

December 2020

Labor Market Analysis

Licensed Vocational Nurses



Prepared by the Central Valley/Mother Lode Center of Excellence

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COVID-19 Statement: This report includes employment projection data by EMSI. EMSI’s projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

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Summary

Please note the COVID-19 statement on page 2 when considering this report's findings.

This study conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for licensed vocational nurses (LVNs). One occupation was identified for Cerro Coso: 29-2061, Licensed Practical and Licensed Vocational Nurses.

Key findings:

- **Occupational demand** — Nearly 4,140 workers were employed in jobs related to LVNs in 2019 in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. Licensed practical and licensed vocational nurses have a projected growth rate of 10% over the next five years and 2,469 annual openings.
- **Wages** — Licensed practical and vocational nurses earn an entry-level wage of \$21.50/hour in the subregion and \$22.30/hour in the region.
- **Employers** — Employers with the most job postings in the subregion are Wellpath, Adventist Health, and The Mentor Network.
- **Occupational titles** — The most common job title is licensed vocational nurse.
- **Skills and certifications** — The top baseline skill is teamwork/collaboration, the top specialized skill is patient care, and the top software skill is Microsoft Excel. The most in-demand certification is licensed vocational nurse.
- **Education** — A postsecondary nondegree award is the typical entry-level education required for licensed practical and vocational nurses.
- **Supply** — Analysis of postsecondary completions in the region shows that on average 307 awards were conferred in the Central Valley/Mother Lode region each year.

Based on a comparison of occupational demand and supply, there is an undersupply of 2,256 trained workers in the subregion and 3,796 workers in the region. The Center of Excellence recommends that Cerro Coso work with the Healthcare Regional Director, the college's advisory board, and local industry in the expansion of programs to address the shortage of LVNs in the region.

Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Cerro Coso to provide labor market information for licensed vocational nurses (LVNs). The geographical focus for this report is the South Central Valley/Southern Mother Lode (SCV/SML) subregion, but regional demand and supply data has been included for broader applicability and use.

The average living wage for a single adult in the South Central Valley/Southern Mother Lode (SCV/SML) subregion is \$10.30/hour.¹

Analysis of the program and occupational data related to LVNs resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 29-2061, Licensed Practical and Licensed Vocational Nurses

The occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O*NET OnLine are shown below.

Licensed Practical and Licensed Vocational Nurses

Job Description: Care for ill, injured, or convalescing patients or persons with disabilities in hospitals, nursing homes, clinics, private homes, group homes, and similar institutions. May work under the supervision of a registered nurse. Licensing required.

Knowledge: Medicine and Dentistry, Customer and Personal Service, Psychology, English Language, Therapy and Counseling

Skills: Service Orientation, Active Listening, Coordination, Monitoring, Reading Comprehension

Occupational Demand

The South Central Valley/Southern Mother Lode subregion employed 4,137 workers in LVN occupations in 2019 (Exhibit 1). This occupation is projected to grow by 10% over the next five years and has 2,469 projected annual openings.

Exhibit 1. LVN employment and occupational projections in the SCV/SML subregion

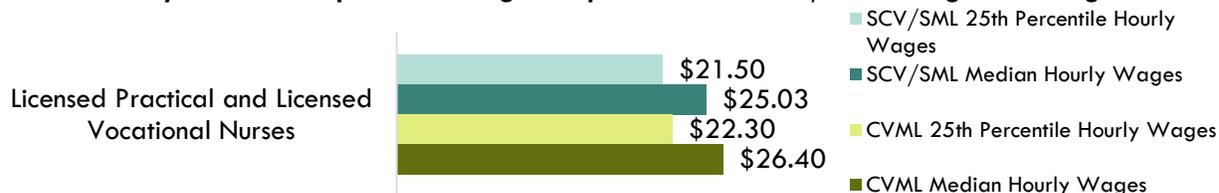
Occupation	2019 Jobs	2024 Jobs	5-Year Change	5-Year % Change	Annual Openings
Licensed Practical and Licensed Vocational Nurses	4,137	4,547	411	10%	2,469

¹ The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

Wages

Exhibit 2 compares the entry-level and experienced wages of LVNs. Licensed practical and vocational nurses earn an entry-level wage of \$21.50/hour in the subregion and \$22.30/hour in the region.

