Labor Market Analysis for Program Recommendation: 1230.20/Licensed Vocational Nursing
(Licensed Vocational Nurse [LVN])
Orange County Center of Excellence, December 2023

Summary

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

Program LMI Endorsement Criteria		
	Yes ☑	**No ☐**
Supply Gap:	*Comments:* There is projected to be **3,095 annual job openings** throughout Los Angeles and Orange counties for *licensed practical and licensed vocational nurses,* which **is more than the 2,070 awards conferred by educational institutions.**	
	Yes ☑	**No ☐**
Living Wage: (Entry-Level, 25th)	*Comments:* **The entry-level wage for *licensed practical and licensed vocational nurses* is $30.74, which is significantly above the OC living wage of $20.63.**	
	Yes ☑	**No ☐**
Education:	*Comments:* The typical entry-level education for *licensed practical and licensed vocational nurses* is a **postsecondary nondegree award. Nearly three-fourths (71%) of workers in the field have completed some college or an associate degree as their highest level of education.**	
Emerging Occupation(s)		
Yes ☐		*No* ☑
Comments: 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 the following middle-skill occupation:

- Licensed Practical and Licensed Vocational Nurses (29-2061)

Middle-skill occupations typically require a community college education while above middle-skill occupations typically require at least a bachelor's degree.

Based on the available data, there appears to be a supply gap for *licensed practical and licensed vocational nurses* in the region, typical education requirements align with a community college education, and entry-level wages for this occupation are significantly above the living wage. **Therefore, due to all 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 *licensed practical and licensed vocational nurses.*

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
Licensed Practical and Licensed Vocational Nurses (29-2061)	LA: 2,391	LA: 1,575	OC: $30.74	Postsecondary nondegree award	71%
	OC: 704	OC: 495			
Total	**3,095**	**2,070**	**N/A**	**N/A**	**N/A**

Demand:

- The number of jobs for *licensed practical and licensed vocational nurses* is projected to increase by 10% through 2027. There is projected to be 3,095 annual job openings.
- The entry-level hourly wage for *licensed practical and licensed vocational nurses* is $30.74 in Orange County, which is significantly above the living wage of $20.63.
- There were 15,435 online job postings for *licensed practical and licensed vocational nurses* over the past 12 months.
- The typical entry-level education for *licensed practical and licensed vocational nurses* is a postsecondary nondegree award.
- Approximately 71% 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 260 awards conferred by five (5) community colleges in Los Angeles and Orange Counties from 2019 to 2022.
- Non-community college institutions conferred an average of 1,810 awards from 2019 to 2021.
- According to COCI, one college in Orange County offers a licensed vocational nursing certificate program. However, there are no courses listed under this TOP code. Therefore, student outcomes metrics – including median wages, living wage attainment, and the percentage of students employed in their field of study - for the Orange County region, as well as RSCCD, are not available.

Demand

Occupational Projections:

Exhibit 2 shows the annual percent change in jobs for *licensed practical and licensed vocational nurses* from 2017 through 2027. Employment for *licensed practical and licensed vocational nurses* declined 1% from 2019 to 2020 in Orange County, which is less than the 7% decline across all occupations due to the COVID-19 pandemic. Employment in this occupation is projected to grow at a similar rate when compared to all occupations through 2027.

