



Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	✓	<input type="checkbox"/>	<input type="checkbox"/>

Program LMI Endorsement Criteria		
Supply Gap	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> There is <i>projected</i> to be 2,090 annual job openings throughout the Inland Empire/Desert region, which is more than the 194 annual average awards conferred by educational institutions over the last 3 years . Supply data includes both community college awards (18) and non-community college awards (176).	
Living Wage	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> All (100%) of annual job openings for these three occupations have entry-level hourly wages above the IE/D living wage of 13.74.¹	
Education	Yes ✓	No <input type="checkbox"/>
	<i>Comments:</i> Most job postings for target occupations require a high school diploma or equivalent (84%). See exhibits 8 and 9 for more details.	

The Inland Empire/ Desert (IE/D) Center of Excellence for Labor Market Research (IE/D COE) reviewed the following occupations to prepare this report:

- Middle-Skill (typically require training/education above a HS diploma but less than a bachelor’s degree)
 - Billing and Posting Clerks (43-3021)
 - Medical Records Specialists (29-2072)
 - Medical Secretaries and Administrative Assistants (43-6013)

Summary of findings

Demand

- The number of jobs related to the middle-skill occupations is projected to increase 9% through 2028, with 2,090 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are above living wage at the 25th percentile hourly wage ranging from \$18.22 to \$21.01 in IE/D.
- There were 2,053 online job postings from 694 employers over the past 12-months with the highest postings for dental receptionists and medical receptionists.
- Most job postings for target occupations require a high school diploma or equivalent (84%), followed by bachelor’s degree (9%), and associate degree (7%).

Supply

- On average, there were 194 annual awards conferred by educational institutions over the last 3 years in related fields: 18 from community colleges and 194 from other institutions (e.g., 4-year universities, private schools).
- Statewide community college students that exited these programs in the 2021-22 academic year earned a median annual wage of \$39,364 (\$18.93 per hour).
- For statewide programs, 81% of students that exited their program in 2021-22 reported that they are working in a job closely related to their field of study.
- Community college programs play an important role diversifying the talent pipeline in these occupations. Most IE/D professionals in healthcare coding occupations are Hispanic/Latino or White (80%), “mid-career” or “late career” age category (74%), and female (91%). Most community college students in related programs are Hispanic/Latino (74%), “pre-career/college” age category (54%), however gender data is unavailable for the most current year.

¹ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. For these reasons, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

Introduction

California Community College Health Information Coding (TOP 1223.10) programs prepare students for employment in training to assign numerical codes to diagnoses, symptoms, and procedures using standard international classifications and terminology (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Health Information Coding programs lead to employment in occupations related to healthcare coding.

Job Demand

In 2023, there were 17,195 jobs in occupations related to healthcare coding in the IE/D region. Regional employment for this occupation group is projected to increase by 9% through 2028 with 2,090 job openings projected annually. Exhibit 1 displays the job count, five-year projected job growth, and job openings in the region.

Exhibit 1. Five-year projections for occupations related to healthcare coding, IE/D Region, 2023-2028

Occupation	SOC	2023 Jobs	2028 Jobs	2023 - 2028 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Medical Records Specialists	29-2072	1,579	1,748	11%	715	143
Billing and Posting Clerks	43-3021	4,265	4,531	6%	2,509	502
Medical Secretaries and Administrative Assistants	43-6013	11,351	12,412	9%	7,224	1,445
Total		17,195	18,691	9%	10,449	2,090

SOURCE: LIGHTCAST 2024.2

Job Postings

The following analysis for occupations related to healthcare coding using online job posting data.

Important note: The data produced in this section were generated by leveraging online job posting data sourced from Lightcast, which is the labor market analytics software tool COEs use to produce these briefs. The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies.² While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, deduplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for occupations related to healthcare coding over the last 12 months and the median posting duration. Over the previous 12 months, there were 2053 unique job postings for occupations related to healthcare coding in the region from 694 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, Aug 2023 – Jul 2024

Job Title	Job Ads	Median Posting Duration
Medical Secretaries and Administrative Assistants	995	25 days
Medical Records Specialists	627	25 days
Billing and Posting Clerks	431	25 days
Total	2,053	

