LABOR MARKET ANALYSIS

FOR PROGRAM RECOMMENDATION

C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

NURSING
IN THE FAR NORTH

Far North

Center of Excellence

FEBRUARY 2022

TABLE OF CONTENTS

Contents

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 Sara Phillips by phone at (530) 242-7635 or by email at sphillips@shastacollege.edu.

SUMMARY

The North/Far North Center of Excellence for Labor Market Research prepared this report to provide a labor market analysis of educational supply and occupational demand for middle-skilled career pathways in the Far North subregion. This report aims to determine if demand in the local labor market is unmet by the supply from existing community college programs and other postsecondary training providers.

This report primarily focuses on training that leads to jobs in middle-skilled occupations - jobs that typically require education beyond a high school diploma but less than a Bachelor's degree - but may include higher-skilled occupations for training pathways that lead to a bachelor's degree. Lowered skilled occupations are rarely considered in this type of analysis due to the lessened barriers for entry-level work, such as no formal education and on-the-job training requirements.

Key findings include:

- The Far North subregion held 8,223 registered and licensed vocational nurse jobs in 2020. Far North nursing jobs are projected to increase by 6% over the next five years, adding 504 jobs to the subregion by 2025. Jobs for nurses are projected to grow slower in the Far North subregion than in California.

- Over the next five years, nurses are projected to have 586 annual openings in the Far North subregion.

- Wage data shows that nursing occupations earn $11 to $25 above the subregion's living wage of $12.74 per hour.

- Awards data analysis shows that Far North training providers conferred an average of 410 awards (certificates and associate degrees) in nursing programs over the last three academic years.

Recommendations include:

- The North/Far North Center of Excellence recommends moving forward with a registered nursing program.

- The North/Far North Center of Excellence also recommends continuing to offer the licensed vocational nursing program.

INTRODUCTION

The Far North Center of Excellence (COE) was asked to provide labor market information for a proposed program at a regional community college. This report focuses on the following Standard Occupational Classification (SOC) occupations and codes:

- These middle-skill occupations require more education and training beyond a high school diploma but less than a four-year degree:
    - Registered Nurses (29-1141)
    - Licensed Practical and Licensed Vocational Nurses (29-2061)
        - California refers to this occupation as Licensed Vocational Nurses (LVNs)

A review of related programs revealed the following Taxonomy of Programs (TOP) title(s) and code(s) are appropriate for inclusion in this report:

- Registered Nursing (1230.10)
- Licensed Vocational Nursing (1230.20)

The corresponding Classification of Instructional Program (CIP) title(s) and code(s) are:

- Registered Nursing/Registered Nurse (51.3801)
- Licensed Practical/Vocational Nurse Training (51.3901)

OCCUPATIONAL DEMAND

Exhibit 1 summarizes the five-year projected job growth for middle-skill and high-skill occupations in the Far North, North/Far North, and California.

Exhibit 1. Employment and projected demand, 2020-2025

Occupation	2020 Jobs	2025 Jobs	2020-2025 Change	2020-2025 % Change	2020-2025 Annual Openings
Registered Nurses	6,505	6,916	412	6%	432
Licensed Practical and Licensed Vocational Nurses	1,718	1,810	92	5%	154
Far North	**8,223**	**8,726**	**504**	**6%**	**586**
Registered Nurses	30,626	32,814	2,188	7%	2,093
Licensed Practical and Licensed Vocational Nurses	5,954	6,523	569	10%	584
North/Far North	**36,580**	**39,337**	**2,757**	**8%**	**2,677**
Registered Nurses	311,510	333,980	22,470	7%	21,293
Licensed Practical and Licensed Vocational Nurses	73,968	80,971	7,003	9%	7,206
California	**385,478**	**414,951**	**29,473**	**8%**	**28,499**

