

Labor Market Analysis: 1223.00/Health Information Technology

Public Health Informatics and Technology

(Certificate requiring 16 to <30 semester units)

Los Angeles Center of Excellence, April 2023

Summary

Program Endorsement:	Endorsed: All Criteria Met <input checked="" type="checkbox"/>	Endorsed: Some Criteria Met <input type="checkbox"/>	Not Endorsed <input type="checkbox"/>
Program Endorsement Criteria			
Supply Gap:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Living Wage: (Entry-Level, 25th)	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Education:	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Emerging Occupation(s)			
	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

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 middle-skill occupations:

- **Medical Records Specialists (29-2072)** 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 healthcare system. Classify medical and healthcare concepts, including diagnosis, procedures, medical services, and equipment, into the healthcare industry's numerical coding system. Includes medical coders.¹
- **Health Information Technologists and Medical Registrars (29-9021)** Apply knowledge of healthcare and information systems to assist in the design, development, and continued modification and analysis of computerized healthcare systems. Abstract, collect, and analyze treatment and follow-up information of patients. May educate staff and assist in problem solving to promote the implementation of the healthcare information system. May design, develop, test, and implement databases with complete history, diagnosis, treatment, and health status to help monitor diseases.²

Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.³ This report is intended to help determine whether there is demand in the local

¹ [Medical Records Specialists : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics \(bls.gov\)](#)

² [Health Information Technologists and Medical Registrars : Occupational Outlook Handbook: : U.S. Bureau of Labor Statistics \(bls.gov\)](#)

³ 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.

labor market that is not being met by the supply from community college programs that align with the relevant occupations.

According to the Centers for Disease Control and Prevention, public health informatics is a cross-disciplinary, emerging field that combines information, computer science, and technology to public health practice, research, and learning.⁴ The US Office of the National Coordinator for Health Information Technology (ONC)⁵ awarded funding to CSU Long Beach in 2021 to lead a consortium of institutions representing noncredit and credit educational pathways and expand the public health information and technology (PHIT) workforce.⁶ For the 10 California Community Colleges collaborating on the program, this is an opportunity to address the state's need for qualified PHIT workers and provide new opportunities for community college students.

PHIT jobs from this initiative are primarily focused on strengthening public health information technology infrastructure, improving data collection related to COVID-19, and simultaneously increase the presence of underrepresented communities with the public health IT workforce. Some of these PHIT roles may focus on the creation, updates, and maintenance to dashboards related to COVID-19 such as those produced by the [World Health Organization](#), [The New York Times](#), or [California's Office of Digital Innovation](#).

As the jobs impacted by PHIT are in development from a labor market perspective, the Standard Occupational Classification (SOC) does not have a single occupational title for the role or roles. The middle-skill occupations included in this report are closely related to and share the most overlap with the knowledge, skills, and abilities of the emerging PHIT workforce.

Based on the available data, there appears to be a supply gap for these middle-skill occupations related to public health informatics in the region. In addition, the Bureau of Labor Statistics lists postsecondary non-degree award as the typical entry-level education for both occupations in this report, and entry-level wages exceed the self-sufficiency standard wage in Los Angeles County.

Therefore, due to all of the criteria being met, the LA COE endorses this proposed program.

Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, **733 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 560 awards conferred** by educational institutions in the region.
 - There were **227 online job postings for roles related to public health informatics**. The highest number of postings were for healthcare data analysts, clinical informatics specialists, health informatics analysts, medical informatics analysts, and directors/managers of clinical informatics.

⁴ <https://www.cdc.gov/training/publichealth101/informatics.html>

⁵ ONC is housed within the US Office of the Secretary for the U.S. Department of Health and Human Services (HHS). ONC is the principal federal entity charged with coordination of nationwide efforts to implement and use the most advanced health information technology and the electronic exchange of health information. More information about ONC can be found at www.healthit.gov.

