



Sutter Health
Palo Alto Medical
Foundation

2022

Santa Cruz County State of the Workforce Report

Produced for the Santa Cruz County Workforce Development
Board

May 2022

Table of Contents

Table of Contents	1
Executive Summary	2
Introduction	2
Key Findings	2
Recommendations.....	4
Map of Santa Cruz County.....	7
Employment Data.....	8
Industry Employment.....	11
Job Quality.....	14
Santa Cruz County Residents.....	17
Demographics	17
Housing and Transportation.....	20
Recovery From COVID-19, Labor Force Participation, Healthcare, Agriculture, and Hospitality	23
Santa Cruz County in the Aftermath of COVID-19.....	23
Healthcare Deep Dive.....	26
Accommodation and Food Services	32
Agriculture.....	34
Appendix A: Healthcare Workforce Transition Opportunities	37

Executive Summary

Introduction

The Santa Cruz County Workforce Development Board engaged BW Research to develop this 2022 State of the Workforce Report. While this report has historically used a range of metrics to capture the current state the workforce and economy of Santa Cruz County, this year's report has particular importance as the local, and global, economy continues to recover and evolve from the disruptions of the COVID-19 pandemic. These disruptions have also reshaped labor markets and the balance of power between employers and employees, resulting in new and additional challenges as workers and employers try to find and match with one another. The findings of this report highlight these disruptions and include deep dives into some industries in Santa Cruz County that have seen the greatest workforce disruptions: Healthcare, Tourism and Hospitality, and Agriculture.

Key Findings

The following are some of the most important findings and trends identified in this report.

- 1. Santa Cruz County labor market has shrunk in size.** In December 2021 there were 6,400 fewer workers than in December 2019, yet the unemployment rate in December 2021 is roughly the same (5.4%) as it was two years prior (5.2%). This represents nearly a 5% decline in workers over a two-year period. An analysis of labor force participation in the county points to part of the problem; between January of 2015 and 2022, labor force participation in the county declined 5.9 percentage-points, or roughly nine percent. Not all of the decline is pandemic related—the labor force participation rate between January 2015 and January 2020 fell 3.3 percentage-points, representing a five percent decline before COVID-19 had arrived in the U.S. An aging population in Santa Cruz County likely plays a significant role in these trends, which when combined with early retirements driven by COVID-19, has led to an accelerated loss of workers and a lack of younger workers to replace them. Furthermore, the California Department of Finance estimates that approximately a net 4,600 residents moved away from Santa Cruz County between July 2019 and July 2021, representing a notable decline in population, many of which were likely low-and middle-income workers.
- 2. Job quality in Santa Cruz County has improved over the last six years, from 2015 to 2021. There has been an increase in the proportion of higher-paying, higher-skill jobs in the county and a decrease in lower-paying, low-skill jobs.** While job quality in Santa Cruz County remains lower than the statewide average, the county has recently shown improvement. In Santa Cruz County, there were approximately 1,300 more Tier 1 jobs and 850 more Tier 2 jobs in 2021 Q3 than there were in 2015 Q3. In 2021 Q3, there were 1,100 fewer Tier 3 jobs compared to 2015 Q3. This indicates a shift towards a more skilled, more educated workforce with higher median annual earnings.
- 3. The industries with the lowest average annual wages per worker all experienced declines in employment between 2015 and 2021, while many better-paying industries saw growth.** Approximately 2,200 Accommodation and Food Services workers were lost between 2015 and 2021, representing a 19 percent decline in employment. Healthcare and Social Assistance—which

- accounts for 15 percent of countywide employment and is one of the mid-earning industries--grew by 2 percent. The Construction industry, which is another mid-earning industry, experienced the most proportional growth in employment (67 percent) during this time. Although the Information industry is among the highest earning industries in Santa Cruz County, the industry experienced the greatest proportional decline of workers between 2015 and 2021 (-46 percent) though this industry is small and this decline represents a relatively small decline in number of jobs lost.
- 4. Santa Cruz County residents have changed their shopping and employment behavior, and they have not returned to pre-pandemic patterns.** As of March 2022, people in Santa Cruz County were still spending seven percent more time at home than they were before the pandemic, and they were spending 19 percent less time at retail and recreation locations, which include shopping malls and movie theatres. The nature of work may have also permanently changed for many; people were spending an average of 27% less time at workplaces than before the pandemic. The rise of remote work may have significant impacts on the county's economy, including changes in commuting patterns and the economic activity of businesses that previously relied on office lunch hours as a significant part of their revenue stream.
 - 5. The healthcare industry has seen significant disruption.** According to a nationwide poll of healthcare workers in the fall of 2021, 18% of those who had worked in the healthcare industry had quit their job and another 12% had been laid-off or lost their job at some point during the pandemic. The COVID-19 pandemic, wanting more money or better benefits, finding a better opportunity, and feeling burned out or overworked were the most common reasons for these separations. This high turnover is likely to have lasting implications in Santa Cruz County; many high demand healthcare occupations, including Personal Care Aids, Home Health Aides, Nursing Assistants, and Medical Assistants, are projected to see high rates of demand in the next year relative to the current number of workers in that occupation, as well as low unemployment rates among workers who worked in these occupations. These factors, paired with the specialization required for most healthcare occupations, mean that the industry is likely to continue to see a shortage of workers until training and education pipelines can fill some of the gaps in the workforce.
 - 6. The pandemic accelerated the decline in Agricultural employment in Santa Cruz County.** While nonfarm employment across the county has risen steadily over the last decade or more, farm employment has seen a steady decline in the number of workers. For example, peak farm employment in July of 2010 was 32% higher than it was in July 2021. Some—but not all—of this shift was driven by the pandemic, as peak farm employment fell 17% between July 2019 and July 2021. The acceleration in the decline of farm labor in Santa Cruz County will have long term effects as farmers look to automation, downsizing their plots, or changing crops in order to address the labor challenges.
 - 7. Accommodation and Food Services was the industry that saw the largest decline in employment during the height of the pandemic, though the industry had largely adapted and recovered by the start of 2022.** In the early days of the pandemic, Accommodation and Food Services in Santa Cruz County saw employment plunge to levels 57% lower between February

and March of 2020, representing a decline of 11,600 jobs. The industry has since largely recovered, though not fully; countywide Accommodation and Food Services employment in February 2022 was equivalent to the number of jobs in February of 2015. The summer of 2022 is expected to experience continued increased demand for accommodation and food services in Santa Cruz County, and is likely to test employer's ability to find workers.

Recommendations

This section outlines recommendations that were developed after consideration of the research findings. While these recommendations are geared towards opportunities for the Santa Cruz County Workforce Development Board, many will require collaboration and partnership with other organizations and institutions across the county.

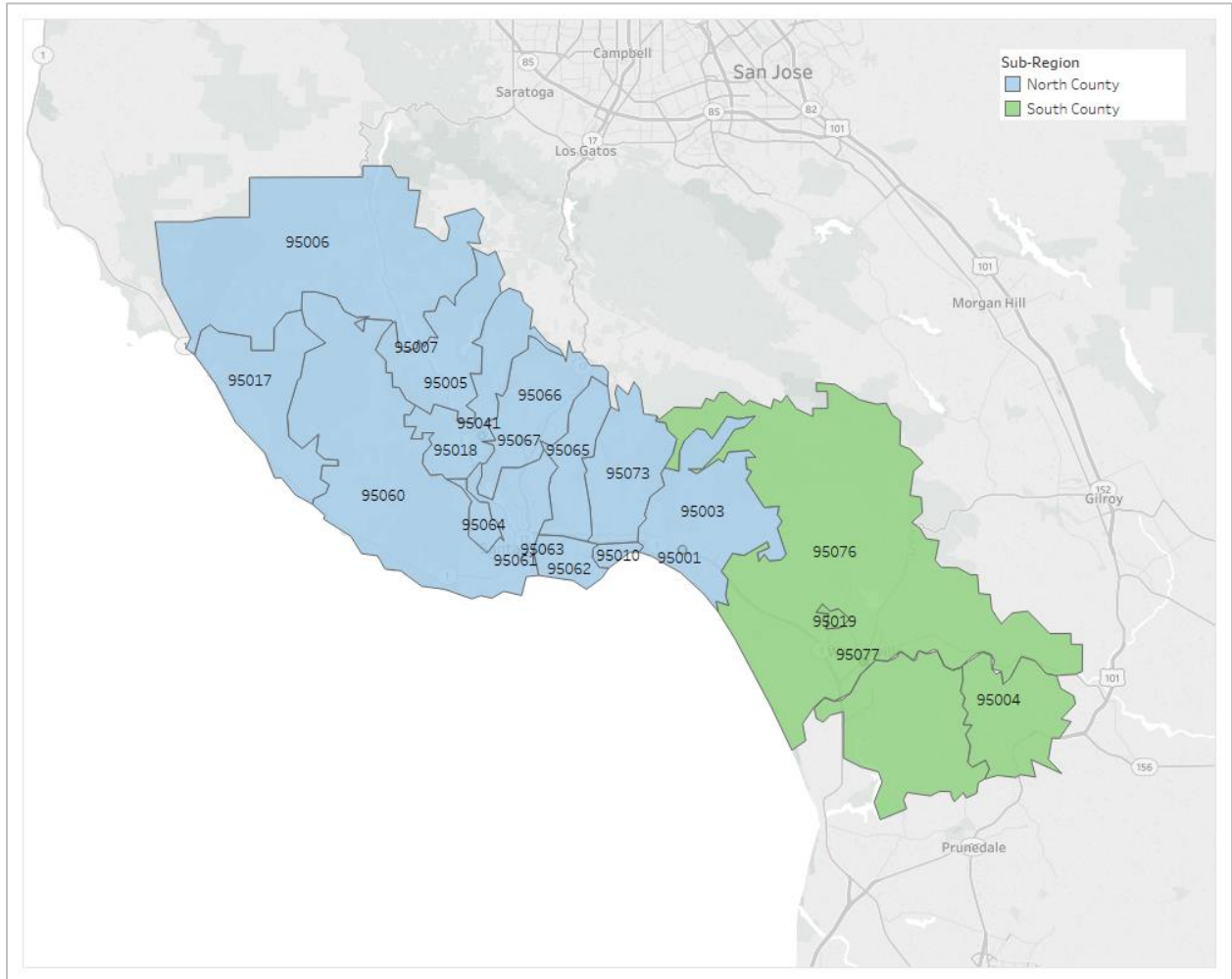
- 1. Consider initiatives to increase labor force participation and pull residents from the employment sidelines.** Unemployed, underemployed, and adults who are disengaged from the labor force present an economic opportunity for a county that is looking for talent. There are several populations that typically have lower labor force participation rates because of barriers they face, and removing those barriers may help those individuals enter the workforce. These populations include parents with young children, those with lower educational attainment, formerly incarcerated, and long-term unemployed and discouraged workers, among others. Strategies that expand access to childcare, improve digital literacy, and increase educational attainment and awareness of relevant career pathways--especially when they are targeted and refined to support specific populations--can increase labor force participation and improve economic mobility.
- 2. Support specific workforce attraction and retention efforts for the healthcare and hospitality industries.** Both the Healthcare and Hospitality industries have seen considerable churn and challenges over the last two plus years of the pandemic, and attracting new workers to the industry is necessary to fully meet their workforce demands. The Santa Cruz County Workforce Development Board may be able to help with these attraction and retention efforts by working with regional employers to develop career profiles and pathways that illuminate the purpose, earnings potential, and upward trajectory of these jobs. Developing strategies to educate students and jobseekers on these potential employment opportunities could also be valuable in the larger effort to bring more workers into the industries. Surveys have shown that factors like pay, purpose, and flexibility are particularly important and salient for those looking for new job opportunities in the post-pandemic world, and employers would benefit from readily advertising these aspects of their jobs.
- 3. Continue to assess and compile the emerging employment skills and pathways in agriculture.** The slow march of automation in agriculture was briefly accelerated by the pandemic, though shortages of human workers highlighted the role that humans will continue to play in agriculture. Many agriculture roles will increasingly rely on some knowledge of web technologies and the Internet of Things (IoT), and some may even require working alongside robots to maintain them and serve as quality control. Working with farmers to develop programs that incentivize and train current workers to upskill in these technologies may have some success in attracting new

entrants and retaining talent. In some cases, these technological skills may be paired with basic education, ESL, computer literacy, or intermediate math or sciences courses to ensure workers have the sufficient background knowledge necessary to operate the technical equipment. This opportunity for workers to advance their knowledge and abilities may help adopters of these programs differentiate themselves from other farms and allow agricultural workers to increase their education while continuing to work.

4. **Emphasize education and workforce development efforts among younger adult residents in South Santa Cruz County.** Residents in the Southern sub-region of the county are, on average, younger, less educated, more likely to be in lower-paying employment, and more racially and ethnically diverse than residents in the Northern sub-region. Workforce development programs in South Santa Cruz County should include the following priorities:
 - a. **Increase educational attainment for those that have a high school diploma or less as their highest level of education.** Labor force participation, overall earnings, and economic mobility are all improved with higher educational attainment, particularly if those individuals have less than a high school diploma. Strategies and investments that increase educational attainment among residents of South Santa Cruz County would provide multiple benefits for the regional economy.
 - b. **Emphasize career education and career pathways that are available in the county and provide an onramp to a sustainable career.** One way to do this is to increase communication and engagement between employers and young people. Programs such as field trips, site visits, and career days, can help middle and high school students better understand the full range of career opportunities and how to best work towards them. Rather than having all students attend a four-year university to figure out what their interests are, some students may be more interested to learn about healthcare careers that start with a certificate or associates degree but allow for growth and strong earning potential down the road.
 - c. **Identify employment opportunities that allow for additional training and education for current workers.** Employment opportunities that serve the joint purpose of inspiring and offering young workers more opportunities for training and education, while also providing some income and work experience, would be quite valuable. This could include pre-apprenticeships and apprenticeship programs, as well as paid internships and more traditional full-time employment paired with training and/or educational programs.
5. **Promote efforts that will expand affordable housing options around Santa Cruz County's work and transit hubs.** Between July 2019 and July 2021, the California Department of Finance estimates that Santa Cruz County's population declined by a net 4,600 residents. This was driven by nearly 5,000 residents leaving the county. While this data does not provide county-level detail on the demographics of these workers, we know that low- and middle- income workers make up the greatest share of residents who are leaving statewide. High costs of living are likely a significant driving force for this migration. Promoting additional housing—including the initiatives that are already underway—is one way to increase affordability. Improving traffic and commute

times is another area of opportunity to increase the livability of the county for a broad range of workers.

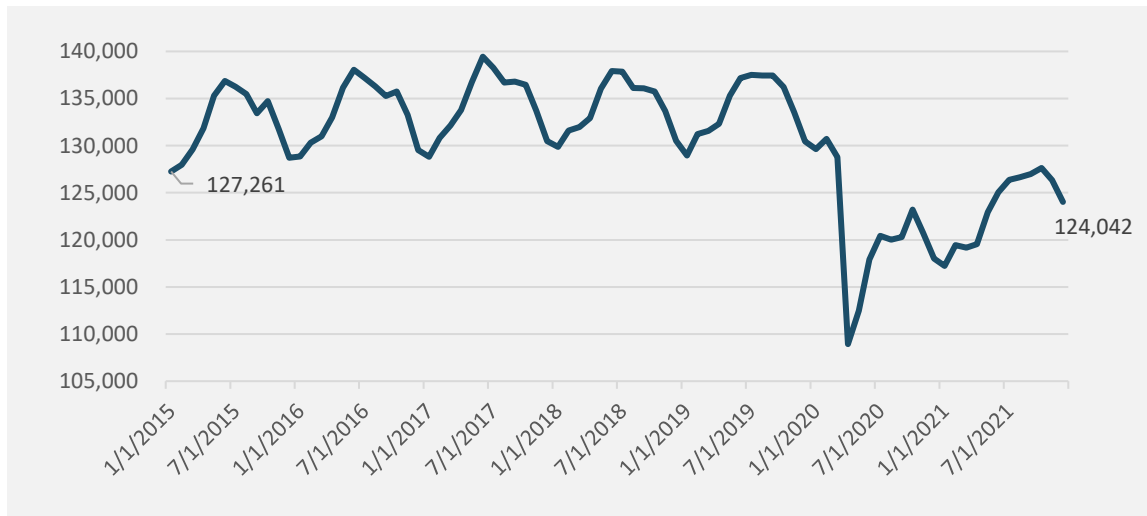
Map of Santa Cruz County



Employment Data

Between 2015 and the end of 2019, employment in Santa Cruz County oscillated between 125,000 and 140,000 employed persons (Figure 1). The number of employed persons in Santa Cruz County increased from just over 127,000 in January 2015 to over 129,500 in January 2020. The COVID-19 pandemic dramatically impacted overall employment from its onset in early 2020, decreasing the number of employed persons to approximately 109,000 in April 2020; this was the lowest overall employment in Santa Cruz County since January 2015. Santa Cruz County has since been on a road to recovery; however, the recovery in overall employment has remained below pre-pandemic levels. The county experienced a peak of approximately 127,600 employed persons, a figure comparable to overall employment in January 2015. The downturn in overall employment by the end of 2021 indicates that the full extent of recovery in Santa Cruz County remains to be seen.

