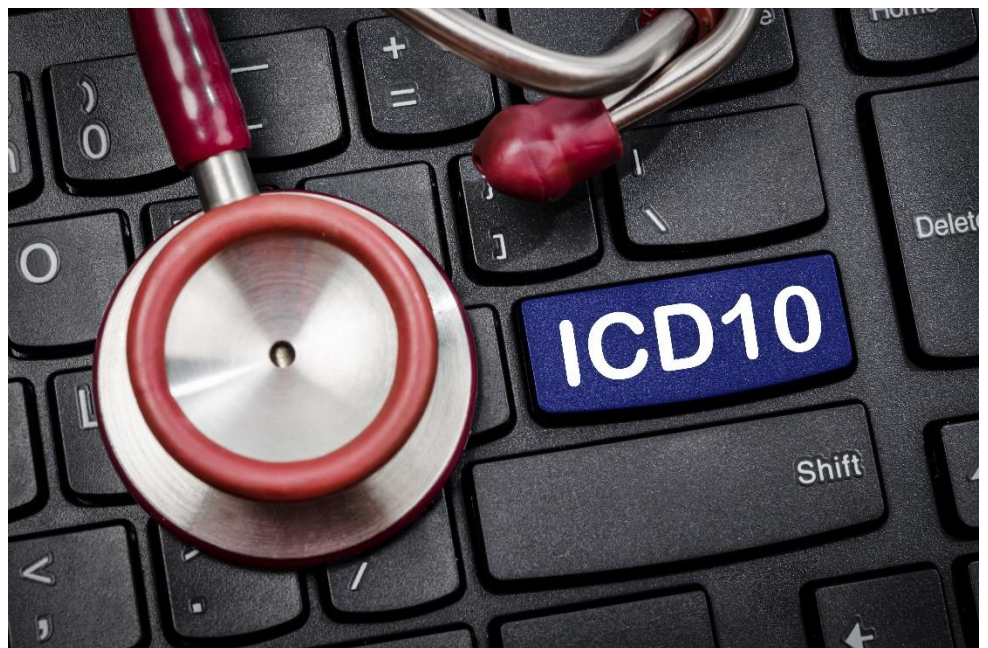


June 2020

# Labor Market Analysis

## Medical Coding



Prepared by the Central Valley/Mother Lode Center of Excellence

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**COVID-19 Statement:** This report includes employment projection data by EMSI. EMSI’s projections are modeled on recorded (historical) employment figures and incorporate several underlying assumptions, including the assumption that the economy during the projection period will be at approximately full employment or potential output. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, they may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and occupational employment. Other measures such as unemployment rates and monthly industry employment estimates will reflect the most recent information on employment and jobs in the state and, in combination with input from local employers, may help validate current and future employment needs as depicted here.

*If for any reason this document is not accessible or if you have specific needs for readability, please contact us and we will do our utmost to accommodate you with a modified version. To make a request, contact Nora Seronello by phone at (209) 575-6894 or by email [seronellon@mjc.edu](mailto:seronellon@mjc.edu).*

# Summary

Please note the COVID-19 statement on page 2 when considering this report's findings.

This study conducted by the Central Valley/Mother Lode Center of Excellence examines labor market demand, wages, skills, and postsecondary supply for medical coding. Three occupations related to medical coding were identified for Cerro Coso:

- 43-6013, Medical Secretaries
- 29-2071, Medical Records and Health Information Technicians
- 31-9094, Medical Transcriptionists

## Key findings:

- **Occupational demand** — Nearly 5,900 workers were employed in jobs related to medical coding in 2019 in the South Central Valley/Southern Mother Lode (SCV/SML) subregion. The largest occupation is medical secretaries with 4,236 workers in 2019, a projected growth rate of 11% over the next five years, and 587 annual openings.
- **Wages** — Of the three occupations, medical records and health information technicians earn the highest entry-level wages, \$15.15/hour in the subregion and \$15.91/hour in the region.
- **Employers** — Employers with the most job postings in the subregion are Adventist Health, and Dignity Health, Covenant Health.
- **Occupational titles** — The most common occupational title in job postings in the subregion is medical records and health information technicians. The most common job title is medical receptionist.
- **Skills and certifications** — The top baseline skill is communication, the top specialized skill is customer billing, and the top software skill is Microsoft Excel. The most in-demand certification is a driver's license.
- **Education** — A postsecondary nondegree award is typically required for medical records and health information technicians, and medical transcriptionists. A high school diploma is typically required for medical secretaries.
- **Supply** — Analysis of postsecondary completions in the region shows that on average 380 awards were conferred in the Central Valley/Mother Lode region each year.