SOURCE: LIGHTCAST 2024.2

² "Job Posting Analytics (JPA) Methodology." Lightcast Knowledge Base, <https://kb.lightcast.io/en/articles/6957446-job-posting-analytics-jpa-methodology>

Earnings

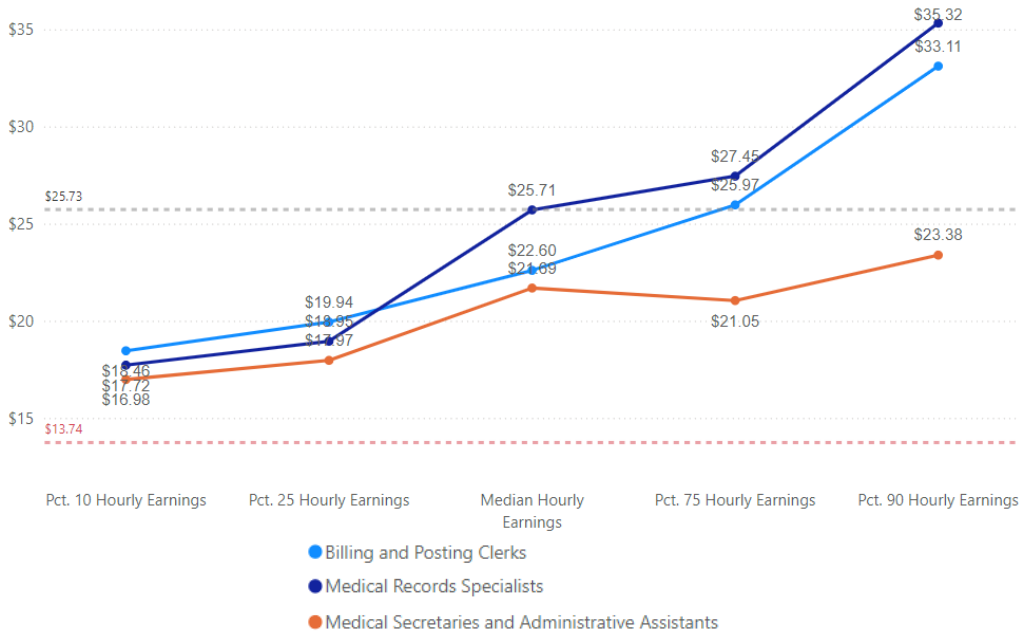
Exhibit 3a displays the hourly earnings for occupations related to medical imaging and Exhibit 3b displays the hourly earnings for job postings of the same occupations and compares both to the UW Self-Sufficiency Standard for the IE/D³ and the MIT IE/D living wage of \$25.73.⁴ The living wage criteria is determined using the data in exhibit 3a but Exhibit 3b is also shown to provide regional context using job posting data.

Exhibit 3a. Projected hourly earnings by percentile, IE/D Region, 2023



SOURCE: LIGHTCAST 2024.2

Exhibit 3b. Hourly earnings of job postings by percentile, IE/D Region, 2023



SOURCE: LIGHTCAST 2024.2

³ While the [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2021, does not account for significant increases in the cost of living in the Inland Empire the last three years, and is below the State of California minimum wage of \$16.00. While the COE uses this standard for the LMI Wage criteria. For these reasons, this report provides an alternative living wage calculation from MIT in the analysis as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$26.30 in Riverside County and \$25.17 in San Bernadino County.