Exhibit 2 compares the percent change in jobs between 2015 through 2020 and the projected changes through 2025. The rate of change is indexed to the total number of jobs in 2015.
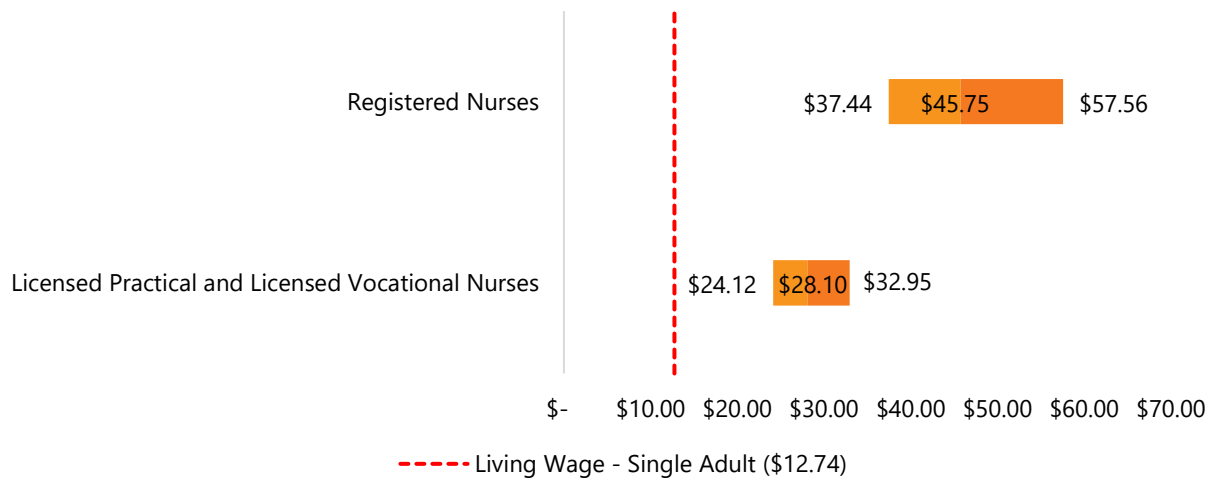
Exhibit 2. Changes in employment, 2015-2025
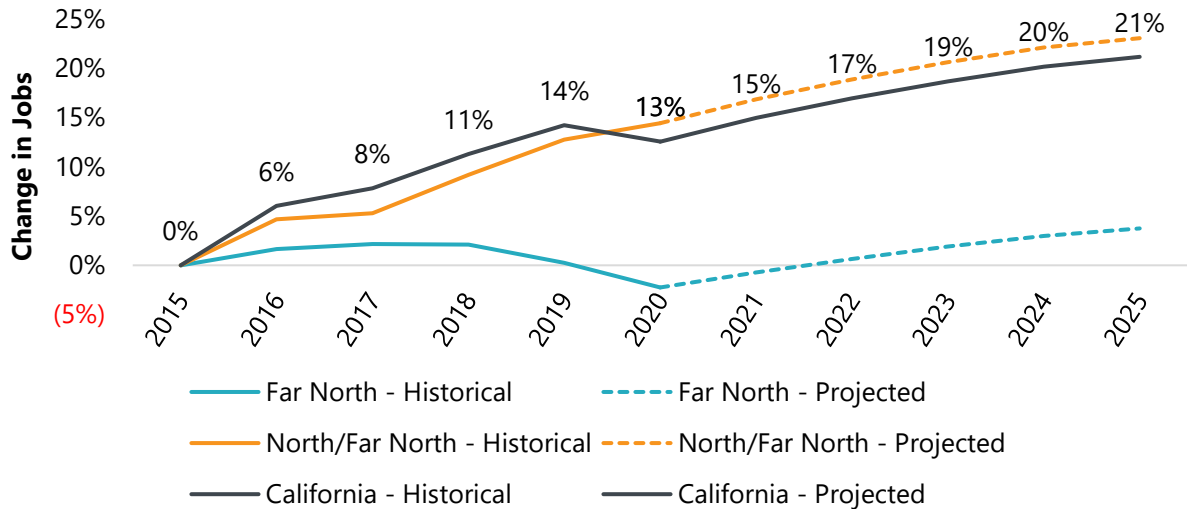
WAGES

Exhibit 3 compares the entry-level, median, and experienced wages for the selected occupations to the Far North living wage for a single adult - $12.74 per hour.[1]

Exhibit 3. Comparison of wages by occupation, 2020

---

[1] Living wage is defined as the level of income a single adult with no children must earn to meet basic needs, including food, housing, transportation, healthcare, taxes, and other miscellaneous basic needs. The 25th-percentile and 75th-percentile hourly wages are used as proxy for entry-level and experienced-level wages.

