

Labor Market Analysis for Noncredit Program Recommendation:
 1230.30/Certified Nurse Assistant
 (Certified Nursing Assistant - Certificate)
 Orange County Center of Excellence, September 2023



Summary

Program LMI Endorsement	Endorsed: All LMI Criteria Met <input type="checkbox"/>	Endorsed: Some LMI Criteria Met <input checked="" type="checkbox"/>	Not LMI Endorsed <input type="checkbox"/>
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Program LMI Endorsement Criteria

	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Supply Gap:	<i>Comments:</i> there is projected to be 7,869 annual job openings throughout Los Angeles and Orange counties for <i>nursing assistants</i> , which is more than the 362 awards conferred by educational institutions.	
Living Wage: (Entry-Level, 25 th)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
	<i>Comments:</i> Entry-level wages for nursing assistants are \$18.63, which is below the OC living wage of \$20.63.	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
	<i>Comments:</i> The typical entry-level education for <i>nursing assistants</i> is a postsecondary nondegree award and more than one-third of workers in the field have completed some college or an associate degree as their highest level of education.	

Emerging Occupation(s)		
Yes <input type="checkbox"/>		No <input checked="" type="checkbox"/>
	<i>Comments:</i> N/A	

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 one middle-skill occupation:

- Nursing Assistants (31-1131)

Based on the available data there appears to be a supply gap for *nursing assistants* and typical education requirements align with a community college education. However, typical entry-level wages are below the 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 (25 th Percentile)	Typical Entry-Level Education	Community College Educational Attainment
Nursing Assistants (31-1131)	LA: 6,186 OC: 1,683	LA: 249 OC: 113	OC: \$18.63	Postsecondary nondegree award	34%
Total	7,869	362	N/A	N/A	N/A

Demand:

- The number of jobs related to *nursing assistants* is projected to increase 12% through 2027, equating to 7,869 annual job openings.
- Hourly entry-level wages for *nursing assistants* are \$18.63 in Orange County, which is below the living wage of \$20.63.
- There were 10,149 online job postings for *nursing assistants* over the past 12 months. The highest number of postings were for certified nursing assistants, patient care technicians, and certified nurse aides.
- The typical entry-level education for *nursing assistants* is a postsecondary nondegree award.
- Approximately 44% of workers in the field have completed some college or an associate degree as their highest level of education.

Supply:

- There was an average of 158 awards conferred by 5 community colleges in Los Angeles and Orange Counties from 2019 to 2022.
- Non-community college institutions conferred an average of 204 awards from 2019 to 2021.
- Orange County community college students that exited certified nurse assistant programs in the 2019-20 academic year had a median annual wage of \$27,404 after exiting the program and 26% attained the regional living wage.
- Throughout Orange County, 91% of certified nurse assistant students that exited their program in 2018-19 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 *nursing assistants* from 2017 through 2027. There was a 7% decline across all occupations from 2019 to 2020 due to the COVID-19 pandemic. Employment for *nursing assistants* declined at the same rate in Orange County. Employment for *nursing assistants* is projected to grow at a slightly higher rate for all occupations through 2027.

