** Paramedic Occupations**

**Labor Market Information Report**

**City College of San Francisco**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

March 2019

# Recommendation

Based on traditional labor market data that combines the Paramedic and Emergency Medical Technician (EMT) occupations into one occupational title, there appears to be an oversupply of students compared to the demand data that is available. The apparent oversupply is about 467 students annually in the Bay region and about 68 students annually in the Mid-Peninsula Sub-Region (San Francisco and San Mateo Counties).

However, City College of San Francisco has operated a Paramedic program since 2003 and believes the demand for Paramedics is not accurately reflected in the EMSI (traditional) labor market data. This is because the labor market data for Paramedics is not being provided as a separate and distinct occupation. Also supply for Paramedics is combined with supply for EMTs, which make it difficult to know which students under TOP 1250.00 (Emergency Medical Services) are seeking employment as Paramedics.

In addition, CCSF states that local Fire Departments are not adequately represented in the labor market data and Fire Departments are the major employer hiring CCSF students. Finally, 78% of CCSF students who took courses on TOP 1250.00 were employed four quarters after exit, indicating CCSF students seeking employment as Paramedics are being hired in the labor market. The SOC code for EMTs and Paramedics is in the process of being revised by the Labor Department so that in the future, labor market data will be available for each occupation separately.

This report also provides student outcomes data on employment and earnings for programs on TOP 1250.00 - Emergency Medical Services 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 City College of San Francisco (CCSF) and in the region.

# Introduction

This report profiles Paramedic Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for the revision to an existing program at City College of San Francisco.

|  |
| --- |
| * **Emergency Medical Technicians and Paramedics (SOC 29-2041):** Assess injuries, administer emergency medical care, and extricate trapped individuals. Transport injured or sick persons to medical facilities.
 |
| *Entry-Level Educational Requirement: Postsecondary non-degree award* |
| *Training Requirement: None* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 67%* |

# Occupational Demand

**Table 1. Employment Outlook for Paramedic Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occupation**  | **2017 Jobs** | **2022 Jobs** | **5-Yr Change** | **5-Yr % Change** | **5-Yr Open-ings** | **Annual Open-ings** | **10% Hourly Wage** | **Median Hourly Wage** |
| Emergency Medical Technicians and Paramedics | 4,980 | 5,695 | 715  | 14% | 2,384 | 477 | $11.16  | $17.76  |

*Source: EMSI 2019.1*

**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 Paramedic Occupations in Mid-Peninsula Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Occupation**  | **2017 Jobs** | **2022 Jobs** | **5-Yr Change** | **5-Yr % Change** | **5-Yr Open-ings** | **Annual Open-ings** | **10% Hourly Wage** | **Median Hourly Wage** |
| Emergency Medical Technicians and Paramedics | 859 | 949 | 90  | 10% | 356 | 71 | $11.45  | $19.64  |

*Source: EMSI 2019.1*

**Mid-Peninsula Sub-Region** includes San Francisco and San Mateo Counties

### Job Postings in Bay Region and Mid-Peninsula Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (Jan 2018 - Dec 2018)**

| Occupation | Bay  | Mid-Peninsula |
| --- | --- | --- |
| Emergency Medical Technicians and Paramedics | 355 | 97 |

*Source: Burning Glass*

**Table 4. Top Job Titles for Paramedic Occupations for latest 12 months (Jan 2018 - Dec 2018)**

| Common Title | Bay | Mid-Peninsula | Common Title | Bay | Mid-Peninsula |
| --- | --- | --- | --- | --- | --- |
| Paramedic | 69 | 25 | Healthcare Specialist | 10 | 6 |
| Emergency Medical Technician | 46 | 7 | Emergency Room In | 6 | 4 |
| EMT | 46 | 14 | Safety/Security EMT | 6 | 6 |
| Emergency Room | 23 | 4 | Medical Responder | 5 | 1 |
| EMT Basic | 19 | 2 | Norcal Ambulance EMT Call Es | 4 | 1 |
| Emergency Medicine | 17 | 9 | Regional Technician | 4 | 0 |
| EMT -B | 12 | 1 | Adjunct Instructor | 3 | 0 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Paramedics in Bay Region**

| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2017) | Jobs in Industry (2022) | % Change (2017-22) | % in Industry (2017) |
| --- | --- | --- | --- | --- |
| Ambulance Services (621910) | 3,069 | 3,053 | 19% | 61.3% |
| Local Government, Excluding Education and Hospitals (903999) | 912 | 920 | 8% | 18.5% |
| General Medical and Surgical Hospitals (622110) | 279 | 280 | 2% | 5.6% |
| Hospitals (Local Government) (903622) | 209 | 215 | 17% | 4.3% |
| Federal Government, Military (901200) | 182 | 181 |  (2%) | 3.6% |
| HMO Medical Centers (621491) | 57 | 57 | 37% | 1.2% |

