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CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

PROGRAM ENDORSEMENT BRIEF

PUBLIC HEALTH OCCUPATIONS IN THE GREATER SACRAMENTO REGION

North (Greater Sacramento)
Center of Excellence

September 2021

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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 North (Greater Sacramento) 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 - occupations 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 North (Greater Sacramento) region held 4,384 public health jobs in 2020. North (Greater Sacramento) public health jobs are projected to increase by 20% over the next five years, adding 863 new jobs to the subregion by 2025.
- Over the next five years, public health occupations are projected to have 530 annual openings in the North (Greater Sacramento) region.
- Wage data shows that public occupations earn an entry-level wage between \$21 and \$42 per hour. All entry-level wages are above the subregion's living wage of \$14.53 per hour.
- North (Greater Sacramento) community colleges conferred an average of 284 awards (certificates and associate degrees) in public health-related programs over the last three academic years (2017-18 through 2019-20).

Recommendations include:

- The North/Far North Center of Excellence recommends proceeding with caution.
- The North/Far North Center of Excellence recommends that community colleges interested in offering training related to this occupation work with four-year universities and employers to develop a fully articulated transfer pathway with on- and off-ramps that align to middle and high-skill careers.

INTRODUCTION

The North (Greater Sacramento) Center of Excellence 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:

- Middle Skill (requires more education than a high school diploma but less than a four-year degree)
 - Community Health Workers (21-1094)
- High Skill (requires a bachelor's degree)
 - Medical and Health Services Managers (11-9111)
 - Health Education Specialists (21-1091)

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

- 1201.00* Health Occupations, General (does not include transfer)
- 1260.00 Health Professions, Transfer Core Curriculum (Transfer-oriented)
 - Although this is not a career education program TOP code, it is worth considering as there are multiple educational pathways to the studied occupations.

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

- 51.0001 Health and Wellness, General
- 51.2201 Public Health, General
- 51.2207 Public Health Education and Promotion
- 51.2208 Community Health and Preventative Medicine
- 51.2210 International Public Health/International Health

There are multiple pathways to a career in public health or health care administration. The following table summarizes the sample job titles (based on job postings) and entry-level education needed for ten occupational pathways. Not all of these occupations are included in this report as there are multiple educational pathways a student could take to end up in them. The occupations included in this report are listed above.

Occupation	Sample Job Title	Typical Entry-Level Education
Community Health Workers	Bilingual Customer Service Representative (WIC CHW)	High school diploma or equivalent
Social and Human Service Assistants	Support Assistant Program Coordinator Community Health Advocate	High school diploma or equivalent
Registered Nurses	Public Health Nurses Public Health Nurse Supervisor	Bachelor's Degree
Medical and Health Services Managers	Public Health Manager Director of Health and Human Services	Bachelor's Degree
Health Education Specialists	Health Educator Health Promotion Specialist	Bachelor's Degree
Compliance Officers	Inspector Regulatory Specialist/Analyst Public Health Officer	Bachelor's Degree
Environmental Scientists and Specialists, Including Health	Environmental Health Scientist Public Health Scientists Toxicologist	Bachelor's Degree
Epidemiologist	Public Health Epidemiologist Medical or Nurse Epidemiologist Veterinary Specialist	Master's Degree
Healthcare Social Workers	Public Health Social Workers Public Health Analysts Health Program Specialists	Master's Degree
Medical Scientist	Biostatistician Clinical Research Supervisors Research Scientists Drug Safety Scientists	Doctoral or professional degree