Exhibit 2: Annual Percent Change in Jobs for Licensed Practical and Licensed Vocational Nurses, 2017-2027
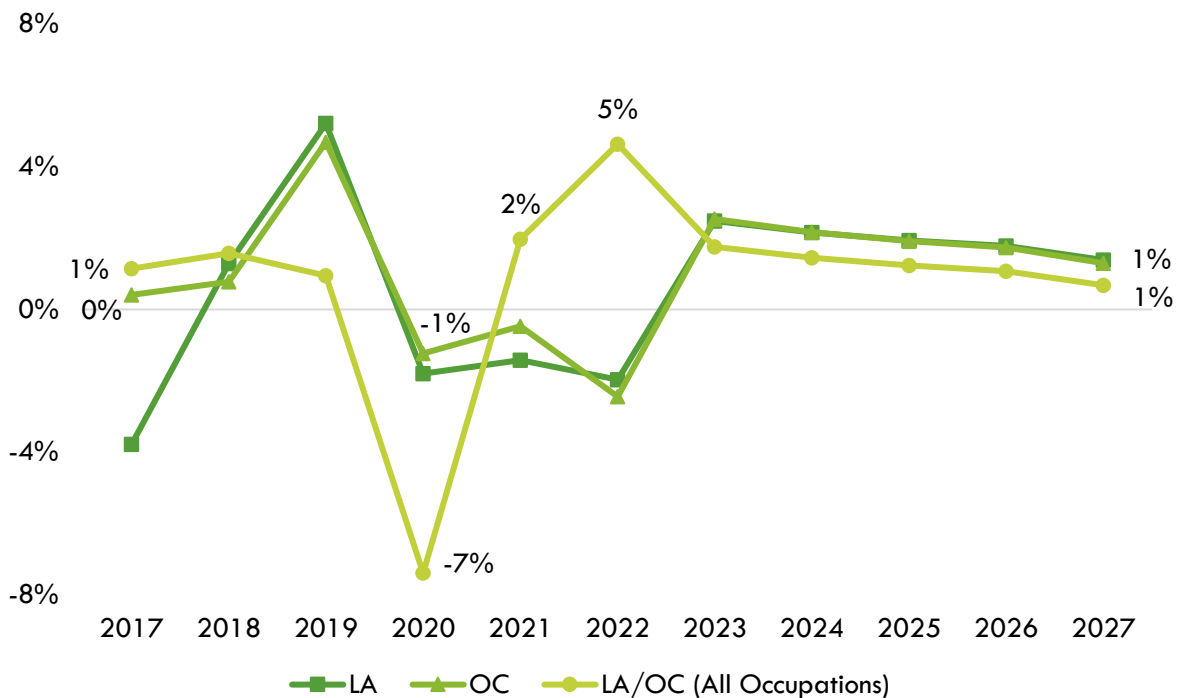

Exhibit 3 shows the five-year occupational demand projections for *licensed practical and licensed vocational nurses*. In Los Angeles/Orange County, the number of jobs related to this occupation is projected to increase by 10% through 2027. There is projected to be 3,095 jobs available annually. Of those, 77% (2,391) are projected to be in Los Angeles County.

Exhibit 3: Occupational Demand in Los Angeles and Orange Counties[1]

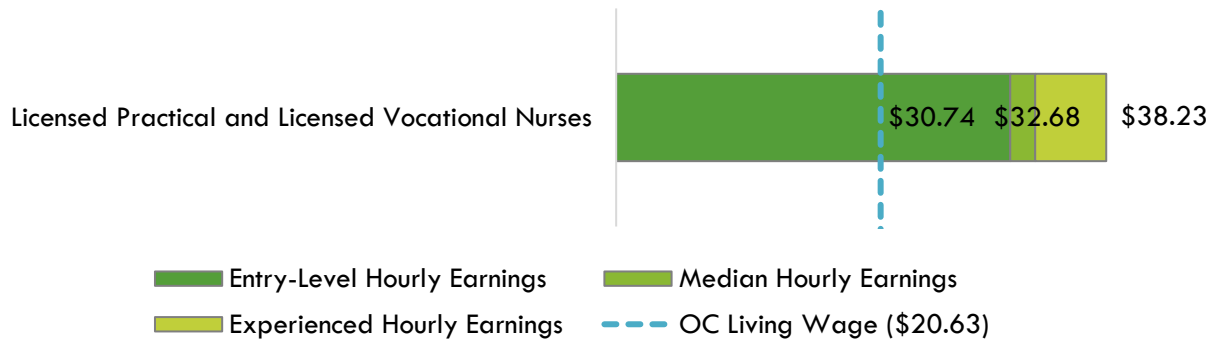| Geography	2022 Jobs	2027 Jobs	2022-2027 Change	2022-2027 % Change	Annual Openings
Los Angeles	22,760	25,066	2,306	10%	2,391
Orange	6,721	7,395	674	10%	704
Total	**29,481**	**32,461**	**2,980**	**10%**	**3,095**

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[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.

