regional Non-Community College Awards, 2019-2022

CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
44.0000	Human Services, General	California State University-Dominguez Hills	121	123	128	124
		California State University-Fullerton	262	291	271	275
		Mount Saint Mary's University	0	1	0	0
		Supply Subtotal/Average	**170**	**168**	**136**	**158**
51.1001	Health and Wellness, General	Biola University	0	3	5	3
		Touro University Worldwide	0	0	0	0
		Supply Subtotal/Average	**0**	**3**	**5**	**3**
51.2208	Community Health and Preventive Medicine	Pitzer College	0	1	0	0
		University of the People	0	0	0	0
		Supply Subtotal/Average	**0**	**1**	**0**	**0**
		Supply Total/Average	**383**	**419**	**404**	**403**

Regional Demographics

This section examines demographic data for Orange County community college students in human services programs compared to the OC population, along with occupational data, to identify potential diversity and equity issues addressable by community college programs.
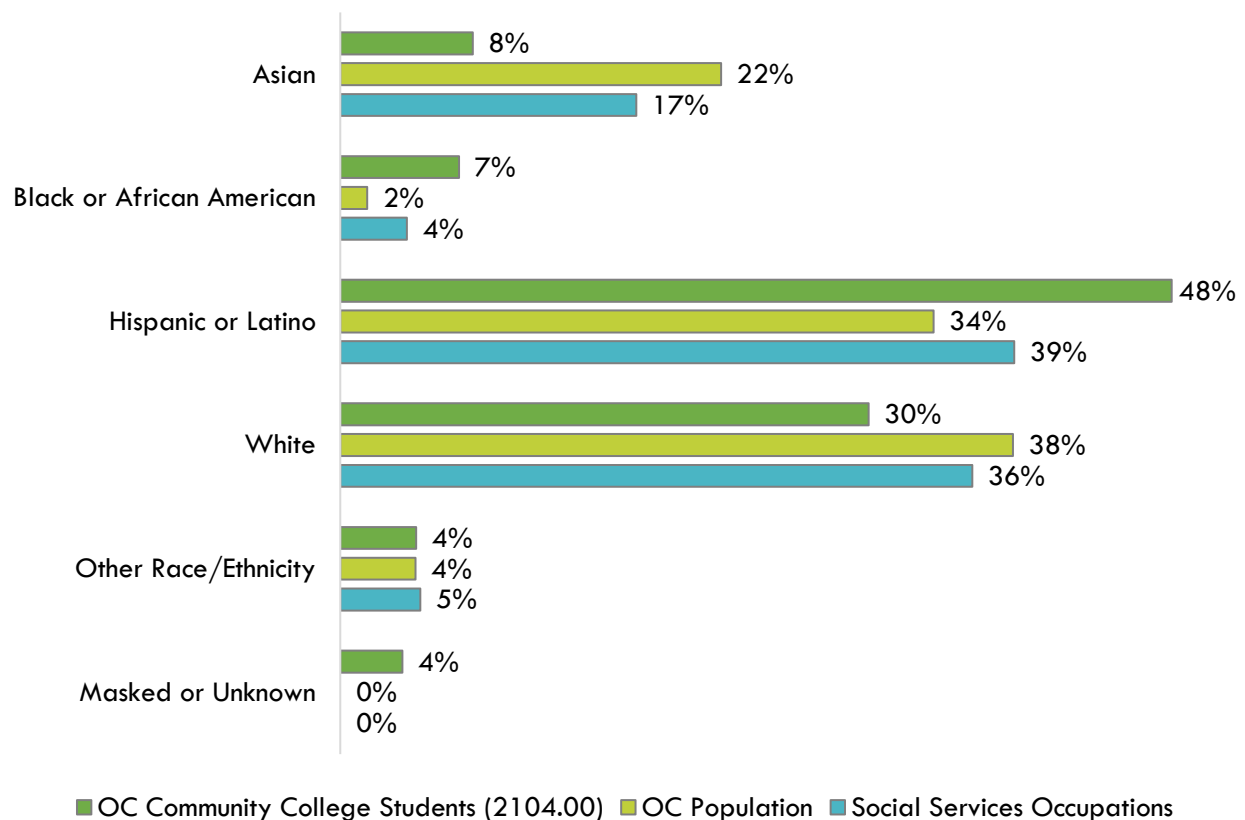
Ethnicity:

Exhibit 15 compares the ethnicity of Orange County community college students enrolled in human services programs, the overall Orange County population, and occupation-specific data for the two social services occupations included in this report.