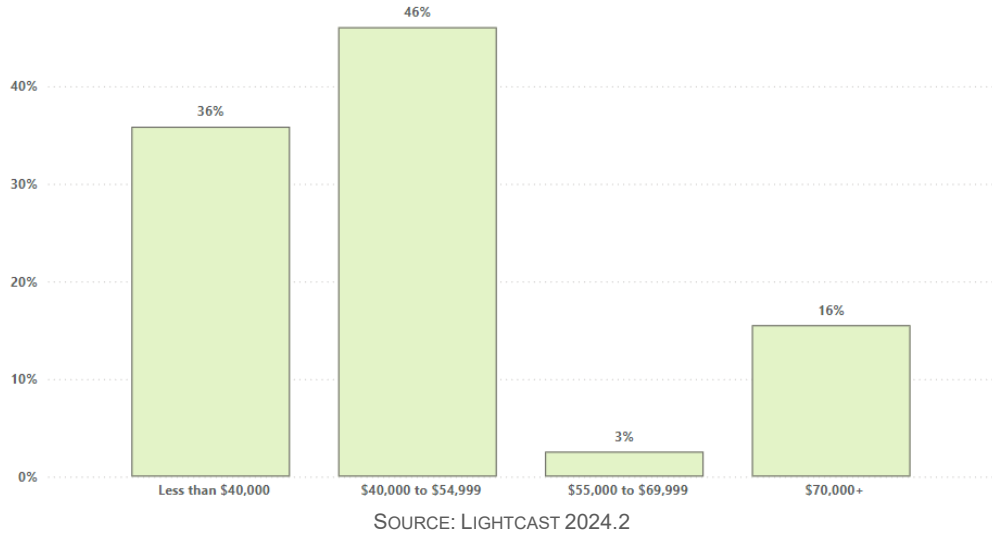
⁴ *ibid.*

All projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) were above the UW Self-Sufficiency Standard for the IE/D (see Exhibit 3a). However, the occupations listed were below the MIT living wage for an adult with no children (\$25.73) in projected wages (see Exhibit 3a).

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to healthcare coding over the last 12 months. Online job ad salary information data suggests the plurality of employers (46%) advertise an annual salary between \$40,000 and \$54,999 (between \$19.23 - \$26.44 per hour).

Exhibit 4. Online advertised salaries occupations related to healthcare coding, IE/D Region, Aug 2023 – Jul 2024



Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the occupations related to healthcare coding over the last 12 months. Assessing the top advertised job titles may provide insight into the types of positions sought by employers.

Exhibit 5. Job titles most frequently used in job ads, IE/D Region, Aug 2023 – Jul 2024

Job Title	Unique Postings
Dental Receptionists	153
Medical Receptionists	146
Unit Secretaries	117
Medical Billers	80
Billing Clerks	67
Billing Specialists	64
Medical Front Desk Receptionists	63
Surgery Schedulers	48
Medical Billing Specialists	46
Front Desk Receptionists	38

SOURCE: LIGHTCAST 2024.2

Exhibit 6 displays the employers posting the most job ads for this occupational group during the last 12 months. Showing employer names can provide insight into where students may find employment after completing a program and may inform job development and other employer engagement targets for faculty and staff involved in related programs. Loma Linda University Health and RadNet had the highest unique job posts for this occupational group in the last 12 months. Posting intensity is the ratio of total job posts to unique job posts which are deduplicated. A higher posting intensity can represent the level of effort and activity the organization is putting into hiring for that position. The following report comes directly from Lightcast's Job Posting Analytics dashboard.

**Exhibit 6. Employers posting the most job ads,
IE/D Region, Aug 2023 – Jul 2024**

Company	Total/Unique (Aug 2023 - Jul 2024)	Posting Intensity	Median Posting Duration
Loma Linda University Health	347 / 65	5 : 1	19 days
RadNet	196 / 44	4 : 1	18 days
Prime Healthcare Services	145 / 39	4 : 1	23 days
County Of Riverside	131 / 39	3 : 1	35 days
Simply Biotech	87 / 37	2 : 1	20 days
Eisenhower Health	76 / 35	2 : 1	18 days
Desert Regional Medical Center	96 / 27	4 : 1	27 days
West Coast Dental Services	100 / 22	5 : 1	13 days
Rancho Health Mso	86 / 19	5 : 1	31 days
Kaiser Permanente	88 / 18	5 : 1	20 days

SOURCE: LIGHTCAST 2024.2

Exhibit 7 displays the top common, specialized and computer skills that were included in the job postings over the last 12 months. Today’s demand is an important indicator of which skills employers are looking for in the current market. Analyzing skills from a historical perspective as well as projecting the future needs of employers may provide insight into how the job posting skills demand compares to the market as a whole. Rapidly growing skills are those that are increasing in demand at a faster rate than the market as a whole.⁵

⁵ “What are Lightcast Skill Projects”, Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