Wages:

The labor market endorsement in this report considers the entry-level hourly wage for *licensed practical and licensed vocational nurses* in Orange County, as it relates 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.
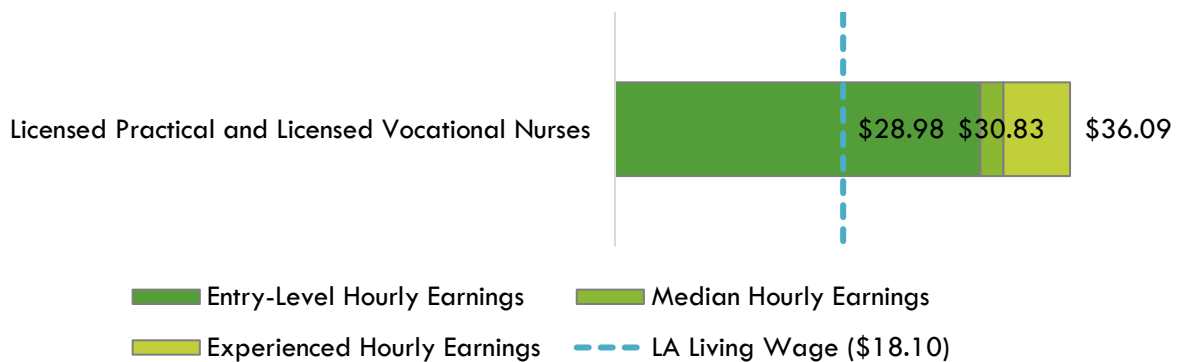
The typical entry-level hourly wage for *licensed practical and licensed vocational nurses* is $30.74, which is significantly above the living wage for one adult ($20.63 in Orange County). The experienced hourly wage is $38.23, which is also above the living wage. Orange County's average wage ($34.32) is above the average statewide wage of $33.52 for this occupation. Exhibit 4 shows the wage range for *licensed practical and licensed vocational nurses* in Orange County and how it compares to the regional living wage.

Exhibit 4: Wages by Occupation in Orange County

Licensed Practical and Licensed Vocational Nurses — $30.74 $32.68 $38.23

- Entry-Level Hourly Earnings
- Median Hourly Earnings
- Experienced Hourly Earnings
- OC Living Wage ($20.63)

The typical entry-level hourly wage for *licensed practical and licensed vocational nurses* is $28.98, which is significantly above the living wage for one adult ($18.10 in Los Angeles County). The experienced hourly wage is $36.09, which is also above the living wage. Los Angeles County's average wage ($32.41) is below the average statewide wage of $33.52 for this occupation. Exhibit 5 shows the wage range for *licensed practical and licensed vocational nurses* in Los Angeles County and how it compares to the regional living wage.

Exhibit 5: Wages by Occupation in Los Angeles County

Licensed Practical and Licensed Vocational Nurses — $28.98 $30.83 $36.09

- Entry-Level Hourly Earnings
- Median Hourly Earnings
- Experienced Hourly Earnings
- LA Living Wage ($18.10)

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.

There were 15,435 online job postings related to *licensed practical and licensed vocational nurses* listed in the past 12 months, as shown in Exhibit 6.

Exhibit 6: Number of Job Postings by Occupation (n=15,435)

Occupation	Job Postings	Percentage of Job Postings
Licensed Practical and Licensed Vocational Nurses	15,435	100%

The top employers for *licensed practical and licensed vocational nurses* in the region, by number of job postings, are shown in Exhibit 7.

