Expanding Access to Healthcare Jobs in San Diego County:

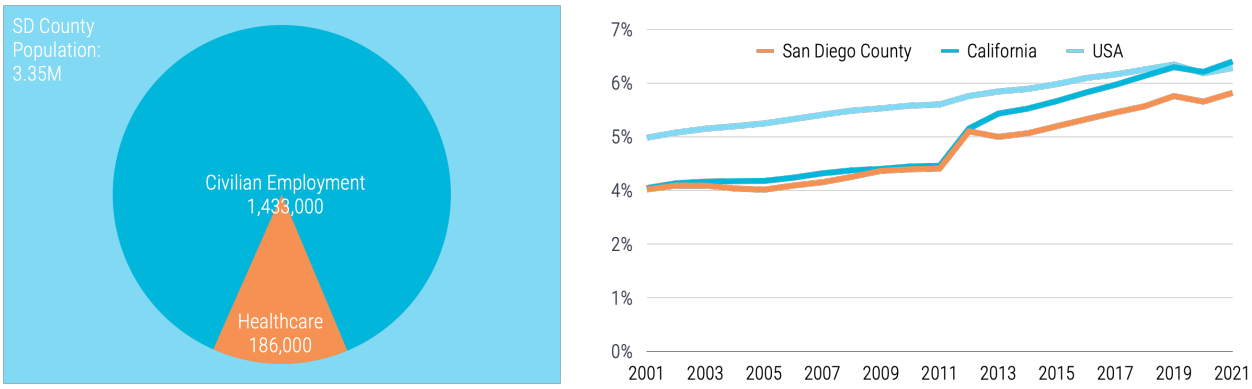
Healthcare Sector Overview

This report is designed to shape the San Diego Workforce Partnership's strategy for helping workers—especially women and people of color, and especially those without a college degree—find a pathway to the middle class in the healthcare sector. JP Morgan Chase provided funding for this reports and for two pilot programs that are shaped by this analysis. The first section provides an overview of San Diego County's healthcare sector, its role in our economy, constituent industries and most common jobs. The second section assesses occupational segregation in healthcare and identifies the 11 most promising job options for our clients. The third section discusses how we can, through talent-pipeline management, expand this list to provide more pathways to the middle class.

Healthcare employment in San Diego County

The healthcare sector employs 186,000 workers in San Diego County—5% of the population and 13% of overall employment. Figure 1 shows the growth of healthcare employment over time.[1] From one-on-one roles like nursing to operating electromagnetic rays to solve medical mysteries, healthcare field workers help the public stay healthy and well while quickly solving problems when something goes wrong. This field calls for workers who are both people- and detail-oriented with a desire to help others.

Figure 1. A large and growing portion of San Diegans work in the healthcare sector.



Healthcare is often considered recession-proof because the demand for medical care doesn't depend on the state of the economy. (Figure 2 shows that healthcare employment was unaffected by the 2009 Great Recession and only slightly affected by the 2020 pandemic.) And as San Diego's population ages, healthcare services ranging from nursing to physical therapy will become even more in-demand. San Diego County stands out from other regions because of our advanced medical research and biotechnology industries, which work together with local hospitals to provide cutting-edge treatment. San Diego ranks #1 in the U.S. for genomic patents and is home to more than 80 research institutions and 30 hospitals. As an example, Rady Children's Institute for Genomic Medicine works with Illumina to provide whole-genome sequencing to diagnose and treat children with rare genetic diseases.

[1] Note though that the jump in 2012 is the result of a group of employers being reclassified by the Bureau of Labor Statistics from North American Industry Classification System (NAICS) code 814110 (private households) to 624120 (services for the elderly and persons with disabilities).

Healthcare is San Diego's second biggest employer (Figure 3), and many of San Diego County's top employers are in the healthcare sector (Figure 4).

Typically when economists talk about the healthcare sector they are referencing healthcare and social assistance, which is comprised of the following four sub-sectors, listed in decreasing size of employment.

1. Ambulatory healthcare services (including physician, dentist, therapist, and other health practitioner offices; outpatient care centers, medical and diagnostic labs, and home health care services)
2. Social assistance (services for youth, elderly, people with disabilities; food, housing, and relief services; occupational rehabilitation; and childcare)
3. Nursing and residential care facilities (including skilled nursing; retirement communities; developmental disability, mental health, and substance abuse facilities)
4. Hospitals (including general, surgical, pediatric, psychiatric, substance abuse, and speciality hospitals)

Figure 2. Healthcare employment during the Great Recession and recovery (2008-2014) and the Covid Recession and recovery (2020-present).

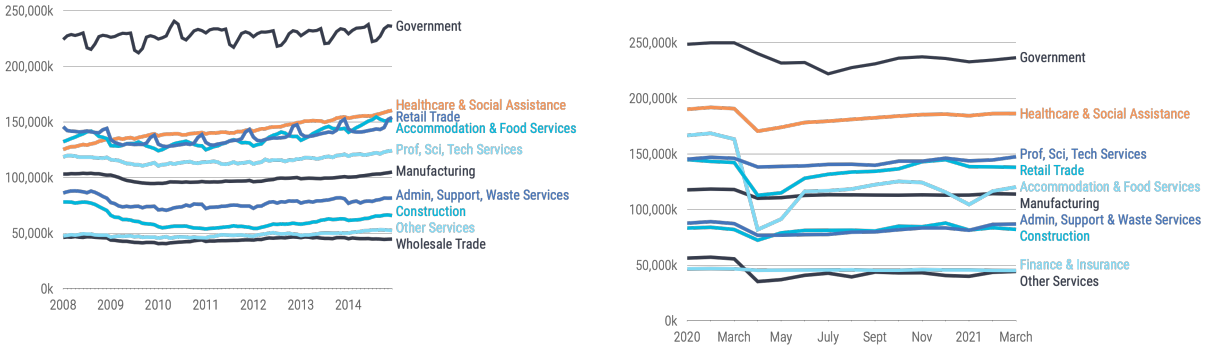


Figure 3. Sectors by number of jobs in San Diego County. Light grey lines represent the national average number of jobs for a region of our population.

