

Middle-Skilled Jobs Analysis: Appendix A

Detailed Occupational Profiles

Prepared by:

Center for Business and Policy Research
University of the Pacific
Stockton and Sacramento, California



Supported by:

The James Irvine Foundation
One Bush Street, Suite 800,
San Francisco, California



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Acronyms

BA	Bachelor of Arts
BACEI	Bay Area Council Economic Institute
BSc	Bachelor of Science
CA	California
CARE	Cooperative Agencies Resources for Education
CBPR	Center for Business and Policy Research
CoS	City of Stockton
CoSMO	City of Stockton Mayor’s Office
CSU	California State University
EOPS	Extended Opportunity Programs and Services
JSRM	Jobs Skills Relationship Map
LEHD	Longitudinal Employer-Household Dynamics
MEL	Monitoring, evaluation, and learning
MSA	Metropolitan Statistical Area
O*NET	Occupational Information Network
SJC	San Joaquin County
SOC	Standard Occupational Classification
TDL	Transportation, Distribution and Logistics
TJIF	The James Irvine Foundation
U.S.	United States

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Section 1 - Introduction

In the *Middle-Skilled Jobs Analysis* two distinct sub-sets of jobs in Stockton, California were discussed:

- Lower paying, high-growth occupations
- Higher paying, but scarce skill jobs

The occupations in those sub-sets were also briefly reviewed. This appendix provides additional details around the occupations identified in the report. For each occupation, we describe:

- Earnings level and equality
- Recent and forecast employment growth
- Skills relationships to other job opportunities (job-skills relationship)
- Demographics
- Local training system

Section 2 - Lower Paying Occupations with Rapid Growth and High Concentration

2.1 Healthcare Support Occupations

Healthcare support jobs include 19 occupations ranging from home health aides and personal care aides to nursing assistants and pharmacy aides.¹ In terms of earnings, the median wage in health support occupations is about 23%

lower than then median for all jobs.² While these jobs have relatively low wages they are forecast to grow significantly during the next decade.³

Despite the low-wage and growing nature of these jobs, our Job-Skills

Table 1 Healthcare Support Workforce Demographics

Race/Ethnicity	Hispanic or Latino	White	Asian	Black or African American	Others
Health Support	37%	26%	20%	14%	2%
<i>All Employed</i>	39%	36%	15%	6%	4%
Education Level	Less than High School	High School or GED	Assoc. Degree/ Some College	Bachelor's Degree	Graduate Degree
Health Support	8%	26%	56%	9%	1%
<i>All Employed</i>	16%	27%	37%	14%	7%
Age	16 to 34 years		35 to 54 years		55 years and older
Health Support	45%		42%		13%
<i>All Employed</i>	37%		44%		19%
Gender	Female			Male	
Health Support	83%			17%	
<i>All Employed</i>	45%			55%	

Source: Burning Glass, based on US Census American Community Survey and US Bureau of Labor Statistics Local Area Unemployment Statistics.

Relationship Map (JSRM), shows that needed skills in several healthcare support occupations can connect these jobs to higher-paid jobs in the health sciences.

Using an analysis of local occupational employment patterns, we found that healthcare support workers are concentrated in the health care and social assistance industry with 85% of these jobs in that industry. Health support jobs tend to engage more women than men with 83% of healthcare support workers being female compared to their composing just 45% of all occupational employment. The racial/ethnic features of these employees show that African American form 14% of the occupational group despite being just 6% of the total employed and Asians form a further 20% of these workers but are just 15% of the employed.

This occupational group has had several changes in its definition over the last decade that make analyzing trends in its employment and earning difficult.⁴ In the most recent occupational data from 2019 we see that the Stockton MSA has a location quotient of 1.22 indicating that the employment share locally is 1.22 times the share of employment found for the nation as a whole. That level of location quotient suggests a local concentration in this occupational group, which may mean there exists a locational advantage. However, given that median earnings in 2019 were just \$12.77 per hour it is important to identify how these employment opportunities might be leveraged to higher paying jobs.