Exhibit 7: Top Employers by Number of Job Postings (n=15,435)

Employer	Job Postings	Percentage of Job Postings
Kaiser Permanente	1,869	12%
Alta Hospitals SYS	491	3%
Maxim Healthcare Services	410	3%
PIH Health	395	3%
Providence	363	2%
Sharp Healthcare	349	2%
University of California	265	2%
Cedars-Sinai	252	2%
UnitedHealth Group	221	1%
Prime Healthcare Services	210	1%
Aveanna Healthcare	206	1%
ShiftMed	194	1%
AccentCare	181	1%
Maxim Healthcare Staffing	125	1%

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

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

### Exhibit 8: Top Skills by Number of Job Postings (n=15,435)

Top Specialized Skills	Top Soft Skills	Top Computer Skills
Nursing (10,256)	Communication (4,006)	Microsoft Outlook (680)
Medication Administration (5,178)	Management (2,552)	Microsoft Excel (499)
Nursing Care (4,880)	Leadership (2,303)	Microsoft Office (490)
Vital Signs (4,307)	Problem Solving (2,157)	Microsoft Word (268)
Infection Control (3,589)	Emergency Procedures (2,040)	LESS (219)
Medical Records (3,270)	First Aid (2,037)	Microsoft PowerPoint (171)
Computerized Physician Order Entry (2,980)	Strategic Planning (1,809)	Clinic Management Systems (148)
Cardiopulmonary Resuscitation (CPR) (2,892)	Multilingualism (1,701)	Epic EMR (107)
Patient Treatment (2,504)	Customer Service (1,607)	Spreadsheets (99)
Asepsis (2,461)	Teaching (1,494)	Learning Management Systems (48)

Educational Attainment:

The Bureau of Labor Statistics (BLS) lists a postsecondary nondegree award as the typical entry-level education for *licensed practical and licensed vocational nurses*. The national-level educational attainment data indicates that 71% of workers have completed some college or an associate degree as their highest level of education. Exhibit 9 shows the educational attainment for this occupation.

Of the 40% of the cumulative job postings for *licensed practical and licensed vocational nurses* that listed a minimum education requirement in Los Angeles/Orange County, 95% (5,893) requested a high school diploma or an associate degree, 3% (209) requested a bachelor's degree, and 2% (125) requested a master's degree or higher.

Exhibit 9: National-level Educational Attainment for Licensed Practical and Licensed Vocational Nurses

