Pharmacy Technicians

Inland Empire/Desert Region (Riverside and San Bernardino counties)

This workforce demand report uses state and federal job projection data developed before the economic impact of COVID-19. The COE is monitoring the situation and will provide more information as it becomes available. Please consult with local employers to understand their current employment needs.

Summary

- The community college pharmacy technology program provides the knowledge, skills, and abilities that lead to the pharmacy technician occupation. Pharmacy technicians is a community college-level occupation and is an essential critical infrastructure occupation.

- The *pharmacy technician* occupation is projected to have 351 annual job openings, increasing employment by 6% through 2024.

- The 50th percentile hourly earnings for this occupation is $18.71 per hour, below the regional $21.78 per hour self-sustainable standard for a single adult with one child.

- In the region, two community colleges conferred an annual average of 45 awards in pharmacy technology programs over the last three academic years. Seven other postsecondary educational institutions issued 249 awards in the previous three academic years.

- The COE recommends caution expanding pharmacy technology programs in the region. See the recommendation section for analysis.

Introduction

California Community College pharmacy technology (TOP 1221.00) programs prepare students for employment by the instruction of the principles and procedures used to maintain and dispensing pharmaceutical supplies and medications (Taxonomy of Programs, 2012). The knowledge, skills, and abilities trained by pharmacy technology programs lead to the pharmacy technician occupation. The Public Policy Institute of California identifies this occupation as an essential critical infrastructure occupation. This classification of occupation is vital in supporting California's basic health, safety, and economic needs or may have the ability to social distance (Bohn et al.).

Pharmacy Technicians (29-2052)

Prepare medications under the direction of a pharmacist. May measure, mix, count out, label, and record amounts and dosages of medications according to prescription orders.

Sample job titles: Accredited Pharmacy Technician; Certified Pharmacy Technician (CPhT); Compounding Technician; Lead Pharmacy Tech, Certified Pharmacy Technician (Lead Pharmacy Tech, CPhT); Lead

Pharmacy Technician (Lead Pharmacy Tech); Pharmacy Technician (Pharmacy Tech); Senior Pharmacy Technician; Technician, Inventory Specialist

Entry-Level Educational Requirement: High school diploma or equivalent
Training Requirement: Between one and twelve months of on-the-job training
Incumbent workers with a Community College Award or Some Postsecondary Coursework: 54%

Job Counts and Projections

In 2019, there were 3,973 pharmacy technician jobs in the Inland Empire/Desert Region. This occupation is projected to increase employment by 6% by 2024 and have 351 annual job openings to fill new or backfill jobs that workers are permanently vacating (includes occupational transfers and retirements). Exhibit 1 displays job counts, five-year projected job growth, job openings, and the share of incumbent workers age 55 years and greater working in this occupation.

Exhibit 1: Pharmacy technicians five-year projections, 2019-2024

2019 Jobs	2024 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
3,973	4,211	6%	2,103	351	11%

Source: Emsi 2021.1

Online Job Advertisements

Exhibit 2 displays the number of online job advertisements posted over the last 12 months, along with the regional and statewide average time to fill for pharmacy technician positions. Staffing company results were excluded from the search results.

On average, local employers fill online job postings for pharmacy technician positions within 37 days, two days shorter than the statewide average, indicating that local employers face similar challenges filling open positions as other employers in California as a whole.

Exhibit 2: Job ads and time to fill

| Job Ads	Regional Average Time to Fill (Days)	California Average Time to Fill (Days)
972	37	39

Source: Burning Glass – Labor Insights

Earnings and Benefits

Community colleges should ensure their training programs lead to employment opportunities that provide self-sustainable income. The University of Washington estimates that a self-sufficient hourly rate for a single adult with one school-age child is $21.78 per hour or $45,992 annually in Riverside County; $21.24 per hour or $44,867 annually in San Bernardino County (Pearce, 2020). For this study, the higher hourly earnings requirement in Riverside County is adopted as the self-sufficiency standard for the two-county region.

The median, 50th percentile hourly earnings for pharmacy technicians is $18.71 per hour, falling short of the $21.78 per hour self-sustainability standard for the region. The hourly earnings for pharmacy technicians exceed the self-sufficiency standard at the 75th percentile, indicating that approximately the top 25% of workers in this occupation exceed the $21.78 per hour standard. Exhibit 3 displays the hourly earnings by percentile for the region.

