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Labor Market Analysis

LVN to RN Pathway



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Prepared by the Central Valley/Mother Lode Center of Excellence

Table of Contents

- Summary 2
 - Key findings 2
- Introduction 3
- Occupational Demand 3
- Wages 4
- Job Postings 4
 - Salaries 5
 - Education 5
 - Baseline and Specialized Skills 5
 - Software Skills 6
 - Certifications 6
- Education, Work Experience & Training 7
- Supply 7
- Student Outcomes 8
- Conclusion 9
- Recommendation 9
- Appendix A: Methodology & Data Sources 10

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.

If for any reason this document is not accessible or if you have specific needs for readability, please contact us and we will do our utmost to accommodate you with a modified version. To make a request, contact Nora Seronello by phone at (209) 575-6894 or by email seronellon@mjc.edu.

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 LVN to RN Pathway. One occupation related to LVN to RN Pathway were identified for Merced College:

- 29-1141, Registered Nurses

Key findings:

- **Occupational demand** — Nearly 11,170 workers were employed in jobs related to LVN to RN Pathway in 2021 in the North Central Valley/Northern Mother Lode (NCV/NML) subregion. The largest occupation is registered nurses with 11,168 workers, a projected growth rate of 7% over the next five years, and 753 annual openings.
- **Wages** — Registered nurses earn the highest entry-level wage, \$43.28/hour in the subregion.
- **Employers** — Employers with the most job postings in the subregion are Sutter Health, Tenet Health System, and Adventist Health.
- **Occupational titles** — The most common occupational title in job postings in the subregion is Registered Nurses. The most common job title is Registered Nurse.
- **Skills and certifications** — The top baseline skill is communication skills, the top specialized skill is patient care, and the top software skill is Microsoft Office. The most in-demand certification is a driver's license.
- **Education** — A bachelor's degree is typically required for registered nurses.
- **Supply** — Analysis of postsecondary completions shows that on average 769 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 483 trained workers in the subregion and 1,339 workers in the region. The Center of Excellence recommends that Merced College work with the regional directors, the college's advisory board, and local industry in the expansion of programs to address the shortage of LVN to RN Pathway workers in the region.

Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Merced College to provide labor market information for LVN to RN Pathway. The geographical focus for this report is the North Central Valley/Northern Mother Lode (NCV/NML) 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 NCV/NML subregion is \$12.65/hour.¹ Analysis of the program and occupational data related to LVN to RN Pathway resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 29-1141, Registered 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.

Registered Nurses

Job Description: Assess patient health problems and needs, develop and implement nursing care plans, and maintain medical records. Administer nursing care to ill, injured, convalescent, or disabled patients. May advise patients on health maintenance and disease prevention or provide case management. Licensing or registration required.

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

Skills: Social Perceptiveness, Active Listening, Coordination, Critical Thinking, Service Orientation

Occupational Demand

The NCV/NML subregion employed 11,168 workers in LVN to RN Pathway occupations in 2021 (Exhibit 1). The largest occupation is registered nurses with 11,168 workers in 2021. This occupation is projected to grow by 7% over the next five years and has the greatest number of projected annual openings, 753.

Exhibit 1. LVN to RN Pathway employment and occupational projections in the NCV/NML subregion

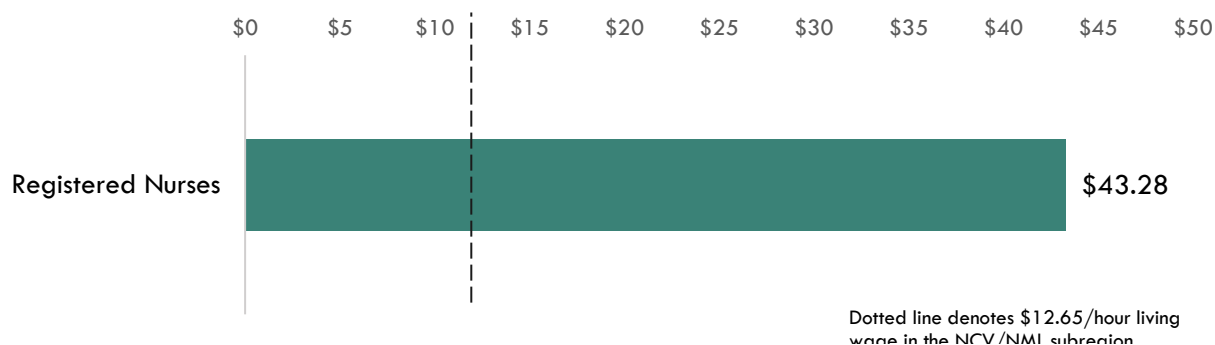
Occupation	2021 Jobs	2026 Jobs	5-Year Change	5-Year % Change	Annual Openings
Registered Nurses	11,168	11,925	757	7%	753
TOTAL	11,168	11,925	757	7%	753

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 shows the entry-level hourly wages of the LVN to RN Pathway occupations. Registered nurse earn the highest entry-level wage, \$18.46/hour in the subregion².