Table 2 Healthcare Support Employment Context

Stockton MSA	2010	2012	2019
Employment	7,230*	6,770*	13,690
Location Quotient	1.02*	0.92*	1.22

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics Note: *=estimates.

Inequality in earnings is near the Statewide level with median earnings for the occupational group 13% less than mean earnings. Employment growth is forecast to be among the highest rate for any occupational group in both the short-term and long-term. Providing training that prepares individuals for these opportunities, but also identifies career pathways to higher earning middle-skilled jobs is therefore an important component to this transformation strategy.

Table 3 Healthcare Support Earnings Context

2019	Stockton MSA	California	USA
Mean Hourly Wage	\$14.66	\$15.94	\$14.91
Median Hourly Wage	\$12.77	\$13.90	\$13.69

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

2.2 Transportation and Material Moving Occupations

Transportation, distribution, and logistics jobs include 52 occupations that involve the moving of passengers and products by road, air, rail, and water. These jobs include truck drivers, pilots, forklift operators, and taxi drivers.⁵ With its central location and extensive transportation infrastructure the importance of the goods movement system to the Stockton and regional economy is well established.⁶ However, the significance of that system has dramatically changed in the past decade. Factors facilitating this transformation include sustained infrastructure investments, emerging technologies, the local human capital profile, and increasing inter-regional integration across northern California.⁷ Given this employment growth, relatively low earnings, and significant potential for future replacement through automation there is a particularly urgent need to build career pathways so that these jobs may be leveraged for higher-skilled better paying employment in the future.

These jobs are found in a growing diversity of industries with 43% of jobs in the transportation and warehousing, 15% in retail trade, 13% in manufacturing, and 10% in wholesale trade. Men account for 84% of workers in these jobs compared to 55% of the entire workforce. In recent years technologies have lowered the skills profile of these jobs.

Table 4 Stockton MSA Transportation and Material Moving Workforce Demographics

Race/Ethnicity:	Hispanic or Latino	White	Asian	Black or African American	Others
Goods Mvmt	46%	25%	16%	9%	4%
All Employed	39%	36%	15%	6%	4%
Education Level:	Less than High School	High School or GED	Assoc. Degree/ Some College	Bachelor's Degree	Graduate Degree
Goods Mvmt	23%	42%	29%	5%	1%
All Employed	16%	27%	37%	14%	7%
Age:	16 to 34 years		35 to 54 years		55 years and older
Goods Mvmt	42%		44%		14%
All Employed	37%		44%		19%
Gender:	Female			Male	
Goods Mvmt	16%			84%	
All Employed	45%			55%	
Source: Burning Glass, based on US Census American Community Survey and US Bureau of Labor Statistics Local Area Unemployment Statistics.					

Overall, 65% of these jobs are undertaken by individuals with a high school degree or less as their highest qualification. These workers are also relatively young, with just 14% of these employees being 55 years or older.

During the past decade employment has grown by 89% from nearly 22,000 jobs to over 41,000 as these jobs' composition of total employment has also grown. In 2019 the Stockton MSA's location quotient was 1.9 indicating a share of employment 90% higher than that of the nation. This employment growth and high concentration corresponds with the transformation of the areas goods movement system from an important regional center to an inter-regional goods movement hub with similar levels of concentration only seen in a few places across the nation.

Table 5 Transportation and Material Moving Employment Context

% Δ in Employment 2010 to 2019	Stockton MSA	California	USA
	89%	63%	47%
Stockton MSA	2010	2012	2019
Employment	21,890	22,590	41,310
Location Quotient	1.64	1.72	1.91
Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics			

While median earnings of \$16.75 per hour in the area are higher than Statewide and National levels, the group's mean and median earnings are less than that for all occupations in the Stockton MSA. These then are relatively lower paid jobs with workers needing to build and develop these skills to advance opportunities and generate broader sustainable and inclusive economic benefits. Inequality of earnings within the group is relatively small with median earnings 90% of average earnings in the area.

The rapid growth of these jobs and their scale has created significant demand which even with technological innovations have not completely bridged skill gaps. To provide these skills there are several local initiatives.