⁶ [Public Health Informatics & Technology \(PHIT\) Workforce Development Program](#)

- **Living Wage Criteria** – Within Los Angeles County, **both occupations have entry-level wages above the self-sufficiency standard hourly wage (\$18.10/hour).**⁷
- **Educational Criteria** –The Bureau of Labor Statistics (BLS) lists a **postsecondary non-degree award as the typical entry-level education** for both occupations in this report.
 - Furthermore, the national-level educational attainment data indicates **between 27% and 62% of workers in the field have completed some college or an associate degree.**

Supply:

- There are **4 community colleges** in the greater LA/OC region that issue awards related to health information technology, conferring an average of **136 awards annually** between 2018 and 2021.
- Between 2017 and 2020, there was an average of **424 awards conferred annually** in related training programs by non-community college institutions throughout the greater LA/OC region.

Occupational Demand

Exhibit 1 shows the five-year occupational demand projections for these middle-skill occupations related to public health informatics. In the greater Los Angeles/Orange County region, the number of jobs related to these occupations is projected to increase by 8% through 2026. There will be more than 730 job openings per year through 2026 due to job growth and replacements.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties⁸

Geography	2021 Jobs	2026 Jobs	2021-2026 Change	2021-2026 % Change	Annual Openings
Los Angeles	6,194	6,695	501	8%	546
Orange	2,026	2,223	197	10%	187
Total	8,220	8,918	698	8%	733

Wages

The labor market endorsement in this report considers the entry-level hourly wages for these middle-skill occupations related to public health informatics 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.

⁷ Self-Sufficiency Standard wage data was pulled from The Self-Sufficiency Standard Tool for California. For more information, visit: <http://selfsufficiencystandard.org/california>.

⁸ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

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 \$18.50 and \$22.03. Experienced workers can expect to earn wages between \$32.42 and \$50.08.

Exhibit 2: Earnings for Occupations in LA County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Medical Records Specialists (29-2072)	\$18.50	\$23.52	\$32.42	\$48,900
Health Information Technologists and Medical Registrars (29-9021)	\$22.03	\$36.73	\$50.08	\$76,400

*rounded to the nearest \$100

Orange County—The majority (85%) of annual openings for these middle-skill occupations related to public health informatics have entry-level wages below the self-sufficiency standard wage for one adult (\$20.63 in Orange County). *Health information technologists and medical registrars* typically earn entry-level hourly wages that are above the county’s self-sufficiency standard wage (\$22.33), while entry-level *medical records specialists* can expect to earn less than the self-sufficiency standard (\$18.04). Experienced workers can expect to earn wages between \$31.54 and \$47.49, which are higher than the self-sufficiency standard.

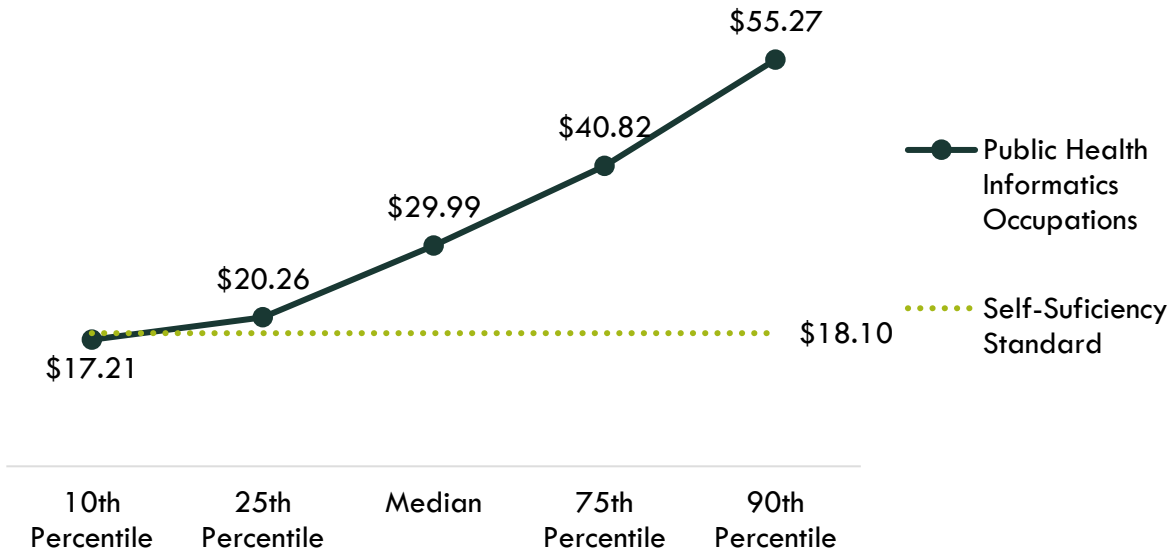
Exhibit 3: Earnings for Occupations in Orange County