Exhibit 2: Annual Percent Change in Jobs for Nursing Assistants, 2017-2027

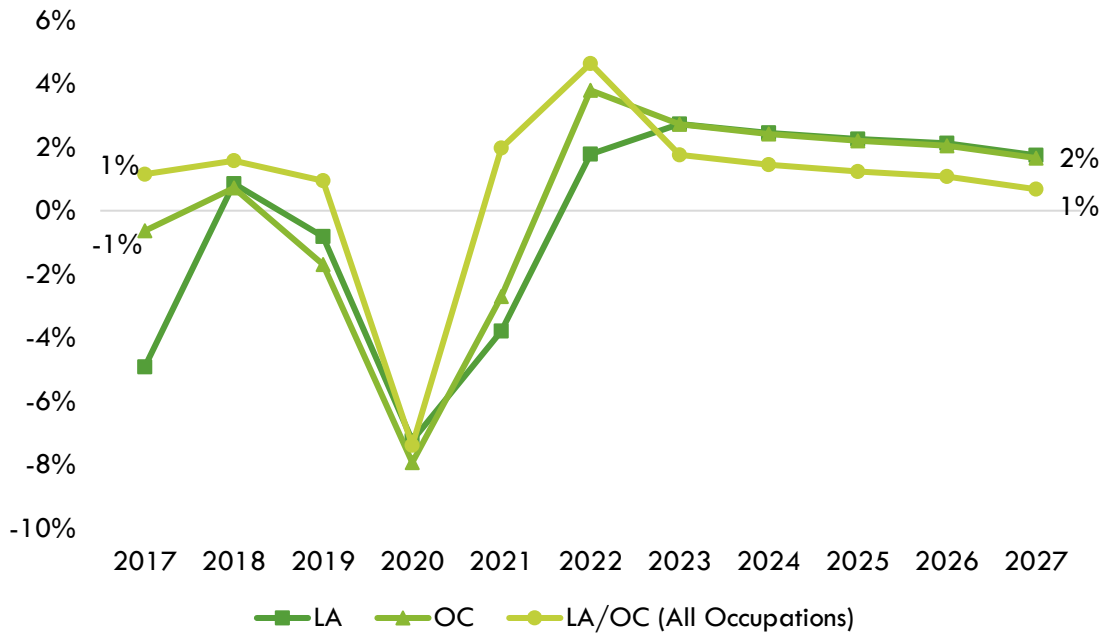


Exhibit 3 shows the five-year occupational demand projections for *nursing assistants*. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 12% through 2027. There is projected to be 7,869 jobs available annually.

Exhibit 3: Occupational Demand in Los Angeles and Orange Counties¹

Geography	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	Annual Openings
Los Angeles	34,010	38,033	4,024	12%	6,186
Orange	9,304	10,378	1,073	12%	1,683
Total	43,314	48,411	5,097	12%	7,869

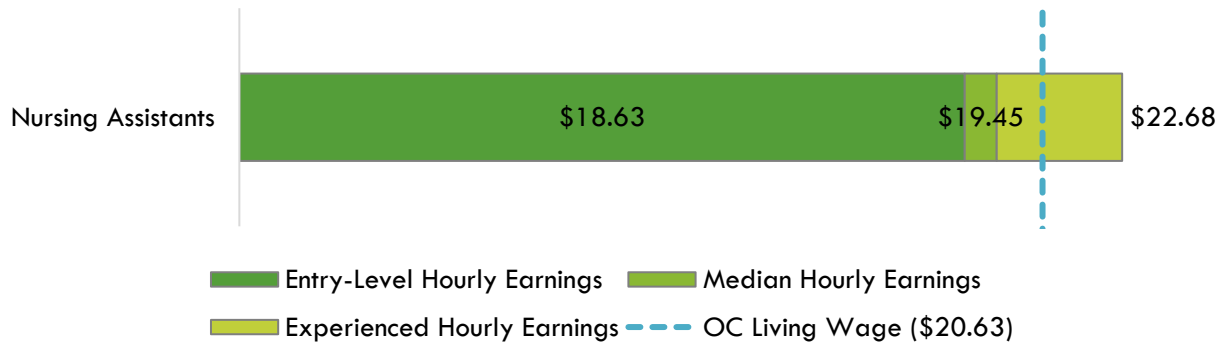
Wages:

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

The typical entry-level hourly wages for *nursing assistants* are \$18.63, which is below the living wage for one adult (\$20.63 in Orange County). Experienced hourly wages range are \$22.68, which is above the living wage. Orange County's average wages are slightly higher than the average statewide wage of \$20.89 for this occupation. Exhibit 4 shows the wage range for *nursing assistants* in Orange County and how it compares to the regional living wage.

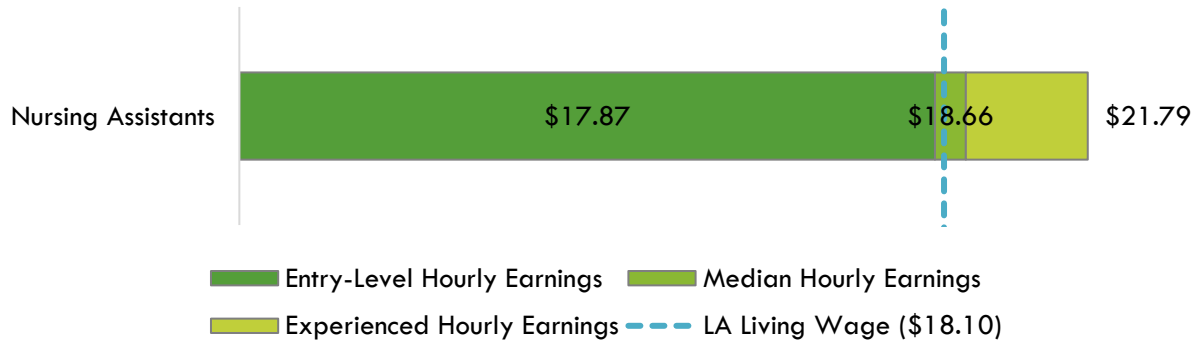
¹ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