Among these the Transportation, Distribution and Logistics (TDL) Partnership of industry partners, the local community college, San Joaquin Delta College, and adult education alliance, the Delta Sierra Adult Education Alliance is significant. It has launched several pilot training initiatives through this collaborative workforce training initiative and additional programs are currently being developed.⁸ Further training to build these employment opportunities is also supported by the state-wide apprenticeship initiative.⁹

Table 6 Transportation and Material Moving Earnings Context

2019	Stockton MSA	California	USA
Mean Hourly Wage:	\$18.66	\$19.03	\$18.23
% Δ Real Mean Wage 2010 to 2019	-7.9%	0.4%	-1.0%
Median Hourly Wage:	\$16.75	\$15.89	\$15.60
% Δ Real Median Wage 2010 to 2019	-13.4%	-2.1%	-2.6%

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics & Annual Avg. Consumer Price Index-All Urban.

2.3 Production Occupations

Production is a group containing some 108 occupations that involve work manufacturing products and equipment. These jobs include assemblers, woodworkers, machinists, welders, and food processing workers.¹⁰ Nationally,

technological change is anticipated to reduce the future number of production jobs with more processes becoming automated.¹¹ However, in Stockton there seems to be an opportunity to grow production jobs, middle-skill jobs and enhance local manufacturing competitiveness.

Table 7 Production Workforce Demographics

Race/Ethnicity:	Hispanic or Latino	White	Asian	Black or African American	Others
Production	53%	23%	17%	4%	4%
<i>All Employed</i>	39%	36%	15%	6%	4%

Education Level:	Less than High School	High School or GED	Assoc. Degree/Some College	Bachelor's Degree	Graduate Degree
Production	27%	38%	28%	6%	0%
<i>All Employed</i>	16%	27%	37%	14%	7%

Age:	16 to 34 years	35 to 54 years	55 years and older
Production	35%	44%	21%
<i>All Employed</i>	37%	44%	19%

Gender:	Female	Male
Production	29%	71%
<i>All Employed</i>	45%	55%

Source: Burning Glass, based on US Census American Community Survey and US Bureau of Labor Statistics Local Area Unemployment Statistics.

Analysis of production workers' employment indicates that the majority (61%) of these jobs are in the manufacturing industry, but there are also 8% of these jobs in services. The local production workforce has a larger share of Hispanics (53%) in the workforce than are employed in the County as a whole (39%), it also has more men (71%) than the overall workforce (55%). In terms of educational attainment, 65% of the workers have a high school or lower qualification compared to 43% for the overall workforce locally.

Production jobs declined by 11% in the Stockton MSA between 2010 and 2019, but their share of the total workforce was near the national share with a location quotient of 0.91 in 2019.

Earnings for production workers did see a moderate rise in both the real mean and median wage from 2010 to 2019. However, the \$17.37 per hour median wage in 2019 makes this occupational group relatively limited in its ability to provide a living wage. It is notable though that earnings inequality declined by three percent between 2010 and 2019 with the median wage forming 90% on the mean wage in 2019.

Table 8 Production Earnings Context

2019	Stockton MSA	California	USA
Mean Hourly Wage:	\$19.32	\$19.99	\$19.30
% Δ Real Mean Wage 2010 to 2019	7.7%	6.2%	1.4%
Median Hourly Wage:	\$17.37	\$17.14	\$17.31
% Δ Real Median Wage 2010 to 2019	9.0%	6.5%	1.3%

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics & Annual Avg. Consumer Price Index-All Urban.

With the systemic development of the local manufacturing and other industries with significant need for production workers, these jobs can provide an important career entry point. Leveraging these jobs for higher earning potential requires building out local skills in other supporting occupations with higher levels of educational and work training which we discuss in the context of leveraging manufacturing opportunities for catalytic workforce and economic development.