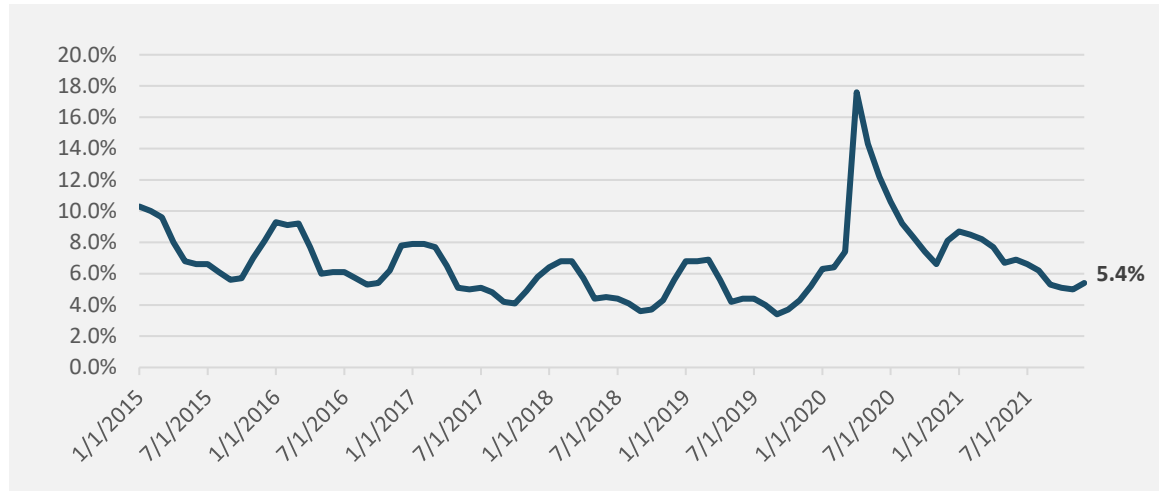
FIGURE 1. OVERALL EMPLOYMENT IN SANTA CRUZ COUNTY (2015-2021)¹



Although the downward trend in the unemployment rate in Santa Cruz County was derailed by the effects of the Covid-19 pandemic in 2020, the county has shown significant recovery (Figure 2). The unemployment rate dropped from a 17.6 percent spike in April 2020 to 5.4 percent in December 2021, signaling a return to the pre-pandemic trend. The unemployment rate spiked up to 17.6 percent in April 2020. Santa Cruz County experienced a rapid drop in the unemployment rate between April 2020 and November 2020; the unemployment rate fell by 11 percentage points during this interval. Between December 2020 and December 2021, the unemployment rate dropped by 2.7 percentage points. The unemployment rate dropped to 5.1 percent in December 2021, 5.2 percentage points lower than the unemployment rate in January 2015.

¹ U.S. Bureau of Labor Statistics/FRED

FIGURE 2. MONTHLY UNEMPLOYMENT RATES IN SANTA CRUZ COUNTY (JAN 2015 - DEC 2021)², NOT SEASONALLY ADJUSTED



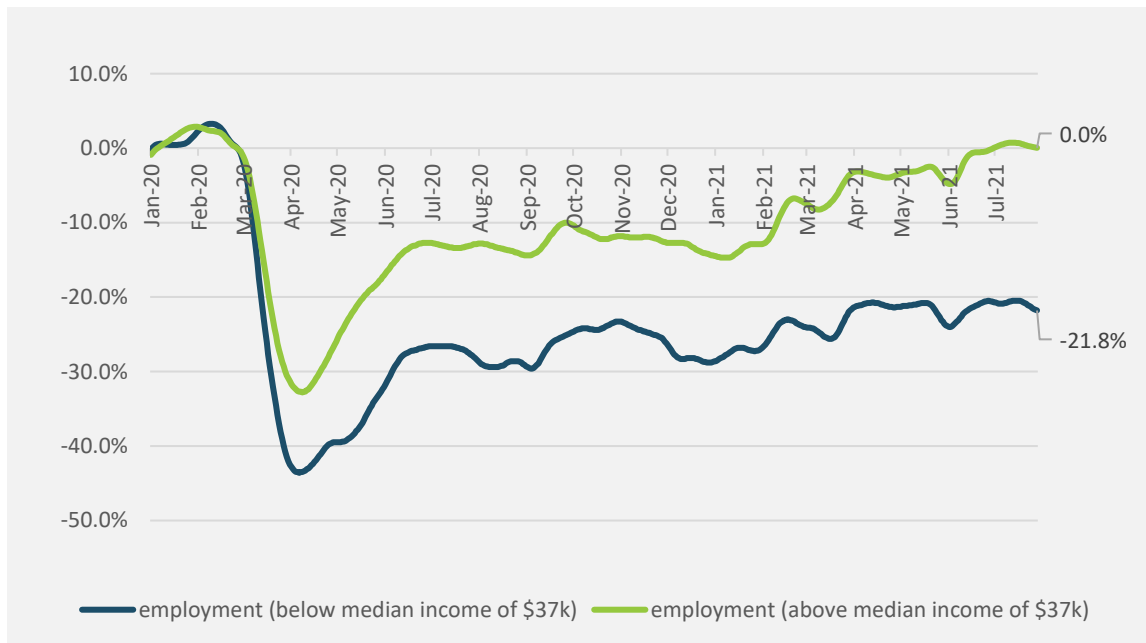
Business Case Study: Discretion Brewing

*Discretion Brewing has observed the tight labor markets that their clients, including regional bars and restaurants, have experienced. Fortunately, Discretion itself has not experienced significant turn-over and they have been able to retain all but two of their full-time employees, who were laid off in the middle of the pandemic. **Discretion Brewing has been able to retain their employees by offering a comprehensive benefits package that includes health insurance, 401k matching, vision and dental insurance, life insurance, and a generous PTO policy.** Despite having to lay-off all their part-time front facing staff at the beginning of the pandemic, the company's staff is back to pre-pandemic levels; there has been a mix of new and old hires for the positions they had to refill. Discretion has found rehiring for these positions easy: "We kept in touch with our old staff," Dustin Vereker, Chief Beer Ambassador of Discretion said, "and we've had a mix of people coming back to the roles because of it." On attracting new hires, Dustin highlighted how "[Discretion] attracts a lot of applicants because we have that 'cool factor'— it's considered cool to work in a brewery— and we treat our people well, which is very important to us". Provided there aren't any new major disruptions to the industry in the near future—like "new variants of the virus [that could] lead to restrictions and indoor sitting limits"— the company is projecting strong growth going forward.*

² U.S. Bureau of Labor Statistics/FRED

At the onset of the Covid-19 pandemic, employment rates for persons above and below the median income (\$37k) were almost equal (Figure 3). Employment rates began to diverge in April 2020, with the employment rate for those above the median income showing a quicker recovery and a return to the January 2020 baseline by August 2021. Compared to the baseline, the employment rate for those below the median was 21.8 percent less than the rate in January 2020. The pandemic affected employees at different income levels disparately and there still exists a large gap in recovery for those below the median income.

FIGURE 3. CHANGE IN EMPLOYMENT RATES BY INCOME LEVEL IN SANTA CRUZ COUNTY³



³ Opportunity Insights

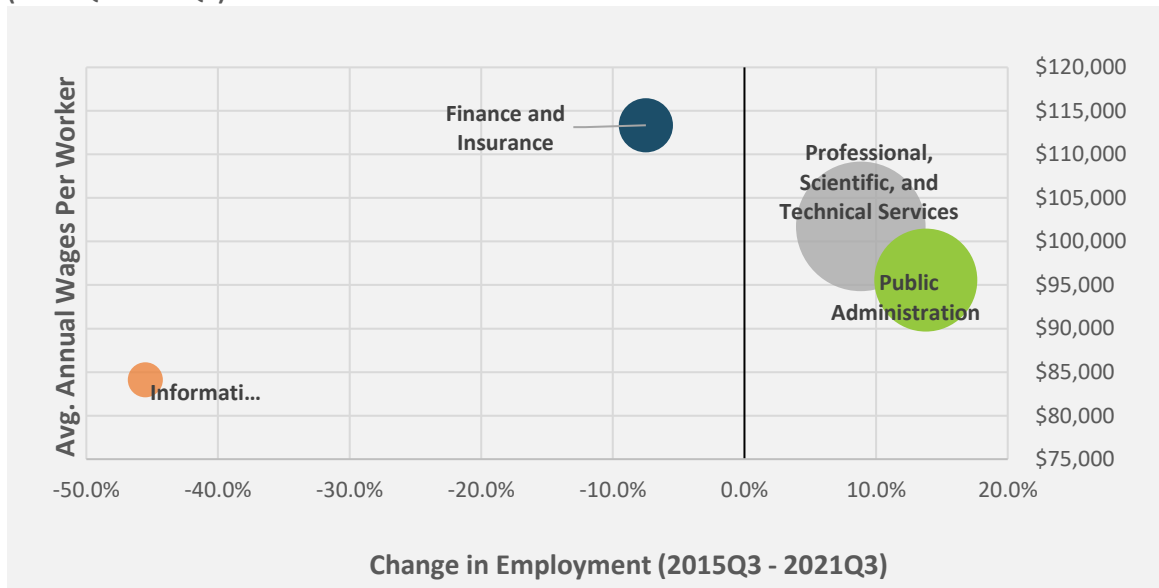
Industry Employment

This section discusses the changes in industry-level employment in the county. Traditional 2-Digit NAICS industries are used because pandemic-related volatility in employment numbers has prevented the ability to confidently project employment at the more granular 6-digit NAICS level.

Between 2015 Q3 and 2021 Q3, many industries saw negative employment growth in Santa Cruz County. Information experienced the most negative change (46 percent) in employment. Construction added the most jobs, growing by 67 percent followed by Transportation and Warehousing (38 percent). Public Administration and Manufacturing experienced modest employment growth of 14 percent and 19 percent respectively. The lowest earning industries— Arts, Entertainment, and Recreation and Accommodation and Food Services— lost 21 percent and 19 percent of their employees, respectively. Finance and Insurance, the highest earning industry, experienced a negative employment change 8 percent between 2015 Q3 and 2021 Q3.

One half of the highest earning industries— averaging over \$75k in annual wages per worker—lost workers while the other half gained employees between 2015 and 2021. Information had the largest negative five-year change in employment, though it is a small industry accounting for about 300 jobs, meaning that small changes in the number of workers result in large percentage changes. Finance and Insurance, which has more than 700 workers across the county, saw a slight decline (8 percent). Employment in Professional, Scientific and Technical Services—which employed over 4,000 workers in 2021 Q3-- grew by 9 percent while employment in Public Administration grew the most of the highest earning industries (14 percent) (Figure 4).

FIGURE 4. FIVE-YEAR EMPLOYMENT PERCENTAGE CHANGE IN SANTA CRUZ COUNTY: HIGHEST EARNING INDUSTRIES (2015 Q3-2021 Q3)⁴

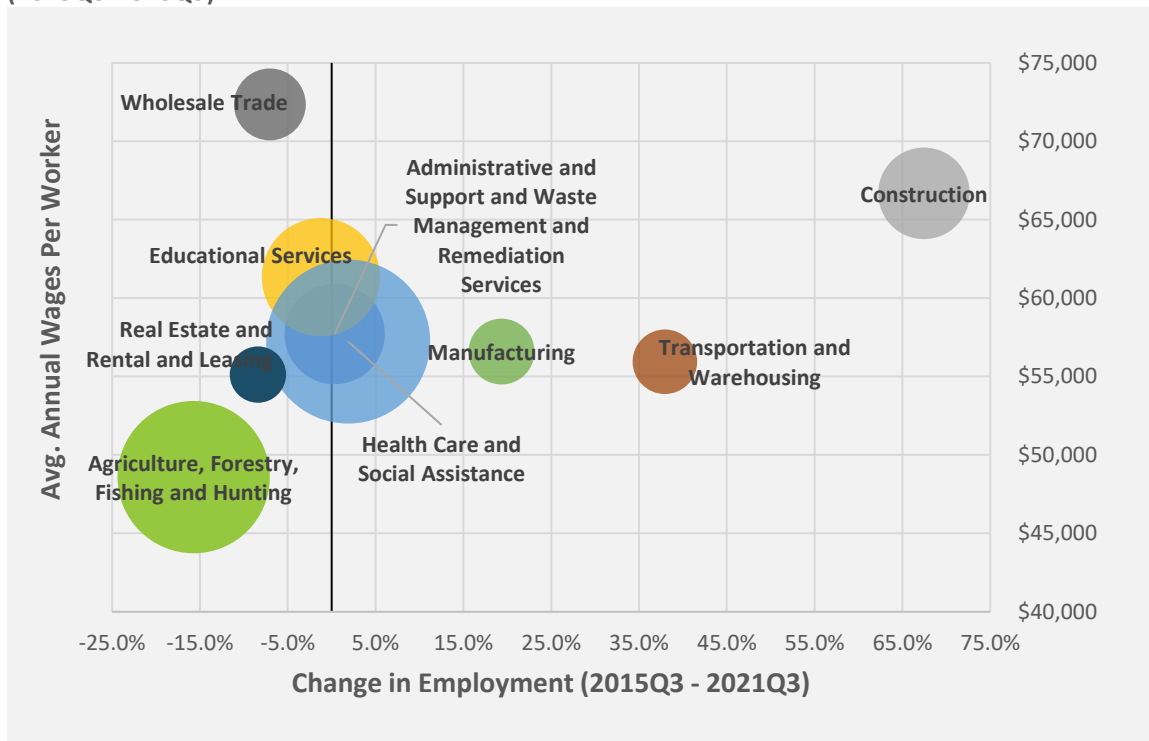


*SIZE OF BUBBLE REFLECTS THE NUMBER EMPLOYED IN THE INDUSTRY IN 2021 Q3

⁴ California Employment Development Department

Most of the industries in Santa Cruz County fall into the middle-earnings (\$45k – \$75k) category of average annual wages per worker. Employment in Construction grew the most between 2015 Q3 and 2021 Q3 (67 percent), followed by Transportation and Warehousing (38 percent), and Manufacturing (19 percent). Healthcare and Social Assistance, and Agriculture, Forestry, Fishing and Hunting were the two largest industries in terms of employment with approximately 11,000 and 9,500 workers respectively. While Healthcare and Social Assistance grew by 2 percent, Agriculture, Forestry, Fishing and Hunting employment shrunk by 16 percent. Employment in Wholesale Trade—the industry with the highest average annual wages per worker in the mid-earning range—declined by 7 percent (Figure 5).