Licensed Practical and Licensed Vocational Nurses: 24% | 71% | 4% | 1%

■ High School Diploma or Less   ■ Some College or Associate Degree
■ Bachelor's Degree   ■ Graduate or Professional Degree
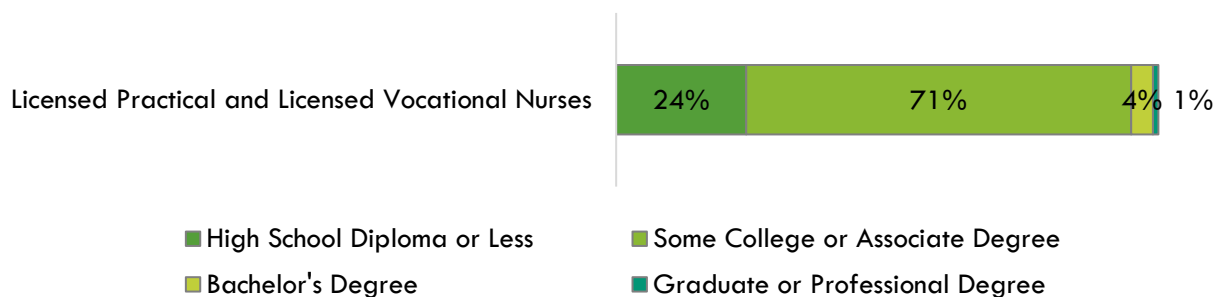
Educational Supply
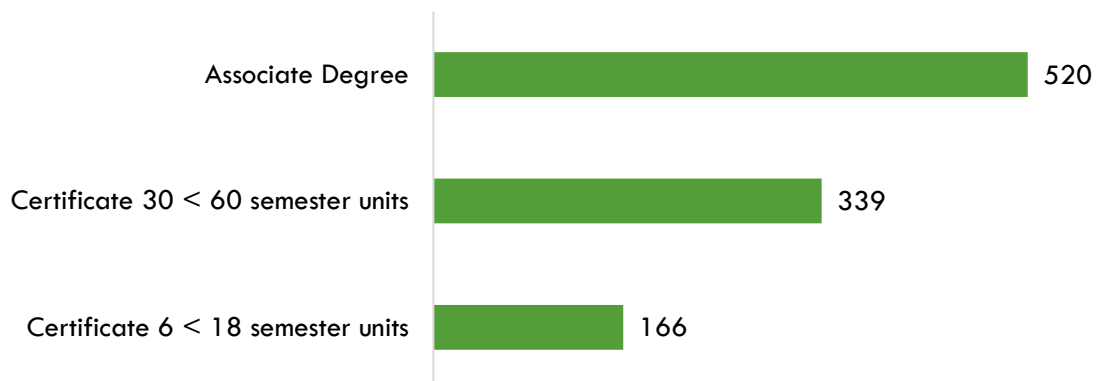
Community College Supply:

Exhibit 10 shows the annual and three-year average number of awards conferred by community colleges in the related TOP codes: Nursing (1230.00) and Licensed Vocational Nursing (1230.20). The college with the most completions in the region is Long Beach City. Over the past 12 months, there were no 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
1230.00	Nursing	Long Beach City	71	73	63	69
		LA Subtotal	**71**	**73**	**63**	**69**
		Fullerton	-	-	51	17
		OC Subtotal	**-**	**-**	**51**	**17**
		Supply Subtotal/Average	**71**	**73**	**114**	**86**
1230.20	Licensed Vocational Nursing	Citrus	46	77	50	58
		Long Beach City	76	83	79	79
		Pasadena	14	14	18	15
		Rio Hondo	24	18	24	22
		LA Subtotal	**160**	**192**	**171**	**174**
		Supply Subtotal/Average	**160**	**192**	**171**	**174**
		Supply Total/Average	**231**	**265**	**285**	**260**

Exhibit 11 shows the annual average community college awards by type from 2019-20 through 2021-22. The majority (520) of the awards are for associate degrees, followed by certificates of 30 to less than 60 semester units (339).

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 licensed vocational nursing programs in Rancho Santiago Community College District (RSCCD), the Orange County Region, and California. In the 2020-21 academic year, there were 3,555 licensed vocational nursing students in California.

According to COCI, one college in Orange County offers a licensed vocational nursing certificate program. Though there are 109 courses throughout the region listed under this TOP code, none of these courses are offered at a RSCCD college or at any Orange County community college. Therefore, student outcomes metrics for RSCCD and Orange County are not available.

California students that exited licensed vocational nursing programs in the 2020-21 academic year had median annual earnings of $41,824 and 59% attained the living wage. Moreover, 91% of licensed vocational nursing students that exited their program in 2019-20 reported that they are working in a job closely related to their field of study.

