

Program Endorsement Brief:

Phlebotomy in the Greater Sacramento region

North Far North Center of Excellence, June 2019

INTRODUCTION

This report provides an overview of the labor market demand and educational program supply for phlebotomy related occupations in the Greater Sacramento region and the larger 22-county North Far North region.

SUMMARY OF KEY FINDINGS

- The California Department of Public Health (CDPH) requires all persons who are not California licensed doctors, nurses, clinical lab scientists or other licensed professionals whose scope of practice does not include phlebotomy to be certified as a phlebotomist before they can draw blood.
- Over the last decade, phlebotomy-related occupations added over 5,000 jobs in the greater Sacramento region. This trend will appear to continue over the next five years.
- Only two post-secondary institutions in the greater Sacramento region offer phlebotomy training: MTI College and National Career Education (NCE).

The report contains the following sections:

- Occupational demand,
- Wages and job postings,
- Education and training,
- Regional program supply, and
- Findings and recommendations.

OCCUPATIONAL DEMAND

The following Standard Occupational Classification (SOC) codes related to the proposed program were included in the analysis:

31-9097.00 - Phlebotomists	
Description:	Draw blood for tests, transfusions, donations, or research. May explain the procedure to patients and assist in the recovery of patients with adverse reactions.
Sample job titles:	Lab Asst; Patient Service Technician PST; Phlebotomist; Phlebotomist Supervisor/Instructor; Phlebotomist, Medical Lab Assistant; Phlebotomy Director; Phlebotomy Program Coordinator; Phlebotomy Supervisor; Registered Phlebotomist-Part Time

Additional occupations whose work may require a skill set similar to Phlebotomists:

29-1141.00 - Registered Nurses	
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.
Sample job titles:	Charge Nurse, Director of Nursing (DON), Emergency Department RN (Emergency Department Registered Nurse), Oncology RN (Oncology Registered Nurse), Operating Room Registered Nurse (OR RN), Public Health Nurse (PHN), Registered Nurse (RN), School Nurse, Staff Nurse, Staff RN (Staff Registered Nurse)

29-2011.00 - Medical and Clinical Laboratory Technologists	
Description:	Perform complex medical laboratory tests for diagnosis, treatment, and prevention of disease. May train or supervise staff.
Sample job titles:	Chief Medical Technologist; Clinical Laboratory Scientist (CLS); Clinical Laboratory Technologist; Histologist Technologist; Medical Laboratory Technologist (Medical Lab Tech); Medical Technologist (MT); Medical Technologist, Clinical Laboratory Scientist; Microbiologist; Microbiology Technologist; Research Assistant

29-2012.00 - Medical and Clinical Laboratory Technicians	
Description:	Perform routine medical laboratory tests for the diagnosis, treatment, and prevention of disease. May work under the supervision of a medical technologist.
Sample job titles:	Certified Clinical Laboratory Technician, Clinical Laboratory Scientist, Clinical Laboratory Technician (Clinical Lab Technician), Laboratory Assistant (Lab Assistant), Laboratory Supervisor, Laboratory Technician, Medical Laboratory Technician (MLT), Medical Laboratory Technicians (Medical Lab Technician), Medical Technician

31-9092.00 - Medical Assistants	
Description:	Perform administrative and certain clinical duties under the direction of a physician. Administrative duties may include scheduling appointments, maintaining medical records, billing, and coding information for insurance purposes. Clinical duties may include taking and recording vital signs and medical histories, preparing patients for examination, drawing blood, and administering medications as directed by physician.
Sample job titles:	Certified Medical Assistant (CMA), Chiropractor Assistant, Clinical Assistant, Doctor's Assistant, Medical Assistant (MA), Medical Office Assistant, Ophthalmic Technician, Optometric Assistant, Optometric Technician, Registered Medical Assistant (RMA)