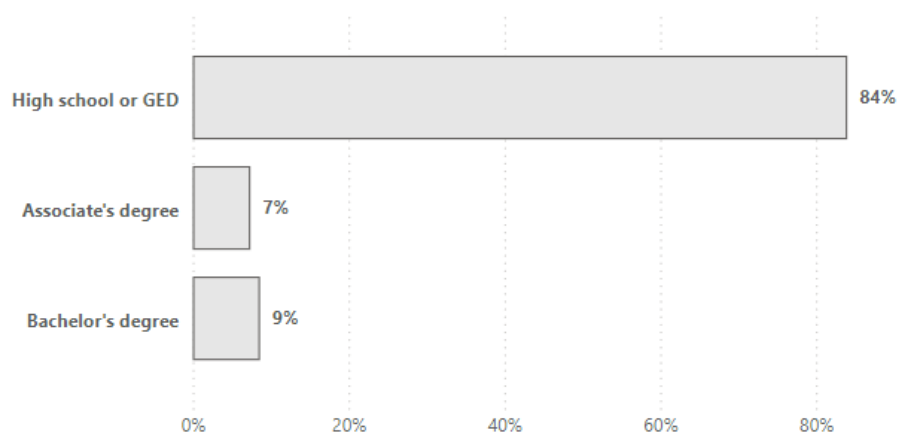
Exhibit 7. Top 10 in-demand skills from employer job ads, IE/D Region, Aug 2023 – Jul 2024

Common skills	Total Postings	Skill Growth Relative to Market
Communication	782	Lagging
Customer Service	634	Stable
Detail Oriented	574	Stable
Multitasking	438	Growing
Management	341	Stable
Organizational Skills	294	Growing
Scheduling	289	Growing
Clerical Works	279	Growing
Collections	269	Growing
Interpersonal Communications	234	Growing
Specialized skills	Total Postings	Skill Growth Relative to Market
Billing	765	Rapidly Growing
Medical Records	493	Growing
Medical Terminology	466	Growing
Medical Billing	278	Lagging
Front Office	276	Growing
Electronic Medical Record	252	Growing
ICD Coding (ICD-9/ICD-10)	215	Stable
Data Entry	209	Lagging
Invoicing	209	Growing
Setting Appointments	206	Growing
Computer Skills	Total Postings	Skill Growth Relative to Market
Microsoft Excel	217	Growing
Microsoft Office	178	Growing
Microsoft Outlook	123	Rapidly Growing
Microsoft PowerPoint	76	Rapidly Growing
Dentrix	67	Stable
Epic EMR	63	Growing
Spreadsheets	53	Rapidly Growing
Microsoft Word	45	Stable
QuickBooks (Accounting Software)	38	Growing
Open Dental	36	Lagging

SOURCE: LIGHTCAST 2024.2

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with high school diploma or equivalent (84%) significantly greater than associate degree (7%) or bachelor's degree (9%)

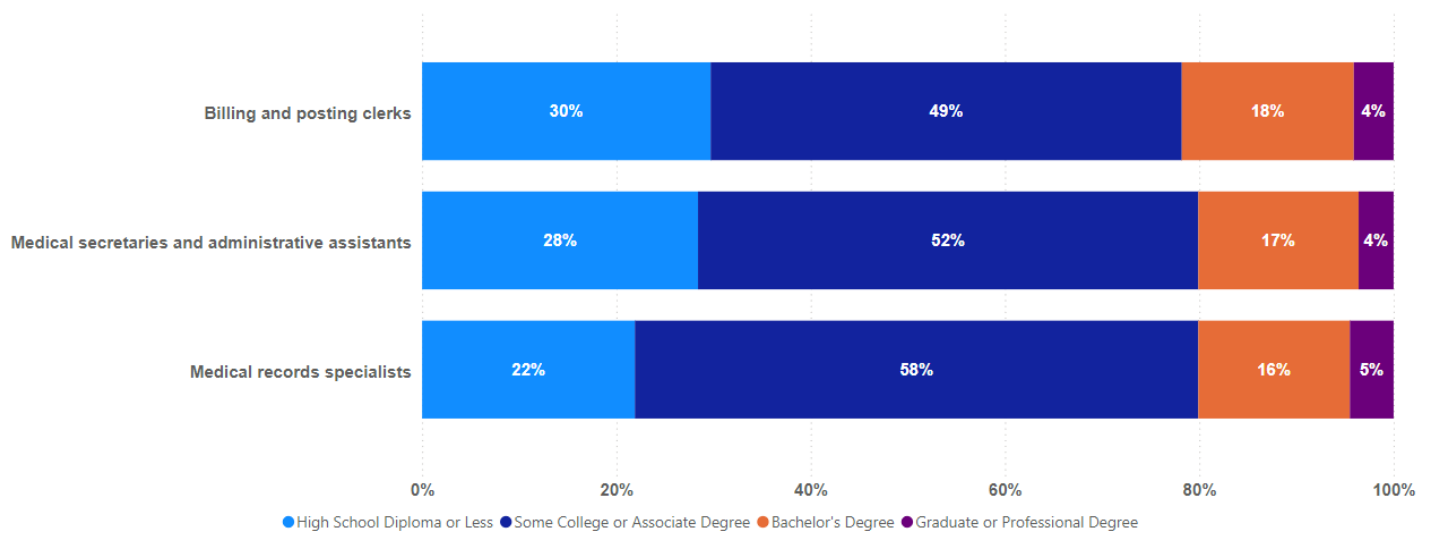
Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, Aug 2023 – Jul 2024



