

## Labor Market Analysis: 1223.00 – Health Information Technology *Health Information Management (Bachelor's Degree)* Los Angeles Center of Excellence, September 2022

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### Summary

The Los Angeles Center of Excellence for Labor Market Research (LA COE) prepared this report to provide regional labor market supply and demand data related to two standard occupations and one emerging occupation:

- **Medical and Health Services Managers (11-9111):** Plan, direct, or coordinate medical and health services in hospitals, clinics, managed care organizations, public health agencies, or similar organizations.<sup>1</sup>
- **Computer Systems Analysts (15-1211):** Analyze science, engineering, business, and other data processing problems to develop and implement solutions to complex applications problems, system administration issues, or network concerns. Perform systems management and integration functions, improve existing computer systems, and review computer system capabilities, workflow, and schedule limitations. May analyze or recommend commercially available software.<sup>2</sup>

Emerging occupation:

- **Health Informatics Specialists (15-1211.01):** Apply knowledge of nursing and informatics to assist in the design, development, and ongoing modification of computerized health care systems. May educate staff and assist in problem solving to promote the implementation of the health care system.<sup>3</sup>

Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.<sup>4</sup> However, the occupations in this report are above middle-skill and typically require a bachelor's degree for employment. This report is intended to help determine whether there is demand in the local labor market that is not being met by the supply from community college programs as well as bachelor's degree programs that align with the relevant occupations, and if a baccalaureate program focused on health information management at an LA/OC community college is necessary to meet labor market demands.

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<sup>1</sup> [Medical and Health Services Managers \(bls.gov\)](https://www.bls.gov/occupations/11-9111)

<sup>2</sup> [Computer Systems Analysts \(bls.gov\)](https://www.bls.gov/occupations/15-1211)

<sup>3</sup> [15-1211.01 - Health Informatics Specialists \(onetonline.org\)](https://www.onetonline.org/occupations/15-1211.01)

<sup>4</sup> The COE classifies middle-skill jobs as the following:

- All occupations that require an educational requirement of some college, associate degree or apprenticeship;
- All occupations that require a bachelor's degree, but also have more than one-third of their existing labor force with an educational attainment of some college or associate degree; or
- All occupations that require a high school diploma or equivalent or no formal education, but also require short- to long-term on-the-job training where multiple community colleges have existing programs.

Based on the available data, there appears to be a supply gap for these health information management occupations in the region. Entry-level wages exceed the self-sufficiency standard wage in both Los Angeles and Orange counties, and the Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education. **Due to all of the criteria being met, the COE would endorse this community college program under the typical program recommendation process designed for subbaccalaureate awards.** However, since this report is for a proposed community college baccalaureate degree, this program requires a different process of approval than the regional program approval process. Additional details are provided below to address the unmet workforce need for this program and to aide in that decision-making process. Detailed reasons include:

#### **Demand:**

- **Supply Gap Criteria** – Over the next five years, **3,429 jobs** are projected to be available annually in the region due to new job growth and replacements, which is more than the three-year average of **1,102 awards** (623 bachelor's and 479 associate degrees and certificates) conferred by educational institutions in the region.
- **Living Wage Criteria** – Within Los Angeles County, both occupations have entry-level wages above the self-sufficiency standard hourly wage (\$18.10/hour).<sup>5</sup>
- **Educational Criteria** –The Bureau of Labor Statistics (BLS) lists a bachelor's degree as the typical entry-level education for the health information management occupations in this report.
  - National-level educational attainment data indicates between 31% and 48% of workers in the field have completed a bachelor's degree.

#### **Supply:**

- **Associate Degrees, Postsecondary Awards, and Certificates** - The occupations in this report are above middle-skill and typically require a bachelor's degree. Therefore, graduates of these programs would need further education and/or training to pursue employment in the health information management occupations in this report.
  - There are 4 community colleges in the greater LA/OC region that issue awards related to health information technology and administration, conferring an average of **441 awards annually** between 2018 and 2021.
  - Between 2017 and 2020, there was an average of **38 awards conferred annually** in related training programs by non-community college institutions throughout the greater LA/OC region.
- **Bachelor's Degrees** – Currently, there are no community colleges in the region that issue bachelor's degrees in health information management. The only existing community college bachelor's programs related to health information management are offered at San Diego Mesa and Shasta College.
  - There are 11 educational institutions in the LA/OC region that have conferred an average of **623 bachelor's degrees annually** in related training programs.