Based on a comparison of occupational demand and supply, there is an undersupply of 483 trained workers in the subregion and 833 workers in the region. The Center of Excellence recommends that Cerro Coso work with the regional director, the college's advisory board, and local industry in the expansion or development of programs to address the shortage of medical coding workers in the region.

Additionally, the Regional Director of Healthcare provided the following statement:

*As little as 10 years ago, lots of folks in healthcare were performing insurance billing and coding services: Medical Assistants, Medical Secretaries, and Medical Records personnel. Today, healthcare providers want to hire someone who has the skill and knowledge to code for the highest reimbursement possible in an ever-changing complex healthcare system. Therefore, industry recognized certifications as offered by the nation organization The American Health Information Management Association (AHIMA) is now the gold standard.*

*Many larger employers require experience in Health Information Management with training specifically in CPT/ICD- 10 coding. AHIMA has a host of career pathway coding certification examinations, each with different academic and coding experiences required. They are as follows: Certified Coding Associate (CCA), Certified Coding Specialist – Physician-based (CCS-P), Certified Coding Specialist (CCS) and many more. In order for a student to sit for one of these examinations, they must attend an AHIMA accredited program or obtain at least two years of coding experience in the workforce before sitting for exam.*

*Fresno City College had the first program for both coding and Health Information Management in the region. However, they have struggled to recruit students into the program and now that the lead faculty will be retiring, and 3 failed faculty searches later the program will be closing soon.*

*Bakersfield College has a newer program in Health Information Technology (AS Degree) which does include medical coding ICD-10 and CPT coding courses. Now that so many classes are available online, I believe it would be feasible for Cerro Coso to work with Bakersfield College to offer many of the HIM Coding Specialist course to their students as distance education.*

*There are of course, other options that may meet the needs of local employers in the Ridgecrest area. Many employers are now looking for an employee who can function in a variety of roles. Training students to become Medical Assistants with skills in both front and back office with medical coding courses added to the curriculum would make an excellent employee.*

*I would also like to suggest that reaching out to local employers is key to either the development of a new program and/or making critical changes to a current program. I am happy to assist with this outreach and to work with college faculty, staff and administrators to help create a program that moves students into available jobs. I can be reached via email ([valerief@cos.edu](mailto:valerief@cos.edu)) or phone (559) 707-0304.*

*Valerie Fisher, M.A., RN  
Central/Mother Lode Regional Director  
Health Workforce Initiative*

# Introduction

The Central Valley/Mother Lode Center of Excellence was asked by Cerro Coso to provide labor market information for medical coding. Review of the Taxonomy of Programs (TOP) and Classification of Instructional Programs (CIP) found the following programs are appropriate for this analysis:

- TOP 122310 - Health Information Coding
- CIP 51.0713 - Medical Insurance Coding Specialist/Coder
- CIP 51.0716 - Medical Administrative/Executive Assistant and Medical Secretary

The geographical focus for this report is the South Central Valley/Southern Mother Lode (SCV/SML) subregion, but regional demand and supply data has been included for broader applicability and use. The average living wage for a single adult in the South Central Valley/Southern Mother Lode (SCV/SML) subregion is \$10.30/hour.<sup>1</sup> Analysis of the program and occupational data related to medical coding resulted in the identification of applicable occupations. The Standard Occupational Classification (SOC) System codes and titles used in this report are:

- 43-6013, Medical Secretaries
- 29-2071, Medical Records and Health Information Technicians
- 31-9094, Medical Transcriptionists

The occupational titles, job descriptions, sample job titles, and knowledge and skills from the Bureau of Labor Statistics and O\*NET OnLine are shown below.

## **Medical Secretaries**

**Job Description:** Perform secretarial duties using specific knowledge of medical terminology and hospital, clinic, or laboratory procedures. Duties may include scheduling appointments, billing patients, and compiling and recording medical charts, reports, and correspondence.