Exhibit 12: Licensed Vocational Nursing (1230.20) Strong Workforce Program Metrics, 2020-21[3]

SWP Metric	RSCCD	OC Region	California
SWP Students	N/A	N/A	3,555
SWP Students Who Earned 9 or More Career Education Units in the District in a Single Year	N/A	N/A	44%
SWP Students Who Completed a Noncredit CTE or Workforce Preparation Course	N/A	N/A	37%
SWP Students Who Earned a Degree or Certificate or Attained Apprenticeship Journey Status	N/A	N/A	659
SWP Students Who Transferred to a Four-Year Postsecondary Institution (2019-20)	N/A	N/A	161
SWP Students with a Job Closely Related to Their Field of Study (2019-20)	N/A	N/A	91%
Median Annual Earnings for SWP Exiting Students	N/A	N/A	$41,824 ($20.10)
Median Change in Earnings for SWP Exiting Students	N/A	N/A	50%
SWP Exiting Students Who Attained the Living Wage	N/A	N/A	59%

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[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 *licensed practical and licensed vocational nurses*. Exhibit 13 shows the annual and two-year average number of awards conferred by these institutions in the related Classification of Instructional Programs (CIP) Code: Licensed Practical/Vocational Nurse Training (51.3901).

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 colleges in the region conferred an average of 1,810 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	2-Year Award Average
51.3901	Licensed Practical/ Vocational Nurse Training	Advanced College	75	2	39
		American Career College-Anaheim	152	155	154
		American Career College-Los Angeles	166	197	182
		American Medical Sciences Center	12	-	6
		Angeles College	43	87	65
		Angeles Institute	33	33	33
		California Career College	11	-	6
		California Career Institute	77	52	65
		Career Care Institute	165	86	126
		Career Development Institute Inc	51	53	52
		Career Networks Institute	4	17	11
		CES College	69	31	50
		Downey Adult School	53	54	54
		Glendale Career College	51	45	48
		Hacienda La Puente Adult Education	19	15	17
		Healthcare Career College	36	23	30
		High Desert Medical College	33	146	90
		Homestead Schools	75	131	103
		Marian Health Careers Center-Los Angeles Campus	90	76	83
		Marian Health Careers Center-Van Nuys Campus	58	61	60
		Medical Allied Career Center	26	32	29
		National Career College	26	7	17
		North-West College-Anaheim	-	-	-

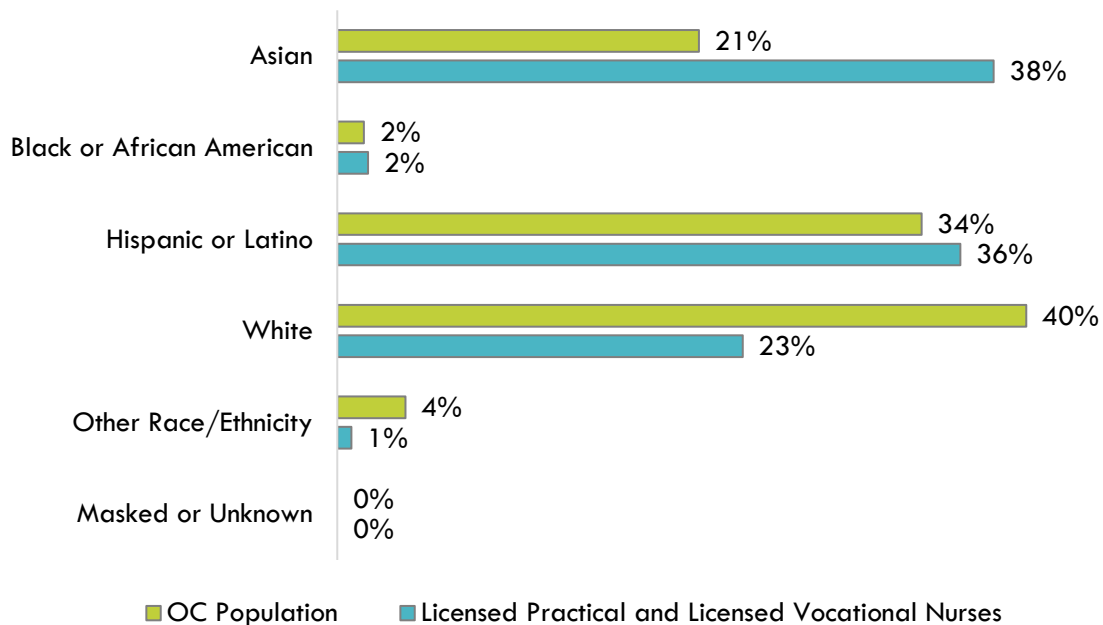| CIP Code	Program	College	2019-2020 Awards	2020-2021 Awards	2-Year Award Average
		North-West College-Glendale	-	-	-
		North-West College-Long Beach	37	46	42
		North-West College-Pomona	37	49	43
		North-West College-Van Nuys	70	29	50
		North-West College-West Covina	60	85	73
		Pacific College	105	80	93
		Platt College-Anaheim	-	-	-
		Platt College-Los Angeles	3	30	17
		Sri Sai Krish Institute	-	36	18
		Stanbridge University	156	121	139
		University of Antelope Valley	35	12	24
		Supply Subtotal/Average	**1,828**	**1,791**	**1,810**
		Supply Total/Average	**1,828**	**1,791**	**1,810**