FIGURE 5. FIVE-YEAR EMPLOYMENT PERCENTAGE CHANGE IN SANTA CRUZ COUNTY: MID-EARNING INDUSTRIES (2015Q3-2021Q3)⁵

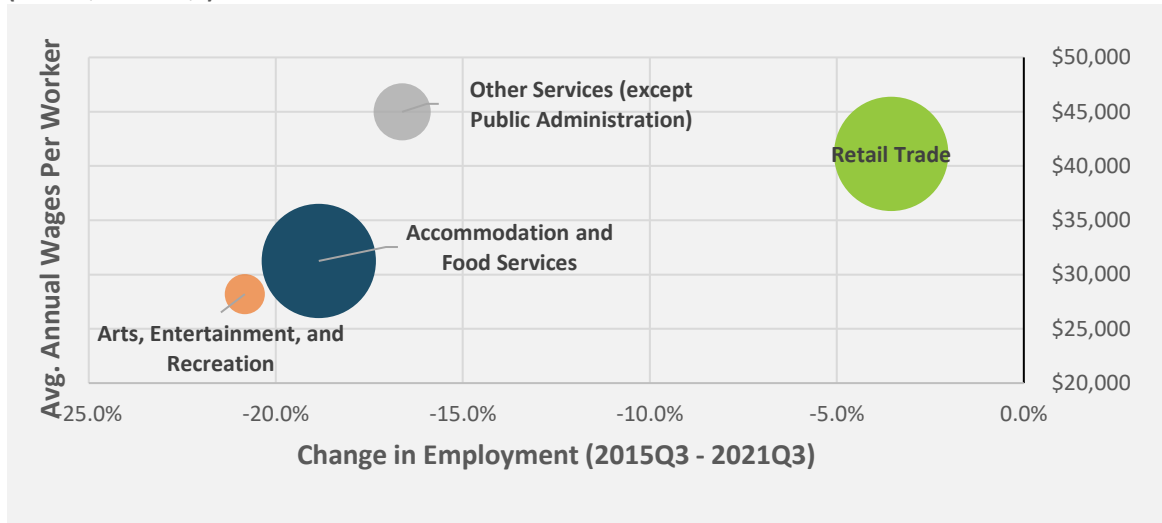


*Size of bubble reflects the number employed in the industry in 2021 Q3

All four industries in the lowest earning category of average annual wages per worker (less than \$45k) lost workers between 2015 Q3 and 2021 Q3. Employment in Arts, Entertainment and Recreation—which is also the lowest earning industry—fell by 21 percent followed by Accommodation and Food Services, where employment fell by 19 percent. Employment fell the least in the Retail Trade Industry (4 percent). Other Services (a miscellaneous category which includes industries such as Personal Care, Automotive Care, and Civic and Social Organizations, among others) lost 17 percent workers by 2021 Q3 (Figure 6).

⁵ California Employment Development Department

FIGURE 6. FIVE-YEAR EMPLOYMENT PERCENTAGE CHANGE IN SANTA CRUZ COUNTY: LOWEST EARNING INDUSTRIES (2015Q3-2021Q3)⁶



*Size of bubble reflects the number employed in the industry in 2021 Q3

Business Case Study: Sante Adarius Rustic Ales

*“We survived through the pandemic by setting up an online store and selling beer that way,” Adair Paterno, owner and operator of Sante Adarius Rustic Ales (SARA), told the research team. **“And what started out as a necessary pivot for the business is now something that we’ve held onto. We had been planning on expanding to online, but the pandemic pushed us to do that immediately, and it turned out to be a good thing overall.”** Since the initial online launch, SARA has built out the system to be more robust, and online ordering is now fully integrated into their business model and bringing in new revenues.*

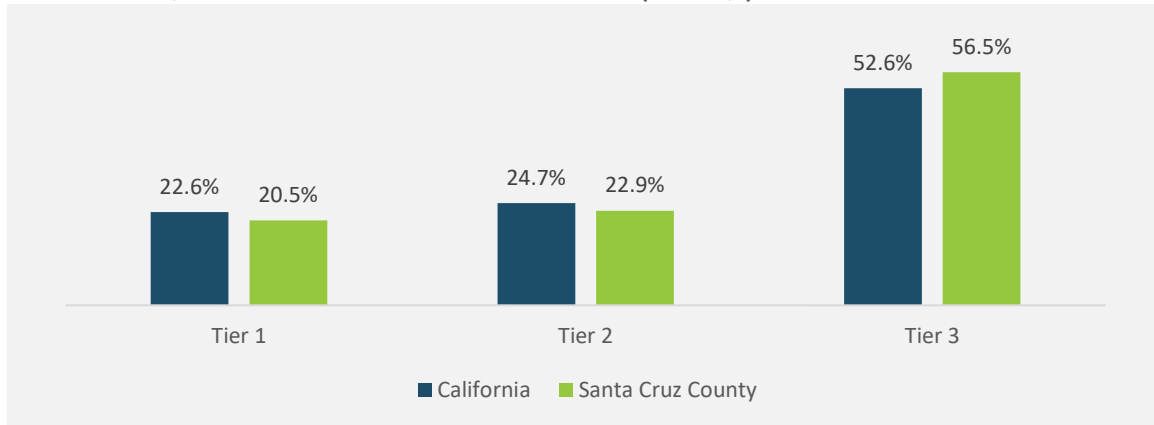
The additional online activity has also required SARA to hire additional staff to maintain the new part of the business. Finding and retaining staff has not been a challenge; even though the brewery lost a few workers who left the industry during the earlier days of the pandemic, finding replacement workers has not been a problem. Adair attributes this to their “strong reputation for being a good employer and having brand recognition.” While the pandemic drastically disrupted SARA’s business model, the company was able to adapt and ultimately develop an additional business model that now supports the original model.

⁶ California Employment Development Department

Job Quality

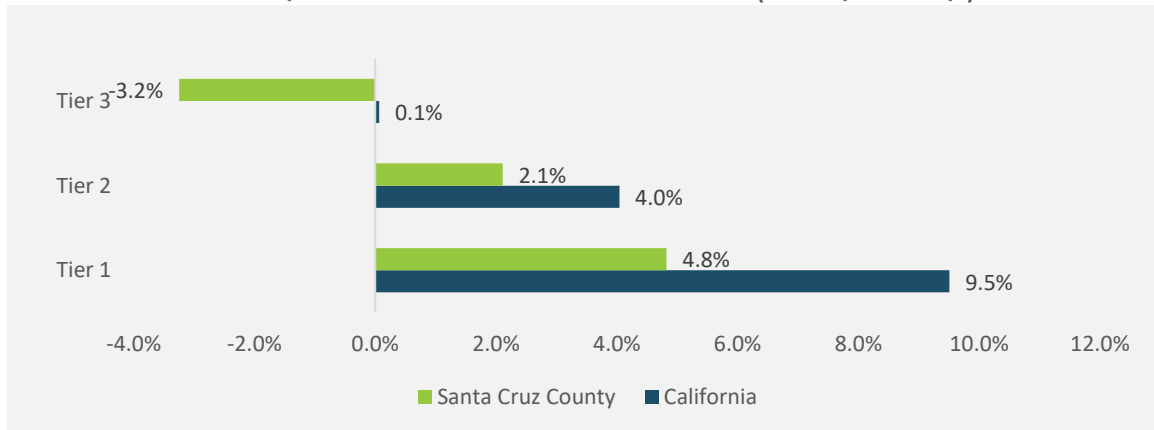
Job quality is lower in Santa Cruz County than it is in the rest of the state (Figure 7). Tier 3 jobs— which are lower-paying and lower-skill— make up 57 percent of the jobs in Santa Cruz County compared to the rest of the state (53 percent). Tier 2 jobs— which comprise a lower share of jobs in Santa Cruz County— make up 23 percent of the share of jobs compared to Tier 1 jobs (21 percent). By comparison to the state, Santa Cruz has lower percentages of the higher-paying and higher-skill Tier 1 and Tier 2 jobs.

FIGURE 7. JOB QUALITY: SANTA CRUZ COUNTY VS. CALIFORNIA (2021 Q3)⁷



Although Santa Cruz County has a higher percentage of Tier 3 jobs than the state, the changes in job quality between 2015 Q3 and 2021 Q3 are promising. Tier 3 jobs fell by 3 percent in Santa Cruz County, while statewide levels remained flat. By 2021 Q3, Tier 2 and Tier 1 jobs had grown by 2 percent and 5 percent respectively. While this growth signals a shift to better paying jobs allowing for economic mobility, it is still modest compared to statewide growth in the same categories; Tier 2 and Tier 1 jobs grew by 4 percent and 10 percent respectively (Figure 8).

FIGURE 8. CHANGE IN JOB QUALITY: SANTA CRUZ COUNTY VS. CALIFORNIA (2015 Q3-2021 Q3)⁸

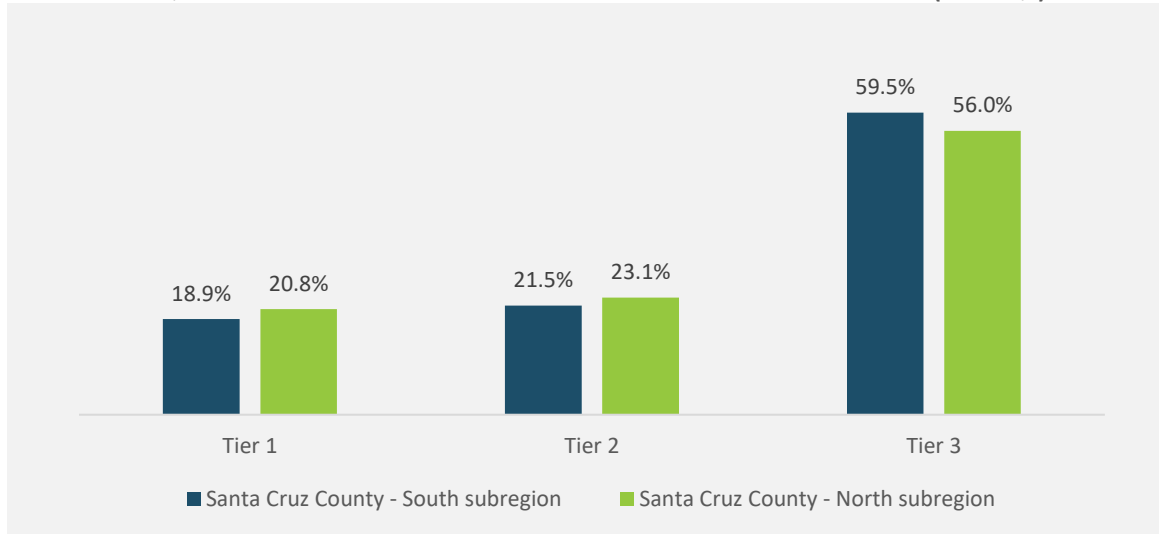


⁷ JobsEQ

⁸ JobsEQ

Within the Santa Cruz County, the southern part of the county has more Tier 3 jobs (59.5 percent) than the northern part of the county (56.0 percent). More Tier 1 and Tier 2 jobs are found in the northern part of Santa Cruz County— 20.8 percent and 23.1 percent respectively. However, the gaps in Tier 1 and Tier 2 jobs in the northern and southern subregions are each less than two percentage points; there are 18.9 percent Tier 1 jobs and 21.5 percent Tier 2 jobs in the southern subregion of Santa Cruz County (Figure 9).

FIGURE 9. JOB QUALITY: NORTH SUBREGION VS. SOUTH SUBREGION IN SANTA CRUZ COUNTY (2021 Q3)⁹



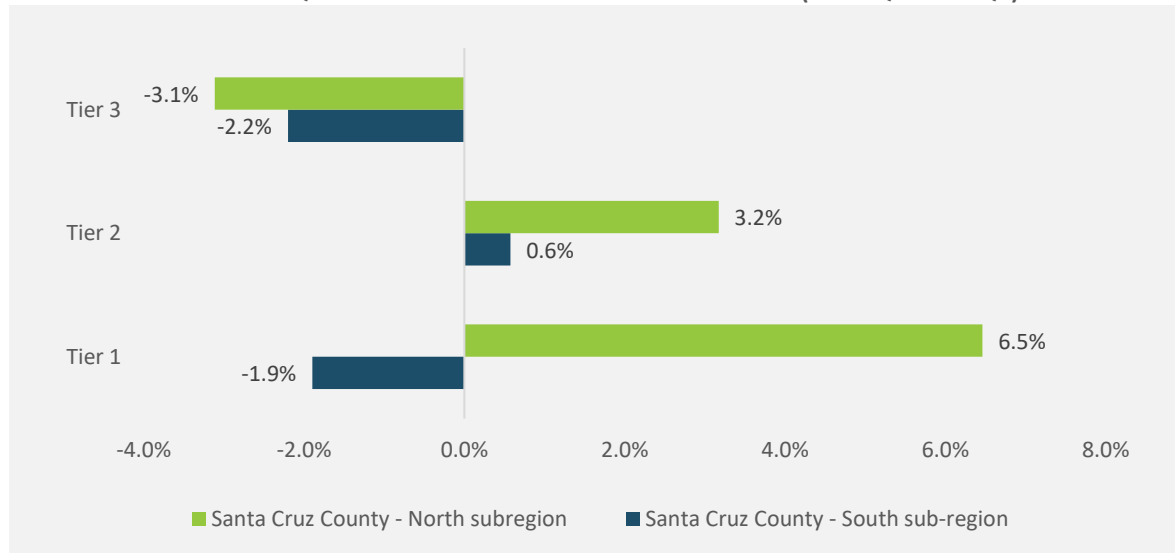
Business Case Study: The Dream Inn

After two years of sluggish business dampened by the pandemic, the Dream Inn is at full capacity. **“It’s like summer already, but it’s only March”** Darren Pound, Vice-President and General Manager of the Dream Inn told the research team. Alongside the typical guests from the Bay Area and Sacramento, a recent influx of visitors from Los Angeles and Orange counties suggests there may be a shift in travel patterns. **One driver of this change in travel patterns may be that flexible work schedules are allowing more people to travel more often.** Furthermore, **high aviation prices and rising gasoline costs may be pushing consumers to stay more local in lieu of a long-distance flight or a multi-day road trip.** There has also been a growing return of group leisure travel, as organizations are drawing down residual unspent travel budgets from previous years. All these factors result in greater demand for hotel rooms. Fortunately, the Dream Inn has been able to stay fully staffed, in part because of its persistently strong offering of wages and benefits via its union contracts. Provided there is no lapse in the progress of public health, Darren says he is “very optimistic about the rest of 2022.”

⁹ JobsEQ

Between 2015 Q3 and 2021 Q3, the north subregion of Santa Cruz County added more high-paying, high-skill jobs than the south subregion i.e., more Tier 1 and Tier 2 jobs (Figure 10). Tier 3 jobs in the south subregion of the county decreased by 3.1 percent, just slightly more than Tier 3 jobs in the north subregion which fell by 2.2 percent. Tier 1 jobs in the north subregion grew by 6.5 percent whereas 1.9 percent of Tier 1 jobs were lost in the south subregion. By 2021 Q3, Tier 2 jobs grew in both subregions: 3.2 percent in the north subregion and 0.6 percent in the south subregion.

FIGURE 10. CHANGE IN JOB QUALITY: NORTH VS. SOUTH SANTA CRUZ COUNTY (2015 Q3-2021 Q3)¹⁰



¹⁰ JobsEQ

Santa Cruz County Residents

Demographics

White residents make up a greater share of the population in Santa Cruz County (72 percent) compared to California (56 percent). Fourteen percent of the population in both the county and the state identify as a race not listed (Figure 11). The North sub-region has a higher proportion (78 percent) of White residents compared to the South sub-region (53 percent), which is almost comparable to the overall state. Compared to the North sub-region, the overall county, and the state, the South sub-region has a higher share (35 percent) of residents who identify with other racial groups not outlined in the survey.