OCCUPATIONAL DEMAND

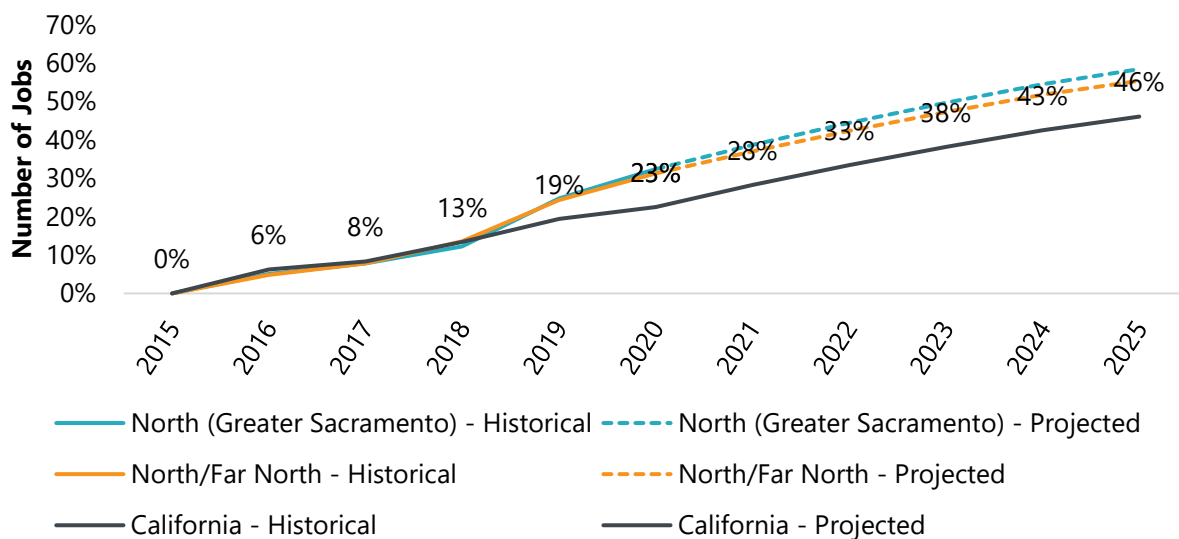
Exhibit 1 summarizes the five-year projected job growth for middle-skill and high-skill occupations in the North (Greater Sacramento) selected occupations, North/Far North, and California.

Exhibit 1. Employment and projected demand, 2020-2025

Occupation	2020 Jobs	2025 Jobs	2020-2025 Jobs Change	2020-2025 Jobs % Change	2020-2025 Annual Openings
Medical and Health Services Managers	3,357	4,088	731	22%	400
Health Education Specialists	588	648	60	10%	70
Community Health Workers	439	510	71	16%	59
North (Greater Sacramento)	4,384	5,246	863	20%	530
Medical and Health Services Managers	4,380	5,291	911	21%	513
Health Education Specialists	805	883	77	10%	95
Community Health Workers	650	735	85	13%	82
North/Far North	5,836	6,909	1,073	18%	690
Medical and Health Services Managers	44,418	53,764	9,346	21%	5,220
Health Education Specialists	6,675	7,428	753	11%	818
Community Health Workers	6,390	7,354	964	15%	842
California	57,483	68,545	11,063	19%	6,880

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.

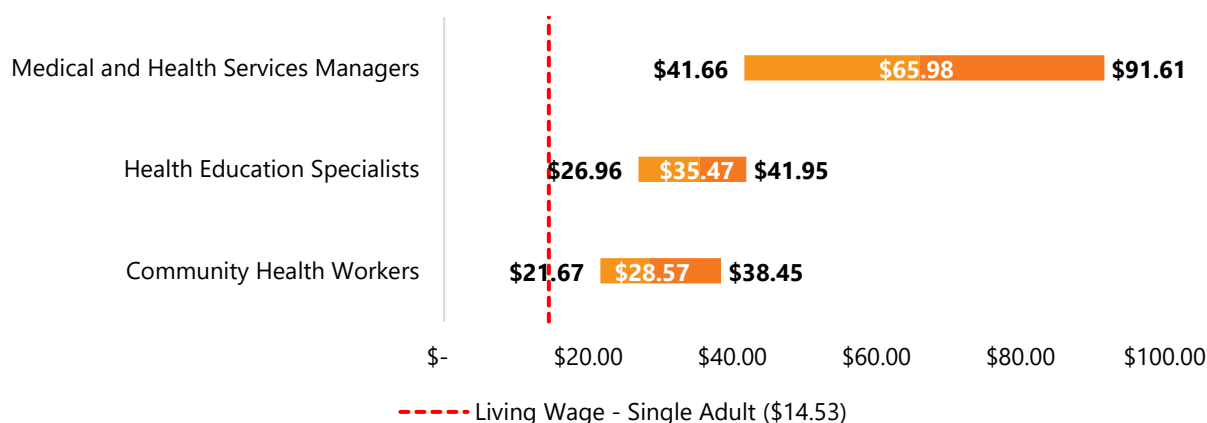
Exhibit 2. Changes in employment, 2015-2025