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<sup>5</sup> Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

## Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for the health information management occupations in this report. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to increase by 9% through 2026, yielding over 3,400 annual job openings through 2026.

**Exhibit 1: Occupational demand in Los Angeles and Orange Counties<sup>6</sup>**

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	26,478	28,818	2,340	9%	2,496
Orange	10,215	11,056	841	8%	933
<b>Total</b>	<b>36,693</b>	<b>39,873</b>	<b>3,181</b>	<b>9%</b>	<b>3,429</b>

## Wages

The labor market endorsement in this report considers the entry-level hourly wages for these health information management occupations in Los Angeles County as they relate to the county's self-sufficiency standard wage. Orange County wages are included below in order to provide a complete analysis of the greater LA/OC region. Detailed wage information, by county, is included in Appendix A.

**Los Angeles County**—Both occupations have entry-level wages above the self-sufficiency standard wage for one adult (\$18.10 in Los Angeles County). Typical entry-level hourly wages are in a range between \$35.05 and \$38.75, while experienced workers can expect to earn wages between \$65.20 and \$76.66.

**Exhibit 2: Hourly Earnings for Occupations in LA County**

Occupation	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)
Medical and Health Services Managers (11-9111)	\$35.05	\$52.70	\$76.66
Computer Systems Analysts (15-1211)	\$38.75	\$50.12	\$65.20

**Orange County**—Both occupations have entry-level wages above the self-sufficiency standard wage for one adult (\$20.63 in Orange County). Typical entry-level hourly wages are in a range between \$35.04 and \$37.62, while experienced workers can expect to earn wages between \$63.27 and \$76.66.

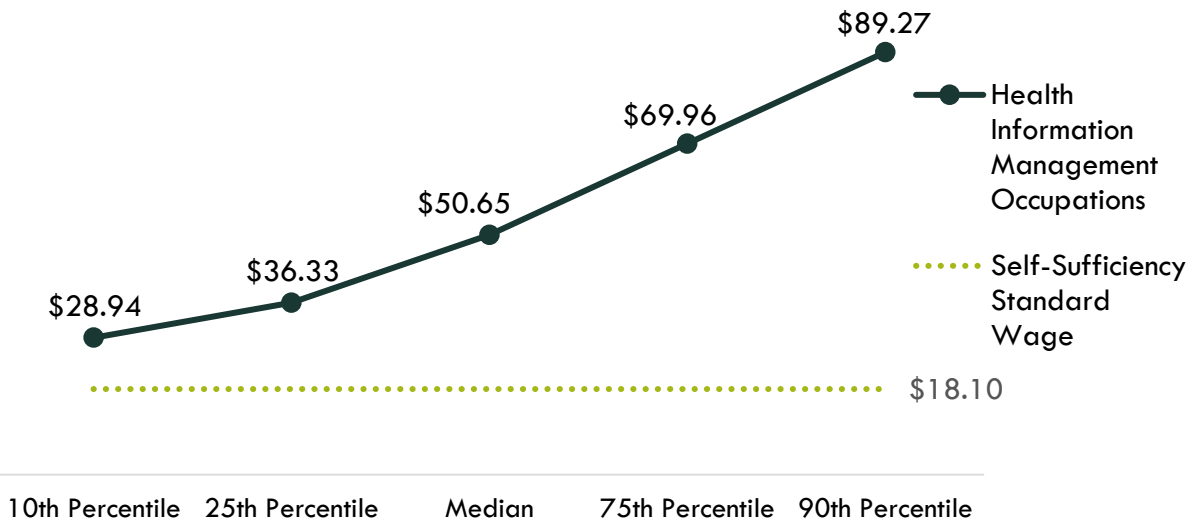
<sup>6</sup> Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

**Exhibit 3: Hourly Earnings for Occupations in Orange County**

Occupation	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)
Medical and Health Services Managers (11-9111)	\$35.04	\$52.67	\$76.66
Computer Systems Analysts (15-1211)	\$37.62	\$48.63	\$63.27

On average, the entry-level hourly earnings for the occupations in this report are \$36.33; this is above the living wage for one single adult in Los Angeles County (\$18.10). Exhibit 4 shows the average wage for the occupations in this report, from entry-level to experienced workers.