FIGURE 11. RACE: SANTA CRUZ COUNTY VS. CALIFORNIA¹¹

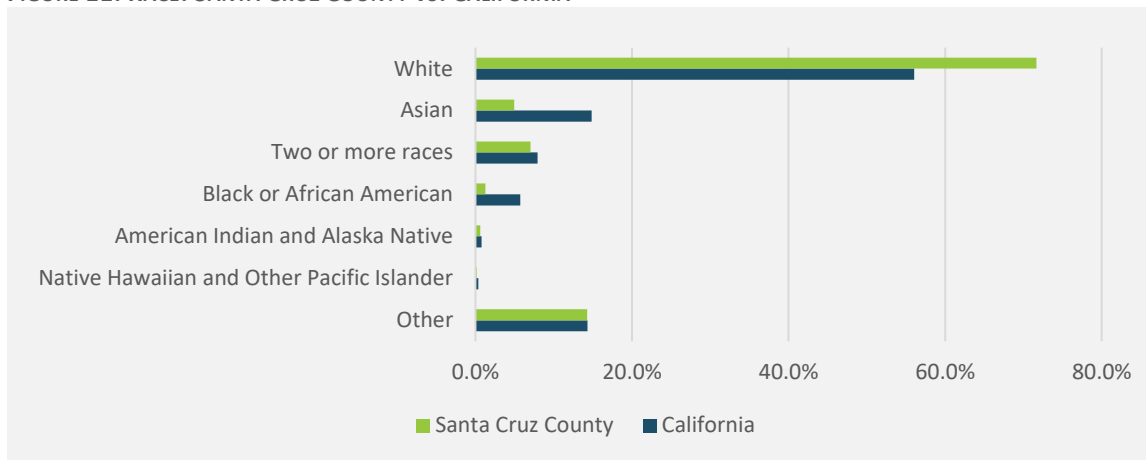
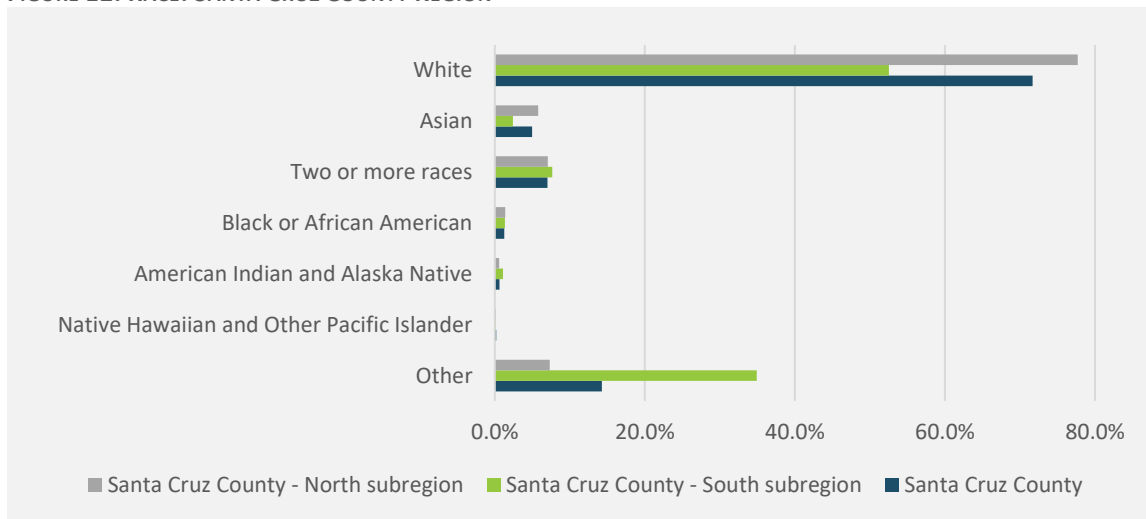


FIGURE 12. RACE: SANTA CRUZ COUNTY REGION¹²

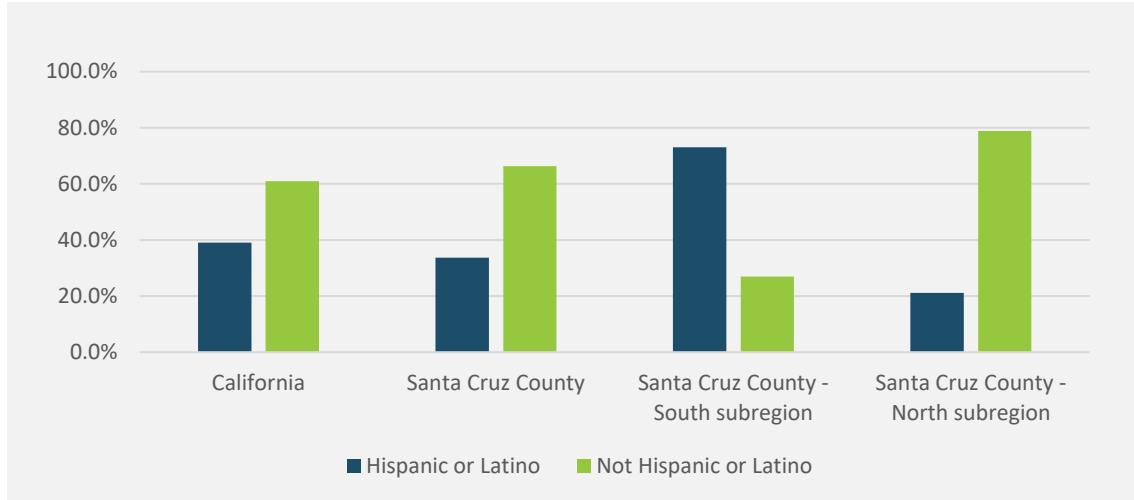


¹¹ U.S. Census Bureau, 2020 5-Year Estimates

¹² U.S. Census Bureau, 2020 5-Year Estimates

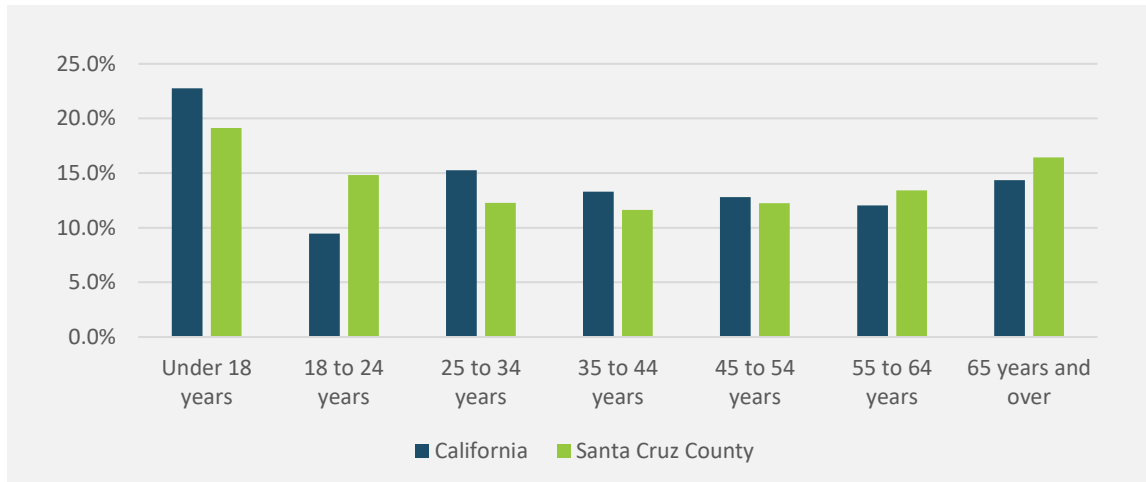
The proportion of Santa Cruz County residents who identify as Hispanic or Latino regardless of race— is similar to the statewide makeup; 34 percent of Santa Cruz County residents are Hispanic or Latino compared to 39 percent of California residents. The South sub-region of Santa Cruz County has a large population (73 percent) of Hispanic or Latino residents, compared the North sub-region (21 percent).

FIGURE 13. ETHNICITY: STATEWIDE, COUNTY, AND REGIONAL¹³



Overall, the age profile for Santa Cruz County reflects statewide phenomena; both have near equal median ages (36.7 years in the state and 38.2 years in Santa Cruz County), and approximately one third in Santa Cruz County and in the state are under the age of 24 (Figure 14). While California has more residents under the age of 18 (23 percent), Santa Cruz County has more people between the 18 and 24 years, thanks to UC Santa Cruz, and more residents who are 55 years or older.

FIGURE 14. AGE PROFILE- STATEWIDE VS. SANTA CRUZ COUNTY¹⁴

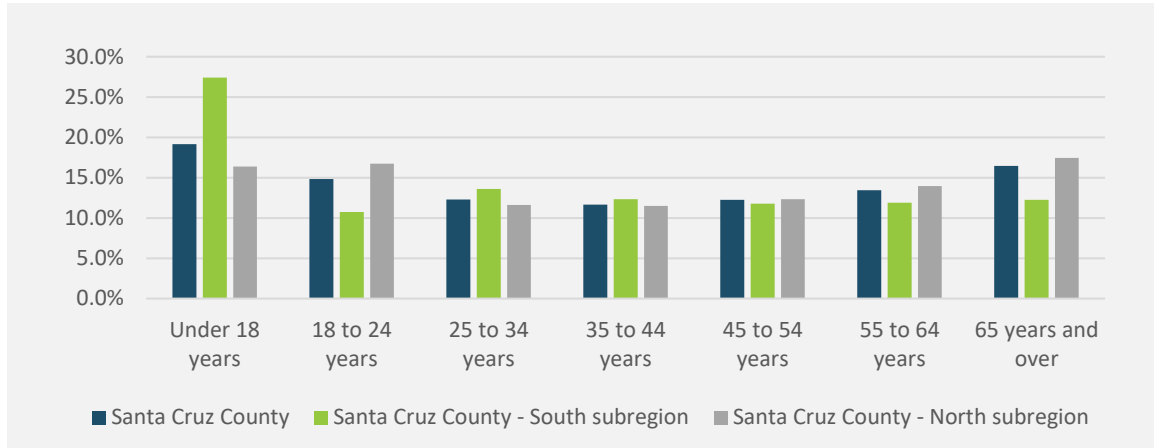


¹³ U.S. Census Bureau, 2020 5-Year Estimates

¹⁴ U.S. Census Bureau, 2020 5-Year Estimates

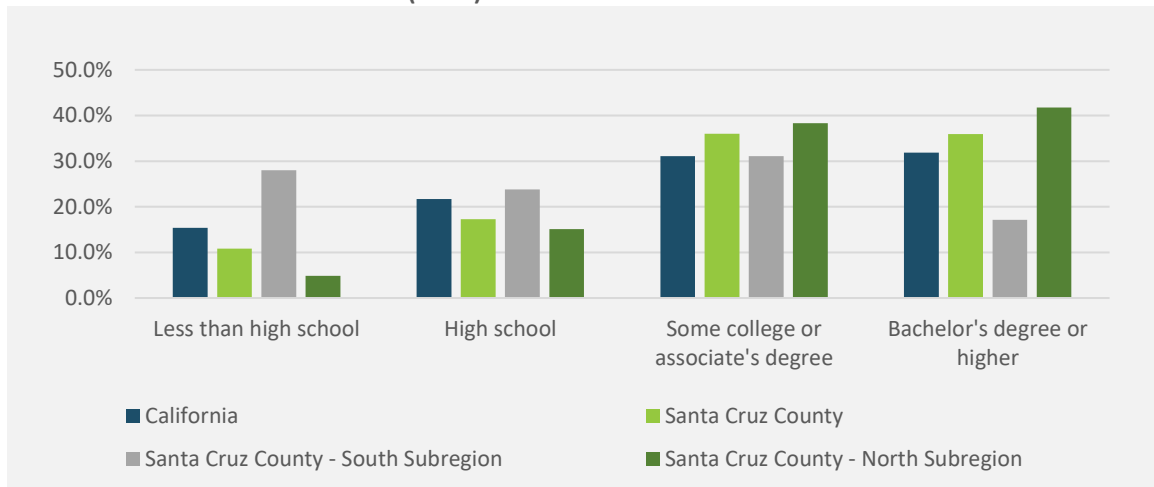
The North sub-region of the county has a larger share of residents who are 55 years and over (31 percent) compared to the South sub-region (24 percent). The South sub-region has a significantly younger population than the North, where 27 percent are under 18 (Figure 15). The North sub-region is showing trends of a population that is nearing retirement age while the South sub-region is poised to experience an influx of new students and workers in upcoming years.

FIGURE 15. AGE PROFILE- SANTA CRUZ COUNTY¹⁵



Santa Cruz County has a slightly more educated population than the state, with residents attaining high school diplomas or more at higher rates than the rest of California (Figure 16). However, differences in educational attainment rates exist by region; South sub-region residents are generally less educated than North sub-region residents. While 42 percent of North sub-region residents have a bachelor’s degree or higher, only 17 percent of South sub-region residents have the same educational attainment. Approximately 28 percent of South sub-region residents do not have a high school diploma, which is nearly six times higher than the 5 percent of North sub-region residents (Figure 15).

FIGURE 16. EDUCATIONAL ATTAINMENT (2019) IN SANTA CRUZ COUNTY & CALIFORNIA¹⁶



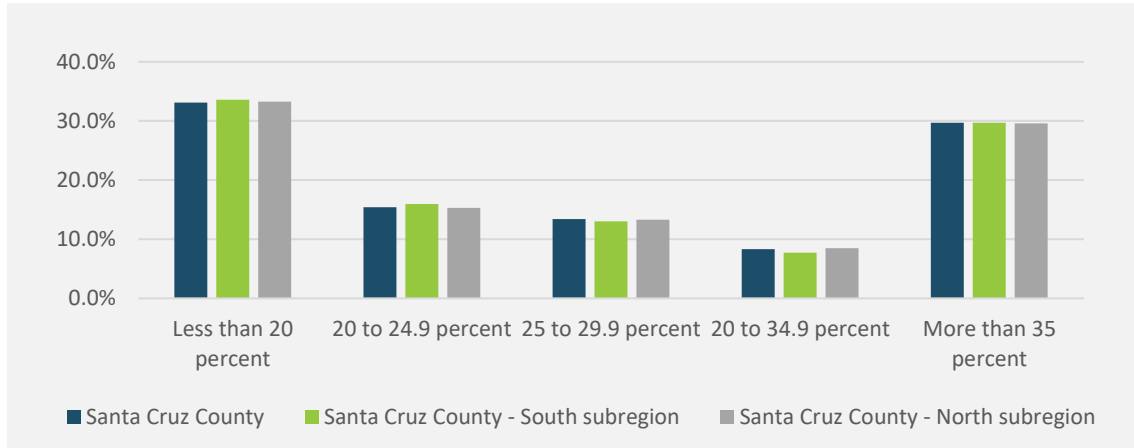
¹⁵ U.S. Census Bureau, 2020 5-Year Estimates

¹⁶ U.S. Census Bureau, 2020 5-Year Estimates

Housing and Transportation

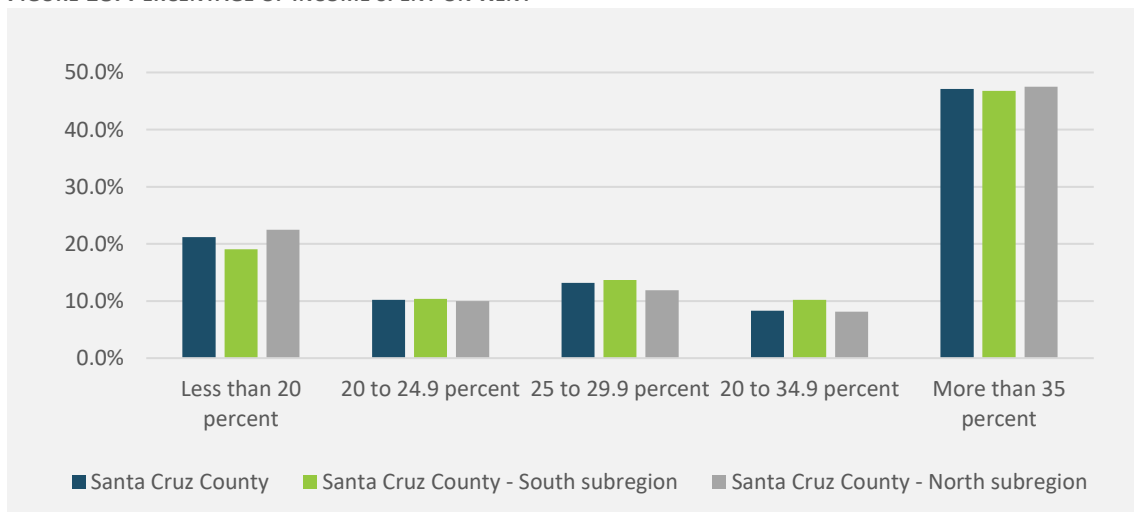
Santa Cruz County has a higher rate of homeownership (60 percent) than the state (55 percent). The share of income residents spend on mortgage payments is similar in both sub-regions, with the most residents spending less than 20.0 percent or more than 35.0 percent of their income on mortgage payments. Of those that own their homes, 30 percent spend more than 35.0 of their income on mortgage payment and 33 percent spend less than 20 percent of their income on their mortgage.