SOURCE: LIGHTCAST 2024.2

For the middle-skill occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 49% and 58% of workers have completed some college or an associate degree as their highest level of education.

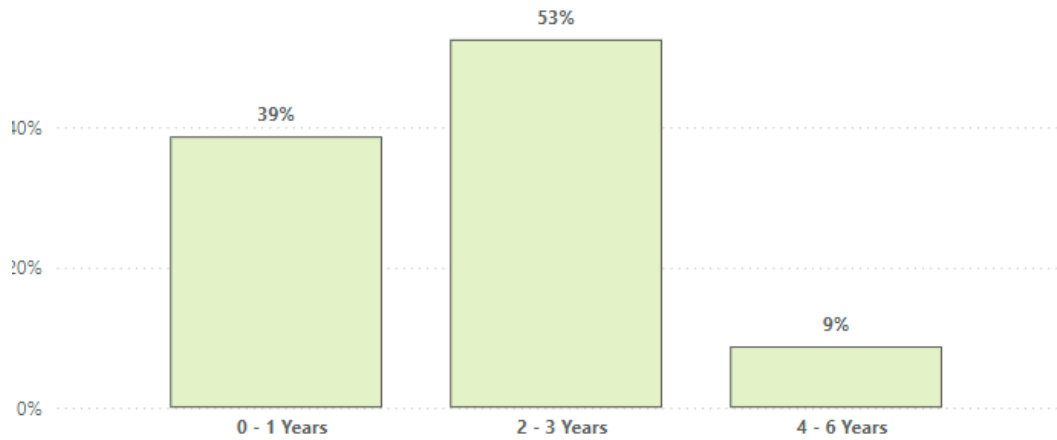
Exhibit 9 National-level Education Attainment for Occupations



SOURCE: BLS 2021

Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The majority (53%) of employers listing minimum experience requirements sought candidates with 2-3 years of previous work experience.

**Exhibit 10 Work experience requirements,
IE/D Region, Aug 2023 – Jul 2024**



SOURCE: LIGHTCAST 2024.2

Student Completions and Program Outcomes

Exhibit 11 displays student completions for the Health Information Coding (TOP 1223.10) programs over the last three academic years (2020-2023). In the previous three academic years, one regional community college issued an average of 18 awards in relevant programs.

Exhibit 11 Annual average community college awards for Health Information Coding (TOP 1223.10)

Top Code	Program	College	2020-2021 Awards	2021-2022 Awards	2022-2023 Awards	3-Year Award Average
1223.10	Health Information Coding	San Bernardino	12	10	31	18

SOURCE: MIS DATA MART

Non-Community College Supply

Award completion data is available for Medical Insurance Coding Specialist/Coder (CIP 51.0713), Medical Insurance Specialist/Medical Biller (CIP 51.0713) in the IE/D for non-community college programs.

In the previous three academic years, seven regional non-community colleges institutions issued an average of 176 awards in relevant programs.