Notably, 48% of community college human services students are Hispanic or Latino, which is higher than the population (34%) and these social services occupations (39%). Conversely, 36% of workers in these social services occupations are white, which is similar to the population (38%), but slightly higher than community college human services students (30%). Approximately 17% of workers in these social services occupations are Asian, which is slightly lower than the population (22%), but double community college human services students (8%).

Examining disaggregated data for each occupation (not shown), *community health workers* has the highest percentage of white workers (46%) while *social and human services assistants* has the highest percentage of Hispanic or Latino (40%), Asian (21%), and Black or African American (5%) workers. Typical entry-level education requirements and wages are similar for these occupations.

Exhibit 15: Program and County Demographics by Ethnicity

Legend: ■ OC Community College Students (2104.00) ■ OC Population ■ Social Services Occupations

Asian: 8%, 22%, 17%
Black or African American: 7%, 2%, 4%
Hispanic or Latino: 48%, 34%, 39%
White: 30%, 38%, 36%
Other Race/Ethnicity: 4%, 4%, 5%
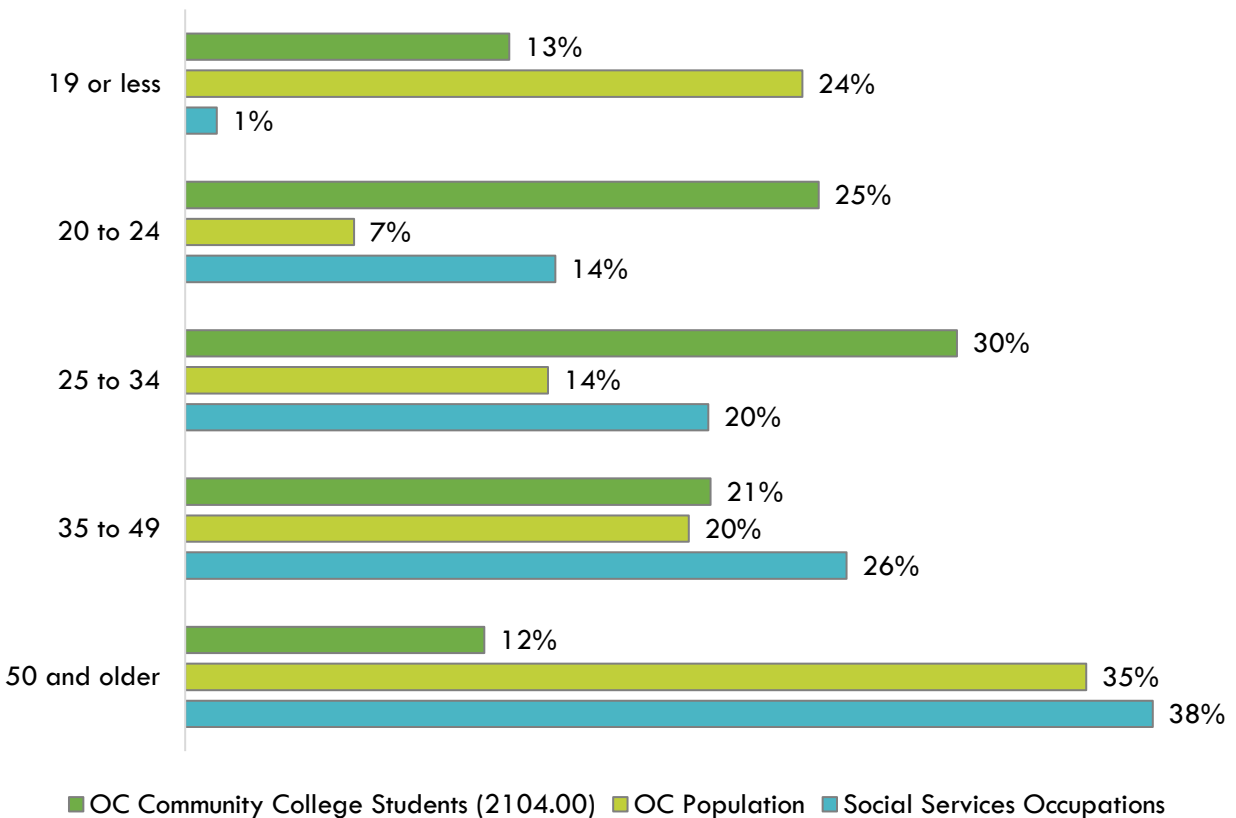Masked or Unknown: 4%, 0%, 0%