Exhibit 2. Entry-level and experienced wage comparison in the SCV/SML subregion and region



Job Postings

There were 1,138 job postings for the one occupation in the SCV/SML subregion from May to October 2020.² The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of LVNs by number of job postings

Employer	Job Postings	% Job Postings
Wellpath	39	5%
Adventist Health	36	4%
The Mentor Network	32	4%
Baymark Health Services	25	3%
Dycora Transitional Health & Living	25	3%
Astrya Global	18	2%
Dignity Health	14	2%
Bristol Hospice	10	1%
Compassionate Care Home Health Agency	10	1%
Interim Healthcare	10	1%

Exhibit 4 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across one O*NET OnLine occupation. The occupational title licensed practical and licensed vocational nurses is listed in 202 job postings. Common job titles in postings include licensed vocational nurse in 232 job postings, licensed practical nurse in 23 job postings, and licensed vocational nurse-corrections in 16 job postings.

Exhibit 4. Top occupational titles in job postings for LVNs

Occupational Title	Job Postings	% of Job Postings
Licensed Practical and Licensed Vocational Nurses	1,138	100%

² Other than occupation titles and job titles, the categories below can be counted one or multiple times per job posting, and across several areas in a single posting. For example, a skill can be counted in two different skill types, and an employer can indicate more than one education level.

Salaries

Exhibit 5 shows the “Market Salaries” for LVNs that are calculated by Burning Glass which uses a machine learning model built off of millions of job postings every year, and accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

Exhibit 5. Salaries for LVNs

Market Salary Percentile	Salary Amount
10th Percentile	\$35,999
25th Percentile	\$41,598
50th Percentile	\$46,722
75th Percentile	\$52,062
90th Percentile	\$61,436

Education

Of the 1,138 job postings, 213 listed an education level preferred for the positions being filled. Of those, 87% requested high school or vocational training, and 34% requested an associate degree (Exhibit 6). A job posting can indicate more than one education level. Hence, the percentages shown in the chart below total more than 100%.

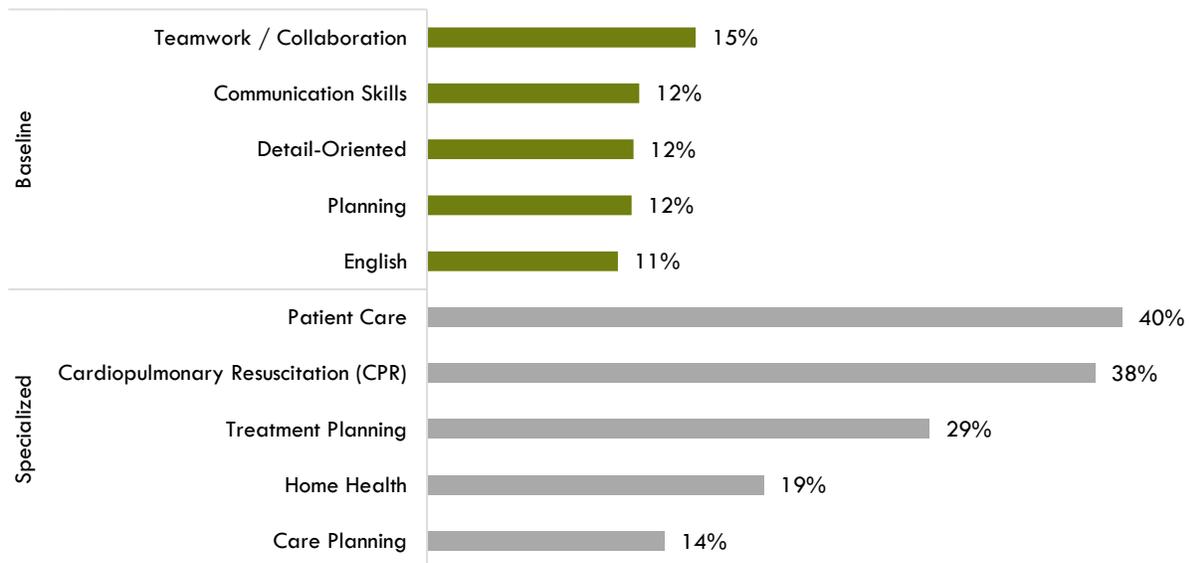
Exhibit 6. Education levels requested in job postings for LVNs

Education level	Job Postings	% of Job Postings
High school or vocational training	185	87%
Associate degree	73	34%

Baseline and Specialized Skills

Exhibit 7 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are teamwork/collaboration, 15% of job postings, communication, 12%, and detail-oriented, 12%. The top three specialized skills are patient care, 40% of job postings, CPR, 38%, and treatment planning, 29%.