WAGES

Exhibit 3 compares the entry-level, median, and experienced wages for the selected occupations to the North (Greater Sacramento) living wage for a single adult - \$14.53 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 of the report 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 NFN COE identified 2,389 online job postings for the selected occupations in the North (Greater Sacramento) region. Job postings data comes from Burning Glass Labor Insights and represents new listings posted online within the last year, from September 1, 2020, to August 31, 2021.

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
Medical and Health Services Managers	4,434	91%
Health Educators	407	8%
Community Health Workers	49	1%
Total Job Postings	4,890	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 5. Top jobs titles

Job Title	Job Postings	Share of Job Postings
Director Of Nursing	92	2%
Medical Director	43	1%
Clinical Supervisor	42	1%
Medical Surgical Telemetry Travel Nurse	35	1%
Executive Director	27	1%
Clinical Director	25	1%

Job Title	Job Postings	Share of Job Postings
Clinical Manager	25	1%
Operations Manager	24	0%
Program Director	22	0%
Medical Intensive Care	21	0%

Employers

Exhibit 6 shows the top 10 employers with the most job postings for the selected occupations. Eleven percent (n = 559) of job postings did not include an employer.

Exhibit 6. Employers with the most job postings

Employer	Job Postings	Share of Job Postings
Anthem Blue Cross	360	7%
Dignity Health	267	5%
UC/UC Davis/UC Davis Health	275	6%
Sutter Health (includes Sacramento Sierra region)	126	3%
Kaiser Permanente	87	2%
Adventist Health	54	1%
Blue Cross Blue Shield of California	47	1%
Universal Health Services, Inc.	46	1%
UnitedHealth Group	39	1%
Davita Incorporated	33	1%

Certifications, Skills, and Experience

Exhibit 7 shows the most relevant certifications requested by employers for the selected occupations. Forty-eight percent (n = 2,349) of job postings did not include certification information.

Exhibit 7. Most in-demand certifications

Certification	Job Postings	Share of Job Postings
Registered Nurse	1,131	23%
Driver's License	678	14%
First Aid Cpr Aed	296	6%
Basic Life Saving (BLS)	232	5%
Social Work License	191	4%
Basic Cardiac Life Support Certification	160	3%
Licensed Clinical Social Worker (LCSW)	110	2%
Board Certified/Board Eligible	97	2%
Licensed Vocational Nurse (LVN)	91	2%
Critical Care Registered Nurse (CCRN)	83	2%

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

Exhibit 8. Most in-demand specialized skills

Specialized Skill	Skill Postings	Share of Skill Postings
Budgeting	1,109	23%
Patient Care	1,030	21%
Scheduling	996	20%
Staff Management	955	20%
Quality Assurance and Control	632	13%
Customer Service	538	11%
Mental Health	463	9%

Specialized Skill	Skill Postings	Share of Skill Postings
Customer Billing	459	9%
Quality Management	432	9%
Behavioral Health	431	9%

Exhibit 9 shows the minimum level of education required by employers for job postings for the selected occupations. Forty percent (n = 1,946) of job postings did not include a preferred education level.