Age:

Exhibit 16 compares the age of Orange County community college students enrolled in human services programs, the overall Orange County population, and occupation-specific data for the two social services occupations included in this report.

Approximately 38% of workers in these social services occupations are age 50 and older, which is similar to the population (35%) and significantly higher than community college human services students (12%). Conversely, 68% of community college human services students are 34 or less, which is significantly higher than the population (45%), and these social services occupations (36%).

Examining disaggregated data for each occupation (not shown), the occupation with the highest percentage of workers age 34 or younger is *property, social services, and community association managers* (23%), which has the lowest entry-level wages of all four social services occupations. Conversely, the occupation with the highest percentage of workers age 35 and older is *property appraisers and assessors* (85%). This occupation also has the highest entry-level education requirements and has the highest entry-level wages of all four social services occupations.

Exhibit 16: Program and County Demographics by Age

Age	OC Community College Students (2104.00)	OC Population	Social Services Occupations
19 or less	13%	24%	1%
20 to 24	25%	7%	14%
25 to 34	30%	14%	20%
35 to 49	21%	20%	26%
50 and older	12%	35%	38%

■ OC Community College Students (2104.00) ■ OC Population ■ Social Services Occupations

Sex:

Exhibit 17 compares the sex of Orange County community college students enrolled in social services programs, the overall Orange County population, and occupation-specific data for these social services occupations.

Though the population is split evenly between women and men, examining disaggregated data for each occupation (not shown), the majority of human services community college students (73%) and workers in these social services occupations (75%) are women. There are no significant differences when examining disaggregated data by occupation (not shown).

Exhibit 17: Program and County Demographics by Sex

Category	Female	Male
OC Community College Students (2104.00)	73%	25%
OC Population	50%	50%
Social Services Occupations	75%	25%