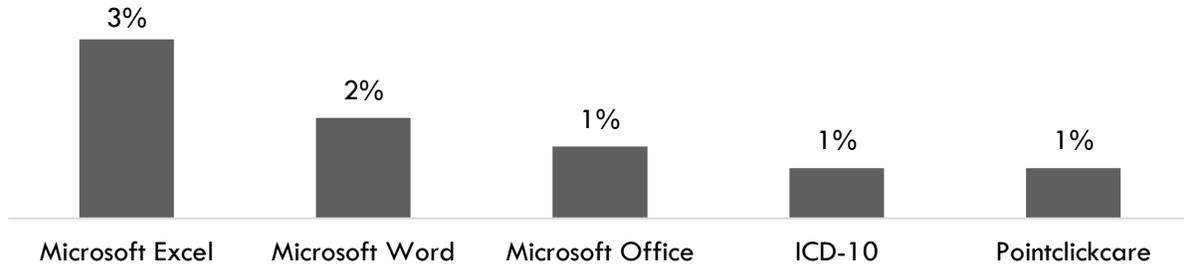
Exhibit 7. In-demand LVN baseline and specialized skills



Software Skills

Analysis also included the software skills most in demand by employers. Microsoft Excel and Word were the top two software skills identified in job postings (Exhibit 8).

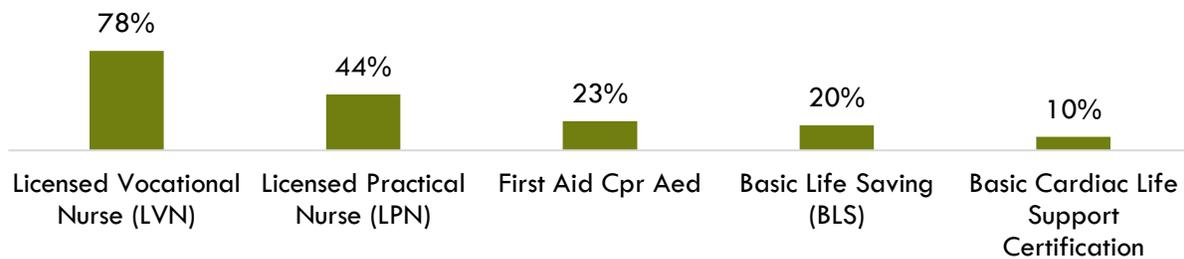
Exhibit 8. In-demand LVN software skills



Certifications

Of the 1,138 job postings, 1,040 contained certification data. Among those, 78% indicated a need for a licensed vocational nurse certification. The next top certifications are licensed practical nurse and first aid/CPR/AED certification (Exhibit 9).

Exhibit 9. Top LVN certifications requested in job postings



Education, Work Experience & Training

A postsecondary nondegree award is the typical entry-level education required for licensed practical and vocational nurses (Exhibit 10).

Exhibit 10. Education, work experience, training, and Current Population Survey results for LVNs³

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Licensed Practical and Licensed Vocational Nurses	Postsecondary nondegree award	None	None	70.0%