Table 9 Production Employment Context

% Δ in Employment 2010 to 2019	Stockton MSA	California	USA
	-11%	6%	11%

Stockton MSA	2010	2012	2019
Employment	16,230	13,790	14,400
Location Quotient	1.26	1.07	0.91

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

2.4 Teaching Assistants and Substitutes

Teaching and other professional educator jobs are typically good, middle-skilled, and high-skilled job with earnings that can support a family. It is because of this they are included in aggregate as part of Section 3.3's higher-paying occupations in need of skilled workers sub-set. However, there is an important distinction with a part of that larger group, namely substitute teachers and teaching assistants. The earnings of teaching assistants and substitute teachers are about half that of other teachers. Comparing average earnings for substitute teachers and teacher assistants provides another indicator of the particularly strong local demand for substitute teachers. As shown in Table 12, teaching assistants earn 82% the earnings of a substitute in the Stockton MSA, but they earn 87% statewide and 91% nationally. This demand for substitute teachers is also noticeable in annual earnings where substitute earnings are four percent higher locally than statewide.

Table 12 Substitutes & Teacher Assistants Mean Annual Earnings Context

2019	Stockton MSA	California	USA
Substitute Teachers	\$43,190	\$41,650	\$32,460
Teacher Assistants	\$35,300	\$36,200	\$29,640

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

In addition, as is shown in Table 13 this part of the major occupational group is growing much faster than others. They have more than doubled between 2012 and 2019 growing from around 3,250 to 7,550 jobs.

Table 13 Details of Stockton MSA Educational Occupations 2012-2019

	2012	2013	2014	2015	2016	2017	2018	2019
Preschool Teachers	4%	3%	4%	5%	5%	5%	4%	3%
K-12 Teachers	41%	38%	38%	39%	36%	35%	31%	29%
Special Education Teachers	7%	7%	6%	6%	6%	6%	6%	4%
Substitute Teachers	11%	9%	11%	12%	22%	19%	17%	19%
Teacher Assistants	11%	14%	15%	14%	13%	14%	16%	18%
All Other Educational Workers	26%	29%	27%	24%	19%	21%	26%	28%
Total Jobs	14,850	14,970	15,310	16,150	17,210	17,950	19,090	20,440

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

While teacher shortages are a national phenomenon, this mobilization of substitute teachers appears to be particularly pronounced locally. Evidence of this can be seen in the location quotient for substitute teachers, which rose from 1.8 in 2012 to 3.9 in 2019. That gives the Stockton MSA the 10th highest concentration nationally out of the 355 MSA for which

data is available. Faced with similarly severe teacher scarcity, many other regions across California are also resorting to increased utilization of substitute teachers and teaching assistants,¹² but not to the extent as locally. This can be seen when the

Table 14 Substitutes & Teacher Assistants Employment Context 2019

Stockton MSA	Employment	Location Quotient
Substitute Teachers	3,900	3.9
Teacher Assistants	3,650	1.6

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

local share of employment is compared to the statewide share. In terms of substitute teachers, Stockton has 2.6 times the share statewide, and in terms of teaching assistants Stockton has 1.5 times the statewide share.

Understanding and addressing the causes for the high numbers of substitute teachers locally needs to be a priority. Research suggests that a prevalence of substitute teachers is associated with significant reduction in student achievement. This is even more important in the context of disadvantaged students where the reduction in achievement is more likely to reduce their motivation to succeed and create further barriers to their finding family sustaining middle-skilled jobs.¹³

Addressing this growing dependence on substitute teachers and assistants is critically important to the development of a successful middle-skilled jobs strategy. As this closely linked to ensuring an adequate supply of new teachers and retention of existing teachers, it is imperative that this is part of efforts to enhance the local education system.