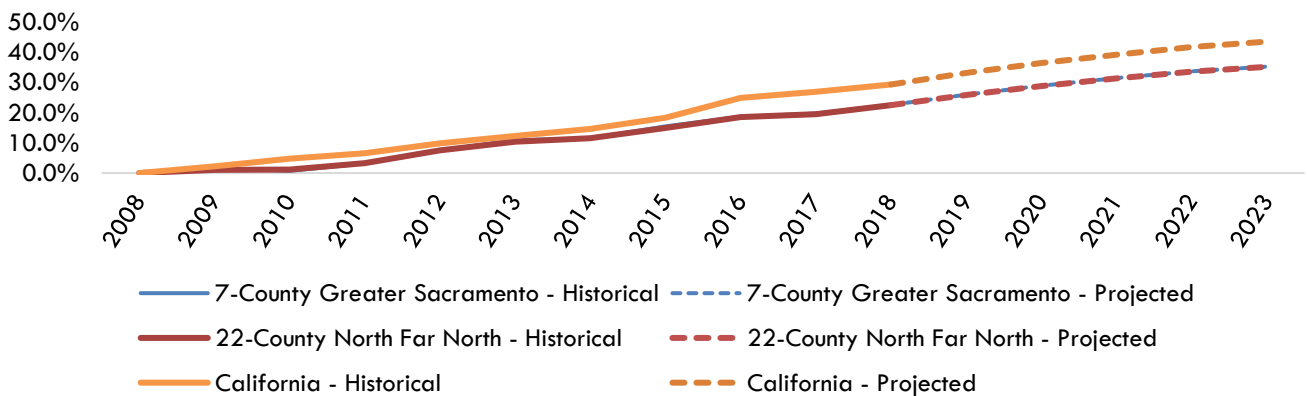
Exhibit 1 summarizes the job trends by SOC codes in the 7-county Greater Sacramento region, the 22-county North Far North region, and California. SOC group 29-2018 represents both Medical and Clinical Laboratory Technologists and Technicians.

Exhibit 1. Employment and projected occupational demand¹

Occupation	SOC	2008 Jobs	2018 Jobs	2023 Jobs	2018-23 % Change	Annual Openings	Annual Replacements
Registered Nurses	29-1141	17,248	19,943	21,714	8.9%	1,365	951
Clinical Laboratory Technologists and Technicians	29-2018	2,083	1,933	2,066	6.9%	149	120
Medical Assistants	31-9092	3,920	6,690	7,741	15.7%	894	622
Phlebotomists	31-9097	717	822	907	10.3%	100	76
GREATER SACRAMENTO	TOTALS	23,968	29,387	32,428	10.3%	2,507	1,770
Registered Nurses	29-1141	22,999	27,216	29,796	9.5%	1,894	1,291
Clinical Laboratory Technologists and Technicians	29-2018	2,660	2,464	2,642	7.2%	192	154
Medical Assistants	31-9092	5,495	8,571	9,797	14.3%	1,125	807
Phlebotomists	31-9097	1,055	1,214	1,317	8.5%	147	113
NORTH FAR NORTH	TOTALS	32,209	39,464	43,552	10.4%	3,359	2,366
Registered Nurses	29-1141	230,131	292,175	322,484	10.4%	20,465	13,555
Clinical Laboratory Technologists and Technicians	29-2018	29,311	30,856	33,667	9.1%	2,367	1,868
Medical Assistants	31-9092	62,791	93,666	106,030	13.2%	11,976	8,937
Phlebotomists	31-9097	9,743	12,797	14,487	13.2%	1,575	1,180
CALIFORNIA	TOTALS	331,975	429,494	476,667	11.0%	36,382	25,541

Exhibit 2 compares the rates of change of the total number of jobs between 2008 and 2018 in the Greater Sacramento region, the North Far North region, and California. It also compares occupational demand projections from 2018 through 2023 across the same areas. The rate of change is indexed to the base year 2008 total number of jobs.