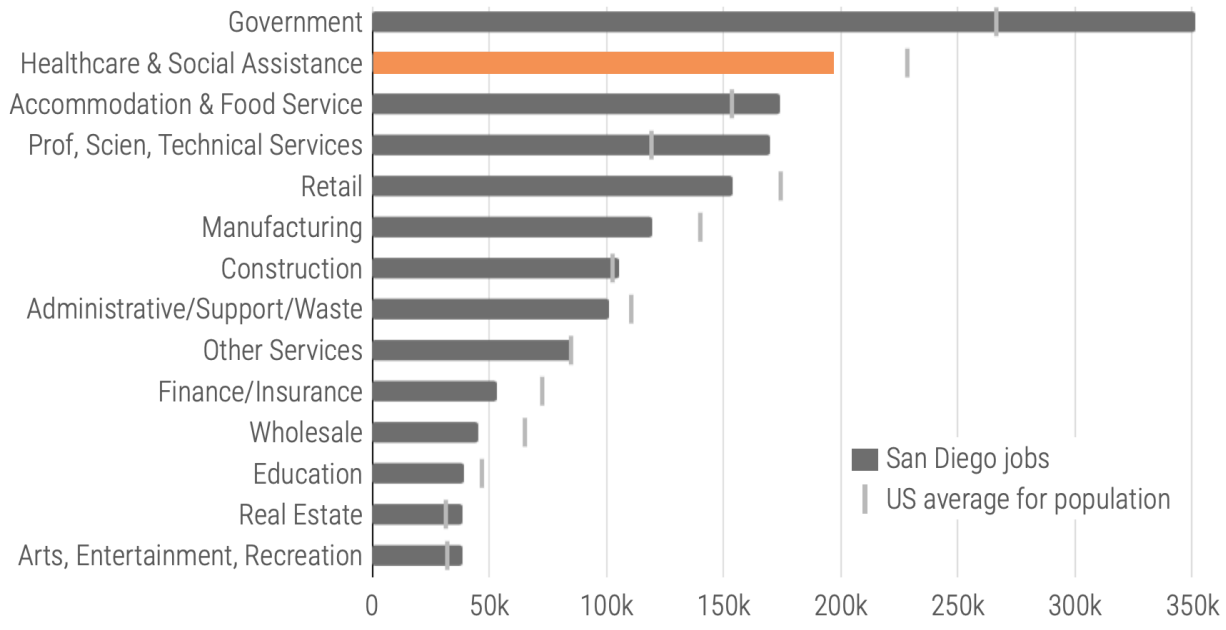


Figure 4. Largest individual employers in San Diego County, with healthcare employers highlighted in orange. (note that UC San Diego has a health system employing approximately 8,000 workers.)

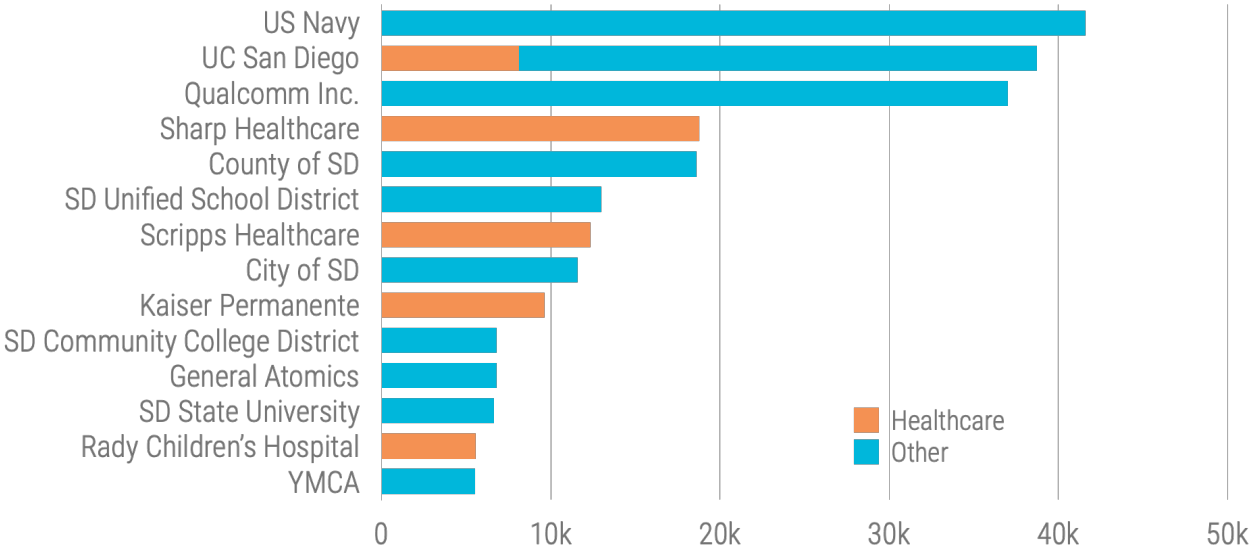


Figure 5 shows that the relative size of these sub-sectors has changed over time, and today the traditional healthcare industries like hospitals and ambulatory care comprise just over half of the sector. (The jump in Social Assistance in 2012 was a result of the Bureau of Labor Statistics reclassifying industries previously considered outside of healthcare into the social assistance category.)