Exhibit 4: Wages by Occupation in Orange County



The typical entry-level hourly wages for *nursing assistants* are \$17.87, which is below the living wage for one adult (\$18.10 in Los Angeles County). Experienced hourly wages range are \$21.79, which is above the living wage. Los Angeles County’s average wages are slightly lower than the average statewide wage of \$20.89 for this occupation. Exhibit 5 shows the wage range for *nursing assistants* in Los Angeles County and how it compares to the regional living wage.

Exhibit 5: Wages by Occupation in Los Angeles County



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.² 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 through other methods such as internal promotion, word-of-mouth advertising, physical job boards, or a variety of other channels.

² K. R. Chowdhary, *Fundamentals of Artificial Intelligence* (Basingstoke: Springer Nature, 2020), <https://link.springer.com/book/10.1007/978-81-322-3972-7>.

There were 10,149 online job postings related to *nursing assistants* listed in the past 12 months, as shown in Exhibit 6.

Exhibit 6: Number of Job Postings by Occupation (n=10,149)

Occupation	Job Postings	Percentage of Job Postings
Nursing Assistants	10,149	100%

The top employers in the region, by number of job postings, are shown in Exhibit 7.

Exhibit 7: Top Employers by Number of Job Postings (n=10,149)

Employer	Job Postings	Percentage of Job Postings
ShiftMed	965	10%
Providence	750	7%
Cedars-Sinai	379	4%
PIH Health	369	4%
DaVita	295	3%
Alta Hospitals SYS	260	3%
University of California	192	2%
Prime Healthcare Services	151	1%
Fresenius	132	1%
Sharp Healthcare	131	1%

The top specialized, soft, and computer skills listed by those most frequently mentioned in job postings (denoted in parentheses) are shown in Exhibit 8.

Exhibit 8: Top Skills by Number of Job Postings (n=10,149)

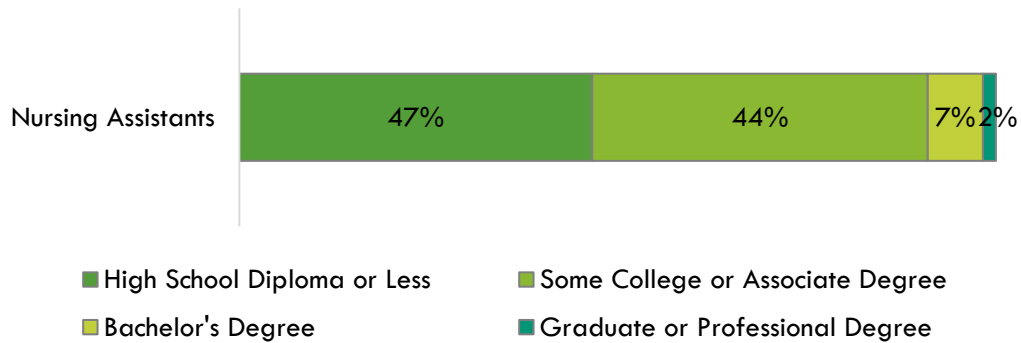
Top Specialized Skills	Top Soft Skills	Top Computer Skills
Nursing (5,700)	Communications (2,868)	Microsoft Excel (202)
Activities Of Daily Living (ADLs) (3,547)	English Language (2,561)	Microsoft Office (65)
Vital Signs (3,395)	Customer Service (1,901)	Microsoft PowerPoint (51)
Patient Assistance (1,786)	Clerical Works (1,286)	Microsoft Word (50)
Nursing Care (1,718)	Organizational Skills (771)	Microsoft Outlook (49)
Medical Terminology (1,669)	Multilingualism (706)	Epic EMR (37)
Toileting (1,464)	Management (595)	Proprietary Software (16)
Infection Control (1,449)	Leadership (594)	iCIMS (Recruitment Software) (15)
Acute Care (1,243)	Compassion (592)	Spreadsheets (12)
Direct Patient Care (1,198)	Decision Making (519)	Program Database (11)

Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a postsecondary nondegree award as the typical entry-level education for *nursing assistants*. Additionally, the national-level educational attainment data indicates 44% of workers in the field have completed some college or an associate degree as their highest level of education. Exhibit 9 shows the educational attainment for *nursing assistants*.