CIP	Program	College	2019-2020 Awards	2020-2021 Awards	2021-2022 Awards	3-Year Award Average
51.0713	Medical Insurance Coding Specialist/Coder	American Career College-Ontario	72	87	66	75
51.0713	Medical Insurance Coding Specialist/Coder	California Technical Academy	0	0	0	0
51.0713	Medical Insurance Coding Specialist/Coder	Loma Linda University	14	0	0	5
51.0713	Medical Insurance Coding Specialist/Coder	UEI College-Riverside	35	38	44	39
51.0714	Medical Insurance Specialist/Medical Biller	American College of Healthcare and Technology	19	23	0	14
51.0714	Medical Insurance Specialist/Medical Biller	Concorde Career College-San Bernardino	16	31	14	20
51.0714	Medical Insurance Specialist/Medical Biller	North-West College-Riverside	23	18	29	23
Total			179	197	153	176

SOURCE: IPEDS

Strong Workforce Program Outcomes

California program outcome data may provide useful 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.

Exhibit 12 Health Information Coding strong workforce program outcomes, IE/D, most recent academic year

Program metric title	Inland Empire/Desert	Statewide
Attained a living wage (completers and skills-builders)		54%
Completed 9+ career education units in one year	35%	55%
Job closely related to the field of study		81%
Median annual earnings (all exiters)		\$39,364
Students who attained a noncredit workforce milestone in a year		79%
Students who earned a degree, certificate, or attained apprenticeship	12	123
Unduplicated count of enrolled students	52	685

