Inquiry and Change Work for Equitable Post-Graduation Success: Customized Labor Market Data as a Leadership Tool

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Introduction

Community colleges and baccalaureate institutions have experienced a topsy-turvy ride over the last decade, including the Great Recession and its enrollment impacts, significant social unrest generated from both sides of the political aisle, and the global pandemic and its aftermath. Against this backdrop, colleges and universities are also engaged in significant work to improve student outcomes – and to make them more equitable for students of color. A substantial challenge facing colleges seeking to achieve this equitable improvement is to identify high-impact strategies through which they can apply limited human and financial resources, time, and change capacity. For over a decade, the National Center for Inquiry & Improvement (NCII, 2024) has supported the guided pathways movement alongside a great group of national partners, while also integrating emphasis on student financial stability, connection to living wage employment, and the nuances of this work at urban, suburban and rural colleges. The challenge for institutions engaged in this important work has been to identify high-impact aspects of the student experience on which to focus institutional change efforts. As part of recent project work, NCII began using the Lightcast™ Analyst Tool (Lightcast, 2024) to dive deeply into using regional labor market (LMI) data to support colleges' inquiry process and ensure that their efforts on (and beyond) the initiative were leading to the living-wage success they imagine for their graduates. The goal is to help colleges be transparent with themselves, and eventually with students, about their career paths and their potential for attaining family-sustaining wages.

This article will make the case for exploring post-graduation success data as critical for community college leaders and their teams, briefly introduce available tools to engage in such exploration, provide three key data exploration illustrations using real labor market data, and explore potential avenues for addressing challenges illuminated by the post-graduation success data.

Making the Case for Post-Graduation Success Data

The community college guided pathways movement formally kicked off with the Bill and Melinda Gates Foundation-funded *Completion by Design*, which included nine community colleges in North Carolina, Ohio, and Florida (Completion by Design, 2024b). Working with partners such as the Community College Research Center (CCRC) at Teachers College, Columbia University (CCRC, n.d.) and Jobs for the Future (Jobs for the Future, 2024), this initial guided pathways project paved the way for significant evolution of the guided pathways framework and national projects including the American Association of Community Colleges (AACC) Pathways projects, with 30 colleges from 2015-17 and a second cohort of 15 colleges from 2017-2019 (AACC, 2024a). Numerous state-level guided pathways projects followed.

In the early days of the guided pathways movement, the dominant conceptualization of guided pathways utilized the *loss-momentum framework* (Completion by Design, 2024a), which helped colleges view the student experience at the college in a series of stages: connection, entry, progress, and completion. Within each of these stages, the framework identified a series of potential loss points that resulted in students' progression being hindered or halted altogether and a series of potential momentum points that could catapult students forward on their path to completion and post-graduation success.

It is important to note that from the beginning of the movement, the focus on post-graduation success was very clearly emphasized and laid out in two ways: students would be successful if they directly entered the workforce with a community college credential with clear labor market value, or if they completed an Associate Degree that afforded them junior standing in a major at a baccalaureate institution—also on the path to a Bachelor's Degree with labor market value. An early mantra of guided pathways emphasized this point from Davis Jenkins and his colleagues at CCRC, "start with the end in mind," which called out this critical focus on post-graduation success (Bailey et al., 2015).

A second major event for focusing the community college field on post-graduation success emerged with the kickoff of the Aspen Institute College Education Program and the announcement of the initial Aspen Prize for Community College Excellence in 2011. Awarded every two years since 2011, this national prize has galvanized attention on community college excellence and focused attention on six critical areas: teaching and learning, certificate and degree completion, transfer and bachelor's attainment, workforce success, access, and equity for students of color and from low-income backgrounds (Aspen Institute College Excellence Program [CEP], 2024). Aspen CEP's founder and executive director, Josh Wyner, has been consistently clear about the importance of the post-graduation success component of the Prize, ensuring that it is emphasized in the data selection process that identifies the top 150 colleges, the review process that helps identify the 10 finalists in each cycle, and ultimately centering post-graduation success amongst the other factors as the Aspen Prize Jury selects the winner(s) for each cycle.

Taken together, these seminal events, combined with the efforts of numerous other national partners, a concomitant shift in dialogue among observers and accreditors of community colleges, and national debate about the value of higher education, have led to an evolution in the field toward a "post-completion" mentality. None of these shifts diminishes the significant work that colleges have undertaken to optimize the student experience and outcomes within the borders of the community college experience. On the contrary, they heighten the need for such efforts by grounding them in the ultimate outcome for students—success after they move through our community colleges.

Given this evolution toward a focus on post-graduation success, community college leaders face several challenges as they consider how to integrate this mindset into their institutional change efforts. Many leaders over the past decade have grounded that change work in the guided pathways framework, with a strong equity emphasis. While post-graduation success has been part of the framework since the beginning, in many if not most colleges, the guided pathways work has turned inward to key aspects of the student experience—the guided pathways pillars:

clarifying the path for students, helping students enter a path, helping students stay on the path, and ensuring that students are learning (AACC, 2019). The pathways movement has entered its second decade, and at many colleges guided pathways efforts are ready to evolve into a "version 2.0 or 3.0" phase of the change process. Re-energizing college change efforts through an exploration of regional labor market data, as described below, can help community college leaders address a number of challenges.