Exhibit 3: Hourly earnings by percentile
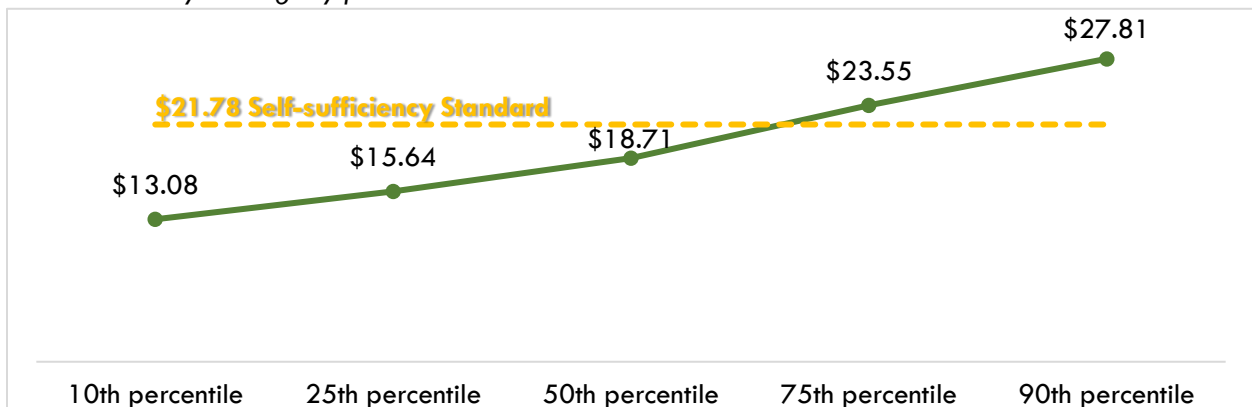
Source: Emsi 2021.1

According to the California Labor Market Information Division's occupational guides, pharmacy technicians' benefits generally include paid vacation, sick leave, medical and dental insurance, and retirement plans (Detailed Occupational Guides, 2020).

Advertised Salary from Online Job Ads

Exhibit 4 displays online job ad salary data for pharmacy technician positions over the 12 months. Online job ad salary information reveals that employers are willing to pay *pharmacy technicians* $35,000 annually, below the $45,992 annual ($21.78 hourly) self-sufficiency standard for the region. Consider online job ad salary with caution since only 28% (273 out of 972) of results for this occupation provided information. The salary figures are prorated to reflect full-time, annual salary status.

Exhibit 4: Advertised salary information

	Real-Time Salary Information				
Number of job postings	Less than $35,000	$35,000 to $49,999	$50,000 to $74,999	More than $75,000	Average Annual Salary
273	59%	35%	6%	0%	$35,000

Source: Burning Glass – Labor Insights

Employers, Skills, Education, and Work Experience

Exhibit 5 displays the employers posting 20 or more online job advertisements for pharmacy technician positions during the last 12 months in the region. Displaying employer names provides some insight into where students may find employment after completing a program.

Exhibit 5: Employers posting the most online job ads

Employers	Job Ads
CVS Health	142
Walgreens Boots Alliance, Inc.	141
Rite Aid Corporation	68
Anthem Blue Cross	38
Universal Health Services, Inc. (Temecula Valley Hospital, Inland Valley Medical Center, Rancho Springs Medical Center)	32
Walmart/Sam's Club	23
Loma Linda University Health	22
Kindred Healthcare Incorporated	20
All other employers	*486*
Total	**972**

Source: Burning Glass – Labor Insights

Exhibit 6 displays a sample of specialized and employability skills employers seek when looking for workers to fill pharmacy technician positions. Specialized skills are occupation-specific skills that employers request for industry or job competency. Employability skills are foundational skills that transcend industries and occupations; this category is often referred to as "soft skills." The skills requested in job postings may be utilized to guide curriculum development.