Figure 6 shows the 20 most common healthcare occupations, and Figure 7 shows the 20 most common healthcare occupations with median wages over $60 an hour, or about $125,000 a year. Notice that the 20 most common healthcare occupations are big—they supply about 2,000 jobs or more each. By contrast, the very-high-wage occupations are small—with one exception, they supply fewer than 800 jobs each. In future reports in this series, we'll use this $60-an-hour cutoff to explore the differences in race and gender representation across the healthcare pay scale.

Figure 5. Number of workers in San Diego's four healthcare sub-sectors

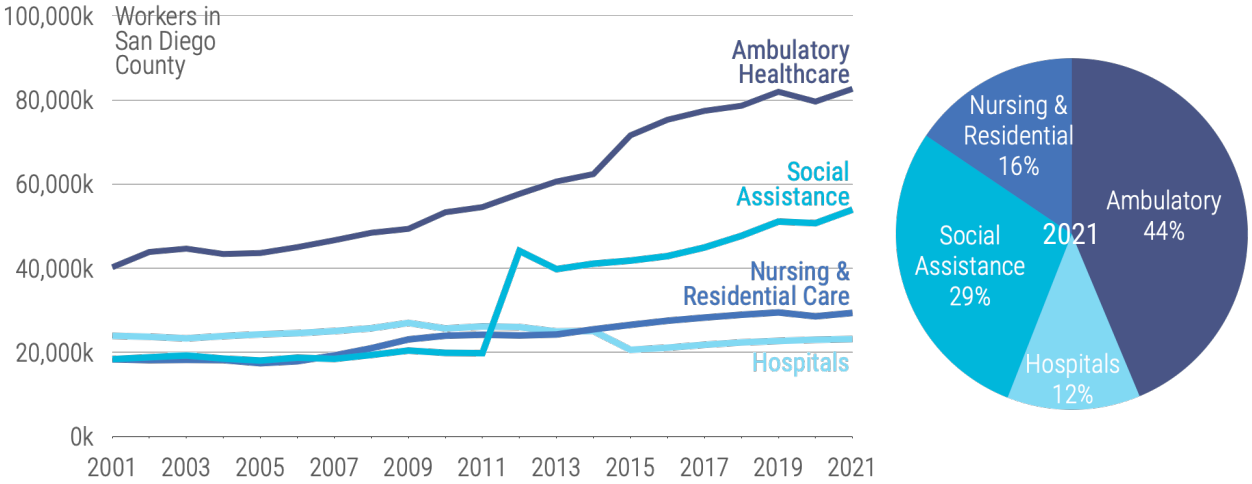


Figure 6. The 20 most common occupations in San Diego's healthcare sector

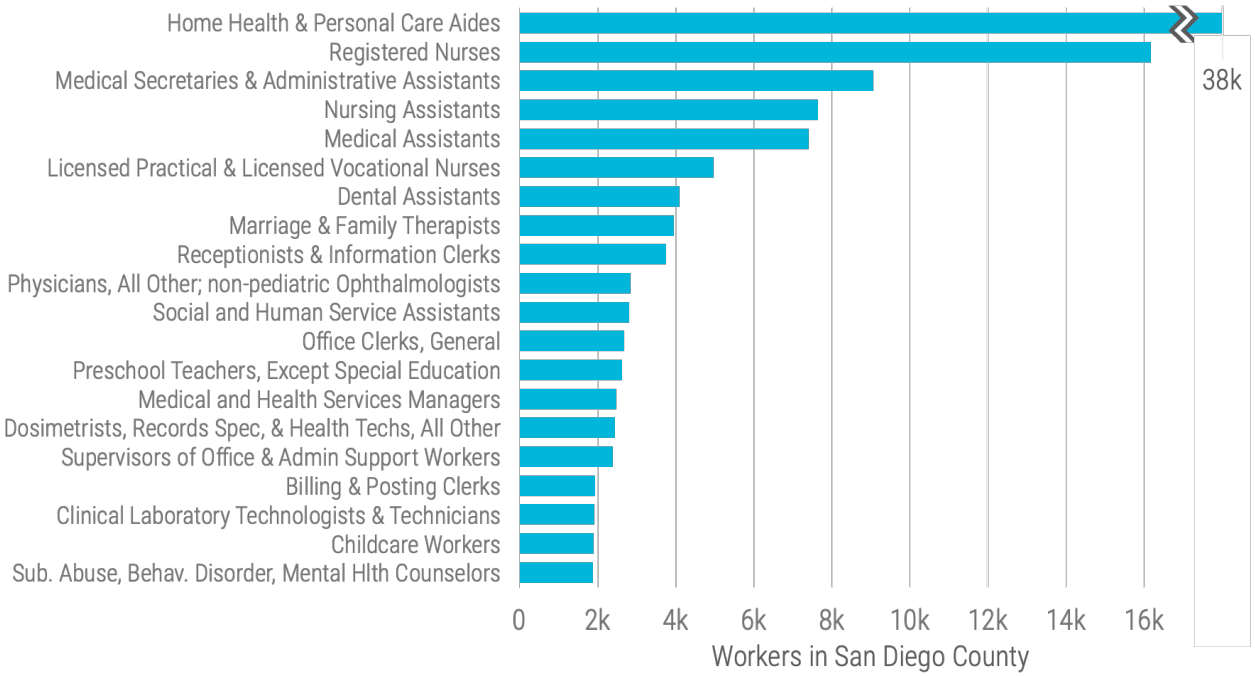


Figure 7. The 20 most common occupations with median hourly wages of $60+

Expanding Access to Healthcare Jobs in San Diego County:

Healthcare Career Pathways

Diversity and equity

Overall, San Diego's healthcare industry appears to reflect the racial and ethnic diversity of the region's workforce (Figure 8). Hispanic, Black, Native American, and multiracial workers, however, are disproportionately employed in the sector's lowest-paying occupations, while 80% of workers in occupations with median wages of $60 or more an hour are white or Asian.