Exhibit 2. Rate of Change for Selected Occupations²



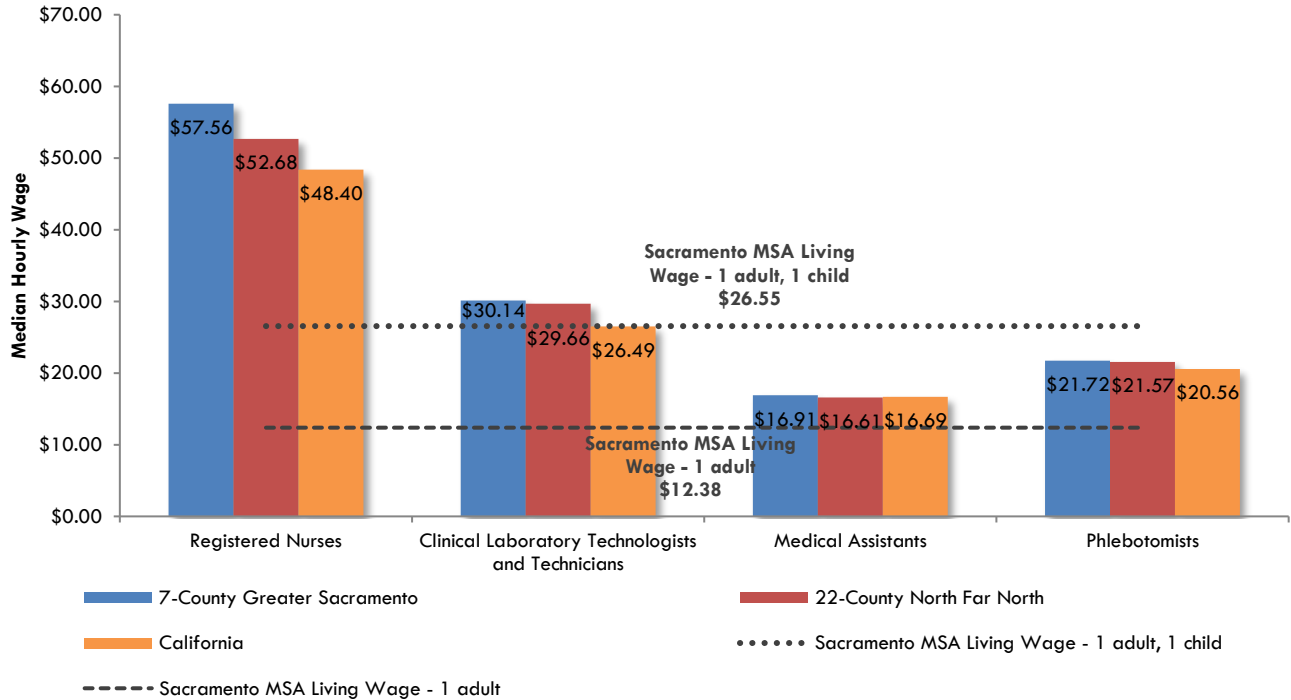
¹ Emsi 2019.2; QCEW Employees, Non-QCEW Employees and Self-Employed. The 7-county Greater Sacramento region includes El Dorado, Placer, Nevada, Sacramento, Sutter, Yolo and Yuba. The 22-county North Far North region includes the aforementioned counties as well as Butte, Colusa, Del Norte, Glenn, Humboldt, Lake, Lassen, Mendocino, Modoc, Plumas, Shasta, Sierra, Siskiyou, Tehama and Trinity.

² Ibid.

WAGES AND JOB POSTINGS

Exhibit 3 compares the median hourly wages of the selected occupations in the study regions to the Sacramento Metropolitan Statistical Area (MSA) living wage for a one-adult household and a one-adult, one-child household.³

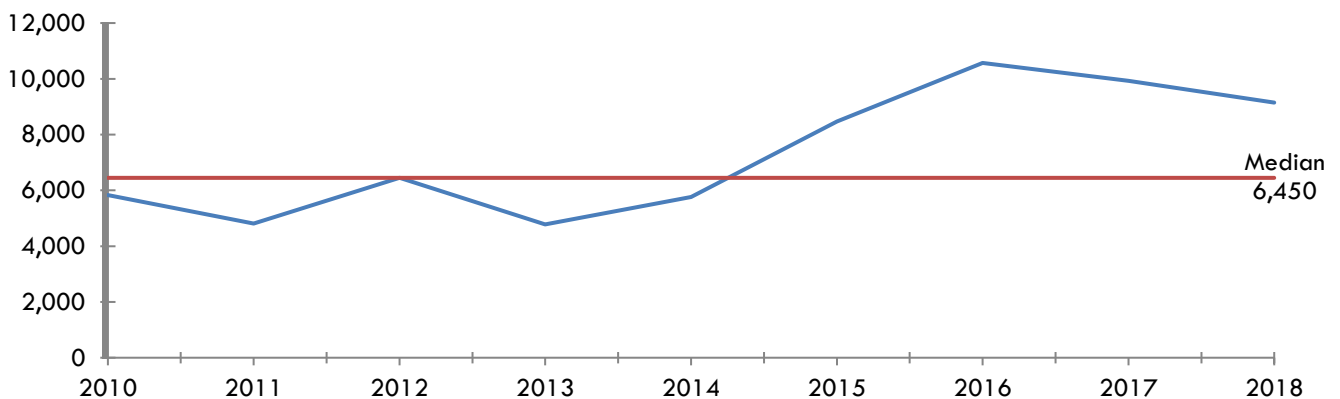
Exhibit 3. Wages for selected occupations⁴



Burning Glass identified a pool of 10,525 job postings in the Greater Sacramento region for the selected occupations. This data represents job listings posted online within the last year, from June 1, 2018, through May 31, 2019.