Many college leaders report some form of initiative fatigue and post-pandemic exhaustion. To motivate people, leaders need a jolt of energy infused into the college's change work, which an exploration of regional labor market data can provide.

Colleges have focused change efforts on equity to varying degrees in the past decade, focusing primarily within the student experience at the college. The data shown in two of three illustrations in section three below can help center the ultimate equitable outcomes for students: success in the labor market through attainment of living wage jobs and careers for students of color and for women.

College leaders report having many change efforts that often compete for attention. Focusing existing change efforts with a post-graduation lens can help bring coherence to the work. College leaders have limited time, human and financial resources, and political capital to devote to significant institutional change efforts. Utilizing a post-graduation lens can help prioritize the pantheon of possible change efforts, elevating those that will most positively impact students' post-graduation outcomes.

Perhaps most importantly, utilizing a post-graduation lens can help college communities galvanize their efforts around what matters most to students—not just success at the college but transformation of their futures, when they emerge from their community college experience either directly ready to enter the labor market with a credential of value, or transferring on the path to a Bachelor's degree (or beyond) that also results in good jobs and family-sustaining wages.

A Lens into Regional Labor Market Data

Observers, philanthropic funders, and those invested in the success of the higher education system often ask a seemingly simple question: Can the colleges we are interested in or working with track their graduates into the workforce and summarize for us where they are working and how much they are making? Community college (and four-year) leaders, of course, would love to be able to answer this question with unit record data on employment and wages that is matched to their graduates; but in most states, this remains either tremendously difficult or impossible. Given this reality, we press forward with the tools available to us, most often by analyzing employment and salary data for occupations that align with college programs. Some data is available publicly; the U.S. Department of Labor's O*Net website (United States Department of Labor, 2024) has abundant information on occupations, including descriptions of jobs, skills needed, work activities, experience and credential requirements, job openings, wages, and employment trends.

Mining these data can be challenging, albeit rewarding. Data aggregation services such as Lightcast™ (formerly EMSI/Burning Glass) and the services side of job postings sites such as LinkedIn and Indeed can make this task more efficient and often integrate other data sources to paint a more complete picture of occupational data in a region. In the case of Lightcast™, the service aggregates a host of data sources, most notably including the Department of Labor's Quarterly Census of Employment & Wages, which provides updated actual wage data covering roughly 95% of the American workforce, with the exception of the military and unincorporated self-employed workers (United States Department of Labor, 2024).

The data provided in the next section were retrieved in November 2023 from the Lightcast™ Analyst tool and analyzed using IBM SPSS Statistics. After much trial and error attempting to share the data in a format that would create interest and exploration among community college leaders and practitioners, NCII ultimately created a story- and slide-based presentation so leaders can better understand their regional labor market data, explore the implications, dive deeper where specific interests take them and integrate the implications of the data into their organizational change processes. Our goal in this initial consideration of the regional labor market data is to inspire college leaders and practitioners to explore further—and ultimately address the challenges raised by findings.

A couple of technical and definitional considerations are necessary before diving into the data illustrations.

Standard Occupational Classification System (SOC Codes). The Bureau of Labor Statistics classifies workers into occupations for purposes of exploring occupational/salary data (United States Bureau of Labor Statistics, 2024) at varying levels of granularity; the 2018 SOC system identifies 867 detailed occupations at the 6-digit level (e.g. "13-1082: Project Management Specialists"), 459 broad occupations at the 5-digit level (e.g. "13-1080: Logisticians & Project Management Specialists"), 98 minor groups at the 3-digit level (e.g. "13-1000: Business Operations Specialists"), and 23 major groups (e.g. "13-0000: Business & Financial Operations Occupations"). We will refer below in data illustrations to SOC codes at the 2-digit and 6-digit level, with other important inquiries existing as well at the 3-digit and 5-digit level. Very often community college leaders are familiar with the six-digit level of SOC codes in their classically direct-to-workforce programs, as they are utilized to determine if new programs are viable in terms of regional job openings and wages. Focusing on SOC codes at the 6-digit level can be useful; but, we have found that starting at the less granular 2-digit level allows for the observation of important larger trends and also heightens the ability to galvanize and inspire a wider range of community college faculty and other practitioners by not diving deeply into single occupations.

Cost of Living Adjustments. The cost of living strongly impacts spending power of salaries and determination of family-sustaining wage thresholds. Lightcast™ utilizes The Council for Community and Economic Research's C2ER Cost of Living (COL) Index (Council for Community and Economic Research, 2024), which creates a composite cost of living index from six categories: food, housing, utilities, transportation, health care, and miscellaneous goods and services. A national indexed score of 100 is created, and local cost of living indices can be compared to the national average. For example, a salary of $70,000 may feel like it would

provide a living wage, but if the COL index in a given region is 160 (e.g. Los Angeles), then the COL-adjusted salary drops from $70,000 to $43,750 – which clearly provides a much different ability to sustain a family. The data illustrations below utilize the COL-adjusted salaries, given that they better reflect students' abilities to earn family-sustaining wages in the communities in which they live.