Of the 47% of the cumulative job postings for *nursing assistants* that listed a minimum education requirement in Los Angeles/Orange County, 95% (4,246) requested a high school diploma or an associate degree and 5% (211) requested a bachelor's degree.

Exhibit 9: National-level Educational Attainment for Occupations



Educational Supply

Community College Supply:

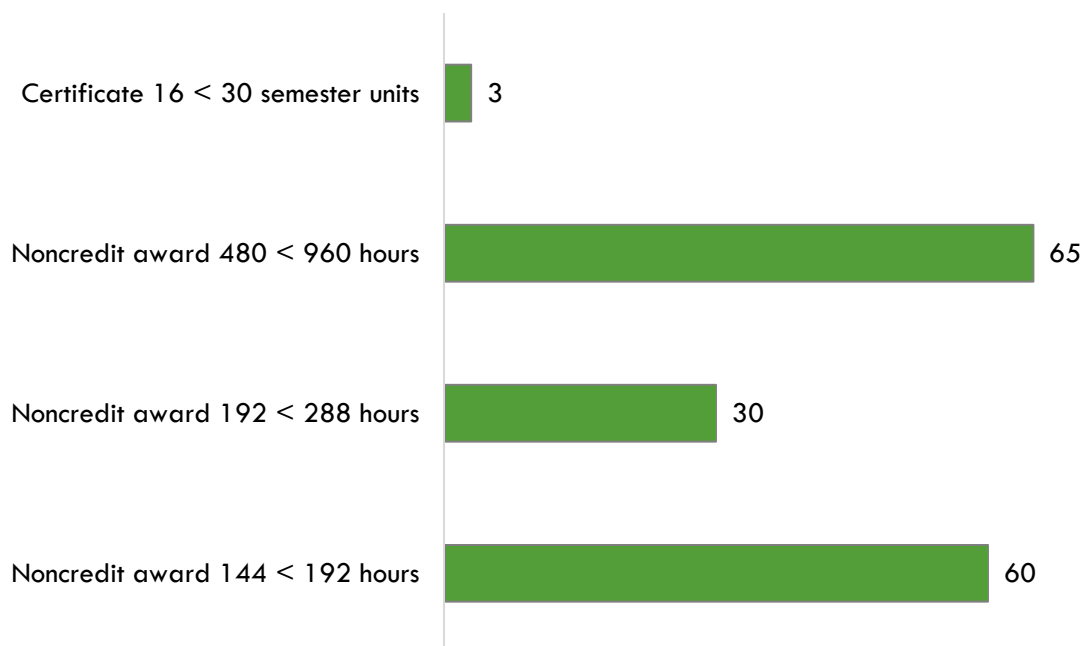
Exhibit 10 shows the three-year average number of awards conferred by community colleges in the related TOP code: Certified Nurse Assistant. The colleges with the most completions in the region are Mt. San Antonio, and Santiago Canyon. Over the past 12 months, there were two other related program recommendation requests from regional community colleges.

Exhibit 10: Regional Community College Awards (Certificates and Degrees), 2019-2022

TOP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
1230.30	Certified Nurse Assistant	LA Mission	3	3	3	3
		Mt San Antonio	88	52	54	65
		LA Subtotal	27	28	33	29
		Saddleback	0	2	3	2
		Santa Ana	0	62	29	30
		Santiago Canyon	50	52	73	58
		OC Subtotal	29	54	32	38
Supply Total/Average			141	171	162	158

Exhibit 11 shows the annual average community college awards by type from 2019-20 to 2021-22. The plurality of the awards are for noncredit awards between 480 and less than 960 hours, followed by noncredit awards between 144 and less than 192 hours.