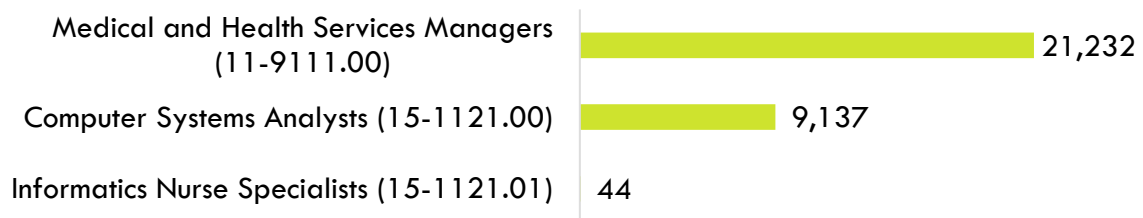
**Exhibit 4: Average Hourly Earnings for Health Information Management Occupations in LA/OC**



### Job Postings

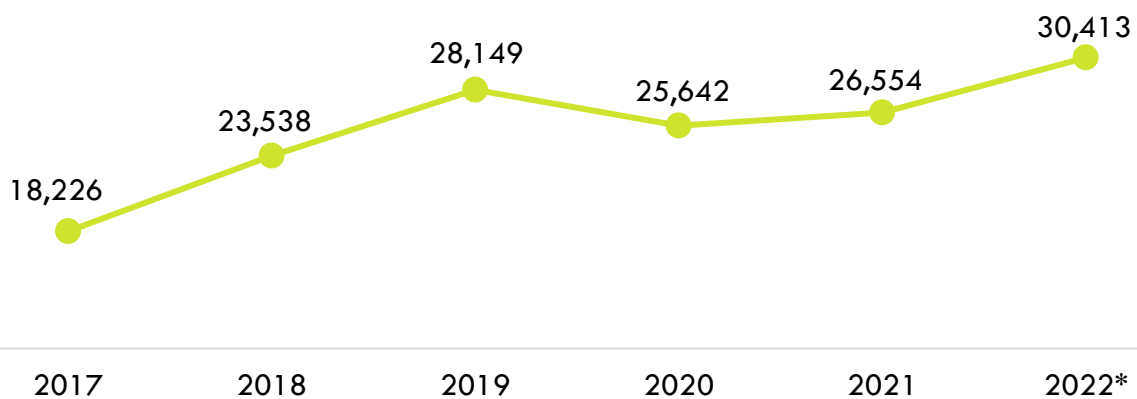
There were 30,413 online job postings related to health information management that requested a bachelor's degree listed in the past 12 months. Exhibit 5 displays the number of job postings by occupation. The majority of job postings (70%) were for *medical and health services managers*, followed by *computer systems analysts* (30%) and *informatics nurse specialists* (less than 1%). The highest number of job postings were for business systems analysts, directors of nursing, systems analysts, senior business systems analysts, and clinical supervisors. The top skills were budgeting, scheduling, patient care, staff management, and project management. Skills relevant to this program emerged as well such as systems analysis, SQL, business systems analysis, and information systems, but they were less frequently requested than the aforementioned skills. The top three employers, by number of job postings, in the region were: Anthem Blue Cross, Cedars-Sinai, and University of California.

**Exhibit 5: Job postings by occupation (last 12 months)**



To gauge employer demand for these bachelor's degree-level health information management occupations, job postings from the most recent five full years were also analyzed. Overall, job postings for these health information management occupations have risen since 2017, increasing most dramatically (by 29%) from 2017 to 2018. Exhibit 6 displays the job posting trend for each full year since 2017, as well as the job postings during 2022 thus far (January 1 through September 8, 2022), which have already surpassed the number of postings over the past five years.