Good Jobs/Living Wage Thresholds. Ultimately, perhaps the core question for community college leaders and practitioners when considering post-graduation outcomes of students is "Are our students achieving family-sustaining or living wages?" This is, of course, a complicated question, as what will sustain a family of four with one wage earner in New York City is very different than what would sustain a single young adult with no dependents in Missoula, Montana. The COL adjustment described above can help us with the geographical differences in living wage thresholds, and tools such as the MIT Living Wage Calculator can adjust for family characteristics as well (Massachusetts Institute of Technology, 2024). In work that crosses multiple state lines and differing family groupings as is often the case, an approach is needed that is simpler albeit less granular. As do our colleagues at CCRC and Aspen, these data illustrations utilize an adapted version of the "good jobs" approach of Georgetown University's Center for Education and the Workforce (2024), which defines a "good job" as one that results in a COL-adjusted median salary of approximately $57,000 for young adults. This allows us to use this relatively simple threshold to assess occupational data retrieved from Lightcast™ and ascertain whether a given occupation's salary in a region achieves (or approaches) this "good job" threshold.

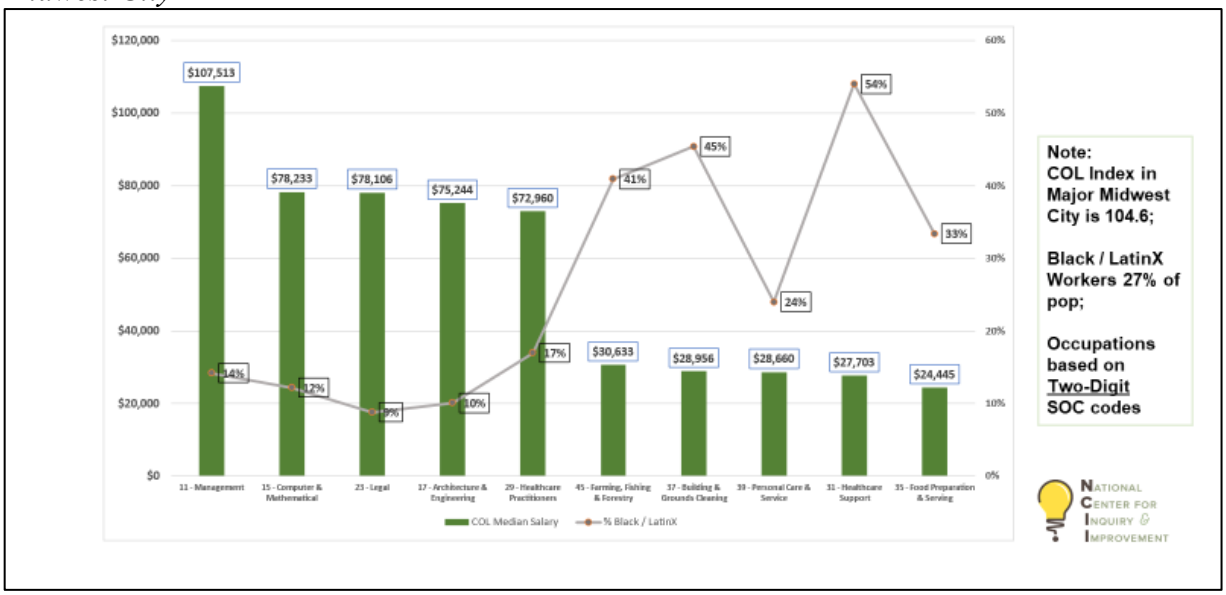
Exploring the Utility of Labor Market Data through Three Key Data Illustrations

In the section above, we explored the types of foundational research questions on which customized regional labor market data can shed light. To illustrate some possibilities for community college leaders to utilize this type of data and analysis, we now dive into three key explorations to powerfully illustrate a case for change: disaggregation of race and gender in high and low paying jobs; why working in healthcare does not guarantee good wages; and, the relationship between education level and opportunity for higher-wage jobs and careers.

Exploring Inequity in Access to High- and Low-Paying Occupations by Race. First, let us examine disaggregated data depicting who is in the higher-paying and lower-paying jobs in a major Midwest city. If regional labor markets were egalitarian, then the percentage of workers in a given occupation would mirror the overall population in the region when disaggregated by race or gender. For this major Midwest city, 27% of the working population is either Black or Latinx; thus, for the labor market to be equitable the percentage of Black or Latinx workers in the five highest-wage jobs in the region and the five lowest-wage jobs in the region should be close to 27%.

Figure 1

The Percentage of Black and LatinX Workers in the Highest vs. Lowest Paying Jobs in a Major Midwest City



Powerfully, Figure 1 displays—at a quick glance—that this labor market has large under-representation gaps for its Black and Latinx workers in the five highest-paying, two-digit occupations in the region: Management (-13 percentage points), Computer & Mathematical (-15 points), Legal (-18 points), Architecture & Engineering (-17 points), and Healthcare Practitioners (-10 points). Conversely, Black and Latinx workers are over-represented in four of the five lowest-paying two-digit occupation occupations: Farming, Fishing & Forestry (+14 points), Building & Grounds Cleaning (+18 points), Healthcare Support (+27 points), and Food Preparation & Serving (+6 points).

It should be noted that this over-representation of Black and Latinx workers in low-wage jobs and under-representation in high-wage jobs in a region is incredibly and perhaps even shockingly consistent across the United States: in red states and blue states, across geographic regions, and in urban, suburban, and rural areas. While the overall percentage of workers who are Black/Latinx in a region varies widely across the country, the under-representation in high-wage jobs and over-representation in low-wage jobs are remarkably consistent. This consistency is fascinating given the vastly divergent political and social structures and current rhetoric that exist across the country, and suggests that it will take vastly different likely cross-sector approaches in designing solutions to address these inequities systemically.