Occupation	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)	Median Annual Earnings*
Medical Records Specialists (29-2072)	\$18.04	\$22.97	\$31.54	\$47,800
Health Information Technologists and Medical Registrars (29-9021)	\$22.33	\$36.11	\$47.49	\$75,100

*rounded to the nearest \$100

On average, the entry-level earnings for the occupations in this report are \$20.26; 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.

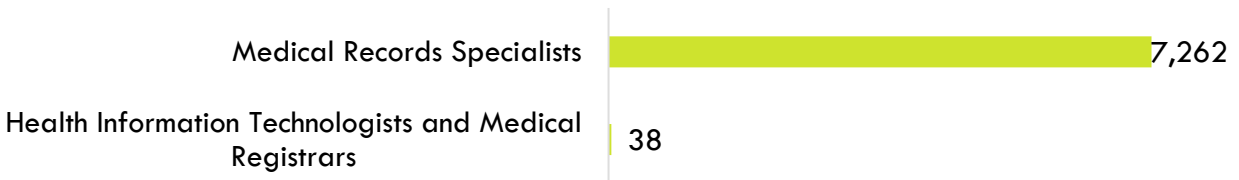
Exhibit 4: Average Hourly Earnings for Public Health Informatics Occupations in LA/OC



Job Postings

There were 7,300 online job postings related to these health information technology occupations listed in the past 12 months. Exhibit 5 displays the number of job postings by occupation. The majority of job postings (99%) were for *medical records specialists*, followed by *health information technologists and medical registrars* (1%). The highest number of job postings were for medical billers, medical records clerks, medical scribes, medical billing specialists, and dental billers. The top skills were medical records, medical billing, medical terminology, ICD coding, and electronic medical records. The top three employers, by number of job postings, in the region were University of California, Kaiser Permanente, and Providence.

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



In addition to these jobs postings, a second query based on job titles related to public health informatics and technology was conducted, yielding 227 unique job postings. The highest number of postings were for healthcare data analysts, clinical informatics specialists, health informatics analysts, medical informatics analysts, and directors/managers of clinical informatics. The top skills requested were data analysis, SQL, electronic medical records, health informatics, data modeling, Epic electronic medical records, and healthcare industry knowledge. The employers posting the most job ads were University of California, Blue-Shield, Providence, Elevance health, Molina Healthcare, and UnitedHealth Group. The majority of these postings were seeking candidates with a bachelor's degree.

Educational Attainment

The Bureau of Labor Statistics (BLS) lists a postsecondary non-degree award as the typical entry-level education for the occupations of interest. Furthermore, the national-level educational attainment data indicates between 27% and 62% of workers in the field have completed some college/associate degree or less education. Of the 60% of job postings listing a minimum education requirement in the greater Los Angeles/Orange County region, 63% (2,742) requested high school or vocational training, 9% (376) requested an associate degree, and 28% (1,237) requested a bachelor's degree.

Educational Supply

Community College Supply—Exhibit 6 shows the annual and three-year average number of awards conferred by community colleges in programs that have historically trained for the occupations of interest. The colleges with the most completions in the region are East LA, Cypress, and Saddleback.

Exhibit 6: Regional community college awards (certificates and degrees), 2018-2021

TOP	Program	College	2018-19 Awards	2019-20 Awards	2020-21 Awards	3-Year Average
1223.00	Health Information Technology	East LA	62	46	69	59
		LA Subtotal	62	46	69	59
		Cypress	19	18	25	21
		Saddleback	15	16	13	15
		OC Subtotal	34	34	38	35
Supply Subtotal/Average			96	80	107	94
1223.10	Health Information Coding	East LA	54	28	34	39
		Glendale	4	-	-	1
		LA Subtotal	58	28	34	40
		Saddleback	1	2	3	2
		OC Subtotal	1	2	3	2
Supply Subtotal/Average			59	30	37	42
Supply Total/Average			155	110	144	136