Exhibit 11: Annual Average Community College Awards by Type, 2019-2022



Community College Student Outcomes:

Exhibit 12 shows the Strong Workforce Program (SWP) metrics for certified nurse assistant programs in the Orange County Region and California. Currently, no Coast Community College District (CCCD) colleges offer a certified nurse assistant program. Therefore, metrics for CCCD are not included.

Orange County students that exited certified nurse assistant programs in the 2019-20 academic year had similar median annual earnings (\$27,404) compared to all certified nurse assistant students in California (\$28,160). A higher percentage of Orange County certified nurse assistant students reported they were employed in their field of study (91%) compared to students throughout California (81%).

Exhibit 12: Certified Nurse Assistant (1230.30) Strong Workforce Program Metrics, 2020-21³

SWP Metric	CCCD	OC Region	California
SWP Students	N/A	387	3,174
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	N/A	Insufficient Data	24%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	N/A	94%	77%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	N/A	116	532
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	N/A	Insufficient Data	174
SWP Students with a Job Closely Related to Their Field of Study (2018-19)	N/A	91%	81%
Median Annual Earnings for SWP Exiting Students (2019-20)	N/A	\$27,404 (\$13.18)	\$28,160 (\$13.54)
Median Change in Earnings for SWP Exiting Students (2019-20)	N/A	6%	33%
SWP Exiting Students Who Attained the Living Wage (2019-20)	N/A	26%	37%

³ All SWP metrics are for 2020-21 unless otherwise noted.

Non-Community College Supply:

For a comprehensive regional supply analysis, it is also important to consider the supply from other institutions in the region that provide training programs for *nursing assistants*. Exhibit 13 shows the annual and three-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Code: Nursing Assistant/Aide and Patient Care Assistant/Aide.

Due to different data collection periods, the most recent two-year period of available data is from 2019 to 2021. Between 2019 and 2021, non-community college institutions in the region conferred an average of 204 awards annually in related training programs.

Exhibit 13: Regional Non-Community College Awards, 2019-2021

CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	3-Year Award Average
52.1501	Nursing Assistant/Aide and Patient Care Assistant/Aide	Angeles College	0	21	10
		California Career Institute	0	6	3
		Hacienda La Puente Adult Education	27	33	30
		Healthcare Career College	7	161	84
		Medical Allied Career Center	0	19	10
		Platt College-Anaheim	41	0	20
		Platt College-Los Angeles	33	0	16
		Triad Education	31	31	31
		Angeles College	0	21	10
		California Career Institute	0	6	3
		Supply Total/Average			139