Exhibit 4 compares the 10-year job posting trends of the selected occupations to the median number of job postings in the Greater Sacramento region.

Exhibit 4: Job postings trend for selected occupations⁵



³ Living Wage Calculator: Counties and Metropolitan Statistical Areas in California, <http://livingwage.mit.edu/>

⁴ Emsi 2019.2; QCEW Employees, Non-QCEW Employees and Self-Employed.

⁵ Burning Glass Technologies, "Labor Insight Real-Time Labor Market Information Tool," <http://www.burning-glass.com>, 2019.

Exhibit 5 shows the number of job postings by county for the selected occupations.

Exhibit 5. Top job postings locations for selected occupations⁶

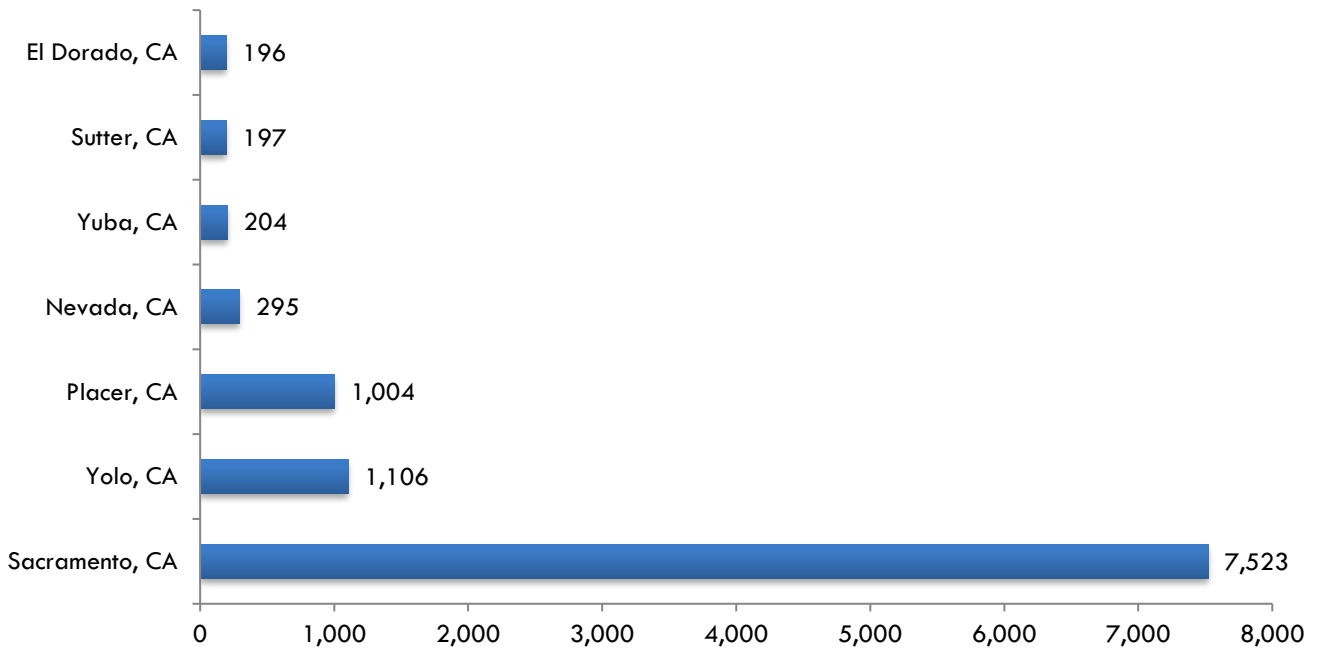


Exhibit 6 lists the employers with the most job openings for the selected occupations within the study region. Of the 10,525 job postings, 6,970 included the employer’s name.