Exhibit 9. Employer-preferred minimum education levels

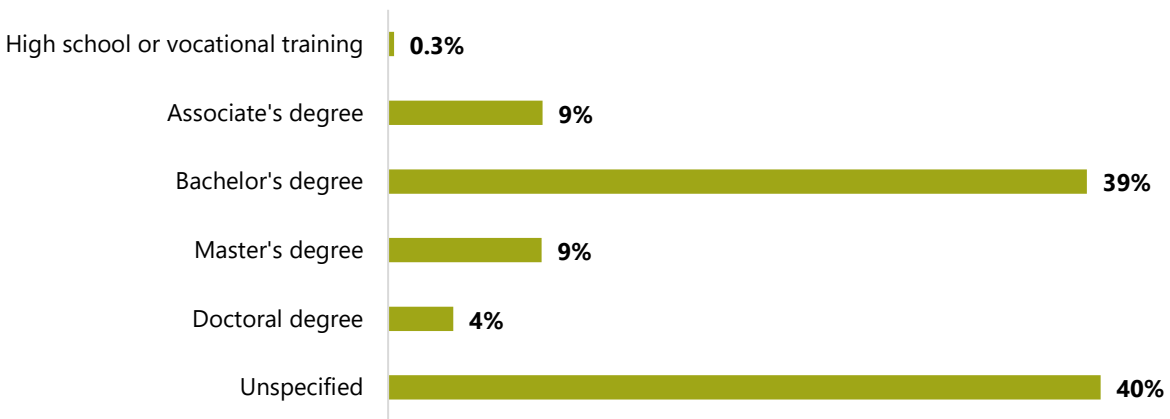
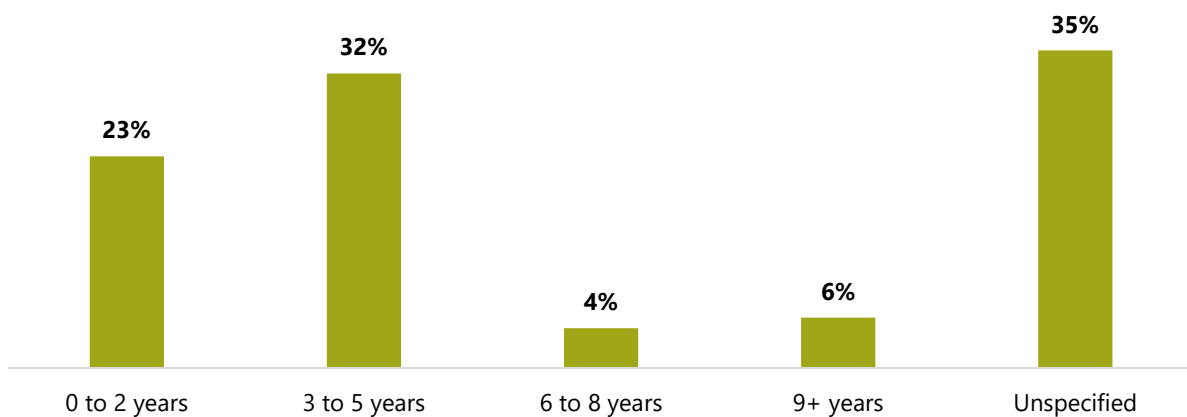


Exhibit 10 shows the experience levels required by employers for job postings for the selected occupations. Thirty-five percent (n = 1,698) of job postings did not include a preferred education level.

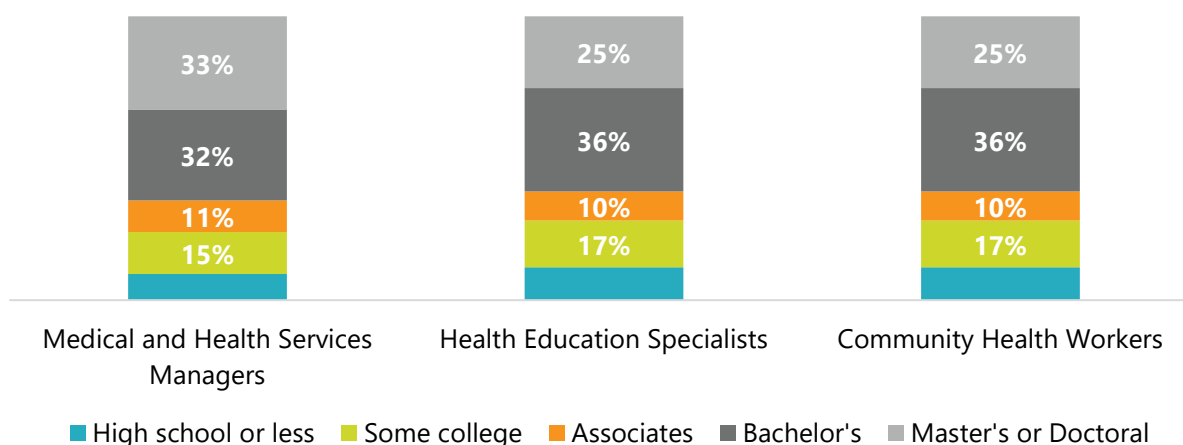
Exhibit 10. Employer-preferred experience levels