Figure 9 shows a strong (exponential) relationship between the racial composition of healthcare occupations and their median wages—in other words, occupations with more white and Asian workers have much higher median wages than ones with more Black, Hispanic, and Native American workers. This phenomenon is often called occupational segregation—the tendency for people of different racial and ethnic identities to be concentrated in different—and unequally paid—occupations.

Figure 8. Racial/ethnic composition of the healthcare sector and overall workforce

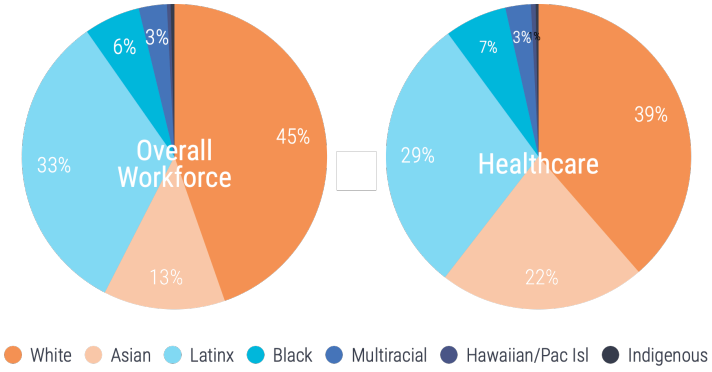
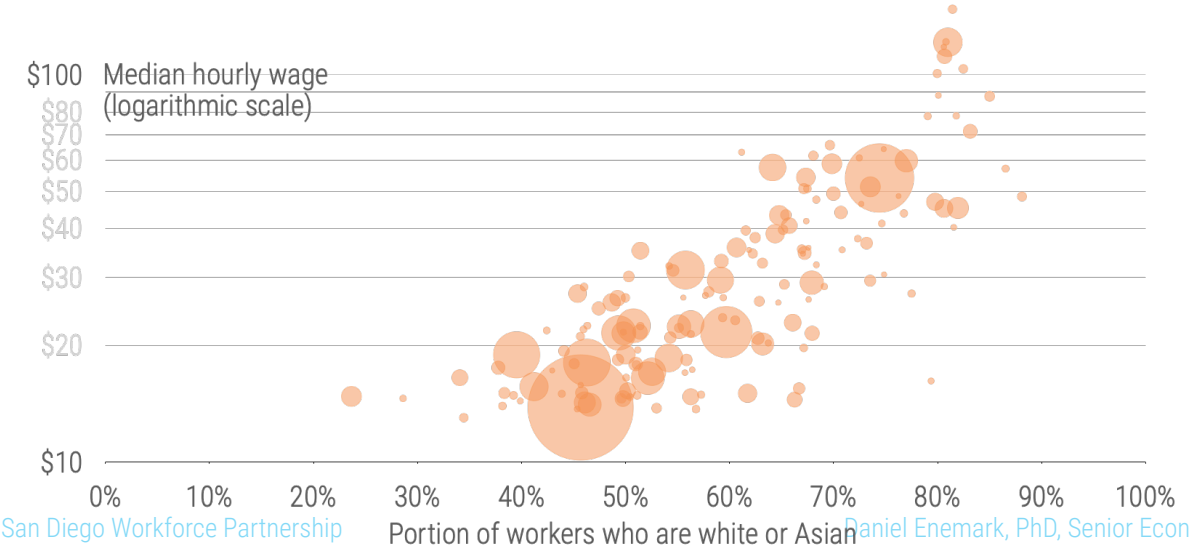


Figure 9. Occupations with at least 100 workers in San Diego County's healthcare sector, by proportion white or Asian and by median hourly wage within sector. Circle area reflects total number of workers in the occupation.



71% of healthcare workers are women (Figure 10), and for most of the pay spectrum, occupational segregation in healthcare is not nearly as egregious by sex as it is by race (as evidenced by the lack of a clear pattern of correlation in Figure 11). For example, 87% of registered nurses are women, and the median pay is $54 an hour ($113,000 a year at full time). However, at the very top of the pay scale, men continue to outnumber women more than two to one; 68% of those in occupations with median wages over $60 an hour are men. Unfortunately, with the exception of Chief Executive, all of these top-paying jobs require advanced medical degrees, so the Workforce Partnership is not well positioned to address these gaps, except through our educational work, where we can encourage students to pursue these careers.