**Knowledge:** Customer and Personal Service, English Language, Clerical, Computers and Electronics, Administration and Management

**Skills:** Speaking, Active Listening, Service Orientation, Reading Comprehension, Coordination

## **Medical Records and Health Information Technicians**

**Job Description:** Compile, process, and maintain medical records of hospital and clinic patients in a manner consistent with medical, administrative, ethical, legal, and regulatory requirements of the health care system. Process, maintain, compile, and report patient information for health requirements and standards in a manner consistent with the healthcare industry's numerical coding system.

**Knowledge:** Clerical, English Language, Computers and Electronics, Customer and Personal Service

**Skills:** Reading Comprehension, Critical Thinking, Speaking, Writing

## **Medical Transcriptionists**

**Job Description:** Transcribe medical reports recorded by physicians and other healthcare practitioners using various electronic devices, covering office visits, emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries. Transcribe dictated

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<sup>1</sup> The term "living wage" in Center of Excellence reports is calculated by averaging the self-sufficiency wages from the Insight Center's California Family Needs Calculator for each county in the subregion: <https://insightccd.org/tools-metrics/self-sufficiency-standard-tool-for-california/>.

reports and translate abbreviations into fully understandable form. Edit as necessary and return reports in either printed or electronic form for review and signature, or correction.

**Knowledge:** Clerical, English Language, Computers and Electronics, Medicine and Dentistry

**Skills:** Active Listening, Reading Comprehension, Writing, Time Management, Critical Thinking

## Occupational Demand

The South Central Valley/Southern Mother Lode subregion employed 5,869 workers in medical coding occupations in 2019 (Exhibit 1). The largest occupation is medical secretaries with 4,236 workers in 2019. This occupation is projected to grow by 11% over the next five years and has the greatest number of projected annual openings, 587.

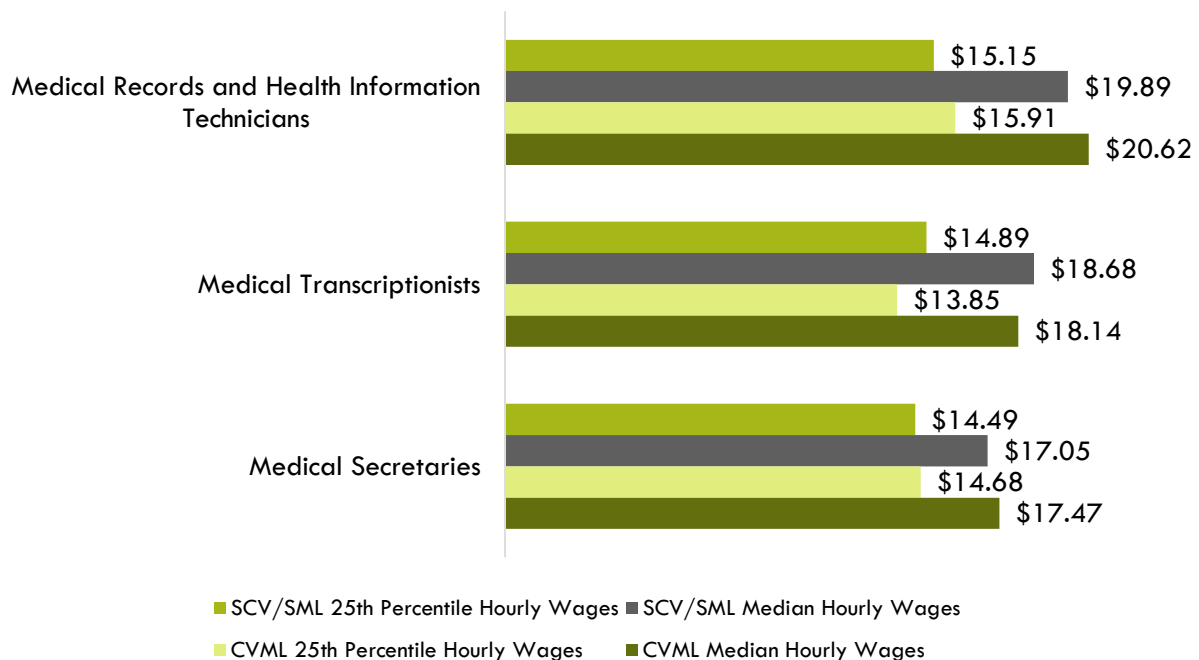
**Exhibit 1. Medical coding employment and occupational projections in the SCV/SML subregion**