This can be a troubling infographic to take in and reflect on, which is exactly why it can be such a powerful tool for community college leaders as they seek to motivate change efforts on their campuses. This particular graphic is often very influential to community college leaders, faculty, and classified and administrative professionals alike. At first glance, the dominant reactions include astonishment at the strength of these relationships, knowing glances and non-verbal responses from Black and Latinx participants confirming what they, in many cases, have personally experienced, and even mild depression about what seems a huge mountain to climb given the strength of these relationships and their seemingly intractable nature.

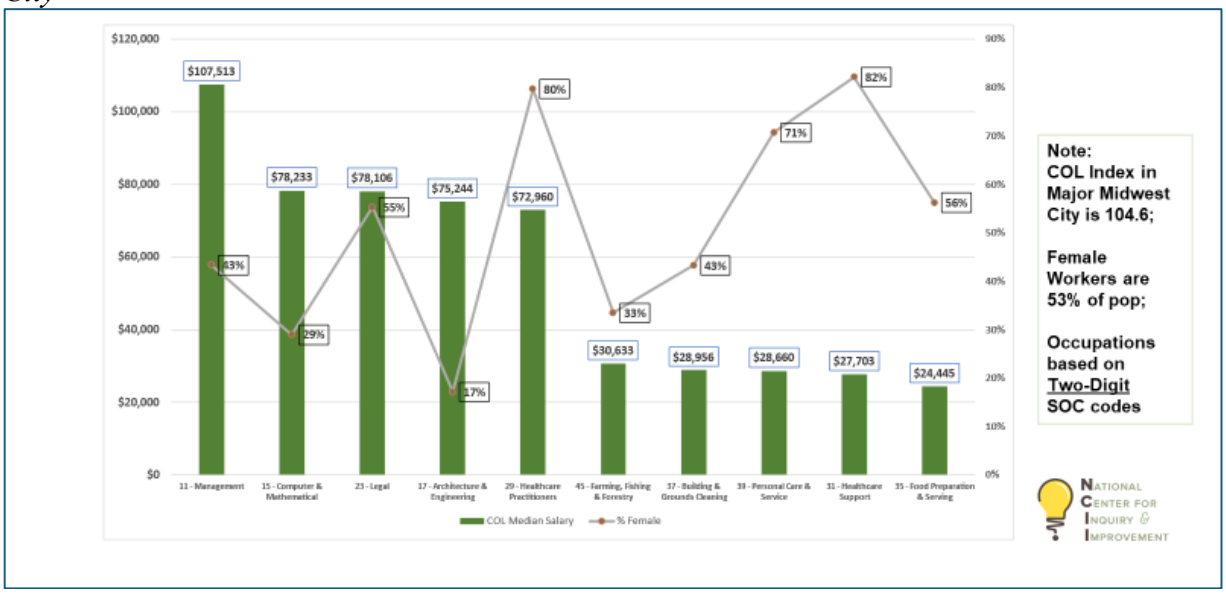
A Collective Call to Action

There is a lot of nuance underneath this relatively simple graphic (Figure 1), and the inevitable curiosity and follow-up questions that come from even a brief reflection on it are exactly what community college leaders should be hoping for. Many community colleges have struggled to create authentic cultures of inquiry in response to the vast explosion of available data on student success over the past two decades. Such a simple yet powerful infographic can focus the community college practitioners on a common important outcome; and with further scaffolding from leadership, it can support a shared vision for improvement. In the next section, we will explore some possibilities for action in response to the implications of this and other infographics, but it is important not to lose how this collective call to action can be critically important for community college leaders to catalyze their teams.

Exploring Inequity in Access to High- and Low-Paying Occupations by Gender. Figure 2 below displays the same data on participation in the five highest-paying occupations and five lowest-paying occupations in the same major Midwest city, this time disaggregated by gender. While not as starkly clear a relationship as in Figure 1's disaggregation by race, the story for women in this major metropolitan area is not much rosier overall from an equitable salary standpoint. Notably, significant representation gaps exist in three of the five top-paying occupations in the region: Management (-10 points), Computer & Mathematical (-24 points), and Architecture & Engineering (a whopping -36 points). Similarly, women are over-represented in the three lowest-paying occupations: Personal Care & Service (+18 points), Healthcare Support (+29 points), and Food Preparation & Serving (+3 points).

Figure 2

The Percentage of Female Workers in the Highest vs. Lowest Paying Jobs in a Major Midwest City



There is slightly more variance in this infographic than in Figure 1; women are more equitably represented in the Legal occupation (+2 points), over-represented in Healthcare Practitioners (+27 points), and under-represented in the low-paying Farming, Fishing & Forestry (-20 points)

and Building & Grounds Cleaning (-10 points). As one example of the nuance in this data and the need to dive a little deeper, especially when examining labor market data at the two-digit occupational level, some of this seemingly better news for women is tempered by a deeper exploration.

To illustrate, the Legal profession looks like it has solid participation for women, which it absolutely does when grouping all the sub-occupations under the umbrella two-digit code of Legal Occupations, where women are over-represented by two percentage points at 55% of the two-digit occupational level. However, there are between five and 80 six-digit occupational codes that are rolled up into the 22 two-digit occupational codes in the SOC system; and, in the case of the Legal profession, there are a relatively small number of six-digit codes (8) under the umbrella two-digit code. Looking at that more granular level, we discover that there are two six-digit codes that capture over 90% of the workers coded in the Legal occupation, which tells a very different story for women in the profession.