JOB POSTINGS

This section analyzes recent data from online job postings (real-time LMI). Online job postings may provide additional insight into recent changes in the labor market that are not captured by historical trends.

The Far North COE identified 5,926 online job postings for the selected occupations in the Far North subregion. Job postings data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from February 1, 2021, to January 31, 2022.

Occupations and Job Titles

Exhibit 4 details the number of online job postings for the selected occupations.

Exhibit 4. Number of job postings by occupation

Occupation	Job Postings	Share of Job Postings
Registered Nurses	5,246	88%
Licensed Practical and Licensed Vocational Nurses	680	12%
Total Job Postings	**5,926**	**100%**

Exhibit 5 shows the top 10 job titles with the most job postings and the share. All job postings included a job title.

Exhibit 5A. Top jobs titles for Registered Nurses

Job Title	Job Postings	Share of Job Postings
Registered Nurse	247	5%
Registered Nurse/Medical/Surgical M/S	40	1%
Registered Nurse/Travel Assignment	32	1%
Registered Nurse - ER	24	0%
Registered Nurse/Emergency Department Trauma	23	0%
Registered Nurse/Labor And Delivery L&D	23	0%

Job Title	Job Postings	Share of Job Postings
ER Registered Nurse	22	0%
Registered Nurse - Home Health	22	0%
Registered Nurse/Intensive Care Unit	22	0%
Registered Nurse - Covid	19	0%

Exhibit 5B. Top jobs titles for Licensed Vocational Nurses

Job Title	Job Postings	Share of Job Postings
Licensed Vocational Nurse	97	14%
Licensed Practical Nurse	23	3%
Licensed Vocational/Practical Nurse Licensed Vocational Nurse/Licensed Practical Nurse	14	2%
Licensed Vocational Nurse - Covid	11	2%
Nursing	11	2%
Dispensing Nurse	10	1%
Licensed Vocational Nurse Home Health	7	1%
Licensed Practical Nurse - Ltc/Snf	6	1%
Licensed Vocational Nurse Home Care	5	1%
Wellness Immunization Clinic Nurse Licensed Practical Nurse	5	1%

Employers

Exhibit 6 shows the top 10 employers with the most job postings for the selected occupations. Fifty percent (n = 2,638) of job postings for registered nurses and 30% (n = 204) of job postings for licensed vocational nurses did not include an employer.

Exhibit 6A. Employers with the most job postings - Registered Nurses

Employer	Job Postings	Share of Job Postings
Dignity Health	181	3%
Asante	167	3%
Oroville Hospital	152	3%
Emerald Health Services	133	3%
Adventist Health	123	2%
Enloe Medical Center	103	2%
Sutter Health	79	2%
Covenant Health	75	1%
Sutter Medical Center	69	1%
Prime Healthcare Services	67	1%

Exhibit 6B. Employers with the most job postings - Licensed Vocational Nurses

Employer	Job Postings	Share of Job Postings
Wellpath	47	7%
Adventist Health	39	6%
Dignity Health	27	4%
Oroville Hospital	24	4%
Department of Veterans Affairs	17	3%
Eastern Plumas Health Care	16	2%
Sutter Health	15	2%
Enloe Medical Center	13	2%
Aveanna Healthcare	13	2%

Employer	Job Postings	Share of Job Postings
Accentcare	11	2%

Certifications, Skills, and Experience

Exhibit 7 shows the most relevant certifications requested by employers for the selected occupations. Sixteen percent (n = 831) of job postings for registered nurses and 8% (n = 57) of job postings for licensed vocational nurses did not include certification information.