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
Medical and Health Services Managers	Bachelor's degree	Less than five years	None
Health Education Specialists	Bachelor's degree	None	None
Community Health Workers	High school diploma or equivalent	None	Short-term on-the-job training

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 14 shows the TOP and CIP codes for educational programs related to the selected occupations.

Exhibit 14. TOP and CIP codes for training programs related to the selected occupations

TOP Programs and Codes	Aligned CIP Programs and Codes
Health Occupations, General (1201.00)	Health and Wellness, General (51.0001)
Health Professions, Transfer Core Curriculum (1260.00)*	N/A
N/A	Community Health and Preventative Medicine (51.2208) Health Services Administration (51.2211) Public Health, General (51.2201) Public Health Education and Promotion (51.2207)

TOP programs and codes with an asterisk (*) are not considered CTE programs.

North (Greater Sacramento) Program Inventory

Active programs as of September 20, 2021.

TOP Code	College	Program Title	Award Offered
Health Occupations, General (1201.00)	Cosumnes River	Allied Health: Pre-Health Occupations	A.S. Degree
	Folsom Lake	Pre-Health Occupations	A.S. Degree
		Public Health Science	A.S. T Degree
	Sacramento City	Health Occupations	Certificate
		Healthcare Business	Certificate
		Pre-Health Occupations	A.S. Degree
	Sierra	Allied Health - General Option	Certificate

TOP Code	College	Program Title	Award Offered
			A.S. Degree
Health Professions, Transfer Core Curriculum (1260.00)* Not a CTE TOP code.	Folsom Lake	Pre-Clinical Laboratory Scientist Trainee	Certificate
	Sierra	Allied Health - Pre-Nursing Option	A.S. Degree
		Health Science	A.S. Degree
Other Training Programs			
Associate Degree Programs <ul style="list-style-type: none">Health Studies, Carrington College - Sacramento		Bachelor Degree Programs <ul style="list-style-type: none">Health Science, CSU SacramentoPublic Health, CSU Sacramento	

Community College Supply

Exhibits 15 and 16 compare the average number of certificates and degrees conferred in selected community college programs over the last three academic years.

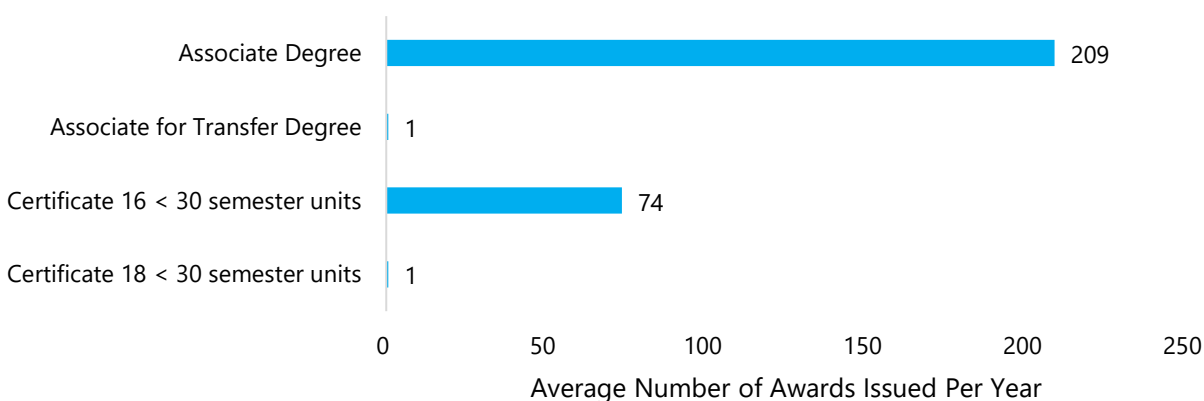
Exhibit 15. Annual average community college awards by program, 2017-18 through 2019-20

