

Program Endorsement Brief: 1211.00/ Polysomnography
Polysomnographic Technology Associate of Science Degree
 Orange County Center of Excellence, August 2021

Summary Analysis

| | | | |
|---|---|---|---|
| Program Endorsement: | Endorsed: All Criteria Met <input type="checkbox"/> | Endorsed: Some Criteria Met <input checked="" 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, 25 th) | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> | |
| Education: | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> | |
| Emerging Occupation(s) | | | |
| Yes <input checked="" type="checkbox"/> | | No <input type="checkbox"/> | |

The Orange County Center of Excellence for Labor Market Research (COE) prepared this report to provide Los Angeles/Orange County regional labor market supply and demand data related to one emerging middle-skill occupation: *Neurodiagnostic Technologist* (29-2099.01). Middle-skill occupations typically require some postsecondary education, but less than a bachelor's degree.¹ Because *Neurodiagnostic Technologist* is currently considered an emerging occupation, data for the broader *Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other* (29-2098) occupation is analyzed in this report. 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 that align with the relevant occupations.

Based on the available data, there appears to be a supply gap for neurodiagnostic technologists in the region and the typical entry-level education for this occupation is a postsecondary nondegree award. However, the typical entry-level wages for this occupation are below the living wage in Orange County. **Therefore, due to all the criteria being met, the COE endorses this proposed program.** Detailed reasons include:

Demand:

- **Supply Gap Criteria** – Over the next five years, there is projected to be **923 jobs available annually** in the region due to new job growth and replacements, **which is more than the 2 awards conferred annually** by educational institutions in the region.
 - However, the Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2098) SOC code includes a variety of emerging occupations, including Neurodiagnostic Technologists (29-2099.01).

¹ 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.

Since the SOC code does not solely represent neurodiagnostic technologists, ***the number of annual job openings is likely overstated.***

- Over the past 12 months, there were **132 online job postings related to neurodiagnostic technologists**. The highest number of job postings were for EEG technicians, neurodiagnostic technicians, EEG technologists, polysomnography technicians, and intraoperative neuromonitoring technologists.
- **Living Wage Criteria** –Within Orange County, ***typical entry-level hourly wages*** for Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2098) are ***\$16.91, which is lower than the living wage*** for one adult in the region (\$17.36 in Orange County).²
- **Educational Criteria** –The Bureau of Labor Statistics (BLS) lists a **postsecondary non-degree award as the typical entry-level education** for Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2099).
 - Furthermore, the national-level educational attainment data indicates **49.3% of workers in the field have completed some college or an associate degree.**

Supply:

- There is **1 community college** in the LA/OC region that issues awards related to electro-neurodiagnostic technology, conferring an average of **2 awards annually** between 2017 and 2020.

Occupational Demand

Exhibit 1, on the following page, shows the five-year occupational demand projections for Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2099), an umbrella code that is comprised of all other health technologist/technician occupations that do not fit into a detailed SOC code. In Los Angeles/Orange County, the number of jobs related to these occupations is projected to increase by 19% through 2024. There will be nearly 1,600 job openings per year through 2024 due to job growth and replacements.

It is important to note that the Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2098) SOC code includes a variety of emerging occupations, such as Ophthalmic Medical Technologists (29-2099.05) and not solely Neurodiagnostic Technologists (29-2099.01) Therefore, the data in Exhibit 1 is likely overstated for neurodiagnostic technicians.

This report includes employment projection data by Emsi which uses EDD information. 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. To the extent that a recession or labor shock, such as the economic effects of COVID-19, can cause long-term structural change, it may impact the projections. At this time, it is not possible to quantify the impact of COVID-19 on projections of industry and

² Living wage data was pulled from California Family Needs Calculator on 7/31/20. For more information, visit the California Family Needs Calculator website: <https://insightcced.org/2018-family-needs-calculator/>.

occupational employment. Therefore, the projections included in this report do not take the impacts of COVID-19 into account.

Exhibit 1: Occupational demand in Los Angeles and Orange Counties³

| Geography | 2019 Jobs | 2024 Jobs | 2019-2024 Change | 2019-2024 % Change | Annual Openings |
|--------------|--------------|--------------|------------------|--------------------|-----------------|
| Los Angeles | 6,359 | 7,611 | 1,252 | 20% | 724 |
| Orange | 1,797 | 2,128 | 331 | 18% | 199 |
| Total | 8,156 | 9,740 | 1,584 | 19% | 923 |

Wages

The labor market endorsement in this report considers the entry-level hourly wages for Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other in Orange County as they relate to the county's living wage. Los Angeles County wages are included below in order to provide a complete analysis of the LA/OC region. Detailed wage information, by county, is included in Appendix A.