Section 3 - Higher Paying Occupations in Need of Skilled Workers

3.1 Installation, Maintenance, and Repair Occupations

Installation, maintenance, and repair workers include 52 occupations that engage in a variety of jobs ranging from the installation of computerized, electric, electrical, and mechanical systems to their preventative maintenance as well as their troubleshooting and repair. Specializations include vehicles such as aircraft, busses, trucks, and automobiles; equipment like telecommunication, medical, as well as heating and air conditioning; and other parts of our built environment like home appliances, security systems, and wind turbines.¹⁴

Employment of these individuals takes place across a wide variety of business activities. Automotive repair and maintenance accounts for the highest level of employment but only 8% of all jobs in the group with the next highest level of

Table 15 Stockton MSA Installation, Maintenance, and Repair Workforce Demographics

Race/Ethnicity	Hispanic or Latino	White	Asian	Black or African American	Others
Installation	36%	47%	10%	3%	4%
<i>All Employed</i>	39%	36%	15%	6%	4%

Education Level	Less than High School	High School or GED	Assoc. Degree/Some College	Bachelor's Degree	Graduate Degree
Installation	15%	35%	44%	5%	1%
<i>All Employed</i>	16%	27%	37%	14%	7%

Age	16 to 34 years	35 to 54 years	55 years and older
Installation	32%	51%	17%
<i>All Employed</i>	37%	44%	19%

Gender	Female	Male
Installation	2%	98%
<i>All Employed</i>	45%	55%

Source: Burning Glass, based on US Census American Community Survey and US Bureau of Labor Statistics Local Area Unemployment Statistics.

employment in building equipment contractors with 7.7% of jobs.¹⁵ Nationally installation jobs are forecast to grow near the average for all occupations.¹⁶

Men account for 98% of workers in these jobs, while whites form 47% of workers in this group compared to their 36% share of the total workforce. Half of these jobs are undertaken by individuals with a high school degree or less as their highest qualification. Employment growth locally was near Statewide and National rates with an 18% increase between 2010 and 2019. In terms of comparative shares, local employment is near national levels with a location quotient of 0.97.

Table 16 Installation, Maintenance, and Repair Employment Context

% Δ in Employment 2010 to 2019	Stockton MSA	California	USA
	18%	19%	16%

Stockton MSA	2010	2012	2019
Employment	8,110	7,130	9,530
Location Quotient	1.05	0.94	0.97

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

Despite declining in real terms between 2010 and 2019, at \$23.74 per hour in 2019 median earnings were still 30% higher than the overall median wage for the Stockton MSA. There was also little inequality with the median wage equaling 95% of the mean wage. These are encouraging features given the predominantly technical training that many jobs in this group require and the relatively scarce higher education attainment levels of the area.

Table 17 Installation, Maintenance, and Repair Earnings Context

	Stockton MSA	California	USA
Mean Hourly Wage:	\$25.09	\$26.77	\$24.10
% Δ Real Mean Wage 2010 to 2019	-3.1%	-0.3%	-0.1%
Median Hourly Wage:	\$23.74	\$24.81	\$22.42
% Δ Real Median Wage 2010 to 2019	-4.1%	-2.2%	-0.9%

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

3.2 Construction Occupations

The construction and extraction occupational group consists of 59 occupations that involve the building of structures. Construction and extraction jobs include designing and building structures that range from factories and

houses to roads and levees. Jobs within this group include carpenters, plumbers, electricians, and iron workers.¹⁷ New home construction since the housing crisis of the 2000s has been a slow process for many communities

Table 18 Stockton MSA Construction Workforce Demographics

Race/Ethnicity	Hispanic or Latino	White	Asian	Black or African American	Others
Construction	62%	31%	2%	3%	2%
<i>All Employed</i>	39%	36%	15%	6%	4%

Education Level	Less than High School	High School or GED	Assoc. Degree/Some College	Bachelor's Degree	Graduate Degree
Construction	29%	42%	26%	3%	1%
<i>All Employed</i>	16%	27%	37%	14%	7%

Age	16 to 34 years	35 to 54 years	55 years and older
Construction	36%	53%	11%
<i>All Employed</i>	37%	44%	19%

Gender	Female	Male
Construction	1%	99%
<i>All Employed</i>	45%	55%

Source: Burning Glass, based on US Census American Community Survey and US Bureau of Labor Statistics Local Area Unemployment Statistics.

across Northern California and the residential construction labor force is still recovering. Increasing construction jobs is directly related to policy priorities promoting new single-family and multi-family construction to increase housing stocks and efforts to build out low-income housing to combat homelessness.¹⁸