Occupation	2019 Jobs	2024 Jobs	5-Year Change	5-Year % Change	Annual Openings
Medical Secretaries	4,236	4,682	446	11%	587
Medical Records and Health Information Technicians	1,283	1,396	113	9%	108
Medical Transcriptionists	350	355	5	1%	52
<b>Total</b>	<b>5,869</b>	<b>6,432</b>	<b>563</b>	<b>10%</b>	<b>748</b>

## Wages

Exhibit 2 compares the entry-level and experienced wages of the medical coding occupations. Medical records and health information technicians earn the highest entry-level wages, \$15.15/hour in the subregion and \$15.91/hour in the region.

**Exhibit 2. Entry-level and experienced wage comparison in the SCV/SML subregion and region**



# Job Postings

There were 1,084 job postings for the three occupations in the SCV/SML subregion from December 2019 to May 2020. The employers with the most job postings are listed in Exhibit 3.

## Exhibit 3. Top employers of medical coding by number of job postings

Employer	Job Postings	% of Job Postings
Adventist Health	28	4%
Dignity Health	23	3%
Covenant Health	20	3%
Community Medical Centers Incorporated	18	2%
Valley Children's Healthcare	17	2%
Nomad Health	13	2%
Kaweah Delta Health Care Dst	12	2%
Community Regional Medical	10	1%
Wellpath	10	1%
Anthem Blue Cross	9	1%

Exhibit 4 shows how job postings for the targeted occupations in the SCV/SML subregion are distributed across three O\*NET OnLine occupations. The occupational title medical records and health information technicians is listed in 596 job postings. Common job titles in postings include medical receptionist, 156 job postings, medical biller, 74 job postings, and medical billing specialist, 57 job postings.

## Exhibit 4. Top occupational titles in job postings for medical coding

Occupational Title	Job Postings	% of Job Postings
Medical Records and Health Information Technicians	596	55%
Medical Secretaries	484	45%
Medical Transcriptionists	4	0%

## Salaries

Exhibit 5 shows the “Market Salaries” for medical coding occupations that are calculated by Burning Glass which uses a machine learning model built off of millions of job postings every year, and accounts for adjustments based on locations, industry, skills, experience, education requirements, among other variables.

## Exhibit 5. Salaries for medical coding

Market Salary Percentile	Salary Amount
10th Percentile	\$26,109
25th Percentile	\$28,468
50th Percentile	\$31,638
75th Percentile	\$38,933
90th Percentile	\$61,168

## Education

Of the 1,084 job postings, 604 listed an education level preferred for the positions being filled. Of those, 81% requested high school or vocational training, and 21% requested an associate degree (Exhibit 6).