Program - TOP Code	College	Annual Awards 2017-18	Annual Awards 2018-19	Annual Awards 2019-20	3-Yr Annual Awards Average
Health Occupations, General (1201.00)	Cosumnes River	--	--	--	--
	Folsom Lake	--	1	94	32
	Sacramento City	3	6	13	7
	Sierra	0	21	444	155
	Subtotal	3	28	551	194
Health Professions, Transfer Core Curriculum (1260.00)*	Folsom Lake	--	64	--	21

Program - TOP Code	College	Annual Awards 2017-18	Annual Awards 2018-19	Annual Awards 2019-20	3-Yr Annual Awards Average
	Sierra	4	27	175	69
	Subtotal	4	91	175	90
	Grand Total	7	119	726	284

(*) Not a CTE TOP code.

Exhibit 16. Annual average community college awards by type, 2017-18 through 2019-20



Other Postsecondary Supply

Exhibit 17 compares the average number of degrees that non-community college training providers conferred in the North (Greater Sacramento) area over the last three academic years. Please note that non-community college data often lags by one year.

Exhibit 17. 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
Health Services/Allied Health/Health Sciences, General (51.0000)	CSU Sacramento (Bachelor's Degree)	180	161	174	172
Health and Wellness, General (51.0001)	Carrington College - Sacramento (Associate Degree)	23	39	25	29

Program - CIP Code	College	Annual Awards 2017-18	Annual Awards 2018-19	Annual Awards 2019-20	3-Yr Annual Awards Average
	Subtotal	203	200	199	201
	Grand Total	203	200	199	201

FINDINGS

- The North (Greater Sacramento) region held 4,384 public health jobs in 2020.
- North (Greater Sacramento) public health jobs are projected to increase by 20% over the next five years, adding 863 new jobs to the subregion by 2025. Jobs for public health occupations are projected to grow faster in the North (Greater Sacramento) subregion than the entire North/Far North region and California.
- Over the next five years, public health occupations are projected to have 530 annual openings in the North (Greater Sacramento) region.
- Wage data shows that public occupations earn an entry-level wage between \$21 and \$42 per hour. All entry-level wages are above the subregion's living wage of \$14.53 per hour.
- According to real-time labor market information, there were about 4,890 online job postings for public health occupations between September 1, 2020, and August 31, 2021. Job postings data is heavily skewed, as 91% of job postings (n = 4,434) are for medical and health services managers.
- For additional information on jobs postings data by occupation, please contact the North/Far North Center of Excellence.
- Between 26% and 37% of incumbent workers in these public health occupations have an educational attainment level consistent with community college offerings. More than 32% of incumbent workers in these occupations hold at least a bachelor's degree.
- North (Greater Sacramento) community colleges conferred an average of 284 awards (certificates and associate degrees) in public health-related programs over the last three academic years (2017-18 through 2019-20).
- 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 201 awards in public health-related programs over the last three years.

RECOMMENDATIONS

- Based on a three-year average of annual awards in North (Greater Sacramento) region substance abuse counseling training programs and projected yearly openings, the supply gap analysis shows that the region seems to have room for additional training.
 - Together, community colleges and other postsecondary training providers issued an average of 485 awards over the last three years.
 - There are 530 projected annual openings for substance abuse counseling occupations.
- The North/Far North Center of Excellence recommends that community colleges interested in offering training related to this occupation work with four-year universities and employers to develop a fully articulated transfer pathway with on- and off-ramps that align to middle and high-skill careers.
- The North/Far North Center of Excellence recommends proceeding with caution.

COE Recommendation		
Move forward with the program	Proceed with caution/More information needed	Program is not recommended
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

APPENDIX A. METHODOLOGY AND SOURCES

Occupations in this report were identified 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. <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/>.

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"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.

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Centers of Excellence for Labor Market Research, Economic and
Workforce Development Program



CENTERS OF EXCELLENCE
FOR LABOR MARKET RESEARCH

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