Analysis of local occupational employment patterns shows construction jobs being

Table 19 Construction Employment Context

% Δ in Employment 2010 to 2019	Stockton MSA	California	USA
	59%	39%	22%

Stockton MSA	2010	2012	2019
Employment	6,540	5,500	10,410
Location Quotient	0.83	0.74	0.98

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

overwhelmingly (85%) concentrated in the construction industry. The area’s construction workforce has a larger share of Hispanics (62%) in the workforce than are employed in the County as a whole (39%), it also has significantly more men (99%) than the overall workforce (55%). In terms of educational attainment, 71% of construction workers have a high school or lower qualification compared to 43% for the overall workforce.

Nationally, construction jobs are forecast to grow faster than the average for all occupations. Encompassing a period of recovery from the housing crisis, between 2010 and 2019 construction jobs have grown at faster rate in the Stockton MSA than Statewide or Nationally. In terms of comparative shares, local employment is near national levels with a location quotient of 0.98.

With a 2019 median hourly wage of \$26.69, earnings for construction jobs were 46% higher than the median for all occupations in the Stockton MSA.¹⁹ Earnings inequality is also very low for construction jobs with the median wage 96% of the average wage.

Table 20 Construction Earnings Context

	Stockton MSA	California	USA
Mean Hourly Wage:	\$27.76	\$29.52	\$25.28
% Δ Real Mean Wage 2010 to 2019	-3.5%	1.0%	2.2%
Median Hourly Wage:	\$26.69	\$27.26	\$22.80
% Δ Real Median Wage 2010 to 2019	-6.9%	-1.3%	3.5%

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

3.3 Teachers and Professional Education Occupations

There are 62 occupations in the education, training, and library group in addition to the substitute teachers and teaching assistants discussed in Section 2.2. The jobs include a range of teachers from preschool and elementary to secondary and postsecondary as well as instructional coordinators, archivists, and librarians.²⁰ These jobs are critical components of the community’s skills ecosystem and fundamental to building a holistic

transformative skills pathway for better middle-skilled jobs. Educational occupations typically require a bachelor’s degree or higher, so these workers are relatively high-skilled, particularly given the lower skill structure of the local

Table 21 Stockton MSA Educational Workforce Demographics

Race/Ethnicity	Hispanic or Latino	White	Asian	Black or African American	Others
Educational	24%	56%	12%	4%	4%
All Employed	39%	36%	15%	6%	4%

Education Level	Less than High School	High School or GED	Assoc. Degree/ Some College	Bachelor's Degree	Graduate Degree
Educational	1%	4%	25%	39%	31%
All Employed	16%	27%	37%	14%	7%

Age	16 to 34 years	35 to 54 years	55 years and older
Educational	29%	46%	25%
All Employed	37%	44%	19%

Gender	Female	Male
Educational	75%	25%
All Employed	45%	55%

Source: Burning Glass, based on US Census American Community Survey and US Bureau of Labor Statistics Local Area Unemployment Statistics.

workforce.

There is a disproportionate share of women in these careers (75%) compared to their overall composition of the workforce (45%). Whites account for 56% of jobs in the group compared to a 36% share of the total workforce. Educational workers also tend to be older with 25% 55 years and older compared to 19% for the entire local workforce.

Excluding substitutes and teaching assistants who in 2019 composed 37% of the entire occupational group, employment has grown by 12% from 11,600 in 2012 to 12,890 in 2019. Earning opportunities in educational jobs is good with a 2019 median hourly wage of \$25.30. However, both mean and median earnings declined in real terms between 2010 and 2019. While the median wage was 88% of the mean wage in 2019, that had decreased from 94% of the mean wage in 2010.