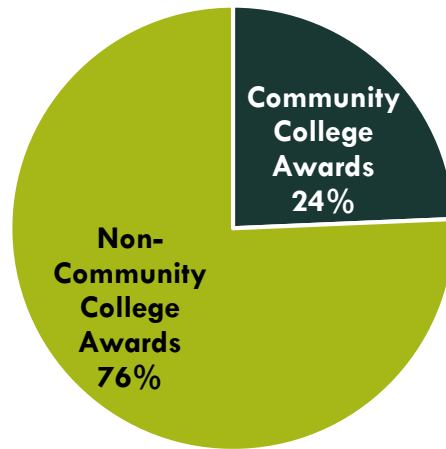
Non-Community College Supply—For a comprehensive regional supply analysis, it is important to consider the supply from other institutions in the region that provide training programs for health information technology. Exhibit 7 shows the annual and three-year average number of awards conferred by these 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 424 sub-baccalaureate awards. Sub-baccalaureate awards include associate degrees, postsecondary awards, and other academic awards that typically take fewer than four years to complete.

Exhibit 7: Regional non-community college awards, 2017-2020

CIP	Program	Institution	2017-18 Awards	2018-19 Awards	2019-20 Awards	3-Year Average
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 Tech. Academy	3	-	-	1
		Westchester College of Nursing & Allied Health	14	4	-	6
51.0713	Medical Insurance Coding Specialist/Coder	American Career College-Anaheim	80	76	60	72
		American Career College-Los Angeles	69	86	70	75
		California Healing Arts College	5	2	1	3
		Fremont College	11	6	4	7
		InterCoast Colleges-Santa Ana	-	5	2	2
		PCI College	4	3	-	2
		Southern California Health Institute	54	65	63	61
		Trident Univ. International	-	3	-	1
		UEI College-Gardena	37	59	38	45
		United Education Institute-Anaheim	41	52	40	44
		United Education Institute-Encino	44	43	40	42
United Education Institute-West Covina	51	48	35	45		
Supply Total/Average			442	468	363	424

Exhibit 8 shows the proportion of community college awards conferred in LA/OC compared to the number of non-community college awards for the programs in this report. The majority of awards conferred in these programs are awarded by non-community colleges in the LA/OC region.

Exhibit 8: Community College Awards Compared to Non-Community College Awards in LA/OC Region, 3-Year Average



Appendix A: Occupational demand and wage data by county

Exhibit 9. Los Angeles County

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25 th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75 th Percentile)
Medical Records Specialists (29-2072)	5,143	5,495	352	7%	446	\$18.50	\$23.52	\$32.42
Health Information Technologists and Medical Registrars (29-9021)	1,051	1,200	149	14%	100	\$22.03	\$36.73	\$50.08
Total	6,194	6,695	501	8%	546	-	-	-

Exhibit 10. Orange County

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	Entry-Level Hourly Earnings (25th Percentile)	Median Hourly Earnings	Experienced Hourly Earnings (75th Percentile)
Medical Records Specialists (29-2072)	1,738	1,892	154	9%	159	\$18.04	\$22.97	\$31.54
Health Information Technologists and Medical Registrars (29-9021)	288	331	43	15%	28	\$22.33	\$36.11	\$47.49
Total	2,026	2,223	197	10%	187	-	-	-

Exhibit 11. Los Angeles and Orange Counties

Occupation (SOC)	2021 Jobs	2026 Jobs	5-Yr Change	5-Yr % Change	Annual Openings	% Age 55 and older*	Typical Entry-Level Education
Medical Records Specialists (29-2072)	6,881	7,386	506	7%	605	28%	Postsecondary non-degree award
Health Information Technologists and Medical Registrars (29-9021)	1,339	1,531	193	14%	128	22%	Postsecondary non-degree award
Total	8,220	8,918	698	8%	733	-	-

*The average percentage of workers age 55 and older across all occupations in the greater LA/OC region is 27%. Health information technologists and medical registrars have a smaller share of older workers, which typically indicates fewer replacements needs to offset the amount of impending retirements.

Appendix B: Sources

- O*NET Online
- Lightcast (formerly 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)

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