**Exhibit 6: Job postings for health information management occupations, 2017-2022**



\*Job postings from January 1 through September 8, 2022

To measure employer preference for candidates with a bachelor’s degree, the proportion of job postings by minimum education requirements from each year appear in Exhibit 7. Employers posting job ads for these health information management occupations have consistently sought candidates with a bachelor’s degree, ranging from a high of 89% to a low of 85%. Please note that not all job postings include a specified minimum education requirement, so the data in Exhibit 7 does not represent all job postings.

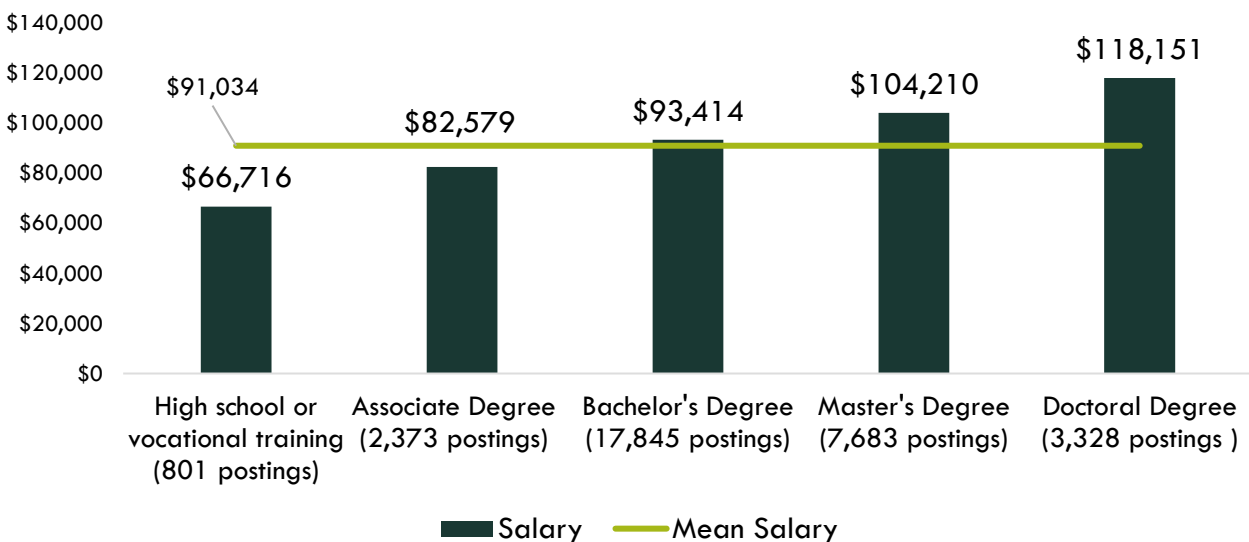
**Exhibit 7: Education requirements from health information management jobs postings in LA/OC, 2017-2022**

Minimum Education Requirement	2017	2018	2019	2020	2021	2022*
Associate degree	14%	11%	12%	12%	14%	15%
Bachelor’s degree or higher	86%	89%	88%	88%	86%	85%

\*Job postings from January 1 through September 8, 2022

Exhibit 8 displays the advertised salaries in job postings for these health information management occupations by level of advertised education. On average, employers seeking candidates with a bachelor’s degree are advertising salaries that are more than \$10,000 higher per year than those seeking candidates with an associate degree. Furthermore, employers seeking candidates with a bachelor’s degree advertise salaries nearly \$27,000 higher per year than employers seeking candidates with a high school diploma. It is important to note that the data in Exhibit 8 represents 18% of the job postings data, as these job postings included both a degree level and salary information.

**Exhibit 8: LA/OC salaries for health information management jobs by advertised education level (last 12 months)**



## Educational Attainment

The Bureau of Labor Statistics (BLS) lists a bachelor’s degree as the typical entry-level education for both occupations in this report. National-level educational attainment data indicates between 31% and 48% of workers in the field have completed a bachelor’s degree.