*Source: EMSI 2018.4*

**Table 6. Top Employers Posting Paramedic Occupations in Bay Region and Mid-Peninsula Sub-Region (Jan 2018 - Dec 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Mid-Peninsula |
| Pro Transport | 32 | Falcon Cct | 5 | Pro Transport | 13 |
| Norcal Ambulance | 18 | State of California | 5 | Protransport 1 | 6 |
| Amr Healthcare | 15 | Falck Company | 4 | Amr Healthcare | 5 |
| Medcor Incorporated | 15 | Falcon Ambulance | 4 | Norcal Ambulance | 5 |
| Protransport 1 | 14 | Falcon Critical Care  | 4 | Voyig | 4 |
| On Site Health Safety | 8 | Medcor | 4 | Millennium Group | 3 |
| Army National Guard | 7 | US Army | 4 | Sunbelt Management Associates | 3 |
| Royal Ambulance Service | 7 | American Medical Response  | 3 | American Medical Response Incorporated | 2 |
| Falck Northern California | 6 | California's Great America | 3 | Treasure Island Job Corps | 2 |
| Amr | 5 | Lucile Packard Childrens Hospital | 3 | Army National Guard | 1 |
| Atlas Lift Tech | 5 | Millennium Group | 3 | California State University | 1 |

*Source: Burning Glass*

# Educational Supply

There are 8 community colleges in the Bay Region issuing 944 awards annually on TOP 1250.00 - Emergency Medical Services. There are two colleges in the Mid-Peninsula Sub-Region issuing 139 awards annually on this TOP code.

**Table 7. Awards on TOP 1250.00 - Emergency Medical Services in the Bay Region**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **College** | **Sub-Region** | **Headcount** | **Associates** | **Certificates** | **Total** |
| Chabot | East Bay | 250 |  |  |  |
| Contra Costa | East Bay | 220 |  |  |  |
| Foothill | Silicon Valley | 571 |  | 54 | 54 |
| Hartnell | Santa Cruz & Monterey | 70 |  |  |  |
| Las Positas | East Bay | 269 |  |  |  |
| Los Medanos | East Bay | 349 |  | 134 | 134 |
| Marin | North Bay | 88 |  |  |  |
| Merritt | East Bay | 155 |  | 1 | 1 |
| Monterey | Santa Cruz & Monterey | 213 |   | 35 | 35 |
| Napa | North Bay | 175 |  |  |  |
| San Francisco | Mid-Peninsula | 440 |   | 87 | 87 |
| San Francisco Centers | Mid-Peninsula | 132 |  |  |  |
| San Jose | Silicon Valley | 130 |  |  |  |
| San Mateo | Mid-Peninsula | 75 |   |   |   |
| Santa Rosa | North Bay | 1,184 |   | 554 | 554 |
| Skyline | Mid-Peninsula | 274 |   | 52 | 52 |
| Solano | North Bay | 216 |   | 27 | 27 |
| **Total Bay Region** |  **4,811**  |  **0**  |  **944**  |  **944**  |
| **Total Mid-Peninsula Sub-Region** | **921** | **0** | **139** | **139** |

# *Source: IPEDS, Data Mart and Launchboard*

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

# Gap Analysis

Based on the traditional labor market data included in this report, there appears to be an oversupply in the Bay region with 477 annual openings for Paramedic occupations and 944 annual awards for an annual oversupply of 467. In the Mid-Peninsula Sub-Region, there also appears to be an oversupply with 71 annual openings and 139 annual awards for an annual oversupply of 68 students.

However, City College of San Francisco indicates it has operated a Paramedic program since 2003 and believes the demand for Paramedics is not accurately reflected in the EMSI (traditional) labor market data. This is because the data for Paramedics is not being provided as a separate and distinct occupation, but rather combined with demand for EMTs. Also, supply for Paramedics is combined with supply for EMTs, which make it difficult to know which students under TOP 1250.00 (Emergency Medical Services) are seeking employment as Paramedics.