The largest sub-occupation in the Legal profession is "Lawyers," which comprise 58% of the workers in the occupation in this Western suburb. On average, lawyers do very well in this region as they do in most regions; their COL-adjusted median salary is $131,000, well above any good job or living-wage threshold. However, women represent a smaller proportion in this category, with lawyers in this Western suburb being only 37% female, well below the 53% of workers in the entire region that are female. Conversely, the second largest six-digit occupation under Legal is "Paralegals & Legal Assistants," who have a much lower median income of $49,399. While it approaches most good job thresholds, this salary is vastly lower than the median for Lawyers. Perhaps, unsurprisingly, women are vastly over-represented in Paralegals & Legal Assistants at 86% of the profession—33 points higher than the overall population.

Relatedly, while nearly all jobs in the "Healthcare Practitioners" column in Figure 2 would be considered "good jobs" in terms of salary, the 80% participation rate of women in these jobs would again be slightly less rosy when a similar, deeper dive is performed into the six-digit occupations that cover doctors (which are closer to 60%-40% male/female) versus those that cover nursing and the various tech-level jobs such as radiation technician, dental hygienist, and LPN/LVN, which are disproportionately female in the 80-90% range.

It should also be noted that both Figure 1 on race and Figure 2 on gender do not address any disparities in pay by race or gender *within* these occupational categories. That is, if women working in management on average make $5,000 less a year in salary than their male counterparts, this finding would represent an additional inequity on top of the data displayed in Figures 1 and 2, which focus solely on the race and gender of the workers in these occupations.

Not All Jobs in Healthcare are Created Equal or Provide Equal Access to Communities of Color. Community colleges play a pivotal role in the healthcare talent pipeline, offering numerous avenues of direct entry including into occupations that require short-term certifications such as certified nursing assistants, home health care aides, veterinary assistants, and phlebotomists; associate degree options leading to various "technologist/technician" positions such as radiologic technologist/technician, diagnostic medical sonographers, and dental hygienists; and, initial entry via a nursing associate degree into perhaps the most in-demand

medical field: registered nursing (which increasingly is emphasizing a Bachelor of Science in Nursing as its preferred degree). Further, community colleges can serve as a low-cost, high-quality point of departure for those hoping to transfer to a bachelor's degree-granting institution on the path to medical or veterinary school in pursuit of an advanced medical degree.

It is commonly a point of pride for community colleges that they play such a pivotal role in the healthcare talent pipeline, and we often hear colleges talking about "how many different options and entry points" they offer through healthcare programs. While the pride about healthcare programs is certainly justified on one level, a closer look at the labor market data associated with these programs suggests that a more nuanced understanding is necessary when considering the role community colleges currently play vis-à-vis the outcomes and what role they could possibly play in a more equitable ecosystem. Unsurprisingly, from a salary standpoint, these occupations vary widely, but it is worth exploring just how different these jobs are salary-wise, and perhaps more importantly, how challenging most communities of color find "moving up" the healthcare ladder to jobs that would pay family-sustaining wages.

To investigate these issues, we will explore the data in a Western suburb for two primary two-digit SOC codes that cover healthcare: "SOC Code 29: Healthcare Practitioners and Technical Occupations" and "SOC Code 31: Healthcare Support Occupations." The Department of Labor makes this designation in its SOC code system to distinguish between higher-paying and lower-paying healthcare occupations and divides the 88 six-digit primary health care occupations into SOC Code 29 (71 occupations) and SOC Code 31 (17 occupations). The top three occupations in terms of number of jobs in this Western suburb in SOC Code 29 are registered nurses (13,400), licensed practical/vocational nurses (3,500), and general physicians (2,200). In SOC Code 31, the top three occupations in terms of number of jobs are home health and personal care aides (37,700), medical assistants (4,500), and nursing assistants (3,500).

Figure 3

A High-Paying Job in Healthcare is Much Harder to Attain for Black & LatinX Citizens in a Western Suburb

SOC	Description	2022 Jobs	COL Median Salary	% Black / LatinX
29-0000	Healthcare Practitioners and Technical Occupations	39,053	$73,279	36%
31-0000	Healthcare Support Occupations	53,286	$22,754	64%

- **Most Common Six-Digit Occupations in 2-Digit SOC Code 29:** Registered Nurses, LPN/LVNs, Pharmacy Technicians, Physicians, Clinical Lab Technicians
- **Most Common Six-Digit Occupations in 2-Digit SOC Code 31:** Home Health Care and Personal Care Aides, Nursing Assistants, Medical Assistants, Dental Assistants, Veterinary Assistants

National Center for Inquiry & Improvement

Figure 3 shows the number of jobs in the region in 2022: roughly 39,000 for the higher-paying healthcare practitioners and 53,000 for the lower-paying healthcare support occupations. While we would expect the healthcare practitioner occupations to have higher salaries than the lower-paying healthcare support occupations, in this Western suburb the ratio is starkly over 3:1 in terms of median salaries. This is due, partially, to a high cost-of-living in this suburb relative to the national average, but it also is somewhat due to wages for the lowest-paying healthcare positions not adjusting to the higher cost-of-living, making these jobs even worse from a compensation standpoint than they would be in lower cost-of-living regions. Most importantly, this table also portrays the remarkable equity gap in the higher paying healthcare practitioner occupations, where 36% of the workers are Black or Latinx in this region, compared to the lower-paying healthcare support occupations where 64% of the workers are Black or Latinx. As with the previous data on the major Midwest city in Figures 1 and 2, this data for a Western suburb in Figure 3 is again representative across the 120 regions for which the author has run this data. As before, the ratio of workers who are Black/Latinx will vary widely by the demographics of the region, but the gap displayed by Figure 3 is almost always double-digit percentage points in all but the regions with lowest proportion of Black/Latinx citizens.