## Educational Supply

### Associate Degrees, Postsecondary nondegree Awards, and subbaccalaureate Certificates

Since the occupations in the report are considered above middle-skill and typically require a bachelor’s degree, graduates of these associate-level programs would need further education and/or training in order to be hired as one of the occupations in this report.

**Community College Supply**—Exhibit 9 shows the annual and three-year average number of awards conferred by community colleges in the related TOP codes: Hospital and Health Care Administration (1202.00) and Health Information Technology (1223.00). The colleges with the most completions in the region are Golden West and East LA.

**Exhibit 9: Regional community college awards (certificates and degrees), 2018-2021**

TOP	Program	College	2018-19 Awards	2019-20 Awards	2020-21 Awards	3-Year Average
1202.00	Hospital and Health Care Administration	Cypress	-	1	-	0
		Golden West	560	295	185	347
		<b>OC Subtotal</b>	<b>560</b>	<b>296</b>	<b>185</b>	<b>347</b>
<b>Supply Subtotal/Average</b>			<b>560</b>	<b>296</b>	<b>185</b>	<b>347</b>
1223.00	Health Information Technology	East LA	62	46	69	59
		<b>LA Subtotal</b>	<b>62</b>	<b>46</b>	<b>69</b>	<b>59</b>
		Cypress	19	18	25	21
		Saddleback	15	16	13	15
		<b>OC Subtotal</b>	<b>34</b>	<b>34</b>	<b>38</b>	<b>35</b>
<b>Supply Subtotal/Average</b>			<b>96</b>	<b>80</b>	<b>107</b>	<b>94</b>
<b>Supply Total/Average</b>			<b>656</b>	<b>376</b>	<b>292</b>	<b>441</b>

**Non-Community College Supply**—For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training in associate-level programs for health information management occupations. Exhibit 10 shows the annual and three-year average number of awards conferred by these institutions in relevant programs.

Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, non-community college institutions in the region conferred an average of 38 associate-level awards.

**Exhibit 10: Regional non-community college awards, associate degrees and postsecondary awards, 2017-2020**

<b>CIP</b>	<b>Program</b>	<b>Institution</b>	<b>2017-18 Awards</b>	<b>2018-19 Awards</b>	<b>2019-20 Awards</b>	<b>3-Year Average</b>
51.0701	Health/ Health Care Administration/ Management	Advanced College	-	1	-	0
		Healthcare Career College	-	-	5	2
51.0706	Health Information/ Medical Records Administration/ Administrator	Fremont College	9	5	2	5
51.0707	Health Information/ Medical Records Technology/ Technician	American Career College-Anaheim	11	-	-	4
		National Career College	9	11	8	9
		Palladium Technical Academy	3	-	-	1
		Westchester College of Nursing & Allied Health	14	4	-	6
51.2211	Health Services Administration	Glendale Career College	7	2	3	4
		North-West College-West Covina	9	6	4	6
<b>Supply Total/Average</b>			<b>62</b>	<b>29</b>	<b>22</b>	<b>38</b>

**Bachelor's Degrees**

Since the occupations in this report are above middle-skill and typically require a bachelor's degree, four-year awards are also included in this supply analysis.

**Community College Supply**— Currently, there are no community colleges in the region that offer bachelor's degree in health information management.

**Non-Community College Supply**—Since the occupations in this report typically require a bachelor's degree for employment, Exhibit 11 displays the educational institutions in the region that award bachelor's degrees that train students for the health information management occupations in this report. Due to different data collection periods, the most recent three-year period of available data is from 2017 to 2020. Between 2017 and 2020, institutions in the region conferred an average of 623 bachelor's degrees.