Exhibit 6: Sample of in-demand skills from employer online job ads

Specialized Skills	Employability Skills
• Customer Service	• Communication Skills
• Prescription Filling	• Computer Literacy
• Scheduling	• Writing
• Inventory Management/Control	• Building Effective Relationships

Source: Burning Glass – Labor Insights

Exhibit 8 displays the entry-level education typically required to enter employment as a pharmacy technician according to the Bureau of Labor Statistics (BLS), the community college-level educational attainment for incumbent workers with "some college, no degree" and an "associate degree" according to the U.S. Census (2016-17) and the real-time minimum advertised education requirement from employer job ads for pharmacy technician positions. Most employers were seeking a candidate with high school or vocational training. The majority (54%) of incumbent workers in this field hold a community college-level of educational attainment.

Exhibit 8: Typical entry-level education, educational attainment, and minimum advertised education requirements

Occupation	Typical Entry-Level Education Requirement	CC-Level Educational Attainment*	Real-Time Minimum Advertised Education Requirement			
			Number of Job Ads	High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Pharmacy Technicians	High school diploma or equivalent	54%	548	98%	2%	-

Source: Emsi 2021.1, Burning Glass – Labor Insights
*Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework

Exhibit 9 displays the work experience typically required for pharmacy technicians and the real-time work experience requirements from employer job ads for pharmacy technician positions. Most employers sought a candidate with 0-2 years of work experience.

Exhibit 9: Work experience required and real-time work experience requirements

Occupation	Work Experience Typically Required	Real-Time Work Experience			
		Number of Job Ads	0 – 2 years	3 – 5 years	6+ years
Pharmacy Technicians	None	506	94%	6%	-

Source: Emsi 2021.1, Burning Glass – Labor Insights

The California State Board of Pharmacy is the regulatory agency that issues licenses for certified pharmacy technicians (CPhT). California requires that pharmacy technician applicants possess a high school diploma or equivalent, have completed a pharmacy technician training program, and be licensed by the Pharmacy Board. California recognizes the following training pathways: an associate degree from an accredited training program, certification from the Pharmacy Technician Certification Board (PTCB), certificate of completion from the National Healthcare Association Pharmacy Technician Certification Program (ExCPT), and pharmacy technician training provided by a branch of the federal armed services. For more information about pharmacy technician requirements and training pathways, visit the California State Board of Pharmacy website (California State Board of Pharmacy, 2021). Exhibit 10 displays the certifications required by employers posting job ads for *pharmacy technicians* in the Inland Empire/Desert Region.

Exhibit 10: Certifications required by employer job ads for pharmacy technicians

Occupation	Certifications
Pharmacy Technicians *(n=604)*	• Certified Pharmacy Technician (CPhT) • Pharmacy Technician Certification Board (PTCB)

Source: Burning Glass – Labor Insights

Student Completions and Program Outcomes

Exhibit 11 displays the annual average awards for community college pharmacy technology (TOP 1221.00) programs in the Inland Empire/Desert Region. These programs have collectively awarded an annual average of 45 associate degrees and certificates over the last three academic years.

Exhibit 11: 2016-19, Annual average community college awards for the pharmacy technology programs in the Inland Empire/Desert Region

1221.00 – Pharmacy Technology	Associate degree	Certificate requiring 18 to <30 semester units	Total CC Annual Average Awards, Academic Years 2016-19
Chaffey	10	15	25
San Bernardino	13	7	20
Total	**23**	**22**	**45**

Source: MIS Data Mart

California program outcome data may provide valuable insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 12. The outcome methodology is available in the appendix section of this report. Dashes indicate there were too few students to obtain program outcome information.

Exhibit 12: 1221.00 – Pharmacy technology strong workforce program outcomes

Strong Workforce Program Metrics: 1221.00 – Pharmacy Technology Academic Year 2017-18, unless noted otherwise	Inland Empire/Desert Region	California
Unduplicated count of enrolled students (2018-19)	212	1,990
Completed 9+ career education units in one year (2018-19)	33%	27%
Perkins Economically disadvantaged students (2018-19)	91%	84%
Students who attained a noncredit workforce milestone in a year (2018-19)	-	78%
Students who earned a degree, certificate, or attained apprenticeship (2018-19)	30	229
Transferred to a four-year institution (transfers)	-	69
Job closely related to the field of study (2016-17)	-	71%
Median annual earnings (all exiters)	$19,428	$26,888
Median change in earnings (all exiters)	-	35%
Attained a living wage (completers and skills-builders)	-	35%

Sources: LaunchBoard Community College Pipeline and Strong Workforce Program Metrics

Pharmacy Technician/Assistant (CIP 51.0805) awards reported by other postsecondary education providers are displayed in Exhibit 13. Completion data is compiled from the Integrated Postsecondary Education Data System (IPEDS) for the most recent three years available. This program awarded 249 annual average awards. Due to IPEDS reporting limitations, it is assumed that each award represents a qualified worker since it is unknown if students are earning multiple awards from this program. Baldy View Regional Occupational Program no longer offers a pharmacy technology program. Brightwood College – Palm Springs permanently closed on December 7, 2018, and is no longer contributing to regional supply.