Figure 10. Sex composition of the healthcare sector and overall workforce

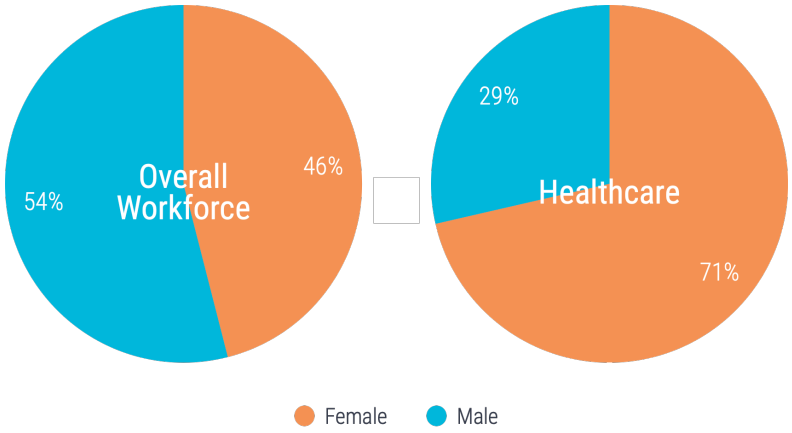
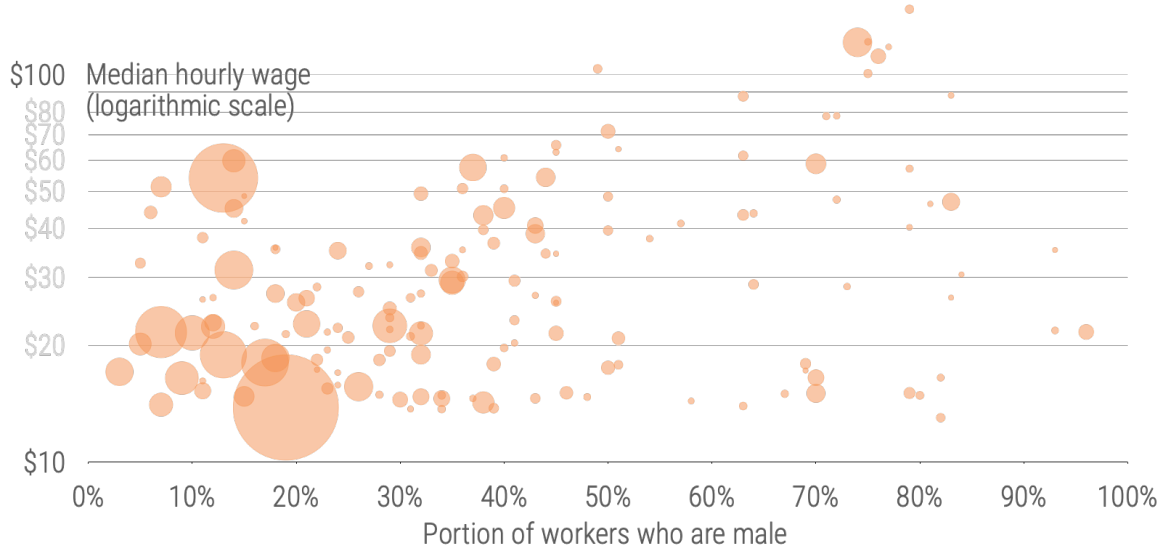


Figure 11. Occupations with at least 100 workers in San Diego County's healthcare sector, by proportion male and by median hourly wage within sector. Circle area reflects total number of workers in the occupation.



The crucial role of education in healthcare employment

Nearly all the highest-paying jobs in healthcare require advanced education. The 20 high-pay jobs listed in Figure 7 account for about 7,600 jobs in San Diego, and only 3% of those jobs (those in nuclear medicine technology and radiation therapy) are accessible with an Associate Degree. 97% require a bachelor's degree, and 62% require a doctoral degree.

If we chart all occupations with at least 300 workers in healthcare by entry-level wage and typical education requirement, we see a strong relationship (Figure 12). In other words, in general the more education you get, the higher your salary is likely to be.

Moreover, earnings are often stratified by education *within* occupations. For example, wages for Radiologic Technicians and Technologists vary much more by education than by experience, based on data from Burning Glass (Figure 13).

Figure 12. Occupations with 300 workers or more in the healthcare sector, by education requirement and entry level (10th percentile) wage

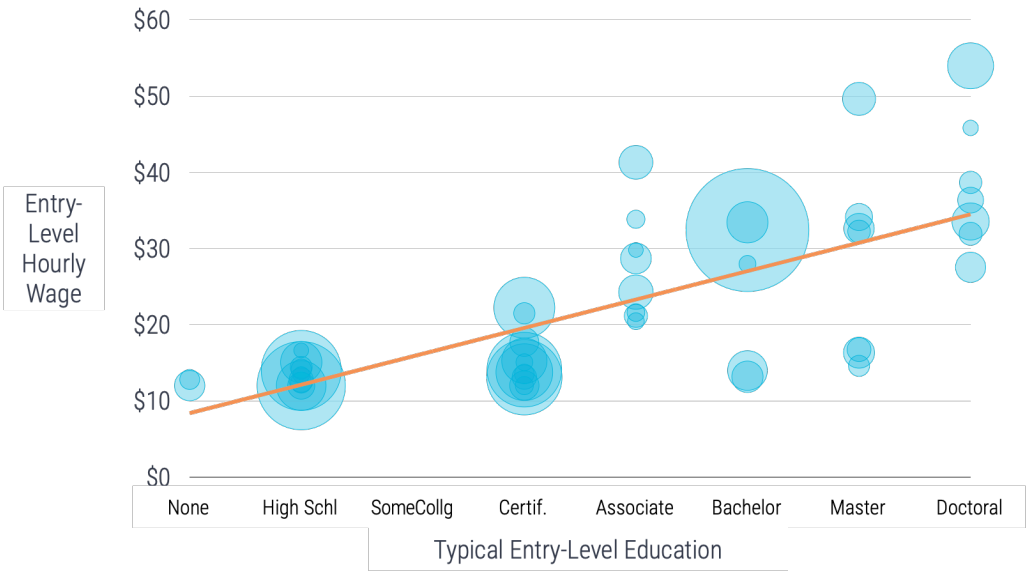
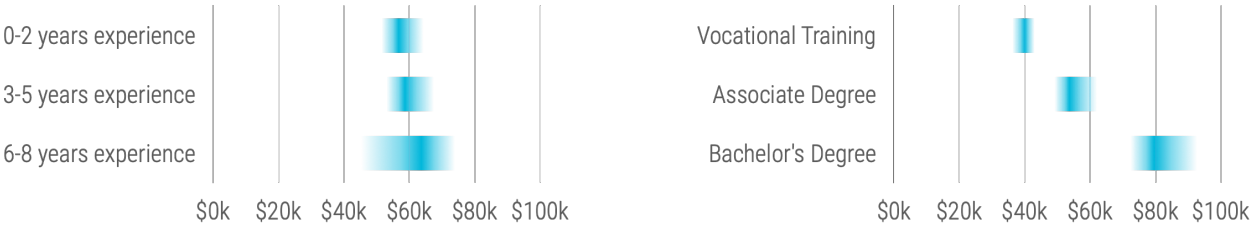