FIGURE 17. PERCENTAGE OF INCOME SPENT ON MORTGAGE



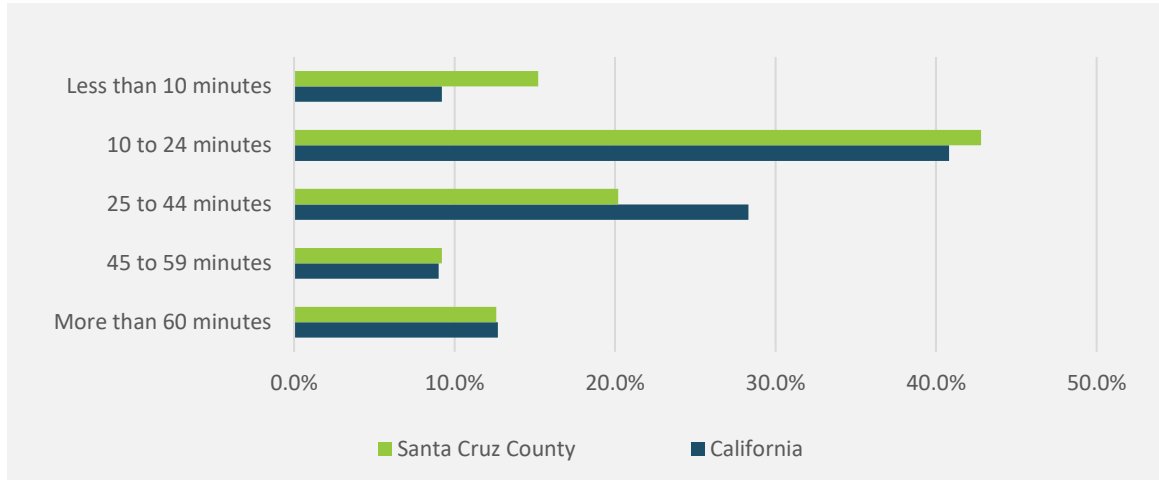
In general, renters in the North and South subregions spend almost equal percentages of their income on rent; however, renters in the South subregion spend slightly less of their income on rent compared to their Northern counterparts (Figure 18). When a high share of the population spends a large portion of their income on housing, the local economy can be negatively impacted in several ways; first, this means residents have less disposable income to spend in the local economy, and second, this may make talent attraction harder in the region.

FIGURE 18. PERCENTAGE OF INCOME SPENT ON RENT



Santa Cruz County residents generally experience commutes of less than half an hour, with a mean travel time of 27.5 minutes compared to the statewide 29.8 minutes (Figure 19). Most Santa Cruz County commuters (43 percent) spend between 10- and 24-minutes commuting to work, and 15 percent take less than 10 minutes to commute to work. The percentage of Santa Cruz County commuters (13 percent) who spend more than one hour commuting to work is equal to that of California commuters (13 percent).

FIGURE 19. TIME TAKEN TO COMMUTE TO WORK¹⁷



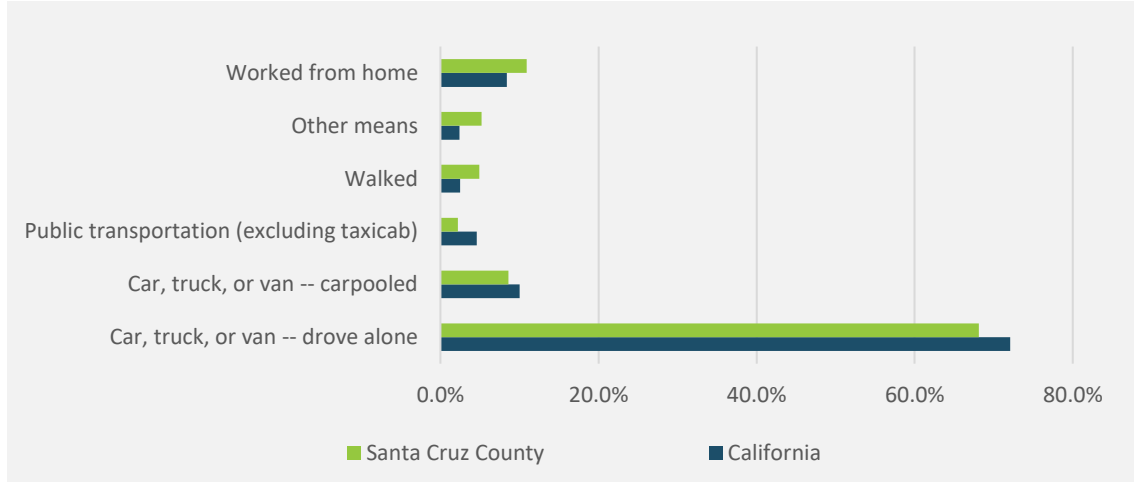
Business Case Study: Dientes Dental

*When the pandemic began, Dientes Dental had to temporarily furlough some of their staff and were operating at ten percent capacity for a period of two months per public health requirements. However, Dientes has emerged from the disruptions of the pandemic, and they are back to one-hundred percent capacity. **The biggest challenge in recruiting and retaining front-facing staff is the long commute from south of the county, where housing is more affordable. These front-facing staff are typically young Latinas with young families. To address this, Dientes has shifted the beginning of the work day from 8:30am to 7:30am to mitigate the challenges of the commute and enable staff to get better access to parking.** To help with attraction and retention for these positions, Dientes—initially with funds secured from two PPP loans and provider relief funds through the CARES Act--has permanently increased the base pay from \$16/hr to \$22/hr in addition to full benefits. While the nature of the work done at Dientes means they will never be able to go fully remote, administrative teams in finance, operations, billing, and human resources are partially remote, after going fully remote during the pandemic. Thanks to inventiveness and adaptability, Dientes will continue to provide oral healthcare for low-income children, adults, and seniors in Santa Cruz County.*

¹⁷ U.S. Census Bureau, 2020 5-Year Estimates

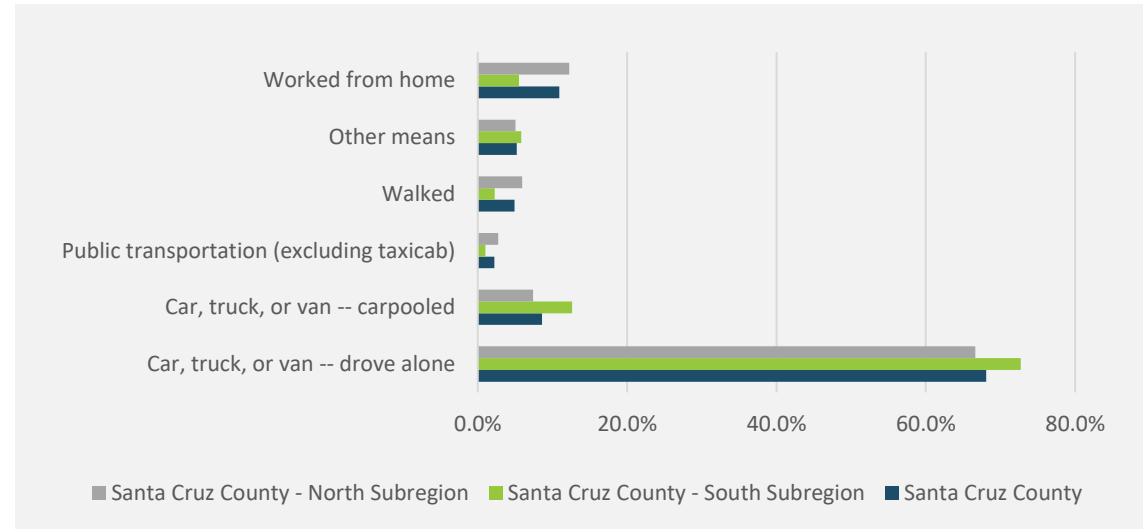
High levels of traffic is something that several interviewees mentioned to the research team. Close to 70 percent of Santa Cruz County workers drive to work alone compared to the 9 percent who carpool to work (Figure 20). More people either walk to work (5 percent) or use other means of transportation (5 percent) compared to the rest of the state (3 percent and 2 percent respectively). Over one tenth (11 percent) of Santa Cruz County residents worked from home, over 2 percentage-points more than the rest of the state. Santa Cruz County residents use public transportation less often than the rest of the state, accounting for 2 percent of transportation compared to the statewide 5 percent.

FIGURE 20. TRANSPORTATION MEANS: SANTA CRUZ COUNTY VS. CALIFORNIA



Within Santa Cruz County, more South sub-region commuters drive to work alone (73 percent) compared to the North sub-region (67 percent) who were also more likely to work from home (12 percent). South sub-region commuters (13 percent) are nearly twice as likely to carpool to work than their North sub-region counterparts (7 percent). North sub-region commuters were more likely to walk to work (6 percent) or use public transport (3 percent) compared to South sub-region commuters (2 percent and 1 percent respectively).

FIGURE 21. TRANSPORTATION MEANS: SANTA CRUZ COUNTY



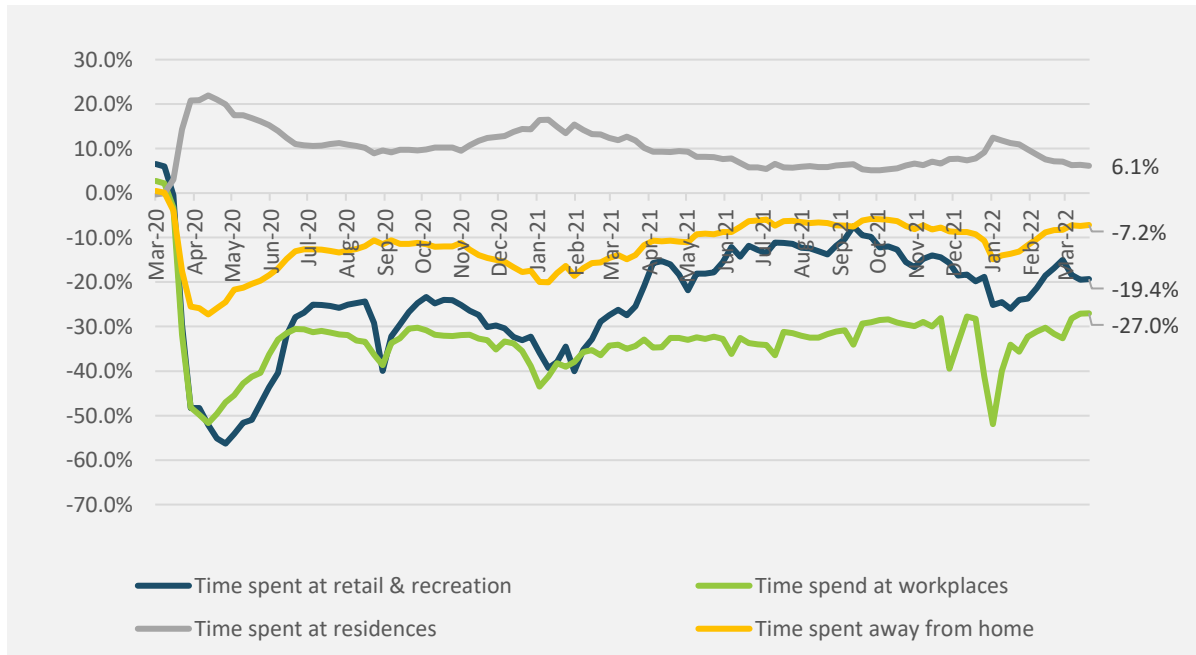
Recovery From COVID-19, Labor Force Participation, Healthcare, Agriculture, and Hospitality

The COVID-19 Pandemic has reshaped how people think about work, play, and community. This disruptive effect has accelerated many trends that predated the pandemic, and has altered the status quo. This section of the report highlights some of those impacts on Santa Cruz County, first by highlighting changes in housing, daily travel patterns, and labor force participation. Next, the section takes a deeper look into key industries in Santa Cruz County that have faced exceptional disruption from the pandemic: Healthcare, Agriculture, and Tourism and Hospitality.

Santa Cruz County in the Aftermath of COVID-19

The pandemic has changed where Santa Cruz County residents spend their time. As of late March 2022, people in Santa Cruz County are spending 27% less time at workplaces and 19% less time at retail and recreation (including malls, movie theaters, and parks) locations than they were before the pandemic. Instead, people in Santa Cruz County are spending 6% more of their time at residences (Figure 22). While this suggests a more permanent trend towards work-from-home, this trend may reshape how local economies function, as people spend less time in public spaces or in office parks.

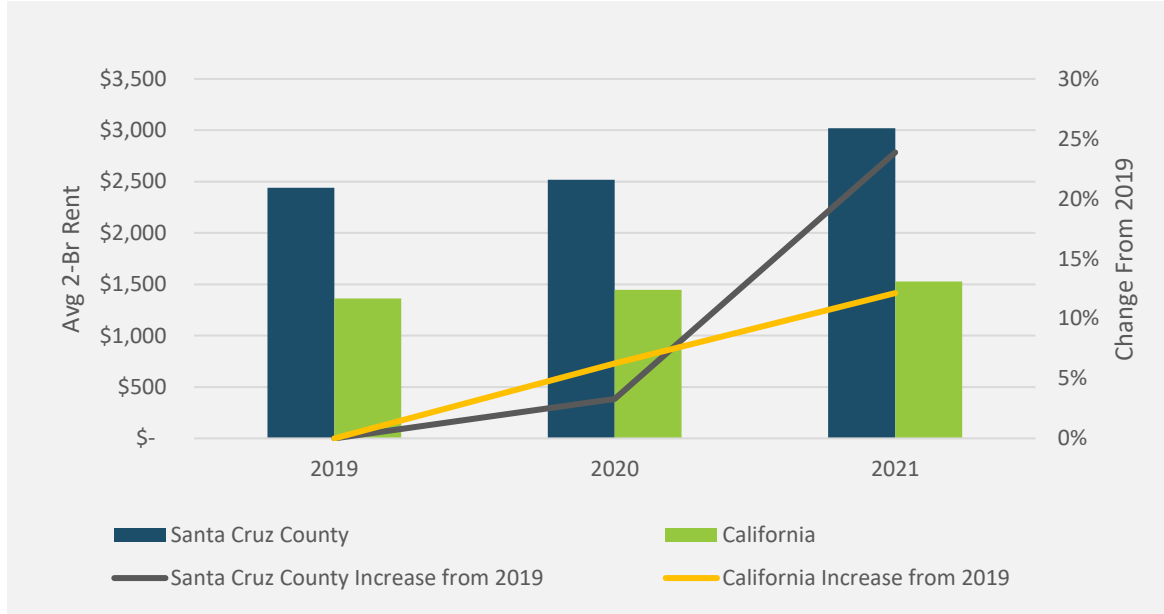
FIGURE 22. CHANGE IN TIME SPENT AT LOCATIONS IN SANTA CRUZ COUNTY¹⁸



¹⁸ Google COVID-19 Community Mobility Data

Along with spending more time at home, people in Santa Cruz County are spending more to rent their home. Between 2019 and 2021, the average rental rate for a two-bedroom apartment in Santa Cruz County grew from roughly \$2,400 to \$3,000 per month, representing a 24% increase. Rents across California also rose during this time, albeit at a slower rate of 12% between 2019 and 2021 (Figure 23). Rising rents will continue to exacerbate any challenges that employers may have in finding employees.