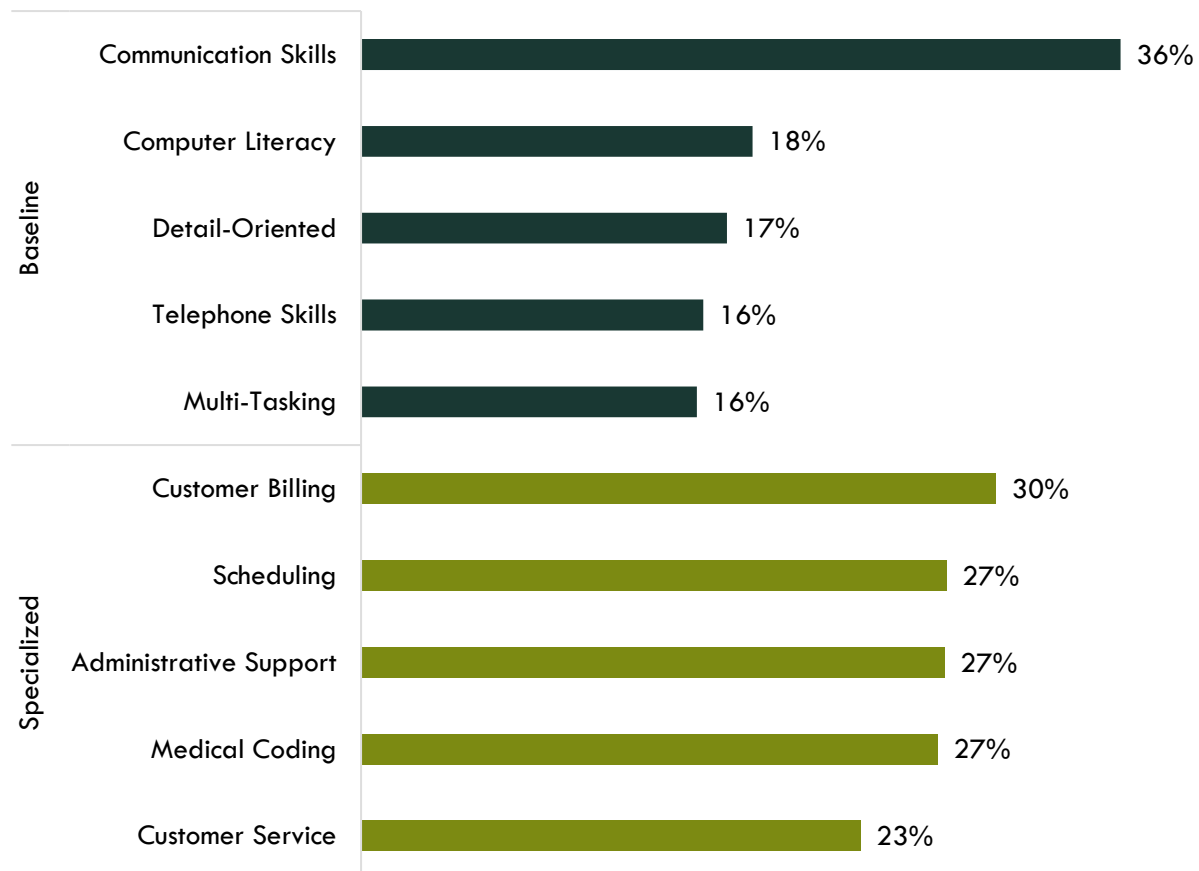
### Exhibit 6. Education levels requested in job postings for medical coding

Education level	% of Job Postings
High school or vocational training	81%
Associate degree	21%
Bachelor's degree	18%
Master's degree	1%
Doctoral degree	0%

## Baseline and Specialized Skills

Exhibit 7 depicts the top baseline and specialized skills for the targeted occupations. The three most important baseline skills are communication, 36% of job postings, computer literacy, 18%, and detail-oriented, 17%. The top three specialized skills are customer billing, 30% of job postings, scheduling, 27%, and administrative support, 27%.

### Exhibit 7. In-demand medical coding baseline and specialized skills

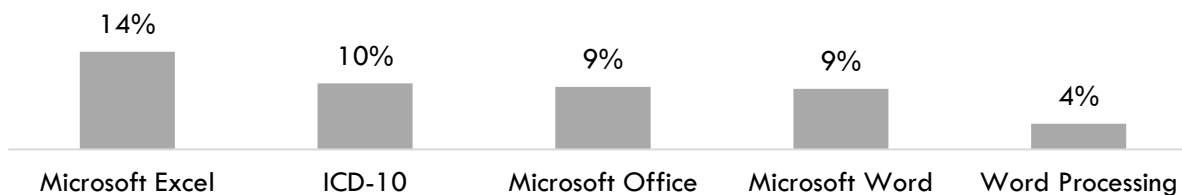




### Software Skills

Analysis also included the software skills most in demand by employers. Microsoft Excel and ICD-10 rank first and second (Exhibit 8).

**Exhibit 8. In-demand medical coding software skills**



### Certifications

Of the 1,084 job postings, 335 contained certification data. Of those, 26% indicated a need for a driver's license. The next top certifications are Certified Professional Coder and Registered Nurse (Exhibit 9). (Due to the low number of job postings with certifications listed, the chart below may not be representative of the full sample.)