Why is this finding so important? Given that community colleges nearly always serve a more diverse student population, with a higher proportion of Black and Latinx students than their four-year public counterparts, it will be much more common for Black and Latinx citizens to enter the healthcare field via community colleges than for White and Asian students. The system has been operating under a tacit assumption that any entry point into healthcare occupations provides the same opportunity, and the fact that we see such vast differences in who is occupying the higher-paying and lower-paying healthcare occupations when disaggregated by race suggests that the system may not be operating as we might hope to advance communities of color into the higher-paying healthcare positions.

Certainly, this also has much to do with employers and how they provide opportunities and education for advancement to higher-paying positions. Indeed, some of the solutions that forward-thinking community colleges and their leaders have implemented involve working closely with employers to provide free tuition and dedicated paid time in a work week for workers in the lower-paying healthcare positions—such as certified nursing assistant and home health care aides—to advance on the educational pipeline necessary to get higher-paying jobs as LPN/LVNs, registered nurses, or the wide variety of higher-paying technologist/technician positions.

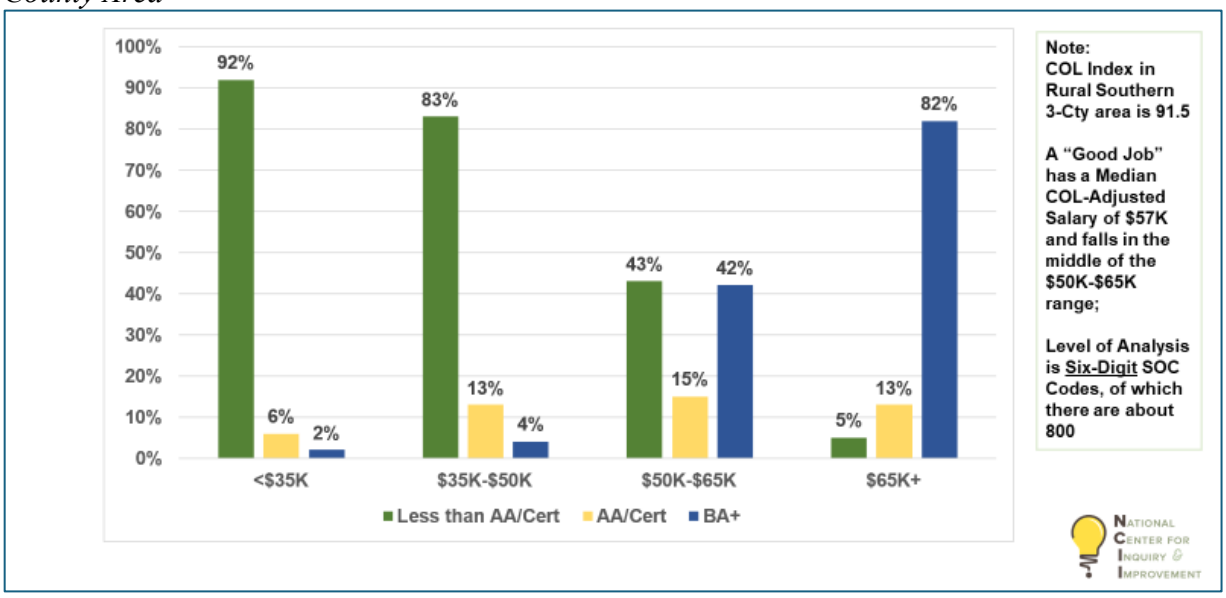
Education to Get Jobs in the United States Remains Critically Necessary for the Highest-Paying Jobs. A recurring national narrative, involving politicians, pundits, researchers, and the public, raises questions about the value of higher education. The debate is complex, but the prevailing question centers on whether higher education attainment is necessary to provide access to high-paying jobs. Concomitantly, the compelling reality is that community college students themselves typically express their desired college outcome as “a better job and a better life” for themselves and their families. To shed light on these issues, it is important to focus on actual wage data depicting whether and how higher education in fact leads to higher-wage jobs and careers.

Figure 4 depicts the relationship between typical education level and jobs in selected salary ranges in a rural three-county area in the South. This is a region with a fairly low cost of living – roughly 8.5% below the national average. This analysis begins by dividing the COL-adjusted median salaries for all 800 six-digit occupations codes in the region into four salary ranges:

- Lower than $35,000 – this salary range is significantly below a good salary for living in the region; these jobs, however, may be stepping stones to better paying jobs.
- $35,000 and $50,000 – this salary range is somewhat below a good salary for living in the region; these jobs, however, may be stepping stones to better paying jobs.
- $50,000 and $65,000 – the middle of this salary range approaches or slightly exceeds a "good salary threshold" of $57,000 for the region.
- Over $65,000 – this salary range is above the good salary threshold in the region.