SOURCE: LAUNCHBOARD

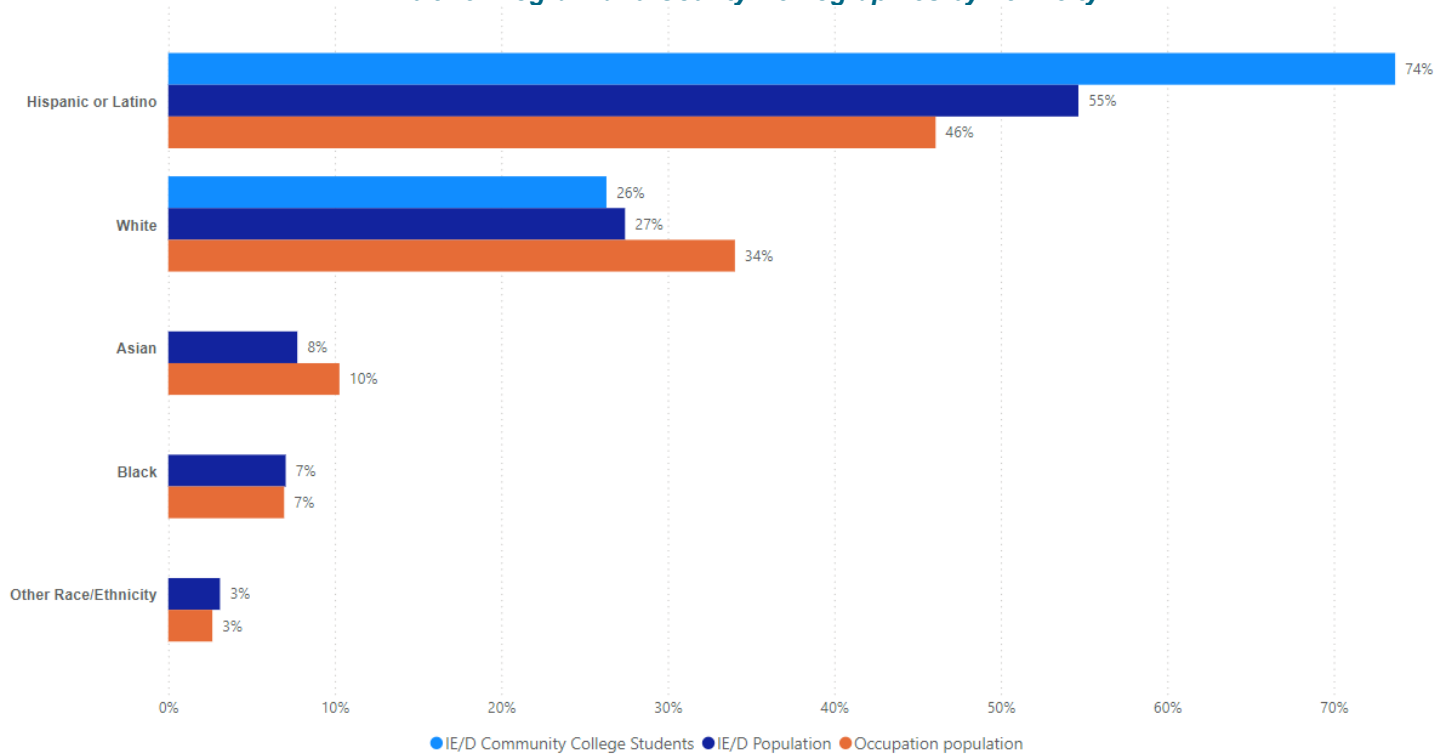
Building an Inclusive Economy

This section examines demographic data for IE/D community college students in Health Information Coding programs compared to the IE/D population. We also include demographics for related occupation data for the three occupations related to healthcare coding. This analysis can be used to:

- Understand the community college system’s current or potential role supporting a diverse talent pipeline into the occupations of interest.
- Inform students (and the faculty and staff working with them) the extent to which individuals from similar demographic groups are over or underrepresented in the professions related to their field of study.
- Inform employers of the diverse talent pipeline coming from the community college system for the occupations analyzed.

Notably, 74% of students enrolled in Health Information Coding programs are Hispanic/Latino, which is significantly higher than Hispanic/Latino workers in occupations related to healthcare coding in the IE/D region (46%). Additionally, 34% of the IE/D population that are employed in occupations related to healthcare coding are White, which is higher than both IE/D community college students (26%) and IE/D population (27%). Though 10% of the workers employed in occupations related to healthcare coding are Asian, only 8% of the IE/D population and (<1%) of students in Health Information Coding are Asian.

Exhibit 13 Program and County Demographics by Ethnicity



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

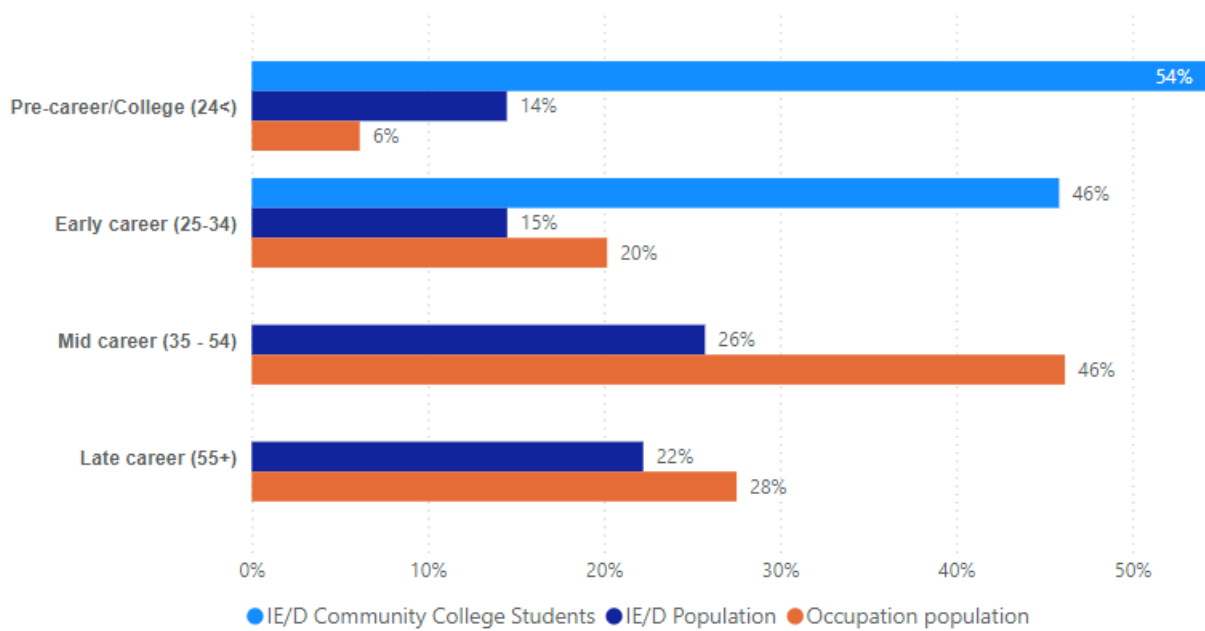
Most IE/D professionals in healthcare coding occupations are Hispanic/Latino or White (80%), “mid-career” or “late career” age category (74%), and female (91%). Most community college students in related programs are Hispanic/Latino (74%), “pre-career/college” age category (54%), however gender data is unavailable for the most current year. Major takeaways:

- Community colleges are an important talent source for employers committed to greater racial/ethnic diversity, especially Hispanic/Latino professionals.
- Female community college students are vastly overrepresented in this program.