Exhibit 7A. Most in-demand certifications - Registered Nurses

Certification	Job Postings	Share of Job Postings
Registered Nurse	4,034	77%
Advanced Cardiac Life Support (ACLS) Certification	1,568	30%
Basic Life Saving (BLS)	1,178	22%
American Heart Association Certification	446	9%
First Aid CPE AED	367	7%
Basic Cardiac Life Support Certification	329	6%
Critical Care Registered Nurse (CCRN)	249	5%
Neonatal Resuscitation Program (NRP)	84	2%

Exhibit 7B. Most in-demand certifications - Licensed Vocational Nurses

Certification	Job Postings	Share of Job Postings
Licensed Vocational Nurse (LVN)	472	69%
Licensed Practical Nurse (LPN)	282	41%
Basic Life Saving (BLS)	147	22%
First Aid CPR AED	139	20%
Basic Cardiac Life Support Certification	76	11%

Certification	Job Postings	Share of Job Postings
Certified Registered Nurse Practitioner	54	8%
Advanced Cardiac Life Support (ACLS) Certification	33	5%

Exhibit 8 shows the specialized skills most requested by employers for the selected occupations.

Exhibit 8A. Most in-demand specialized skills - Registered Nurses

Specialized Skill	Skill Postings	Share of Skill Postings
Patient Care	1,714	33%
Advanced Cardiac Life Support (ACLS)	1,577	30%
Acute Care	784	15%
Life Support	742	14%
Treatment Planning	687	13%
Cardiopulmonary Resuscitation (CPR)	669	13%
Caregiving	488	9%
Critical Care	452	9%
Trauma	349	7%
Telemetry	315	6%

Exhibit 8B. Most in-demand specialized skills - Licensed Vocational Nurses

Specialized Skill	Skill Postings	Share of Skill Postings
Patient Care	236	35%
Treatment Planning	178	26%
Cardiopulmonary Resuscitation (CPR)	169	25%

Specialized Skill	Skill Postings	Share of Skill Postings
Acute Care	89	13%
Vital Signs Measurement	84	12%
Teaching	76	11%
Home Health	71	10%
Care Planning	62	9%
Discharge Planning	58	9%
Life Support	56	8%

Exhibit 9 shows employers' minimum level of education for job postings for the selected occupations. Twenty-four percent (n = 1,251) of job postings for registered nurses and 77% (n = 526) of job postings for licensed vocational nurses did not include a preferred education level.

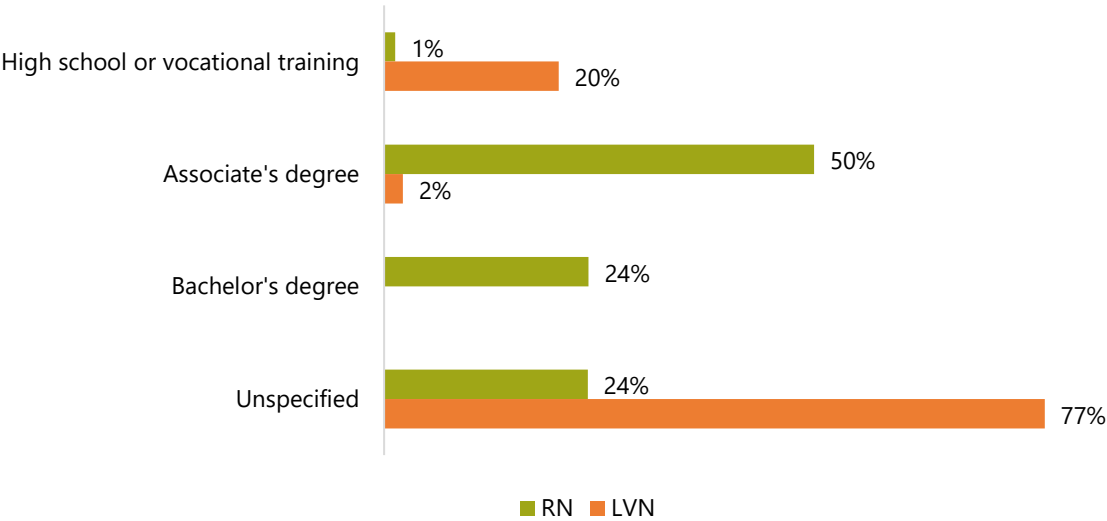**Exhibit 9. Employer-preferred minimum education levels**

Legend: RN, LVN

Exhibit 10 shows the experience levels required by employers for job postings for the selected occupations. Forty-four percent (n = 2,324) of job postings for registered nurses and 65% (n = 440) for licensed vocational nurses did not include a preferred education level.