Figure 4

Typical Entry-Level Education for Jobs in Selected Salary Ranges in a Rural Southern Three-County Area



While one could devise other salary range designations and descriptions, this categorization allows investigation of the typical educational level needed to enter into typically lower-wage occupations (<$35K and $35K-$50K) and higher wage occupations ($50K-$65K and >$65K), with a decent distribution of jobs in each salary range. Utilizing the typical education level Lightcast™ designates for each six-digit occupation, the education levels are grouped into three categories:

- Less than an AA/Cert (jobs that typically require no education, a high school education, or some college with no certification/degree).
- AA/Cert (jobs that typically require an associate degree or certificate).
- BA+ (jobs that typically require a bachelor's degree, master's degree, doctorate or other advanced degree).

Again, these could be grouped differently, but for the sake of parsimony and clarity of the infographic, we utilize this three-category approach.

Now we will explore the relationship in this rural three-county region in the South. The left side of the graphic shows that for low-wage jobs with COL-adjusted median salaries of less than $35,000, for the most part no specific education is needed to enter these jobs, with 92% of the workers in this salary range employed in occupations with a typical entry-level education of "Less than AA/Cert." For workers in the $35,000-$50,000 range, 83% of workers are in occupations with typical entry-level education being "Less than AA/Cert."

The necessity for higher education becomes more evident in the $50,000-$65,000 salary range, where 15% of workers are in occupations whose typical entry-level education is an associate degree or certificate, and 42% of workers are in occupations whose typical entry-level education is a bachelor's degree or higher. In this salary range and region, 43% of the jobs still do not require higher education. Finally, moving to workers in occupations with a median COL-adjusted salary over $65,000, we find that 82% of workers are in occupations requiring a bachelor's degree or higher, and only 5% of workers in this salary range are in high-paying occupations typically requiring no higher education at all.

Upon reflection, in this region the case for higher education could not be clearer; while it is certainly true that higher education is not required for the low- and some mid-paying jobs, it is equally clear that it is a key condition of entry for higher-paying occupations in the region. Looking across the 120 regions for which NCII has run this data in the past year, the data on three of these four salary ranges (<$35K, $35K-$50K and >$65K) is fascinatingly similar again across designations such as urban/rural/suburban, high cost of living vs. low, political differences in regions/states, and demographic breakdowns. The "BA+" rate in the $65K+ category rises even further in high cost-of-living and more knowledge economy-based areas such as Silicon Valley or New York City.

The salary range with the most regional variability is the $50K-$65K range, with the need for higher education varying more widely than it does in the other salary ranges. In some regions such as this rural Southern region, there is a significant proportion of decent-paying jobs that do not require higher education (43% require less than AA/Cert) – most often indicating the presence of advanced manufacturing jobs and/or the region having a relatively lower cost-of-living. In the higher cost-of-living regions and in rural regions without a dominant local industry such as advanced manufacturing, the need for higher education in this $50-$65K range increases.

Identifying Opportunities for Impactful Change

The previous section describes three key illustrations of using regional labor market data by examining equity by race and gender in high-wage and low-wage occupations, why healthcare jobs are not universally positive from a salary standpoint, and the importance of higher education for access to high-paying occupations. As community college leaders reflect on such dives into the data—hopefully engaging and energizing their college teams to improve these outcomes—they are faced with the question of what comes next.

With input from partners from the CCRC, The Aspen Institute's Higher Education Program, and the Community College Center for Student Engagement (CCCSE, 2024), NCII has identified

potential starting points for such inquiry and action. NCII shares these observations as points of departure for inquiry rather than a definitive list. Each college's culture and foundational structures, as well as their institutional change history will differ, as will the opportunities for evolutionary change within the college against the backdrop of the unique regional labor market that its graduates enter upon completion.

Community college leaders can integrate all of these factors as they and their teams identify impactful opportunities for change, while acknowledging the need to focus limited human and financial resources toward a change agenda. This suggests that colleges be highly strategic about the problems they choose to address. Employing a focus on key post-graduation success issues such as those initially explored here can be a useful barometer for impact. We will briefly explore below four potential areas of inquiry for community college leaders to consider, primarily based on the intersection between the insight regional labor market data provides and the frameworks of the guided pathways and equity movements.

Clarify Career Paths Leading to Living Wages. A starting point for community college leaders on the path of elevating post-graduation success as a key student outcome is seemingly simple: to ensure that the campus community (faculty, classified professionals, and administrators) are exposed to and are helped to understand the implications of the region's labor market data on college decision-making. When this data is presented to leaders and practitioners alike, a very common response is, "We really need to show our students this data so they can make informed decisions." While this is a critical strategy, we observe that a necessary precondition for students understanding the implications of careers, occupations, and living wage considerations is that the entire range of college faculty, staff, and administrators at a college explore and understand them first.

The college practitioners and leaders who explore this data almost always come in with some ideas about the relationship between the college's programs and wages in their local labor market, but rarely are those ideas connected in the fashion illustrated above. More technically-oriented direct-to-workforce programs tend to address these issues in a targeted way in their program review processes, but looking more broadly at the trends by industry and occupation, and especially investigating the equity issues outlined above, is usually a step forward for college practitioners and leaders. Community college leaders can galvanize their campus around key post-graduation outcomes by highlighting such important data in their leadership and strategy discussions and integrating use of the data in college planning and resource allocation processes.