Exhibit 14 compares the age of IE/D community college students enrolled in Health Information Coding programs compared to the IE/D population.

The majority of students enrolled in Health Information Coding programs are in the “pre-career/college” category (54%) as compared to IE/D population (14%) and workforce (6%) in these three occupations related to healthcare coding. These programs are an important entry point for young healthcare coding professionals.

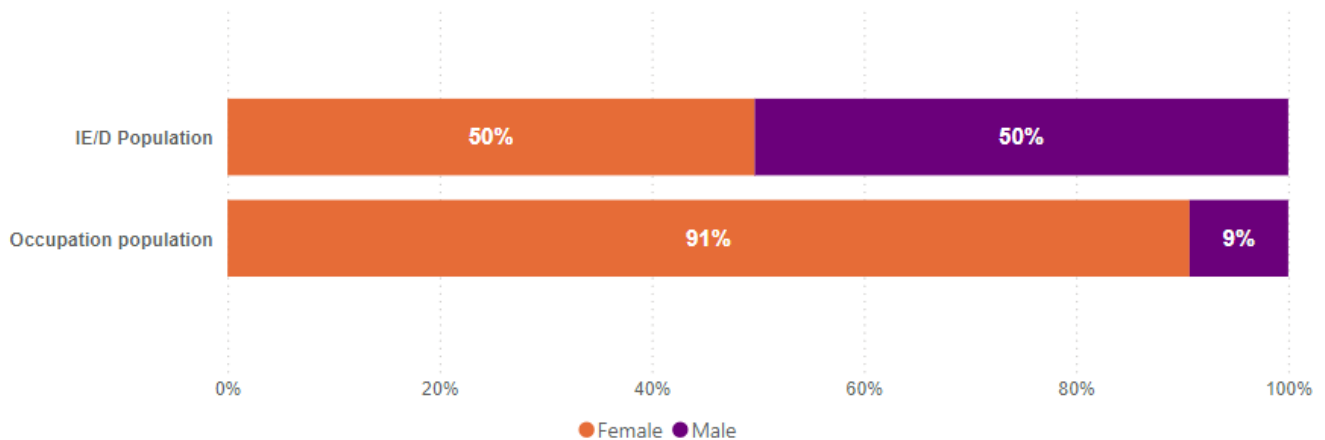
Exhibit 14 Program and County Demographics by Age



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

Exhibit 15 is intended to compare the gender of IE/D County community college students enrolled in Health Information Coding programs compared to the IE/D population, however the gender values were unavailable for the most current year. We also include demographics for related occupation data for the three occupations related to healthcare coding to identify potential diversity and equity issues addressable by community college programs.

Exhibit 15 Program and County Demographics by Gender



SOURCE: LIGHTCAST 2024.2 AND LAUNCHBOARD

Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2020 and 2023 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be 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 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 for each metric, please see the web link for LaunchBoard's Strong Workforce Program Metrics Data Element Dictionary in the References section (LaunchBoard, 2023a). 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, 2023a).

Appendix: References

Type of Data	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment. https://lightcast.io/
Living Wage	The living wage is derived from MITs Living Wage Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: https://livingwage.mit.edu/pages/methodology The living wage for one adult in San Bernardino County is \$25.17 per hour (\$52,353.60 annually). The living wage for one adult in Riverside County is \$26.30 per hour (\$54,704 annually). The average living wage to represent Inland Empire/Desert is \$25.74 per hour (53,539.20 annually)
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. 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 BLS publishes projections data. For more information, see https://www.bls.gov/emp/documentation/education/tech.htm
Educational Supply	The CCCCO Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
Student Metrics and Demographics	LaunchBoard, a statewide data system supported by the California Community Colleges Chancellor's Office and hosted by Cal-PASS Plus, provides data on progress, success, employment, and earnings outcomes for California community college students. For more information, see: https://www.calpassplus.org/LaunchBoard/Home.aspx