Exhibit 10. Employer-preferred experience levels
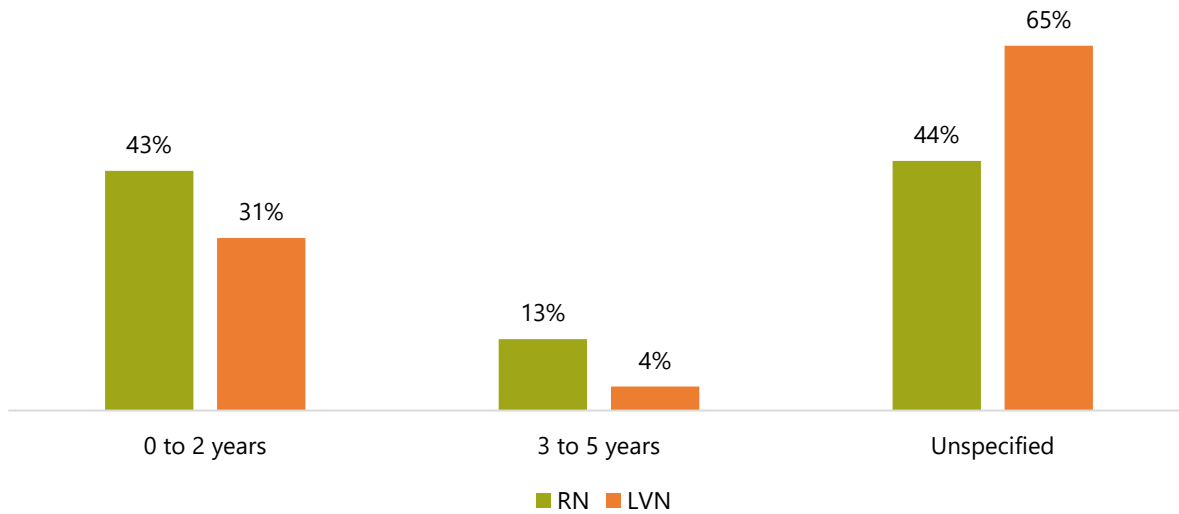
EDUCATION AND TRAINING

The U.S. Census Bureau and Bureau of Labor Statistics collected data on education achieved by workers employed in occupations. Exhibit 11 shows the national-level educational attainment of the current workforce in the selected occupations.

Exhibit 11. National worker educational attainment for selected occupations, 2019
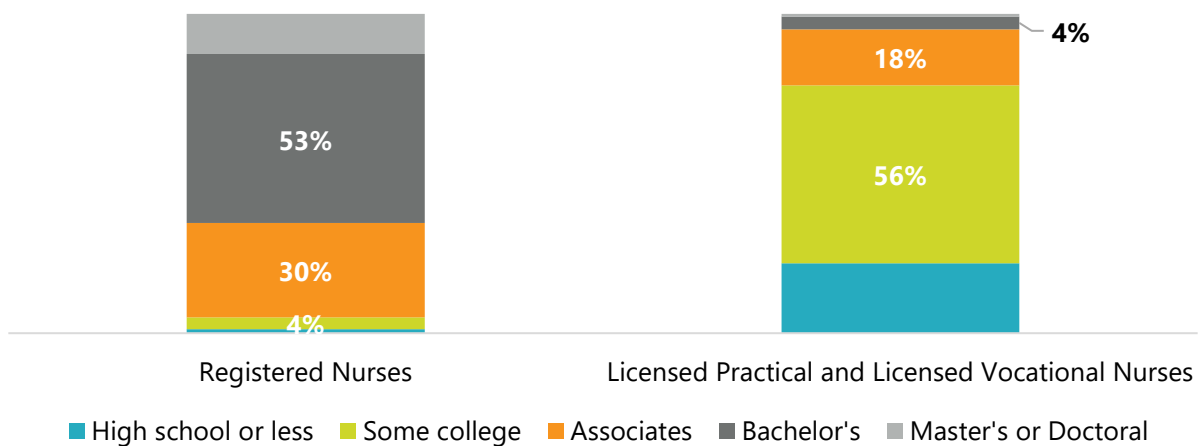
The Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which the BLS publishes projections data. Exhibit 12 shows the skill level and entry-level job requirements for the selected occupations.