Integrate Consideration of Living Wage Career Paths into Student Onboarding. One of the hallmarks of the guided pathways movement in community colleges has been to highlight the importance of programs as the key unit of measure in community college progression by clarifying program paths, accelerating entry into programs, monitoring progress along program paths, and ensuring that students are learning key skills and abilities within programs. As noted earlier, a key mantra of the guided pathways movement—from the beginning—of our colleagues at CCRC was "start with the end in mind," with that end being either direct entry into a living wage career after community college completion or transfer with junior standing, also on a path to completion and living wage attainment.

Guided pathways have also always focused on students making informed choices about programs, particularly ensuring that underserved and first-time-in-college students have the necessary facts to make these informed decisions. It is unlikely that colleges can have students dive deeply into the labor market data illustrated above, but they can ensure that students are thinking about the careers for which the programs they are considering lead to and the differences in wages associated with those careers both at entry and as their career progresses. Part of this scaffolding involves helping students understand what family-sustaining wage thresholds are in each region, taking cost of living into account, and how these thresholds evolve as life circumstances do. For example, making $28,000 a year may sound like a lot of money for a single 20-year-old with no dependents, but it is nowhere near family-sustaining for a 32-year-old with three children.

Student onboarding processes already cover a lot of the "operational" aspects of starting college: financial aid processes, campus tours, introduction to the range of student support structures such as tutoring and libraries. Alongside these operational features, community college onboarding increasingly seeks to build the critical senses of belonging, validation of lived experience, and psychological safety in their incoming students. We suggest that a fourth leg of the onboarding process should be an emphasis on career considerations such as living wage career paths and their relationship to program decisions that students will be making early in their college experience.

Career Connectedness in the Classroom. A third area of inquiry for community college leaders involves focusing on strengthening pedagogy that integrates career connectedness into the classroom. This happens to some degree in community college classrooms, but intentionally emphasizing career connections in faculty professional development and making them a pillar of teaching and learning is a promising strategy. Career connections can be a motivating factor for students who may not understand why they are learning certain skills and abilities – a common challenge reported by community college students, especially in general education coursework.

This clear connection to careers is ever-present in classrooms in direct-to-workforce programs such as surgical technology, welding, advanced manufacturing, and information technology. Ironically, connection to career content in these programs may be where it is least necessary from a student motivation standpoint; students in these programs typically know exactly why they are there and trust that the curriculum and the instruction they receive are designed to help them achieve career-ready skills.

Conversely, this connection is usually less clear to students in a class such as Introduction to Psychology for the 95%+ of students in that class who are not going to graduate school in psychology. Rather than succumbing to the tendency to focus on identifying and supporting the <5% of students in a general education course who are going to graduate school in that discipline, colleges can emphasize helping the other 95% of students understand how they can apply what they are learning in their future careers, whatever they may be.

Work with Employers to Provide Support for Students to Progress Along Career Paths. A fourth opportunity to utilize the exploration of labor market data and living wage consideration is to focus on the role of employers in supporting progression along career pathways for our

graduates who become their employees. Many completers of community college programs, especially those that are certificate-based, are going to first get a job that is early in the career path in a chosen field and that does not have wages that would be considered family-sustaining in the long run. Indeed, much of the structural set-up in our direct-to-workforce programs in community colleges assumes that students will progress along career pathways, usually with on-the-job work experience and skill development combined with additional educational certifications and degrees from community colleges and our bachelor's degree-granting educational partners.

Data, such as those highlighted in the healthcare deep dive above, suggest that especially for communities of color, progression along these career pathways is not currently being optimized. Similar challenges exist in such fields as early childhood education, logistics, culinary arts, and cosmetology. If colleges are going to address such systemic inequities in the labor market going forward, they must engage not only within their institutions but also by working closely with employer partners. Examples of such partnerships include colleges working with employers to provide tuition credit for specific programs that will advance employees on career pathways toward living wages, dedicated time in the work week to work on such educational programs, reviewing hiring practices to ensure fairness, and automatic acceptance/enrollment of students in the next stage program in the career pathway upon completion of an earlier one.

Other Recommended Areas of Inquiry

Other areas of inquiry could include ensuring that all students have a full program education plan that includes career goals and paths as soon as possible, preferably by the end of the first semester; centering ongoing student advising on the connection between educational progress at the institution and the path to living wage jobs and careers in the region; working with K-12 partners to ensure cross-sector collaboration toward key post-graduation success outcomes; and, making the case to students and employers for general education outcomes and degrees providing the key skills to advance on career paths and adapt to changing economies.

Conclusion

When community college leaders have engaged with utilizing and sharing labor market data on their students' post-graduation success, many report that these explorations and reflections galvanized practitioners and leaders on their campuses. In some cases, it was seen as the critical step in moving the college toward a "Pathways 2.0 or 3.0" mentality that could serve as a "true north" for the work. In addition, this avenue of inquiry makes sometimes esoteric explorations of equity much more real by focusing on the inequities for communities of color and women in the regional labor market. This renewed energy and optimism for change is heartening, and we look forward to the continued evolution of community college leaders integrating a post-graduation mindset into their change work.

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