Exhibit 6: Top employers by number of job postings⁷

Employers	Greater Sacramento (n = 6,970)	
	Number of Postings	Percent of Postings
Sutter Health	597	8.6%
Dignity Health	349	5.0%
Kaiser Permanente	234	3.4%
Sutter Health Sacramento Sierra Region	232	3.3%
Sutter Medical Center	221	3.2%
Anthem Blue Cross	216	3.1%
University California	142	2.0%
Cynet Systems Inc	142	2.0%
Uc Davis Health	138	2.0%
Onestaff Medical	111	1.6%

⁶ Ibid.

⁷ Ibid.

Exhibit 7 shows the top job titles for the selected occupations in the Greater Sacramento region. All 10,525 job postings included job titles.

Exhibit 7. Top job titles by number of job postings⁸

Titles	Greater Sacramento (n = 10,525)	
	Number of Postings	Percent of Postings
Registered Nurse	2,628	25.0%
Medical Assistant	494	4.7%
Travel Registered Nurse	439	4.2%
Nurse Case Manager	314	3.0%
Med/Surg Registered Nurse	291	2.8%
Laboratory Technician	282	2.7%
Labor and Delivery Registered Nurse	255	2.4%
Operating Room Nurse	243	2.3%
Hands-On Care	234	2.2%
Emergency Room Registered Nurse	196	1.9%
Home Health Registered Nurse	187	1.8%
Laboratory Assistant	185	1.8%
Phlebotomist	178	1.7%

Exhibit 8 shows the skills most in-demand for the selected occupations in the Greater Sacramento region. 7,691 of the 10,525 job postings included required skills information.

Exhibit 8. Top skills by number of job postings⁹

Skills	Greater Sacramento (n = 7,691)	
	Number of Postings	Percent of Postings
Patient Care	2,865	37.3%
Advanced Cardiac Life Support (ACLS)	2,097	27.3%
Acute Care	1,373	17.9%
Cardiopulmonary Resuscitation (CPR)	1,336	17.4%
Treatment Planning	1,310	17.0%
Case Management	1,255	16.3%
Scheduling	1,081	14.1%
Patient/Family Education and Instruction	891	11.6%
Phlebotomy	804	10.5%
Home Health	723	9.4%

⁸ Ibid.

⁹ Ibid.

EDUCATION AND TRAINING

Exhibit 9 shows the typical educational attainment for workers 25 years and old by occupation across the U.S. At the national level, the typical education for the existing workforce based on survey data from 2016-2017 for the selected occupations is a high diploma or less.