Table 22 Education, Training and Library Employment Context

% Δ in Employment 2010 to 2019	Stockton MSA	California	USA
		30%	13%
Stockton MSA	2010	2012	2019
Employment	15,730	14,850	20,440
Location Quotient	1.19	1.19	1.34
Emp w/out Subs & TAs		11,600	12,890
LQ w/out Subs & TAs			1.1

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

Table 23 Education, Training and Library Earnings Context

	Stockton MSA	California	USA
Mean Hourly:	\$28.83	\$32.42	\$27.75
% Real Mean Wage Δ 2010 to 2019	-3.4%	-0.9%	-2.4%
Median Hourly:	\$25.30	\$27.87	\$24.42
% Real Median Wage Δ 2010 to 2019	-9.7%	-5.6%	-5.2%

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics & Annual Avg. Consumer Price Index-All Urban.

3.4 Healthcare Practitioners and Technical Occupations

The healthcare practitioners and technical group consists of 61 occupations that promote health and wellness. Healthcare practitioners and technical occupations include registered nurses, physicians and surgeons, as well as dietitians and nutritionists.²¹ Driven by an aging population with growing health care needs and workforce transitions, these occupations in the Stockton MSA are forecast to grow by over 1,100 jobs annually through 2026.²² With the median wage in healthcare practitioners and technical jobs 134% higher than the median for all occupations it is crucial in terms of both the health needs of the population and the earnings opportunities of these jobs that they are a focus of the middle-skilled jobs strategy.

Using an analysis of local occupational employment patterns, healthcare practitioners and technical workers' industries of employment were overwhelmingly (78%) concentrated in the health care & social assistance industry. Health practitioners' jobs tend to engage more women than men with 69% being female compared to their composing just 45% of all occupational employment. The racial/ethnic features of the health practitioner workforce show that Hispanic

Table 24 Healthcare Practitioners and Technical Workforce Demographics

Race/Ethnicity	Hispanic or Latino	White	Asian	Black or African American	Others
Practitioners	17%	39%	32%	7%	5%
<i>All Employed</i>	39%	36%	15%	6%	4%
Education Level	Less than High School	High School or GED	Assoc. Degree/Some College	Bachelor's Degree	Graduate Degree
Practitioners	1%	7%	39%	28%	26%
<i>All Employed</i>	16%	27%	37%	14%	7%
Age	16 to 34 years		35 to 54 years		55 years and older
Practitioners	28%		48%		24%
<i>All Employed</i>	37%		44%		19%
Gender	Female		Male		
Practitioners	69%		31%		
<i>All Employed</i>	45%		55%		

Source: Burning Glass, based on US Census American Community Survey and US Bureau of Labor Statistics Local Area Unemployment Statistics.

populations are underrepresented with just 17% of these jobs but 39% of the total employed. In contrast, while Asians form 15% of the total employed, they have 32% of these jobs.

Between 2010 and 2019 health practitioner employment grew by 20% but its share declined leading the area's location quotient to decrease from 1.02 to 0.87. In terms of earnings, the 2019 median wage for healthcare practitioners and technical jobs was \$42.87 per hour. Earnings inequality decreased in the decade from 2010 to 2019 with the median wage equaling 91% of the mean wage in 2019. These earnings were significantly higher than National levels with mean local wages 18% higher and median wages 31% higher. The relatively lower level of employment coupled with the higher earnings suggests that there may be a local shortage of skills in these occupations.²³

Table 25 Healthcare Practitioners and Technical Employment Context

% Δ in Employment 2010 to 2019	Stockton MSA	California	USA
	20%	24%	20%
Stockton MSA	2010	2012	2019
Employment	10,890	11,710	13,030
Location Quotient	1.02	1.02	0.87

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

Table 26 Healthcare Practitioners and Technical Earnings Context

	Stockton MSA	California	USA
Mean Hourly Wage:	\$47.31	\$49.59	\$40.21
% Δ Real Mean Wage 2010 to 2019	0.8%	2.6%	0.1%
Median Hourly Wage	\$42.87	\$45.08	\$32.78
% Δ Real Median Wage 2010 to 2019	4.9%	6.2%	-0.6%

Source: US Bureau of Labor Statistics, Annual May, Occupational Employment Statistics