³ "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

Supply

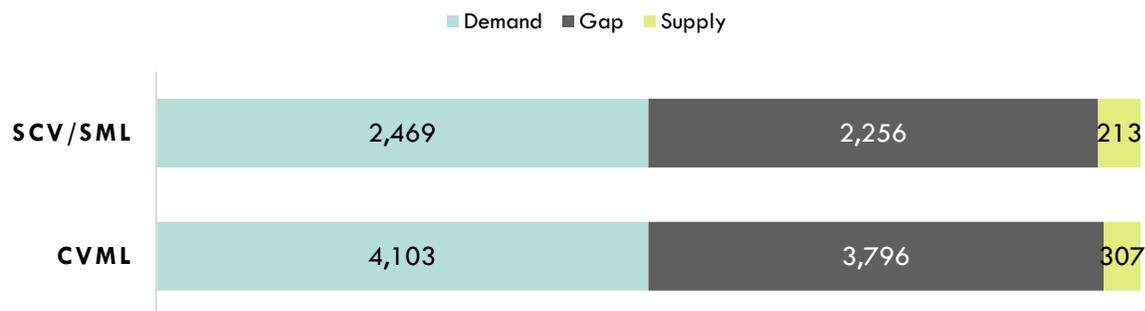
Analysis of program data from the California Community Colleges Chancellor’s Office Data Mart included the TOP and CIP codes: 123020-Licensed Vocational Nursing and 51.3901-Licensed Practical/Vocational Nurse Training. Analysis of the last three years of data shows that, on average, 307 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 11).

Exhibit 11. Postsecondary supply for LVN occupations in the region

TOP or CIP Code-Title	College	Associate Degree	Award 1 < 2 academic years	Certificate 30 < 60 semester units	Subtotal
123020 - Licensed Vocational Nursing	Bakersfield			22	22
	Cerro Coso	13		17	31
	Merced	17		23	40
	Reedley College	8		17	25
51.3901 - Licensed Practical/Vocational Nurse Training	Brightwood College-Modesto		3		3
	Clovis Adult Education		42		42
	San Joaquin Valley College-Visalia	44			44
	Santa Barbara Business College-Bakersfield		50		50
	Xavier College School of Nursing		51		51
TOTAL		82	145	79	307

There is an undersupply of 2,256 LVNs in the SCV/SML subregion and 3,796 LVNs in the region (Exhibit 12).

Exhibit 12. LVN workforce annual demand and supply in the SCV/SML subregion and region



Student Outcomes

Exhibit 13 summarizes employment and wage outcomes from the California Community College Chancellor’s Cal-PASS Plus LaunchBoard for the TOP code related to LVNs. There were 118 licensed vocational nursing students who received a degree, certificate, or attained apprenticeship journey status, and 13 transferred. More than 90% of students reported attaining a job closely related to their field of study, 84% reported a median change in earnings, and 93% attained a living wage.

Exhibit 13. Regional metrics for the TOP code related to LVNs

Metric	Licensed Vocational Nursing 123020
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	118
Number of Students Who Transferred	13
Job Closely Related to Field of Study	91%
Median Change in Earnings	84%
Attained a Living Wage	83%
* denotes data not available.	

Conclusion

The entry-level wages of the one occupation exceed the SCV/SML subregion's average living wage. There were 1,138 job postings in the past six months for occupations related to LVNs in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is teamwork/collaboration, and the top specialized skill is patient care.
- The top software skill is Microsoft Excel.
- The top certification is a licensed vocational nurse certification.

There is an undersupply of trained workers, a shortage of 2,256 in the SCV/SML subregion and 3,796 in the region.

Recommendation

Based on these findings, it is recommended that Cerro Coso work with the Healthcare Regional Director, the college's advisory board, and local industry in the expansion of programs to address the shortage of LVNs in the region.

Appendix A: Methodology & Data Sources

Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor’s Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry: economicmodeling.com.
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: https://www.bls.gov/emp/tables/educational-attainment.htm .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: labormarketinfo.edd.ca.gov .
Job Posting and Skills Data	Burning Glass: burning-glass.com/ .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: onetonline.org .

Key Terms and Concepts

Annual Job Openings: Annual openings are calculated by dividing the number of years in the projection period by total job openings.

Education Attainment Level: The highest education attainment level of workers age 25 years or older.

Employment Estimate: The total number of workers currently employed.

Employment Projections: Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (EMSI) formula that includes historical employment and economic indicators along with national, state and local trends.

Living Wage: The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

Occupation: An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

Percent Change: Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

Replacements: Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

Total Job Openings (New + Replacements): Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

Typical Education Requirement: represents the typical education level most workers need to enter an occupation.

Typical On-The-Job Training: indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.