Figure 13. Distribution of Radiological Tech wages in San Diego County by experience and education levels



Realistic entry-level options in healthcare

The San Diego Workforce Partnership does not have any programs designed to put clients through more than two years of education, so we're most interested in careers requiring an Associate Degree or less.

We also believe it is important to place clients in jobs with self-sufficient entry-level wages, and the University of Washington Center for Women's Welfare estimates the basic needs of a San Diego County resident (a single adult with no dependents) to be $3,058.72 per month, requiring full-time employment at $17.65 an hour.

Removing all occupations that require a four-year degree or pay less than $17.65 at the entry level leaves the occupations listed in Table 1, ordered by training requirements and then by number of jobs.

Table 1. Jobs with self-sufficient entry-level wages not requiring a four-year degree

	Occupation	Employed in Healthcare	Typical Entry-Level Education	Required Experience	Entry Wage
1	Licensed Practical/Vocational Nurses	5,266	Certification	None	$22.22
2	Phlebotomists	1,215	Certification	None	$17.73
3	Surgical Techs	670	Certification	None	$21.49
4	Radiologic Techs	1,704	Associate	None	$24.27
5	Dental Hygienists	1,638	Associate	None	$41.30
6	Respiratory Therapists	1,362	Associate	None	$28.69
7	Physical Therapist Assistants	777	Associate	None	$21.15
8	Diagnostic Medical Sonographers	483	Associate	None	$33.83
9	Cardiovascular Techs	469	Associate	None	$21.59
10	Occupational Therapy Assistants	421	Associate	None	$20.46
11	MRI Technologists	326	Associate	< 5 years	$29.80

Likely pathways for advancement

Workforce development programs often seek to take advantage of career pathways—patterns of advancement in which workers in one job are likely to transition toward another job with higher pay. The theory is that placing a client in a "springboard job"—one with high upward mobility—will multiply the client's earnings over time. Unfortunately most healthcare occupations require a tremendous amount of occupation-specific training, so pathways are limited without expensive and time-consuming educational programs. Table 2 identifies the most common wage-increasing transition when someone with a job in the 11 occupations listed in Table 1 changes employer, occupation, or industry.[2]

[2] Source: Brookings Mobility Toolkit (drawing on data from the US Census' Current Population Survey). Wage data is specific to San Diego County, but transition rates are based on national data. Where lack of data requires it, transition data is based on occupation groups rather than an individual occupation. Phlebotomist number calculated based on Health Support Workers; Surgical Tech based on Health Practitioner Techs; and Radiologic Tech, Diagnostic Medical Monographer, Cardiovascular Tech, and MRI Technologists based on Diagnostic Techs.

Table 2. Wage-increasing career transitions when individuals change employer, occupation, or industry

	Occupation	Employed in Healthcare	Most Common Upward Transition	% of Transitions Leading to this Job
1	Licensed Practical/Vocational Nurses	5,266	Registered Nurse	20%
2	Phlebotomists	1,215	Registered Nurse	3%
3	Surgical Techs	670	Pharmacist	3%
4	Radiologic Techs	1,704	Physician / Surgeon	3%
5	Dental Hygienists	1,638	Dentist	3%
6	Respiratory Therapists	1,362	Registered Nurse	7%
7	Physical Therapist Assistants	777	Physical Therapist	22%
8	Diagnostic Medical Sonographers	483	Physician / Surgeon	3%
9	Cardiovascular Techs	469	Physician / Surgeon	3%
10	Occupational Therapy Assistants	421	Occupational Therapists	25%
11	MRI Technologists	326	Physician / Surgeon	3%

The first thing to notice about Figure 2 is that most jobs have no common upward transitions. But even the most common transitions (highlighted in blue) are made by a minority of workers. And many of the transitions that do happen may be the result of workers *returning* to a higher-wage occupation after accepting a lower-paying role briefly to meet immediate employment needs following loss of work.

For example, while this analysis of Census data suggests that 22% of Physical Therapist Assistants (PTAs) who change employer, occupation or industry become a Physical Therapist (PT), the American Physical Therapy Association states that "becoming a PTA is not a steppingstone to becoming a PT," and estimates that only about 10% of PTAs make the transition to PT. (There does appear to be a significantly stronger career pathway from Occupational Therapy Assistant to Occupational Therapist, with the American OT Association listing over a dozen bridge programs, though none are in California.)