Orange County—The typical entry-level hourly wages for Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other are \$16.91, which is below the living wage for one adult (\$17.36 in Orange County). Experienced workers can expect to earn wages of \$26.90, which is higher than the living wage estimate. Orange County's average wages are below the average statewide wage of \$24.50 for this occupation.

Los Angeles County—The typical entry-level hourly wages for Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other are \$17.87, which is above the living wage for one adult (\$15.04 in Los Angeles County). Experienced workers can expect to earn wages of \$28.37, which is higher than the living wage estimate. Los Angeles County's average wages are above the average statewide wage of \$24.50 for this occupation.

Job Postings

There were 132 online job postings related to the emerging occupation Neurodiagnostic Technologist (29-2099.01) listed in the past 12 months. The highest number of job postings were for EEG (electroencephalogram) technicians, neurodiagnostic technicians, EEG (electroencephalogram) technologists, polysomnography technicians, and Intraoperative neuromonitoring technologists. The top skills were: electroencephalography (EEG), life support, cardiopulmonary resuscitation (CPR), polysomnography, and patient care. The top three employers, by number of job postings, in the region were: Children's Hospital of Orange County (CHOC), University of Southern California/Keck Medicine of USC, and UCLA.

It is important to note that the job postings data included in this section reflects online job postings listed in the past 12 months and does not yet demonstrate the impact of COVID-19. While employers

³ Five-year change represents new job additions to the workforce. Annual openings include new jobs and replacement jobs that result from retirements and separations.

have generally posted fewer online job postings since the beginning of the pandemic, the long-term effects are currently unknown.

Educational Attainment

The Bureau of Labor Statistics (BLS) lists a postsecondary non-degree award as the typical entry-level education for Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other. Furthermore, the national-level educational attainment data indicates 49.3% of workers in the field have completed some college or an associate degree. Of the 39% of neurodiagnostic technologist job postings listing a minimum education requirement in Los Angeles/Orange County, 52% (27) requested a bachelor's degree and 48% (25) requested an associate degree.

Educational Supply

Community College Supply—Exhibit 2 shows the three-year average number of awards conferred by community colleges in the related TOP code: Polysomnography (1211.00). The only college in the region with completions is Orange Coast. Over the past 12 months, there were no other related program recommendation requests from regional community colleges.

Currently, there are no non-community college programs or awards associated with this occupation in the Los Angeles/Orange County region.

Exhibit 2: Regional community college awards (certificates and degrees), 2017-2020

| TOP Code | Program | College | 2017- 2018 Awards | 2018- 2019 Awards | 2019- 2020 Awards | 3-Year Award Average |
|----------------------|-----------------|--------------|-------------------------|-------------------------|-------------------------|----------------------------|
| 1211.00 | Polysomnography | Orange Coast | - | 5 | - | 2 |
| | | OC Subtotal | 0 | 5 | 0 | 2 |
| Supply Total/Average | | | 0 | 5 | 0 | 2 |

Appendix A: Occupational demand and wage data by county

Exhibit 4. Orange County

| Occupation (SOC) | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | Annual Openings | Entry-Level Hourly Earnings (25th Percentile) | Median Hourly Earnings | Experienced Hourly Earnings (75th Percentile) |
|--|-----------|-----------|-------------|---------------|-----------------|---|------------------------|---|
| Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2098) | 1,797 | 2,128 | 331 | 18% | 199 | \$16.91 | \$20.51 | \$26.90 |

Exhibit 5. Los Angeles County

| Occupation (SOC) | 2019 Jobs | 2024 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 Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2098) | 6,359 | 7,611 | 1,252 | 20% | 724 | \$17.87 | \$21.67 | \$28.37 |

Exhibit 6. Los Angeles and Orange Counties

| Occupation (SOC) | 2019 Jobs | 2024 Jobs | 5-Yr Change | 5-Yr % Change | Annual Openings |
|---|--------------|--------------|----------------|------------------|--------------------|
| Medical Dosimetrists, Medical Records Specialists, and Health Technologists and Technicians, All Other (29-2098) | 8,156 | 9,740 | 1,584 | 19% | 923 |

Appendix B: Sources

- O*NET Online
- Labor Insight/Jobs (Burning Glass)
- Economic Modeling Specialists, International (Emsi)
- Bureau of Labor Statistics (BLS)
- Employment Development Department, Labor Market Information Division, OES
- California Community Colleges Chancellor's Office Management Information Systems (MIS)
- California Family Needs Calculator, Insight Center for Community Economic Development
- Chancellor's Office Curriculum Inventory (COCI 2.0)

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