Exhibit 2. LVN to RN Pathway entry-level wages in the NCV/NML subregion



Job Postings

There were 5,999 job postings for the occupation in the NCV/NML subregion from May 2021 to October 2022.³ The employers with the most job postings are listed in Exhibit 3.

Exhibit 3. Top employers of LVN to RN Pathway by number of job postings

Employer	Job Postings	% Job Postings
Sutter Health	249	7%
Tenet Health System	185	5%
Adventist Health	136	4%
Emanuel Medical Center	132	4%
Doctors Medical Center Of Modesto	118	3%
Kaiser Permanente	114	3%
Dignity Health	112	3%
Asante	110	3%
Nationwide Health Care Incorporated	109	3%
St Joseph Medical Center	79	2%

Exhibit 4 shows how job postings for the targeted occupations in the NCV/NML subregion are distributed across five O*NET OnLine occupations. The occupational title Registered Nurses is listed in 5,286 job postings. Note how this occupational title dominates the job posting results. Common job titles in postings include Registered Nurse in 438 job postings, Case Manager in 53 job postings, and Registered Nurse Float Pool in 49 job postings.

² Entry-level wages are derived from the 25th percentile.

³ 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.

Exhibit 4. Top occupational titles in job postings for LVN to RN Pathway

Occupational Title	Job Postings	% of Job Postings
Registered Nurses	5,286	88%
Critical Care Nurses	703	12%
Acute Care Nurses	4	0%
Advanced Practice Psychiatric Nurses	4	0%
Clinical Nurse Specialists	2	0%

Salaries

Exhibit 5 shows the “Market Salaries” for LVN to RN Pathway occupations. These are calculated by Burning Glass using a machine learning model built off of millions of job postings every year. This accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

Exhibit 5. Salaries for LVN to RN Pathway occupations

Market Salary Percentile	Salary Amount
10th Percentile	\$51,463
25th Percentile	\$61,813
50th Percentile	\$71,685
75th Percentile	\$80,714
90th Percentile	\$90,145

Education

Of the 5,999 job postings, 4,960 listed an education level preferred for the positions being filled. Among those, 56% requested bachelor’s degree, 53% requested an associate’s, and 11% requested a master’s degree (Exhibit 6). A job posting can indicate more than one education level. Hence, the percentages shown in the chart below may total more than 100%.

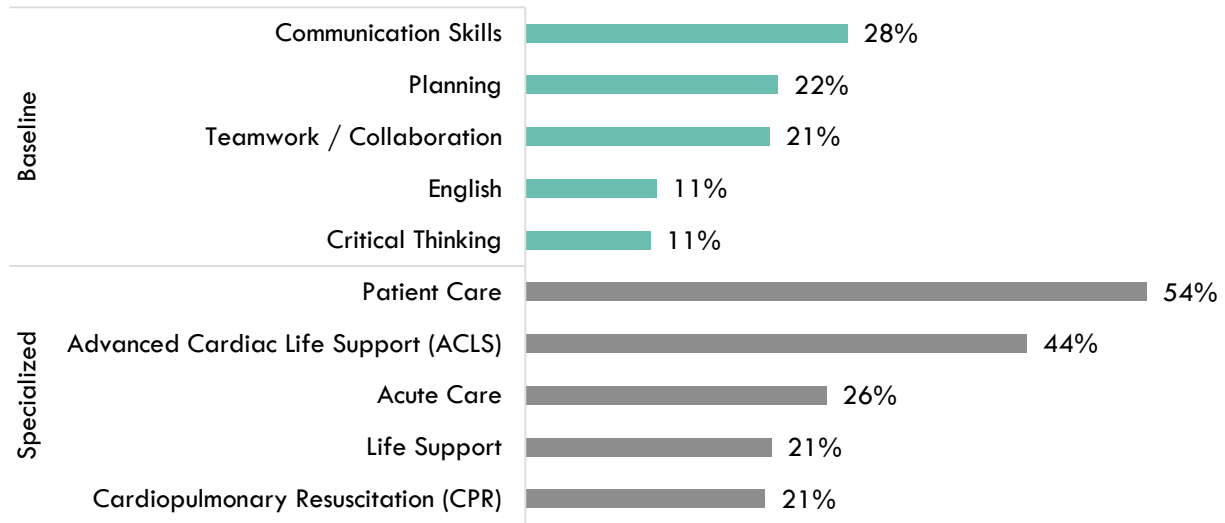
Exhibit 6. Education levels requested in job postings for LVN to RN Pathway

