



Labor Market Analysis for Program Recommendation

Paramedicine Occupations

Chabot College

Prepared by the San Francisco Bay Center of Excellence for Labor Market Research

April 2024

Recommendation

Based on all available data, there appears to be an “undersupply” of Paramedicine workers compared to the demand for this cluster of occupations in the Bay region and in the East Bay sub-region (Alameda, Contra Costa counties). There is a projected annual gap of about 752 students in the Bay region and 213 students in the East Bay Sub-Region.

Introduction

This report provides student outcomes data on employment and earnings for TOP 1251.00 - Paramedic programs in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Chabot College and in the region.

This report profiles Paramedicine Occupations in the 12 county Bay region and in the East Bay sub-region for a proposed new program at Chabot College.

Chabot College requested occupational demand data for “Emergency Department Technician”, however no Standard Occupational Classification (SOC) code exists yet for this emerging occupation. Many Emergency Departments in California hire "Emergency Department Technicians" (or emergency room technicians, or patient care technicians in the emergency room). A review of job postings data, searching for “Emergency Department Technicians,” indicates there were 129 jobs posted over the past 12 months in the Bay region for this position, and 59 jobs posted in the East Bay Sub-region.

- **Paramedics (29-2043):** Administer basic or advanced emergency medical care and assess injuries and illnesses. May administer medication intravenously, use equipment such as EKGs, or administer advanced life support to sick or injured individuals.
Entry-Level Educational Requirement: Postsecondary nondegree award
Training Requirement: None
Percentage of Community College Award Holders or Some Postsecondary Coursework: 66%
- **Firefighters (33-2011):** Control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.
Entry-Level Educational Requirement: Postsecondary nondegree award
Training Requirement: Long-term on-the-job training
Percentage of Community College Award Holders or Some Postsecondary Coursework: 60%

Occupational Demand

Table 1. Employment Outlook for Paramedicine Occupations in Bay Region

Occupation	2021 Jobs	2026 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Paramedics	2,285	2,537	252	11%	902	180	\$21	\$25
Firefighters	6,902	7,277	375	5%	3,210	642	\$36	\$44
Total	9,187	9,814	627	7%	4,112	822		

Source: Lightcast 2022.3

Bay Region includes: Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

Table 2. Employment Outlook for Paramedicine Occupations in East Bay Sub-region

Occupation	2021 Jobs	2026 Jobs	5-yr Change	5-yr % Change	5-yr Total Openings	Annual Openings	25% Hourly Earning	Median Hourly Wage
Paramedics	450	516	66	15%	193	39	\$25	\$28
Firefighters	1,962	2,060	98	5%	902	180	\$39	\$44
Total	2,411	2,576	164	7%	1,095	219		

Source: Lightcast 2022.3

East Bay Sub-Region includes: Alameda, Contra Costa Counties

Job Postings in Bay Region and East Bay Sub-Region

Table 3. Number of Job Postings by Occupation for latest 12 months (Apr. 2023 - Mar. 2024)

Occupation	Bay Region	East Bay
Paramedics	1,372	441
Firefighters	131	32
Emergency Department Technician	129	59

Source: Lightcast

Table 4a. Top Job Titles for Paramedicine Occupations for latest 12 months (Apr. 2023 - Mar. 2024) - Bay Region

Title	Bay	Title	Bay
Paramedics	931	Reserve Firefighters	8
Emergency Response Managers	161	Emergency Medical Technician Paramedics	7
Paramedic Specialists	111	Flight Paramedics	7
Gamers	74	Captains/Firefighters	4
Firefighters/Paramedics	60	Medic Emergency Medical Technicians	4
Firefighters	42	Response Specialists	4
Paramedic Instructors	10	Wildland Firefighters	4
Critical Care Paramedics	9	Emergency Department Paramedics	3
Heavy Equipment Operators	8		

Title	Bay	Title	Bay
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Source: Lightcast

**Table 4b. Top Job Titles for Paramedicine Occupations for latest 12 months (Apr. 2023 - Mar. 2024)
East Bay Sub-Region**

Title	East Bay	Title	East Bay
Paramedics	345	Critical Care Paramedics	3
Emergency Response Managers	44	Emergency Response Coordinators	2
Firefighters/Paramedics	13	Medic Emergency Medical Technicians	2
Firefighters	12	Non-Commissioned Officers	2
Emergency Medical Technician Paramedics	6	Paramedic Specialists	2
Paramedic Instructors	5	Emergency Medical Responders	1
Reserve Firefighters	5	Flight Paramedics	1
Response Specialists	4	Operations Support Specialists	1

Source: Lightcast

Industry Concentration

Table 5. Industries hiring Paramedicine Workers in Bay Region

Industry - 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2021)	Jobs in Industry (2026)	% Change (2021-26)	% Occupation Group in Industry (2022)
Local Government, Excluding Education and Hospitals	6,918	7,643	10%	79%
Ambulance Services	693	821	18%	8%
Federal Government, Military	367	348	-5%	4%
All Other Support Services	199	196	-2%	2%
State Government, Excluding Education and Hospitals	96	124	28%	1%
Convention and Trade Show Organizers	55	89	61%	1%
General Medical and Surgical Hospitals	80	90	13%	1%
Federal Government, Civilian, Excluding Postal Service	74	76	4%	1%
Packaging and Labeling Services	70	73	4%	1%
Hospitals (Local Government)	56	84	50%	1%

Source: Lightcast 2022.3

Table 6. Top Employers Posting Paramedicine Occupations in Bay Region and East Bay Sub-Region (Apr. 2023 - Mar. 2024)

Employer	Bay	Employer	East Bay
AMR	1,208	AMR	394
Global Medical Response	55	Global Medical Response	9
Daily Dispatch	13	Daily Dispatch	5
Pro-Transport	13	Alameda County	4
County Of Marin	9	East Bay Regional Park District	4
Protransport-1	9	Tesla	4

Source: Lightcast

Educational Supply

There are six (6) community colleges in the Bay Region issuing 66 awards on average annually (last 3 years ending 2021-22) on TOP 1251.00 - Paramedic. In the East Bay Sub-Region, there are two (2) community colleges that issued six (6) awards on average annually (last 3 years) on this TOP code.