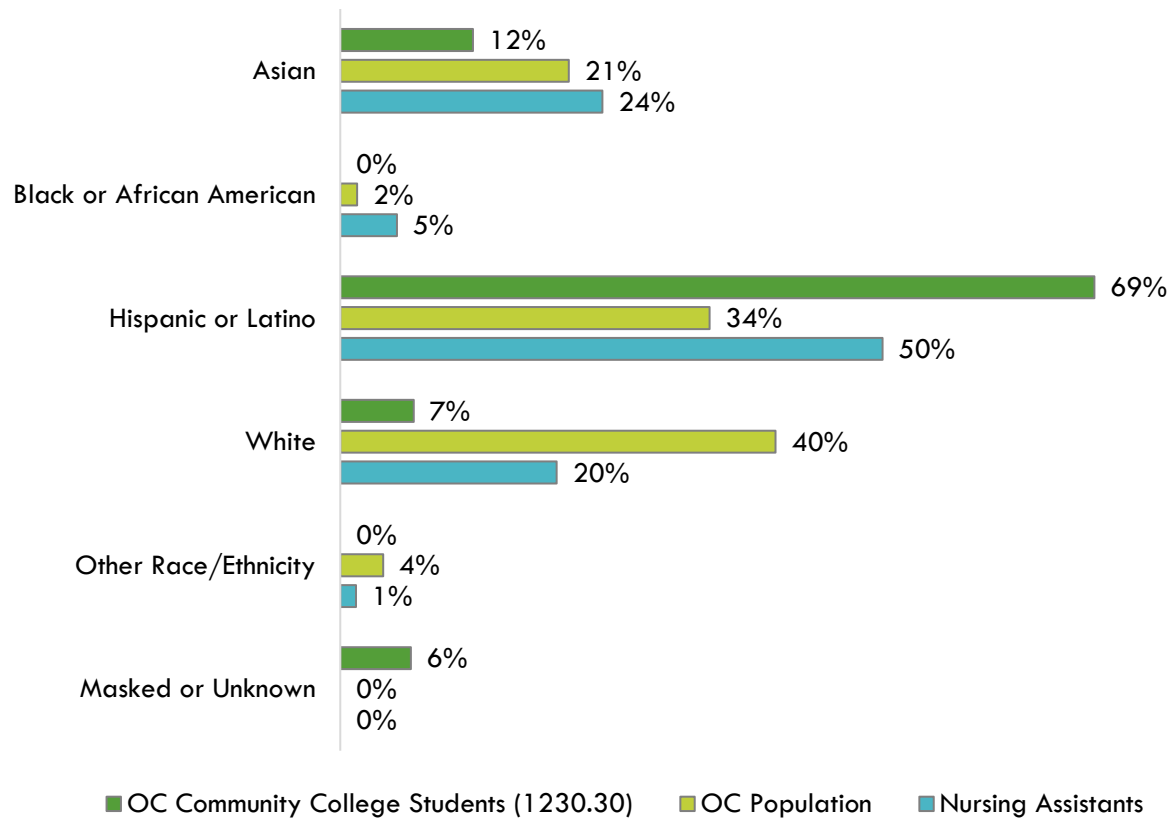
Regional Demographics

This section analyzes demographic data for Orange County community college students enrolled in certified nurse assistant programs compared to the OC population, as well occupational data, for the purpose of identifying potential diversity and equity issues that can be addressed by community college programs.

Ethnicity:

Exhibit 14 shows the ethnicity of Orange County community college students enrolled in certified nurse assistant programs compared to the overall Orange County population, as well as *nursing assistants*. Notably, 69% of certified nurse assistant students are Hispanic or Latino, which is significantly higher than *nursing assistants* (50%), and the population (34%).

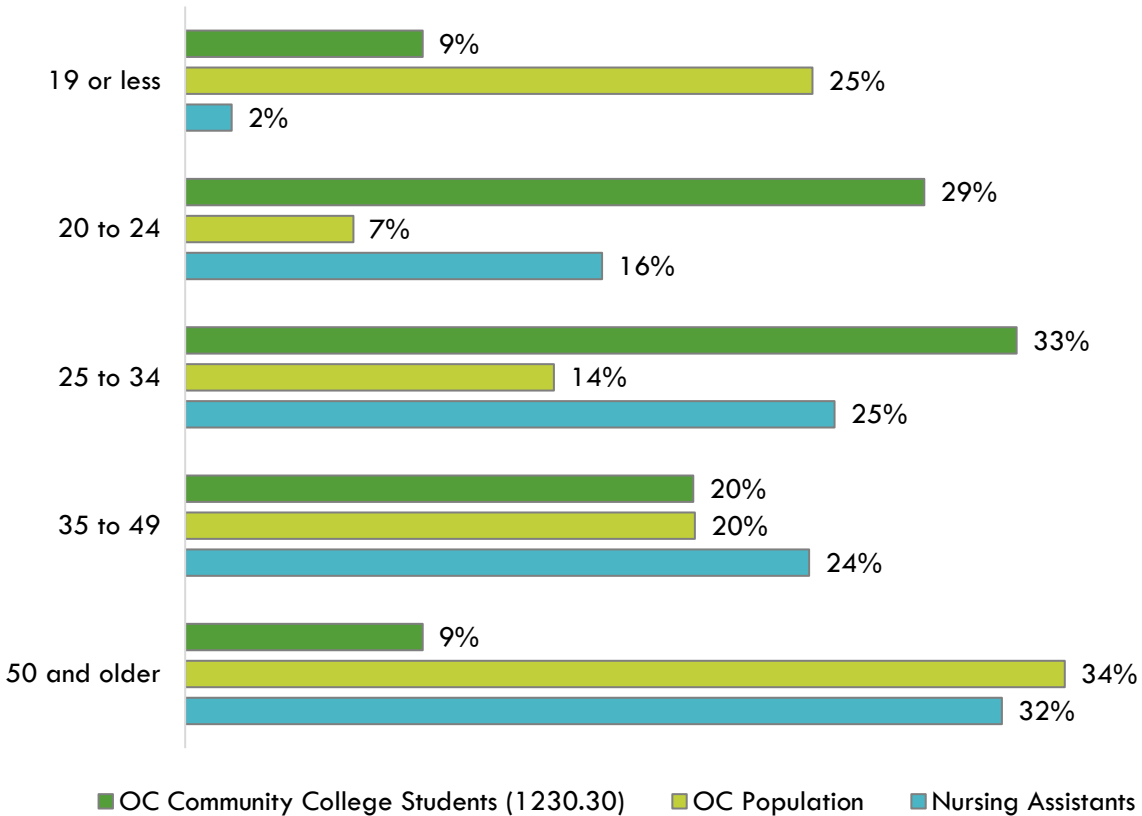
Exhibit 14: Program and County Demographics by Ethnicity