**Exhibit 9. Top medical coding certifications requested in job postings**



## Education, Work Experience & Training

A postsecondary nondegree award is typically required for medical records and health information technicians, and medical transcriptionists (Exhibit 10). A high school diploma is typically required for medical secretaries.

**Exhibit 10. Education, work experience, training, and Current Population Survey results for medical coding occupations<sup>2</sup>**

Occupation	Typical Entry-level Education	Work Experience Required	Typical On-The-Job Training	CPS
Medical Records and Health Information Technicians	Postsecondary nondegree award	None	None	56.6%
Medical Transcriptionists	Postsecondary nondegree award	None	None	57.1%
Medical Secretaries	High school diploma or equivalent	None	Moderate-term	46.7%

<sup>2</sup> "Labor Force Statistics from the Current Population Survey," Bureau of Labor Statistics, <https://www.bls.gov/cps/>.

# Supply

Analysis of program data from the California Community Colleges Chancellor's Office Data Mart included the TOP and CIP codes: TOP 122310 - Health Information Coding; CIP 51.0713 - Medical Insurance Coding Specialist/Coder; CIP 51.0716 - Medical Administrative/Executive Assistant and Medical Secretary. Analysis of the last three years of TOP code data shows that, on average, 380 awards were conferred in the Central Valley/Mother Lode region each year (Exhibit 11).

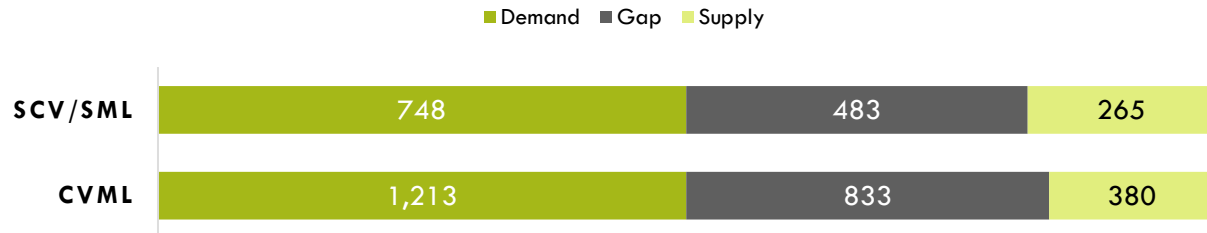
**Exhibit 11. Postsecondary supply for medical coding occupations in the region**

TOP Title-Code	College	Associate Degree	Award <1 academic year	Award 1<2 academic years	Certificate 18<30 units	Subtotal
122310 - Health Information Coding	Fresno City				6	6
	Institute of Technology			6		6
	San Joaquin Valley College-Visalia	7		29		36
51.0713 - Medical Insurance Coding Specialist/Coder	UEI College-Bakersfield			89		89
	UEI College-Fresno			70		70
	United Education Institute-UEI College Stockton			0		0
	Carrington College-Stockton			27		27
51.0716 - Medical Administrative/Executive Assistant and Medical Secretary	Computer Tutor Business and Technical Institute		47			47
	Milan Institute-Merced		25			25
	Milan Institute-Visalia		57			57
	MTI Business College Inc			15		15
<b>Total</b>		<b>7</b>	<b>129</b>	<b>237</b>	<b>6</b>	<b>380</b>

## Gap Analysis

There is an undersupply of 483 medical coding workers in the SCV/SML subregion and 833 workers in the region (Exhibit 12).

**Exhibit 12. Medical coding workforce annual demand and supply in the SCV/SML subregion and region**



## Student Outcomes

Exhibit 13 summarizes employment and wage outcomes from the California Community College Chancellor's Cal-PASS Plus LaunchBoard for the TOP and CIP codes related to medical coding. Across the region, 84 medical office technology students received a degree/certificate or attained apprenticeship journey status, and 11 students transferred. A median change in earnings was reported by 26%, and 55% attained a living wage.

**Exhibit 13. Regional metrics for the TOP code related to medical coding**

Metric	Medical Office Technology 051420
Students Who Got a Degree or Certificate or Attained Apprenticeship Journey Status	84
Number of Students Who Transferred	11
Job Closely Related to Field of Study	75%
Median Change in Earnings	26%
Attained a Living Wage	55%
* denotes data not available.	