Regional Demographics

This section analyzes demographic data for Orange County community college students enrolled in licensed vocational nursing 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.

As noted in the student outcomes section, though one community college in Orange County offers a licensed vocational nursing program and there are 109 active courses throughout the region under Licensed Vocational Nursing (TOP 1230.20), none of these courses are offered at a RSCCD college or at any Orange County community college. Therefore, student outcomes metrics and student demographics for RSCCD and Orange County are not available. The following section includes data for the Orange County population compared to *licensed practical and licensed vocational nurses*.

Ethnicity:

Exhibit 14 shows the ethnicity of the overall Orange County population, as well as *licensed practical and licensed vocational nurses*. Notably, 38% of workers employed in this occupation are Asian, which is significantly higher than the population (21%) – a deviation of 17%. Also notable is the 36% of Hispanic or Latino workers in this occupation, which is slightly higher than the Orange County population (34%).

Exhibit 14: Program and County Demographics by Ethnicity

Asian
- OC Population: 21%
- Licensed Practical and Licensed Vocational Nurses: 38%

Black or African American
- OC Population: 2%
- Licensed Practical and Licensed Vocational Nurses: 2%

Hispanic or Latino
- OC Population: 34%
- Licensed Practical and Licensed Vocational Nurses: 36%

White
- OC Population: 40%
- Licensed Practical and Licensed Vocational Nurses: 23%

Other Race/Ethnicity
- OC Population: 4%
- Licensed Practical and Licensed Vocational Nurses: 1%

Masked or Unknown
- OC Population: 0%
- Licensed Practical and Licensed Vocational Nurses: 0%

☐ OC Population   ☐ Licensed Practical and Licensed Vocational Nurses

Age:

Exhibit 15 shows the age of the overall Orange County population, as well as *licensed practical and licensed vocational nurses.* The plurality of workers in this occupation are age 25 to 34 (34%) and age 35 to 49 (33%), which are higher than the population (14% and 20%, respectively).

Exhibit 15: Program and County Demographics by Age

Age	OC Population	Licensed Practical and Licensed Vocational Nurses
19 or less	25%	0%
20 to 24	7%	6%
25 to 34	14%	34%
35 to 49	20%	33%
50 and older	34%	27%