Exhibit 12. Typical education, work experience, and on-the-job training requirements

Occupation	Typical Entry-level Education	Work Experience Required	On-the-job Training Required
Registered Nurses	Bachelor's degree	None	None
Licensed Practical and Licensed Vocational Nurses	Postsecondary nondegree award	None	None

EDUCATIONAL SUPPLY

Educational supply for an occupation can be estimated by analyzing the number of awards issued in related Taxonomy of Programs (TOP) or Classification of Instructional Programs (CIP) codes. Exhibit 13 shows the TOP and CIP codes for educational programs related to the selected occupations.

Exhibit 13. TOP and CIP codes for training programs related to the selected occupations

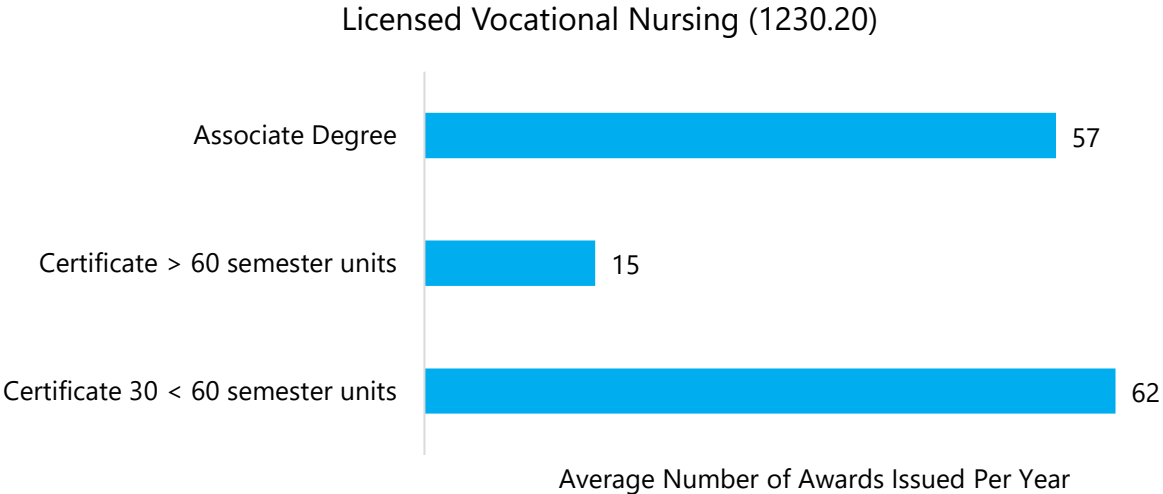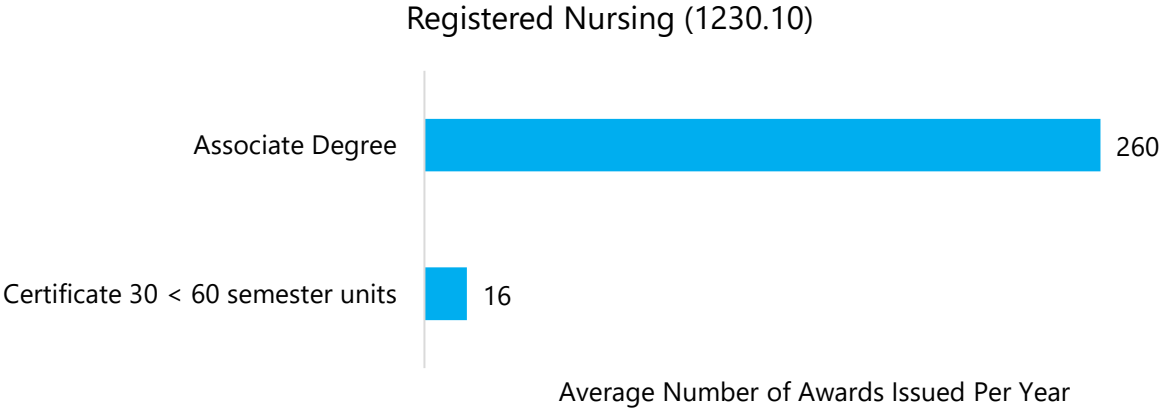| TOP Programs and Codes	Aligned CIP Programs and Codes
Registered Nursing (1230.10)	Registered Nursing/Registered Nurse (51.3801)
Licensed Vocational Nursing (1230.20)	Licensed Practical/Vocational Nurse Training (51.3901)

Community College Supply

Exhibits 14 and 15 compare the average number of certificates and degrees conferred in selected community college programs over the last three academic years.