## Conclusion

The entry-level wages of the three occupations exceed the SCV/SML subregion's average living wage. There were 1,084 job postings in the past six months for occupations related to medical coding in the subregion. Analysis of skills and certification requirements in job postings indicates:

- The top baseline skill is communication, and the top specialized skill is customer billing.
- The top software skill is Microsoft Excel.
- The top certification is a driver's license.

There is an undersupply of trained workers, a shortage of 483 in the SCV/SML subregion and 833 in the region.

# Recommendation

Based on these findings, it is recommended that Cerro Coso work with the regional director, the college's advisory board, and local industry in the expansion or development of programs to address the shortage of medical coding in the region.

Additionally, the Regional Director of Healthcare provided the following statement:

*As little as 10 years ago, lots of folks in healthcare were performing insurance billing and coding services: Medical Assistants, Medical Secretaries, and Medical Records personnel. Today, healthcare providers want to hire someone who has the skill and knowledge to code for the highest reimbursement possible in an ever-changing complex healthcare system. Therefore, industry recognized certifications as offered by the nation organization The American Health Information Management Association (AHIMA) is now the gold standard.*

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*Valerie Fisher, M.A., RN  
Central/Mother Lode Regional Director  
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# Appendix A: Methodology & Data Sources

## Data Sources

Labor market and educational supply data compiled in this report derive from a variety of sources. Data were drawn from external sources, including the Economic Modeling Specialists, Inc., the California Community Colleges Chancellor’s Office Management Information Systems Data Mart and the National Center for Educational Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Below is the summary of the data sources found in this study.

Data Type	Source
Labor Market Information/Population Estimates and Projections/Educational Attainment	Economic Modeling Specialists, Intl. (EMSI). EMSI occupational employment data are based on final EMSI industry data and final EMSI staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates also affected by county-level EMSI earnings by industry: <a href="http://economicmodeling.com">economicmodeling.com</a> .
Typical Education Level and On-the-job Training	Bureau of Labor Statistics (BLS) uses a system to assign categories for entry-level education and typical on-the-job training to each occupation for which BLS publishes projections data: <a href="https://www.bls.gov/emp/tables/educational-attainment.htm">https://www.bls.gov/emp/tables/educational-attainment.htm</a> .
Labor Force, Employment and Unemployment Estimates	California Employment Development Department, Labor Market Information Division: <a href="http://labormarketinfo.edd.ca.gov">labormarketinfo.edd.ca.gov</a> .
Job Posting and Skills Data	Burning Glass: <a href="http://burning-glass.com/">burning-glass.com/</a> .
Additional Education Requirements/ Employer Preferences	The O*NET Job Zone database includes over 900 occupations as well as information on skills, abilities, knowledge, work activities and interests associated with specific occupations: <a href="http://onetonline.org">onetonline.org</a> .

## Key Terms and Concepts

**Annual Job Openings:** Annual openings are calculated by dividing the number of years in the projection period by total job openings.

**Education Attainment Level:** The highest education attainment level of workers age 25 years or older.

**Employment Estimate:** The total number of workers currently employed.

**Employment Projections:** Projections of employment are calculated by a proprietary Economic Modeling Specialists, Intl. (EMSI) formula that includes historical employment and economic indicators along with national, state and local trends.

**Living Wage:** The cost of living in a specific community or region for one adult and no children. The cost increases with the addition of children.

**Occupation:** An occupation is a grouping of job titles that have a similar set of activities or tasks that employees perform.

**Percent Change:** Rate of growth or decline in the occupation for the projected period; this does not factor in replacement openings.

**Replacements:** Estimate of job openings resulting from workers retiring or otherwise permanently leaving an occupation. Workers entering an occupation often need training. These replacement needs, added to job openings due to growth, may be used to assess the minimum number of workers who will need to be trained for an occupation.

**Total Job Openings (New + Replacements):** Sum of projected growth (new jobs) and replacement needs. When an occupation is expected to lose jobs, or retain the current employment level, number of openings will equal replacements.

**Typical Education Requirement:** represents the typical education level most workers need to enter an occupation.

**Typical On-The-Job Training:** indicates the typical on-the-job training needed to attain competency in the skills needed in the occupation.