Exhibit 13: Other educational providers pharmacy technician/assistant programs, three-year annual average credentials and enrollments in the Inland Empire/Desert Region

51.0805 – Pharmacy Technician/Assistant	Award <1 Academic Year	Award 1<2 Academic Years	Other Educational Providers Annual Average Credentials, Academic Years 2014-17
American Career College-Ontario	39	49	88
American College of Healthcare	-	21	21
Baldy View Regional Occupational Program (No longer offered)	1	-	1
Brightwood College-Palm Springs (Closed)	-	5	5
North-West College-Riverside	27	-	27
Riverside County Office of Education-School of Career Education	30	-	30
UEI College-Riverside	-	77	77
Total	**97**	**152**	**249**

Source: IPEDS

Recommendation

The community college pharmacy technology (TOP 1221.00) program provides the knowledge and skills that lead to the *pharmacy technician* occupation. This occupation is projected to have 351 annual job openings over the next five years. This occupation's median earnings are $18.71 per hour, below the $21.78 per hour self-sustainable earnings estimate for a single adult with one child. The 75th percentile rate is $23.55 per hour, exceeding the self-sustainability standard. California requires that pharmacy technician applicants possess a high school diploma or equivalent, have completed a pharmacy technician training program, and be licensed by the California State Board of Pharmacy.

Two regional community colleges reported 45 annual average awards from pharmacy technology programs over the last three years. Other postsecondary institutions in the region reported 249 annual

average awards in the previous three years. Regional community colleges and other postsecondary institutions reported 294 combined annual average awards. Assuming each award represents a qualified program completer, the annual supply of program completers is relatively close to meeting the annual demand for more workers (351 annual job openings) in the region.

The Centers of Excellence recommends caution expanding pharmacy technology programs for the following reasons:

1. The median hourly earnings for pharmacy technicians falls short of the self-sustainability standard
2. The annual average supply of potential program completers is relatively close to meeting the annual demand for more workers.

Colleges considering a pharmacy technology program should meet with relevant employers to document their need for more workers and the specific skills, licensing, and certifications that will lead to self-sustainable earnings shortly after entering employment.

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Appendix: Program Completion and Outcome Methodology

Exhibit 10 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2016 and 2019 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total of associate degrees and certificates issued during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variation present in a single year.

Community college student outcome information is from LaunchBoard and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from records provided by California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included in each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2021a). Finally, employment in a job closely related to the field of study comes from self-

reported student responses on the CTE Employment Outcomes Survey (CTEOS), administered by Santa Rosa Junior College (LaunchBoard, 2021a).

Job postings data is limited to the information provided by employers and the ability of artificial intelligence search engines to identify this information. Preliminary calculations by Georgetown Center on Education and the Workforce found that "just 30 to 40 percent of openings for candidates with some college or an associate degree, and only 40 to 60 percent of openings for high school diploma holders appear online" (Carnevale et al., 2014). Online job postings often do not reveal employers' hiring goals or intentions; it is unknown if employers plan to hire one or multiple workers from a single online job posting or collect resumes for future hiring needs. A closed job posting may not be the result of a hired worker.

Table 1: 2019 to 2024 job growth, earnings, education, training, and work experience required, Inland Empire/Desert Region

Occupation (SOC)	2019 Jobs	5-Yr Change	5-Yr % Change	Annual Openings (New + Replacement Jobs)	Hourly Earnings Range (10th to 90th percentile)	Median Hourly Earnings (50th percentile)	Average Annual Earnings	Typical Entry-Level Education & On-The-Job Training Required	Work Experience Required
Pharmacy Technicians (29-2052)	3,973	4,211	6%	351	$13.08 to $27.81	$18.71	$40,600	High school diploma or equivalent & 1-12 months	None

Source: Emsi 2021.1