In addition, CCSF states that local Fire Departments are not adequately represented in the labor market data and Fire Departments are the major employer hiring CCSF students. Finally, 78% of CCSF students who took courses on TOP 1250.00 were employed four quarters after exit, indicating CCSF students seeking employment as Paramedics are being hired in the labor market. The SOC code for EMTs and Paramedics is in the process of being revised by the Labor Department so that in the future, labor market data will be available for each occupation separately.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 1250.00 - Emergency Medical Services**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **2015-16** | **Bay (All CTE Programs)** | **San Francisco (All CTE Programs)** | **State (1250.00)** | **Bay (1250.00)** | **Mid-Peninsula (1250.00)** | **City College of San Francisco (1250.00)** |
| % Employed Four Quarters After Exit | 74% | 72% | 72% | 76% | 76% | 78% |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | $10,170 | $7,231 | $8,225 | $8,134 | $8,090 |
| Median % Change in Earnings | 46% | 31% | 68% | 59% | 34% | 32% |
| % of Students Earning a Living Wage | 63% | 65% | 52% | 52% | 43% | 41% |

*Source: Launchboard Pipeline (version available on 2/27/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Paramedic Occupations in Bay Region (Jan 2018 - Dec 2018)**

| **Skill** | **Postings** | **Skill** | **Postings** | **Skill** | **Postings** |
| --- | --- | --- | --- | --- | --- |
| Cardiopulmonary Resuscitation (CPR) | 191 | Cleaning | 28 | Assisted Living | 21 |
| Patient Care | 135 | Patient Transportation and Transfer | 27 | Emergency Vehicle Operation | 20 |
| Advanced Cardiac Life Support (ACLS) | 70 | HAZMAT | 26 | Hepatitis B | 20 |
| Occupational Health and Safety | 57 | Medical Coding | 24 | Measles Mumps Rubella (MMR) | 20 |
| Medical Triage | 52 | Customer Service | 23 | Scheduling | 20 |
| Customer Contact | 43 | Electrocardiogram (EKG / ECG) | 23 | Community Relations | 19 |
| Emergency Medicine | 40 | Motor Vehicle Operation | 23 | Fire Protection | 19 |
| Life Support | 40 | Patient Interviewing | 23 | Information Systems | 19 |
| Critical Care | 38 | Treatment Planning | 23 | Primary Care | 19 |
| Customer Billing | 34 | Case Management | 22 | Patient Assistance | 18 |
| Public Health and Safety | 31 | Electronic Medical Records | 22 | Safety Training | 18 |
| Trauma | 30 | Hoisting Equipment | 22 | Teaching | 16 |

*Source: Burning Glass*

**Table 10. Certifications for Paramedic Occupations in the Bay Region (Jan 2018 - Dec 2018)**

Note: 12% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

|  |  |  |  |
| --- | --- | --- | --- |
| **Certification** | **Postings** | **Certification** | **Postings** |
| Emergency Medical Technician (EMT) | 235 | Board Certified/Board Eligible | 5 |
| Driver's License | 170 | Board Certified in Emergency Medicine | 4 |
| Medical Examiner's License | 59 | Certified Emergency Nurse | 4 |
| Advanced Cardiac Life Support (ACLS) Certification | 58 | Certified Medical Assistant | 4 |
| Basic Life Saving (BLS) | 54 | Certified Pediatric Emergency Nurse | 4 |
| Paramedic Certification | 32 | Emergency Vehicle Operator | 4 |
| National Registry of Emergency Medical Technicians (NREMT) | 29 | Security Clearance | 4 |
| First Aid Cpr Aed | 27 | Certified Patient Account Technician | 3 |
| American Heart Association Certification | 24 | Phlebotomy Certification | 2 |
| Basic Cardiac Life Support Certification | 15 | CDL Class A | 1 |
| Nurse Practitioner | 13 | Ca License | 1 |
| Firefighter | 8 | Certified Compensation Professional (CCP) | 1 |
| Firefighter II | 7 | Certified Ophthalmic Technician | 1 |

*Source: Burning Glass*

**Table 11. Education Requirements for Paramedic Occupations in Bay Region**

Note: 65% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

|  |  |
| --- | --- |
| **Education (minimum advertised)** | **Latest 12 Mos. Postings** |
| High school or vocational training | 115 (93%) |
| Associate Degree | 8 (7%) |
| Bachelor’s Degree or Higher | 0 (0%) |

*Source: Burning Glass*

# Methodology

Occupations for this report were identified by use of skills listed in O\*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

# Sources

O\*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

CTE LaunchBoard [www.calpassplus.org/Launchboard/](http://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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