Variations in career advancement by employer

While the Current Population Survey provides data on career transitions by occupation (as reported in Table 2 and Figure 14), there is no publicly available data on career transitions by employer. Our talent pipeline management interviews (discussed in greater detail in the next section) revealed that some employers, for example Kaiser Permanente, match incoming hires with mentors who can help develop career advancement plans—and even help workers shift to part-time schedules that allow for enrollment in upskilling programs. We are interested to know the degree to which employees take advantage of these services and whether they lead to more economic mobility. This would require further research.

The pathway from Licensed Practical/Vocational Nurse (LVN) to Registered Nurse (RN)

By far the most promising career pathway among the 11 jobs in Table 2 is LVN to RN. Not only are there far more LVNs in San Diego than PTAs and OTAs combined, there are multiple local LVN to RN bridge programs.

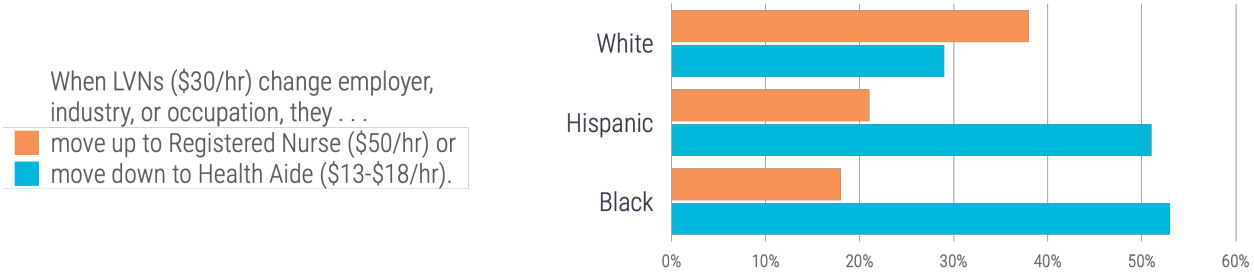
There are four compelling reasons to pursue an LVN to RN program. First and foremost, for individuals with a high school education interested in a nursing career, LVN is a much, much faster process. The average LVN program lasts one year, but some programs are as brief as seven months. For clients who want to start working in the healthcare sector and need employment in months rather than years, LVN is a good first step. In addition, many local nursing programs view an LVN certificate as a major advantage when evaluating applications, which means that students who might ordinarily struggle to gain admittance into a BSN program can improve their odds by starting as an LVN.

Second, there are 6,700 LVNs in San Diego County, and widening the pathway from LVN to RN improves job quality for LVNs. Third, moving LVNs to RNs creates new openings to backfill in the LVN field, helping more workers get a start in the healthcare sector. Finally, the LVN workforce is much more diverse than the RN workforce, so helping more LVNs advance has the potential to create a RN workforce that better matches the local patient population. Given the scientific literature showing that white medical professionals provide a lower quality of care to BIPOC patients,[3] this would likely improve the experiences of patients of color.

Three challenges in expanding this pathway

First, it is important to specify that expanding the pathway from LVN to RN only has the *potential* to increase the RN diversity. Indeed, unless we specifically seek out BIPOC LVNs to serve, expanding the pathway could actually exacerbate the lack of diversity among RNs. While the pool of LVNs is more diverse than the pool of RNs, the pool of LVNs *transitioning to RNs* is not. In fact, when we break down job transition data by race, we find that white LVNs are more likely to transition up to RN and less likely to transition down (in wages) to Health Aide, while Black and Hispanic LVNs are more than twice as likely to transition down as to transition up.

Figure 14. Racial/ethnic differences in likelihood to transition from LVN up RN vs down to Health Aide



Second, in interviews we conducted with community college partners as part of the talent pipeline management work, we learned that local hospitals often prefer registered nurses with bachelor's degrees, as the proportion of health workers with a BA is one of the criteria outside organizations use to evaluate hospitals for magnet status. Since some of the LVN to RN programs don't involve earning a BSN, these programs may limit to some degree a client's employability or earning potential. We plan to conduct further research to determine what limitations if any RNs with associate degrees face in the labor market.

Third, of the schools providing LVN to RN programs, such as Concorde Career College, are for-profit institutions with troubled histories of failing to adequately serve their students. Absent compelling evidence for value, we would not want to encourage or facilitate enrollment in these programs.

Conclusions

Helping LVNs transition to RNs can increase job quality for LVNs and increase the diversity in and access to RN employment. But a program facilitating this transition needs to do three things: (1) prioritize advancing Black, Hispanic, and Native American LVNs; (2) collaborate only with high-quality bridge programs; and (3) connect LVNs to bridge programs that match their career goals, so that clients wanting to work in hospitals

[3] See for example the following studies:
Ayanian, JZ, Zaslavsky, AM, Guadagnoli, E, Fuchs, CS, Yost, KJ, Creech, CM, ... & Wright, WE. (2005). Patients' perceptions of quality of care for colorectal cancer by race, ethnicity, and language. *Journal of Clinical Oncology*, 23(27), 6576-6586.
Schwamm, L. H., Reeves, M. J., Pan, W., Smith, E. E., Frankel, M. R., Olson, D., ... & Fonarow, G. C. (2010). Race/ethnicity, quality of care, and outcomes in ischemic stroke. *Circulation*, 121(13), 1492.

are steered toward BSN programs while those wanting to work in settings where there is no advantage to a BSN are steered toward associate degrees to take advantage of the shortened time commitment and cost.