Endnotes

- ¹ For a detailed list of health science occupations, please refer to the O*Net website:
<https://www.onetonline.org/find/career?c=8&g=Go>
- ² For a nation-wide profile of healthcare occupations see the US Bureau of Labor Statistics Occupational Outlook Handbook at:
<https://www.bls.gov/ooh/healthcare/home.htm>
- ³ Detailed local employment projections are available from the California Employment Development Department at:
<https://www.labormarketinfo.edd.ca.gov/data/employment-projections.html>
- ⁴ Describe occupational changes in health support.
- ⁵ For detailed list of transportation, distribution and logistics occupations, please refer to the O*Net website:
<https://www.onetonline.org/find/career?c=16&g=Go>
- ⁶ See, for example: <https://www.sjcog.org/249/Goods-Movement> and <https://www.sjcog.org/389/Warehousing-and-Logistics>
- ⁷ See, for example: https://www.pacific.edu/Documents/school-business/BFC/TransportationWarehousing_CBPR_2019.pdf
- ⁸ <https://www.deltacollege.edu/campus-offices/instruction-and-planning/career-technical-education-and-workforce-development/dsaea>
- ⁹ <https://foundationccc.org/What-We-Do/Workforce-Development/Workforce-Services/California-Apprenticeship-Initiative>
- ¹⁰ For detailed list of production occupations, please refer to the O*Net website:
<https://www.onetonline.org/find/family?f=51&g=Go>
- ¹¹ For a nation-wide profile of production occupations see the US Bureau of Labor Statistics Occupational Outlook Handbook at:
<https://www.bls.gov/ooh/production/home.htm>
- ¹² See, for example, A. Podolsky and L. Sutch (2016). "California Teacher Shortages: A Persistent Problem", Learning Policy Institute.
- ¹³ See for example: Miller, R. T., Murnane, R. J., & Willett, J. B. (2008). Do worker absences affect productivity? The case of teachers. *International Labor Review*, 147(1), 71–89. Available at: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1564-913X.2008.00024.x>
- ¹⁴ For detailed list of installation, maintenance, and repair occupations, please refer to the O*Net website:
<https://www.onetonline.org/find/family?f=49&g=Go>
- ¹⁵ May 2019 National Occupational Employment Statistics: <https://www.bls.gov/oes/current/oes490000.htm>
- ¹⁶ For a nation-wide profile of installation, maintenance, and repair occupations see the US Bureau of Labor Statistics Occupational Outlook Handbook at: <https://www.bls.gov/ooh/installation-maintenance-and-repair/home.htm>
- ¹⁷ For detailed list of construction and extraction occupations, please refer to the O*Net website:
<https://www.onetonline.org/find/family?f=47&g=Go>
- ¹⁸ See, for example: https://ternercenter.berkeley.edu/construction-costs#_ftn5 and <https://lao.ca.gov/Publications/Report/4102>
- ¹⁹ For a nation-wide profile of construction and extraction occupations see the US Bureau of Labor Statistics Occupational Outlook Handbook at: <https://www.bls.gov/ooh/construction-and-extraction/home.htm>
- ²⁰ For detailed list of education, training, and library occupations, please refer to the O*Net website:
<https://www.onetonline.org/find/family?f=25&g=Go>
- ²¹ For a nation-wide profile of healthcare occupations see the US Bureau of Labor Statistics Occupational Outlook Handbook at:
<https://www.bls.gov/ooh/healthcare/home.htm>
- ²² California Employment Development Department, long-term Stockton-Lodi MSA occupational projections 2016-2026:
[https://www.labormarketinfo.edd.ca.gov/file/occproj/stoc\\$occproj.xlsx](https://www.labormarketinfo.edd.ca.gov/file/occproj/stoc$occproj.xlsx)
- ²³ See, for example: https://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/UCSF%20PCP%20Workforce%20Study_Rpt%202%20-%20Final_081517.pdf, and <https://healthforce.ucsf.edu/sites/healthforce.ucsf.edu/files/publication-pdf/UCSF%20Central%20Valley%20Workforce%20RN%20Forecasts%202018-03-26.pdf>