There is one (1) other CTE educational institution in the Bay Region issuing four (4) awards on average annually (last 3 years ending 2021-22) on CIP 51.0904 - Emergency Medical Technology/Technician (EMT Paramedic). There are no other CTE educational institution in the East Bay Sub-Region issuing awards on average annually (last 3 years) on this CIP code.

Table 7a. Community College Awards on TOP 1251.00 - Paramedic in Bay Region

College	Subregion	Associate Degree	High unit Certificate	Low unit Certificate	Total
Contra Costa	East Bay	0	1	0	1
Foothill	Silicon Valley	19	2	0	21
Las Positas	East Bay	3	1	1	5
Napa	North Bay	3	0	0	3
San Francisco	Mid-Peninsula	6	8	0	14
Santa Rosa	North Bay	5	17	0	22
Total		36	29	1	66

Source: Data Mart

Note: The annual average for awards is 2019-20 to 2021-22.

Table 7b. Other CTE Institutions Awards on CIP 51.0904 - Emergency Medical Technology/Technician (EMT Paramedic) in Bay Region

College	Subregion	Associate degree	Total
Pacific Union College	North Bay	4	4
Total		4	4

Gap Analysis

Based on the data included in this report, there is a labor market gap in the Bay region with 822 annual openings for the Paramedicine occupational cluster and 70 annual (3-year average) awards for an annual undersupply of 752 students. In the East Bay Sub-Region, there is also a gap with 219 annual openings and 6 annual (3-year average) awards for an annual undersupply of 213 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1251.00 - Paramedic

Metric Outcomes	Bay All CTE Programs	Chabot All CTE Programs	State 1251.00	Bay 1251.00	East Bay 1251.00	Chabot 1251.00
Students with a Job Closely Related to Their Field of Study	74%	75%	93%	94%	100%	N/A
Median Annual Earnings for SWP Exiting Students	\$53,090	\$48,800	\$59,828	\$62,004	\$66,878	N/A
Median Change in Earnings for SWP Exiting Students	24%	34%	51%	53%	94%	N/A
Exiting Students Who Attained the Living Wage	54%	56%	77%	63%	70%	N/A

Source: Launchboard Strong Workforce Program Median of 2018 to 2021.

Skills, Certifications and Education

Table 9. Top Skills for Paramedicine Occupations in Bay Region (Apr. 2023 - Mar. 2024)

Skill	Posting	Skill	Posting
Ambulances	1,323	Cardiopulmonary Resuscitation (CPR)	93
Defibrillation	1,287	National Incident Management Systems	60
Electrocardiography	1,287	Fire Prevention	53
Intravenous Hydration	1,284	Fire Suppression Systems	50
Medical Equipment	1,279	Trauma Care	35
Emergency Response	201	Fire Protection	29
Hoisting	163	Medical Ventilators	26
Healthcare Industry Knowledge	161	Fire Science	24
Firefighting	125	Fire Service	24
Emergency Medical Services	123	Critical Care	22

Source: Lightcast

Table 10. Certifications for Paramedicine Occupations in Bay Region (Apr. 2023 - Mar. 2024)

Certification	Posting	Certification	Posting
Valid Driver's License	1,273	Cardiopulmonary Resuscitation (CPR) Certification	34
Advanced Cardiovascular Life Support (ACLS) Certification	1,241	Certified First Responder (CFR)	25
Pediatric Advanced Life Support (PALS)	1,233	CDL Class C License	18
Basic Life Support (BLS) Certification	1,226	Neonatal Resuscitation Program Certification (NRP)	18
Paramedic (EMT-P)	1,098	Firefighter II Certification	15
Basic Trauma Life Support (BTLS)	735	Nationally Registered Paramedic (NRP)	12
Emergency Medical Technician (EMT)	86	American Red Cross (ARC) Certification	12
Advanced Life Support	83	Certified Cardiographic Technician (CCT)	10
Firefighter I Certification	65	Certified Patient Account Technician	10
Nationally Registered Emergency Medical Technician (NREMT)	37	Automated External Defibrillator (AED) Certification	8

Source: Lightcast

Table 11. Education Requirements for Paramedicine Occupations in Bay Region

Education Level	Job Postings	% of Total
High school or GED	1,387	97%
Associate degree	18	1%
Bachelor's degree & higher	26	2%

Source: Lightcast

Note: 7% of records have been excluded because they do not include a degree level. As a result, the chart above may not be representative of the full sample.

Methodology

Occupations for this report were identified by use of job descriptions and skills listed in O*Net. Labor demand data is sourced from Lightcast occupation and job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CCCCO Data Mart and CTE Launchboard.

Sources

O*Net Online

Lightcast

CTE LaunchBoard www.calpassplus.org

Launchboard

Statewide CTE Outcomes Survey

Employment Development Department Unemployment Insurance Dataset

Living Insight Center for Community Economic Development

Chancellor's Office MIS system

Contacts

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