■ OC Population ■ Licensed Practical and Licensed Vocational Nurses
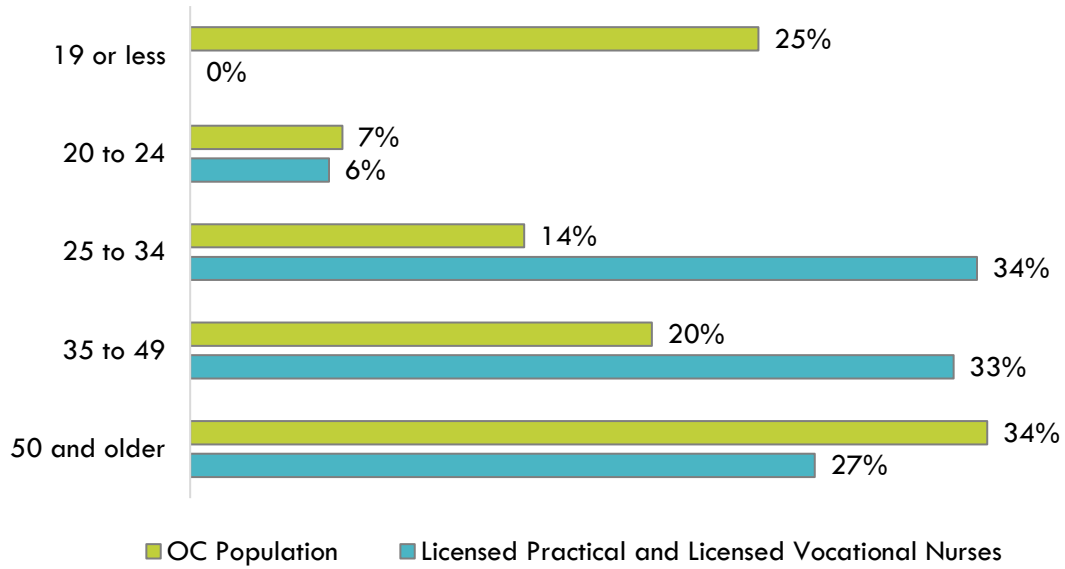
Sex:

Exhibit 16 shows the sex of the overall Orange County population, as well as *licensed practical and licensed vocational nurses.*

Though the Orange County population is split nearly evenly between men and women, 74% of workers in this occupation are women.

Exhibit 16: Program and County Demographics by Sex

Category	Female	Male
OC Population	51%	49%
Licensed Practical and Licensed Vocational Nurses	74%	26%

Female ☐ Male ☐ Masked or Unknown ☐
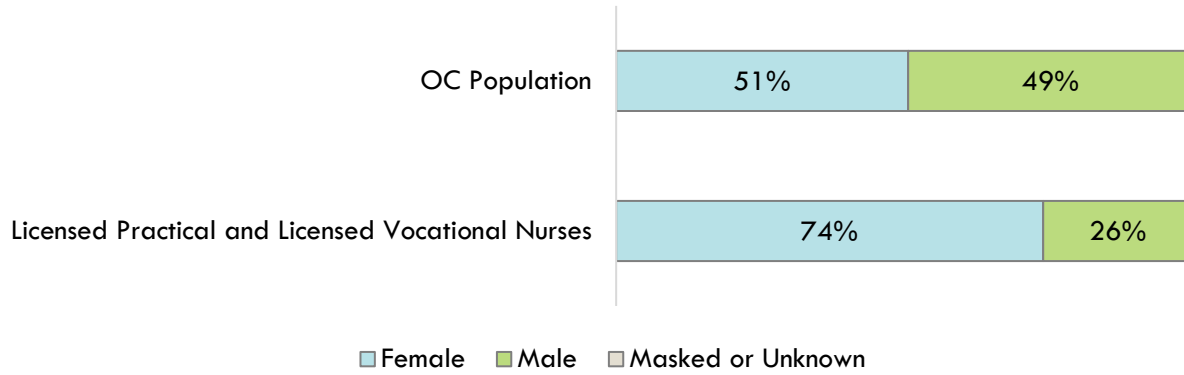
Appendix A: Methodology

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	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://insightcced.org/family-needs-calculator/ The living wage for one adult in Orange County is $20.63 per hour ($42,910.40 annually). This figure is used by the CCCCO to calculate the percentage of students that attained the regional living wage.
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

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