Education Level	Job Postings	% of Job Postings
Bachelor's degree	2,795	56%
Associate's degree	2,652	53%
Master's degree	566	11%
High school or vocational training	249	5%
Doctoral degree	28	1%

Baseline and Specialized Skills

Exhibit 7 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are communication skills, 28% of job postings, planning, 22%, and teamwork/collaboration, 21%. The top three specialized skills are patient care, 54% of job postings, advanced cardiac life support (ACLS), 54%, and acute care, 26%.

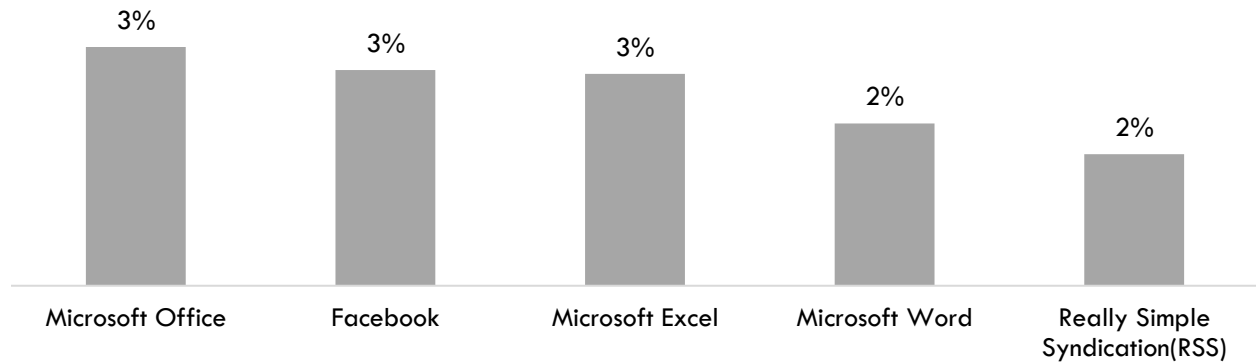
Exhibit 7. In-demand LVN to RN Pathway baseline and specialized skills



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).

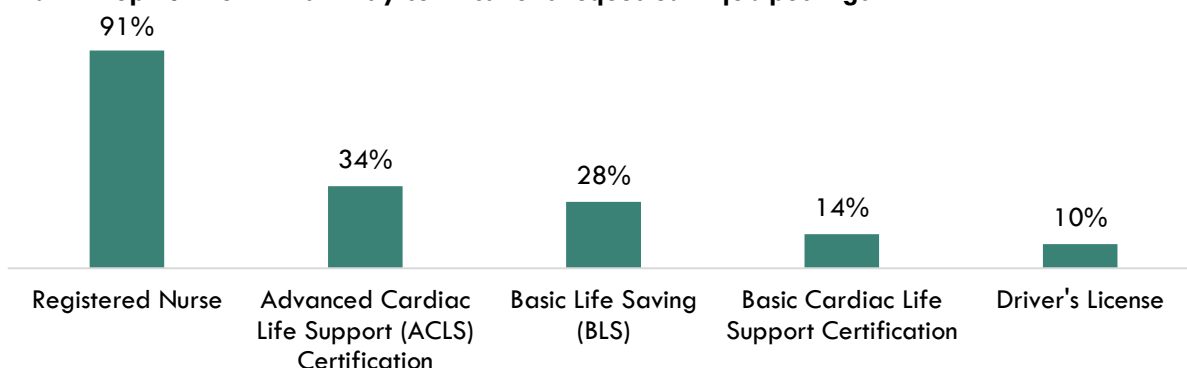
Exhibit 8. In-demand LVN to RN Pathway software skills



Certifications

Of the 5,999 job postings, 5,318 contained certification data. Among those, 91% indicated a need for a driver's license. The next top certifications are Advanced Cardiac Life Support (ACLS) Certification and Basic Life Saving (BLS) (Exhibit 9)

Exhibit 9. Top LVN to RN Pathway certifications requested in job postings



Education, Work Experience & Training

A bachelor's degree is typically required for registered nurses (Exhibit 10).