Expanding Access to Middle-Class Healthcare Jobs

The previous section, "Healthcare Career Pathways," identified 11 jobs that pay self-sufficient entry-level wages and don't require a bachelor's degree (See Tables 1 and 2 of that section). But our clients may be interested in other careers, or may not have the time and resources to pursue an associate degree, which eight fo the 11 jobs require. There are two ways we can expand clients' options: (1) help them pursue intermediate steps on the way to one of our eleven occupations, or (2) work with employers who can commit to paying self-sufficient wages in occupations with lower typical pay.

Ramping up from Dental Assistants to Dental Hygienists

Dental hygienist is one of the occupations identified in the previous section as paying well and not requiring a four-year degree. But it doesn't require an associate degree, and many of our clients are unable to forego full-time employment for two years in order to obtain such a degree. For San Diegans seeking a career in the dentistry industry, more scaffolding is needed to support the journey to become a dental hygienist.

With the support of JP Morgan Chase, we are creating a pilot program that helps clients scale up to dental hygienist by first becoming a Certified Dental Assistant (CDA) and then a Registered Dental Assistant (RDA). We enroll students in an accelerated, four-week training at Grossmont Community College and provide a stipend of $1,600 to cover their expenses during this period. At the end of the training, we work with the California Dental Association to place graduates in CDA roles with at least a self-sufficient wage of $17.65 an hour[4] (or $36,800 a year, slightly below the median salary of $39,700), supported by federal-funded "on the job training" reimbursements to employers that cover half of clients' salaries for up to six months.

After 18 months working as CDAs, our clients will be eligible to take the RDA exam.[5] The median RDA salary is $42,790. Although about 75% of RDAs make a self-sufficient wage in San Diego County, we hope to advance interested clients even further to Dental Hygienist, where the median salary is over $100,000. The educational institutions in the county train about 60 dental hygienists a year—less than half of the 136 average annual openings,[6] so we believe there is adequate demand to support a Dental Assistant to Dental Hygienist bridge program. We are currently working with San Diego & Imperial Counties Community College Association to explore the possibility of creating such a program.

Identifying high-paying employers of Medical Assistants

This report relies almost entirely on internal analysis of publicly available data. The advantage of this approach is that government surveys from the Census Bureau and Bureau of Labor Statistics employ representative samples, meaning that we can draw conclusions about average outcomes with a quantifiable level of statistical confidence. The disadvantage is that this data relies on categorizing individuals by government taxonomies like the Standard Occupational Classification system, and does not provide rich

---

[4] The Self-Sufficiency Standard is calculated by the University of Washington's Center for Women's Welfare, in collaboration with the Insight Center.

[5] Taking the RDA exam requires the following additional certifications: X-Ray, Eight-Hour Infection Control, CPR, and California Dental Practice Act training. Grossmont will provide clients with these certifications as part of our program.

[6] Openings are calculated by adding the net number of new jobs to the replacement jobs generated by retirements.

information about *why* the patterns we observe exist and what we might be able to do to change those patterns in ways that benefit low-income workers.

An essential complement to public data is direct communication with employers, and we did this through our talent-pipeline-management research along with San Diego's Regional Economic Development Corporation. This section previews some of the findings from that work, which will be described in greater depth in a separate report. Surveying our employer working group, we found that the occupation in greatest need was Medical Assistant—a professional who performs both administrative and routine clinical tasks in a medical setting. While our broad-based labor market analysis rejected this role as a career pathway because of its low earnings, reported entry-level wages among our employer working group were high enough to justify treating this occupation as a potential entry point to healthcare careers.

Table 3 shows the current workforce, total demand our employers expected over the next three years, expected growth in employment, average entry-level wages and talent-sourcing difficulty for 10 jobs that meet the following four criteria: higher-than-average projected job growth, key role within both hospital and community healthcare settings, offers $19 an hour with benefits, and does not require a degree but does require some formal education or training.

Table 3. Data on key middle-skill healthcare jobs from our talent-pipeline management research

Occupation	Current Positions	Total Need, next 3 yrs	Projected Growth	Average Entry-Level Wage	Hard to Source? (scale 1-5)
Medical Assistants	1790	633	12.9%	$20.67	2.0
Licensed Vocational Nurses	817	357	21.5%	$28.02	2.9
Phlebotomists	722	322	14%	$23.46	2.7
Clinical Laboratory Scientists	470	289	28.5%	$48.95	4.2
Respiratory Therapists	511	237	17.4%	$38.85	2.3
Surgical Technologists	461	203	16.9%	$32.28	3.0
Radiologic Technologists	427	195	13.8%	$44.64	2.0
Diagnostic Medical Sonographers	312	108	8.7%	$51.54	3.0
Sterile Processing Technicians	222	135	27.5%	$20.53	3.5
Electronic Medical Records and Health Information Technologists	156	49	5.1%	$22.44	2.1

Figure 15 compares the average entry-level wages reported by our employer working group to the 10th and 25th percentile pay in San Diego County according to government data. Note that for all but one occupation, our working group reported paying entry-level workers more than the 25th-percentile wage.

Conclusion

Our talent-pipeline-management work leads us to believe that building relationships with the right employers may allow us to help clients obtain jobs with self-sufficiency wages in occupations that typically pay lower wages at the entry level. It also suggests we may be able to create new pathways to high-paying jobs that require an associate degree. Working together with employers and training providers could allow us to significantly widen access to high-paying healthcare jobs for clients without a bachelor's degree—especially those from the Black, Hispanic, and Native American communities underrepresented in the sector. The pilot work we are undertaking with the support of JP Morgan Chase will help us assess the viability of these strategies moving forward.

Figure 15. Wages according to public data and a survey of our employer working group