Age:

Exhibit 15 shows the age of Orange County community college students enrolled in certified nurse assistant programs compared to the overall Orange County population, as well as *nursing assistants*. Approximately 32% of *nursing assistants* are age 50 and older, which is similar to the population (34%), but significantly higher than community college certified nurse assistant students (9%). Conversely, 71% of community college certified nurse assistant students are 34 or less, which is significantly higher than both the population (46%) and *nursing assistants* (44%).

Exhibit 15: Program and County Demographics by Age

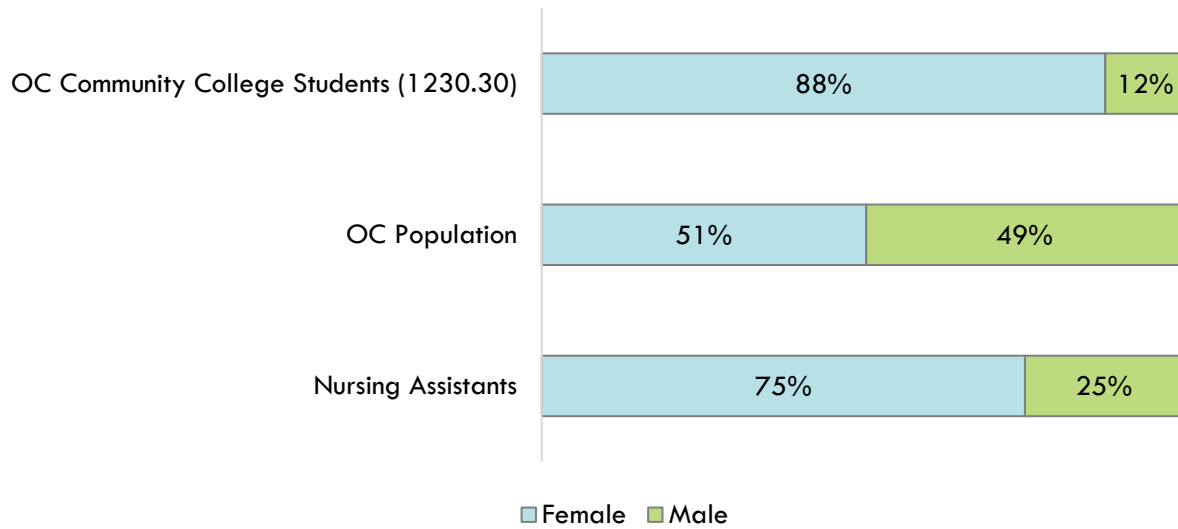


Sex:

Exhibit 16 shows the sex of Orange County community college students enrolled in certified nurse assistant programs compared to the overall Orange County population as well as *nursing assistants*.

Though the population is split nearly evenly, the vast majority of certified nurse assistant students (88%) and *nursing assistants* (75%) are women.

Exhibit 16: Program and County Demographics by Sex



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	<p>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/</p>
Living Wage	<p>The living wage is derived from the Insight Center’s California Family Needs Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, child care, health care, transportation, and taxes. For more information, see: https://insightccd.org/family-needs-calculator/</p> <p>The living wage for one adult in Orange County is \$20.63 per hour (\$42,910.40 annually). This figure is used by the CCCCCO to calculate the percentage of students that attained the regional living wage.</p>
Typical Education and Training Requirements, and Educational Attainment	<p>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</p>
Emerging Occupation Descriptions, Additional Education Requirements, and Employer Preferences	<p>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/</p>
Educational Supply	<p>The CCCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu</p> <p>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</p>
Student Metrics and Demographics	<p>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</p>

Data Type	Source
Population and Occupation Demographics	<p>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</p> <p>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</p>

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