Exhibit 9. Typical educational attainment for selected occupations, nationally¹⁰

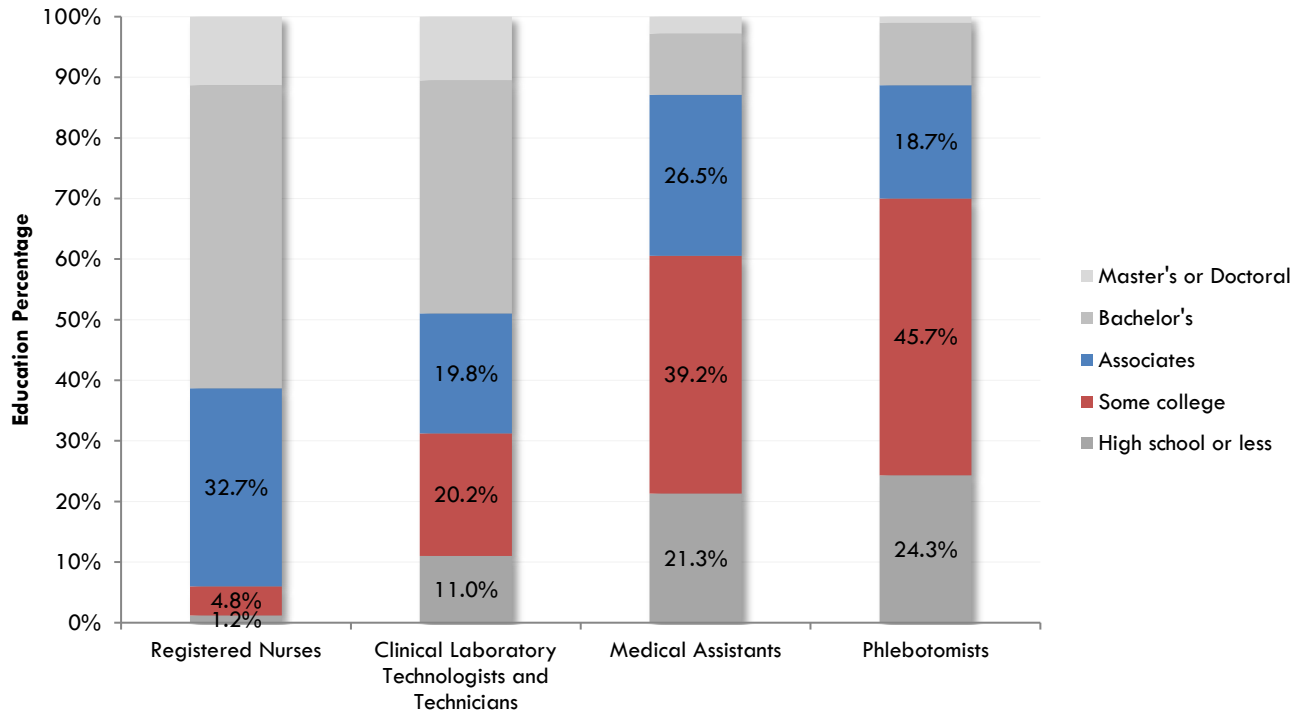


Exhibit 10 shows the typical entry-level education requirements, on-the-job training, and work experience requirements for the selected occupations in the Greater Sacramento region.

Exhibit 10. Typical education, training, and work experience for selected occupations¹¹

Occupations	SOC	Typical Entry-Level Education	Typical On-The-Job Training	Work Experience Required
Registered Nurses	29-1141	Bachelor's degree	None	None
Clinical Laboratory Technologists and Technicians	29-2018	Associate's degree	None	None
Medical Assistants	31-9092	Postsecondary nondegree award	None	None
Phlebotomists	31-9097	Postsecondary nondegree award	None	None

PROGRAM SUPPLY

Analysis of existing educational programs shows that there is one Taxonomy of Program (TOP) code related to training for phlebotomy: 1205.10 - Phlebotomy. The corresponding Classification of Instructional Programs (CIP) code is 51.1009 – Phlebotomy Technician/Phlebotomist.

¹⁰ Bureau of Labor Statistics. Educational Attainment for Workers 25 Years and Older by Detailed Occupation, 2016-2017, <https://www.bls.gov/emp/tables/educational-attainment.htm>.

¹¹ Emsi 2019.2; QCEW Employees, Non-QCEW Employees and Self-Employed.

Exhibit 11 compares the average total number of awards (certificates and degrees) conferred by colleges in the Greater Sacramento region over the last three academic years. 2017-18 data is not yet available for other post-secondary institutions. No community colleges currently offer training under TOP code 1205.10.

Exhibit 11. Average annual awards conferred by Greater Sacramento post-secondary institutions, 2014-2017¹²