FIGURE 23. CHANGE IN AVERAGE RENTAL RATES FOR TWO-BEDROOM APARTMENT¹⁹



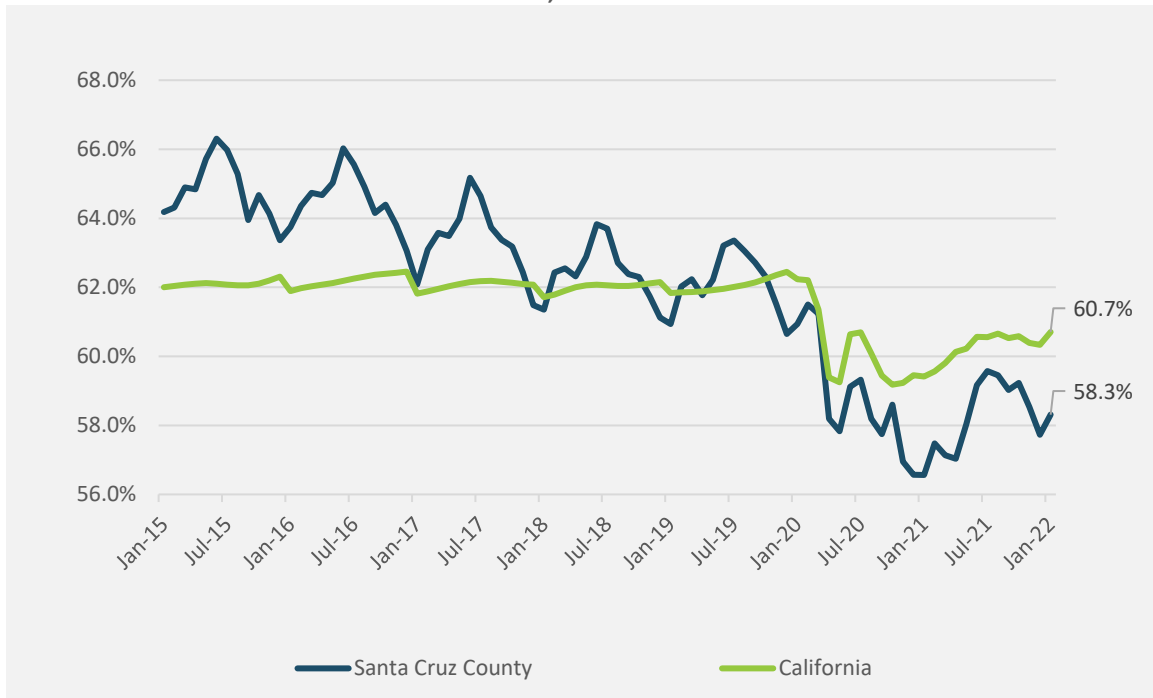
The percentage of people in the Santa Cruz County labor force is declining. Between 2015 and 2020, the labor force participation rate (LFPR) in Santa Cruz County was on a downward trend— dropping from 64.3 percent in January 2015 to 60.6 percent in January 2020— whereas the statewide LFPR constantly hovered around 62.0 percent (Figure 24).²⁰ Both California and Santa Cruz County experienced dips in the LFPR during the COVID-19 pandemic and the LFPR for both remained below pre-pandemic levels for both until January 2022. This means that fewer people, ages 16 and older, are working or looking for work.

Declining labor force participation rates will have long lasting implications on the Santa Cruz County economy. If fewer people are working, there will be less economic activity in the region and diminished disposable incomes available to spend throughout the local economy. If severe enough, this could stymie economic growth and many of the businesses in the county. Bringing workers back into the workforce, as well as bringing new workers into the labor force, will be crucial in ensuring the Santa Cruz County economy continues to grow.

¹⁹ Data from Rentdata.org

²⁰ The labor force participation rate (LFPR) is the civilian labor force as a proportion of the total population 16 years or over. To calculate the LFPR, the research augmented BLS/FRED civilian labor force data with ACS 5-Year population-16-years-and-over estimates. The team imputed ACS estimates into months within the year, assuming the relative change in populations would stay the same.

FIGURE 24. LABOR FORCE PARTICIPATION RATE: STATE, COUNTY & REGIONAL²¹

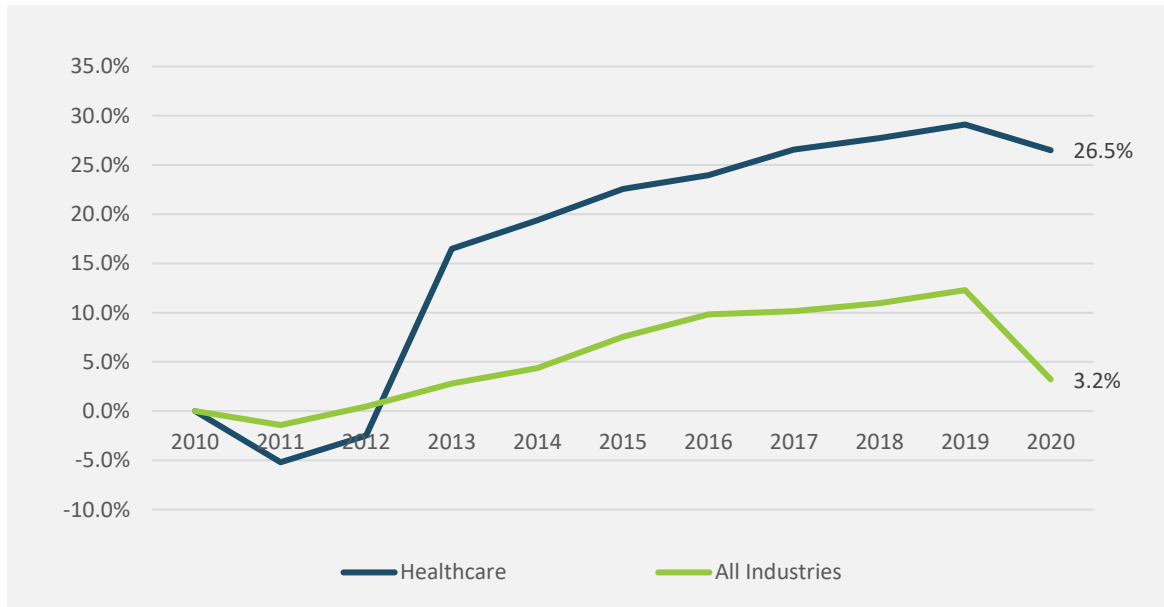


²¹ Bureau of Labor Statistics/FRED, United States Census Bureau, American Community Survey 5-Year Estimates (2015-2020).

Healthcare Deep Dive

The Healthcare industry makes up roughly 14% of employment in Santa Cruz County. Over the ten years between 2010 and 2020, Healthcare employment grew by 3,200 jobs. In fact, Healthcare accounted for 28% of the employment growth countywide between 2010 and 2019. Healthcare was also one of few industries that largely showed resiliency throughout the pandemic (Figure 25). Employment among eleven key Healthcare occupations highlights that many of these occupations are projected to see increased demand over the next three years, including several of the largest occupations (Registered Nurses, Personal Care Aids, and Medical Assistants). It is also worth noting that six of the eleven occupations have average annual wages that exceed \$50,000 per year (Figure 26). Even among occupations that pay less than this, Healthcare occupations have a strong opportunity for upward mobility.

FIGURE 25. GROWTH IN HEALTHCARE AND OVERALL EMPLOYMENT IN SANTA CRUZ COUNTY FROM 2010 LEVELS

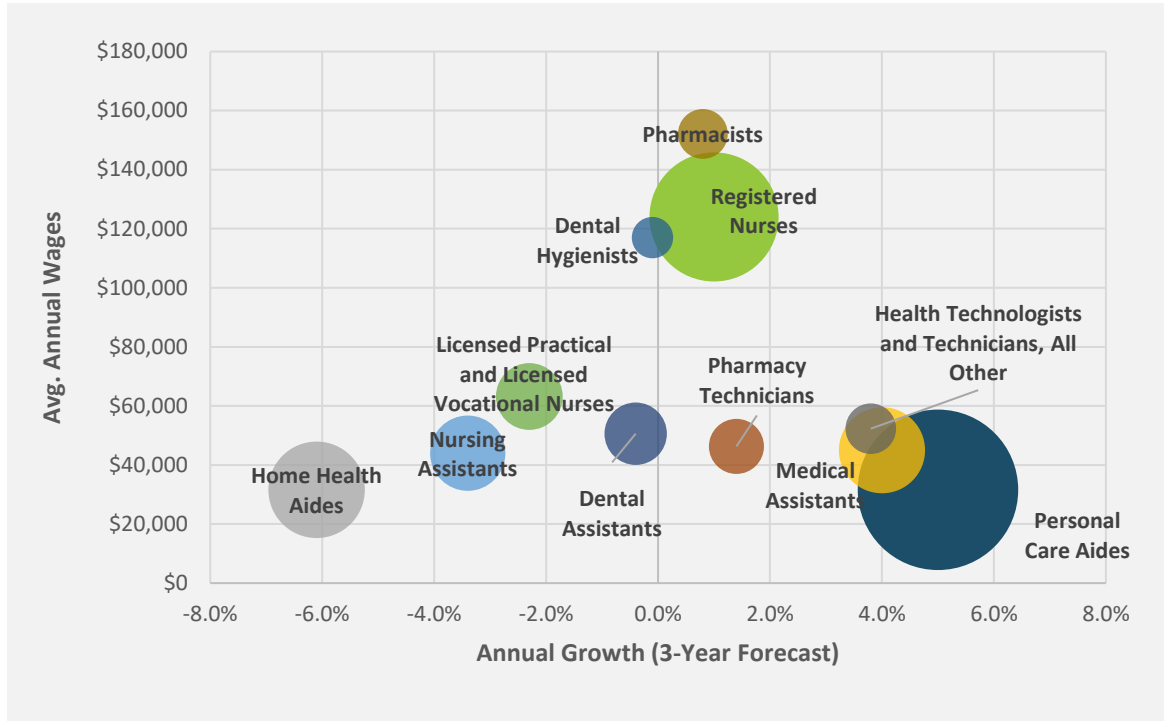


Business Case Study: Sutter Health

*Sutter Health faced the challenges of the pandemic head on, adapting their patient care to increase virtual visits when possible, and many patients have been enthusiastic about the availability of virtual visits. However, challenges carried forward from the pandemic still affect their teams. Turnover was, and continues to be, high. Trish Burgin MSN, RN, PHN, the Service Line Director of the Urgent Care, Hospitalists, and Geriatric departments, told the research team **“As a Registered Nurse and a Director who supports people who do that work, it was hard – there were days where I went home wondering if I should still continue with [healthcare]. It was the first time in 20 years I had questioned that. Many of my colleagues had the same thought. It was tough.”** Many healthcare workers have retired earlier than they otherwise would have, which has led to a loss of institutional knowledge.*

Replacing these workers has been difficult, as the applicant pool has gotten smaller, especially for patient-facing roles. Patient-facing workers, who tend to be young with young families, were often challenged by children attending school virtually at home. This sometimes meant parents were forced to choose between supporting their child’s education or putting their own education or employment on hold. The high demand for healthcare occupations—and the high demands that these workers face while at work—likely mean that the industry will continue to face workforce challenges until younger talent is able to fill the gaps and existing workers are able to advance upward.

FIGURE 26. KEY HEALTHCARE OCCUPATIONS IN SANTA CRUZ COUNTY*



* BUBBLE SIZE EQUATES TO THE RELATIVE NUMBER OF EMPLOYEES FOR EACH OCCUPATION

On the frontlines of the pandemic, the Healthcare industry has seen unparalleled disruption, and healthcare workers are struggling as a result. A recent poll by Morning Consult revealed that as of September 2021, 18% of those who had worked in the healthcare industry had quit their job and another 12% had been laid-off or lost their job at some point during the pandemic. Of those who have remained at their pre-pandemic healthcare job, 19% considered leaving the healthcare industry altogether, and 12% considered leaving their role for another job in healthcare. The most common reasons for separations from workers’ pre-pandemic healthcare roles were the pandemic (54%), more money or better benefits (50%), finding a better opportunity (50%), and being burned out or overworked (49%) (Figure 28). These findings suggest that the industry has seen a combination of high turnover as well as those leaving the industry altogether. Replacing those who left the industry may be difficult; Cabrillo College—which graduated 188 Health Professions-related workers in the 2019-2020 academic year—had collegewide enrollment rates 25% lower for the Fall of 2022 than they were two years prior.²²

²² “Cabrillo College enrollment continues to drop, causes concern.” Phil Gomez, KSBW Action News. <https://www.ksbw.com/article/cabrillo-college-enrollment-continues-to-drop-causes-concern/36690836#>

FIGURE 27. OF THOSE WHO REMAIN AT PRE-PANDEMIC HEALTHCARE JOB, HAVE YOU CONSIDERED LEAVING YOUR JOB?

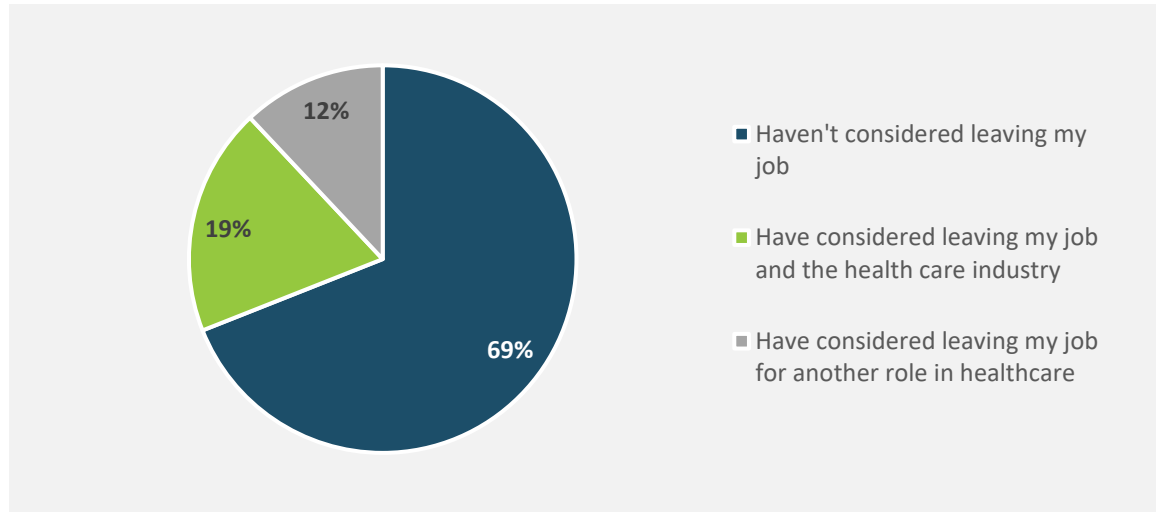
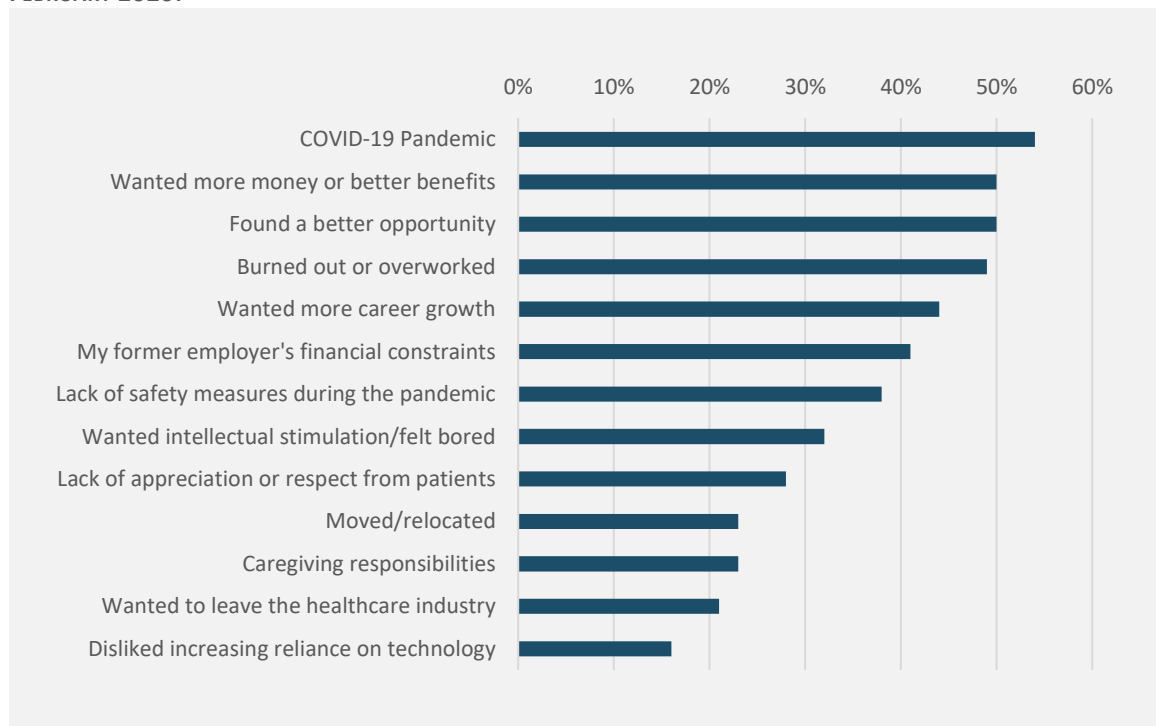
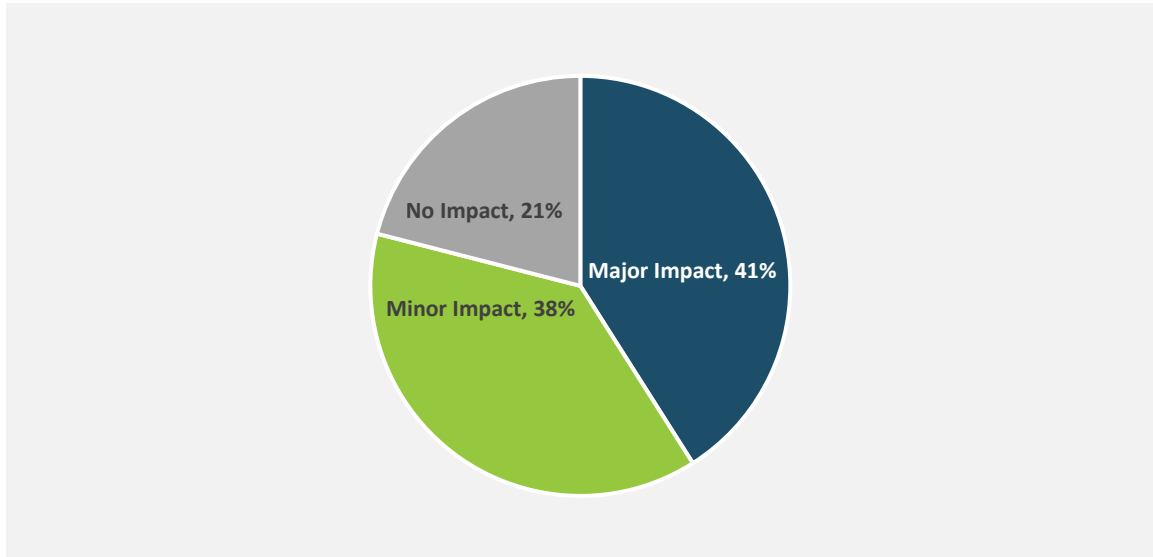


FIGURE 28. TOP REASONS FOR WHY WORKERS QUIT OR WERE SEPARATED FROM THEIR HEALTHCARE JOB SINCE FEBRUARY 2020.