Exhibit 14. Annual average community college awards by program, 2018-19 through 2020-21

Program - TOP Code	College	Annual Awards 2018-19	Annual Awards 2019-20	Annual Awards 2020-21	3-Yr Annual Awards Average
Registered Nursing (1230.10)	Butte	104	117	113	111
	Mendocino	22	23	23	23
	Redwoods	76	55	84	72
	Shasta	51	51	58	53
	Siskiyous	27	25	0	17
	Subtotal	**280**	**271**	**278**	**276**
Licensed Vocational Nursing (1230.20)	Butte	46	44	1	30
	Feather River	1	49	1	17
	Lassen	16	20	38	25
	Redwoods	65	7	44	39
	Shasta	21	0	14	12
	Siskiyous	4	29	2	12
	Subtotal	**153**	**149**	**100**	**134**
	Grand Total	**433**	**420**	**378**	**410**

Registered Nursing (1230.10)

Associate Degree	260
Certificate 30 < 60 semester units	16

Average Number of Awards Issued Per Year

Licensed Vocational Nursing (1230.20)

Associate Degree	57
Certificate > 60 semester units	15
Certificate 30 < 60 semester units	62

Average Number of Awards Issued Per Year

Other Postsecondary Supply

Exhibit 16 compares the average number of degrees that non-community college training providers conferred in the Far North over the last three academic years. Please note that non-community college data lags by one year.

Exhibit 16. Other postsecondary awards by program, 2017-18 through 2019-20

Program - CIP Code	College	Annual Awards 2017-18	Annual Awards 2018-19	Annual Awards 2019-20	3-Yr Annual Awards Average
Registered Nursing/Registered Nurse (51.3801)	CSU Chico (Bachelor's Degree)	110	110	117	112
	Simpson University	30	30	35	32
	Grand Total	**140**	**140**	**152**	**144**

FINDINGS

- This report focuses on four occupations in nursing pathways, including registered nurses and licensed vocational nurses.

- The Far North subregion held 8,223 nursing jobs in 2020. Far North nursing jobs are projected to increase by 6% over the next five years, adding 504 jobs to the subregion by 2025. Jobs for nurses are projected to grow slower in the Far North subregion than in California.

  - Jobs for registered nurses represent the majority of nursing job growth in the Far North. Registered nurses will add 412 jobs by 2025, while licensed vocational nurses will add 92 jobs.

- Over the next five years, nurses are projected to have 586 annual openings in the Far North subregion.

  - Registered nurses will have 432 openings each year between 2020 and 2025, while licensed vocational nurses will have 154 annual openings.

- Wage data shows that nursing occupations earn $11 to $25 above the subregion's living wage of $12.74 per hour.

  - Entry-level wages for registered nurses are around $37 per hour, while licensed practical nurses earn about $24 per hour.

- According to real-time labor market information, there were about 5,926 online job postings for nursing occupations between February 1, 2021, and January 31, 2022.

  - Eighty-eight percent (n = 5,246) of job postings were for registered nurses. There were 680 job postings for licensed vocational nurses.

- Between 34% and 74% of incumbent nurses have educational attainment levels consistent with community college offerings (some college or associate degrees).

  - Seventy-four percent of licensed vocational nurses have education consistent with community college offerings.

  - Thirty-four percent of incumbent registered nurses have some college training or an associate degree, while another 53% hold a bachelor's degree.

- Seven Far North community colleges offer degrees and certificates in nursing programs. Together, these programs conferred an average of 410 awards (certificates and associate degrees) in nursing programs over the last three academic years (2018-19 through 2020-21).