Exhibit 10. Education, work experience, training, and Current Population Survey results for LVN to RN Pathway occupations⁴

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Registered Nurses	Bachelor's degree	None	None	33.3%

Supply

Analysis of program data from the Integrated Postsecondary Education Data System (IPEDS) included the TOP code and title: 123010 - Registered Nursing. Analysis of the last three years of data shows that, on average, 769 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 11).

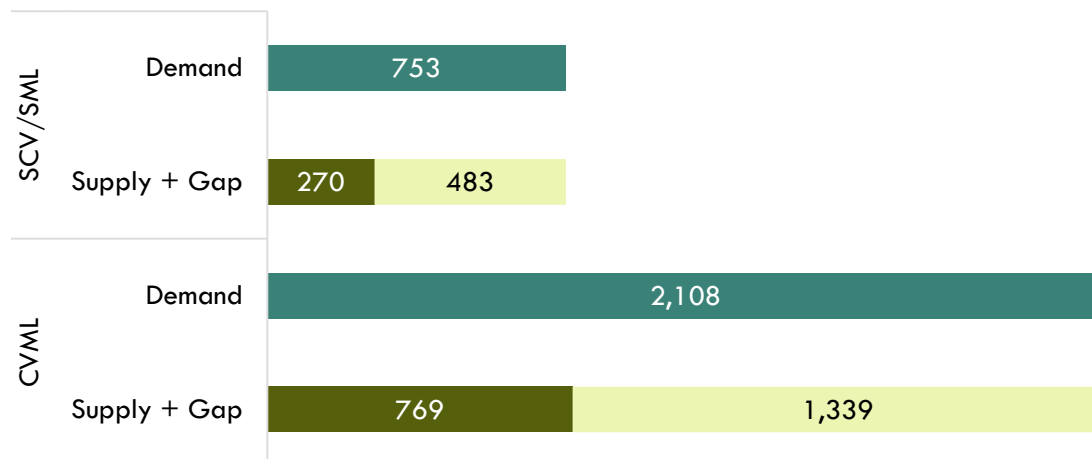
Exhibit 11. Postsecondary supply for LVN to RN Pathway occupations in the region

TOP/ CIP Code- Title	College	Associate Degree	Certificate 18 < 30 Semester Units	Certificate 30 < 60 Semester Units	Subtotal
123010 - Registered Nursing	Bakersfield	118			118
	Fresno City	197		34	231
	Merced	56			56
	Modesto	110			110
	Porterville	19			19
	Reedley College	11	4		15
	San Joaquin Delta	103			103
	Sequoias	85			85
	West Hills Lemoore	31			31
	TOTAL		731	4	34

⁴ "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

There is an undersupply of 483 LVN to RN Pathway workers in the NCV/NML subregion and 1,339 workers in the region (Exhibit 12).

Exhibit 12. LVN to RN Pathway workforce demand (annual job openings), postsecondary supply of students (awards), and additional students needed to fill gap in the NCV/NML 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 LVN to RN Pathway. Of note, 276 students received a degree or certificate or attained apprenticeship journey status; 74 students transferred; 97% of students obtained a job closely related to their field of study; 86% had a median change in earnings; and 83% of students attained a living wage.

Exhibit 13. Subregional metrics for the TOP code related to LVN to RN Pathway

Metric	Registered Nursing 123010
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	276
Number of Students Who Transferred	74
Job Closely Related to Field of Study	97%
Median Change in Earnings	86%
Attained a Living Wage	83%
* denotes data not available.	

Conclusion

The entry-level wages of the occupation exceed the NCV/NML subregion's average living wage. There were 5,999 job postings in the past six months for occupations related to LVN to RN Pathway in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is communication skills, and the top specialized skill is patient care.
- The top software skill is Microsoft Office.
- The top certification is a driver's license.

There is an undersupply of trained workers, a shortage of 483 in the NCV/NML subregion and 1,339 in the region.

Recommendation

Based on these findings, it is recommended that Merced College work with the regional director, the college's advisory board, and local industry in the expansion of programs to address the shortage of LVN to RN Pathway 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.