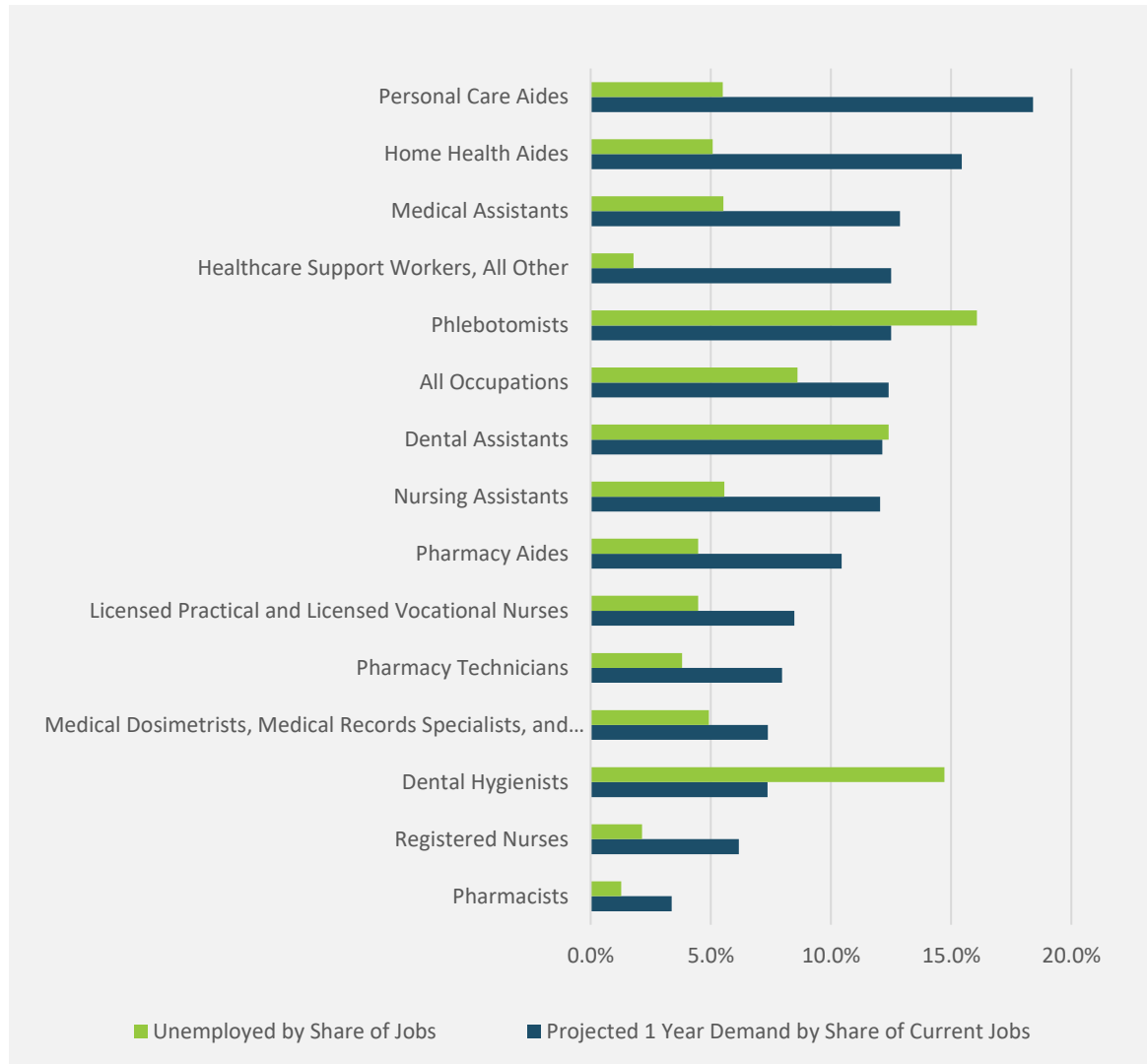
The shortage of healthcare workers has subsequently exacerbated the challenges of those who remain; 41% reported that the shortage had a major impact on their workplace and another 38% reported a minor impact (Figure 29).

FIGURE 29. HAS THE SHORTAGE OF HEALTHCARE WORKERS AFFECTED YOUR WORKPLACE?



Data suggest that the county's healthcare labor challenges are not likely to be over. A number of Healthcare occupations have high rates of projected one-year demand (the sum of those exiting the occupation, transferring to a new role, and new demand via employment growth) relative to the current number of jobs; Personal Care Aids and Home Health Aids are projected to see one-year demand that is 18% and 15% of the current number of workers in the county. This suggests there will be a substantial gap in workers going forward. Furthermore, there is little talent to replace these workers; unemployment among this workforce in the county is 6% and 5%--much lower than the unemployment rate among all workers in the county (9%) (Figure 30).

FIGURE 30. UNEMPLOYMENT AND PROJECTED REPLACEMENT NEED IN HEALTHCARE OCCUPATIONS²³



²³ JobsEQ, Bureau of Labor Statistics QCEW 2021Q3.

An analysis of the occupations with the greatest transition opportunities²⁴ into the healthcare occupations listed above revealed that the occupations with the greatest transferability into healthcare positions are healthcare positions. While this finding is not surprising, it is indicative of what may be the best workforce strategies going forward. Since poaching healthcare workers from other fields or occupations is not a workable solution to solving workforce shortages, growing the existing pool of workers is the only alternative. To do so, employers could focus on upskilling and advancing their existing lower-level workers, while developing programs with local educational institutions that offer “earn and learn” opportunities that rapidly develop the necessary hands-on experience and allow students to enter these more entry-level positions, faster.

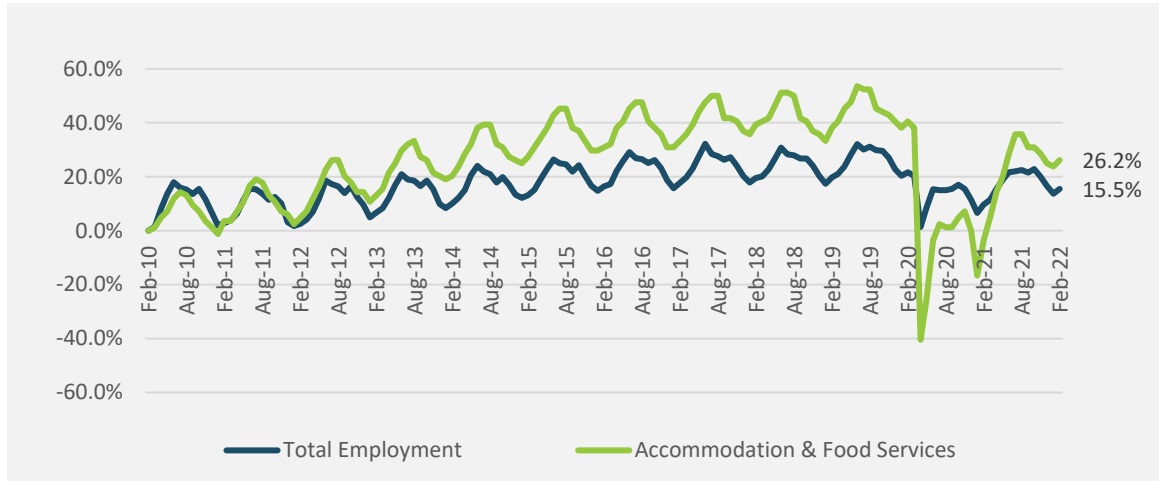
Because of the inherent physical presence required for many healthcare jobs, most workers will not have the opportunity to work remotely. However, recent shifts in patient care delivery models may mean that healthcare workers skills will change. Workers providing telehealth will have to be able to navigate web-connected devices and assist patients in similarly operating devices. Additionally, telehealth and more at-home-health care provision means that interpersonal skills and communication abilities will only grow in importance. Ensuring that workers are tech-savvy, communicative, and emotionally intelligent will be important in providing quality healthcare across new mediums or in new environments.

Accommodation and Food Services

In February 2022, the Accommodation and Food Services industry accounted for 10,600 jobs across Santa Cruz County, or about 10% of all jobs in the county. As Figure 31 highlights, the Accommodation and Food Services industry in Santa Cruz County has seen substantial turmoil over the past two years. After ten years of steady, albeit cyclical, growth, in April of 2020, 41% of the jobs from February 2010 were erased. This plunge was more dramatic from its previous status of 11,600 jobs in March 2020, representing a 57% decline from these heights. Since the start of the COVID-19 pandemic the industry has recovered. The total number of Accommodation and Food Services jobs in the county have returned to February levels last observed in 2015.

²⁴ Using O*NET’s Skill Transferability Matrix to identify the 10-most similar occupations, the research team found that only 13% of the most-related occupations are not healthcare-related occupations. To see the breakdown of occupations and their corresponding transfer opportunities, please see Appendix A on page 24.

FIGURE 31. CHANGE IN EMPLOYMENT FROM FEBRUARY 2010 - 2022²⁵



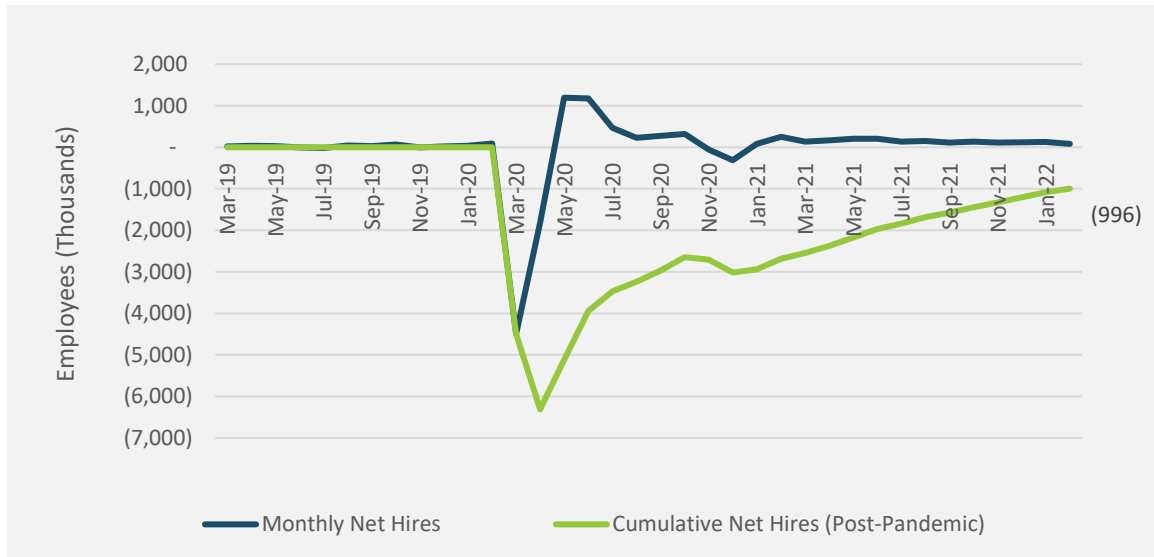
Business Case Study: Hotel Paradox

“We’re busier than ever,” Grant D’Entremont said about business at the Hotel Paradox, noting how “from a recovery standpoint, we’re beginning to see a lot of in-person group meetings come back.” Although demand for conferences is still low, the Hotel Paradox has been hosting smaller meetings because they are easier to accommodate and manage in terms of public health. The Hotel Paradox has begun to receive more inquiries for conferences in 2023, but recovery has been slower on that front because “people are still hesitant.” The Hotel Paradox has faced some challenges with retaining and hiring workers who possess specific skillsets, particularly for culinary and management positions. However, the turnover rate has been significantly lower than the industry standard, and they have had huge success with entry level hiring. Accelerated by the pandemic, Hotel Paradox has adapted to the dynamic workforce challenges in retaining staff by providing flexibility around schedules and improving the feedback mechanisms. This now includes augmenting qualitative feedback with quantitative insights for employees. Hotel Paradox has also strengthened their financial analyses with better data, leading to better profit margins despite the effects of rising prices of goods and services.

The Accommodation and Food Services industry has also been hit particularly hard by high rates of separations and turnovers. According to nationwide data from the U.S. Bureau of Labor Statistics’ Job Openings and Labor Turnover Survey (JOLTS), monthly net hires (hires less the separations of quits, firings, and other separations) has been positive since January 2021. However, the industry remains nearly a million cumulative hirings short from its pre-pandemic level in February of 2020 (Figure 32). This suggests that while staffing has been on the rebound, there is still a long substantial gap between cumulative hires and separations.

²⁵ California Employment Development Department. Employment by Industry Data.