- o Far North community colleges conferred an average of 16 certificates and 260 degrees in the registered nursing (1230.10) TOP code, for a total average of 276 awards issued each year between 2018-19 and 2020-21.

  - o Far North community colleges conferred an average of 77 certificates and 57 degrees in the licensed vocational nursing (1230.20) TOP code, for a total average of 134 awards issued each year between 2018-19 and 2020-21.

- Local non-community college postsecondary training providers also offer training related to the studied occupations. Between 2017-18 and 2019-20, non-community college training providers conferred an average of 144 awards in registered nurse training programs over the last three years. Please note that non-community college awards data lags by one year.

RECOMMENDATIONS

Far North Nursing Supply Gap Analysis

Occupation	Demand (Avg. Annual Job Openings)	Supply (Total Avg. Annual Awards)	Gap Analysis (Demand vs. Supply)
Registered Nurses	432	420	Near Parity
Licensed Vocational Nurses	154	134	Near Parity

- Based on a three-year average of annual awards in Far North region nursing programs and projected yearly openings, the supply gap analysis shows that the region seems to be nearing parity.

  - o The demand for registered and licensed vocational nurses is slightly greater than the training supply (a 3% and 13% gap between supply and demand).

- The Far North Center of Excellence recommends continued collaboration with relevant employers to understand their demand for these occupations.

- The North/Far North Center of Excellence recommends moving forward with the registered nursing program and continuing to offer training for licensed vocational nurses.

COE Recommendation		
Move forward with the program	**Proceed with caution**	**Program is not recommended**
☒	☐	☐

APPENDIX A. METHODOLOGY AND SOURCES

This report identified Occupations using the Center of Excellence TOP-to-CIP-to-SOC crosswalk and O*Net OnLine. This report's findings were determined using labor market data from the Bureau of Labor Statistics (BLS), U.S. Census Bureau data from Emsi, and jobs posting data from Burning Glass.

Cal-PASS Plus LaunchBoard. California Community Colleges Chancellor's Office. https://www.calpassplus.org/LaunchBoard/Home.aspx.

Emsi 2021.4; QCEW Employees, Non-QCEW Employees, and Self-Employed. https://www.economicmodeling.com/. 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).

Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-2017. Bureau of Labor Statistics. https://www.bls.gov/emp/tables/educational-attainment.htm#.

Integrated Postsecondary Education Data System (IPEDS). National Center for Education Statistics. U.S. Department of Education. https://nces.ed.gov/ipeds/.

"Labor Insight Real-Time Labor Market Information Tool." Burning Glass Technologies. http://www.burning-glass.com.

Labor Market Information Division. California Employment Development Department. https://labormarketinfo.edd.ca.gov/.

Management Information Systems (MIS) Data Mart. California Community Colleges Chancellor's Office. https://datamart.cccco.edu/.

Occupational Employment Statistics (OES). Bureau of Labor Statistics. https://www.bls.gov/oes/home.htm.

O*NET OnLine. U.S. Department of Labor/Employment and Training Administration (DOL ETA). https://www.onetonline.org/.

Self-Sufficiency Standard Tool for California. The University of Washington. http://www.selfsufficiencystandard.org/

"Taxonomy of Programs." California Community Colleges Chancellor's Office. June 2012, 6th Edition. https://www.cccco.edu/-/media/CCCCO-Website/About-

Us/Divisions/Educational-Services-and-Support/Academic-Affairs/What-we-do/Curriculum-and-Instruction-Unit/Files/TOPmanual6200909corrected12513pdf.ashx

"TOP-CIP-SOC Crosswalk." Centers of Excellence for Labor Market Research. November 2015 Edition. http://coeccc.net/

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.

Important Disclaimer: All representations included in this report have been produced from primary research and/or secondary review of publicly and/or privately available data and/or research reports. Efforts have been made to qualify and validate the accuracy of the data and the reported findings; however, neither the Centers of Excellence, COE host District, nor California Community Colleges Chancellor's Office are responsible for applications or decisions made by recipient community colleges or their representatives based upon components or recommendations contained in this study.

C·O·E

CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

FOR MORE INFORMATION, PLEASE CONTACT:

Sara Phillips, Director

Far North Center ofExcellence

sphillips@ShastaCollege.edu