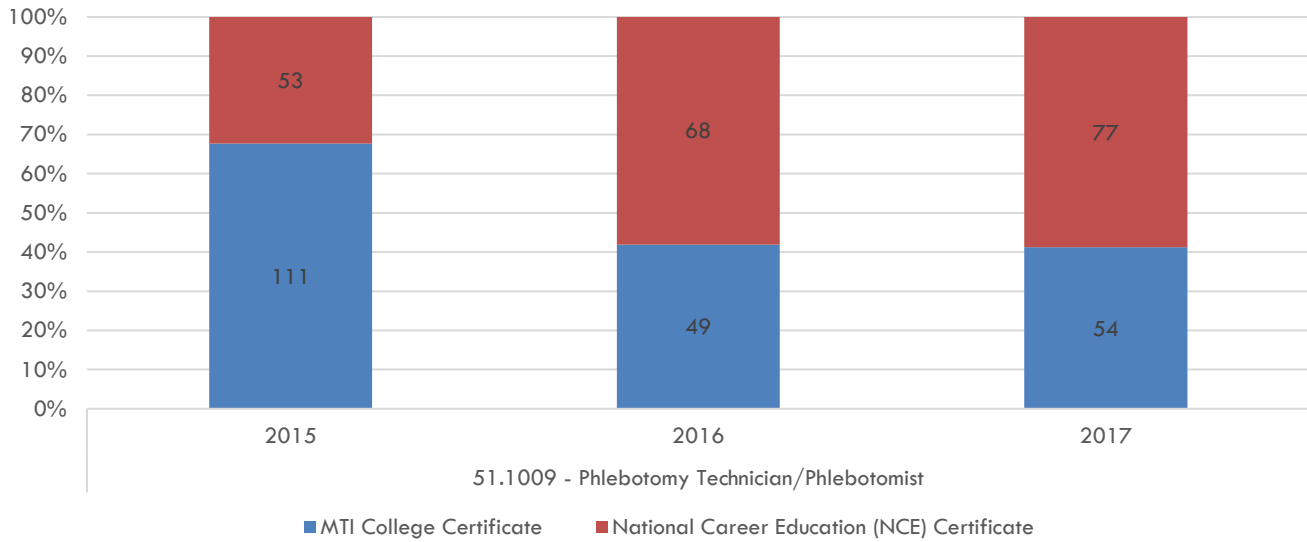


Exhibit 12 displays program awards by credential type and year for the selected education programs over the last three academic years. 2017-18 data is not yet available for other post-secondary institutions.

Exhibit 12. Program awards conferred by Greater Sacramento community colleges, 2014-2017¹³

Program	Certificates				Associate			
	2014-15	2015-16	2016-17	3-Year Avg	2014-15	2015-16	2016-17	3-Year Avg
MTI	111	49	54	71	--	--	--	--
NCE	53	68	77	66	--	--	--	--
Totals	164	117	131	137	--	--	--	--

¹² COE Supply Tables, California Community Colleges Chancellor's Office DataMart, and Integrated Postsecondary Education Data System (IPEDS).

¹³ Ibid.

FINDINGS

- While Phlebotomists are the specific training occupation for phlebotomy programs, other occupations often require phlebotomy training. These occupations include but are not limited to registered nurses, laboratory technologists and technicians, and medical assistants. Occupational data for phlebotomists offers a direct measurement of demand, while data for other occupations serve to identify new and incumbent workers who could be candidates for phlebotomy training in a community college.
- The California Department of Public Health (CDPH) requires all persons who are not California licensed doctors, nurses, clinical lab scientists or other licensed professionals whose scope of practice does not include phlebotomy to be certified as a phlebotomist before they can draw blood. While some workers in phlebotomy-related occupations have the required California licensure for their occupations, many others do not and are still included in the occupation. This is particularly true for lab technicians and medical assistants, who may draw blood for diagnostic purposes.
- Between 2008 and 2018, these phlebotomy-related occupations added over 5,000 jobs in the greater Sacramento region. This trend will appear to continue over the next five years, with the addition of 300 more jobs, at a projected growth rate of 10.3% and just over 2,500 jobs per year.
- Median hourly wages for the three occupations fall between the Sacramento living wage thresholds of one-adult and a one-adult, one-child household. Hourly wages are highest for registered nurses at \$57 per hour and the lowest for medical assistants at almost \$17 per hour. Phlebotomists in the greater Sacramento region earn almost \$22 per hour.
- There are only two post-secondary institutions in the greater Sacramento region that offer phlebotomy training: MTI College and National Career Education (NCE). Together, these institutions issue almost 140 certificates per year.

RECOMMENDATIONS

- Based on a three-year average of annual award in phlebotomy programs in the Greater Sacramento region (137 certificates), and projected annual openings for phlebotomy-related occupations (2,507 openings), the region appears to have some demand for programs related phlebotomy.

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

METHODOLOGY

Occupations in this report were identified using O*Net. Findings in this report 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.

APPENDIX A: DATA SOURCES

Sources used for data analysis purposes in this report include:

- U.S. Department of Labor/Employment and Training Administration (DOLETA) O*NET Online
- Burning Glass, Labor Insight/Jobs
- Economic Modeling Specialists, International (EMSI)
- California Employment Development Department, Labor Market Information Division (EDD, LMID)
- Bureau of Labor Statistics, Occupational Employment Statistics (OES)
- California Community Colleges Chancellor's Office, Cal-PASS Plus LaunchBoard
- Living Insight Center for Community Economic Development, Self-Sufficiency Standard Tool for California
- California Community Colleges Chancellor's Office Management Information Systems (MIS Data Mart)
- U.S. Department of Education, National Center for Education Statistics, Integrated Postsecondary Education Data System (IPEDS)

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