**Exhibit 11: Regional non-community college awards, associate degrees and postsecondary awards, 2017-2020**

CIP	Program	Institution	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
51.0701	Health/ Health Care Administration/ Management	Angeles College	7	-	-	2
		CA Intercontinental Univ.	-	-	1	0
		CSU-Long Beach	217	203	186	202
		CSU-Northridge	263	240	195	233
		Concordia University-Irvine	11	12	6	10
		Pacific College	-	9	8	6
		Platt College-Anaheim	-	-	4	1
		Platt College-Los Angeles	25	21	10	19
		University of La Verne	17	7	8	11
51.2211	Health Services Administration	Chapman University	63	75	84	74
		Fremont College	14	9	10	11
52.1201	Management Information Systems, General	Los Angeles Pacific Univ.	-	-	4	1
		Loyola Marymount University	13	18	-	10
52.1206	Information Resources Management	UC Irvine	37	45	44	42
52.1299	Management Information Systems and Services, Other	Azusa Pacific University	2	1	1	1
<b>Supply Total/Average</b>			<b>669</b>	<b>640</b>	<b>561</b>	<b>623</b>

**Recommendations**

Based on all of the available data, there appears to be an opportunity for community colleges to offer a bachelor’s degree in health information management. Considering Assembly Bill No. 927, signed into law by Governor Newsom on October 6, 2021, which extended the community college statewide baccalaureate degree pilot program indefinitely, community colleges have an extraordinary opportunity to providing training in areas requiring increasing levels of educational demand, such as health information management.<sup>7</sup> Beyond the scope of this report, AB 927 lists several other requirements that must be addressed by each district seeking authorization of their proposed baccalaureate program:

- Evidence that the district consulted with regional employers and regional workforce development boards.

<sup>7</sup> [Bill Text - AB-927 Public postsecondary education: community colleges: statewide baccalaureate degree program.](#)

- Statewide and regional workforce data relevant to the proposed baccalaureate degree program.
- Evidence that the baccalaureate degree to be offered will help address unmet workforce needs. The evidence may include, but is not limited to, information showing the following:
  - Employers are having difficulty filling positions that require a baccalaureate degree.
  - Employers are willing to pay baccalaureate degree holders more than those with a related associate degree or no postsecondary degree.
  - Employers have a preference for candidates with the proposed baccalaureate degree.

The last three indented bullet points are addressed as thoroughly as possible with job posting, but industry advisory committee in this area should validate this data with regional employers. In addition to these criteria related to the labor market, each applicant also needs to provide documentation of consultation with the California State University and the University of California regarding collaborative approaches to meeting regional workforce needs.

**Appendix A: Occupational demand and wage data by county**

**Exhibit 12. Los Angeles County**

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)
Medical and Health Services Managers (11-9111)	13,798	16,195	2,396	17%	1,608	\$35.05	\$52.70	\$76.66
Computer Systems Analysts (15-1211)	12,680	12,623	(56)	0%	888	\$38.75	\$50.12	\$65.20
<b>Total</b>	<b>26,478</b>	<b>28,818</b>	<b>2,340</b>	<b>9%</b>	<b>2,496</b>	-	-	-

**Exhibit 13. Orange County**

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 <sup>th</sup> Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 <sup>th</sup> Percentile)
Medical and Health Services Managers (11-9111)	4,377	5,152	775	18%	514	\$35.04	\$52.67	\$76.66
Computer Systems Analysts (15-1211)	5,838	5,903	66	1%	419	\$37.62	\$48.63	\$63.27
<b>Total</b>	<b>10,215</b>	<b>11,056</b>	<b>841</b>	<b>8%</b>	<b>933</b>	-	-	-

**Exhibit 14. Los Angeles and Orange Counties**

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Typical Entry-Level Education
Medical and Health Services Managers (11-9111)	18,176	21,347	3,171	17%	2,122	Bachelor's degree
Computer Systems Analysts (15-1211)	18,517	18,526	9	0%	1,308	Bachelor's degree
<b>Total</b>	<b>36,693</b>	<b>39,873</b>	<b>3,181</b>	<b>9%</b>	<b>3,429</b>	-

## Appendix B: Sources

- O\*NET Online
- Labor Insight (Burning Glass Technologies)
- Lightcast (formerly Emsi)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- California Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- Self-Sufficiency Standard at the Center for Women's Welfare, University of Washington
- Chancellor's Office Curriculum Inventory (COCI 2.0)

For more information, please contact:

Luke Meyer, Director  
Los Angeles Center of Excellence  
[Lmeyer7@mtsac.edu](mailto:Lmeyer7@mtsac.edu)