☐ Female ☐ Male
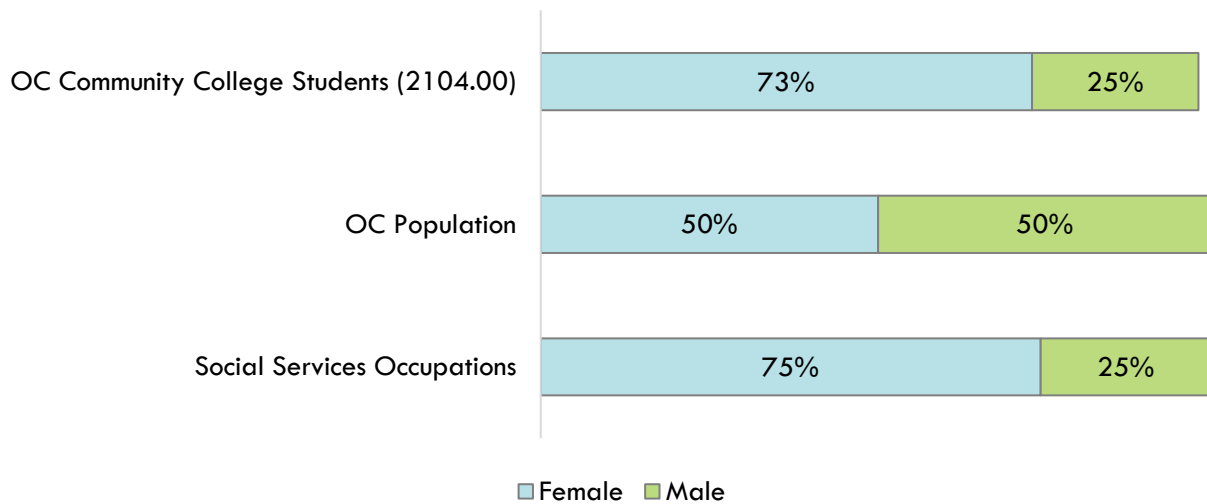
Appendix A: Methodology

The OC COE prepared this report by analyzing data from occupations and education programs. Occupational data is derived from Lightcast, a labor market analytics firm that consolidates data from the California Employment Development Department (EDD), U.S. Bureau of Labor Statistics (BLS) and other government agencies. Program supply data is drawn from two systems: Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP).

Using a TOP-SOC crosswalk, the OC COE identified middle-skill jobs for which programs within these TOP codes train. Middle-skill jobs include:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

The OC COE determined labor market supply for an occupation or SOC code by analyzing the number of program completers or awards in a related TOP or CIP code. The COE developed a "supply table" with this information, which is the source of the program supply data for this report. TOP code data comes from the California Community Colleges Chancellor's Office MIS Data Mart (datamart.cccco.edu) and CIP code data comes from the Integrated Postsecondary Education Data System (nces.ed.gov/ipeds/use-the-data), also known as IPEDS. TOP is a system of numerical codes used at the state level to collect and report information on California community college programs and courses throughout the state that have similar outcomes. CIP codes are a taxonomy of academic disciplines at institutions of higher education in the United States and Canada. Institutions outside of the California Community College system do not use TOP codes in their reporting systems.

Data included in this analysis represent the labor market demand for relevant positions most closely related to the proposed program as expressed by the requesting college in consultation with the OC COE. Traditional labor market information was used to show current and projected employment based on data trends, as well as annual average awards granted by regional community colleges. Real-time labor market information captures job post advertisements for occupations relevant to the field of study which can signal demand and show what employers are looking for in potential employees but is not a perfect measure of the quantity of open positions.

All representations have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. The most recent data available at the time of the analysis was examined; however, data sets are updated regularly and may not be consistent with previous reports. Efforts have been made to qualify and validate the accuracy of the data and findings; however, neither the Centers of Excellence for Labor Market Research (COE), COE host district, nor California Community Colleges Chancellor's Office are responsible for the applications or decisions made by individuals and/or organizations based on this study or its recommendations.

Appendix B: Data Sources

Data Type	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment Statistics and the American Community Survey. For more information, see https://lightcast.io/
Living Wage	"Living Wage" measures the income necessary for an individual or family to afford basic expenses by assessing the costs such as housing, food, child care, health care, transportation, and taxes. Per the CCCCCO's this report's endorsement criteria uses the University of Washington's Center for Women's Welfare Self-Sufficiency Standard last updated in March 2024, which is $27.13 per hour ($56,451 annually) in Orange County. For more information, see: http://www.selfsufficiencystandard.org/California The MIT Living Wage, updated on February 14, 2024, is a nationally recognized living wage metric and is provided for reference. The current MIT Living Wage in Orange County is $30.48. For more information, see: https://livingwage.mit.edu/counties/06059
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see https://www.bls.gov/emp/documentation/education/tech.htm
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	The O*NET database includes information on skills, abilities, knowledges, work activities, and interests associated with occupations. For more information, see https://www.onetonline.org/help/online/
Educational Supply	The CCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
Student Metrics and Demographics	LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://www.calpassplus.org/LaunchBoard/Home.aspx

Data Type	Source
Population and Occupation Demographics	The Census Bureau's American Community Survey (ACS) is the premier source for detailed population and housing information. For more information, see: https://www.census.gov/programs-surveys/acs

Data is sourced from IPUMS USA, a database providing access to ACS and other Census Bureau data products. For more information, see: https://usa.ipums.org/usa/about.shtml |

For more information, please contact the Orange County Center of Excellence:

Jesse Crete, Ed. D., Director
crete_jesse@rsccd.edu

Jacob Poore, Assistant Director
poore_jacob@rsccd.edu

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