FIGURE 32. CHANGE IN NATIONAL ACCOMMODATION AND FOOD SERVICES HIRES AND SEPARATIONS²⁶



Business Case Study: Betty Burgers

*Like most businesses, the pandemic disrupted Betty Burgers—a restaurant with four locations around the county. Fortunately, most Betty Burgers locations were able to remain open throughout the pandemic, though as the pandemic wore on, so did the challenge to find and retain quality and qualified workers. Laurie Negro, owner of Betty Burgers told the research team “Everyone’s hiring cooks. COVID changed situation for the kitchen more than front of the house. When restaurants closed, a lot of kitchen staff left for construction.” **Despite these challenges, Betty Burgers has managed to stay strongly staffed by utilizing a number of attraction and retention strategies, launching a \$300 referral bonus to employees and “giving everyone raises of at least a 10-15% to keep them.” Betty Burgers also now offers group health insurance and a 401k plan, neither of which the restaurant had before. The restaurant has also adapted how it finds talent, using Indeed, Instagram ads, and personal networks through friends and family. Through these adaptations the restaurant has been able to retain staff at pre-pandemic levels and continue to serve their Big Betty burgers.***

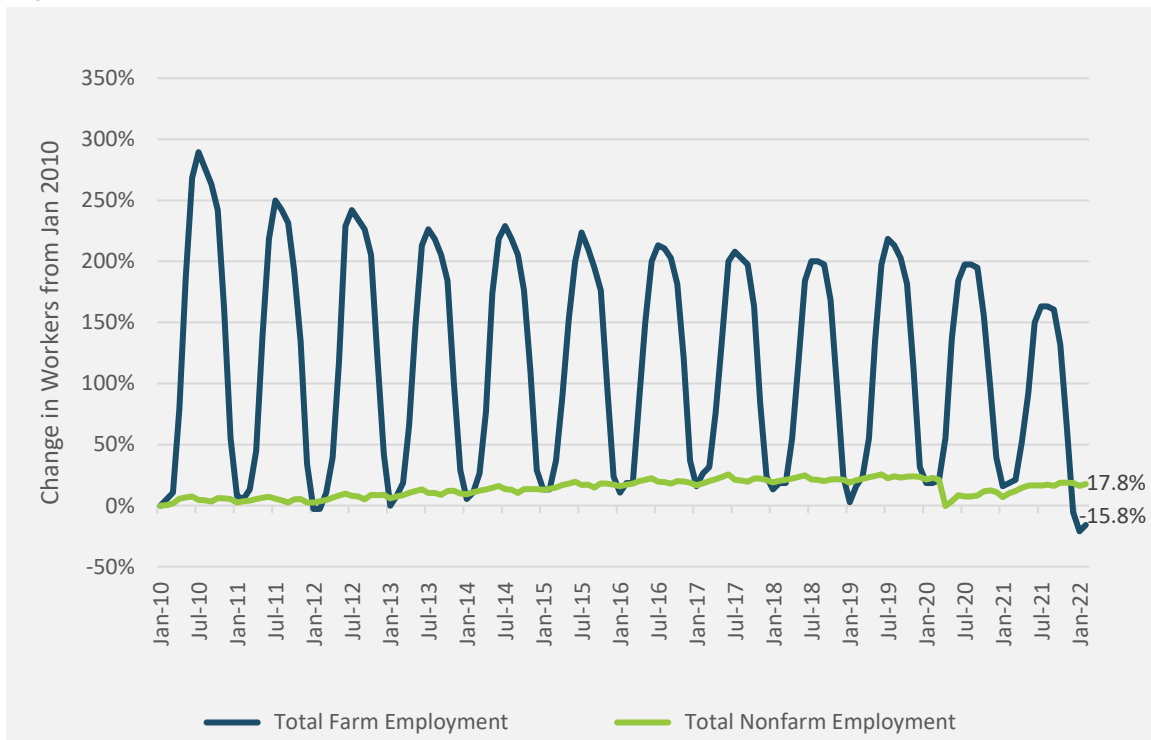
Agriculture

Agriculture and farming account for a substantial proportion of Santa Cruz County’s employment; during the peak summer months, agriculture accounts for nearly one in every ten jobs in the county. Given the role of agriculture in the county’s economy—while also supplying a large portion of the county’s fruits and vegetables—the recent workforce challenges in agriculture are worth analysis and discussion.

²⁶ U.S. Bureau of Labor Statistics Job Openings and Labor Turnover Survey

While nonfarm employment in the county has risen steadily over the past twelve years, farm employment has diminished notably. While farm employment in the county is highly seasonal—nearly quadrupling the number of jobs between January and July of 2010—this magnitude of the cycle has become smaller as fewer workers rejoin during the summer, and off-season employment reached its lowest off-season number in twelve years in January 2022. In fact, the peak nonfarm employment in July 2021 was 32% lower than it was in July 2010 and 17% lower than July 2019 (equating to a 2,000 job difference between 2019 and 2021). It is worth noting that nonfarm jobs, in comparison, have increased by 18% during this same time (Figure 33). This represents a significant decline the number of farm employees, and highlights the challenges that farmers across the county have as they look to plant, harvest, and transport their crops.

FIGURE 33. CHANGE IN FARM AND NON-FARM EMPLOYMENT IN SANTA CRUZ COUNTY FROM JANUARY 2010 BASELINE²⁷



As the data above highlights, the COVID-19 pandemic exacerbated the trending decline in the number of agricultural workers. COVID-19 hit agricultural workers particularly hard; one nationwide study found that agricultural workers were more likely to test positive for COVID-19 than the general population²⁸ and another study of agricultural workers in the Salinas Valley found that 20% of farmworkers tested positive for COVID-19 antibodies compared to 1% of the San Francisco Bay Area population by the end of October

²⁷ California Employment Development Department. Employment by Industry Data.

²⁸ “Social determinants of COVID-19 mortality at the county level” Rebecca K. Fielding-Miller, Maria E. Sundaram, and Kimberly Brouwer. October 14, 2020. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0240151>

2020.²⁹ Given the elevated risks of infection, and subsequent transmission to loved ones, it is no surprise that some former agricultural workers have sought one of the many employment opportunities elsewhere or potentially left the workforce altogether.

The trending decline in agricultural workers that the pandemic accelerated was largely due to continued mechanization of traditional agriculture roles. While increased automation may decrease the need for manual laborers in the short-term, it is driving demand for workers with IT knowledge and experience in the longer-term. The increased use of sensors (also known as the Internet of Things (IoT)) to plant, monitor, feed, water, and harvest crops is driving demand for new skillsets including proficiency in basic internet and Microsoft Office, data analysis tools such as SPSS or SAS, and Geographic Information Systems (GIS). Between 2019 and 2022, IDATE DigiWorld estimates that the number of active IoT connections in Agriculture in the European Union increased more than three-fold, from 12 million to nearly 47 million connections. By 2025 this number is projected to reach more than 70 million.³⁰ This suggests that new skills will be needed, which in turn may drive higher wages in the agriculture industry.

²⁹ “Seroprevalence of Antibodies to SARS-CoV-2 in 10 Sites in the United States, March 23-May 12, 2020” Fiona P. Havers, MD, MHS; Carrie Reed, PhD; Travis Lim, DrPH; et al. July 21, 2020.

<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2768834>

³⁰ PRECISION FARMING MARKET - GROWTH, TRENDS, COVID-19 IMPACT, AND FORECASTS (2022 - 2027). Mordor Intelligence. <https://www.mordorintelligence.com/industry-reports/global-precision-farming-market-industry>

Appendix A: Healthcare Workforce Transition Opportunities

SOC Code	Occupation	Detailed Titles	Healthcare/Non-Healthcare Classification	Most-Closely Related Title
29-1051	Pharmacists	Pharmacists	Not Same Healthcare	Nursing Instructors and Teachers, Postsecondary
29-1051	Pharmacists	Pharmacists	Not Same Healthcare	Health Specialties Teachers, Postsecondary
29-1051	Pharmacists	Pharmacists	Not Same Healthcare	Medical Scientists, Except Epidemiologists
29-1141	Registered Nurses	Registered Nurses	Healthcare	Licensed Practical and Licensed Vocational Nurses
29-1141	Registered Nurses	Registered Nurses	Healthcare	Critical Care Nurses
29-1141	Registered Nurses	Registered Nurses	Healthcare	Acute Care Nurses
29-1141	Registered Nurses	Registered Nurses	Not Same Healthcare	Respiratory Therapists
29-1141	Registered Nurses	Registered Nurses	Not Same Healthcare	Cardiovascular Technologists and Technicians
29-1141	Registered Nurses	Registered Nurses	Not Same Healthcare	Psychiatric Technicians
29-1141	Registered Nurses	Registered Nurses	Not Same Healthcare	Respiratory Therapy Technicians
29-1141	Registered Nurses	Registered Nurses	Not Same Healthcare	First-Line Supervisors of Personal Service Workers
29-1141	Registered Nurses	Registered Nurses	Healthcare	Medical Assistants
29-1141	Registered Nurses	Registered Nurses	Not Same Healthcare	Emergency Medical Technicians and Paramedics
29-1141	Registered Nurses	Acute Care Nurses	Healthcare	Critical Care Nurses
29-1141	Registered Nurses	Acute Care Nurses	Healthcare	Registered Nurses
29-1141	Registered Nurses	Acute Care Nurses	Healthcare	Licensed Practical and Licensed Vocational Nurses
29-1141	Registered Nurses	Acute Care Nurses	Not Same Healthcare	Respiratory Therapists
29-1141	Registered Nurses	Acute Care Nurses	Not Same Healthcare	Cardiovascular Technologists and Technicians
29-1141	Registered Nurses	Acute Care Nurses	Not Same Healthcare	Respiratory Therapy Technicians

29-1141	Registered Nurses	Acute Care Nurses	Not Same Healthcare	First-Line Supervisors of Personal Service Workers
29-1141	Registered Nurses	Acute Care Nurses	Not Healthcare	Athletic Trainers
29-1141	Registered Nurses	Acute Care Nurses	Not Same Healthcare	Emergency Medical Technicians and Paramedics
29-1141	Registered Nurses	Acute Care Nurses	Not Same Healthcare	Physical Therapist Assistants
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Nursing Instructors and Teachers, Postsecondary
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Neuropsychologists and Clinical Neuropsychologists
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Healthcare Social Workers
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Nurse Midwives
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Mental Health Counselors
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Marriage and Family Therapists
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Occupational Therapists
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Educational, Guidance, School, and Vocational Counselors
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Nurse Practitioners
29-1141	Registered Nurses	Advanced Practice Psychiatric Nurses	Not Same Healthcare	Patient Representatives
29-1141	Registered Nurses	Critical Care Nurses	Healthcare	Acute Care Nurses
29-1141	Registered Nurses	Critical Care Nurses	Healthcare	Registered Nurses
29-1141	Registered Nurses	Critical Care Nurses	Not Same Healthcare	Respiratory Therapists
29-1141	Registered Nurses	Critical Care Nurses	Healthcare	Licensed Practical and Licensed Vocational Nurses
29-1141	Registered Nurses	Critical Care Nurses	Not Same Healthcare	Cardiovascular Technologists and Technicians
29-1141	Registered Nurses	Critical Care Nurses	Not Same Healthcare	Respiratory Therapy Technicians
29-1141	Registered Nurses	Critical Care Nurses	Not Same Healthcare	Radiation Therapists
29-1141	Registered Nurses	Critical Care Nurses	Not Same Healthcare	Nuclear Medicine Technologists
29-1141	Registered Nurses	Critical Care Nurses	Not Healthcare	Athletic Trainers
29-1141	Registered Nurses	Critical Care Nurses	Not Same Healthcare	Emergency Medical Technicians and Paramedics
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Nurse Practitioners

29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Nurse Midwives
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Physician Assistants
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Healthcare	Nursing Instructors and Teachers, Postsecondary
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Physical Therapists
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Occupational Therapists
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Health Specialties Teachers, Postsecondary
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Nurse Anesthetists
29-1141	Registered Nurses	Clinical Nurse Specialists	Not Same Healthcare	Recreation and Fitness Studies Teachers, Postsecondary
29-1141	Registered Nurses	Clinical Nurse Specialists	Healthcare	Advanced Practice Psychiatric Nurses
29-2052	Pharmacy Technicians	Pharmacy Technicians	Healthcare	Medical Assistants
29-2052	Pharmacy Technicians	Pharmacy Technicians	Healthcare	Pharmacy Aides
29-2052	Pharmacy Technicians	Pharmacy Technicians	Healthcare	Dental Assistants
29-2052	Pharmacy Technicians	Pharmacy Technicians	Not Same Healthcare	Opticians, Dispensing
29-2052	Pharmacy Technicians	Pharmacy Technicians	Not Same Healthcare	Physical Therapist Assistants
29-2052	Pharmacy Technicians	Pharmacy Technicians	Healthcare	Licensed Practical and Licensed Vocational Nurses
29-2052	Pharmacy Technicians	Pharmacy Technicians	Healthcare	Endoscopy Technicians
29-2052	Pharmacy Technicians	Pharmacy Technicians	Not Same Healthcare	Veterinary Assistants and Laboratory Animal Caretakers
29-2052	Pharmacy Technicians	Pharmacy Technicians	Not Same Healthcare	Occupational Therapy Assistants
29-2052	Pharmacy Technicians	Pharmacy Technicians	Not Same Healthcare	Physical Therapist Aides
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Not Same Healthcare	Physical Therapist Assistants
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Not Same Healthcare	Psychiatric Technicians

29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Healthcare	Acute Care Nurses
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Healthcare	Medical Assistants
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Not Same Healthcare	Respiratory Therapy Technicians
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Not Same Healthcare	Cardiovascular Technologists and Technicians
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Not Same Healthcare	Occupational Therapy Assistants
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Not Healthcare	Social and Human Service Assistants
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Not Same Healthcare	Radiologic Technicians
29-2061	Licensed Practical and Licensed Vocational Nurses	Licensed Practical and Licensed Vocational Nurses	Healthcare	Dental Assistants
31-9091	Dental Assistants	Dental Assistants	Healthcare	Endoscopy Technicians
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Dental Hygienists
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Radiologic Technologists
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Surgical Technologists
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Neurodiagnostic Technologists

31-9091	Dental Assistants	Dental Assistants	Healthcare	Medical Assistants
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Respiratory Therapy Technicians
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Veterinary Technologists and Technicians
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Nuclear Medicine Technologists
31-9091	Dental Assistants	Dental Assistants	Not Same Healthcare	Cardiovascular Technologists and Technicians
31-9092	Medical Assistants	Medical Assistants	Healthcare	Pharmacy Technicians
31-9092	Medical Assistants	Medical Assistants	Not Same Healthcare	Physical Therapist Assistants
31-9092	Medical Assistants	Medical Assistants	Healthcare	Licensed Practical and Licensed Vocational Nurses
31-9092	Medical Assistants	Medical Assistants	Not Same Healthcare	Neurodiagnostic Technologists
31-9092	Medical Assistants	Medical Assistants	Not Same Healthcare	Occupational Therapy Assistants
31-9092	Medical Assistants	Medical Assistants	Healthcare	Dental Assistants
31-9092	Medical Assistants	Medical Assistants	Not Same Healthcare	Social and Human Service Assistants
31-9092	Medical Assistants	Medical Assistants	Healthcare	Registered Nurses
31-9092	Medical Assistants	Medical Assistants	Healthcare	Speech-Language Pathology Assistants
31-9092	Medical Assistants	Medical Assistants	Not Same Healthcare	Psychiatric Technicians
31-9095	Pharmacy Aides	Pharmacy Aides	Not Healthcare	Hotel, Motel, and Resort Desk Clerks
31-9095	Pharmacy Aides	Pharmacy Aides	Not Healthcare	Gaming Cage Workers
31-9095	Pharmacy Aides	Pharmacy Aides	Not Healthcare	Tellers
31-9095	Pharmacy Aides	Pharmacy Aides	Not Healthcare	Gaming Change Persons and Booth Cashiers
31-9095	Pharmacy Aides	Pharmacy Aides	Not Healthcare	Postal Service Clerks
31-9095	Pharmacy Aides	Pharmacy Aides	Healthcare	Pharmacy Technicians
31-9095	Pharmacy Aides	Pharmacy Aides	Not Healthcare	Gaming and Sports Book Writers and Runners
31-9095	Pharmacy Aides	Pharmacy Aides	Not Healthcare	Library Assistants, Clerical
31-9095	Pharmacy Aides	Pharmacy Aides	Not Same Healthcare	Physical Therapist Aides
31-9095	Pharmacy Aides	Pharmacy Aides	Not Same Healthcare	Medical Records and Health Information Technicians

31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Healthcare	Teacher Assistants
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Healthcare	Social and Human Service Assistants
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Healthcare	Preschool Teachers, Except Special Education
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Same Healthcare	Occupational Therapy Assistants
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Healthcare	Executive Secretaries and Executive Administrative Assistants
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Healthcare	Medical Assistants
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Same Healthcare	Adult Basic and Secondary Education and Literacy Teachers and Instructors
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Same Healthcare	Human Resources Assistants, Except Payroll and Timekeeping
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Same Healthcare	Residential Advisors
31-9099	Healthcare Support Workers, All Other	Speech-Language Pathology Assistants	Not Same Healthcare	Self-Enrichment Education Teachers
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Healthcare	Dental Assistants
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Same Healthcare	Neurodiagnostic Technologists
31-9099	Healthcare Support	Endoscopy Technicians	Not Same Healthcare	Respiratory Therapy Technicians

	Workers, All Other			
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Same Healthcare	Surgical Technologists
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Same Healthcare	Nuclear Medicine Technologists
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Same Healthcare	Radiologic Technologists
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Same Healthcare	Diagnostic Medical Sonographers
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Same Healthcare	Cardiovascular Technologists and Technicians
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Healthcare	Histotechnologists and Histologic Technicians
31-9099	Healthcare Support Workers, All Other	Endoscopy Technicians	Not Same Healthcare	Medical and Clinical Laboratory Technicians